





Key Facts

CONFIGURATION

nodeicode & Availability

**TECHNICAL SPECIFICATION** 

General Technical Data

Operating Parameters

Controls

Sensors

Electric Interfaces

Connectors

Mechanical Interfaces

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Snarts

Hydraulical Interfaces

Work Ports

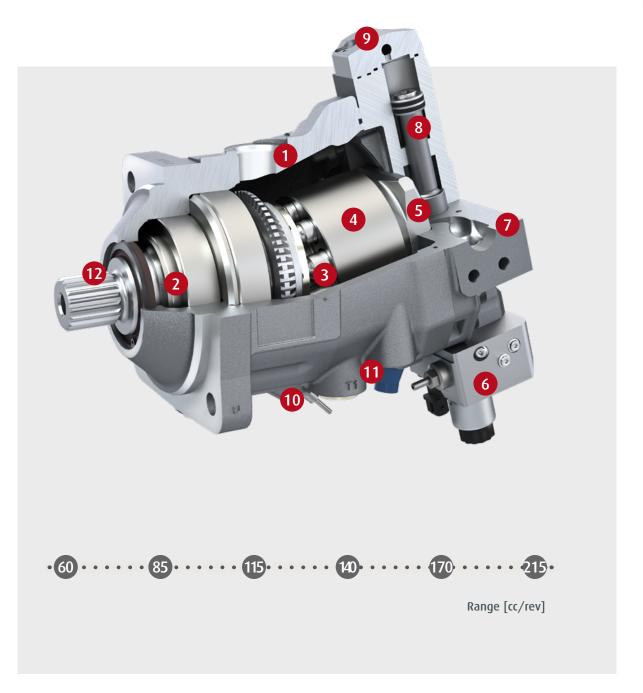
Auxiliary Ports

Functions/Options

#### Overview | **Key Facts**

In the following you will find the design characteristics and related advantages of the CMV. The components mentioned here are referred to repeatedly in the following sections of this datasheet.

With the next generation of the bent axis motors, Linde Hydraulics expands its customer oriented portfolio of high-quality components for hydraulic systems. Due to their standardized interfaces, e.g. the plug-in flange according to ISO, the CMV and CMF fit a high variety of applications, without the need of adaptors. The motors enable a more cost effective operation of the respective applications thanks to low windage losses and lighter weight.



1	~~	Robust design bent axis motor with high power density	<u> </u>	Suitable for a wide range of applications
2	کہن	Drive shaft assembly		High speed capability
3		Pistons		High flexibility
4		Rotating group with variable displacement		High starting torque
5		Port plate		High functional reliability - even under adverse operating conditions
6		Modular concept of various displacement and/or pressure controls (e.g. pressure side selection)		Precise control & low hysteresis
7		Optimized flow concept		Prevention of housing pressure peaks and vibrations
8		Control piston		Sensing of speed and direction of rotation
9		Asymmetrically damped changeover switch		Easy handling
10		Sensor		Easy replacement without the need of application
11		Thread for mounting of lifting devices		
12		Standardized interfaces		



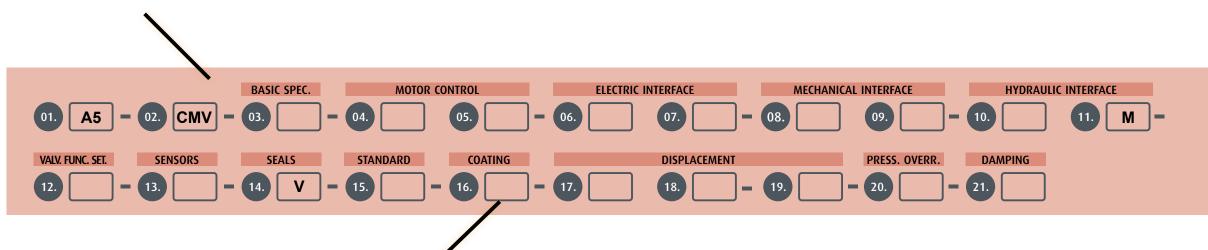


### **OVERVIEW** Key Facts CONFIGURATION Modelcode & Availability **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters **Electric Interfaces** Mechanical Interfaces Shafts Hydraulical Interfaces Work Ports Auxiliary Ports Functions/Options

#### Configuration | Modelcode & Availability | Type

In the following you will find the Modelcode structure for inquiries in context of the [Configuration]. All features of the CMV are listed including brief specification. Please consider the availability and compatibility of the individual items regarding the relevant nominal size. In context of an order or inquiry consider these items as a coherent model code. It serves for further processing. For a more in-depth look at the technical specifications, please refer to the relevant section under [Technical Specification].

#### Modelcode for orders/inquiries



Modelcode items describing a configuration element each

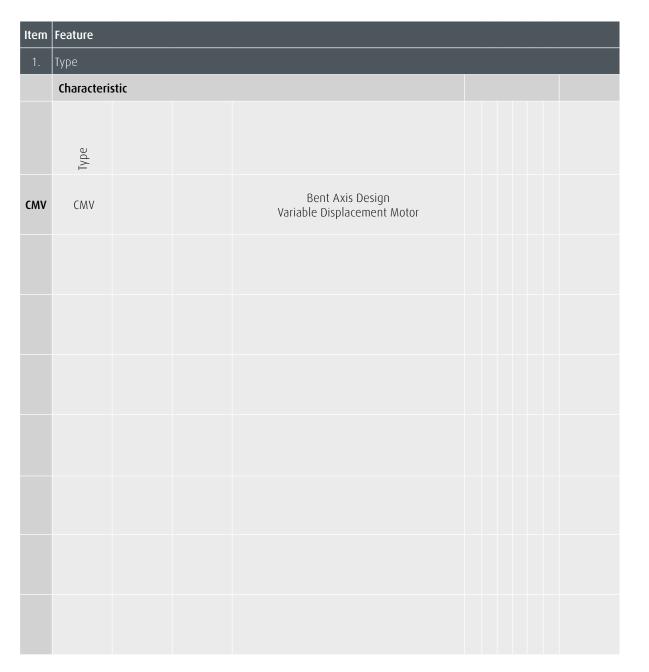


# Linde Hydraulics Linde Einde

## **OVERVIEW Key Facts** CONFIGURATION **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Electric Interfaces Mechanical Interfaces Shafts Hydraulical Interfaces Work Ports Auxiliary Ports Functions/Options

#### Configuration | Modelcode & Availability | **Type**







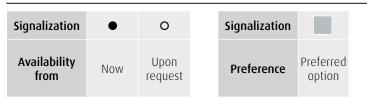
# Linde Hydraulics Linde Einde

## **OVERVIEW Key Facts** CONFIGURATION **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Electric Interfaces Mechanical Interfaces Shafts Hydraulical Interfaces Auxiliary Ports Functions/Options

### Configuration | Modelcode & Availability | **Model Code Release**

Item	Feature						
2.	Model code	e release					
	Characteri	stic					
	Release date						
A5	March 2023						

2. MODELCODE
EM





### **OVERVIEW Key Facts** CONFIGURATION **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Electric Interfaces Mechanical Interfaces Shafts Hydraulical Interfaces Auxiliary Ports Functions/Options

# (d)

### Configuration | Modelcode & Availability | **Nominal Size**

3.	
MODELCODE ITEM	Nominal Size

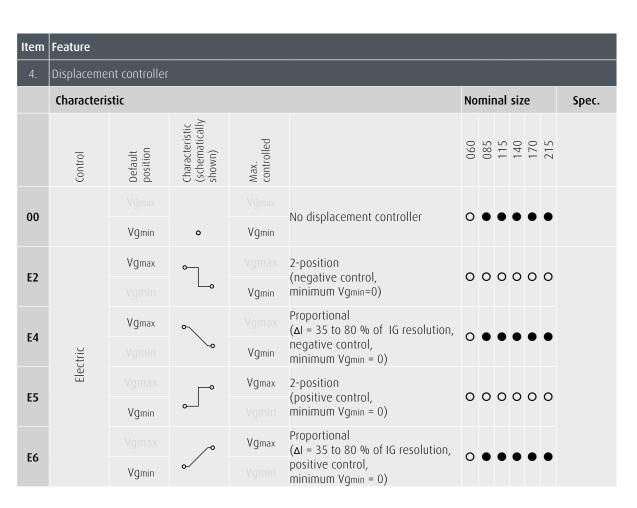
Item	Feature					
3.	Nominal siz	e				
	Characteris				Nominal size	Spec.
	Nominal size	Maximum displacement range [cc/rev]			060 085 115 170	<u>C</u> 7
060	60	62			0	
085	85	87.7			•	
115	115	115.3			•	
140	140	144.1			•	
170	170	170			•	
215	215	217.9			•	•

Signalization	•	0	Signalization	
Availability from	Now	Upon request	Preference	Preferred option

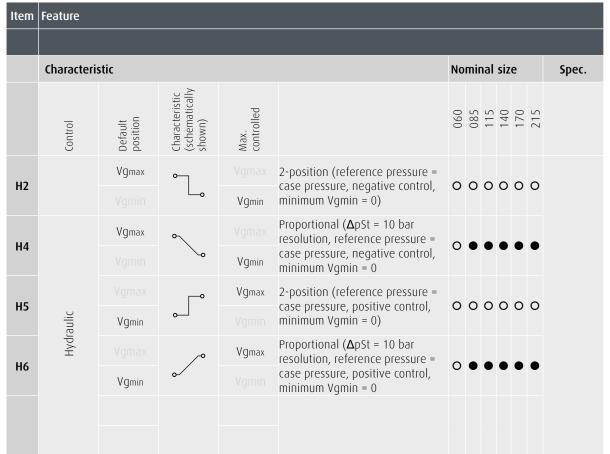


### **OVERVIEW** Key Facts CONFIGURATION Modelcode & Availability **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters **Electric Interfaces** Mechanical Interfaces Hydraulical Interfaces Work Ports **Auxiliary Ports** Functions/Options

### Configuration | Modelcode & Availability | **Displacement Controller**







Signalization	•	0
Availability from	Now	Upon request

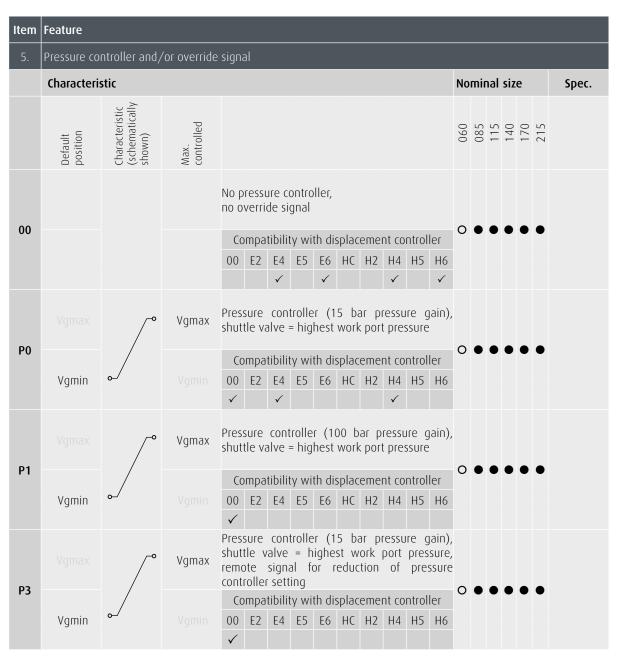


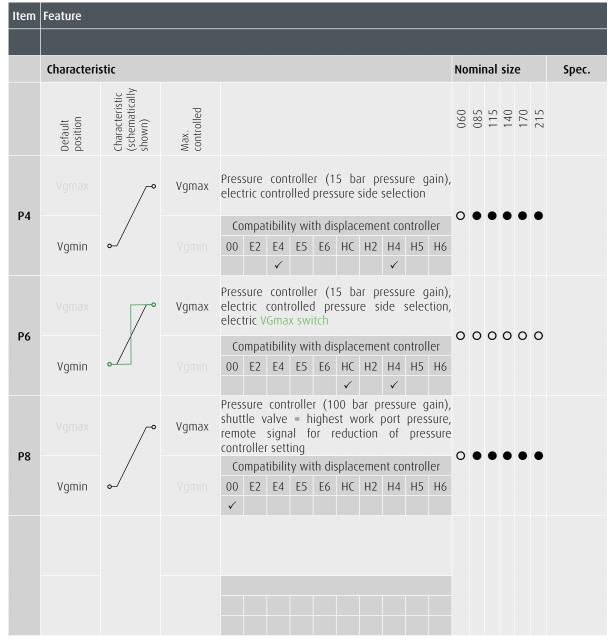


### **OVERVIEW Key Facts** CONFIGURATION Modelcode & Availability **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters **Electric Interfaces** Mechanical Interfaces Hydraulical Interfaces Work Ports Auxiliary Ports Functions/Options

### (M)

#### Configuration | Modelcode & Availability | Pressure Controller and/or Override Signal







# Linde Hydraulics Linde

# **OVERVIEW Key Facts** CONFIGURATION **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Electric Interfaces Mechanical Interfaces Shafts Hydraulical Interfaces Work Ports Auxiliary Ports Functions/Options

#### Configuration | Modelcode & Availability | Electric Connectors for Sensors & Solenoids



Item	Feature								
6.	Electric connectors for sensors & solenoids								
	Characterist	ic			Nominal size	Spec.			
					060 085 115 140 170 215				
0				Not applicable	0 • • • •				
D				Deutsch	0 • • • •				
Α				AMP Junior Timer	0 • • • •				



# Linde Hydraulics Linde Einde

## **OVERVIEW Key Facts** CONFIGURATION **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Electric Interfaces Mechanical Interfaces Shafts Hydraulical Interfaces Auxiliary Ports Functions/Options

### Configuration | Modelcode & Availability | Voltage for Solenoids

Item	Feature									
7.	Voltage for solenoids									
	Characteri	stic				Nominal size	Spec.			
						060 085 115 170 215	1			
0				Not applicable		0 • • • •	•			
1				12 V		0 • • • •				
2				24 V		0 • • • •				

7.			
MODELCODE ITEM	Voltage for Solenoids		

Signalization	•	0	Signalization	
Availability from	Now	Upon request	Preference	Preferred option

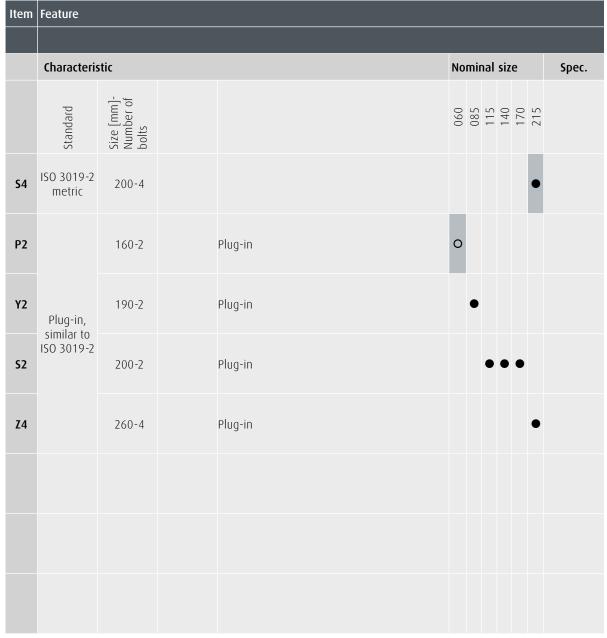


### **OVERVIEW Key Facts** CONFIGURATION **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Electric Interfaces Mechanical Interfaces Shafts Hydraulical Interfaces Work Ports Auxiliary Ports Functions/Options

### Configuration | Modelcode & Availability | Mounting Flange

8. MODELCODE	Mounting Flange

Item	Feature								
8.	Mounting fla	ange							
	Characteris	stic			Nominal size	Spec.			
	Standard	Size [mm]- Number of bolts					060 085 115 140 170	<u> </u>	
C2		127-2		SAE C			•		
<b>C4</b>	ISO 3019-1	127-4		SAE C			0		
D4	/ SAE J744	152-4		SAE D			•••		
<b>E4</b>		165-4		SAE E			•	•	
M4		125-4					0		
N4	ISO 3019-2 metric	140-4					•		
P4		160-4					•		
R4		180-4					••		



Signalization	•	0	Signalization	
Availability from	Now	Upon request	Preference	Preferred option



### **OVERVIEW Key Facts** CONFIGURATION **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Electric Interfaces Mechanical Interfaces Shafts Hydraulical Interfaces Work Ports Auxiliary Ports Functions/Options

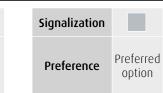
### Configuration | Modelcode & Availability | **Drive Shaft / Compagnion Flange**

9.		
MODELCODE ITEM	Drive Shaft / Compagnion Flange	

Item	Feature											
9.	Drive shaft ,	/ compagnio										
	Characteris	stic	Nominal size Spec.									
	Standard	Number of teeth	Spline pitch/ module	Identification code	060 085 115 140 170							
<b>S7</b>		14	12/24	32-4	o							
\$8		21	16/32	35-4	•							
<b>S</b> 9		17	12/24	38-4	•							
<b>V</b> 6	ISO 3019-1/ SAE J744	23	16/32	38-4	••							
V7		27	16/32	44-4	••							
T1		13	8/16	44-4	• • •							
Т2		15	8/16	50-4	• •							
D3	DIN5480	14	2	W30	О							
<b>D4</b>	טוועט460	16	2	W35	0							

Item	Feature				
	Characteris	stic		_	Nominal size Spec.
	Standard	Number of teeth	Spline pitch/ module	Identification code	060 085 115 140 170 215
<b>D5</b>		18	2	W40	••
D6	DIN5480	21	2	W45	•••
D7		24	2	W50	••
F4	SAE J1946				Companion flange Type A - 120x8xM10







## **OVERVIEW Key Facts** CONFIGURATION **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Electric Interfaces Mechanical Interfaces Hydraulical Interfaces Auxiliary Ports Functions/Options

#### Configuration | Modelcode & Availability | Port Plate Housing

	Feature											
10.	Port Plate Housing											
	Characteristic							Nominal size	Spec.			
		Open & dosed circuit operation	Closed circuit operation		Open circuit	operation	060 085 115 140 170					
	Work port orientation	Without additional functions	Flushing valve	Counter balance valve	Cross over relief valve	Anti-cavitation valve	Interface for external counter balance valve					
A0		✓						0 • • • •				
A1			✓					0 • • • •				
A3	Axial twin ports (facing to rear)				✓			0 0				
A4						✓		• •				
A5					✓		<b>✓</b>	0 0				
<b>S</b> 0	Side ports (facing to the	✓						0 • • • •				
<b>S</b> 1	outside, left and right)		✓					0 • • • •				



	Port Plate Housing									
10.	Port Plate Housi									
	Characteristic							Nominal size	Spec	
		Open & closed circuit operation	Closed circuit operation		Open	operation		060 085 115 140 170 215		
	Work port orientation	Without additional functions	Flushing valve	Counter balance valve	Cross over relief valve	Anti-cavitation valve	Interface for external counter balance valve			
R2	Radial twin ports			✓				0 0		

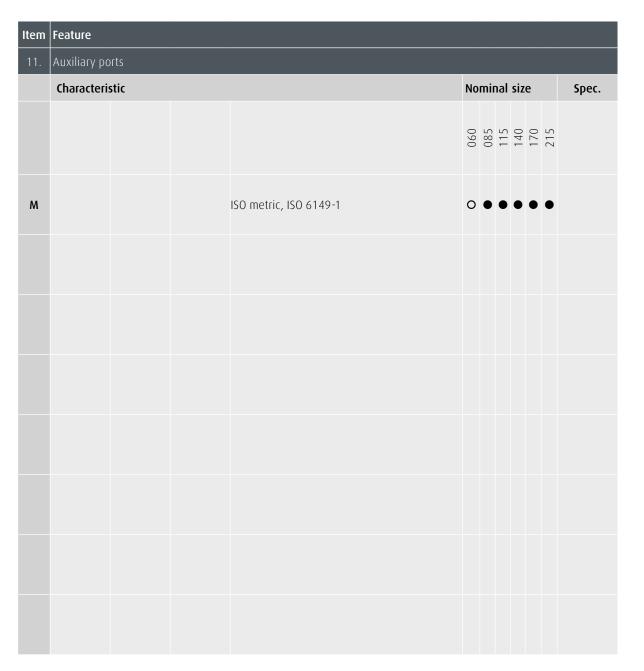
Signalization	•	0	Signalization	
Availability from	Now	Upon request	Preference	Preferred option

# Linde Hydraulics Linde Einde

# **OVERVIEW Key Facts** CONFIGURATION **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Electric Interfaces Mechanical Interfaces Shafts Hydraulical Interfaces Work Ports Auxiliary Ports Functions/Options

#### Configuration | Modelcode & Availability | **Auxiliary Ports**









### **OVERVIEW Key Facts** CONFIGURATION **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Electric Interfaces Mechanical Interfaces Shafts Hydraulical Interfaces Auxiliary Ports Functions/Options

# (n)

#### Configuration | Modelcode & Availability | Valve Function Settings

Item	Feature											
12.	Valve function settings (according to your choice at item 10. Port plate housing)											
	Characteri	stic	Nominal size	Spec.								
						060 085 115 170 215						
	Operation	Port plate function	Pressure [bar]	Flow [I/min]								
0			-	-		0 • • • •						
		No additional function										
Р	Open & closed circuit		400			0 0						
Q	Open 8		380			0 0						
R		Cross over relief valve	350			0 0						
S			300			0 0						
T			250			0 0						

ITEM
------

Item	Feature	Feature											
12.	Valve function settings (according to your choice at item 10. Port plate housing)												
	Characteri	stic	Nominal size	Spec.									
					060 085 115 170 215								
	Operation	Function	Pressure [bar]	Flow [I/min]									
В				6	0 • • • •								
D	.=			10	0 • • • •								
F	Closed circuit	Flushing		15	0 • • • •								
Н	D			20	0 • • • •								
J				25									

Signalization	•	0	Signalization	
Availability from	Now	Upon request	Preference	Preferred option



### **OVERVIEW Key Facts** CONFIGURATION **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Electric Interfaces Mechanical Interfaces Shafts Hydraulical Interfaces Auxiliary Ports Functions/Options

#### Configuration | Modelcode & Availability | **Speed Sensor**



Item	Feature					
13.	Speed sens	Oſ				
	Characteris				Nominal size	Spec.
	Speed sensor	Prepared for speed sensor	Without Speed sensor		060 085 115 140 170 215	
S	✓			Speed sensor, Function: speed and direction of rotation  Connector type: is to be defined at modelcode Item 6 (default: Deutsch)	0 • • • •	
V		✓		Option allows the subsequent installation of speed sensors  (Housing already has a mounting for the sensor, the drive shaft is equipped with an incremental ring)	0 • • • •	
0			✓	Option does not allow the subsequent installation of speed sensors  (Housing has no mounting for the sensor, the drive shaft is not equipped with an incremental ring)	00000	

Signalization	•	0	Signalization	
Availability from	Now	Upon request	Preference	Preferred option

# Linde Hydraulics Linde Einde

# **OVERVIEW Key Facts** CONFIGURATION **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Electric Interfaces Mechanical Interfaces Shafts Hydraulical Interfaces Auxiliary Ports Functions/Options

#### Configuration | Modelcode & Availability | **Seal Material**



Item	Feature				
14.	Seal materi				
	Characteri	stic		Nominal size	Spec.
				060 085 115 140 170	
V			FKM (Viton)	0 • • • •	



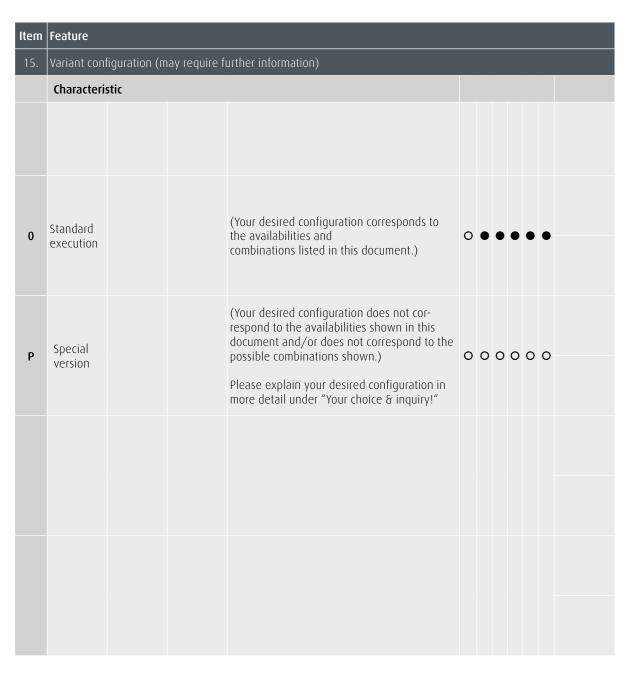
# Linde Hydraulics Linde

### **OVERVIEW** CONFIGURATION Modelcode & Availability **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Electric Interfaces Mechanical Interfaces Shafts Hydraulical Interfaces Work Ports Auxiliary Ports Functions/Options

## (d)

#### Configuration | Modelcode & Availability | Variant Configuration





Signalization	•	0	Signalization	
Availability from	Now	Upon request	Preference	Preferred option



### **OVERVIEW Key Facts** CONFIGURATION **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Electric Interfaces Mechanical Interfaces Shafts Hydraulical Interfaces Auxiliary Ports Functions/Options



#### Configuration | Modelcode & Availability | Corrosion Protection or Paint

16.	
 DELCODE ITEM	Corrosion Protection or Paint

Item	Feature								
16.	Corrosion protection or paint								
	Characteristic				Nominal size	Spec.			
	Corrosion protection	Primer	Paint		060 085 115 140 170 215				
00	Anticorit RPO-3002			Corrosion protection, no primer or paint, 6 month active	0 • • • •				
P1		oxide red, RAL 3009		Primer	0 • • • •				
Р6		traffic grey B RAL 7043		Primer (default primer)	0 • • • •				
V3		grey, RAL 7043	jet black, RAL 9005	2-coat paint	0 • • • •				
<b>V</b> 7		grey, RAL 7043	slate grey, RAL 7015	2-coat paint	0 • • • •				

Signalization	•	0	Signalization	
Availability from	Now	Upon request	Preference	Preferred option



### **OVERVIEW Key Facts** CONFIGURATION **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Electric Interfaces Mechanical Interfaces Shafts Hydraulical Interfaces Auxiliary Ports Functions/Options

## (d)

### Configuration | Modelcode & Availability | **Vg**max

Item	Feature						
17.	Vgmax						
	Characteris	tic				Nominal size	Spec.
	Fixed setting	Individual setting	Comes with adjustment screw	Subsequent changes possible	Set value [cc/rev]	060 085 115 140 170 215	
					62	0	
					87.7	•	
MAX	<b>√</b>				115.3	•	
MAX	•				144.1	•	
					170	•	
					217.9	•	
[VALUE]		✓	✓	✓	Individual value (numeric, 3 digits, only integer values) Minimum 70% of Vg <sub>max</sub> expressed in cc/rev)	0 • • • •	

Signalization	•	0	Signalization	
Availability from	Now	Upon request	Preference	Preferred option



### **OVERVIEW Key Facts** CONFIGURATION **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Electric Interfaces Mechanical Interfaces Shafts Hydraulical Interfaces Work Ports Functions/Options

#### Configuration | Modelcode & Availability | **Vg**min

In the following you will find the Modelcode structure for inquiries in context of the [Configuration]. All features of the CMV are listed including brief specification. Please consider the availability and compatibility of the individual items regarding the relevant nominal size. In context of an order or inquiry consider these items as a coherent model code. It serves for further processing. For a more in-depth look at the technical specifications, please refer to the relevant section under [Technical Specification].

Item	Feature								
18.	. Vgmin								
	Characteris	stic				Nominal size	Spec.		
	Fixed setting	Individual setting	Comes with adjustment screw	Subsequent changes possible	Set value [cc/rev]	060 085 115 140 170 215			
[VALUE]		✓	✓	✓	Range 0 to 70% of Vgmax*1 expressed in cc/rev (numeric, 3 digits, only integer values)	0 • • • •			



Preference Preferred option

# Linde Hydraulics Linde

# **OVERVIEW Key Facts** CONFIGURATION **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Electric Interfaces Mechanical Interfaces Shafts Hydraulical Interfaces Auxiliary Ports Functions/Options

#### Configuration | Modelcode & Availability | **Begin of Displacement Control**

MODELCODE Begin of Displacement Control (Hydraulic Controllers Only; as per 4.)	
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Item	Feature			
19.	Begin of displacemer	nt control (hydraulic controllers only; as per 4.)		
	Characteristic		Nominal size	Spec.
		Set value [bar]	060 085 115 140 170 215	
00		Not applicable	0 • • • •	
[VALUE]		Range 5 to 10 (numeric, 2 digits, only in 1 bar increments)	0 • • • •	

Signalization	•	0	Signalization	
Availability from	Now	Upon request	Preference	Preferred option

# Linde Hydraulics Linde

# **OVERVIEW Key Facts** CONFIGURATION **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Electric Interfaces Mechanical Interfaces Shafts Hydraulical Interfaces Work Ports Auxiliary Ports Functions/Options

#### Configuration | Modelcode & Availability | Regulation Begin of Pressure Override

20.	
MODELCODE ITEM	Regulation Begin of Pressure Override (as per 5.)

Item	Feature			
20.	Regulation begin of pre	essure override (as per 5.)		
	Characteristic		Nominal size	Spec.
		Set value [bar]	060 085 115 140 170	
000		Not applicable	0 • • • •	
[VALUE]		Range 80 to 400 (numeric, 3 digits, only in 10 bar increments)	0 • • • •	

Signalization	•	0	Signalization	
Availability from	Now	Upon request	Preference	Preferred option



# **OVERVIEW Key Facts** CONFIGURATION **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Electric Interfaces Mechanical Interfaces Hydraulical Interfaces Auxiliary Ports

Functions/Options

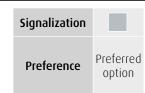
### Configuration | Modelcode & Availability | Control Damping

Item	Feature									
21.	Control damping									
	Characteris						Nominal size	Spec.		
	Option depends on	controller configuration	Undamped swiveling	Damped	swiveling		060 085 115 140 170 215			
	Displacement controller	Pressure cotroller		from Vgmin to Vgmax	from Vgmax to Vgmin					
	E4	00					0 • • • •			
	E6		00	,				0 • • • •		
	H4			00 •	✓				0 • • • •	
	Н6						0 • • • •			
		PO		✓			0 • • • •			
		P1		✓			0 • • • •			
1	00	Р3		✓			0 • • • •			
		P8		✓			0 • • • •			
	E4			,			0 • • • •			
	H4	PO		✓	✓		0 • • • •			
	E4			,			0 • • • •			
	H4	P4		✓	✓		0 • • • •			
	H4	P6		✓	✓		0 • • • •			



Item	Item Feature								
	Characteri	stic					Nominal size	Spec.	
	Option depends on	controller configuration	Undamped swiveling	Damped	swiveling		060 085 115	215	
	Displacement controller	Pressure cotroller		from Vgmin to Vgmax	from Vgmax to Vgmin				
	E4						0 • • •	• •	
	E6	✓	✓		0 • • •	• •			
2	H4	00		V	V		0 • • •	• •	
	Н6						0 • • •	• •	







General Technical Data

**OVERVIEW** 

Key Facts

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**TECHNICAL SPECIFICATION** 

General Technical Data

Operating Parameters

Controls

Sensors

Electric Interfaces

Connectors

Mechanical Interfaces

Shafts

Hydraulical Interfaces

Work Ports

Auxiliary Ports

Functions/Options

### Technical Specification | **General Technical Data**

In the following you will find the general technical data of the CMV. The values listed refer to the respective nominal size and take into account the general use. If these data do not correspond to the requirements in the context of your application, please contact us. Other values are available upon individual consideration of your application.

General technical data					
Nominal size					
	Vg <sub>max</sub>				
		at total pressure (A+B) = 40 bar			
Displacement	Vgx	at total pressure (A+B) = 120 bar	cc/rev		
		at total pressure (A+B) = 140 bar			
	Vg <sub>min</sub>				
		at Vg <sub>max</sub>			
Speed	Nominal speed	at $Vg \leq Vg_X$	rpm		
		at Vg <sub>min</sub>			
	at Vg <sub>max</sub>				
Inlet flow			I/min		
mict now			1/ 111111		
	Nominal pressure				
Pressure <sup>1</sup>	Maximum pressure <sup>2</sup>				
	Maximum housing pressure				
Torque	Output torque at $\Delta p$ = 430 bar				
Temperature	Perm. housing tempe	rature	°C		
Weight (without oil) approx.			kg		

60	85	115	140	170	215
60	85	115	140	170	215
62	87.7	115.3	144.1	170	217.9
upon request	29.8	39.2	49	64.6	82.8
-	-	-	-	105.4	135.1
upon request	52.6	69.2	86.5	-	-
0	0	0	0	0	0
4450	3900	3550	3250	3100	2900
7200	6800	6150	5600	4900	4600
		upon r	equest		
upon request	342.0	409.3	468.3	527.0	631.9
		45	50		
		50	00		
		2	.5		
411	582	787	958	1163	1471
		9	0		
27.7	36.3	44.8	59.2	62.1	76.4



 $<sup>^{1}</sup>$  reference = ambient pressure;  $^{2}$  highest transient pressure, that can temporarily occur





Operating Range

Displacement/Speed

Recommendations
Operating Conditions

Viscosity/Temperature

#### **OVERVIEW**

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odelcode & Availability

#### **TECHNICAL SPECIFICATION**

General Technical Data

Operating Parameters

Control

Sensors

Electric Interfaces

Connectors

Mechanical Interfaces

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Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

Functions/Options

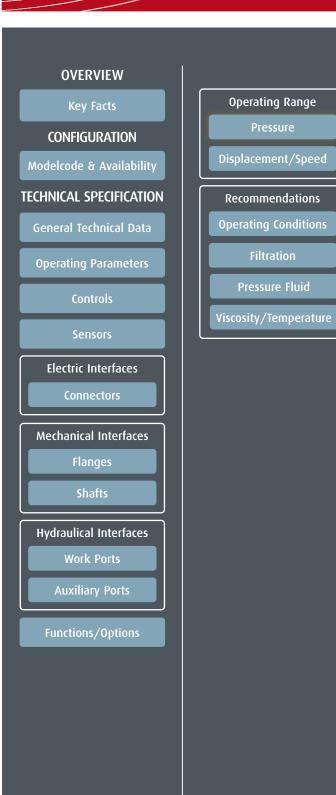
# Technical Specification | Operating Parameters | **Pressure**

Pressure at work port A or B			
Nominal pressure p <sub>nom</sub>			450
Maximal pressure p <sub>max</sub>		bar	500
Minimum pressure pump operating mode inlet			see the diagram
Maximum summation pressure psu (pressure A + pressure B)			upon request
Rate of pressure change RAmax	Without pressure relief valve	bar/s	16000
react of pressure change RAIIIax	With pressure relief valve	ngi/ 3	9000

Definition
The nominal pressure corresponding to the maximum design pressure
Highest transient pressure, that can temporarily occur; reference = ambient pressure
In order to prevent damage to the motor during pump operation (changing the the high-pressure side while the direction of rotation remains the same, e.g. during braking), a minimum pressure must be ensured at the work ports (inlet).
The summation pressure is the sum of the pressures at both work ports (A and B); reference = ambient pressure
Maximum permissible rate of pressure build up and reduction during a pressure change over the entire pressure range (Definition see diagram)

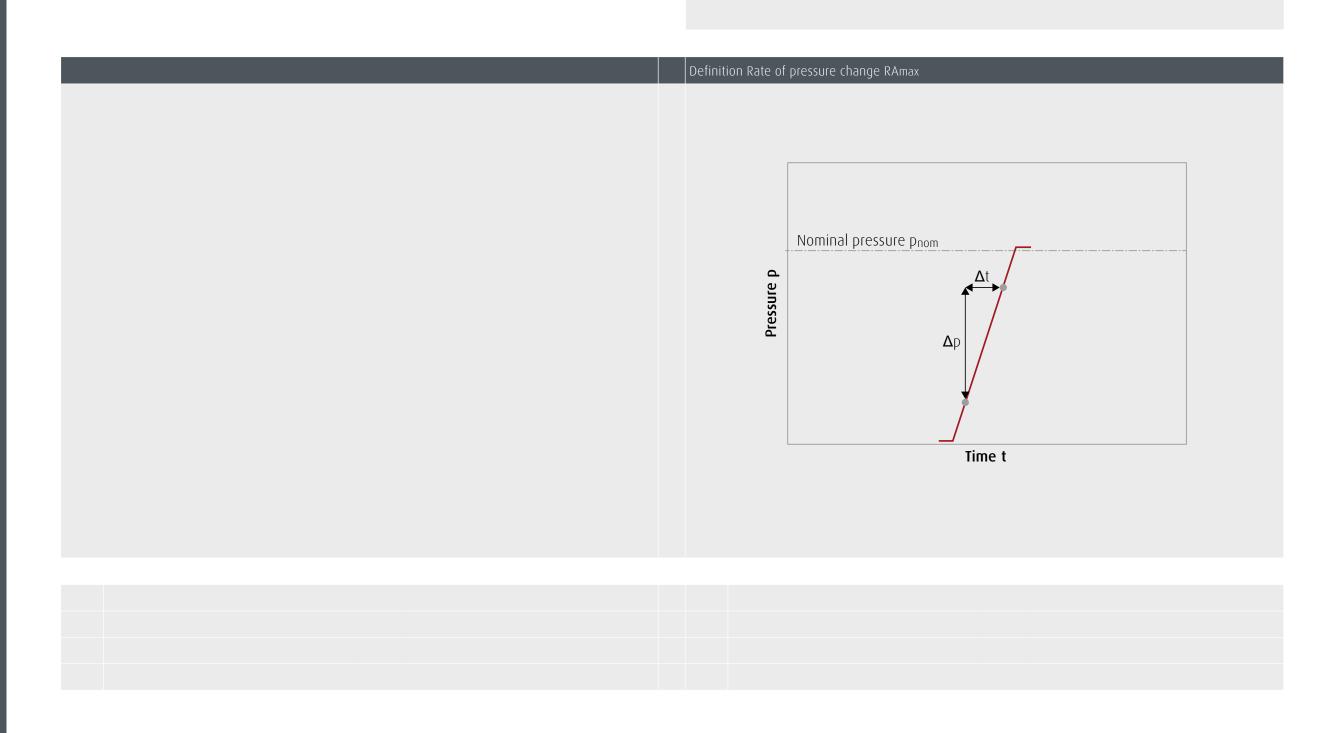








### Technical Specification | Operating Parameters | **Pressure**







Operating Range

Displacement/Speed

Recommendations

**Operating Conditions** 

Viscosity/Temperature

#### **OVERVIEW**

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Modelcode & Availability

#### **TECHNICAL SPECIFICATION**

General Technical Data

Operating Parameters

Control

Sensors

**Electric Interfaces** 

Connectors

Mechanical Interfaces

Shafts

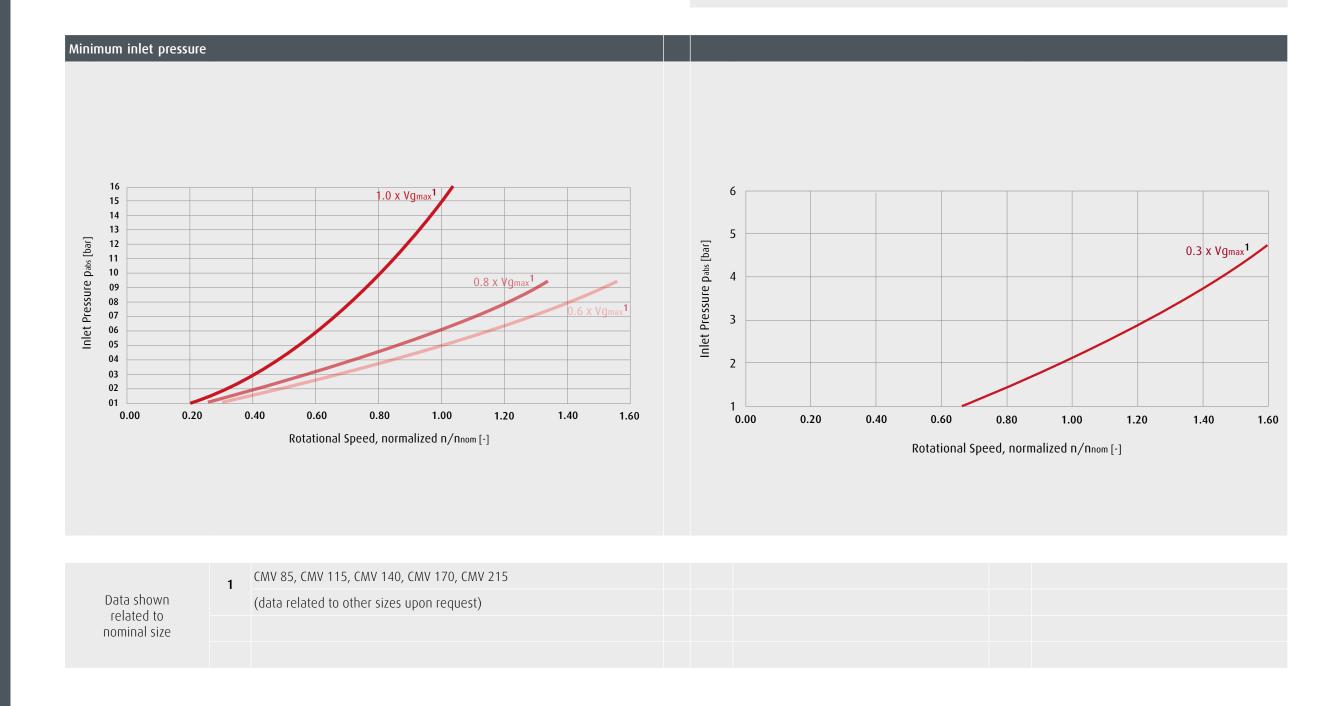
Hydraulical Interfaces

Work Ports

Auxiliary Ports

Functions/Options

# Technical Specification | Operating Parameters | **Pressure**









Operating Range

Displacement/Speed

Recommendations

**Operating Conditions** 

Viscosity/Temperature

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Connector

Mechanical Interfaces

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Shafts

Hydraulical Interfaces

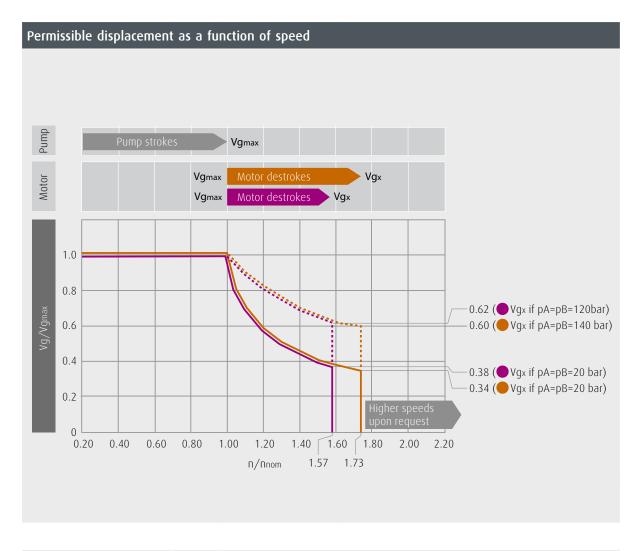
Work Ports

Auxiliary Ports

Functions/Options

### Technical Specification | Operating Parameters | Displacement/Speed

In the following you will find the operating parameters which should be considered to ensure safe operation under all prevailing conditions and a long service life of the CMV.

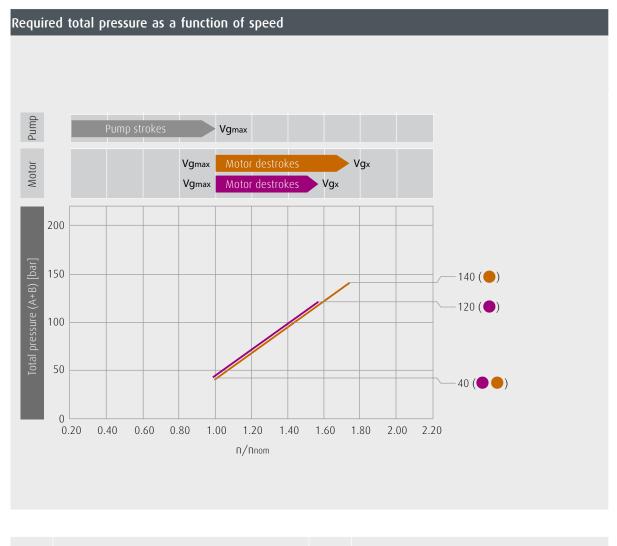


CMV 85, CMV 115, CMV 140

CMV 170, CMV 215

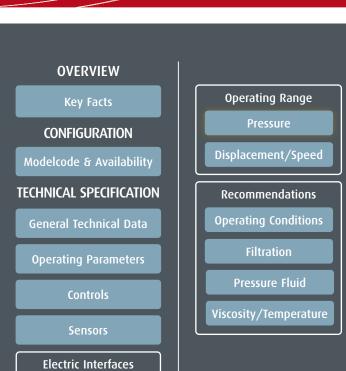
Data shown

related to nominal size









Mechanical Interfaces

Hydraulical Interfaces

Functions/Options

### Technical Specification | Operating Parameters | **Operating Conditions**

General technical o	data	
Nominal size		
Spand	Speed	
Speed		
Droccuro	Operating pressure	bar
Pressure	Max. pressure	Dal
Power		
rowei		
	Viscosity	Centistokes (cSt)
Fluid	Durity of fluid	
	Purity of fluid	

Beneficial conditions for long service life	Adverse factors for long service life
All sizes	All sizes
Lower continuous maximum speed	Between nominal speed and maximum speed
<300 on average	>300 on average
Only at reduced displacement	
Continuous power or lower	Continuous operation close to maximum power
15 30	
In accordance with ISO 4406	In accordance with ISO 4406
18/16/13 or better	Worse than 18/16/13







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Recommendations

Operating Conditions

Filtration

Viscosity/Temperature

Commissioning

Minimum requirements

Filtration

Filling and operation of hydraulic systems

For reliable proper function and long service life

Comparable international standards

#### Technical Specification | Operating Parameters | **Filtration**

In the following you will find the operating parameters which should be considered to ensure safe operation under all prevailing conditions and a long service life of the CMV.

		18/16/13

20/18/15

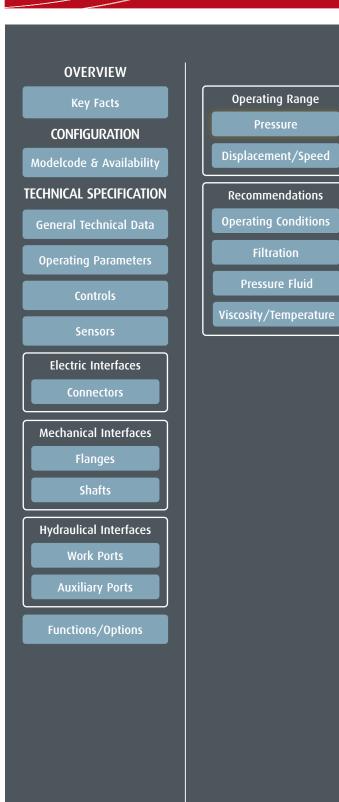
The minimum purity requirement for the hydraulic oil is based on the most sensitive system component. For commissioning we recommend a filtration in order to achieve the required purity.

The required purity of the hydraulic oil must be ensured during filling or topping up. When drums, canisters or large-capacity tanks are used the oil generally has to be filtered. We recommend the implementation of suitable measures (e.g. filters) to ensure that the required minimum purity of the oil is also achieved during operation.

Purity class according to ISO 4406		Purity class according to SAE AS 4059 E
18/16/13	corresponds to	8A/7B/7C
20/18/15	corresponds to	9A/8B/8C









### Technical Specification | Operating Parameters | **Pressure Fluid**

In the following you vunder all prevailing c	will find the operating parameters which should be considered to e onditions and a long service life of the CMV.	re safe operation	
Pressure fluid			
		Mineral oil HL	<sup>o</sup> according to DIN 51 524-2
Pressure fluid	Permitted pressure fluids	Biodegradable fluids in a	ccordance with ISO 15 380 on request
		Other pre	ssure fluids on request





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3.10.1

Hydraulical Interfaces

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Functions/Options



Viscosity/Temperature





### Technical Specification | Operating Parameters | Temperature/Viscosity

In the following you will find the operating parameters which should be considered to ensure safe operation under all prevailing conditions and a long service life of the CMV.

In order to be able to select the right hydraulic fluid it is necessary to know the working temperature in the hydraulic circuit. The hydraulic fluid should be selected that its optimum viscosity is within the working temperature range (see tables). The temperature should not exceed 90 °C in any part of the system. Due to pressure and speed influences the leakage fluid temperature is always higher than the circuit temperature. Please contact Linde Hydraulics if the stated conditions cannot be met in special circumstances.

[°C]
/s] = [cSt]
/s] = [cSt]
/s] = [cSt]
[°C]

-20 à +105 °C
10 to 80 cSt
15 to 30 cSt
1000 cSt
Viscosity class [mm²/s] = [cSt] at 40 °C
22 cSt
32 cSt
46 ог 68 cSt





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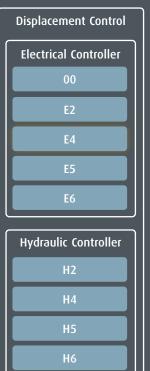
Shafts

**Hydraulical Interfaces** 

Work Ports

**Auxiliary Ports** 

Functions/Options

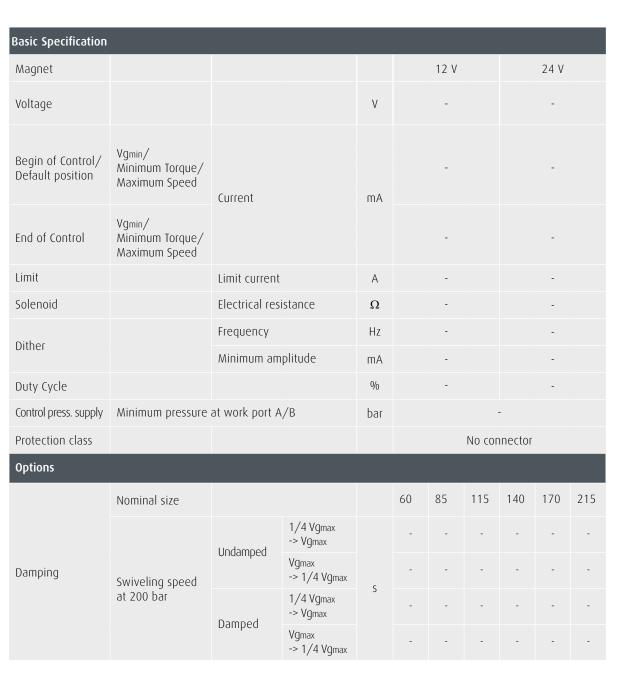


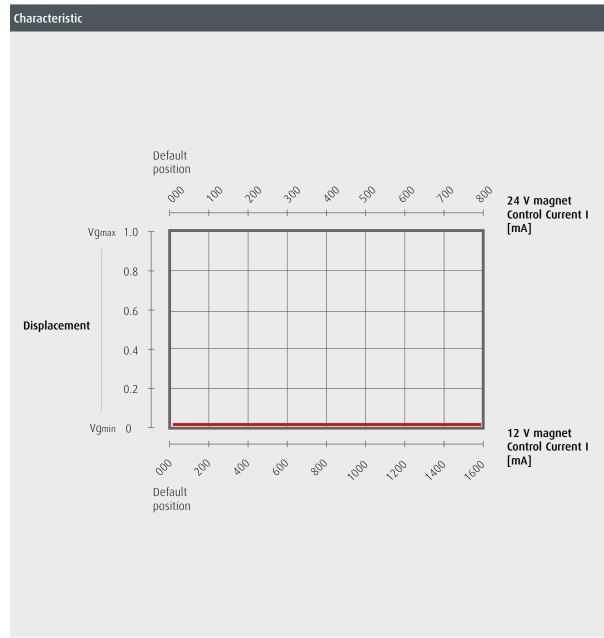
Pressure Control/ Override
00
P0
P1
Р3
P4
P6
P8

### Technical Specification | Controls | Displacement Controller | **00**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

The displacement controller with the abbreviation "00" is not an individual function. In this case, the component for diplacement and pressure control does not support dispacement control. The motor is in default position Vgmin. When choosing this option, a pressure controller must be considered to control the motor.











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Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

Functions/Options



Pressure Control/ Override

00

P0

P1

P3

P4

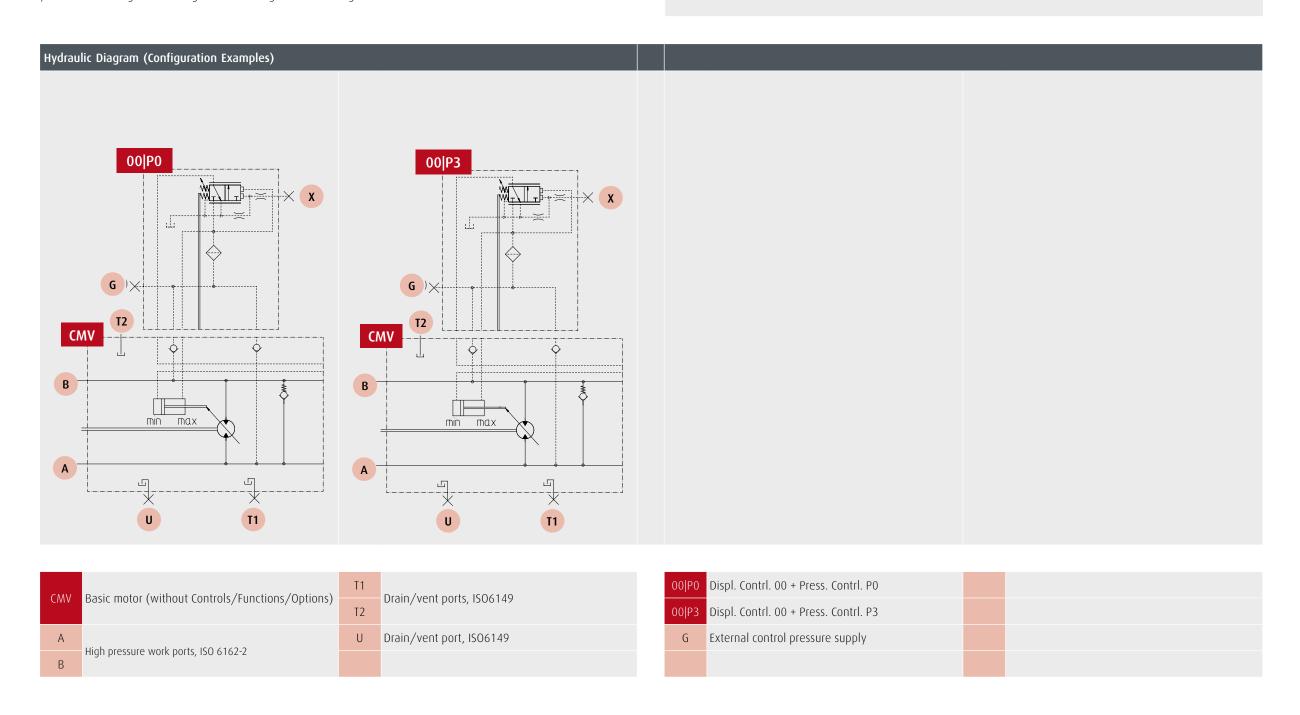
P6

P8



#### Technical Specification | Controls | Displacement Controller | **00**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.







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Pressure Control/ Override
00
P0
P1
P3
P4
P6
P8

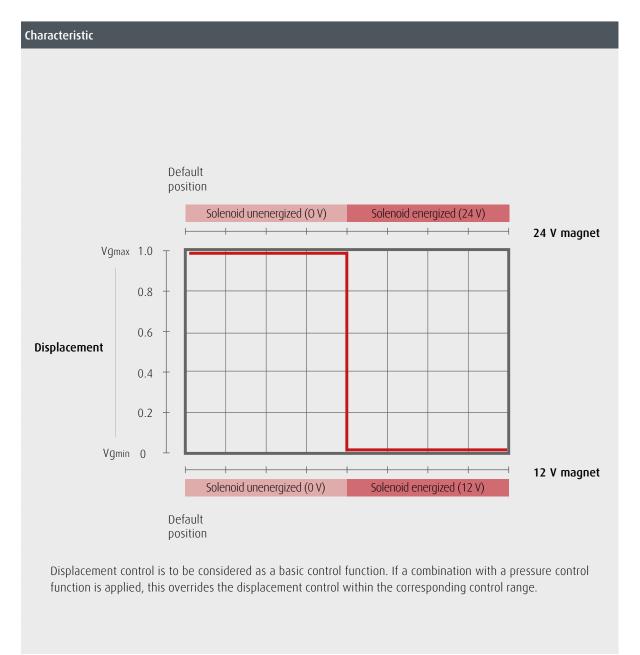


#### Technical Specification | Controls | Displacement Controller | **E2**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

				_	_	_	_	_	_	_
Basic Specification										
Magnet					12 V		24 V			
Voltage				V	(-10	12 %/+ 20	) %) (-10		24 (-10%/+ 20%)	
Begin of Control/ Default position	Vgmax/ Maximum Torque/ Minimum Speed	Status soleno		Solenoid unenergized						
End of Control	Vgmin/ Minimum Torque/ Maximum Speed				Solenoid energized					
Solenoid		Electrical res	istence	Ω	6.3		24.6			
Duty Cycle			0/0		100 100			100		
Control press. supply	Minimum pressure	at work port A	bar	30						
Protection class					See connector					
Options										
	Nominal size				60	85	115	140	170	215
Damping	Approx. swiveling speed at 200 bar	Undamped	1/4 Vgmax -> Vgmax	S	upon request	upon request	upon request	upon request	upon request	upon request
			Vgmax -> 1/4 Vgmax		upon request	upon request	upon request	upon request	upon request	upon request
		Damped	1/4 Vgmax -> Vgmax		upon request	upon request	upon request	upon request	upon request	upon request
		Daniped	Vgmax -> 1/4 Vgmax		upon request	upon request	upon request	upon request	upon request	upon request

The displacement controller E2 is an electric controller that enables 2-point negative control and default position Vg<sub>max</sub>. In addition, one-sided or two-sided damping is optionally available. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.







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Connectors

Mechanical Interfaces

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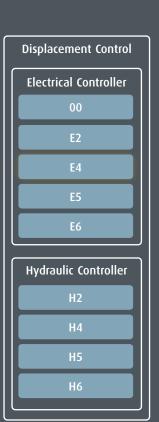
Shafts

Hydraulical Interfaces

Work Ports

Auxiliary Ports

Functions/Options



Pressure Control/ Override

00

P0

P1

P3

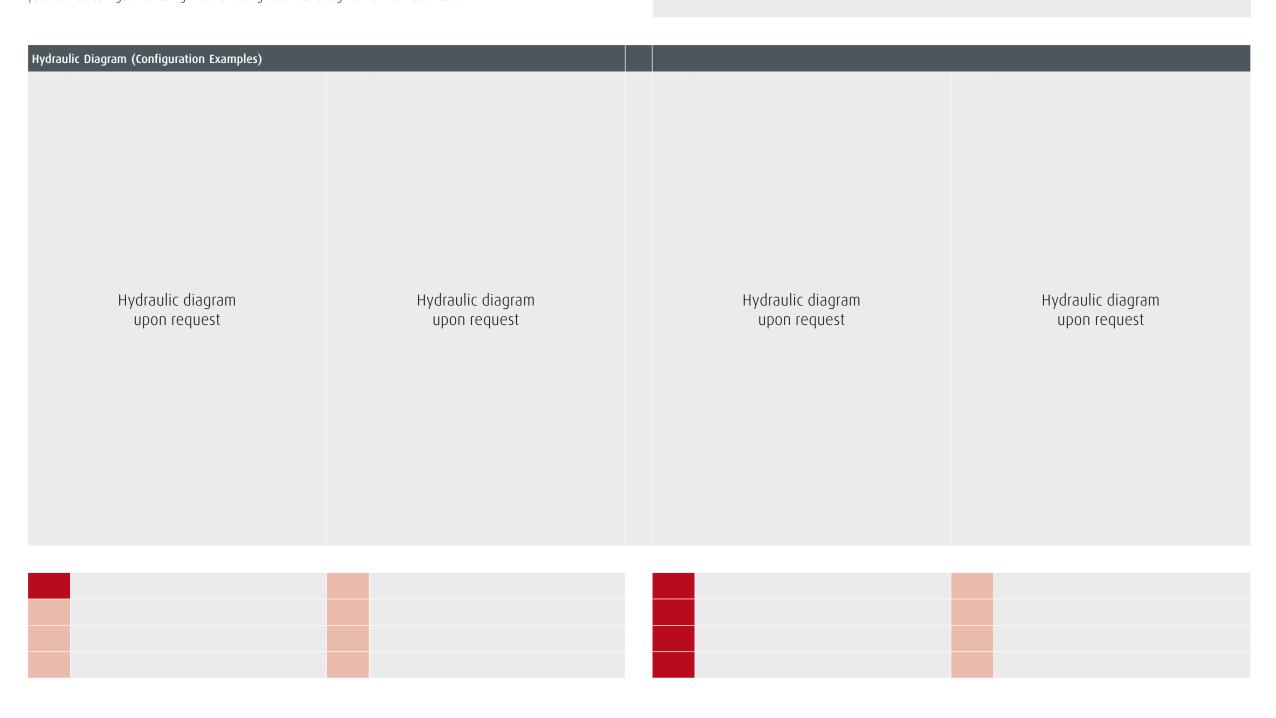
P4

P6

P8



## Technical Specification | Controls | Displacement Controller | **E2**







Key Facts

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#### **TECHNICAL SPECIFICATION**

General Technical Data

Operating Parameters

Controls

Sensor

**Electric Interfaces** 

Connectors

Mechanical Interfaces

Shafts

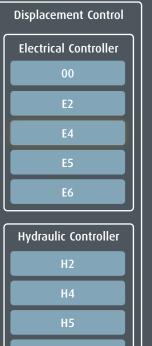
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**Hydraulical Interfaces** 

Work Ports

**Auxiliary Ports** 

Functions/Options



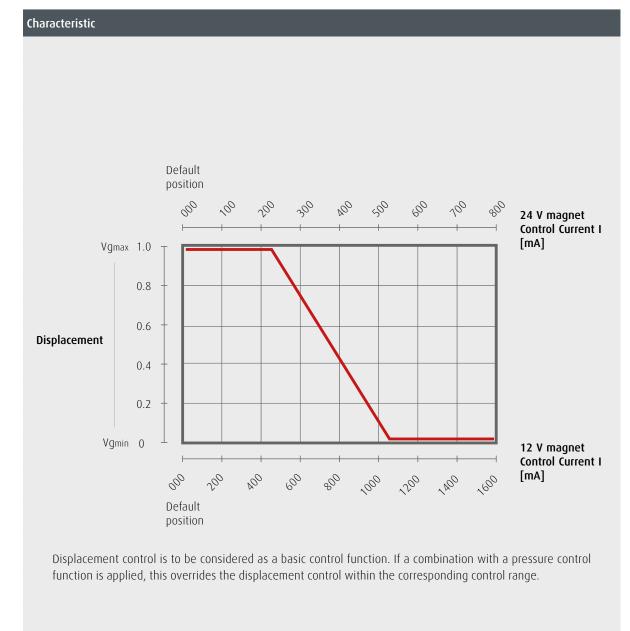
Pressure Control/ Override
00
PO
P1
Р3
P4
P6
P8

## Technical Specification | Controls | Displacement Controller | **E4**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

Basic Specification											
Magnet					12 V			24 V			
Voltage				V	12 (-10%/+ 20 %)			24 (-10%/+ 20%)			
Begin of Control/ Default position	Vg <sub>max</sub> / Maximum Torque/ Minimum Speed	Current	mA	450			225				
End of Control	Vgmin/ Minimum Torque/ Maximum Speed			1050			525				
Limit		Limit current	А		1.3		0.65				
Solenoid		Electrical res	Ω	6.3			24.6				
Dither		Frequency		Hz		100		100			
Dittiei		Minimum am	plitude	mA	320		160				
Duty Cycle				0/0		100 100					
Control press. supply	Minimum pressure	at work port A	л/В	bar	30						
Protection class					See connector						
Options											
	Nominal size				60	85	115	140	170	215	
		Undamped	1/4 Vgmax -> Vgmax	S	-	0.15	0.2	0.2	0.3	0.5	
Damping	Approx. swiveling speed at 200 bar	Undamped	Vgmax -> 1/4 Vgmax		-	0.15	0.2	0.2	0.3	0.5	
		Damped	1/4 Vgmax -> Vgmax		-	0.3	0.5	0.5	0.6	1.0	
			Vgmax -> 1/4 Vgmax		-	0.3	0.5	0.5	0.6	1.0	

The displacement controller E4 is an electric controller that enables stepless negative control (proportional to the applied control current) and default position Vgmax. In addition, one-sided or two-sided damping is optionally available. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.









Key Facts

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#### **TECHNICAL SPECIFICATION**

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Operating Parameters

Control

Sensor

**Electric Interfaces** 

Connectors

Mechanical Interfaces

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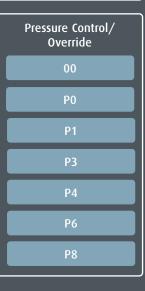
Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

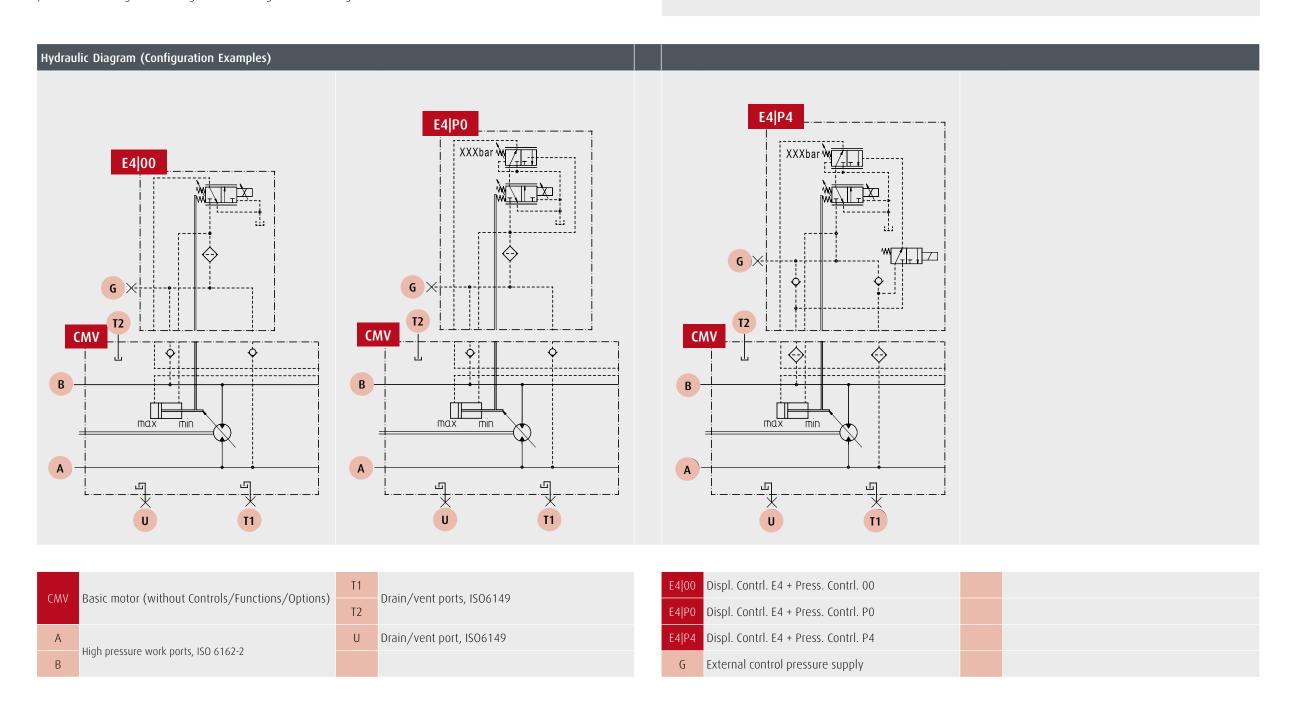
Functions/Options







## Technical Specification | Controls | Displacement Controller | **E4**







Key Facts

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ለodelcode & Availability

#### **TECHNICAL SPECIFICATION**

General Technical Data

Operating Parameters

Control

Sensor

**Electric Interfaces** 

Connectors

Mechanical Interfaces

Shaft:

Hydraulical Interfaces

Work Ports

Auxiliary Ports

Functions/Options



Pressure Control/ Override
00
P0
P1
Р3
P4
P6
P8

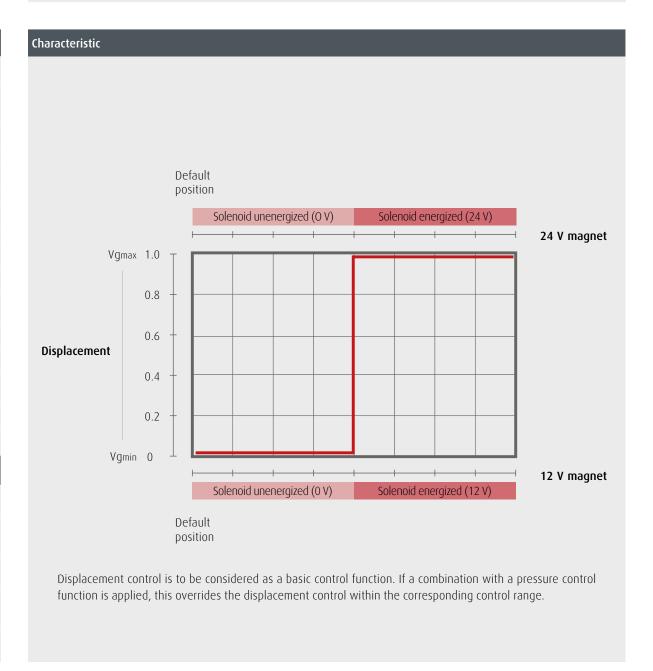


## Technical Specification | Controls | Displacement Controller | **E5**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

Basic Specification												
Magnet				12 V			24 V					
Voltage		V 12 (-10%/+ 20 %)				24 (-10%/+ 20%)						
Begin of Control/ Default position	Vg <sub>min</sub> / Minimum Torque/ Maximum Speed	Status soleno	oid		Solenoid unenergized							
End of Control	Vgmax/ Maximum Torque/ Minimum Speed			Solenoid energized								
Solenoid		Electrical res	Ω	6.3 24.6			24.6					
Duty Cycle				%	100 100							
Control press. supply	Minimum pressure	at work port A	/В	bar	30							
Protection class					See connector							
Options												
	Nominal size				60	85	115	140	170	215		
		Undamped	1/4 Vgmax -> Vgmax	S	upon request	upon request	upon request	upon request	upon request	upon request		
Damping	Approx. swiveling speed at 200 bar	опаатреа	Vgmax -> 1/4 Vgmax		upon request	upon request	upon request	upon request	upon request	upon request		
		Damped	1/4 Vgmax -> Vgmax		upon request	upon request	upon request	upon request	upon request	upon request		
		Damped	Vgmax -> 1/4 Vgmax		upon request	upon request	upon request	upon request	upon request	upon request		

The displacement controller E5 is an electric controller that enables 2-point positive control and default position Vgmin. In addition, one-sided or two-sided damping is optionally available. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.







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Auxiliary Ports

Functions/Options

Displacement Control

Electrical Controller

00

E2

E4

E5

E6

Hydraulic Controller

H2

H4

H5

H6

Pressure Control/ Override

P0

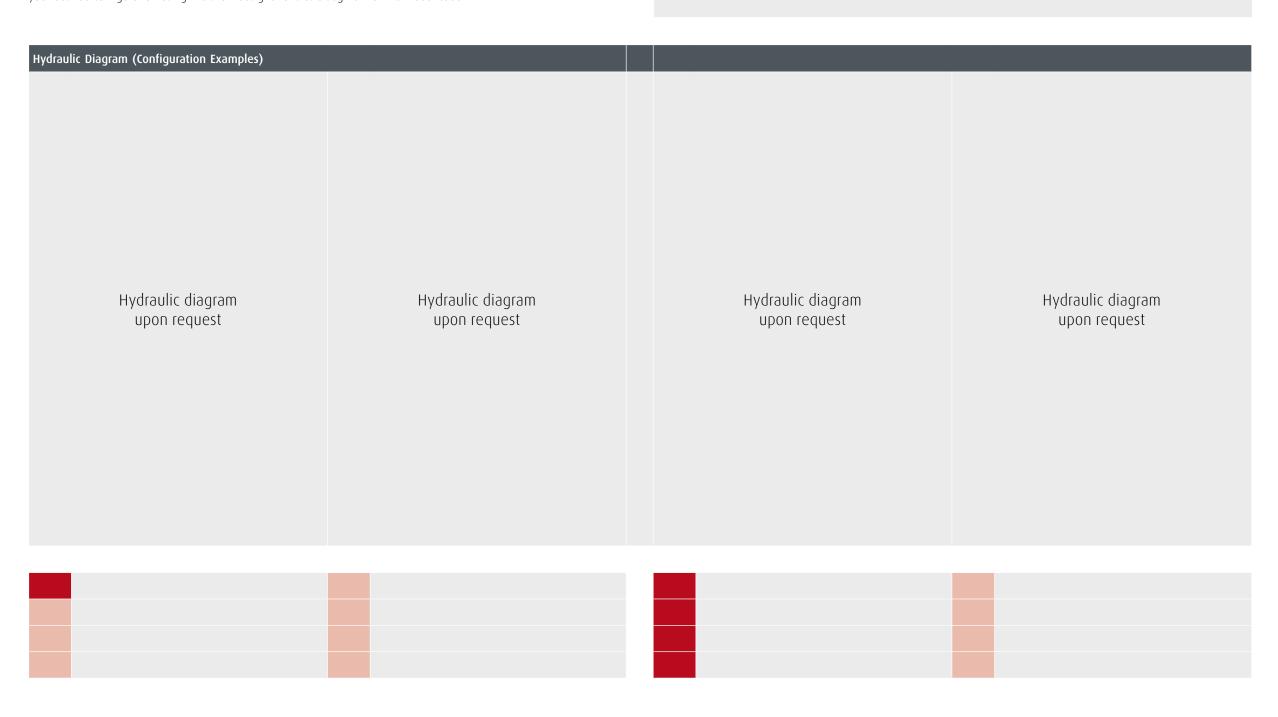
P1 P3

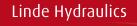
D4

P6



## Technical Specification | Controls | Displacement Controller | **E5**







Key Facts

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Sensor

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Mechanical Interfaces

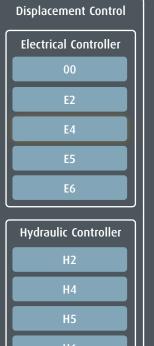
Shafts

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Work Ports

**Auxiliary Ports** 

Functions/Options



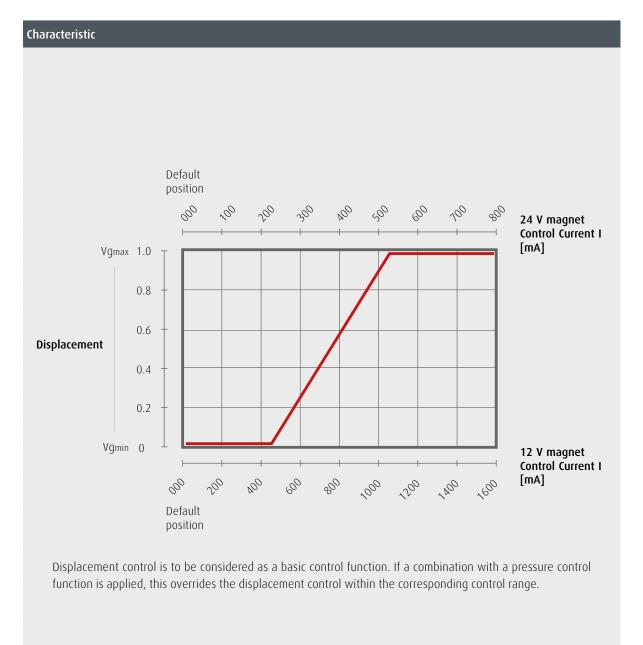
Pressure Control/ Override
00
P0
P1
P3
P4
P6
P8

## Technical Specification | Controls | Displacement Controller | **E6**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

Basic Specification											
Magnet					12 V			24 V			
Voltage				V	12 (-10%/+ 20 %)			24 (-10%/+ 20%)			
Begin of Control/ Default position	Vgmin/ Minimum Torque/ Maximum Speed	Current	mA	450			225				
End of Control	Vgmax/ Maximum Torque/ Minimum Speed			1050			525				
Limit		Limit current	А		1.3		0.65				
Solenoid		Electrical res	Ω	6.3			24.6				
Dither		Frequency		Hz	100			100			
Dittiei		Minimum am	plitude	mA	320		160				
Duty Cycle				0/0		100 100					
Control press. supply	Minimum pressure	at work port A	л/В	bar	30						
Protection class					See connector						
Options											
	Nominal size				60	85	115	140	170	215	
		Undamped	1/4 Vgmax -> Vgmax	S	-	0.15	0.2	0.2	0.3	0.5	
Damping	Approx. swiveling speed at 200 bar	Undamped	Vgmax -> 1/4 Vgmax		-	0.15	0.2	0.2	0.3	0.5	
		Damped	1/4 Vgmax -> Vgmax		-	0.3	0.5	0.5	0.6	1.0	
			Vgmax -> 1/4 Vgmax		-	0.3	0.5	0.5	0.6	1.0	

The displacement controller E6 is an electric controller that enables stepless positive control (proportional to the applied control current) and default position Vgmin. In addition, one-sided or two-sided damping is optionally available. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.









Key Facts

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lodelcode & Availability

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Sensor

**Electric Interfaces** 

Connectors

Mechanical Interfaces

Shafts

Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

Functions/Options



# Pressure Control/ Override 00 P0 P1 P3 P4 P6 P8



## Technical Specification | Controls | Displacement Controller | **E6**







**Key Facts** 

CONFIGURATION

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Operating Parameters

**Electric Interfaces** 

Mechanical Interfaces

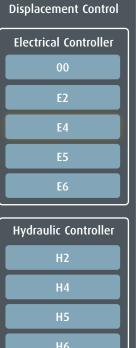
Shafts

Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

Functions/Options



E4
E5
E6
Hydraulic Controller
H2
H4
H5
H6
Pressure Control/ Override
00
PO
P1

P6

## Technical Specification | Controls | Displacement Controller | **H2**

- 0.3 0.5 0.5 0.6 1.0

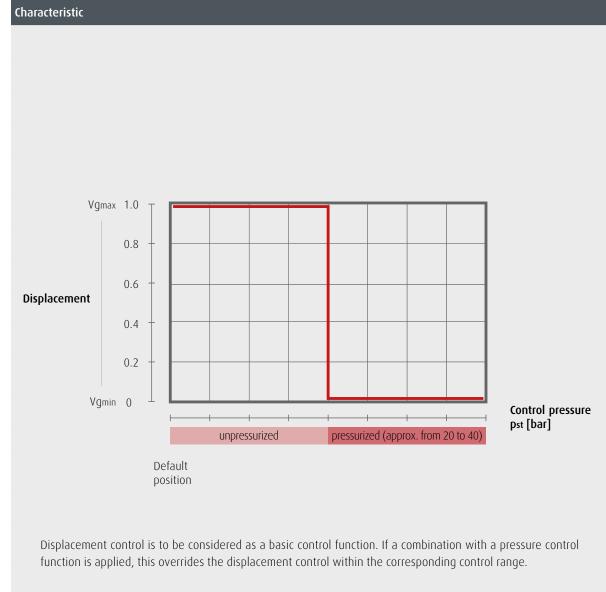
In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

**Basic Specification** Control Begin of control/ Maximum torque/ pressure Pilot port unpressurized Default position Minimum speed (pst) bar Vgmin/ Control Pilot port pressurized End of control Minimum torque/ pressure (approx. from 20 to 40) Reference pressure Reference Case pressure Limit 50 Maximum pilot pressure Control press. supply Minimum pressure at work port A/B bar 30 Threaded port ISO 6149-1 M14x1.5 Nominal size 85 115 140 170 215 1/4 Vgmax 0.15 0.2 0.2 0.3 0.5 -> Vgmax Undamped Vqmax 0.15 0.2 0.2 0.3 0.5 Damping -> 1/4 Vgmax Approx. swiveling speed at 200 bar 1/4 Vgmax 0.3 0.5 0.5 0.6 1.0 -> Vgmax

-> 1/4 Vgmax

Damped

The displacement controller H2 is an hydraulic controller that enables 2-point negative control and default position Vqmax. In addition, one-sided or two-sided damping is optionally available. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.







## OVERVIEW Key Facts

CONFIGURATION

delcode & Availability

**TECHNICAL SPECIFICATION** 

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Control

Sensor

Electric Interfaces

Connectors

Mechanical Interfaces

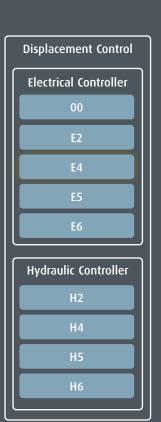
Shafts

Hydraulical Interfaces

Work Ports

Auxiliary Ports

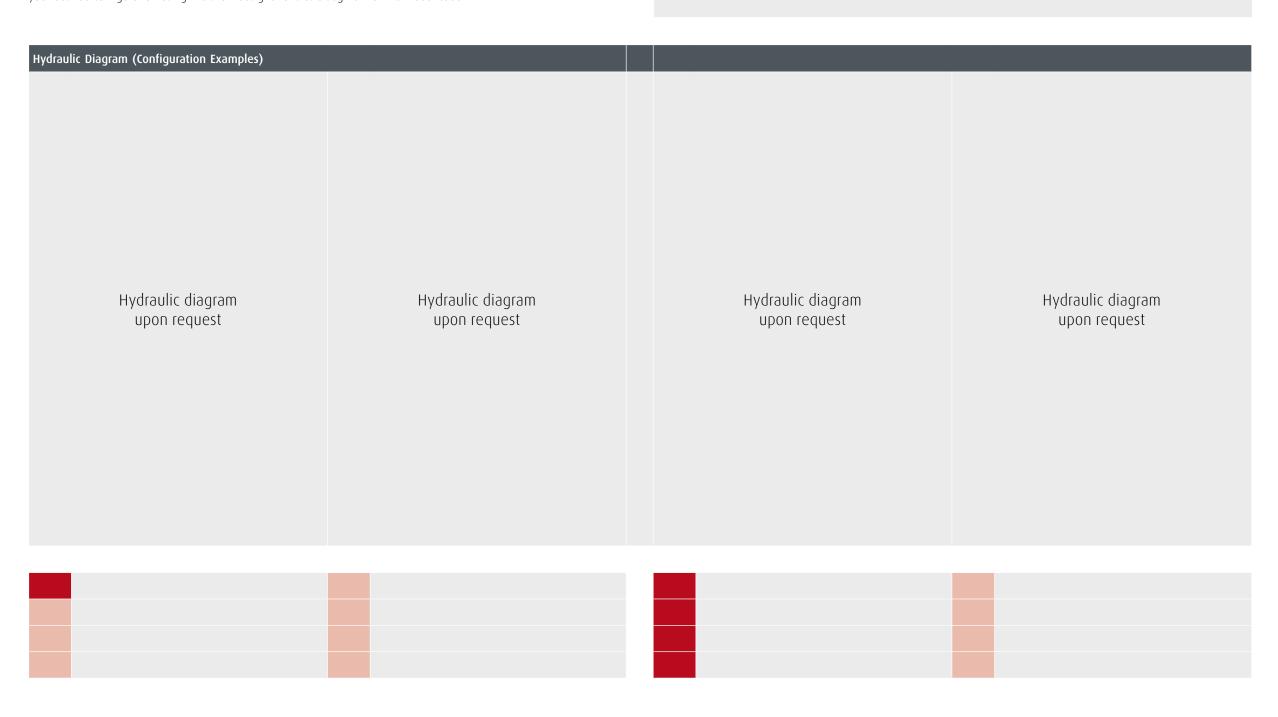
Functions/Options







## Technical Specification | Controls | Displacement Controller | **H2**







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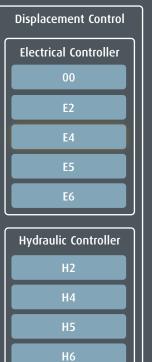
Shafts

Hydraulical Interfaces

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**Auxiliary Ports** 

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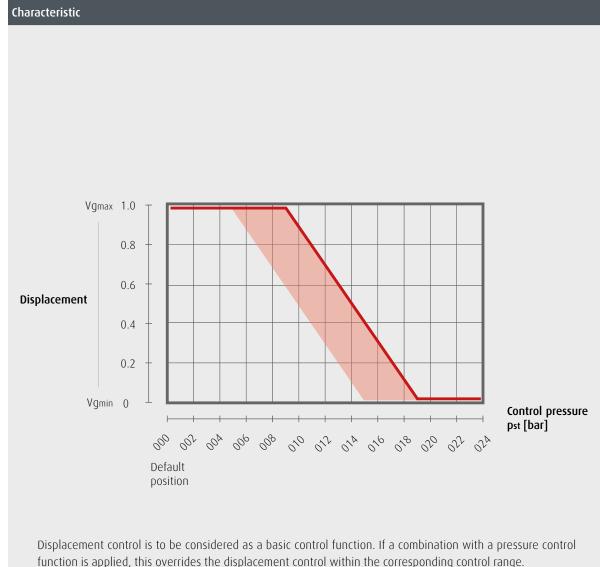
## Technical Specification | Controls | Displacement Controller | **H4**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

Basic Specification					
Begin of control/	Vgmax/	Control	Minimum Setting		5
Default position	Maximum torque/ Minimum speed	pressure (pst)	Maximum Setting		9
5.1.6	Vgmin/	Control	Minimum Setting	bar	15
End of control	Minimum torque/ Maximum speed	pressure (pst)	Maximum Setting		19
Reference	Reference pressure	2			Case pressure
Limit	Maximum pilot pre	ssure		bar	50
Control press. supply	Minimum pressure	ire at work port A/B			30
Threaded port					ISO 6149-1 M14x1.5

	Nominal size				60	85	115	140	170	215
		Undamped	1/4 Vgmax -> Vgmax	6	-	0.15	0.2	0.2	0.3	0.5
Damping	Approx. swiveling	undamped	Vgmax -> 1/4 Vgmax		-	0.15	0.2	0.2	0.3	0.5
	speed at 200 bar	Dampod	1/4 Vgmax -> Vgmax	S	-	0.3	0.5	0.5	0.6	1.0
		Damped	Vgmax -> 1/4 Vgmax		-	0.3	0.5	0.5	0.6	1.0

The displacement controller H4 is an hydraulic controller that enables stepless negative control (proportional to the applied pilot pressure) and default position Vqmax. In addition, one-sided or two-sided damping is optionally available. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.



function is applied, this overrides the displacement control within the corresponding control range.







# OVERVIEW Key Facts CONFIGURATION Modelcode & Availability TECHNICAL SPECIFICATION

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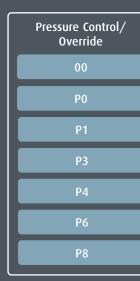
Hydraulical Interfaces

Work Ports

Auxiliary Ports

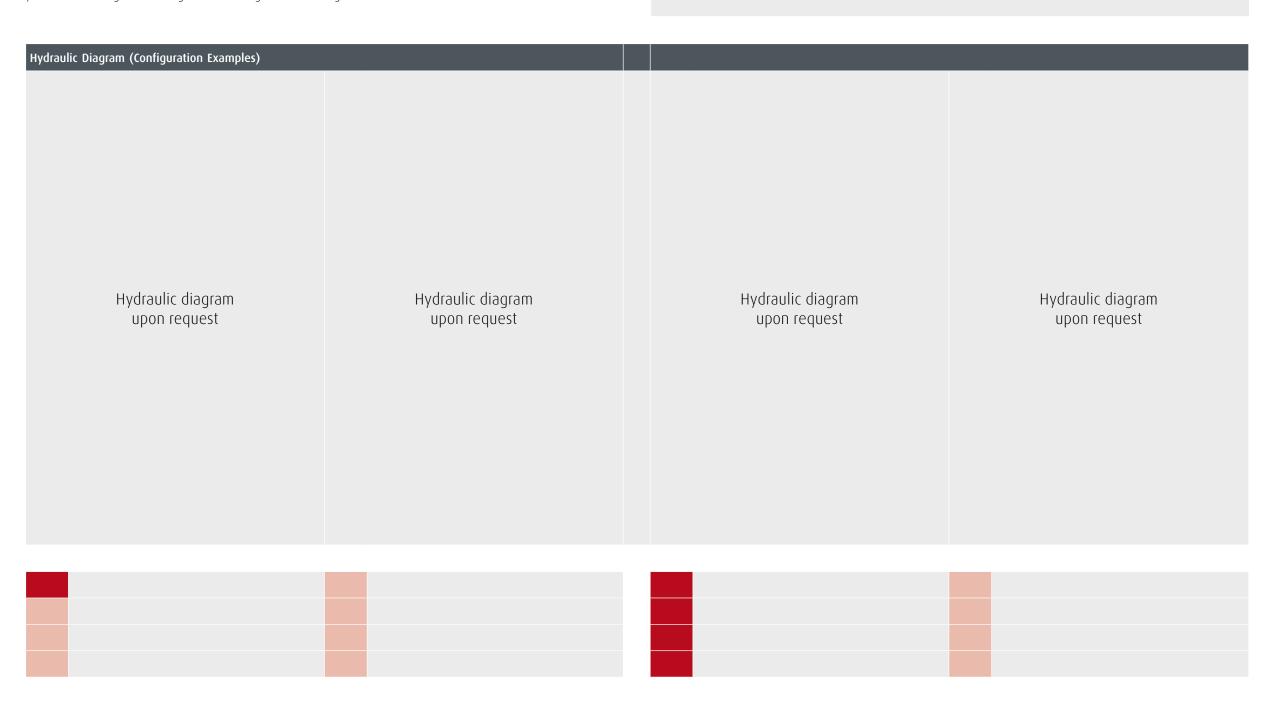
Functions/Options







## Technical Specification | Controls | Displacement Controller | **H4**







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Pressure Control/ Override
00
PO
P1
Р3
P4
P6
P8

## Technical Specification | Controls | Displacement Controller | **H5**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

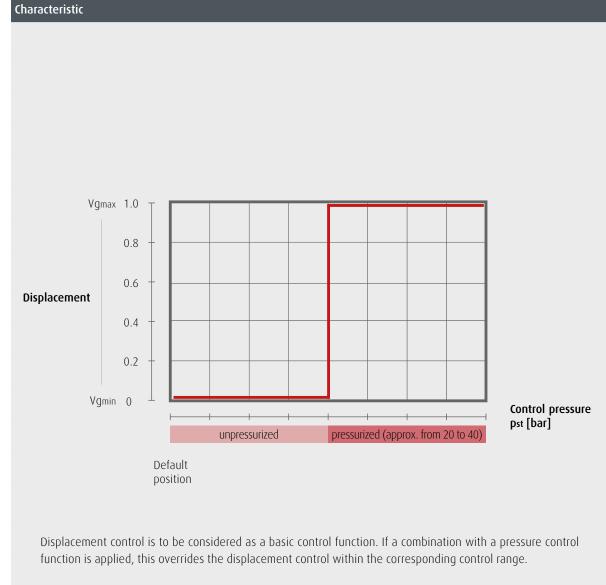
Basic Specification												
Begin of control/ Default position	Vgmin/ Minimum torque/ Maximum speed	Control pressure (pst)			Pilot port unpressurized							
End of control	Vgmax/ Maximum torque/ Minimum speed	Control pressure (pst)		bar	Pilot port pressurized (approx. from 20 to 40)							
Reference	Reference pressure				Case pressure							
Limit	Maximum pilot pre	ssure		bar	50							
Control press. supply	Minimum pressure	at work port A	n/B	bar	30							
Threaded port					ISO 6149-1 M14x1.5							
	Nominal size				60	85	115	140	170	215		
		Undamped	1/4 Vgmax -> Vgmax		-	n.a.	n.a.	n.a.	n.a.	n.a.		
Damping	Approx. swiveling	ondomped	Vgmax -> 1/4 Vgmax		-	n.a.	n.a.	n.a.	n.a.	n.a.		
	speed at 200 bar		1/4 Vgmax	S	_	n.a.	n.a.	n.a.	n.a.	n.a.		

-> 1/4 Vgmax

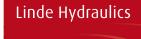
Damped

n.a. n.a. n.a. n.a.

The displacement controller H5 is an hydraulic controller that enables 2-point positive control and default position Vgmin. In addition, one-sided or two-sided damping is optionally available. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.









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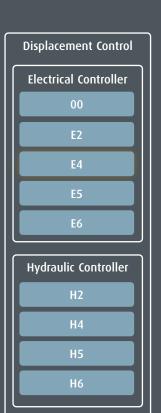
Shafts

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Functions/Options



Pressure Control/ Override

00

P1

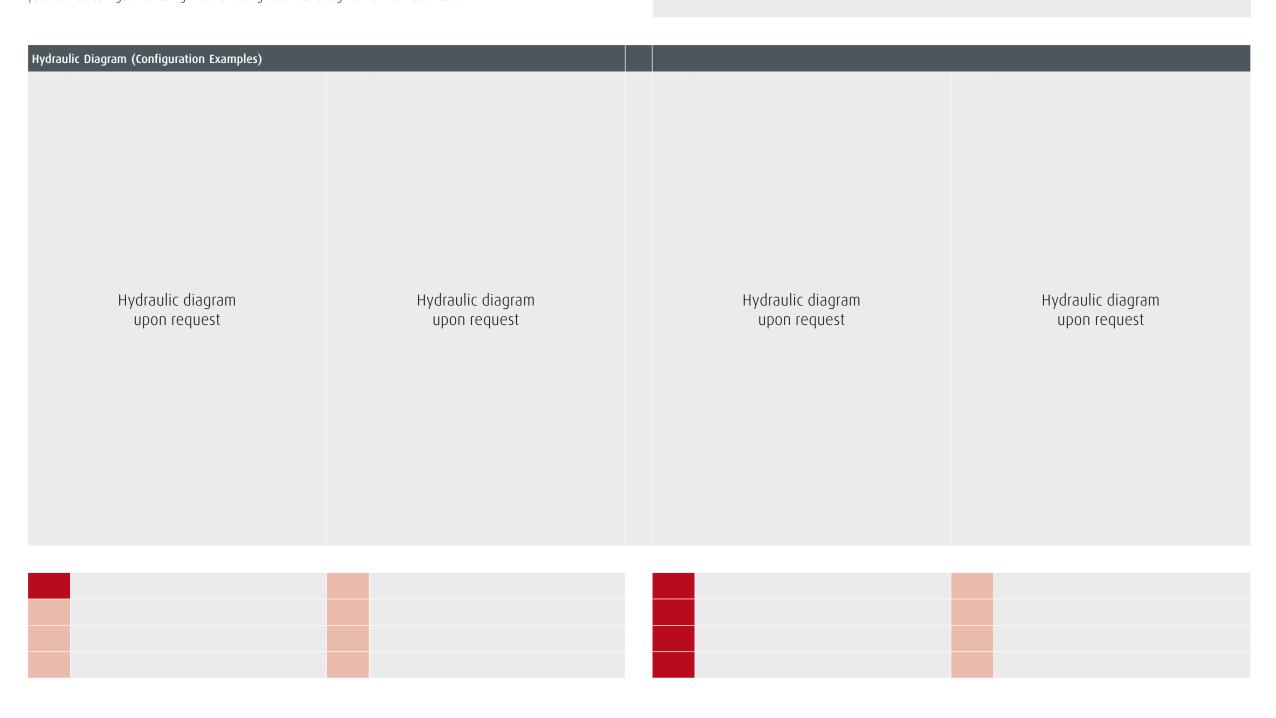
Р3

P4 P6

P8



## Technical Specification | Controls | Displacement Controller | **H5**







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Pressure Control/ Override
00
P0
P1
P3
P4
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P8

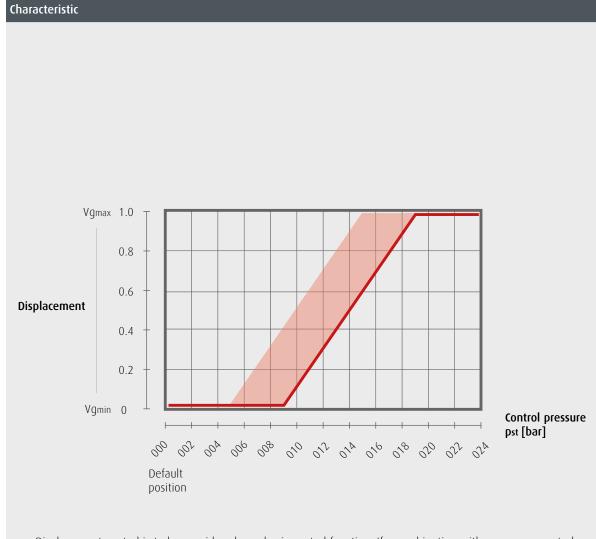
## Technical Specification | Controls | Displacement Controller | **H6**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

Basic Specification									
Begin of control/	Vgmax/	Control pressure (pst)	Minimum Setting		5				
Default position	Maximum torque/ Minimum speed		Maximum Setting	bar	9				
- 1 ( ) 1	Vgmin/ Minimum torque/ Maximum speed	Control pressure (pst)	Minimum Setting		15				
End of control			Maximum Setting		19				
Reference	Reference pressure				Case pressure				
Limit	Maximum pilot pre	ssure		bar	50				
Control press. supply	Minimum pressure	at work port A	л/В	bar	30				
Threaded port					ISO 6149-1 M14x1.5				

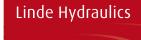
	Nominal size			60	85	115	140	170	215	
	Approx. swiveling speed at 200 bar	Undamped	1/4 Vgmax -> Vgmax	S	-	0.15	0.2	0.2	0.3	0.5
Damping		ondamped	Vgmax -> 1/4 Vgmax		-	0.15	0.2	0.2	0.3	0.5
		Damped	1/4 Vgmax -> Vgmax		-	0.3	0.5	0.5	0.6	1.0
			Vgmax -> 1/4 Vgmax		-	0.3	0.5	0.5	0.6	1.0

The displacement controller H6 is an hydraulic controller that enables stepless positive control (proportional to the applied pilot pressure) and default position Vgmin. In addition, one-sided or two-sided damping is optionally available. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.



Displacement control is to be considered as a basic control function. If a combination with a pressure control function is applied, this overrides the displacement control within the corresponding control range.







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Displacement Control

Electrical Controller

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E2

E4

E5

E6

Hydraulic Controller

H2

H4

H5

H6

Pressure Control/ Override

00

P1

Р3

P6

P8



## Technical Specification | Controls | Displacement Controller | **H6**







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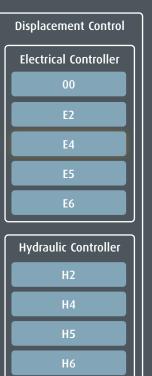
Shafts

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## **Override** P1 Р3 P6

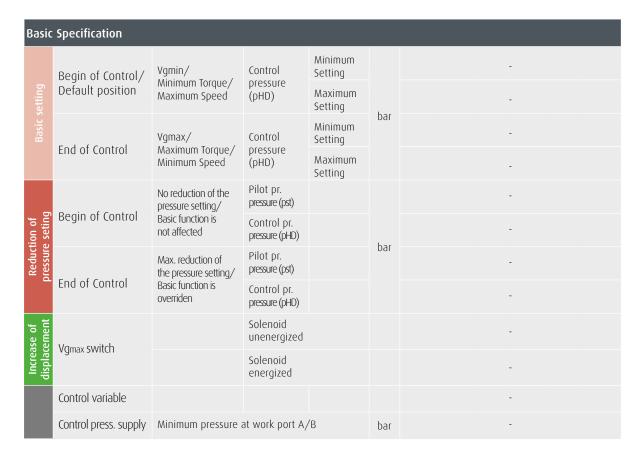
Pressure Control/

Technical Specification | Controls | Pressure Controller and/or Override Signal | **00** 

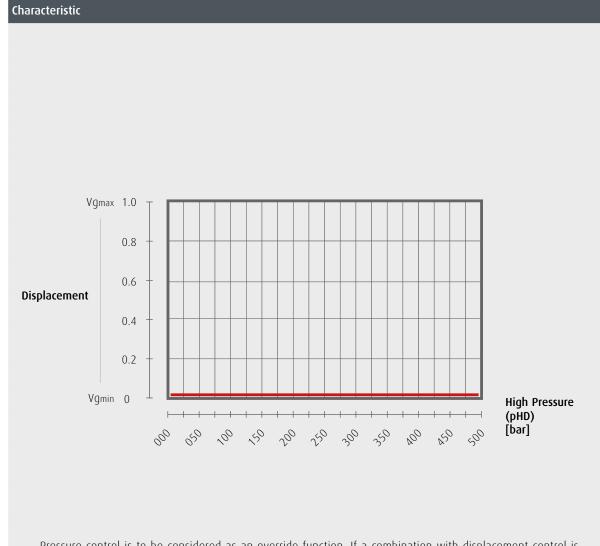
In the following you will find the technical specifications of the displacement and pressure controllers for the are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or overrid get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" section Find Model Code & Availability, you can then check the availability of the corresponding controller your desired configuration using the short designations as a segment of the model code.

the CMV. These	The p
le signals. First	ment
or "P0". In the	be co
rs and compile	

pressure controller with the abbreviation "00" is not an individual function. In this case, the component for diplaceand pressure control does not support pressure control. When choosing this option, a displacement controller must onsidered to control the motor.



1		Damping	Nominal size				60	85	115	140	170	215
1			Swiveling speed at 200 bar	Undamped	1/4 Vgmax -> Vgmax		-	-	-	-	-	-
1					Vgmax -> 1/4 Vgmax	S	-	-	-	-	-	-
1				Damped	1/4 Vgmax -> Vgmax		-	-	-	-	-	-
					Vgmax -> 1/4 Vgmax		-	-	-	-	-	-



Pressure control is to be considered as an override function. If a combination with displacement control is applied, this function, also known as the basic control function, is overridden by pressure control within the corresponding control range.







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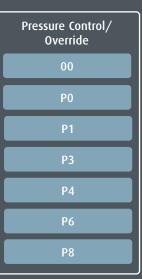
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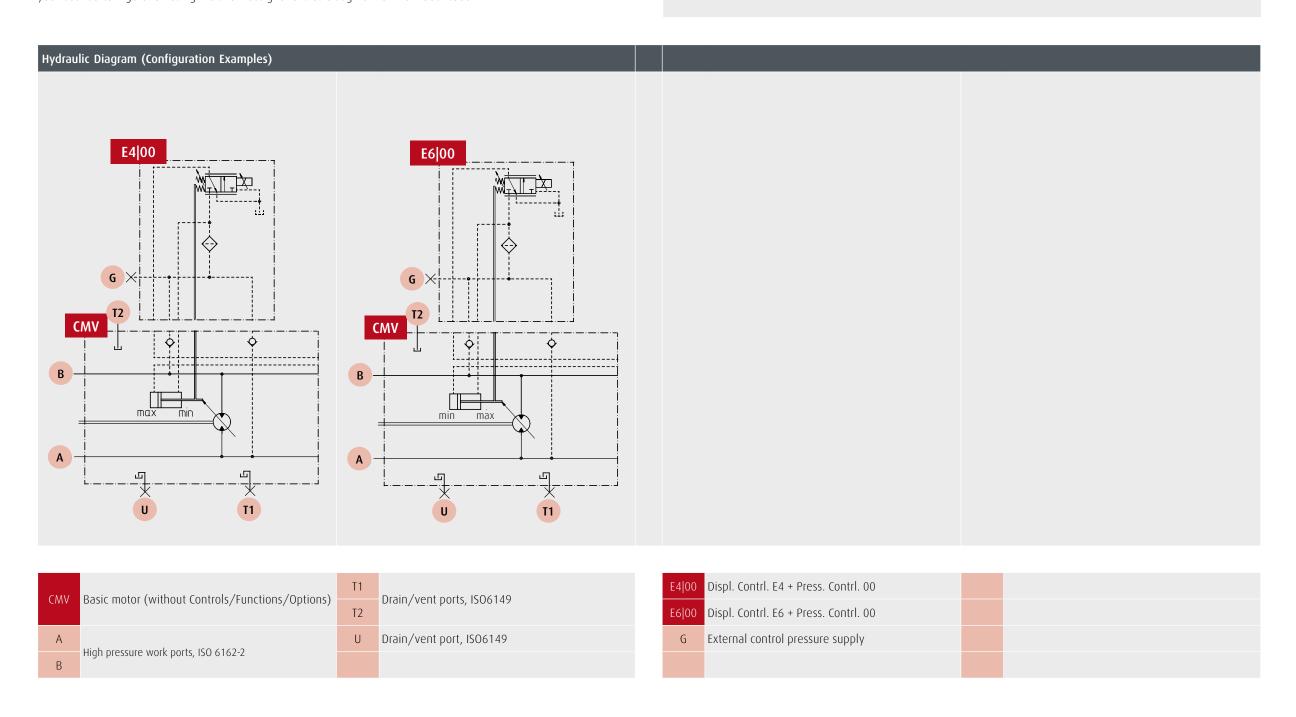
Functions/Options







## Technical Specification | Controls | Pressure Controller and/or Override Signal | **00**







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00
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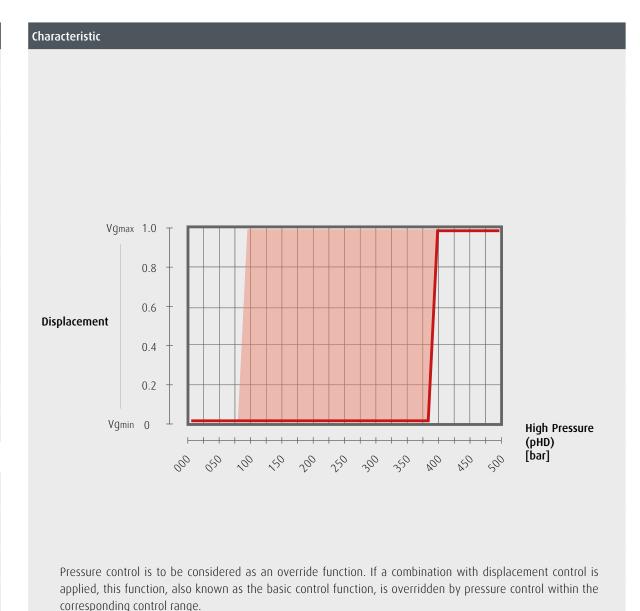
## Technical Specification | Controls | Pressure Controller and/or Override Signal | **P0**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

Basio	Specification					
	Begin of Control/ Default position	Vgmin/ Minimum Torque/ Maximum Speed	Control pressure (pHD)	Minimum Setting		80
Basic setting				Maximum Setting	h	385
Basic	End of Control	Vgmax/	Control	Minimum Setting	bar	95
		Maximum Torque/ Minimum Speed	pressure (pHD)	Maximum Setting		400
	Begin of Control	No reduction of the pressure setting/ Basic function is not affected	Pilot pr. pressure (pst)		bar	n.a.
Reduction of ressure seting			Control pr. pressure (pHD)			n.a.
Reduction of pressure seting	End of Control	Max. reduction of the pressure setting/ Basic function is overriden	Pilot pr. pressure (pst)			n.a.
			Control pr. pressure (pHD)			n.a.
se of ement	No. avitali		Solenoid unenergized			n.a.
Increase of displacement	Vgmax switch		Solenoid energized			n.a.
	Control variable					Work port A or B according to highest pressure value prevailing
	Control press. supply Minimum pressure at work port A/B				bar	30

	Damping	Nominal size			60	85	115	140	170	215	
		Swiveling speed at 200 bar	Undamped	1/4 Vgmax -> Vgmax	S	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
				Vgmax -> 1/4 Vgmax		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
			Damped	1/4 Vgmax -> Vgmax		upon request	upon request	upon request	upon request	upon request	upon request
				Vgmax -> 1/4 Vgmax		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

The pressure controller P0 enables self-regulating control depending on prevailing high-pressure level and default position Vgmin without any external signal. In addition, this pressure controller is basically one-sided damped. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.







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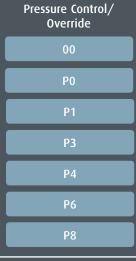
Hydraulical Interfaces

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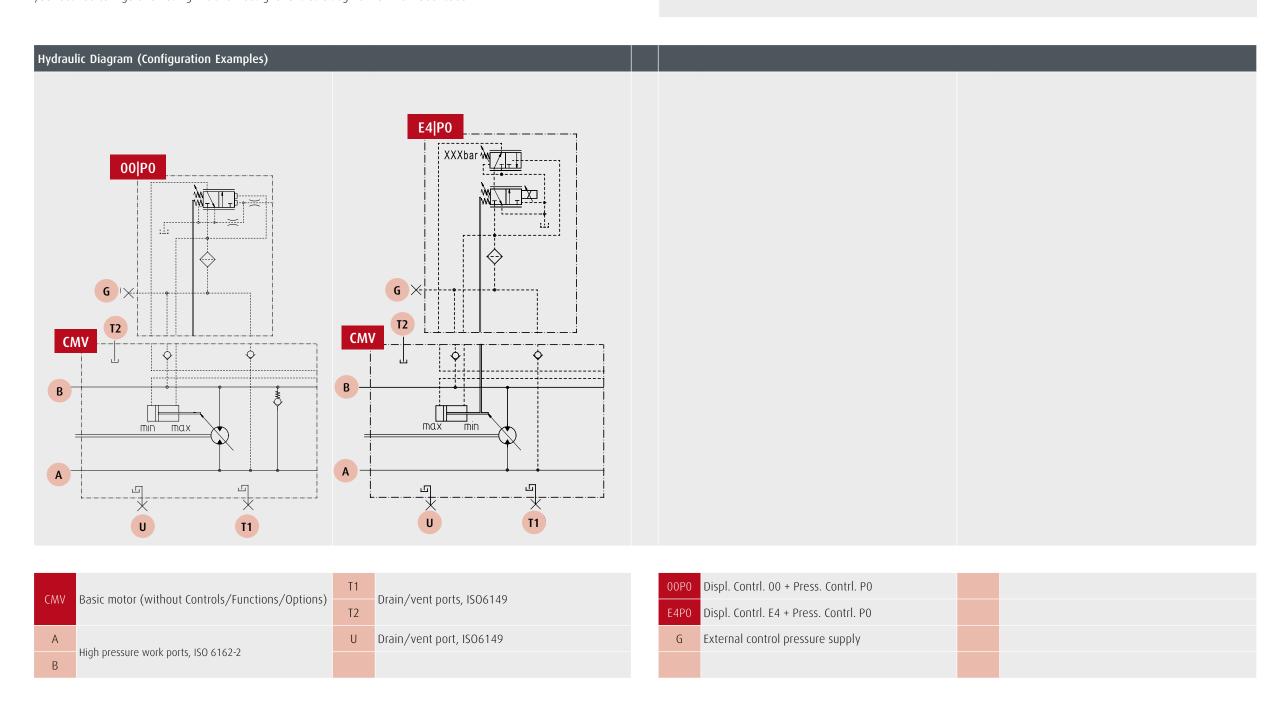
Functions/Options







## Technical Specification | Controls | Pressure Controller and/or Override Signal | **P0**







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Functions/Options



Pressure Control/ Override						
00						
PO						
P1						
P3						
P4						
P6						
P8						

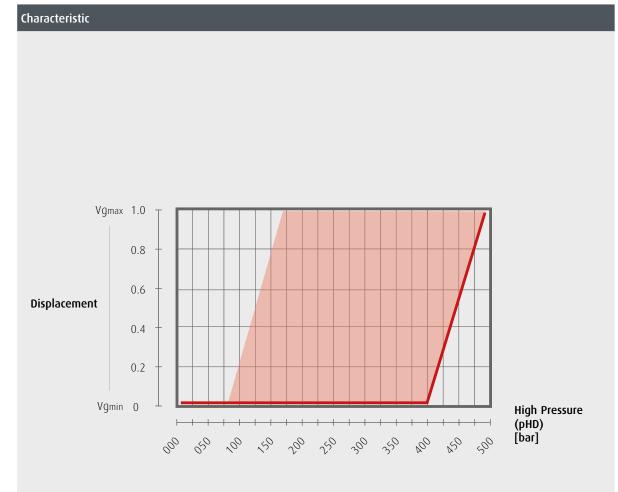
## Technical Specification | Controls | Pressure Controller and/or Override Signal | P1

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

Basic	Basic Specification										
	Begin of Control/ Default position	Vgmin/ Minimum Torque/ Maximum Speed	Control pressure (pHD)	Minimum Setting		80					
Basic setting				Maximum Setting	h	400					
Basic	Fod of Control	Vgmax/	Control	Minimum Setting	bar	170					
	End of Control	Maximum Torque/ Minimum Speed	pressure (pHD)	Maximum Setting		490					
	Begin of Control	No reduction of the pressure setting/ Basic function is not affected	Pilot pr. pressure (pst)		bar	n.a.					
Reduction of ressure seting			Control pr. pressure (pHD)			n.a.					
Reduction of pressure seting	End of Control	Max. reduction of the pressure setting/ Basic function is overriden	Pilot pr. pressure (pst)			n.a.					
			Control pr. pressure (pHD)			n.a.					
ise of ement	Vgmax Switch		Solenoid unenergized			n.a.					
Increase of displacement	vgmax SWIICH		Solenoid energized			n.a.					
	Control variable					Work port A or B according to highest pressure value prevailing					
	Control press. supply	Minimum pressure	at work port A <sub>/</sub>	/B	bar	30					

	Damping	Nominal size			60	85	115	140	170	215	
		Swiveling speed at 200 bar	Undamped	1/4 Vgmax -> Vgmax	S	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
				Vgmax -> 1/4 Vgmax		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
			Damped	1/4 Vgmax -> Vgmax		upon request	upon request	upon request	upon request	upon request	upon request
				Vgmax -> 1/4 Vgmax		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

The pressure controller P1 enables self-regulating control depending on prevailing high-pressure level and default position Vgmin without any external signal. In addition, this pressure controller is basically one-sided damped. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply. The difference between P0 and P1 is the gradient, with which the displacement changes as a function of rising work pressure.



The difference between P0 and P1 is the gradient, with which the displacement changes as a function of rising work pressure. P0 has a pressure gain of about 10 to 15 bar from Vmin to Vmax, whereas P1 has a pressure gain of about 100 bar from Vmin to Vmax.

Pressure control is to be considered as an override function. If a combination with displacement control is applied, this function, also known as the basic control function, is overridden by pressure control within the corresponding control range.







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Functions/Options

Displacement Control

Electrical Controller

00

E2

E4

E5

E6

Hydraulic Controller

H2

H4

H5

Pressure Control/ Override

00

P1

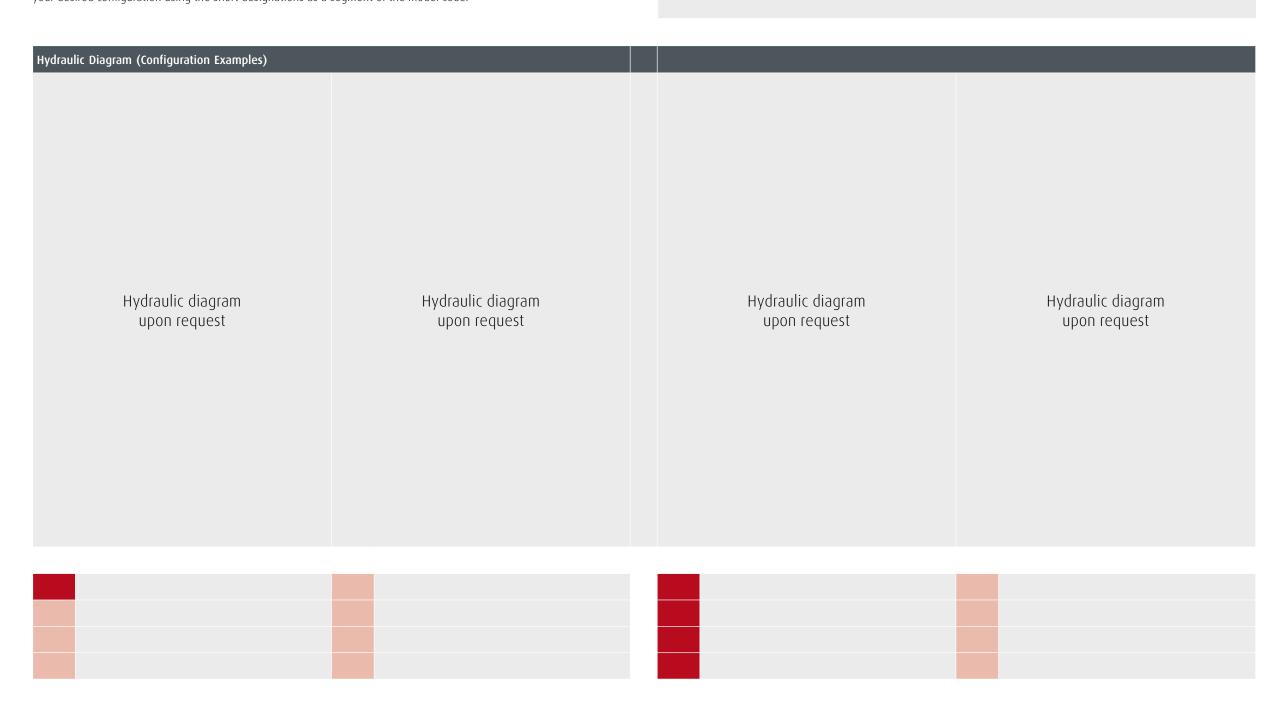
Р3

P6

Р8



## Technical Specification | Controls | Pressure Controller and/or Override Signal | **P1**







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Work Ports

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Functions/Options



0verride						
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PO						
P1						
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Pressure Control/

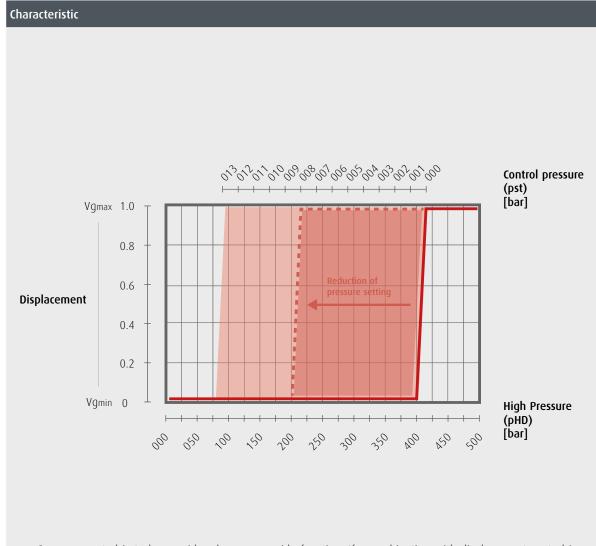
## Technical Specification | Controls | Pressure Controller and/or Override Signal | **P3**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

	Basic	Specification								
		Begin of Control/ Default position	Vgmin/	Control	Minimum Setting		80			
			Minimum Torque/ Maximum Speed	pressure (pHD)	Maximum Setting		400			
		End of Control	Vgmax/	Control	Minimum Setting	bar	95			
			Maximum Torque/ Minimum Speed	pressure (pHD)	Maximum Setting		415			
		Begin of Control	No reduction of the pressure setting/ Basic function is not affected	Pilot pr. pressure (pst)		bar	0			
	ion of seting			Control pr. pressure (pHD)			according to basic setting			
	Reduction of pressure seting		Max. reduction of the pressure setting/ Basic function is overriden	Pilot pr. pressure (pst)			8			
	_	End of Control		Control pr. pressure (pHD)			according to basic setting minus 176			
	se of ement	Va switch		Solenoid unenergized			na.			
	Increase of displacement	Vgmax switch		Solenoid energized			n.a.			
İ		Control variable					Work port A or B according to highest pressure value prevailing			
1		Control press, supply	Minimum pressure	at work port A	/B	har	30			

	Damping	Nominal size				60	85	115	140	170	215
				1/4 Vgmax -> Vgmax		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		Swiveling speed	Undamped	Vgmax -> 1/4 Vgmax	c	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		at 200 bar	Damand	s 1/4 Vgmax -> Vgmax	upon request	upon request	upon request	upon request	upon request	upon request	
			Damped	Vgmax -> 1/4 Vgmax		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

The pressure controller P3 enables self-regulating control depending on prevailing high-pressure level and default position Vgmin without any external signal. According to the desired operating condition, the pressure setting can be reduced continuously via an external signal. In addition, this pressure controller is basically one-sided damped. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.



Pressure control is to be considered as an override function. If a combination with displacement control is applied, this function, also known as the basic control function, is overridden by pressure control within the corresponding control range.







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Control

Sensor

**Electric Interfaces** 

Connectors

Mechanical Interfaces

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Shafts

Hydraulical Interfaces

Work Ports

Auxiliary Ports

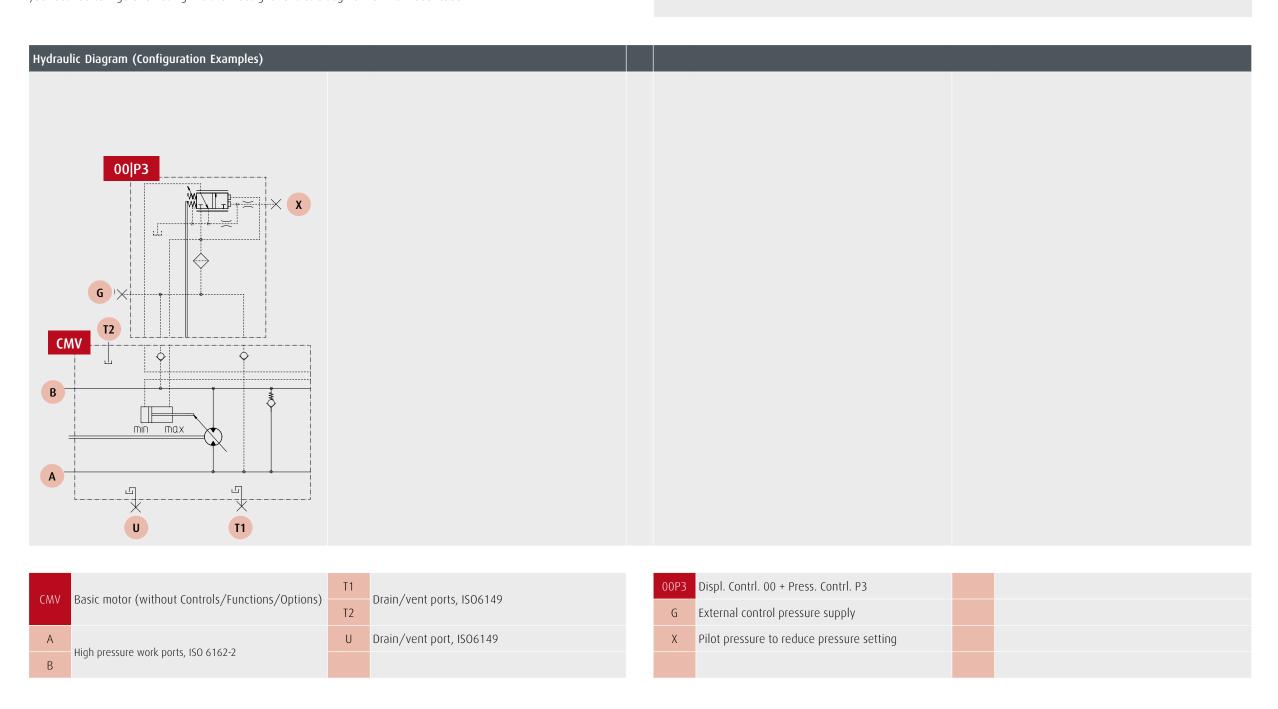
Functions/Options



## Pressure Control/ Override 00 P0 P1 P3 P4 P6 P8



## Technical Specification | Controls | Pressure Controller and/or Override Signal | **P3**







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**Hydraulical Interfaces** 

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Pressure Control/ Override
00
Р0
P1
Р3
P4
P6
P8



## Technical Specification | Controls | Pressure Controller and/or Override Signal | **P4**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

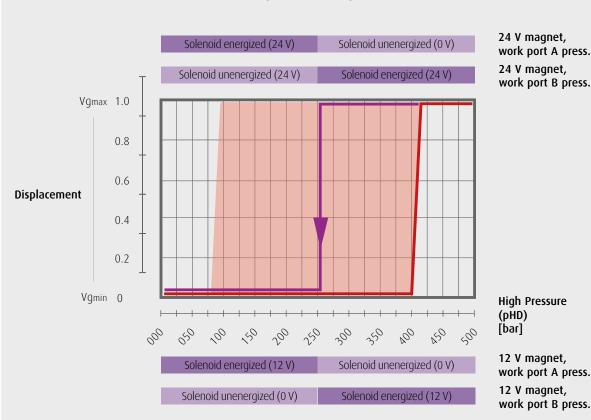
Basic	: Specification					
	Begin of Control/ Default position Vgmin/ Minimum Torque/ Maximum Speed		Control	Minimum Setting		80
Basic setting		pressure (pHD)	Maximum Setting	bar	400	
Basic	End of Control	Vgmax/	Control pressure	Minimum Setting	Dai	95
		Maximum Torque/ Minimum Speed	(pHD)	Maximum Setting		415
<u>-</u> -		Work port A pressurized/ direction of rotation: counterclockwise	Solenoid une	nergized		Pressure control activated/ Motor remains at Vgmin
Deactivating of pressure control	Pressure side		Solenoid ene	rgized		Pressure control deactivated
Deactiv	selection	Work port B pressurized/ direction of rotation: counterclockwise	Solenoid une	nergized		Pressure control deactivated
			Solenoid ene	rgized		Pressure control activated/ Motor remains at Vgmin
Increase of displacement	Vgmax switch	v				n.a.
Increa displac	vgillax svvitci i		Solenoid energized			n.a.
	Control variable					Work port A or B according to pressure side selection
	Control press. supply	Minimum pressure a	at work port A	/B	bar	30

	Damping	Nominal size				60	85	115	140	170	215
				1/4 Vgmax -> Vgmax		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		Swiveling speed	Undamped	Vgmax -> 1/4 Vgmax	S	n.a.	n.a. n	n.a.	n.a.	n.a.	n.a.
		at 200 bar	Damand	1/4 Vgmax -> Vgmax	3	upon request	upon request	upon request	upon request	upon request	upon request
			Damped	Vgmax -> 1/4 Vgmax		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

The pressure controller P4 enables self-regulating control depending on prevailing high-pressure level and default position Vgmin without any external signal. Independently of the basic setting, the pressure controller can be overridden so that the motor sviwels to Vgmin - depending on the pressure side. In addition, this pressure controller is basically one-sided damped. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.



This controller provides the feature to define side selection for the pressure signal reaching the pressure controller. This feature is i.e. to be selected, when the application can generate a high pressure during decelleration, like in drive applications or during downhill driving.



Pressure control is to be considered as an override function. If a combination with displacement control is applied, this function, also known as the basic control function, is overridden by pressure control within the corresponding control range.

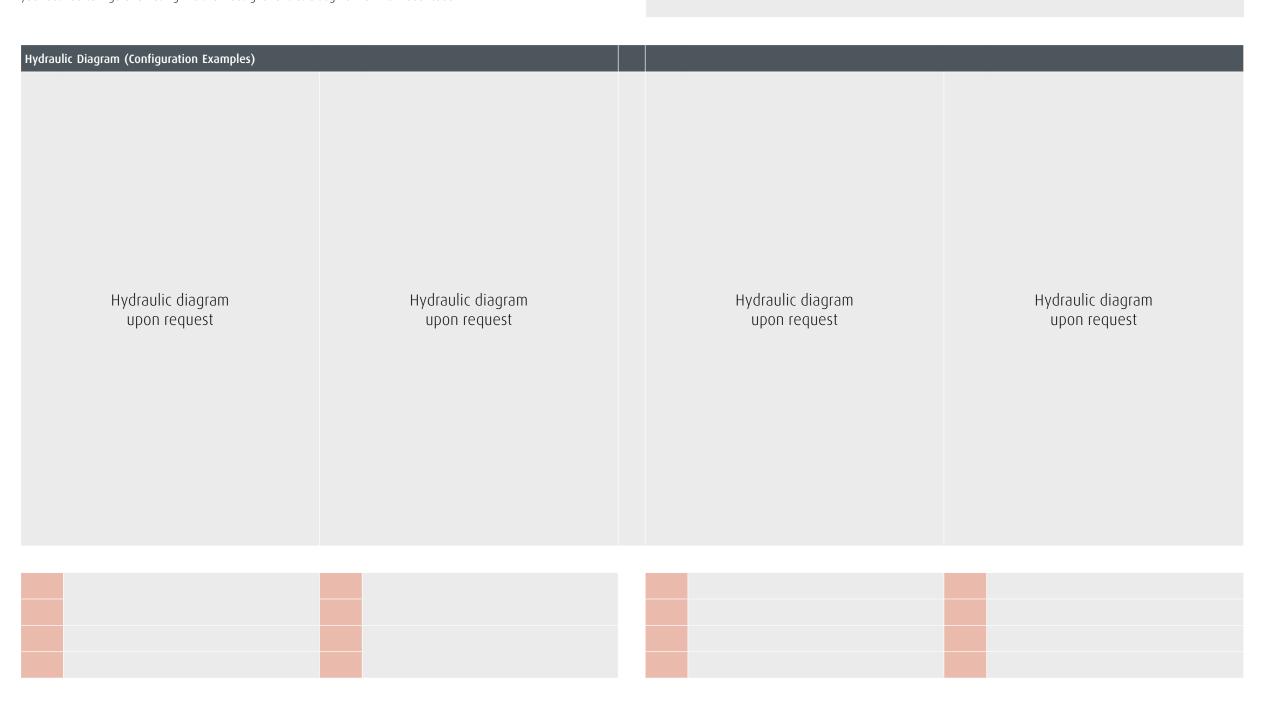




## **OVERVIEW** Displacement Control Key Facts CONFIGURATION **Electrical Controller TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Hydraulic Controller Electric Interfaces Mechanical Interfaces Shafts Pressure Control/ **Override** Hydraulical Interfaces Work Ports Auxiliary Ports P1 Functions/Options Р3 P6



## Technical Specification | Controls | Pressure Controller and/or Override Signal | **P4**







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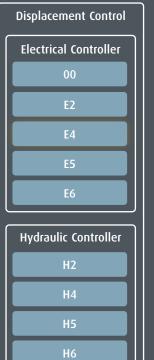
Shafts

Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

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Override
00
P0
P1
Р3
P4
P6
P8

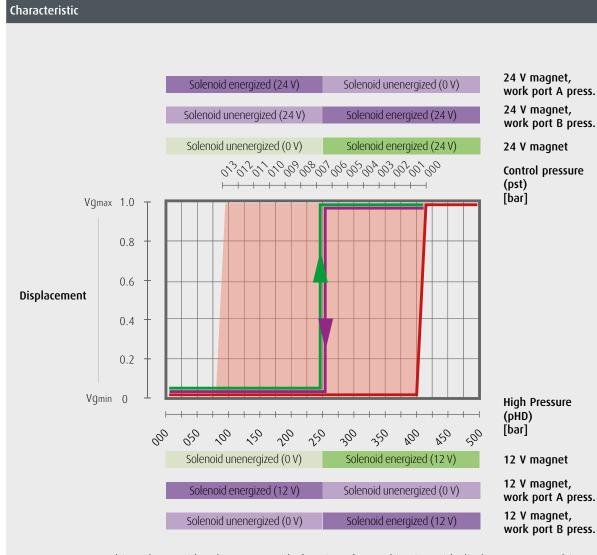
## Technical Specification | Controls | Pressure Controller and/or Override Signal | **P6**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

Basic	Specification					
	Begin of Control/ Default position	Vgmin/	Control	Minimum Setting	bar	80
Basic setting		Minimum Torque/ Maximum Speed	pressure (pHD)	Maximum Setting		400
Basic	End of Control	Vgmax/	Control	Minimum Setting		95
	End of Control	Maximum Torque/ Minimum Speed	pressure (pHD)	Maximum Setting		415
	Pressure side selection	Work port A pressurized/	Solenoid une	nergized		Pressure control activated/ Motor remains at Vgmin
Deactivating of pressure control		direction of rotation: counterclockwise	Solenoid ene	rgized		Pressure control deactivated
Deactiv <sub>a</sub>		Work port B pressurized/ direction of rotation: counterclockwise	Solenoid une	nergized		Pressure control deactivated
			Solenoid ene	rgized		Pressure control activated/ Motor remains at Vgmin
Increase of displacement			Solenoid unenergized			according to basic setting
Increa displac	Vgmax switch		Solenoid energized			Vgmax
	Control variable					Work port A or B according to pressure side selection
	Control press. supply	Minimum pressure a	at work port A	/B	bar	30

	Damping	Nominal size			60	85	115	140	170	215	
				1/4 Vgmax -> Vgmax		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		Swiveling speed	Undamped	Vgmax -> 1/4 Vgmax	S	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		at 200 bar		1/4 Vgmax -> Vgmax	3	upon request	upon request	upon request	upon request	upon request	upon request
			Damped	Vgmax -> 1/4 Vgmax		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

The pressure controller P6 enables self-regulating control depending on prevailing high-pressure level and default position Vgmin without any external signal. Independently of the basic setting, the pressure controller can be overridden so that the motor sviwels to Vgmax or, depending on the pressure side, to Vgmin. In addition, this pressure controller is basically one-sided damped. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.



Pressure control is to be considered as an override function. If a combination with displacement control is applied, this function, also known as the basic control function, is overridden by pressure control within the corresponding control range.



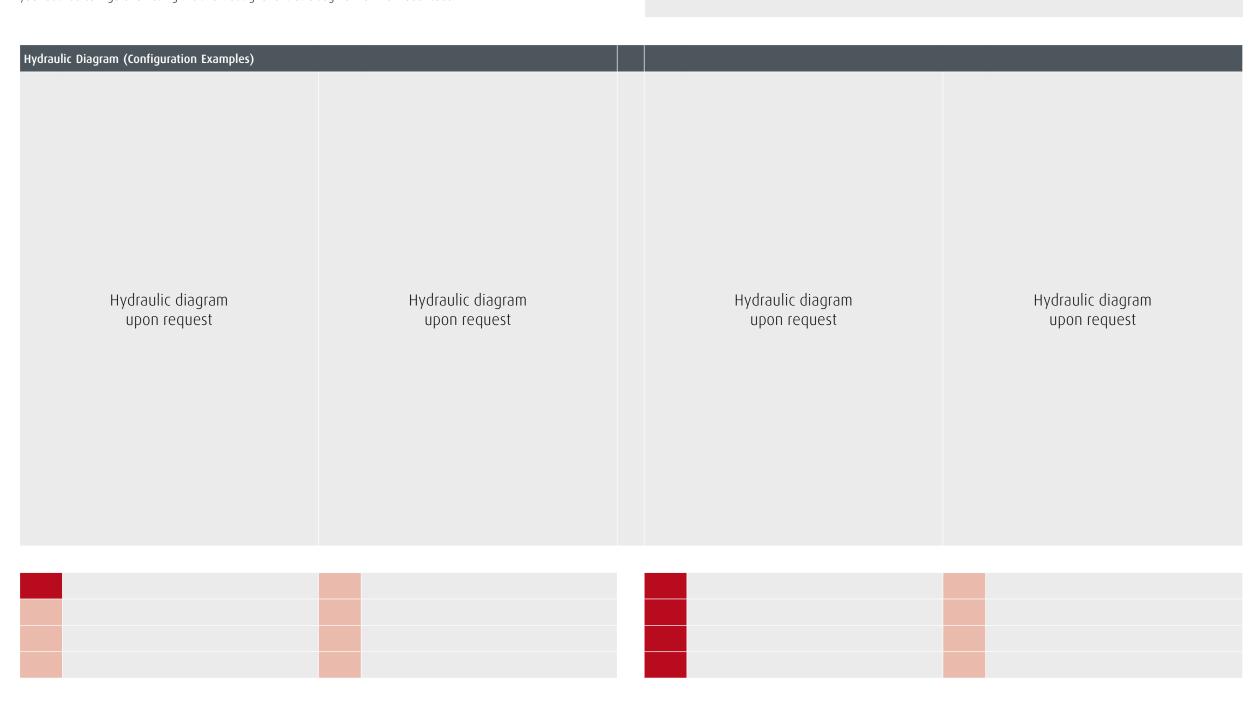




## **OVERVIEW** Displacement Control Key Facts CONFIGURATION **Electrical Controller TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Hydraulic Controller Electric Interfaces Mechanical Interfaces Shafts Pressure Control/ **Override** Hydraulical Interfaces Work Ports Auxiliary Ports P1 Functions/Options Р3 P6



## Technical Specification | Controls | Pressure Controller and/or Override Signal | **P6**







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00
PO
P1
Р3
P4
P6
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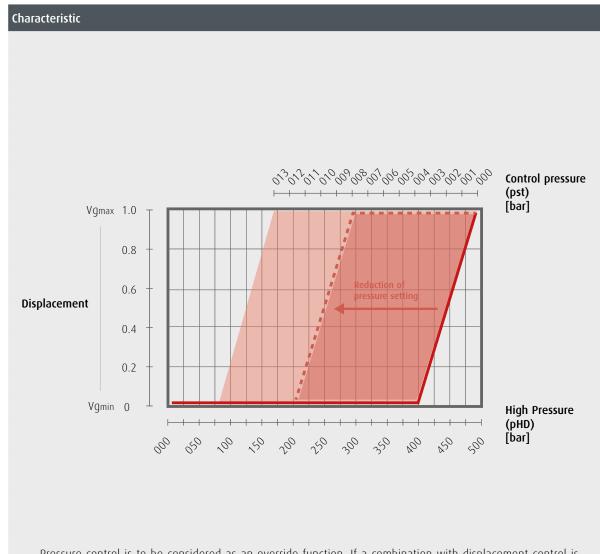
## Technical Specification | Controls | Pressure Controller and/or Override Signal | **P8**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

Basic	Specification					
	Begin of Control/	Vgmin/	Control	Minimum Setting		80
Basic setting	Default position	Minimum Torque/ Maximum Speed	(pHD)	Maximum Setting	har	400
Basic	End of Control	Vgmax/	Control	Minimum Setting	bar	170
		Maximum Torque/ Minimum Speed	pressure (pHD)	Maximum Setting		490
		No reduction of the pressure setting/	Pilot pr. pressure (pst)			0
tion of seting	Begin of Control	Basic function is not affected	Control pr. pressure (pHD)		har	according to basic setting
Reduction of pressure seting		Max. reduction of the pressure setting/ Basic function is overriden	Pilot pr. pressure (pst)		bar	8
	End of Control		Control pr. pressure (pHD)			according to basic setting minus 176
ise of ement	Vamov switch		Solenoid unenergized			na.
Increase of displacement	Vgmax switch		Solenoid energized			n.a.
	Control variable					Work port A or B according to highest pressure value prevailing
	Control press. supply	Minimum pressure a	at work port A/	′B	bar	30

	Damping	Nominal size				60	85	115	140	170	215
				1/4 Vgmax -> Vgmax		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		Swiveling speed	Undamped	Vgmax -> 1/4 Vgmax	c	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		at 200 bar	Damand	s 1/4 Vgmax -> Vgmax	upon request	upon request	upon request	upon request	upon request	upon request	
			Damped	Vgmax -> 1/4 Vgmax		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

The pressure controller P8 enables self-regulating control depending on prevailing high-pressure level and default position Vgmin without any external signal. According to the desired operating condition, the pressure setting can be reduced continuously via an external signal. In addition, this pressure controller is basically one-sided damped. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.



Pressure control is to be considered as an override function. If a combination with displacement control is applied, this function, also known as the basic control function, is overridden by pressure control within the corresponding control range.







## **OVERVIEW** Displacement Control Key Facts CONFIGURATION **Electrical Controller TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Hydraulic Controller Electric Interfaces Mechanical Interfaces Shafts Pressure Control/ **Override** Hydraulical Interfaces Work Ports Auxiliary Ports P1 Functions/Options Р3 P6



## Technical Specification | Controls | Pressure Controller and/or Override Signal | **P8**





Speed & Direction

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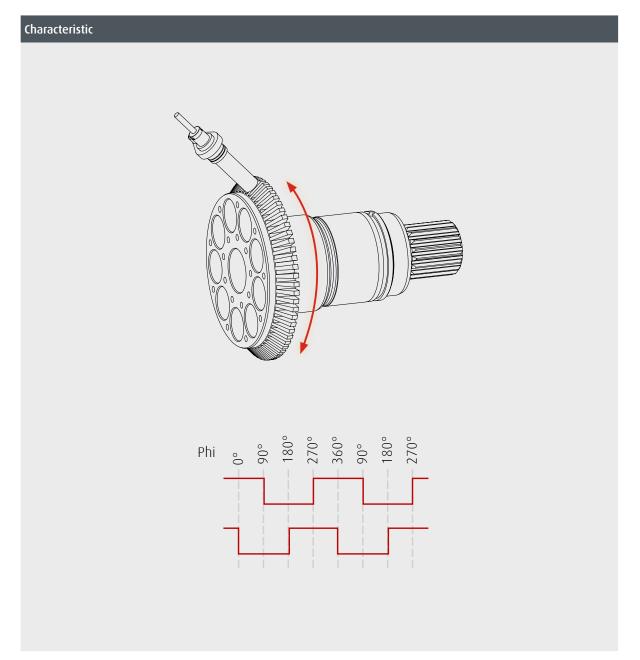
Functions/Options

## Technical Specification | Sensors | **Speed & Direction**

In the following you will find the technical specifications of the sensors for the CMV. First get an overview of the specification. In the section Find Model Code & Availability, you can then check the availability of the sensor and compile your desired configuration using the short designations as a segment of the model code.

The sensor for speed and direction of rotation is located in the housing of the CMV and picks up the frequency signal from a increment ring on the drive shaft. It is available as an option. If no speed sensor is desired, but the possibility for subsequent installation exists, the drive shaft is supplied with increments and the installation opening is provided with a blind plate.

Basic Specification									
Sensor type						Ha	all		
Signal output						Nf	PN		
Voltage			V			7.0	32.0		
Protection class				See connector					
	Nominal siz	е		60	85	115	140	170	215
Impulsos	Impulses pe	st ten		54	58	65	70	74	80
Impulses				-	-	-	-	-	-
				-	-	-	-	-	-







Speed & Direction

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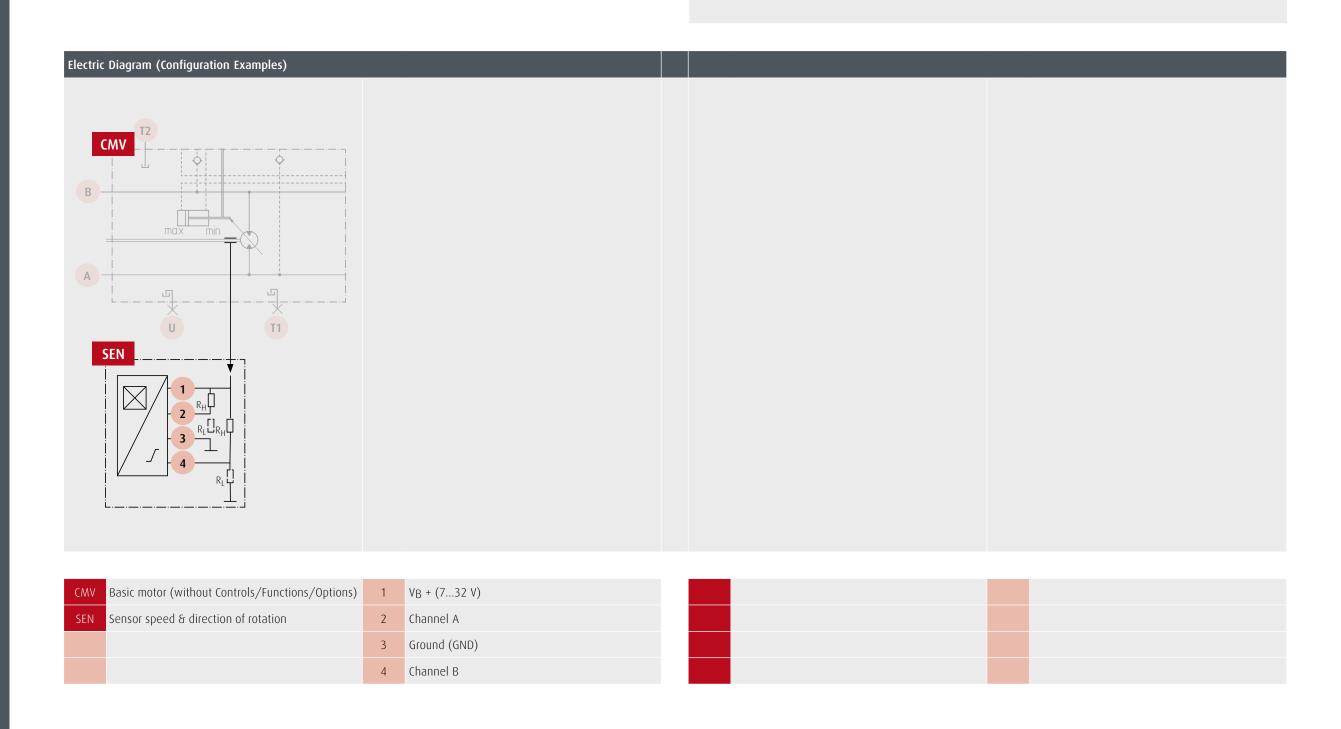
Work Ports

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In the following you will find the technical specifications of the sensors for the CMV. First get an overview of the specification. In the section Find Model Code & Availability, you can then check the availability of the sensor and compile your desired configuration using the short designations as a segment of the model code.







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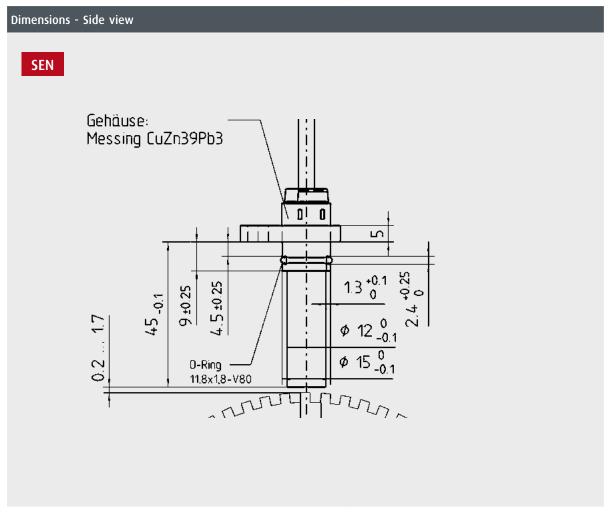
Work Ports

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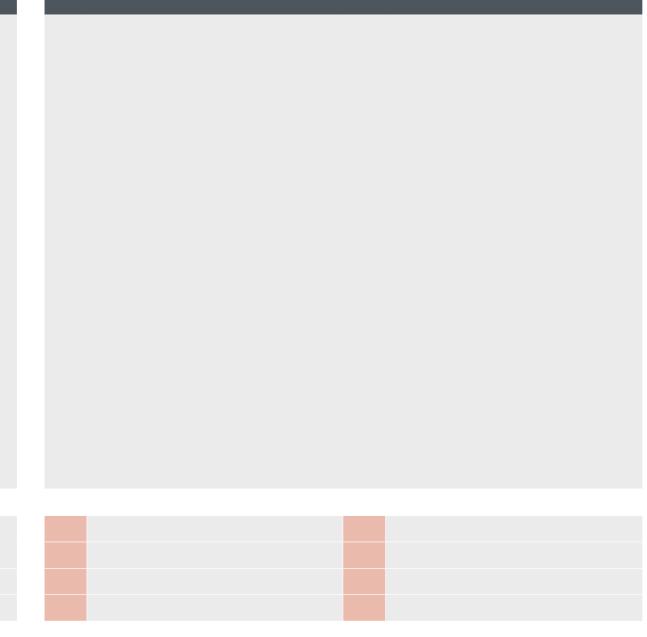
Functions/Options

## Technical Specification | Sensors | **Speed & Direction**

In the following you will find the technical specifications of the sensors for the CMV. First get an overview of the specification. In the section Find Model Code & Availability, you can then check the availability of the sensor and compile your desired configuration using the short designations as a segment of the model code.



Sensor speed & direction of rotation







A - AMP Junior Timer

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Hydraulical Interfaces

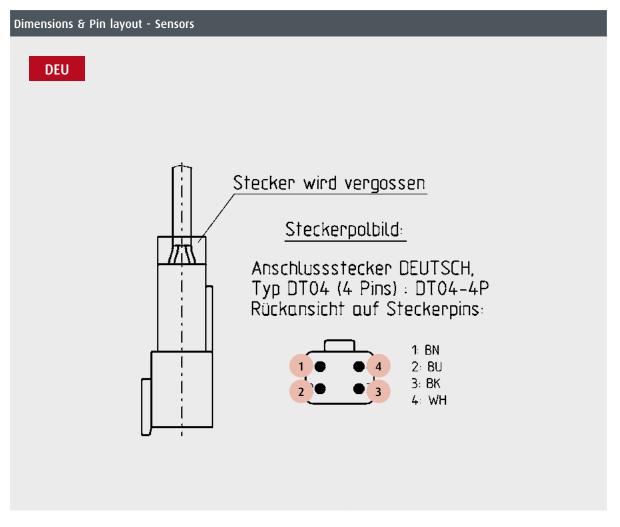
Work Ports

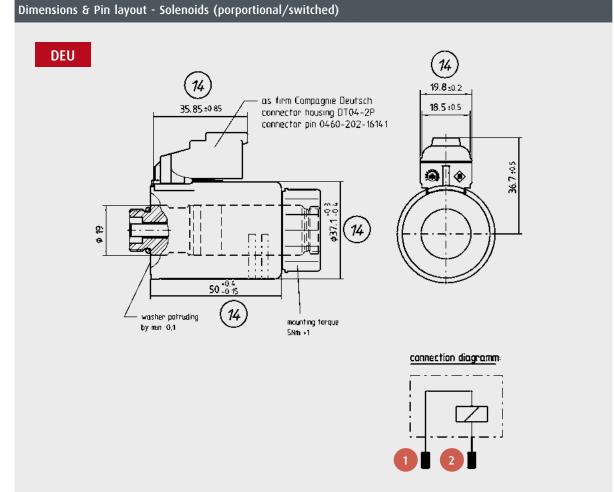
**Auxiliary Ports** 

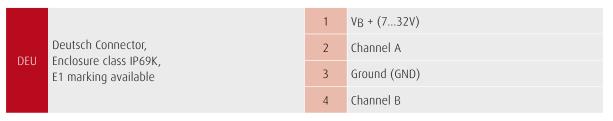
Functions/Options

## Technical Specification | Connectors | **D - Deutsch**

In the following you will find the technical specifications of the connectors for the CMV. First get an overview of the specification. Note the short designations such as "D" or "A". In the section Model Code & Availability, you can then check the availability of the sensor and compile your desired configuration using the short designations as a segment of the model code







Deutsch Connector, Enclosure class IP69K, E1 marking available VB + (7...32V) / Switched ground
 Switched ground / VB + (7...32V)

(L)



A - AMP Junior Timer

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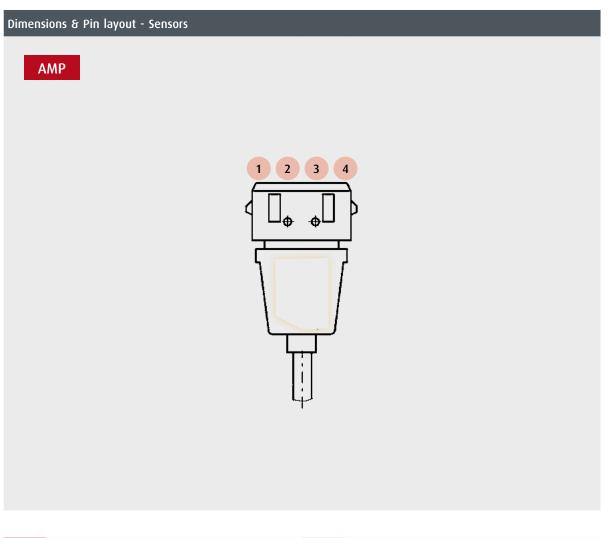
Work Ports

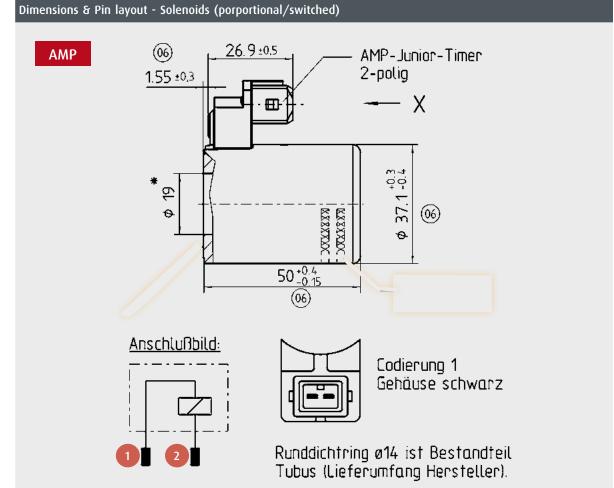
Auxiliary Ports

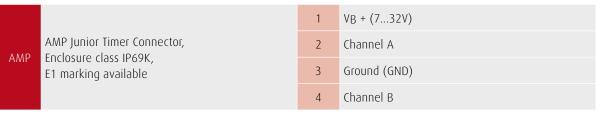
Functions/Options

## Technical Specification | Connectors | A - AMP Junior Timer

In the following you will find the technical specifications of the connectors for the CMV. First get an overview of the specification. Note the short designations such as "D" or "A". In the section Model Code & Availability, you can then check the availability of the sensor and compile your desired configuration using the short designations as a segment of the model code







AMP Junior Timer Connector, Enclosure class IP69K, E1 marking available 1 VB + (7...32V) / Switched ground 2 Switched ground / VB + (7...32V)





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#### ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 170

### similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

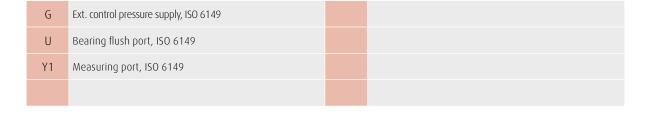
## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **C4/CMV60**

In the following you will find the technical specifications of the mounting flanges and auxiliary ports. They are clustered according to the standard and nominal sizes. First get an overview of the dimensions. Note the short designations such as "C4" or "E4". In the section [Model Code & Availability] you can then check the availability of the mounting flange as well as auxiliary ports and compile your desired configuration using the short designations as a segment of the model code.

Dimensions		
	Dimensions upon request	
	оронтечоск	

Dimensions		
	Dimensions upon request	

А	High pressure work port, ISO 6162-2, If pressurised - motor runs clockwise	AX	Pressure equalization port
	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	Tressure equalization port
В	High pressure work port, ISO 6162-2, If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149
D	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149







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#### ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

### similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **C4/CMV60**

In the following you will find the technical specifications of the mounting flanges and auxiliary ports. They are clustered according to the standard and nominal sizes. First get an overview of the dimensions. Note the short designations such as "C4" or "E4". In the section [Model Code & Availability] you can then check the availability of the mounting flange as well as auxiliary ports and compile your desired configuration using the short designations as a segment of the model code.

Dimensions - side view		
	Dimensions upon request	

Dimensions - front view		
	Dimensions	
	upon request	

A If pressurised - mo	۸	High pressure work port, ISO 6162-2, If pressurised - motor runs clockwise	AX	Pressure equalization port
	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	riessure equalization port	
	В	High pressure work port, ISO 6162-2, If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149
	D		T2	Drain / vent port, ISO 6149

G	Ext. control pressure supply, ISO 6149	
U	Bearing flush port, ISO 6149	
Y1	Measuring port, ISO 6149	





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### ISO 3019-1/ SAE J744

C4 / CMV 60

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

## similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **C4/CMV60**

Dimensions		
	Dimensions upon request	

Dimensions		
	Dimensions upon request	

٨	High pressure work port, ISO 6162-2, If pressurised - motor runs clockwise	AX	Pressure equalization port
А	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	riessure equalization port
n	High pressure work port, ISO 6162-2, If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149

G	Ext. control pressure supply, ISO 6149	
U	Bearing flush port, ISO 6149	
Y1	Measuring port, ISO 6149	





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### ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

### similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | C2/CMV85

Dimensions		
	Dimensions upon request	

Dimensions		
	Dimensions upon request	

٨	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise	AX	Pressure equalization port
А	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	riessure equalization port
High pressure work port, ISO 6162-2, SAE 1"  If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M22x1.5, 15.5 mm deep	
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M27x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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### ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

### similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | C2/CMV85

Dimensions		
	Dimensions upon request	

Dimensions		
	Dimensions upon request	

٨	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise	AX	Pressure equalization port
А	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	riessure equalization port
High pressure work port, ISO 6162-2, SAE 1"  If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M22x1.5, 15.5 mm deep	
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M27x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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### ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

### similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | C2/CMV85

Dimensions		
	Dimensions upon request	

Dimensions		
	Dimensions upon request	

٨	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise	AX	Pressure equalization port
А	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	riessure equalization port
В	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M22x1.5, 15.5 mm deep
D	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M27x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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### ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

## similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **D4/CMV115**

Dimensions - Top view		
	Dimensions upon request	

Dimensions		
	Dimensions upon request	

٨	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise	AX	Proceure equalization port
А	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	Pressure equalization port
В	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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### ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

## similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **D4/CMV115**

Dimensions - Top view		
	Dimensions upon request	

Dimensions		
	Dimensions upon request	

٨	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise	AX	Pressure equalization port
А	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	Pressure equalization port
D	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

## similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **D4/CMV115**

Dimensions - Top view		
	Dimensions upon request	

Dimensions		
	Dimensions upon request	

٨	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise	AX	Pressure equalization port
А	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	Pressure equalization port
D	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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### ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

## similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **D4/CMV140**

Dimensions	
	Dimensions pon request

Dimensions		
	Dimensions upon request	

٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise	AX	Pressure equalization port
A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	riessure equalization port
D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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### ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

## similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **D4/CMV140**

Dimensions	
	Dimensions pon request

Dimensions		
	Dimensions upon request	

٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise	AX	Pressure equalization port
A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	riessure equalization port
D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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### ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

## similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **D4/CMV140**

Dimensions	
	Dimensions pon request

Dimensions		
	Dimensions upon request	

	٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Pressure equalization port
	A		ВХ	riessure equalization port
	D	High pressure work port, ISO 6162-2, SAE 1 1/4"	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
	В	If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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### ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

## similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **D4/CMV170**

Dimensions		
	Dimensions	
	upon request	

Dimensions		
	Dimensions upon request	

	Δ.	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Pressure equalization port, ISO 6149,
	A		ВХ	M14x1.5, 11.5 mm deep
	В	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
	D	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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### ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

## similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **D4/CMV170**

Dimensions		
	Dimensions	
	upon request	

Dimensions		
	Dimensions upon request	

	Δ.	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Pressure equalization port, ISO 6149,
	A		ВХ	M14x1.5, 11.5 mm deep
	В	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
	D	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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### ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

## similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **D4/CMV170**

Dimensions		
	Dimensions	
	upon request	

Dimensions		
	Dimensions upon request	

٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Pressure equalization port, ISO 6149,
А		ВХ	M14x1.5, 11.5 mm deep
В	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
D	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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### ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

### similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **E4/CMV215**

Dimensions		
	Dimensions upon request	

Dimensions		
	Dimensions upon request	

	٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Pressure equalization port, ISO 6149,
А	A		ВХ	M22x1.5, 15.5 mm deep
	High pressure work port, ISO 6162-2, SAE 1 1/4"	T1	Drain / vent port, ISO 6149, M33x2, 19 mm deep	
	В	If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M42x2, 19.5 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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### ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

### similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **E4/CMV215**

Dimensions		
	Dimensions upon request	

Dimensions		
	Dimensions upon request	

	٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Pressure equalization port, ISO 6149,
А	A		ВХ	M22x1.5, 15.5 mm deep
	High pressure work port, ISO 6162-2, SAE 1 1/4"	T1	Drain / vent port, ISO 6149, M33x2, 19 mm deep	
	В	If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M42x2, 19.5 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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### ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

### similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **E4/CMV215**

Dimensions		
	Dimensions upon request	

Dimensions		
	Dimensions upon request	

٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise	AX	Pressure equalization port, ISO 6149,
A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	M22x1.5, 15.5 mm deep
В	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M33x2, 19 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M42x2, 19.5 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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### ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

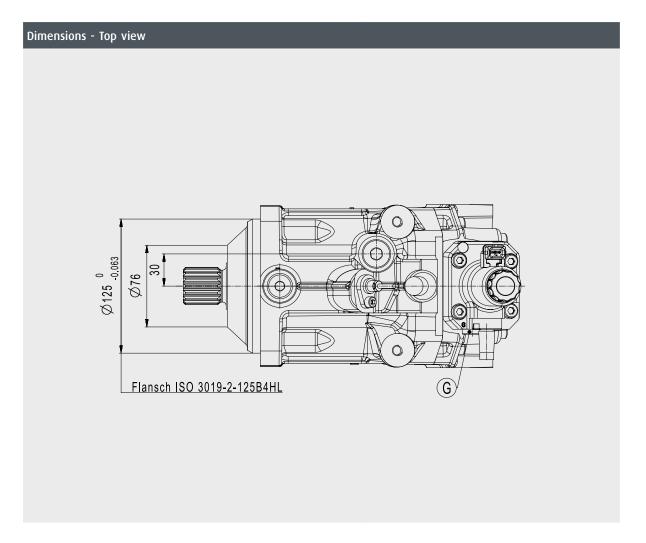
## similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | M4/CMV60



٨	High pressure work port, ISO 6162-2, If pressurised - motor runs clockwise	AX	Pressure equalization port
A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	riessure equalization port
D	High pressure work port, ISO 6162-2, If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149

G	Ext. control pressure supply, ISO 6149	
U	Bearing flush port, ISO 6149	
Y1	Measuring port, ISO 6149	







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C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 140

R4 / CMV 170

similar to ISO 3019-2

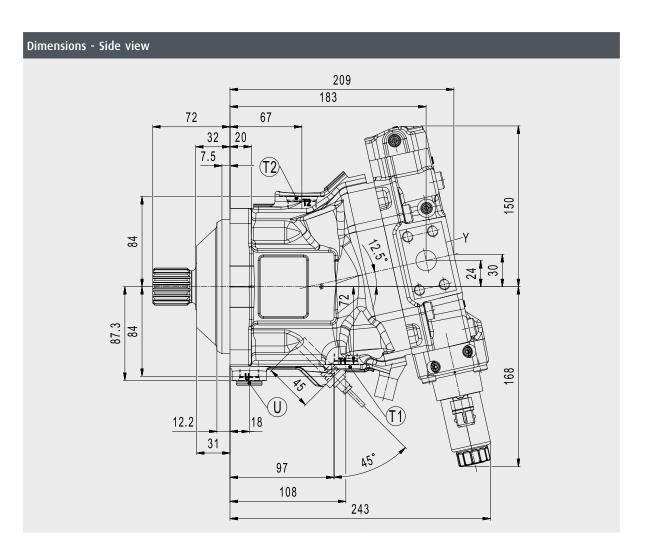
P2 / CMV 60

Y2 / CMV 85

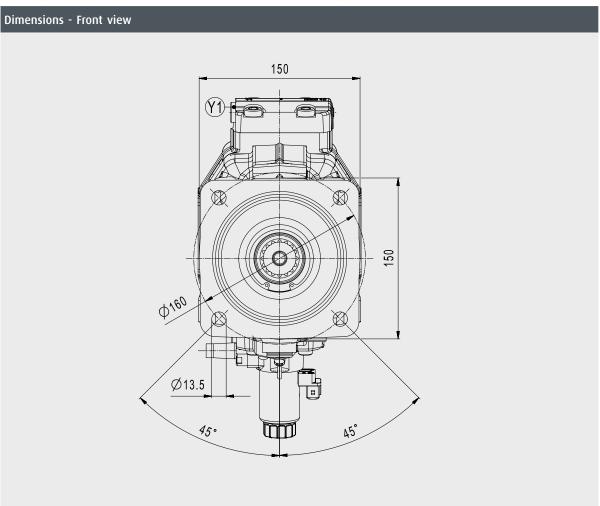
S2 / CMV 115

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | M4/CMV60



А	High pressure work port, ISO 6162-2, If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX BX	Pressure equalization port
n	High pressure work port, ISO 6162-2, If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149









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C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 170

## similar to ISO 3019-2

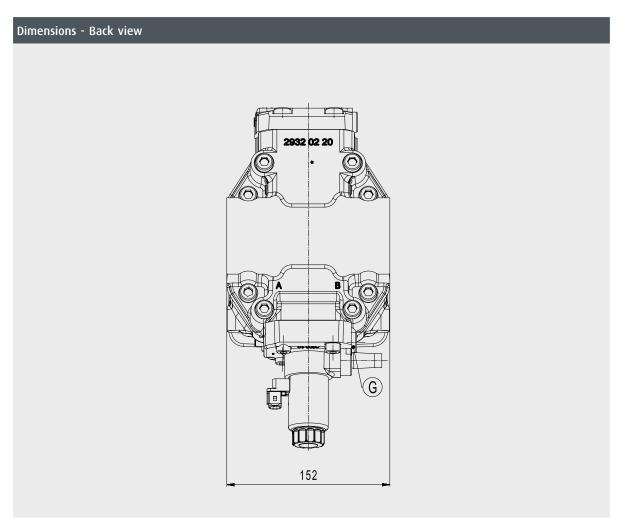
P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

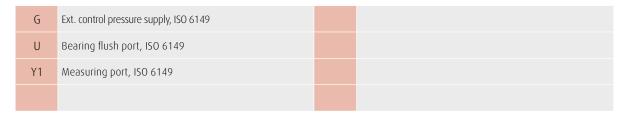
Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | M4/CMV60



٨	High pressure work port, ISO 6162-2, If pressurised - motor runs clockwise	AX	Proceure equalization part
А	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	Pressure equalization port
D	High pressure work port, ISO 6162-2, If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149

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#### ISO 3019-1/ **SAE J744**

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 170

#### Plug-in, similar to ISO 3019-2

P2 / CMV 60

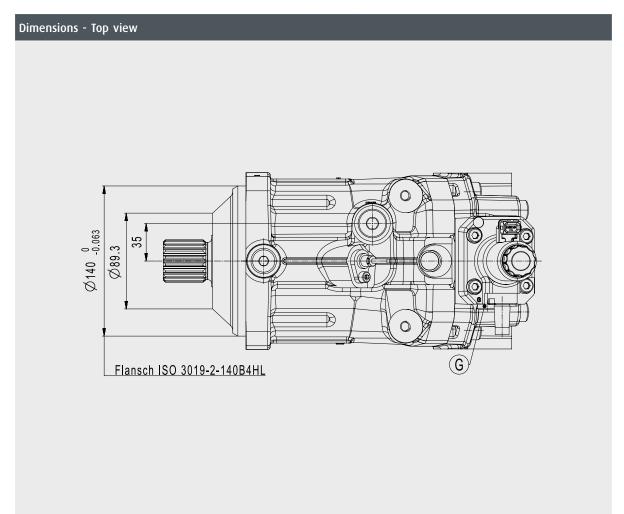
Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | N4/CMV85

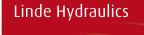
**Dimensions** 



٨	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise	AX	Pressure equalization port
А	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	riessure equalization port
В	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M22x1.5, 15.5 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M27x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	







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ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 140

R4 / CMV 170

S4 / CMV 215

similar to ISO 3019-2

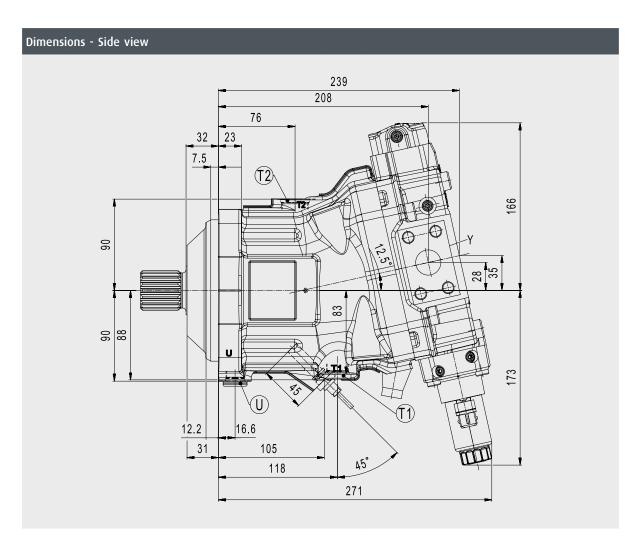
P2 / CMV 60

Y2 / CMV 85

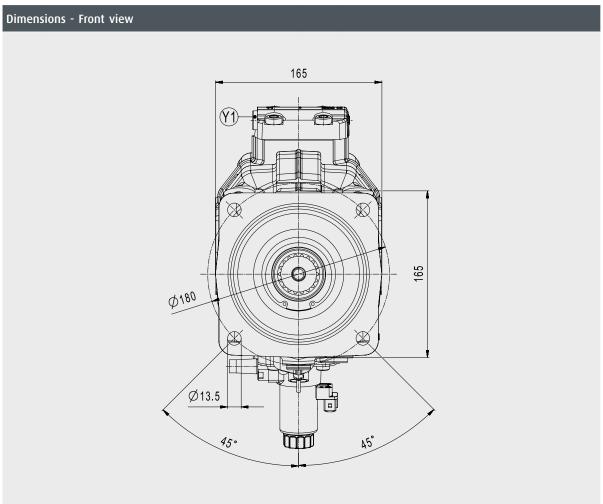
S2 / CMV 115

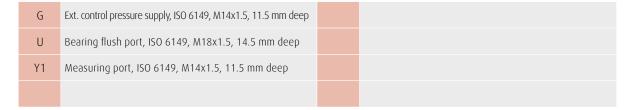
Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | N4/CMV85



٨	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise		Pressure equalization port
А	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	rressure equalization port
D	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M22x1.5, 15.5 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M27x2, 19 mm deep









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#### ISO 3019-1/ **SAE J744**

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

## similar to ISO 3019-2

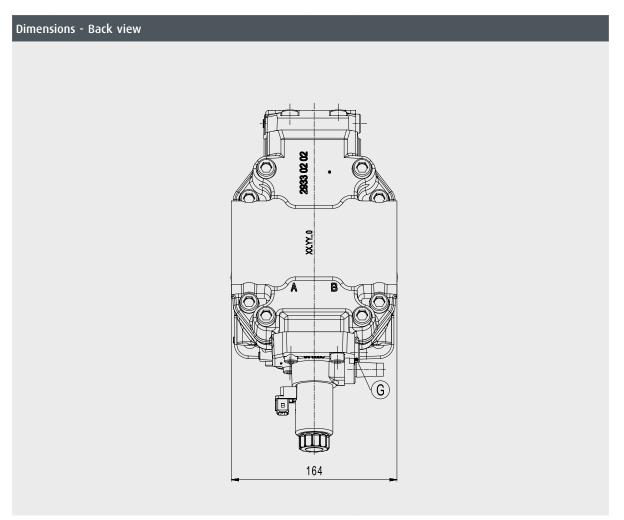
P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | N4/CMV85

**Dimensions** 



٨	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise		Proceure equalization port
А	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	Pressure equalization port
В	High pressure work port, ISO 6162-2, SAE 1"	T1	Drain / vent port, ISO 6149, M22x1.5, 15.5 mm deep
В	If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M27x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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**Auxiliary Ports** 

Functions/Options

### ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

### similar to ISO 3019-2

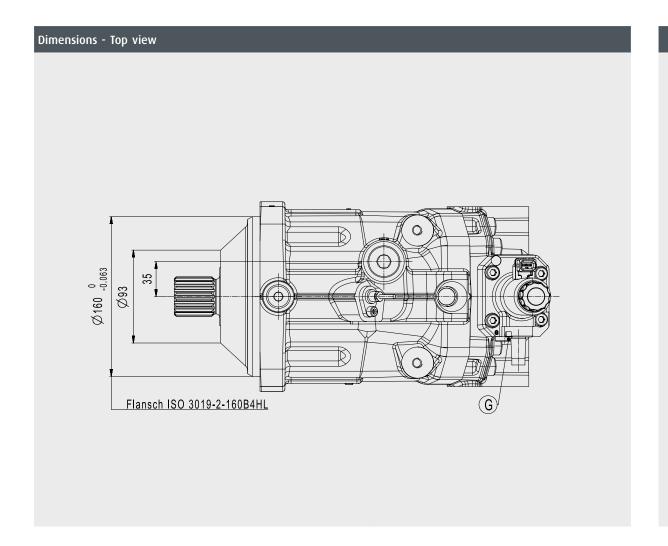
P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | **P4/CMV115**



Δ	A High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise Nom. press.: 450 bar, max. press.: 500 bar	AX	Pressure equalization port
Α		ВХ	rressure equalization port
	High pressure work port, ISO 6162-2, SAE 1"	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В	If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	







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Functions/Options

#### ISO 3019-1/ **SAE J744**

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 140

R4 / CMV 170

### similar to ISO 3019-2

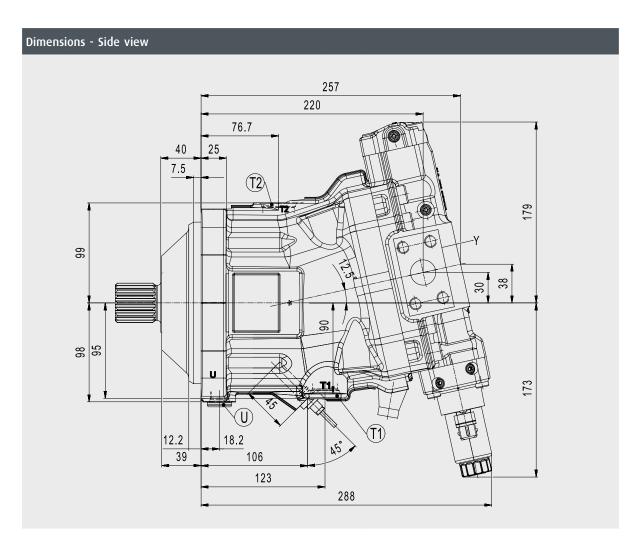
P2 / CMV 60

Y2 / CMV 85

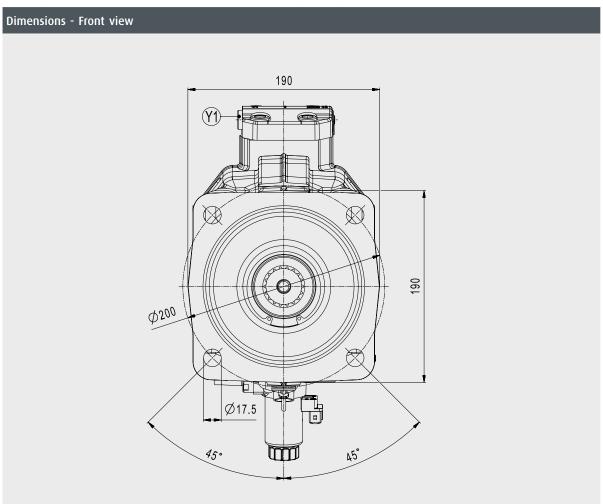
S2 / CMV 115

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | **P4/CMV115**



A	٨	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise	AX	Procesure agualization part
	A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	Pressure equalization port
	D	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
	В		T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep



G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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Functions/Options

#### ISO 3019-1/ **SAE J744**

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 140

R4 / CMV 170

S4 / CMV 215

### similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise

Nom. pres.: 450 bar, max. press.: 500 bar

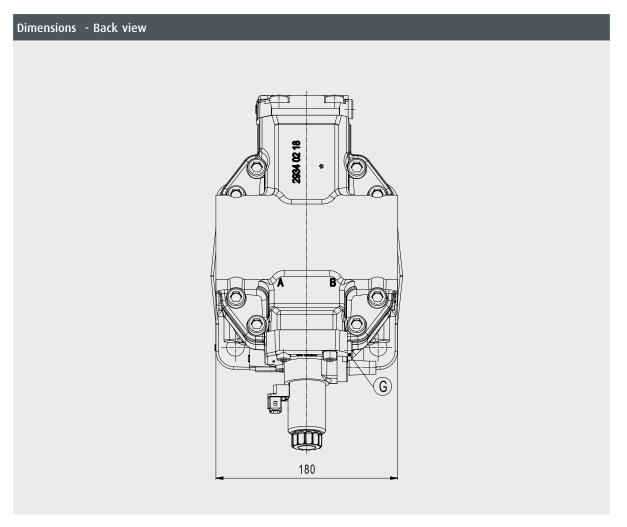
High pressure work port, ISO 6162-2, SAE 1"

If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

**Dimensions** 

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | **P4/CMV115**

In the following you will find the technical specifications of the mounting flanges and auxiliary ports. They are clustered according to the standard and nominal sizes. First get an overview of the dimensions. Note the short designations such as "C4" or "E4". In the section [Model Code & Availability] you can then check the availability of the mounting flange as well as auxiliary ports and compile your desired configuration using the short designations as a segment of the model code.



AX	Oroccura aqualization part	
ВХ	Pressure equalization port	
T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep	
T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep	

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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Functions/Options

### ISO 3019-1/ **SAE J744**

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 170

## similar to ISO 3019-2

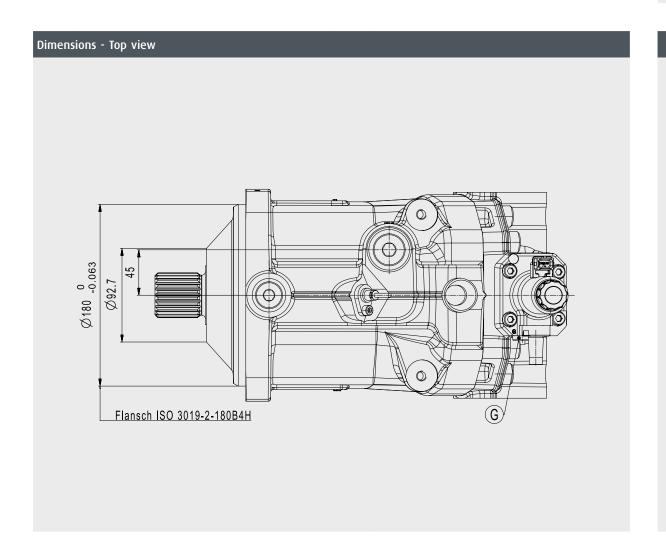
P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | R4/CMV140



А	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX BX	Pressure equalization port
D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. press.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В		T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	







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Functions/Options

ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 140

R4 / CMV 170

S4 / CMV 215

similar to ISO 3019-2

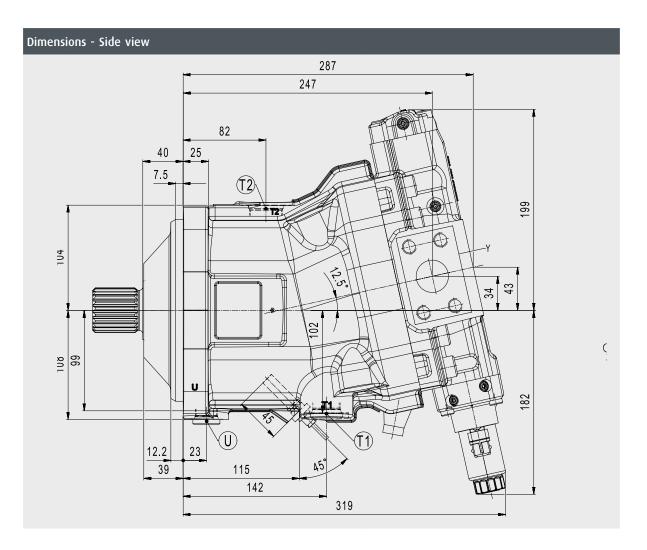
P2 / CMV 60

Y2 / CMV 85

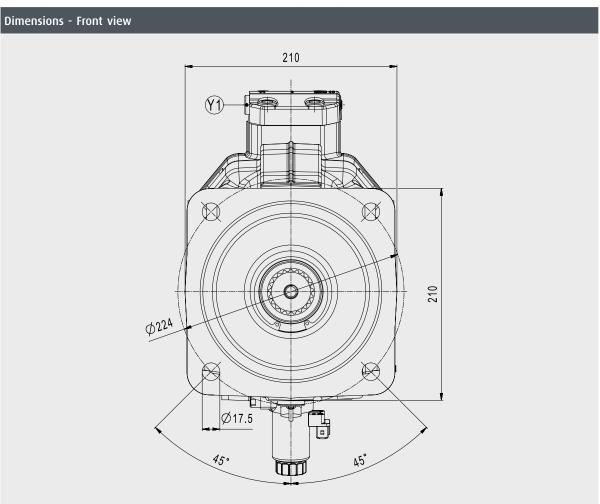
S2 / CMV 115

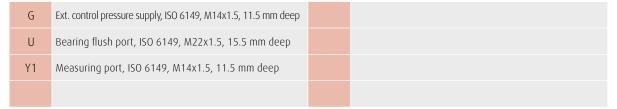
Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | R4/CMV140



А	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise		Pressure equalization port
, (	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	rressure equalization part
D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В		T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep









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#### ISO 3019-1/ **SAE J744**

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 170

## similar to ISO 3019-2

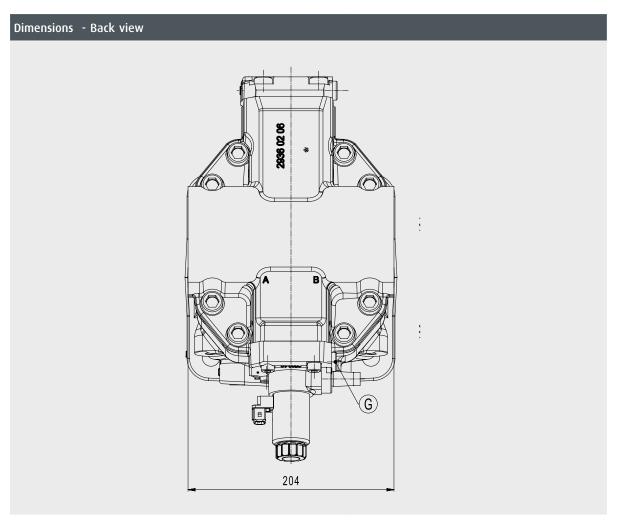
P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | R4/CMV140

**Dimensions** 



G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep			

	٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Proceure equalization port
	А		ВХ	Pressure equalization port
	D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
E	В		T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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ISO 3019-1/ **SAE J744** 

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 170

similar to ISO 3019-2

P2 / CMV 60

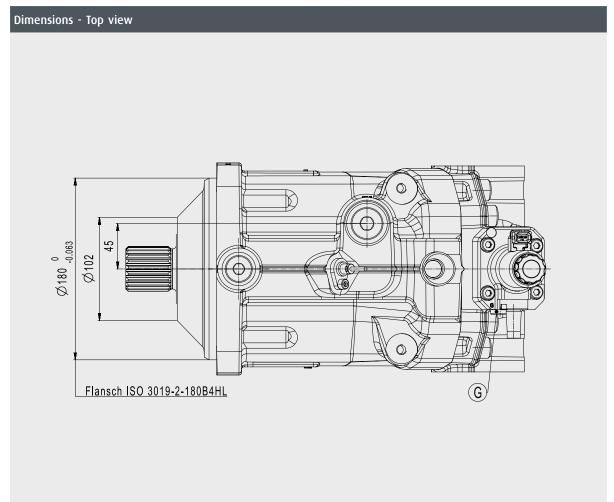
Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

**Dimensions** 

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | R4/CMV170



	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Pressure equalization port, ISO 6149,
A		ВХ	M14x1.5, 11.5 mm deep
D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	







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ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 140

R4 / CMV 170

S4 / CMV 215

similar to ISO 3019-2

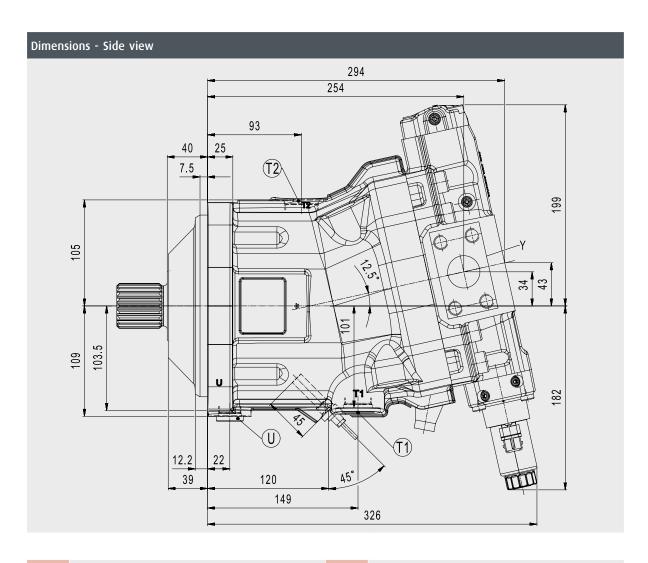
P2 / CMV 60

Y2 / CMV 85

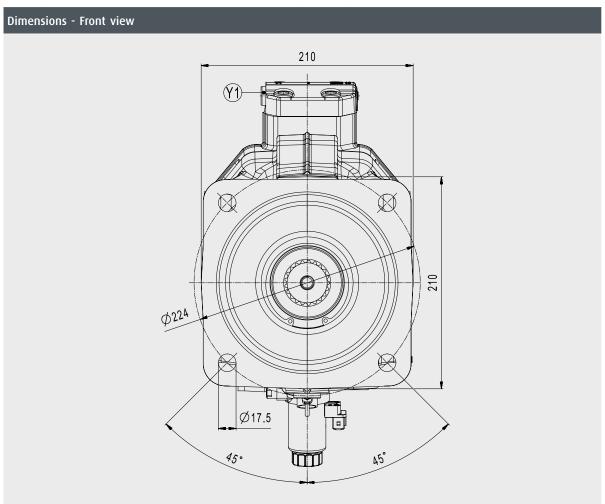
S2 / CMV 115

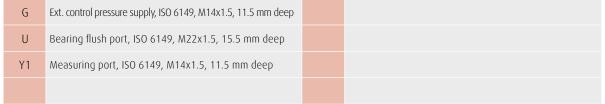
Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | R4/CMV170



٨		High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise		Pressure equalization port, ISO 6149,
		Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	M14x1.5, 11.5 mm deep
В	n	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
	В		T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep









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Functions/Options

#### ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 140

R4 / CMV 170

## similar to ISO 3019-2

P2 / CMV 60

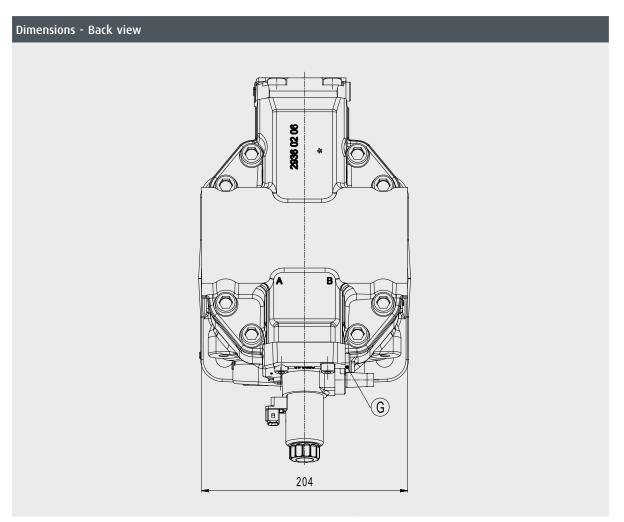
Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | R4/CMV170

In the following you will find the technical specifications of the mounting flanges and auxiliary ports. They are clustered according to the standard and nominal sizes. First get an overview of the dimensions. Note the short designations such as "C4" or "E4". In the section [Model Code & Availability] you can then check the availability of the mounting flange as well as auxiliary ports and compile your desired configuration using the short designations as a segment of the model code.



٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar		Pressure equalization port, ISO 6149,
A			M14x1.5, 11.5 mm deep
В	High pressure work port, ISO 6162-2, SAE 1 1/4"	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
	If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar		Drain / vent port, ISO 6149, M33x2, 19 mm deep

Dimensions			

Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep

Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep

Measuring port, ISO 6149, M14x1.5, 11.5 mm deep







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**Auxiliary Ports** 

Functions/Options

### ISO 3019-1/ **SAE J744**

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 170

## similar to ISO 3019-2

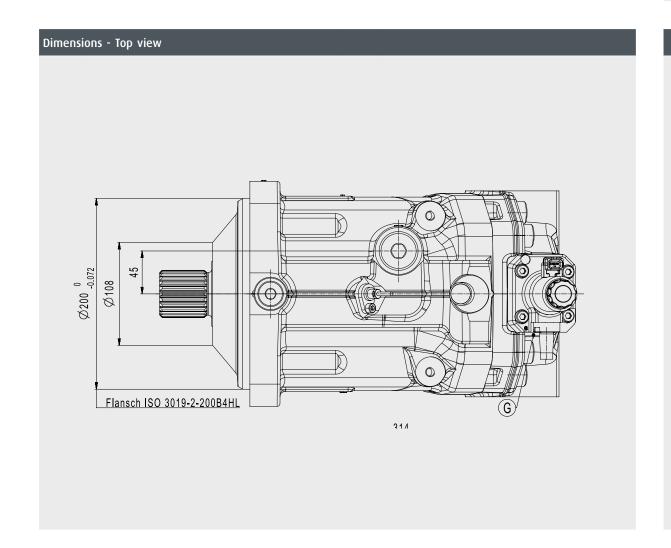
P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | **\$4/CMV215**



	٨	High pressure work port, ISO 6162-2, SAE 1 1/4"		Pressure equalization port, ISO 6149,
	А	If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	M22x1.5, 15.5 mm deep
	D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M33x2, 19 mm deep
	В		T2	Drain / vent port, ISO 6149, M42x2, 19.5 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	







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**Auxiliary Ports** 

Functions/Options

ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 140

R4 / CMV 170

S4 / CMV 215

similar to ISO 3019-2

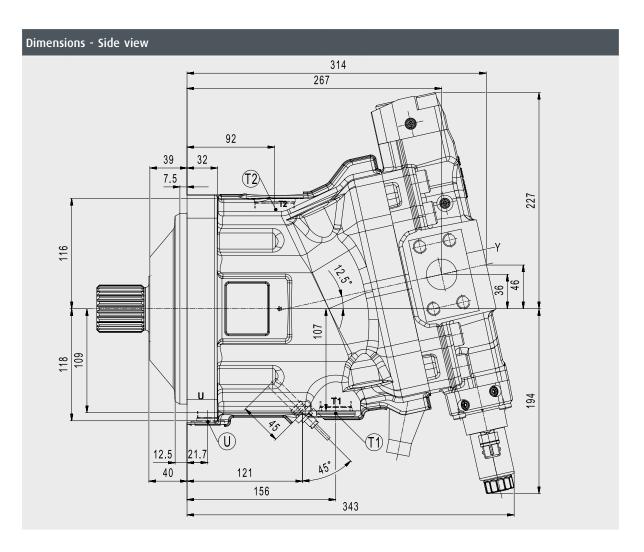
P2 / CMV 60

Y2 / CMV 85

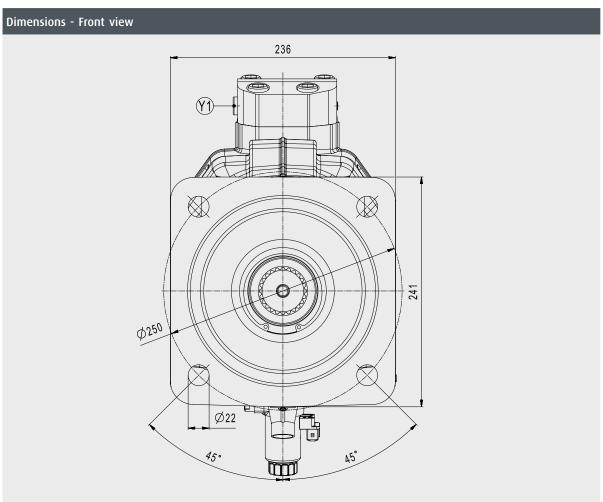
S2 / CMV 115

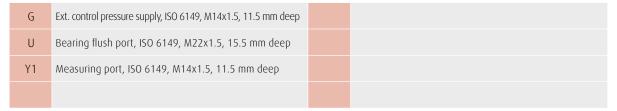
Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | **\$4/CMV215**



		High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise	AX	Pressure equalization port, ISO 6149,
	А	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	M22x1.5, 15.5 mm deep
	В	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M33x2, 19 mm deep
			T2	Drain / vent port, ISO 6149, M42x2, 19.5 mm deep









Key Facts

CONFIGURATION

#### **TECHNICAL SPECIFICATION**

General Technical Data

Operating Parameters

**Electric Interfaces** 

Mechanical Interfaces

Shafts

Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

Functions/Options

### ISO 3019-1/ **SAE J744**

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

## similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | **\$4/CMV215**

**Dimensions** 

In the following you will find the technical specifications of the mounting flanges and auxiliary ports. They are clustered according to the standard and nominal sizes. First get an overview of the dimensions. Note the short designations such as "C4" or "E4". In the section [Model Code & Availability] you can then check the availability of the mounting flange as well as auxiliary ports and compile your desired configuration using the short designations as a segment of the model code.

# Dimensions - Back view 216

А	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX BX	Pressure equalization port, ISO 6149, M22x1.5, 15.5 mm deep
0	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M33x2, 19 mm deep
В		T2	Drain / vent port, ISO 6149, M42x2, 19.5 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	







Key Facts

CONFIGURATION

#### **TECHNICAL SPECIFICATION**

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Operating Parameters

**Electric Interfaces** 

Mechanical Interfaces

Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

Functions/Options

### ISO 3019-1/ **SAE J744**

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 140

R4 / CMV 170

## similar to ISO 3019-2

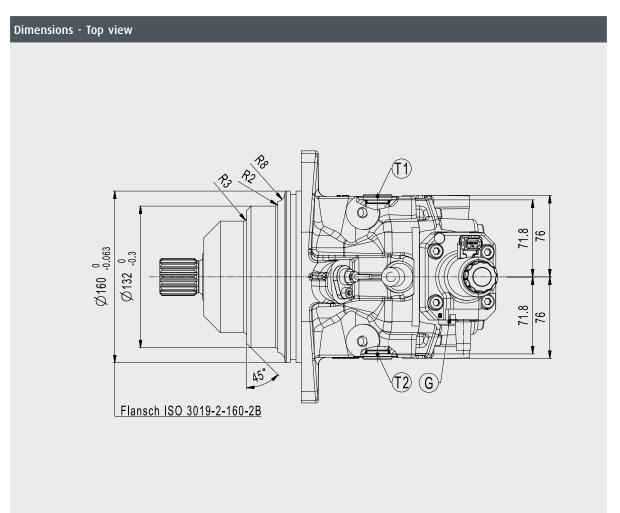
P2 / CMV 60

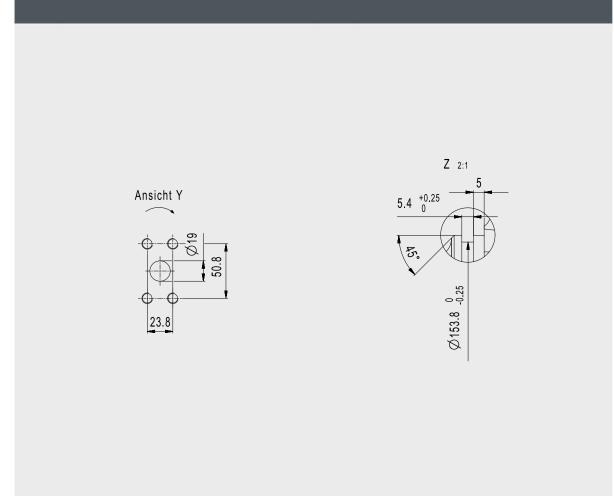
Y2 / CMV 85

S2 / CMV 115

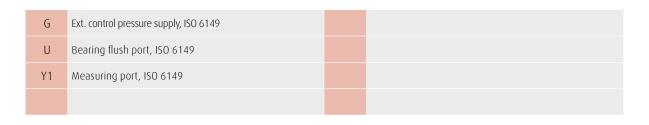
Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | Plug-in, similar to ISO 3019-2 | **P2/CMV60** 





А	High pressure work port, ISO 6162-2, If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX BX	Pressure equalization port
D	High pressure work port, ISO 6162-2, If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149
В		T2	Drain / vent port, ISO 6149









Key Facts

CONFIGURATION

#### **TECHNICAL SPECIFICATION**

General Technical Data

Operating Parameters

**Electric Interfaces** 

Mechanical Interfaces

Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

Functions/Options

### ISO 3019-1/ **SAE J744**

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 140

R4 / CMV 170

## similar to ISO 3019-2

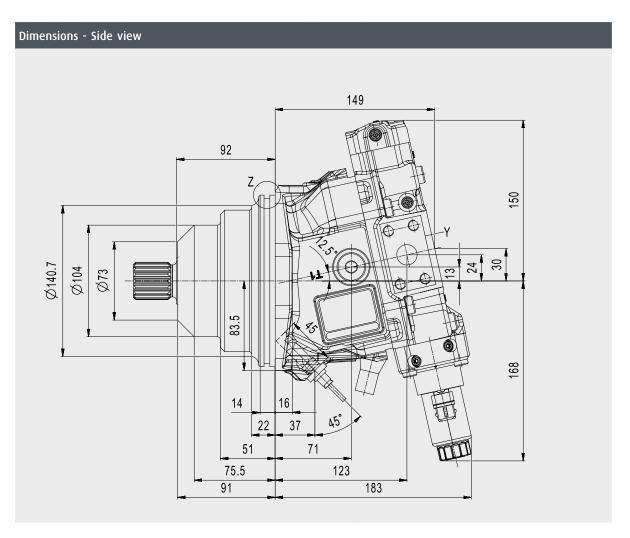
P2 / CMV 60

Y2 / CMV 85

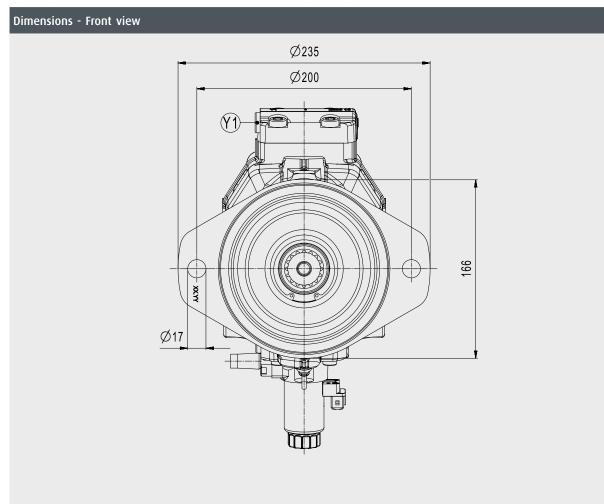
S2 / CMV 115

Z4 / CMV 215

## Technical Specification | Mounting Flanges Auxiliary Ports | Plug-in, similar to ISO 3019-2 | **P2/CMV60**



А	High pressure work port, ISO 6162-2, If pressurised - motor runs clockwise	AX	Pressure equalization port
	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	riessure equalization port
D	High pressure work port, ISO 6162-2, If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149



G	Ext. control pressure supply, ISO 6149	
U	Bearing flush port, ISO 6149	
Y1	Measuring port, ISO 6149	







Key Facts

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**Electric Interfaces** 

Mechanical Interfaces

Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

Functions/Options

#### ISO 3019-1/ **SAE J744**

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 170

### similar to ISO 3019-2

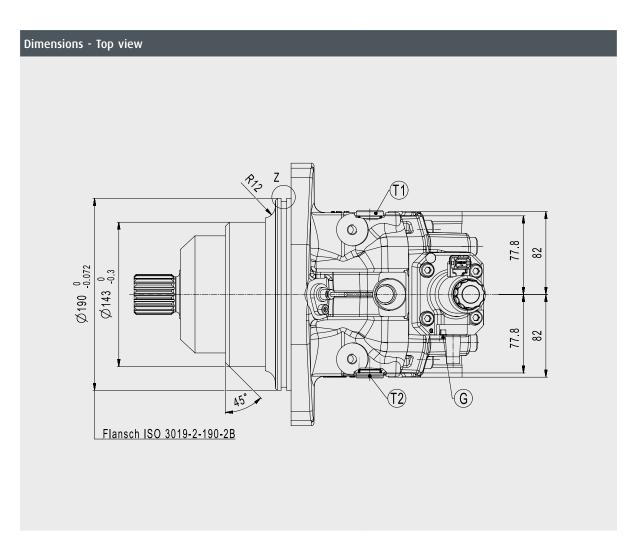
P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

# Technical Specification | Mounting Flanges Auxiliary Ports | Plug-in, similar to ISO 3019-2 | Y2/CMV85



|--|

٨	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Pressure equalization port
A		ВХ	riessure equalization port
n	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M22x1.5, 15.5 mm deep
В		T2	Drain / vent port, ISO 6149, M27x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	







Key Facts

CONFIGURATION

#### **TECHNICAL SPECIFICATION**

General Technical Data

Operating Parameters

**Electric Interfaces** 

Mechanical Interfaces

Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

Functions/Options

#### ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 140

R4 / CMV 170

S4 / CMV 215

### similar to ISO 3019-2

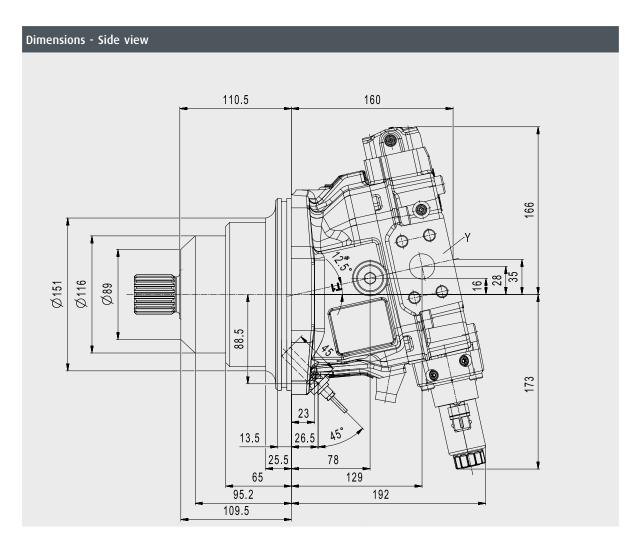
P2 / CMV 60

Y2 / CMV 85

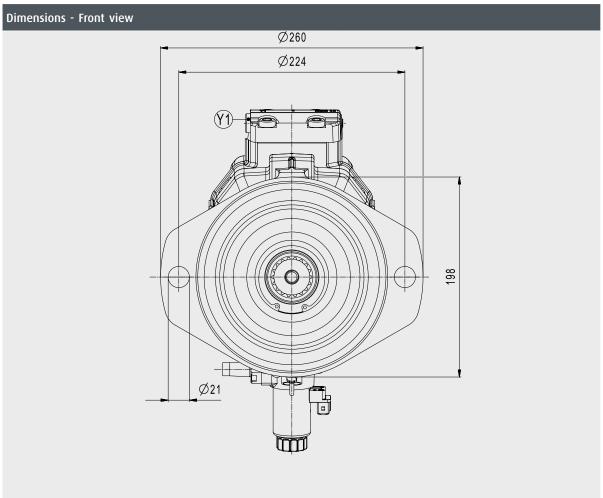
S2 / CMV 115

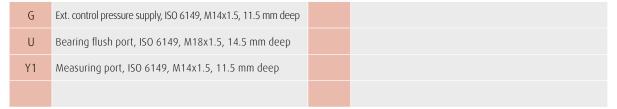
Z4 / CMV 215

# Technical Specification | Mounting Flanges Auxiliary Ports | Plug-in, similar to ISO 3019-2 | Y2/CMV85



٨	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Pressure equalization port
А		ВХ	
n	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M22x1.5, 15.5 mm deep
В		T2	Drain / vent port, ISO 6149, M27x2, 19 mm deep









Key Facts

CONFIGURATION

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**Electric Interfaces** 

Mechanical Interfaces

Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

Functions/Options

ISO 3019-1/ **SAE J744** 

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 170

similar to ISO 3019-2

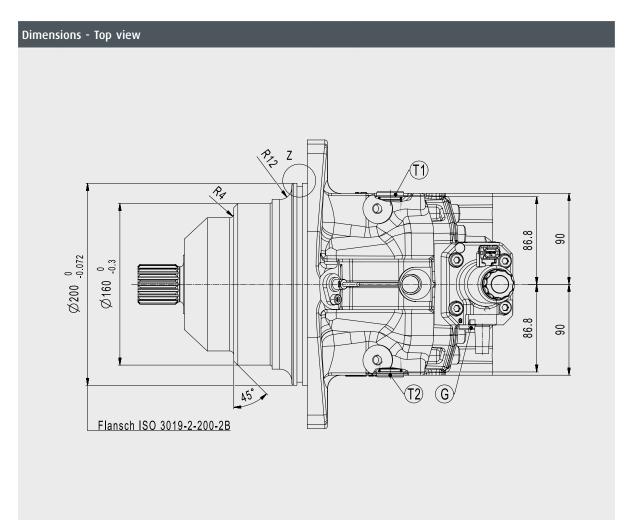
P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

# Technical Specification | Mounting Flanges Auxiliary Ports | Plug-in, similar to ISO 3019-2 | **S2/CMV115**

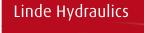


Dimensions	Z 2:1  5.4 0 -0.072  8:61  8:61	
	<i>B</i>	

٨	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Pressure equalization port
A		ВХ	rressure equalization port
В	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В		T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	







Key Facts

CONFIGURATION

#### **TECHNICAL SPECIFICATION**

General Technical Data

Operating Parameters

**Electric Interfaces** 

Mechanical Interfaces

Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

Functions/Options

ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 140

R4 / CMV 170

S4 / CMV 215

similar to ISO 3019-2

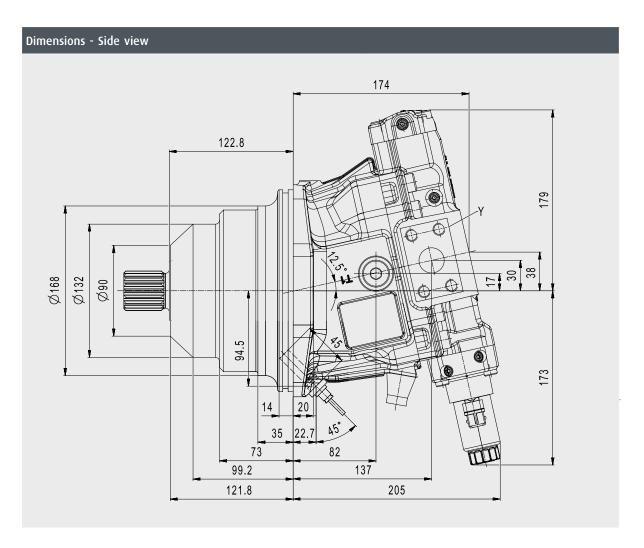
P2 / CMV 60

Y2 / CMV 85

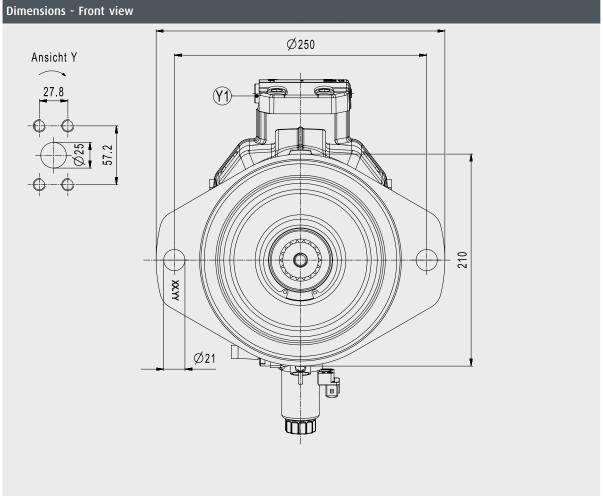
S2 / CMV 115

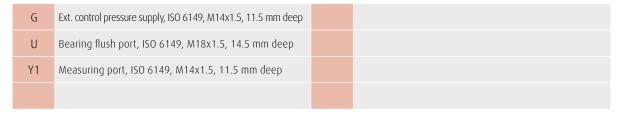
Z4 / CMV 215

# Technical Specification | Mounting Flanges Auxiliary Ports | Plug-in, similar to ISO 3019-2 | **S2/CMV115**



٨	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Proceure equalization part
A		ВХ	Pressure equalization port
0	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В		T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep











Key Facts

CONFIGURATION

#### **TECHNICAL SPECIFICATION**

General Technical Data

Operating Parameters

**Electric Interfaces** 

Mechanical Interfaces

Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

Functions/Options

#### ISO 3019-1/ **SAE J744**

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 170

### similar to ISO 3019-2

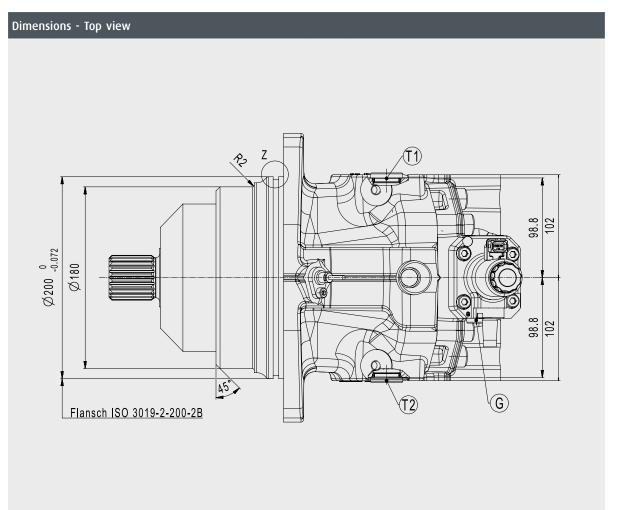
P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

# Technical Specification | Mounting Flanges Auxiliary Ports | Plug-in, similar to ISO 3019-2 | **\$2/CMV140**



0 194 0 31.8 31.8
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٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Pressure equalization port
A		ВХ	
D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В		T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

-	G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
	U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Υ	Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	







Key Facts

CONFIGURATION

#### **TECHNICAL SPECIFICATION**

General Technical Data

Operating Parameters

**Electric Interfaces** 

Mechanical Interfaces

Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

Functions/Options

#### ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 140

R4 / CMV 170

S4 / CMV 215

### similar to ISO 3019-2

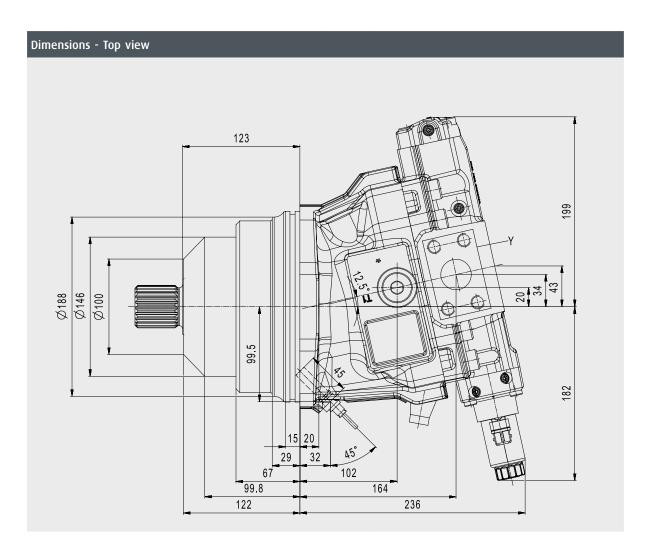
P2 / CMV 60

Y2 / CMV 85

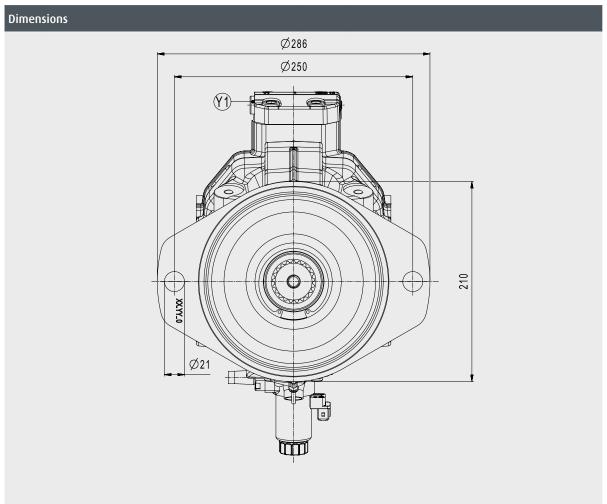
S2 / CMV 115

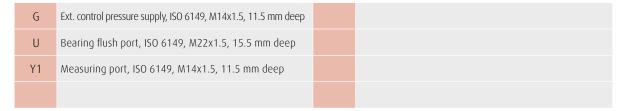
Z4 / CMV 215

# Technical Specification | Mounting Flanges Auxiliary Ports | Plug-in, similar to ISO 3019-2 | **S2/CMV140**



٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Desceure equalization post
А		ВХ	Pressure equalization port
D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В		T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep









Key Facts

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#### **TECHNICAL SPECIFICATION**

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Operating Parameters

**Electric Interfaces** 

Mechanical Interfaces

Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

Functions/Options

#### ISO 3019-1/ **SAE J744**

C4 / CMV 60

C2 / CMV 85

ISO 3019-2

R4 / CMV 170

P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

metric

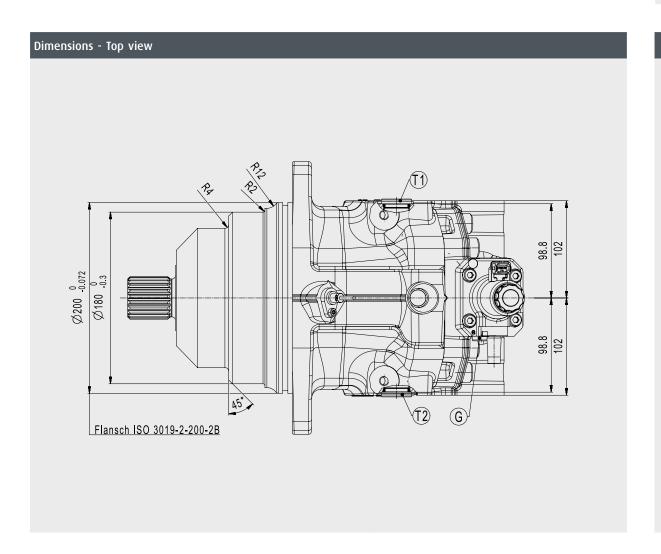
M4 / CMV 60

N4 / CMV 85

### similar to ISO 3019-2

Z4 / CMV 215

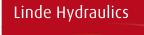
# Technical Specification | Mounting Flanges Auxiliary Ports | Plug-in, similar to ISO 3019-2 | **S2/CMV170**



	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Pressure equalization port, ISO 6149,
А		ВХ	M14x1.5, 11.5 mm deep
D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В		T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	







Key Facts

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#### **TECHNICAL SPECIFICATION**

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**Electric Interfaces** 

Mechanical Interfaces

Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

Functions/Options

#### ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 140

R4 / CMV 170

S4 / CMV 215

### similar to ISO 3019-2

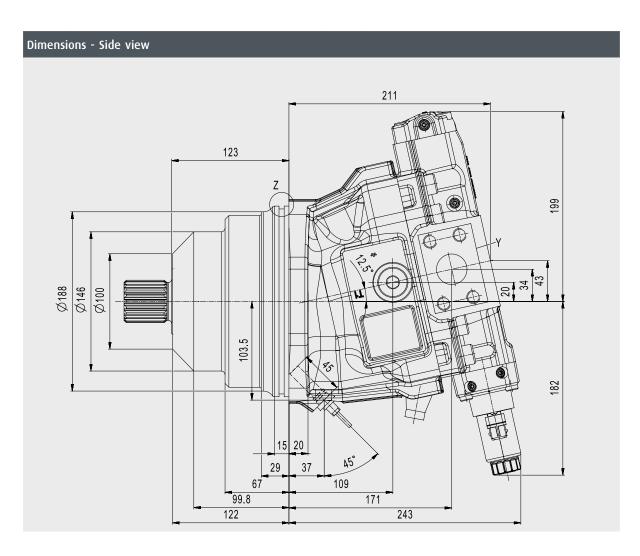
P2 / CMV 60

Y2 / CMV 85

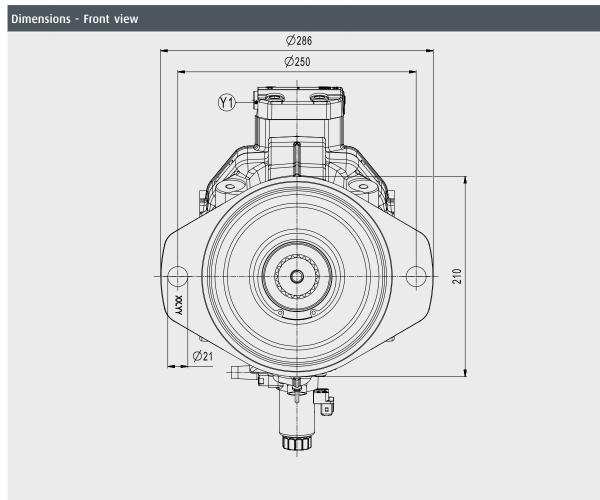
S2 / CMV 115

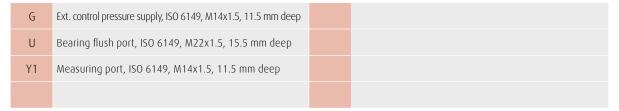
Z4 / CMV 215

# Technical Specification | Mounting Flanges Auxiliary Ports | Plug-in, similar to ISO 3019-2 | **S2/CMV170**



٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise		Pressure equalization port, ISO 6149,
А	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	M14x1.5, 11.5 mm deep
High pressure work port, ISO 6162-2, SAE 1 1/4"	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep









Key Facts

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Mechanical Interfaces

Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

Functions/Options

#### ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 170

### similar to ISO 3019-2

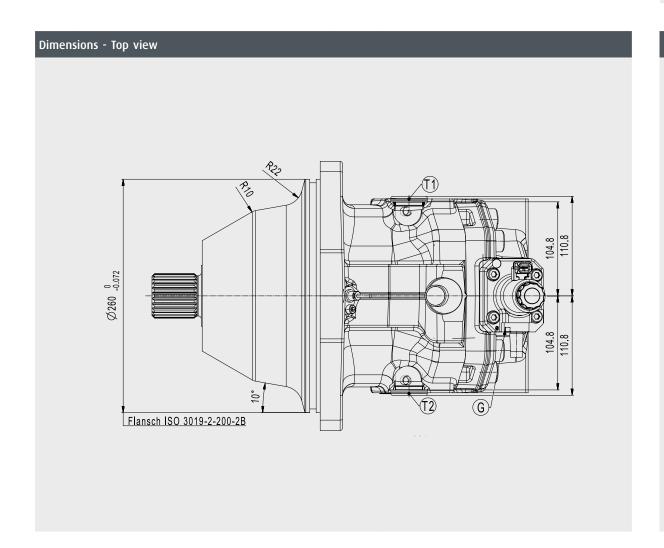
P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

# Technical Specification | Mounting Flanges Auxiliary Ports | Plug-in, similar to ISO 3019-2 | **Z4/CMV215**



٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise	AX	Pressure equalization port, ISO 6149,
A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	M22x1.5, 15.5 mm deep
D	High pressure work port, ISO 6162-2, SAE 1 1/4"  If pressurised - motor runs counter-clockwise  Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M33x2, 19 mm deep
В		T2	Drain / vent port, ISO 6149, M42x2, 19.5 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





Key Facts

CONFIGURATION

#### **TECHNICAL SPECIFICATION**

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Operating Parameters

**Electric Interfaces** 

Mechanical Interfaces

Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

Functions/Options

#### ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

R4 / CMV 140

R4 / CMV 170

S4 / CMV 215

### similar to ISO 3019-2

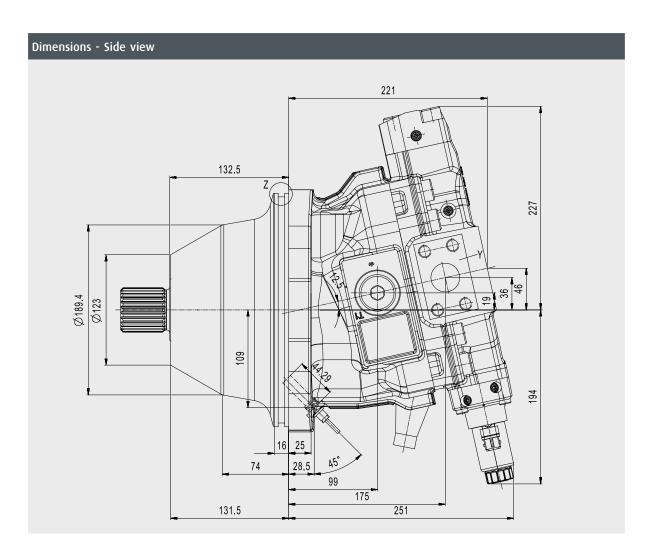
P2 / CMV 60

Y2 / CMV 85

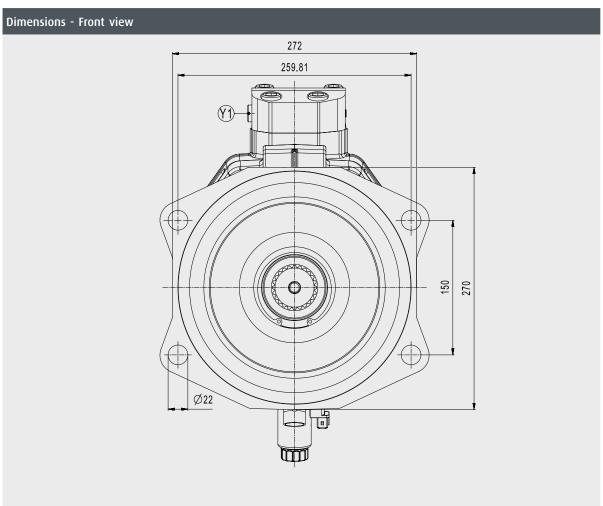
S2 / CMV 115

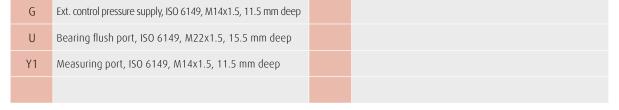
Z4 / CMV 215

# Technical Specification | Mounting Flanges Auxiliary Ports | Plug-in, similar to ISO 3019-2 | **Z4/CMV215**



	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise	AX	Pressure equalization port, ISO 6149, M22x1.5, 15.5 mm deep
	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	м22х1.3, 13.3 інш асер
В	High pressure work port, ISO 6162-2, SAE 1 1/4"  If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M33x2, 19 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M42x2, 19.5 mm deep









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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

NZ / CNN 140 /170

1 / CMV 115/140/17

T2 / CMV 170/215

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 11F /140 /170

D7 / CMV 170/215

SAE J1946

F4

# Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **S7 / CMV 60**

Specification					
		Standard			
Shaft end	Specification	Number of teeth			
related data	Specification	Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
	Radial forces	<b>↓</b> Fq		Fpmax	N
Nominal size related data	Rodio Forces	<b>a</b>		a	mm
		Fax+	Motor at standstill or in rotation considering	Fax+	N
			unpressurized work ports	Fax-	N
	Axial forces		Work ports pressurized	Fax+/p	N/bar

ISO 3019-1/SAE J744					
	14				
	12/24				
	32-4				
60					
400					
405					
6930					
24					
0					
500					
7.5					





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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

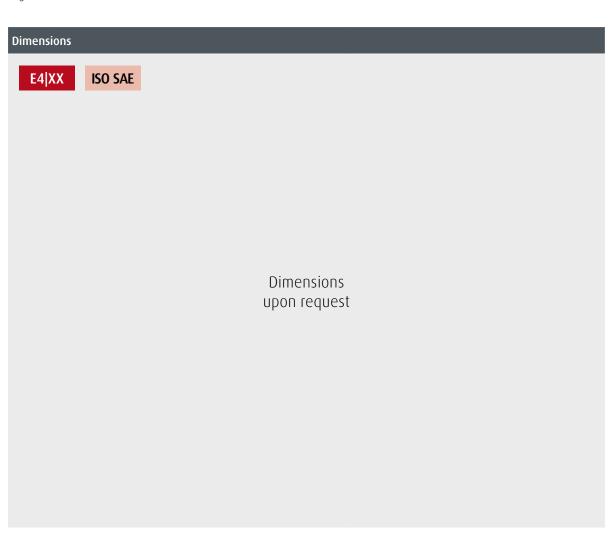
6 / CMV 115/140/170

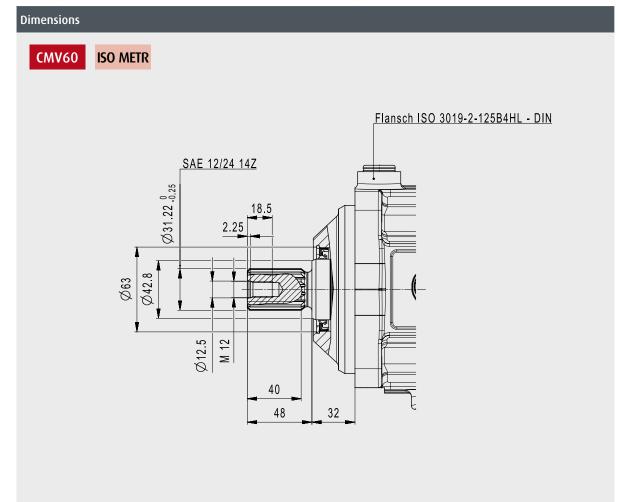
D7 / CMV 170/215

SAE J1946

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## Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **S7 / CMV 60**





CMV60 Nominal size 60	CMV170	Nominal size 170
CMV85 Nominal size 85	CMV215	Nominal size 215
CMV115 Nominal size 115	ISO SAE	Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR	Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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Functions/Options

### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

1 / CMV 115/140/1/0

T2 / CMV 170/215

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

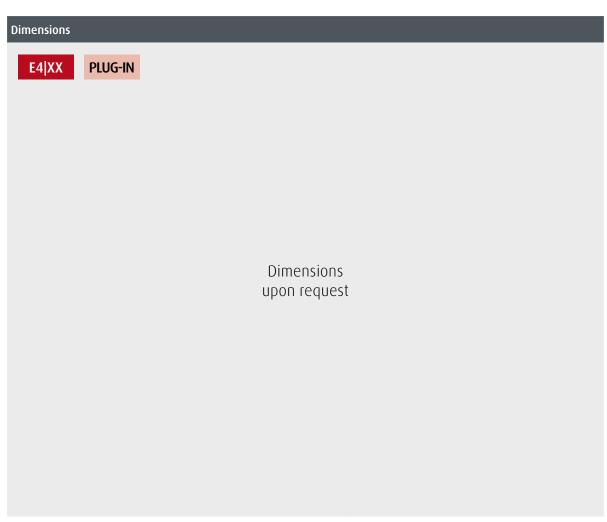
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SAE J1946

F4

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## Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **S7 / CMV 60**



Dimensions			

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



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Functions/Options

#### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

SAE J1946



# Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **S8 / CMV 85**

Specification					
		Standard			
Shaft end	Specification	Number of teeth			
related data	Specification	Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
	Radial forces	<b>↓</b> Fq		Fpmax	N
Nominal size related data	Notice 10 rees	<b>a</b>		а	mm
		Fax+ Fax-	Motor at standstill or in rotation considering	Fax+	N
	A *-1 (		unpressurized work ports	Fax-	N
	AMIGITORICS		Work ports pressurized	Fax+/p	N/bar

	ISO 3019-1/SAE J744	
	21	
	16/32	
	35-4	
85		
628		
450		
12500		
24		
0		
710		
9.6		





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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

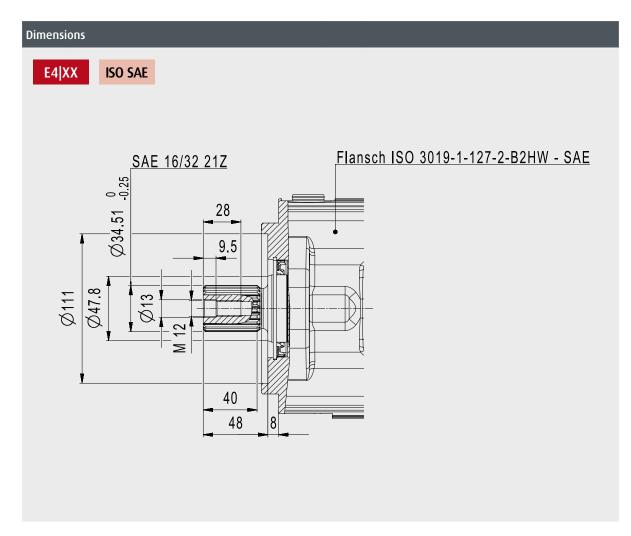
6 / CMV 115/140/170

07 / CMV 170/215

SAE J1946

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## Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **S8 / CMV 85**



Dimensions		
CMV60 ISO METR		
	Dimensions upon request	

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISOMETR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 115/140/17

T2 / CMV 170/215

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

( / CMV 11F /140 /170

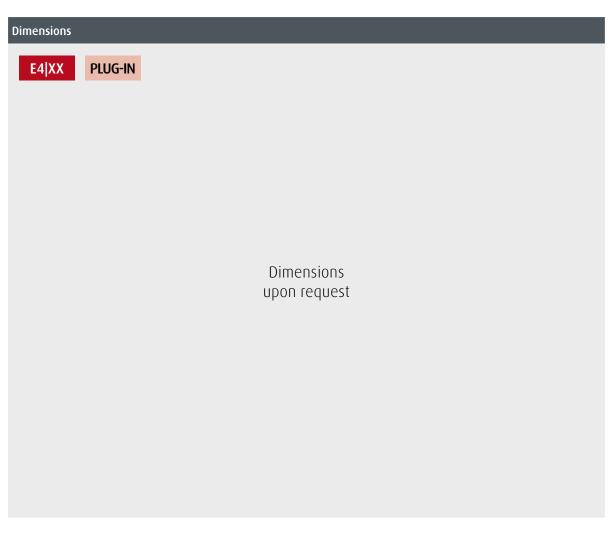
D7 / CMV 170/215

**SAE J1946** 

F4

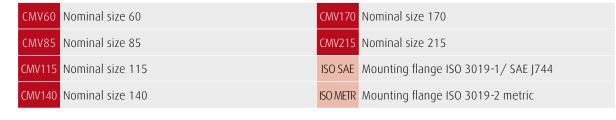
# Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **S8 / CMV 85**

In the following you will find the technical specifications of the drive shafts. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing standard and load capacity of the shafts. Beyond that you will find the dimensions of each shaft in combination with each relevant mounting flange and nominal size. Note the short designations such as "S7" or "D3". In the section [Model Code & Availability], you can then check the availability of the flange and auxiliary ports and compile your desired configuration using the short designations as a segment of the model code.



Dimensions		

PLUG-IN Mounting flange Plug-in, similar to ISO 3019-2







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#### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

, S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140 /170

I / CMV 115/140/17

72 / CMV 170/215

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

06 / CMV 115/140/17

D7 / CMV 170/215

SAE J1946

F4

# Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **S9 / CMV 85**

Specification					
эресписаноп		Standard			
Shaft end	Specification	Number of teeth			
related data	Specification	Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
	Radial forces	Fq		Fpmax	N
Nominal size related data	Radidi forces			a	mm
		Fax+	Motor at standstill or in rotation considering	Fax+	N
	Axial forces  Fax+  Fax-		unpressurized work ports	Fax-	N
		Work ports pressurized	Fax+/p	N/bar	

	ISO 3019-1/SAE J744				
	17				
	12/24				
	38-4				
85					
600					
430					
12500					
27					
0					
710					
9.6					





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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

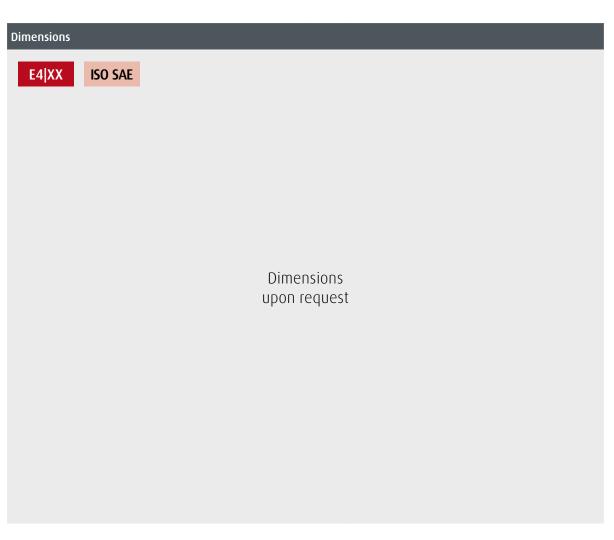
6 / CMV 115/140/170

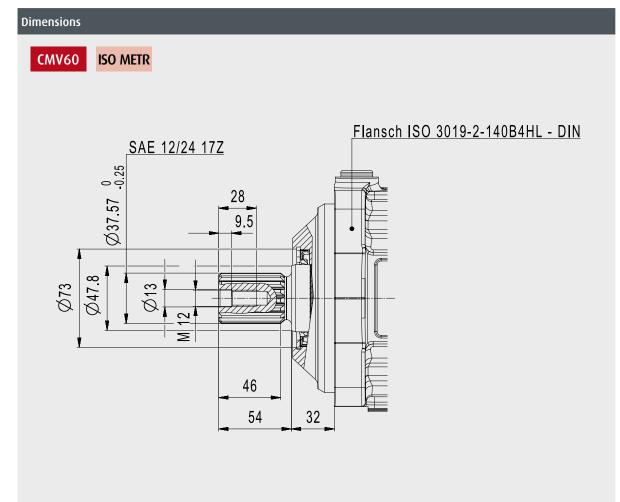
D7 / CMV 170/215

**SAE J1946** 

F4

## Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **S9 / CMV 85**





CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISOMETR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V/ / CMV 140/170

I / CMV 115/140/1/0

T2 / CMV 170/215

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

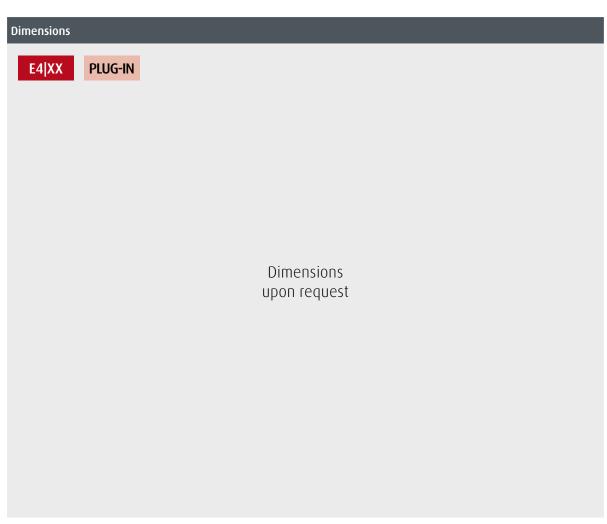
D5 / CMV 85/115

D7 / CMV 170/215

SAE J1946

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## Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **S9 / CMV 85**



Dimensions			

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



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Functions/Options

#### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

50 / Ciii. 03

S9 / CMV 85 V6 / CMV 85/115

1 / CMV 115/140/1/

T2 / CMV 170/215

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

C / CMV 11F /140 /17

D7 / CMV 170/215

SAE J1946

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# Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **V6 / CMV 85/115**

Specification	_				
		Standard			
Shaft end	Specification	Number of teeth			
related data	Specification	Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
	Radial forces	<b>↓</b> Fq		Fpmax	N
Nominal size related data		a		а	mm
		Fax+	Motor at standstill or in rotation considering	Fax+	N
	Axial forces		unpressurized work ports	Fax-	N
	Fax-		Work ports pressurized	Fax+/p	N/bar

ISO 3019-1/SAE J744						
	23					
	16/32					
	38-4					
85	115					
628	578					
450	315					
12500	9450					
27	27					
0	0					
710	1000					
9.6	11					





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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

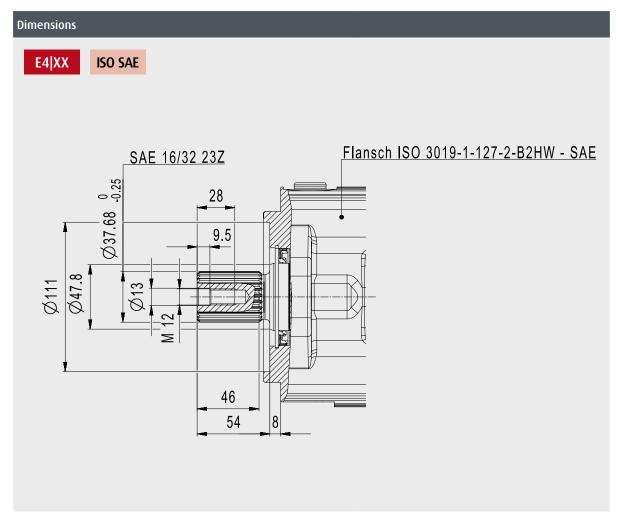
6 / CMV 115/140/170

D7 / CMV 170/215

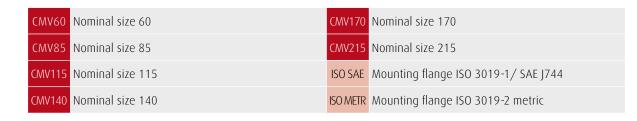
SAE J1946

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## Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **V6 / CMV 85/115**



Dimensions	
CMV60 ISO METR	
Dimensions	
upon request	



PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 115/140/170

T2 / CMV 170/215

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 115/140/170

O7 / CMV 170/215

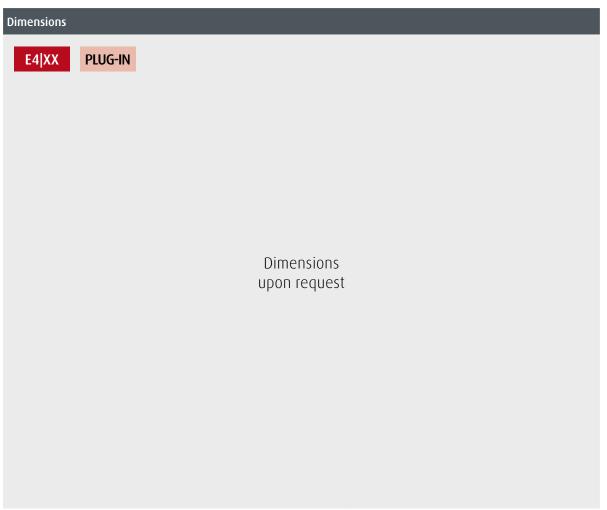
**SAE J1946** 

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# Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **V6 / CMV 85/115**

Dimensions



CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

#### DIN5480

D3 / CMV 60

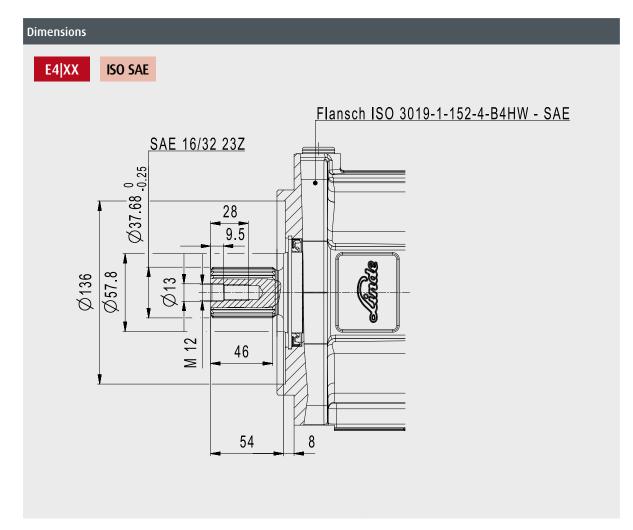
D4 / CMV 60/85

D5 / CMV 85/115

D7 / CMV 170/215

**SAE J1946** 

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | V6 / CMV 85/115



CMV60	ISO METR		
		Dimensions upon request	



PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 115/140/17

T2 / CMV 170/215

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

D7 / CMV 170/215

SAE J1946

Nominal size 60

Nominal size 85

Nominal size 115 Nominal size 140

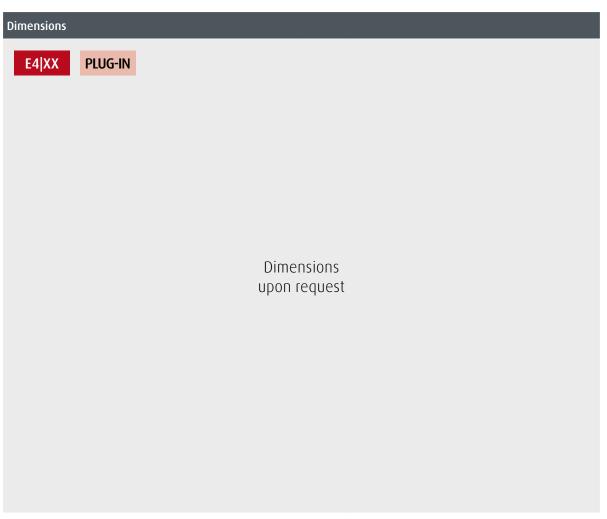
F4



### Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **V6 / CMV 85/115**

**Dimensions** 

In the following you will find the technical specifications of the drive shafts. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing standard and load capacity of the shafts. Beyond that you will find the dimensions of each shaft in combination with each relevant mounting flange and nominal size. Note the short designations such as "S7" or "D3". In the section [Model Code & Availability], you can then check the availability of the flange and auxiliary ports and compile your desired configuration using the short designations as a segment of the model code.



CMV170 Nominal size 170

CMV215 Nominal size 215

ISO SAE Mounting flange ISO 3019-1/ SAE J744

ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN Mounting flange Plug-in, similar to ISO 3019-2



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#### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85 V6 / CMV 85/115

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

SAE J1946

## Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | V7 / CMV 140/170

Specification	_				
		Standard			
Shaft end	Specification	Number of teeth			
related data	Specification	Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
	Radial forces	<b>↓</b> Fq		Fpmax	N
Nominal size related data	RodidiTorces	a		а	mm
		_/	Motor at standstill or in rotation considering	Fax+	N
	Axial forces	Fax+	unpressurized work ports	Fax-	N
	Axial forces  Fax-		Work ports pressurized	Fax+/p	N/bar

	ISO 3019-1/SAE J744	
	27	
	16/32	
	44-4	
140	170	
1032	1218	
450	450	
16000	19400	
33.5	33.5	
0	0	
1210	1200	
12.4	15.1	





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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 115/140/170

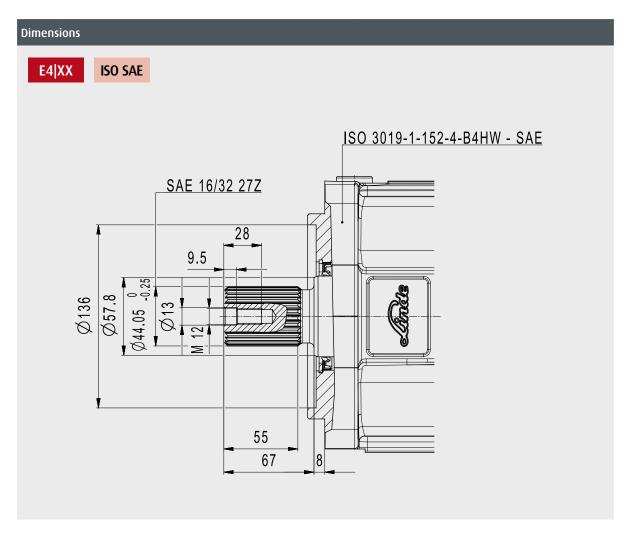
D7 / CMV 170/215

SAE J1946

F4

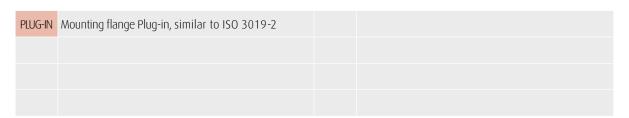
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## Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | V7 / CMV 140/170



Dimensions  CMV60	ISO METR				
			ensions <sub>.</sub>		
		upon	request		

CMV60 Nominal size 60	CMV170	Nominal size 170
CMV85 Nominal size 85	CMV215	Nominal size 215
CMV115 Nominal size 115	ISO SAE	Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR	Mounting flange ISO 3019-2 metric







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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

D7 / CMV 170/215

**SAE J1946** 

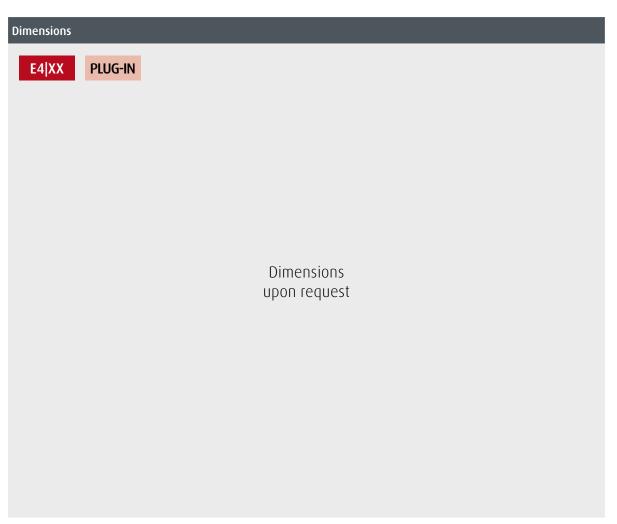
Nominal size 60

Nominal size 85

Nominal size 115 Nominal size 140

## Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | V7 / CMV 140/170

In the following you will find the technical specifications of the drive shafts. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing standard and load capacity of the shafts. Beyond that you will find the dimensions of each shaft in combination with each relevant mounting flange and nominal size. Note the short designations such as "S7" or "D3". In the section [Model Code & Availability], you can then check the availability of the flange and auxiliary ports and compile your desired configuration using the short designations as a segment of the model code.



CMV170	Nominal size 170	PLUG
CMV215	Nominal size 215	
ISO SAE	Mounting flange ISO 3019-1/ SAE J744	
ISO METR	Mounting flange ISO 3019-2 metric	

Dimensions			
Difficusions			

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



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Functions/Options

### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

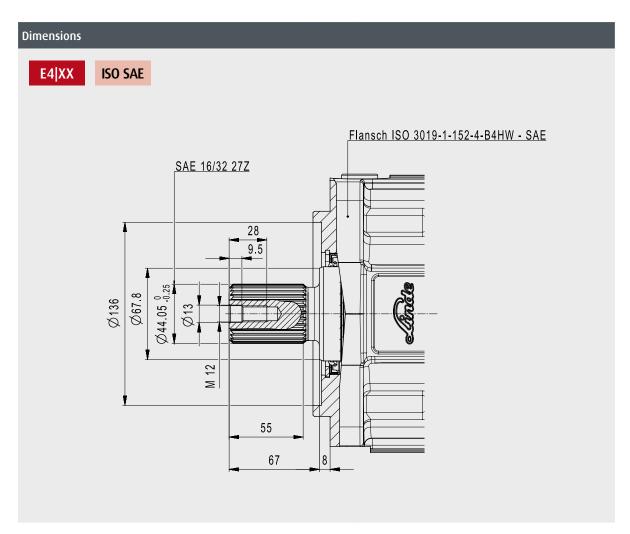
5 / CMV 115/140/170

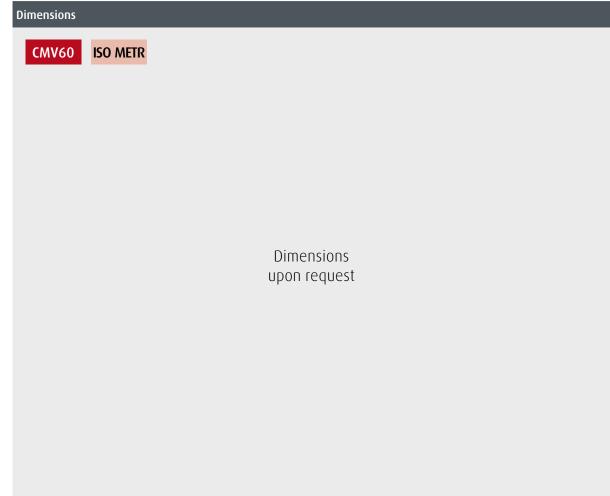
D7 / CMV 170/215

SAE J1946

F4

# Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **V7 / CMV 140/170**





CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISOMETR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

T2 / CMV 170/215

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

D7 / CMV 170/215

**SAE J1946** 

Nominal size 60

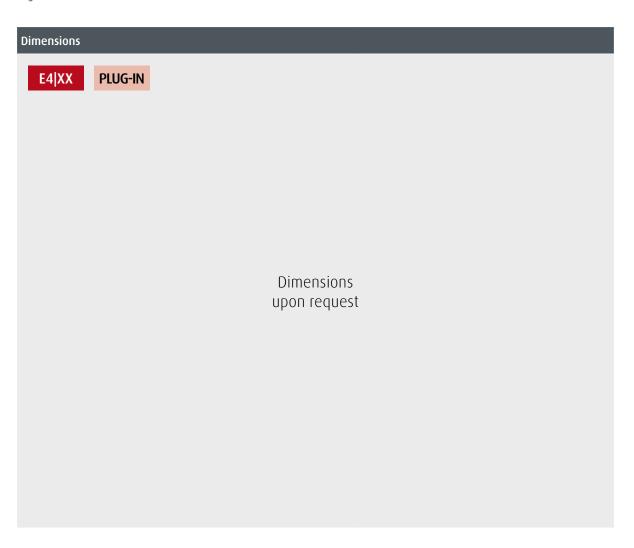
Nominal size 85

Nominal size 115 Nominal size 140

## Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | V7 / CMV 140/170

**Dimensions** 

In the following you will find the technical specifications of the drive shafts. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing standard and load capacity of the shafts. Beyond that you will find the dimensions of each shaft in combination with each relevant mounting flange and nominal size. Note the short designations such as "S7" or "D3". In the section [Model Code & Availability], you can then check the availability of the flange and auxiliary ports and compile your desired configuration using the short designations as a segment of the model code.



CMV170 Nominal size 170

CMV215 Nominal size 215

ISO SAE Mounting flange ISO 3019-1/ SAE J744

ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



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Functions/Options

#### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 115/140/17

T2 / CMV 170/215

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 11F /140 /170

D7 / CMV 170/215

SAE J1946

F

## Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | T1 / CMV 115/140/170

Specification	_				
		Standard			
Shaft end	Specification	Number of teeth			
related data	Specification	Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
	Radial forces	<b>↓</b> Fq		Fpmax	N
Nominal size related data	RodidiTorces	a		а	mm
		_/	Motor at standstill or in rotation considering	Fax+	N
	Axial forces	Fax+	unpressurized work ports	Fax-	N
	Axial forces  Fax-		Work ports pressurized	Fax+/p	N/bar

ISO 3019-1/SAE J744					
	13				
	8/16				
	44-4				
115	140	170			
826	894	879			
450	390	325			
15000	16000	11550			
33.5	33.5	33.5			
0	0	0			
1000	1210	1200			
11	12.4	15.1			





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Functions/Options

### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

s9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

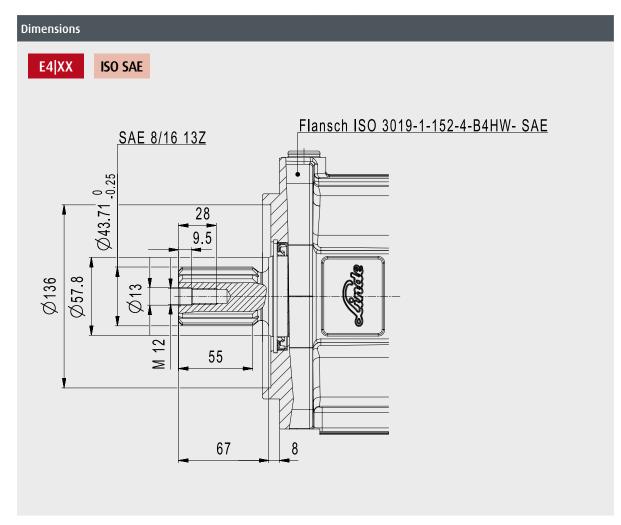
6 / CMV 115/140/170

D7 / CMV 170/215

SAE J1946

F4

## Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | T1 / CMV 115/140/170



CMV60 ISO METR		
	Dimensions upon request	
	' '	

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	SOMETR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



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Functions/Options

### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

... / .... / . . . / . . .

1 / CMW 113/140/170

T2 / CMV 170/215

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

( / CMV 11F /140 /170

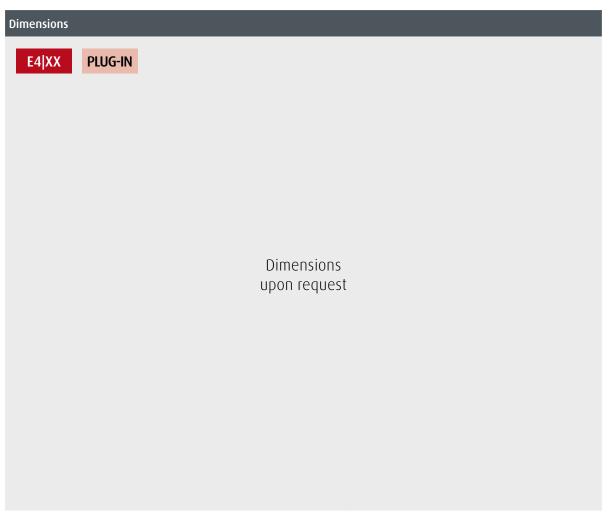
07 / CMV 170/215

**SAE J1946** 

F4

# (A)

### Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | T1 / CMV 115/140/170



Dimensions		

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

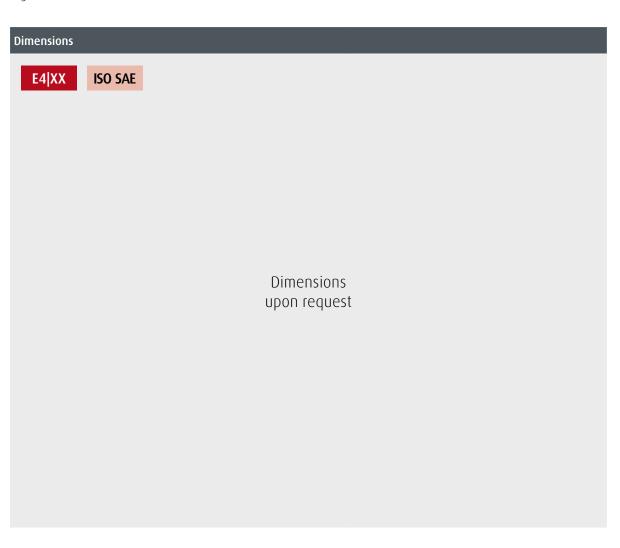
( / CMV 11F /140 /170

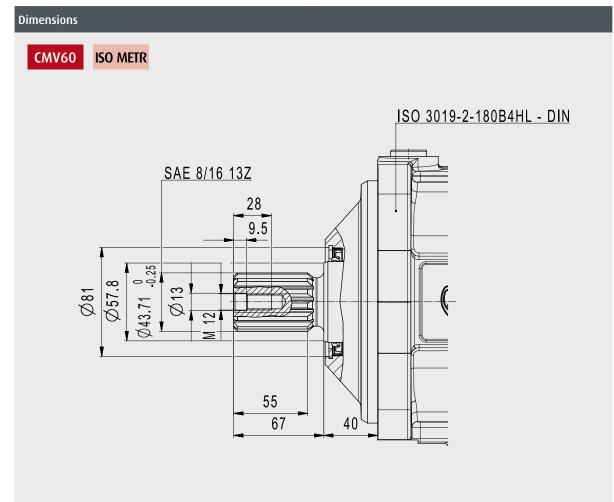
D7 / CMV 170/215

SAE J1946

F4

## Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | T1 / CMV 115/140/170





CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric







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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

... / .... / . . . / . . .

1 / CMW 113/140/170

T2 / CMV 170/215

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

( / CMV 11F /140 /170

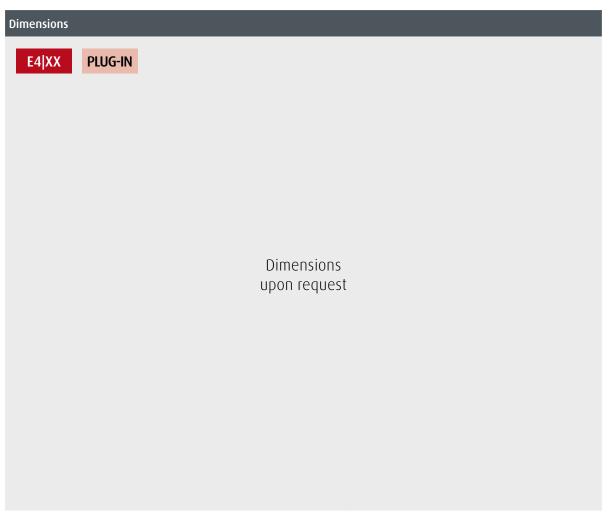
07 / CMV 170/215

**SAE J1946** 

F4

# (A)

### Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | T1 / CMV 115/140/170



Dimensions		

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



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#### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

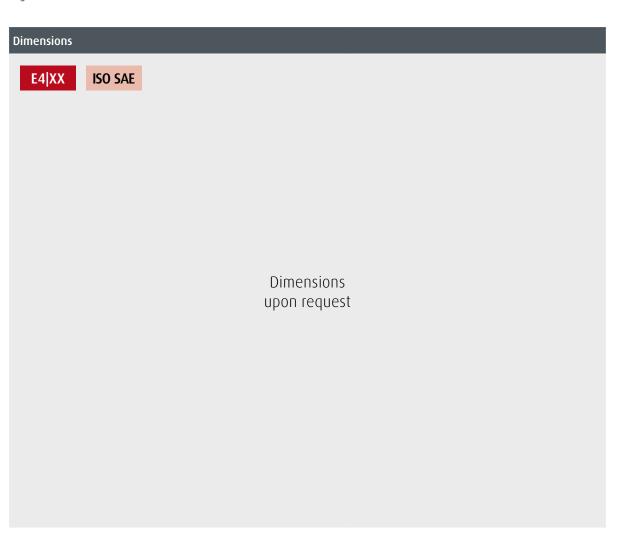
6 / CMV 115/140/170

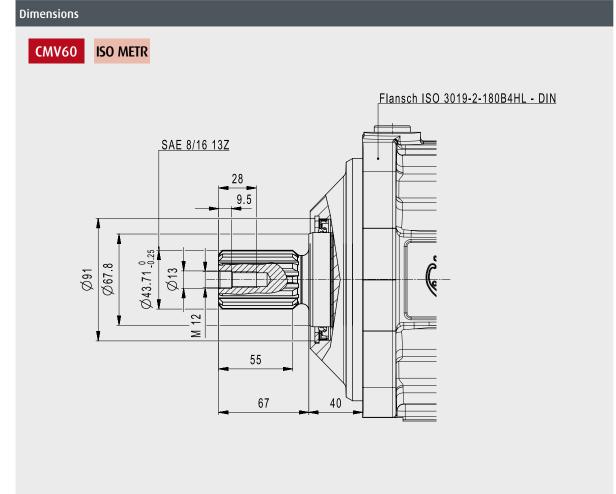
D7 / CMV 170/215

SAE J1946

F4

# Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | T1 / CMV 115/140/170





CMV60 Nominal size 60	CMV170	Nominal size 170
CMV85 Nominal size 85	CMV215	Nominal size 215
CMV115 Nominal size 115	ISO SAE	Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR	Mounting flange ISO 3019-2 metric







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#### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

s9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 115/140/170

T2 / CMV 170/215

#### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

( / CMV 11F /140 /170

D7 / CMV 170/215

SAE J1946

Nominal size 60

Nominal size 85

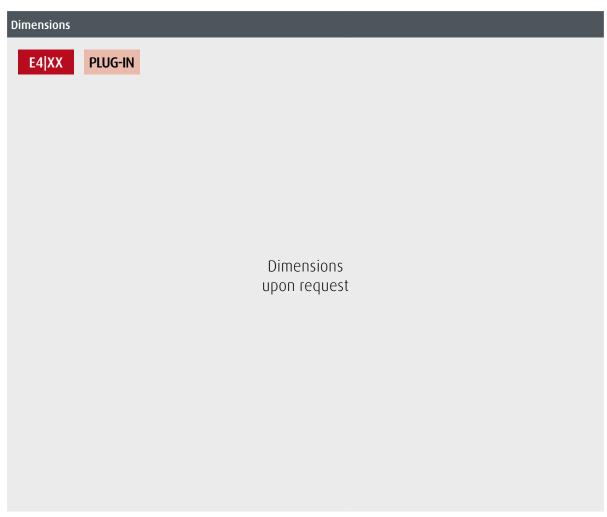
Nominal size 115 Nominal size 140

F4

## Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | T1 / CMV 115/140/170

**Dimensions** 

In the following you will find the technical specifications of the drive shafts. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing standard and load capacity of the shafts. Beyond that you will find the dimensions of each shaft in combination with each relevant mounting flange and nominal size. Note the short designations such as "S7" or "D3". In the section [Model Code & Availability], you can then check the availability of the flange and auxiliary ports and compile your desired configuration using the short designations as a segment of the model code.



CMV170 Nominal size 170

CMV215 Nominal size 215

ISO SAE Mounting flange ISO 3019-1/ SAE J744

ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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Functions/Options

### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 115/140/17

T2 / CMV 170/215

### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

( / CMV 11F /140 /170

D7 / CMV 170/215

SAE J1946

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# Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | T2 / CMV 170/215

Specification					
Shaft end		Standard			
	Specification	Number of teeth			
related data	Specification	Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
	Radial forces	Fq		Fpmax	N
Nominal size related data				а	mm
		_/	Motor at standstill or in rotation considering	Fax+	N
	Axial forces  Fax+  Fax-	Fax+	unpressurized work ports	Fax-	N
		Work ports pressurized	Fax+/p	N/bar	

ISO 3019-1/SAE J744					
15					
8/16					
	50-4				
170	215				
1218	1457				
450	420				
19400	22600				
33.5	33.5				
0	0				
1200	1250				
15.1	17				





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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

T1 / CMV 115/140/170

T2 / CMV 170/215

### DIN5480

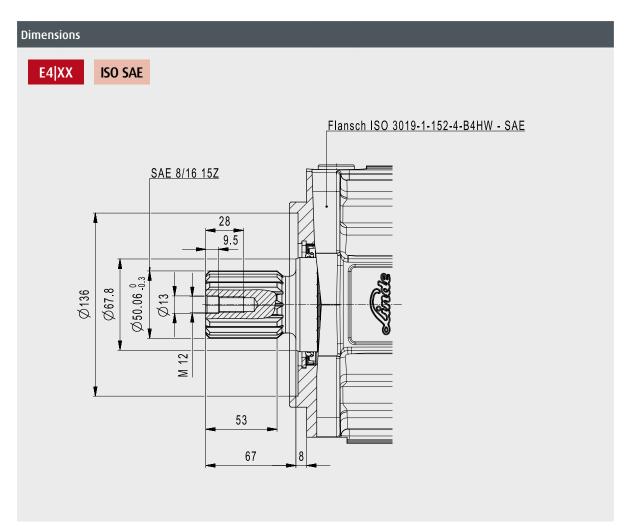
D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

**SAE J1946** 

# Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | T2 / CMV 170/215



CMV60 IS	o metr		
		Dimensions upon request	

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISOMETR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

, cint 03

S9 / CMV 85

V6 / CMV 85/115

V/ / CMV 140/1/0

1 / CMV 115/140/17

T2 / CMV 170/215

### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

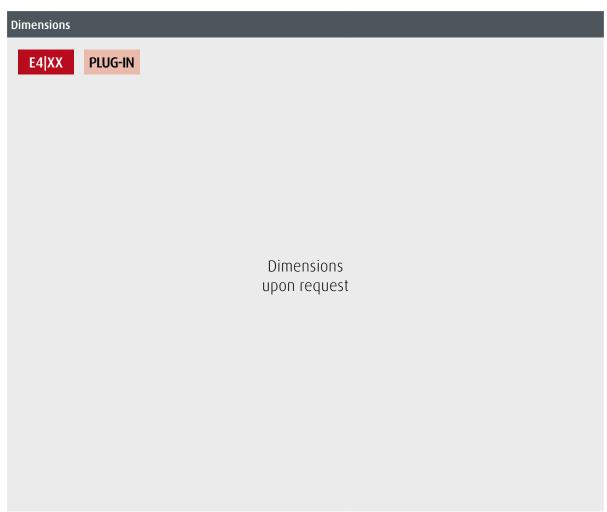
6 / CMV 115/140/170

O7 / CMV 170/215

**SAE J1946** 

F4

# Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | T2 / CMV 170/215



Dimensions		

CMV60	Nominal size 60	CMV170	Nominal size 170
CMV85	Nominal size 85	CMV215	Nominal size 215
CMV115	Nominal size 115	ISO SAE	Mounting flange ISO 3019-1/ SAE J744
CMV140	Nominal size 140	ISO METR	Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

### DIN5480

D3 / CMV 60

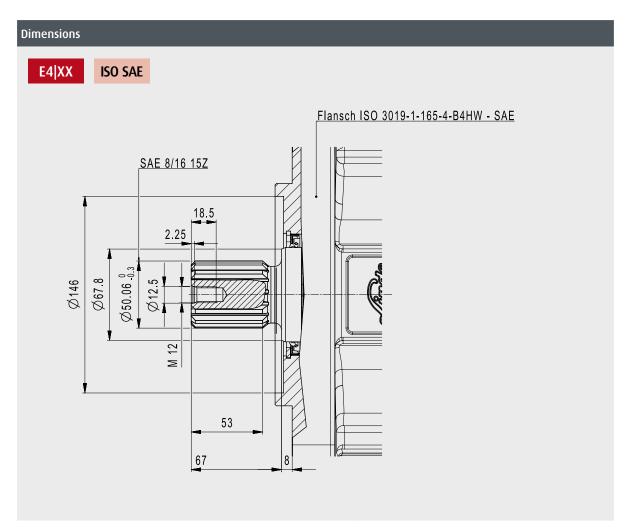
D4 / CMV 60/85

D5 / CMV 85/115

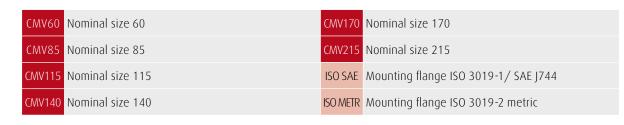
D7 / CMV 170/215

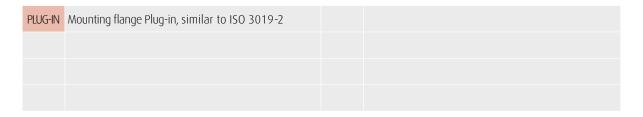
**SAE J1946** 

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | T2 / CMV 170/215



CMV60 ISO METR		
	Dimensions upon request	









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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

, cint 03

S9 / CMV 85

V6 / CMV 85/115

V/ / CMV 140/1/0

1 / CMV 115/140/17

T2 / CMV 170/215

### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

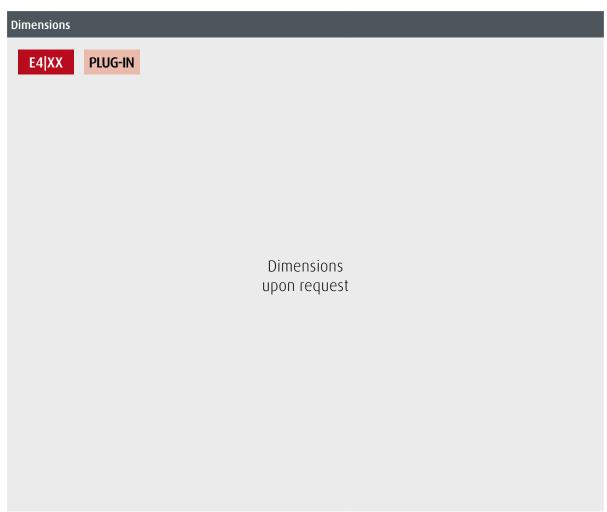
6 / CMV 115/140/170

O7 / CMV 170/215

**SAE J1946** 

F4

# Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | T2 / CMV 170/215



Dimensions		

CMV60	Nominal size 60	CMV170	Nominal size 170
CMV85	Nominal size 85	CMV215	Nominal size 215
CMV115	Nominal size 115	ISO SAE	Mounting flange ISO 3019-1/ SAE J744
CMV140	Nominal size 140	ISO METR	Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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Functions/Options

### ISO 3019-1/ SAE J744

**S7 / CMV 60** 

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 115/140/17

72 / CMV 170/215

### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

C / CMV 11F /140 /17

07 / CMV 170/215

SAE J1946

F4

# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D3 / CMV 60**

Specification	_				
Shaft end		Standard			
		Number of teeth			
related data	Specification	Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
Nominal size related data	Radial forces	forces		Fpmax	N
	Radial forces			а	mm
		_/	Motor at standstill or in rotation considering	Fax+	N
	A tal Carre	Axial forces  Fax+  Fax-	unpressurized work ports	Fax-	N
	ANIAI IUICES		Work ports pressurized	Fax+/p	N/bar

	DIN 5480	
	14	
	2	
	W30	
60		
upon request		

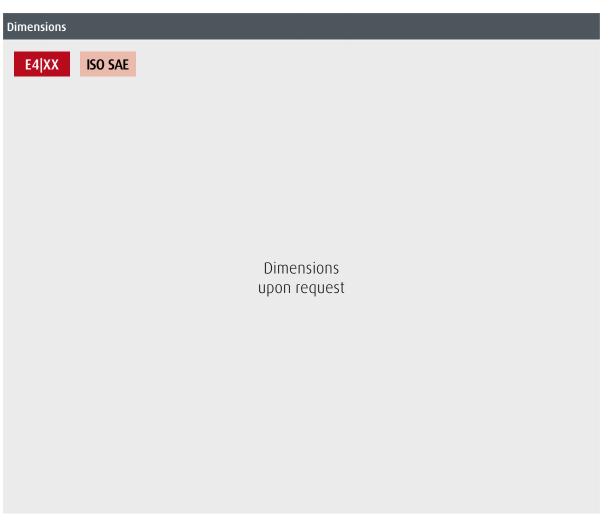




## **OVERVIEW** ISO 3019-1/ **Key Facts** SAE J744 CONFIGURATION S7 / CMV 60 S8 / CMV 85 **TECHNICAL SPECIFICATION** S9 / CMV 85 General Technical Data V6 / CMV 85/115 Operating Parameters Electric Interfaces DIN5480 D3 / CMV 60 Mechanical Interfaces D4 / CMV 60/85 D5 / CMV 85/115 Shafts Hydraulical Interfaces Work Ports SAE J1946 Auxiliary Ports Functions/Options



# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D3 / CMV 60**



Dimensions  CMV60	ISO METR			
		Dimensior		
		upon reque		

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 115/140/170

T2 / CMV 170/215

### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

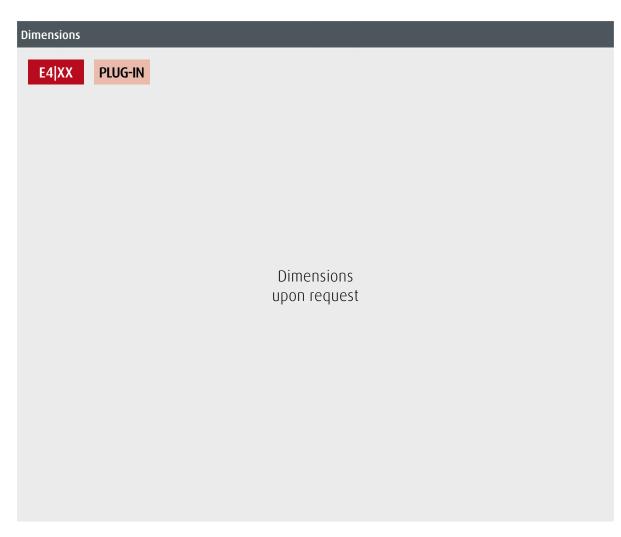
( / CMV 11F /140 /170

D7 / CMV 170/215

SAE J1946

F4

# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D3 / CMV 60**



Dimensions			

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	







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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85 V6 / CMV 85/115

V7 / CMV 140 /170

1 / CMV 115/1/0/17

T2 / CMV 170/215

### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 115/140/170

O7 / CMV 170/215

SAE J1946

F4

# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D4 / CMV 60/85**

Specification	_				
Shaft end		Standard			
	Specification	Number of teeth			
related data	эрестевноп	Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
Nominal size related data	Radial forces	forces		Fpmax	N
	Radial forces			а	mm
		rial forces  Fax+  Fax-	Motor at standstill or in rotation considering	Fax+	N
	A tal Carre		unpressurized work ports	Fax-	N
	ANIAI IUICES		Work ports pressurized	Fax+/p	N/bar

DIN 5480						
	16					
	2					
	W35					
60	85					
444	upon request					
450	upon request					
10300	upon request					
20	upon request					
0	upon request					
500	upon request					
7.5	upon request					





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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/17

T1 / CMV 115/140/170

T2 / CMV 170/215

### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

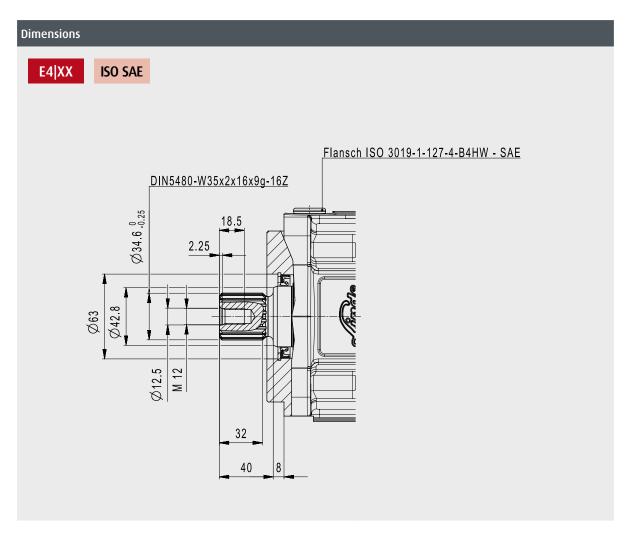
6 / CMV 115/140/170

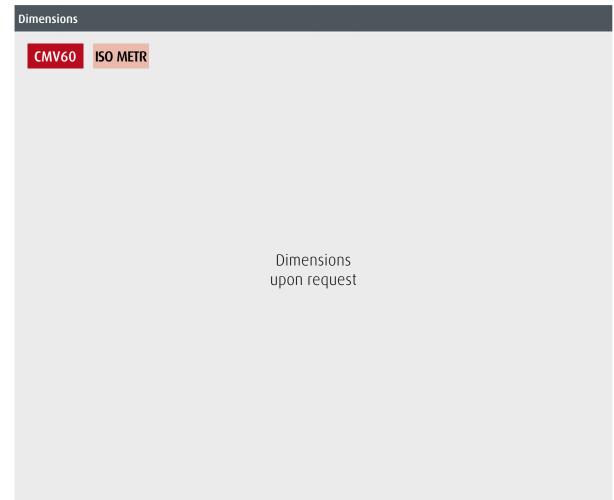
7 / CMV 170/215

SAE J1946

F4

# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D4 / CMV 60/85**





CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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Functions/Options

### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 115/140/170

T2 / CMV 170/215

### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

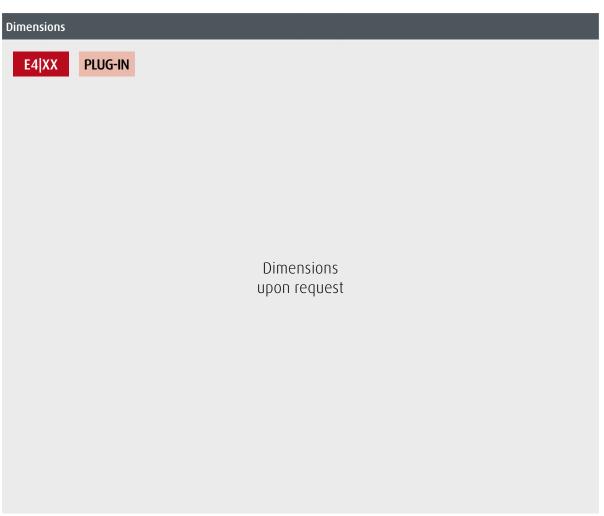
6 / CMV 115/140/170

07 / CMV 170/215

SAE J1946

F4

# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D4 / CMV 60/85**



Dimensions			

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 115/140/170

T2 / CMV 170/215

### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

( / CMV 11F /140 /170

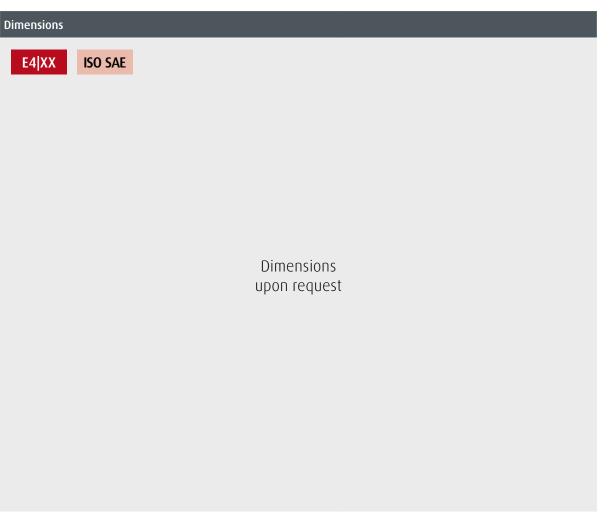
07 / CMV 170/215

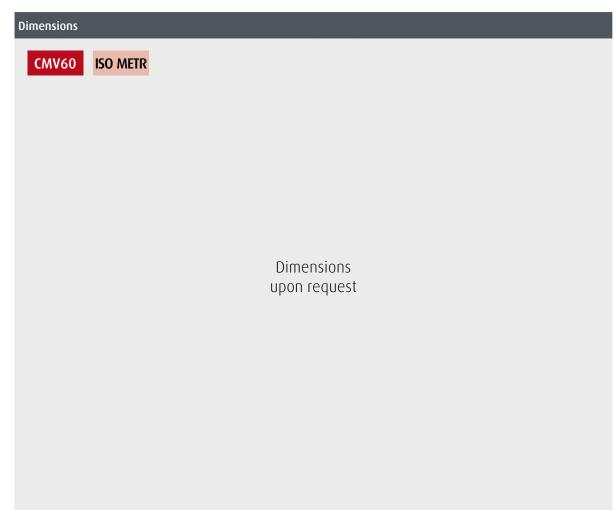
SAE J1946

F4



# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D4 / CMV 60/85**





CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



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Functions/Options

### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T2 / CMV 170/215

### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

D7 / CMV 170/215

**SAE J1946** 

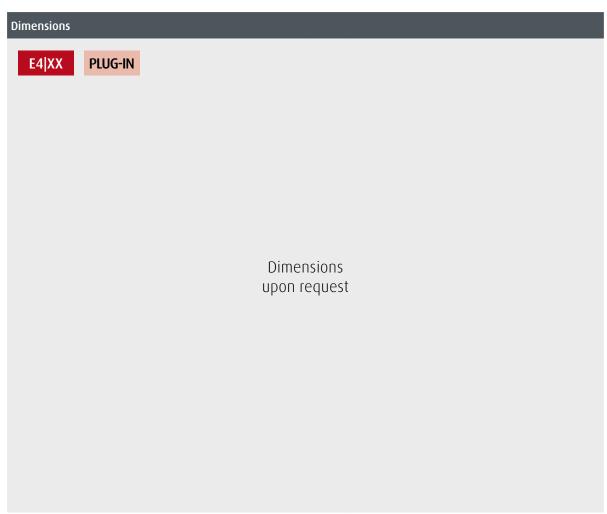
Nominal size 60

Nominal size 85

Nominal size 115 Nominal size 140

# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D4 / CMV 60/85**

In the following you will find the technical specifications of the drive shafts. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing standard and load capacity of the shafts. Beyond that you will find the dimensions of each shaft in combination with each relevant mounting flange and nominal size. Note the short designations such as "S7" or "D3". In the section [Model Code & Availability], you can then check the availability of the flange and auxiliary ports and compile your desired configuration using the short designations as a segment of the model code.



CMV170	Nominal size 170
CMV215	Nominal size 215
ISO SAE	Mounting flange ISO 3019-1/ SAE J744
ICO AAETO	Mounting flange ISO 3019-2 metric

Dimensions		





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### ISO 3019-1/ SAE J744

**S7 / CMV 60** 

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

I / CMV 115/140/17

72 / CMV 170/215

### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 115/140/170

D7 / CMV 170/215

SAE J1946

F∠

# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D5 / CMV 85/115**

Specification					
	Specification	Standard			
Shaft end		Number of teeth			
related data	Specification	Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
	Radial forces	Fq a		Fpmax	N
Nominal size related data	Redief forces			а	mm
	Axial forces  Fax+  Fax+  Fax-	Fax+	Motor at standstill or in rotation considering	Fax+	N
			unpressurized work ports	Fax-	N
		Work ports pressurized	Fax+/p	N/bar	

	DIN 5480	
	18	
	2	
	W40	
85	115	
628	826	
450	450	
12500	16700	
22.5	22.5	
0	0	
710	1000	
9.6	11	



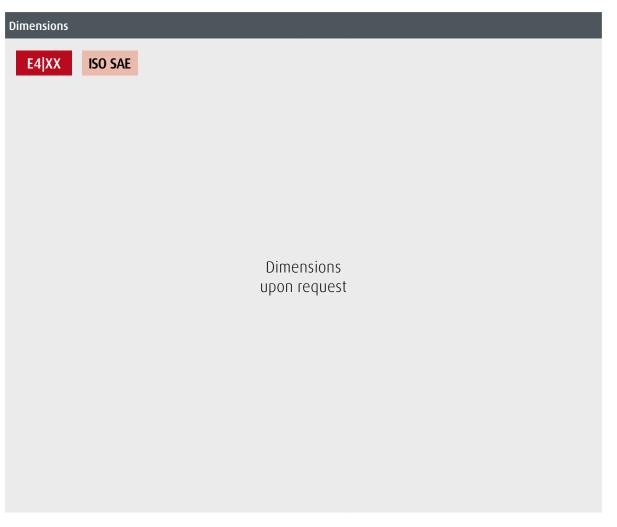


### **OVERVIEW** ISO 3019-1/ Key Facts SAE J744 CONFIGURATION S7 / CMV 60 S8 / CMV 85 **TECHNICAL SPECIFICATION** S9 / CMV 85 General Technical Data V6 / CMV 85/115 Operating Parameters **Electric Interfaces** DIN5480 D3 / CMV 60 Mechanical Interfaces D4 / CMV 60/85 D5 / CMV 85/115 Shafts Hydraulical Interfaces Work Ports SAE J1946

Auxiliary Ports

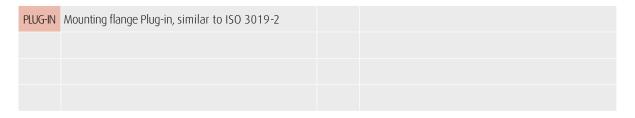
Functions/Options

# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D5 / CMV 85/115**



CMV60 ISO METR		
	Dimensions upon request	

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISOMETR Mounting flange ISO 3019-2 metric







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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 115/140/170

D7 / CMV 170/215

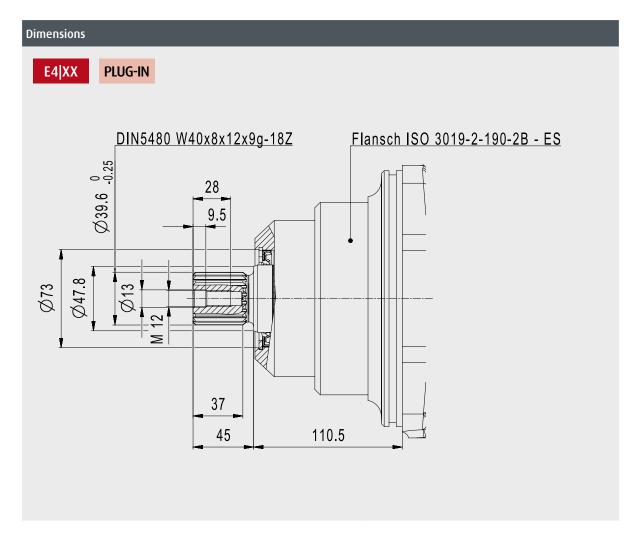
SAE J1946

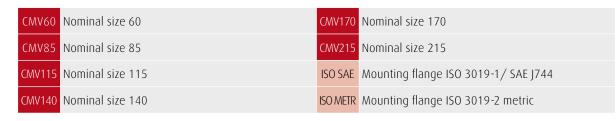
F4

# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D5 / CMV 85/115**

Dimensions

PLUG-IN Mounting flange Plug-in, similar to ISO 3019-2







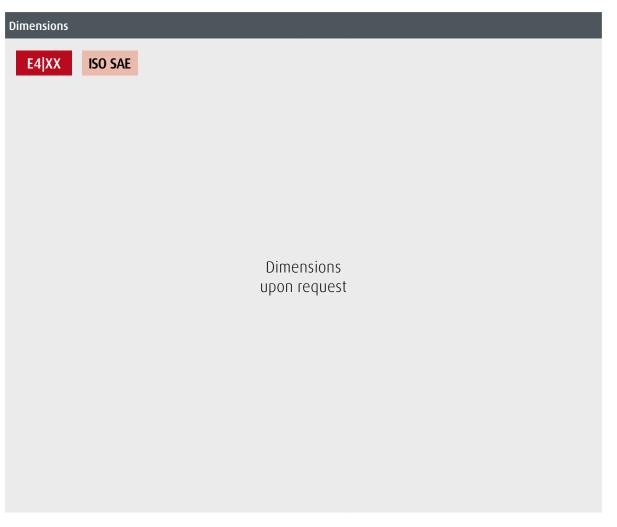


### **OVERVIEW** ISO 3019-1/ Key Facts SAE J744 CONFIGURATION S7 / CMV 60 S8 / CMV 85 **TECHNICAL SPECIFICATION** S9 / CMV 85 General Technical Data V6 / CMV 85/115 Operating Parameters **Electric Interfaces** DIN5480 D3 / CMV 60 Mechanical Interfaces D4 / CMV 60/85 D5 / CMV 85/115 Shafts Hydraulical Interfaces Work Ports SAE J1946

Auxiliary Ports

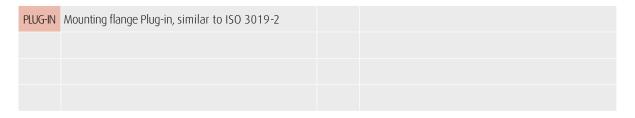
Functions/Options

# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D5 / CMV 85/115**



CMV60 ISO METR		
	Dimensions upon request	

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISOMETR Mounting flange ISO 3019-2 metric







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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

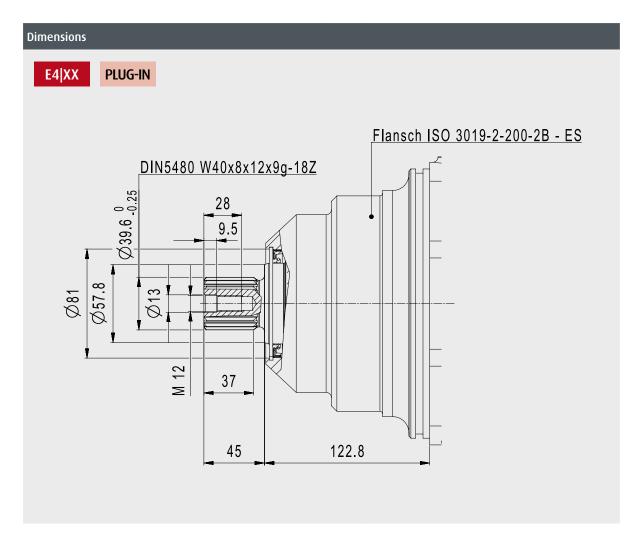
6 / CMV 115/140/170

D7 / CMV 170/215

SAE J1946

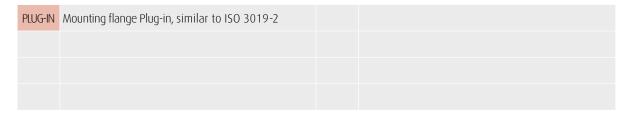
F4

# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D5 / CMV 85/115**

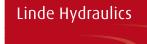


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Functions/Options

### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140 /170

I / CMV 115/140/17

72 / CMV 170/215

### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 115/140/170

O7 / CMV 170/215

SAE J1946

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# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D6 / CMV 115/140/170**

Specification					
		Standard			
Shaft end	Specification	Number of teeth			
related data	эреспісаціон	Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
	Radial forces	Fq		Fpmax	N
Nominal size related data	Radial forces			а	mm
		_/	Motor at standstill or in rotation considering unpressurized work ports	Fax+	N
		Fax+		Fax-	N
	Axidi loices	exial forces  Fax-		Fax+/p	N/bar

DIN 5480					
	21				
	2				
	W45				
115	140	170			
826	1032	1218			
450	450	450			
16700	19500	21200			
25	25	25			
0	0	0			
1000	1210	1200			
11	12.4	15.1			





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Functions/Options

### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

s9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

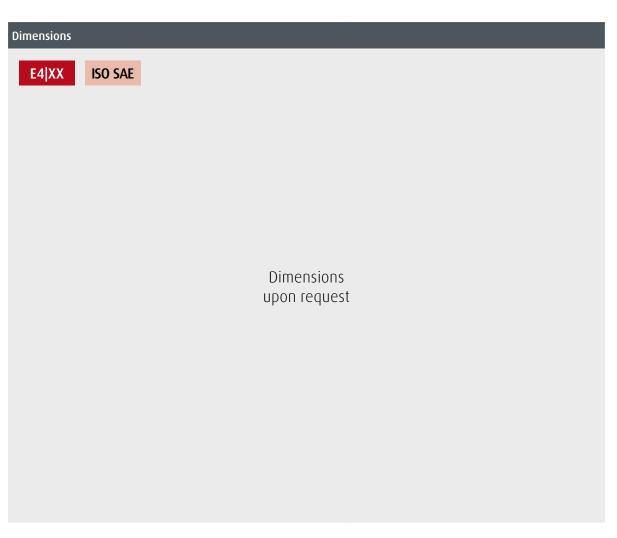
6 / CMV 115/140/170

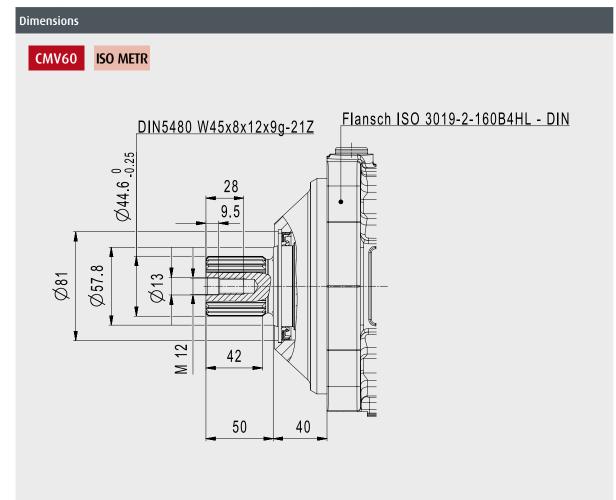
D7 / CMV 170/215

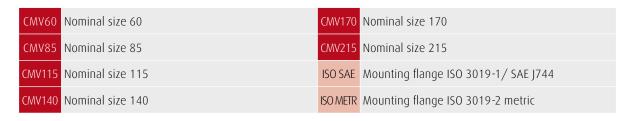
SAE J1946

F4

# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D6 / CMV 115/140/170**







PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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Functions/Options

### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

| / CMV 11E /140 /15

2 / CMV 170/215

### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

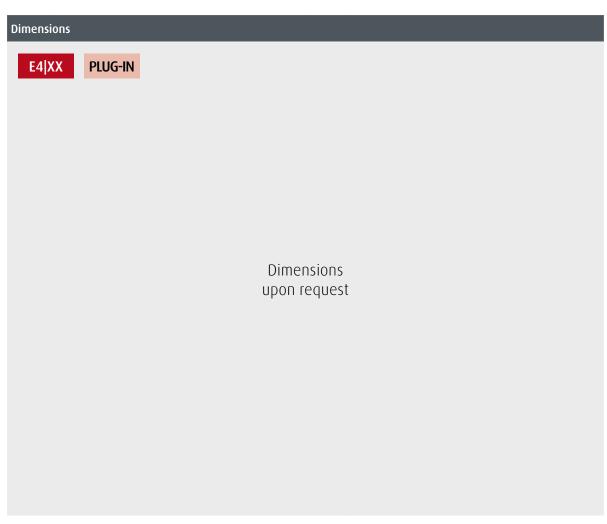
O7 / CMV 170/215

SAE J1946

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# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D6 / CMV 115/140/170**



Dimensions			

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISOMETR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



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ISO 3019-1/
SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

D6 / CMV 115/140/170

DIN5480

SAE J1946

Functions/Options

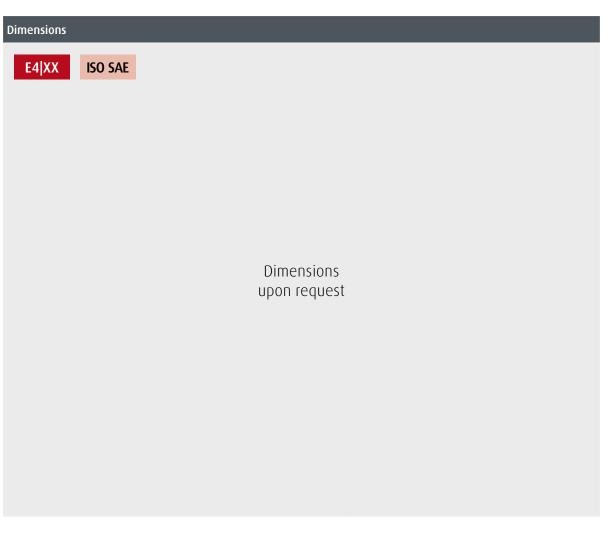
Auxiliary Ports

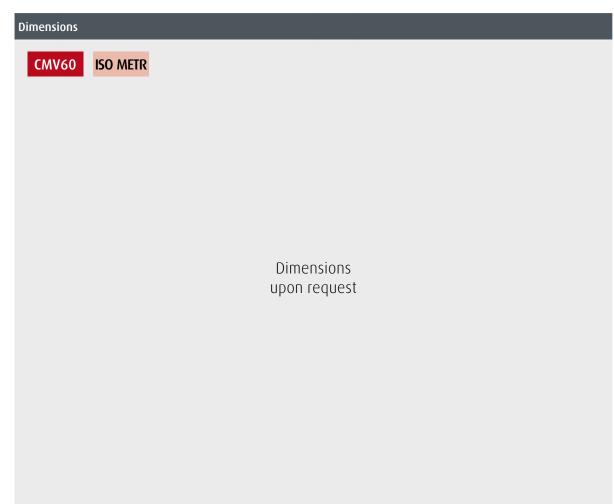
Shafts

Hydraulical Interfaces

Work Ports

# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D6 / CMV 115/140/170**





CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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Functions/Options

ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 115/140/170

D7 / CMV 170/215

SAE J1946

Nominal size 60

Nominal size 85

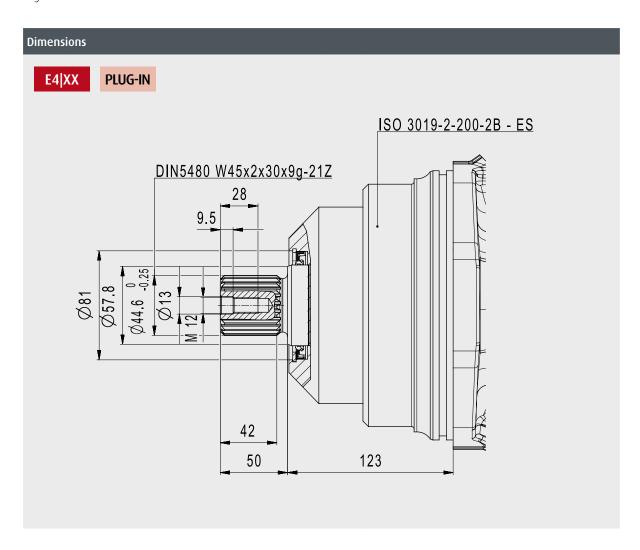
Nominal size 115 Nominal size 140

F4

# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D6 / CMV 115/140/170**

**Dimensions** 

In the following you will find the technical specifications of the drive shafts. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing standard and load capacity of the shafts. Beyond that you will find the dimensions of each shaft in combination with each relevant mounting flange and nominal size. Note the short designations such as "S7" or "D3". In the section [Model Code & Availability], you can then check the availability of the flange and auxiliary ports and compile your desired configuration using the short designations as a segment of the model code.



CMV170 Nominal size 170

CMV215 Nominal size 215

ISO SAE Mounting flange ISO 3019-1/ SAE J744

ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN Mounting flange Plug-in, similar to ISO 3019-2	





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ISO 3019-1/
SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

D6 / CMV 115/140/170

DIN5480

SAE J1946

Functions/Options

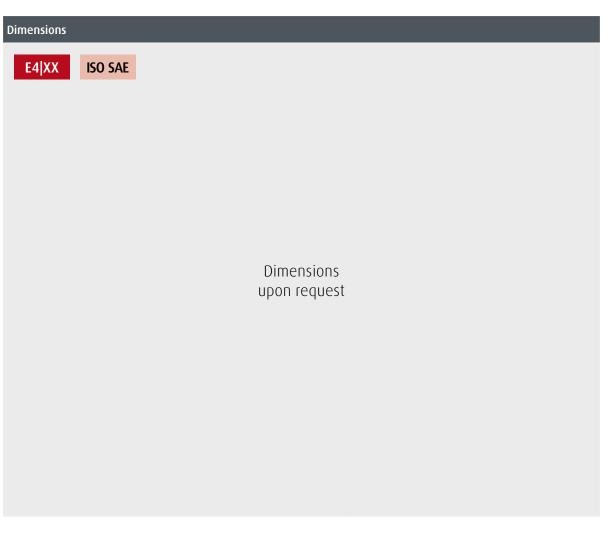
Auxiliary Ports

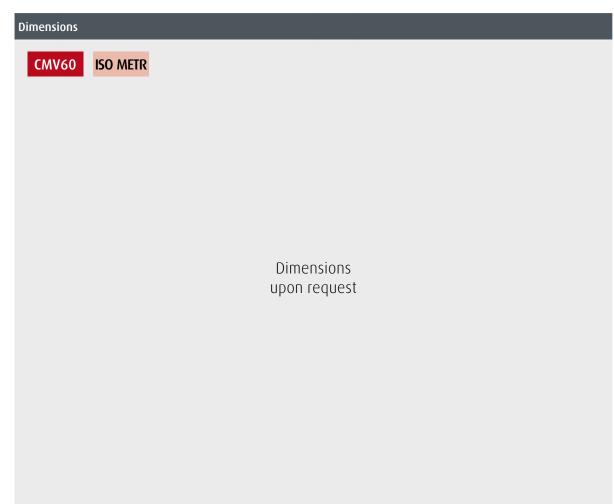
Shafts

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# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D6 / CMV 115/140/170**





CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 115/140/170

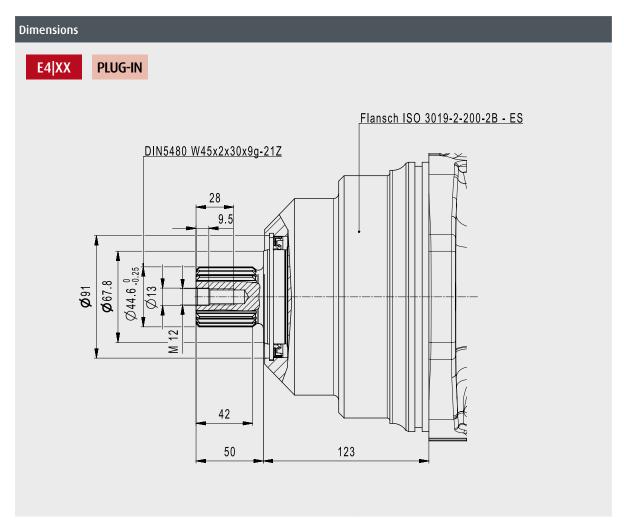
D7 / CMV 170/215

SAE J1946

F4

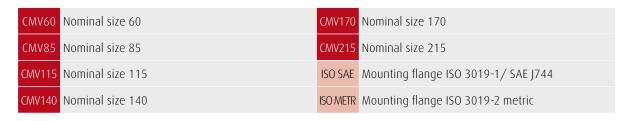
# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D6 / CMV 115/140/170**

In the following you will find the technical specifications of the drive shafts. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing standard and load capacity of the shafts. Beyond that you will find the dimensions of each shaft in combination with each relevant mounting flange and nominal size. Note the short designations such as "S7" or "D3". In the section [Model Code & Availability], you can then check the availability of the flange and auxiliary ports and compile your desired configuration using the short designations as a segment of the model code.



Dimensions			

PLUG-IN Mounting flange Plug-in, similar to ISO 3019-2







# Linde

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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

, S9 / CMV 85

V6 / CMV 85/115

... / .... / . . . / . . .

1 / CMV 115/1/0/17

T2 / CMV 170/215

### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

C / CNN/ 11F /140 /17/

07 / CMV 170/215

SAE J1946

F4

# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D7 / CMV 170/215**

Specification	_				
		Standard			
Shaft end	Specification	Number of teeth			
related data	Specification	Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
	Radial forces	<b>↓</b> Fq		Fpmax	N
Nominal size related data	RodidiTorces	<b>a</b>		а	mm
		_/	Motor at standstill or in rotation considering	Fax+	N
	Axial forces	Fax+	unpressurized work ports	Fax-	N
	, MIGH TOTALS	Fax-	Work ports pressurized	Fax+/p	N/bar

	DIN 5480	
	24	
	2	
	W50	
170	215	
1218	1561	
450	450	
21200	25000	
27.5	27.5	
0	0	
1200	1250	
15.1	17	





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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

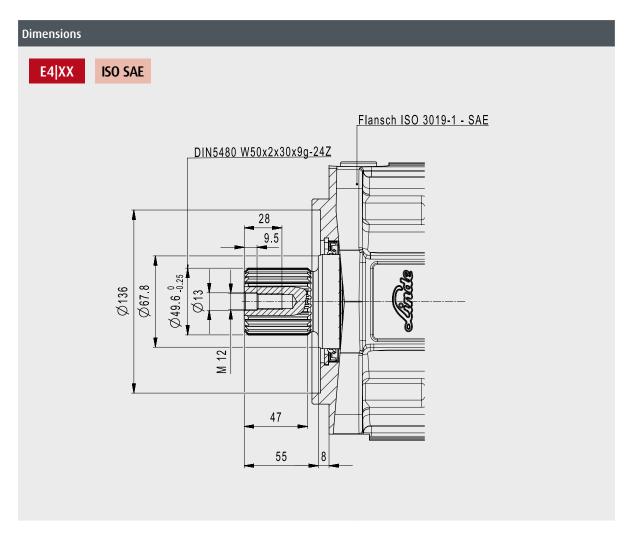
5 / CMV 115/140/170

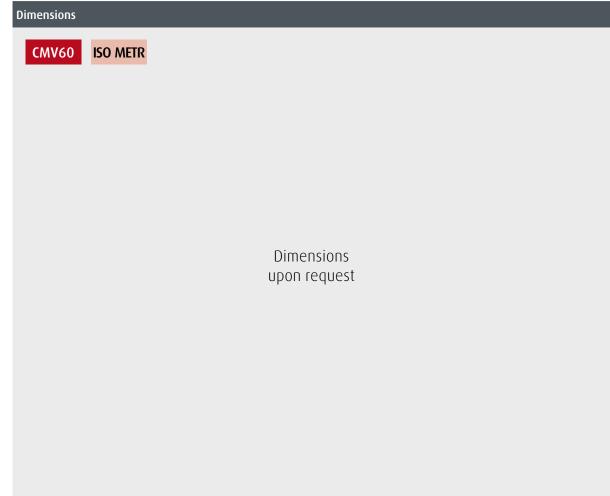
D7 / CMV 170/215

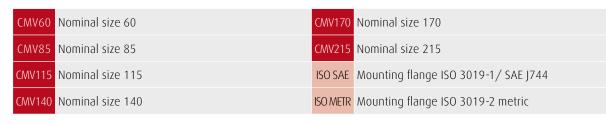
SAE J1946

F4

# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D7 / CMV 170/215**







PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140 /170

### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 115/140/170

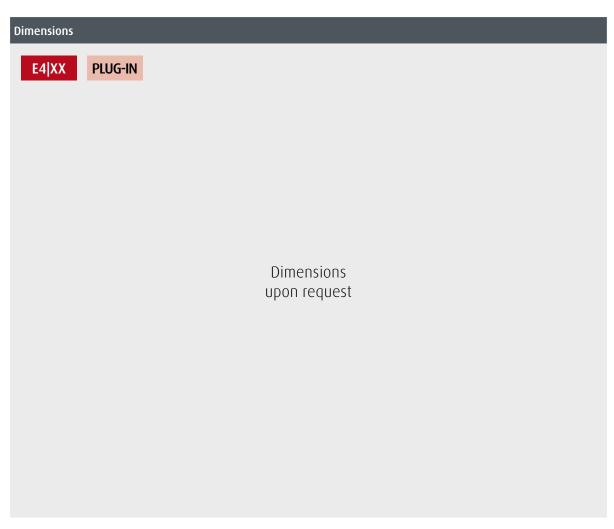
07 / CMV 170/215

SAE J1946

F4

# În

# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D7 / CMV 170/215**



Dimensions		

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



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Functions/Options

### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

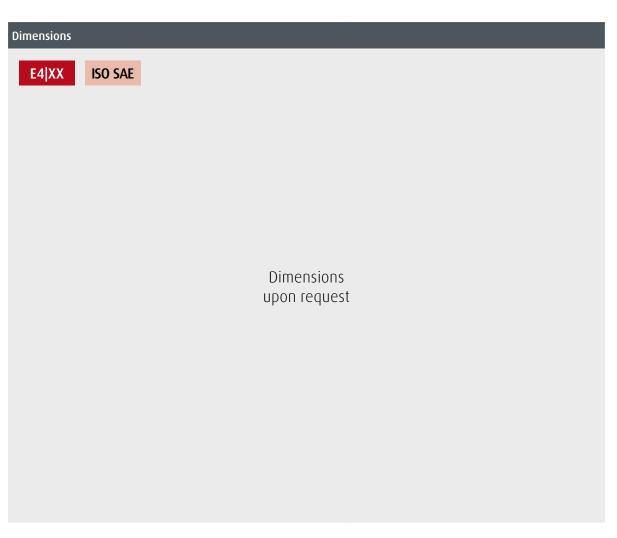
6 / CMV 115/140/170

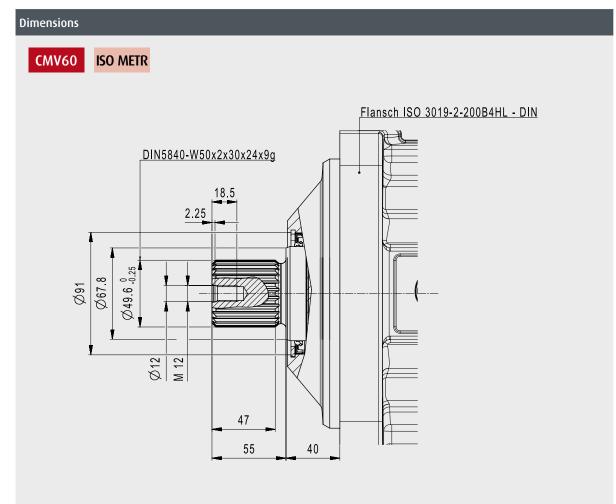
D7 / CMV 170/215

SAE J1946

F4

# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D7 / CMV 170/215**





CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140 /170

### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 115/140/170

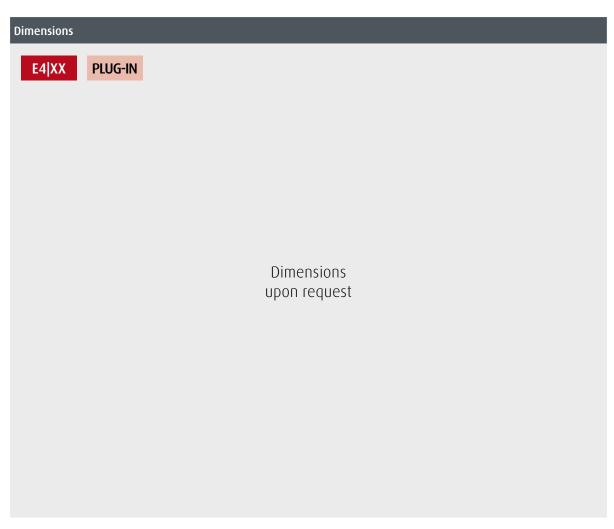
07 / CMV 170/215

SAE J1946

F4

# În

# Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D7 / CMV 170/215**



Dimensions		

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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Functions/Options

### ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

... / .... / . . . / . . .

1 / CMV 115/140/17

T2 / CMV 170/215

### DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

06 / CMV 115/140/17

O7 / CMV 170/215

SAE J1946

F4

# Technical Specification | Drive Shafts / Comp. Flanges | SAE J1946 | **F4**

Specification					
	ta Specification	Standard			
Shaft end		Number of teeth			
related data		Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
		Fq		Fpmax	N
Nominal size related data				а	mm
	Axial forces	Fax+ Fax-	Motor at standstill or in rotation considering	Fax+	N
			unpressurized work ports	Fax-	N
			Work ports pressurized	Fax+/p	N/bar

	SAE J1946	
85/115/140/170/215		
upon request		





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### ISO 3019-1/ SAE J744

**S7 / CMV 60** 

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140 /170

1 / CANV 11F /140 /17

T2 / CMV 170/215

### DIN5480

D3 / CMV 60

D4 / CMV 60/85

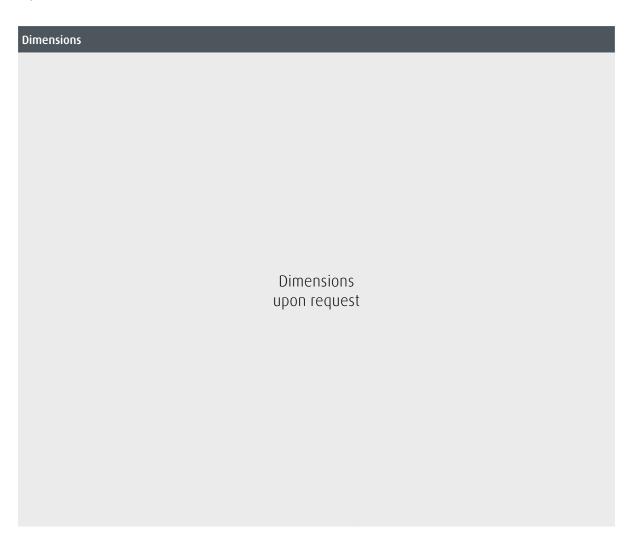
D5 / CMV 85/115

( / CMV 11F /140 /170

\_\_\_

SAE J1946

# Technical Specification | Drive Shafts / Comp. Flanges | SAE J1946 | **F4**



Dimension	15			
		Dimensions upon request		

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	







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### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

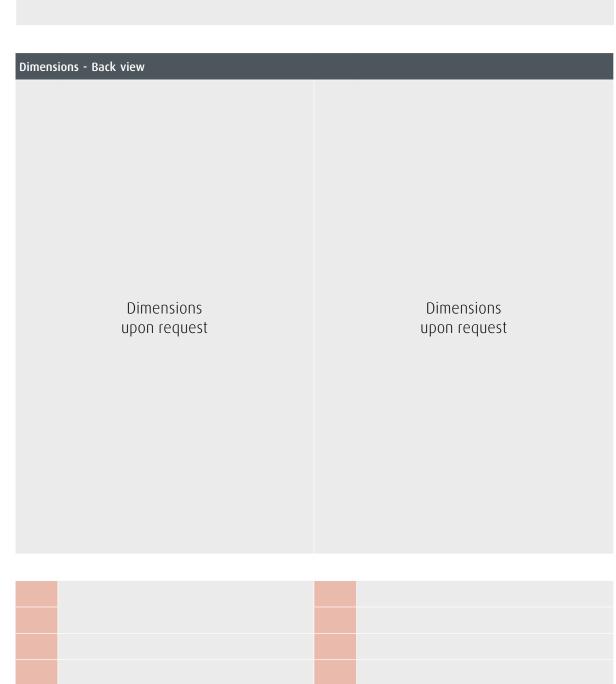
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



# Technical Specification | Work Ports | Axial Twin Ports | ISO SAE | CMV 60

Dimensions  Umensions  Upon request	Dimensions upon request







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### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

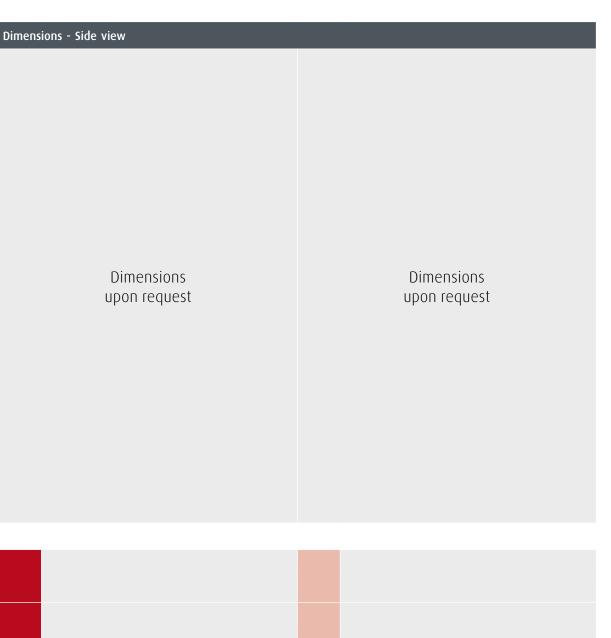
CMV 60-215

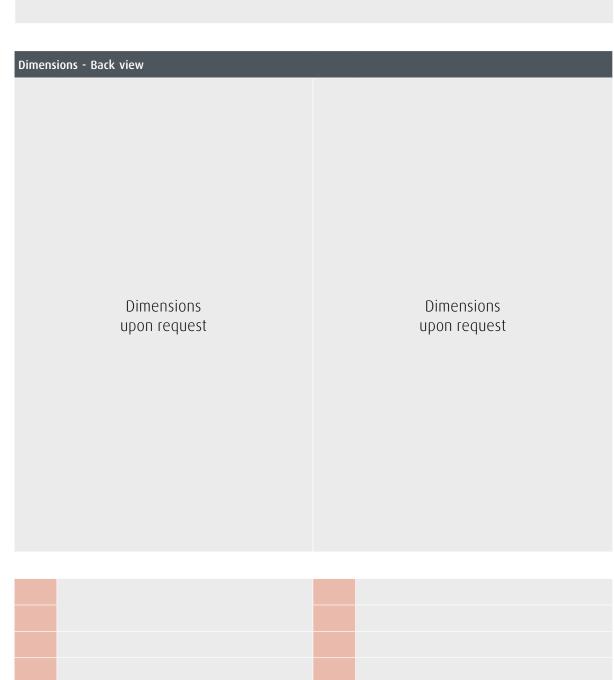
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

# (G)

# Technical Specification | Work Ports | Axial Twin Ports | ISO SAE | CMV 85









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### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-2<u>15</u>

In combination with ISO 3019-2 metric

CMV 60-215

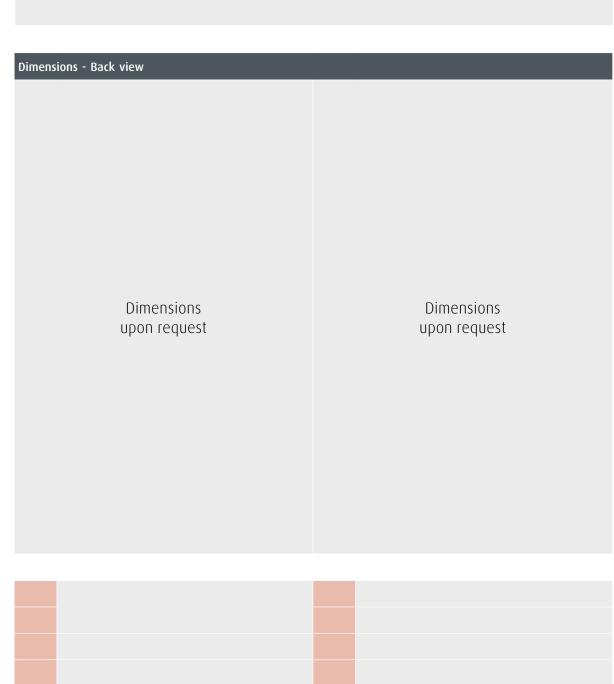
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



# Technical Specification | Work Ports | Axial Twin Ports | ISO SAE | CMV 115

Dimensions - Side view	
Dimensions upon request	Dimensions upon request







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### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

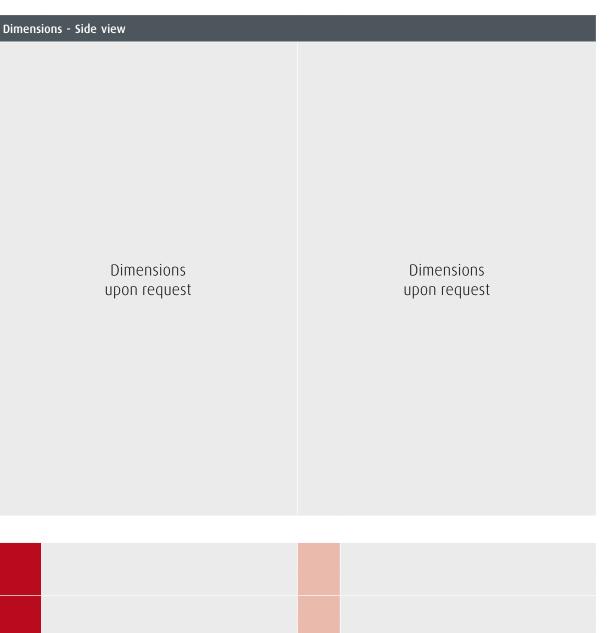
CMV 60-215

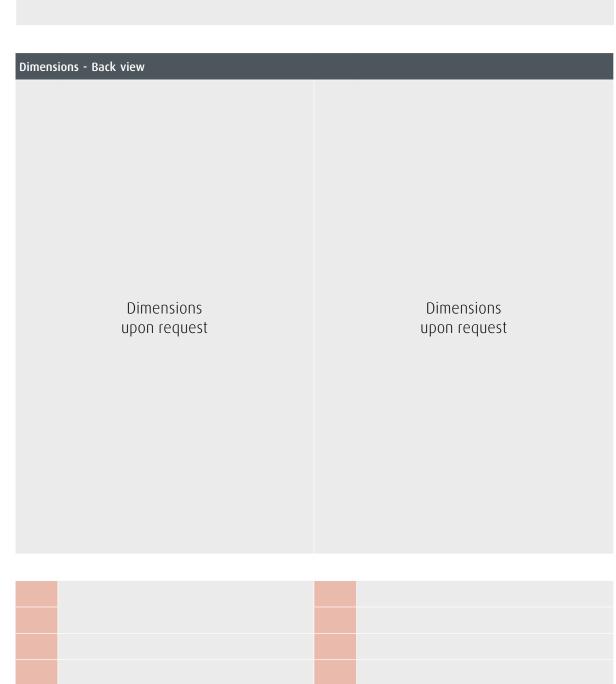
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



## Technical Specification | Work Ports | Axial Twin Ports | ISO SAE | CMV 140









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#### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

#### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

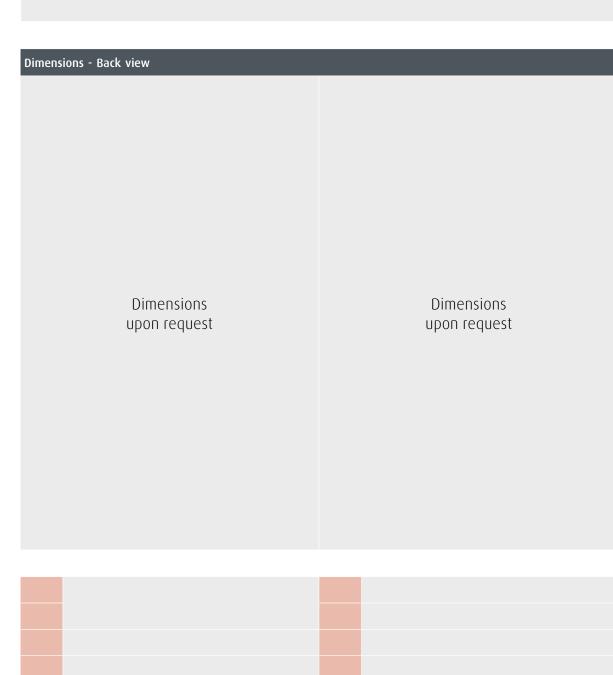
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



## Technical Specification | Work Ports | Axial Twin Ports | ISO SAE | CMV 170

Dimensions - Side view	
Dimensions upon request	Dimensions upon request







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#### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

#### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-2<u>15</u>

In combination with ISO 3019-2 metric

CMV 60-215

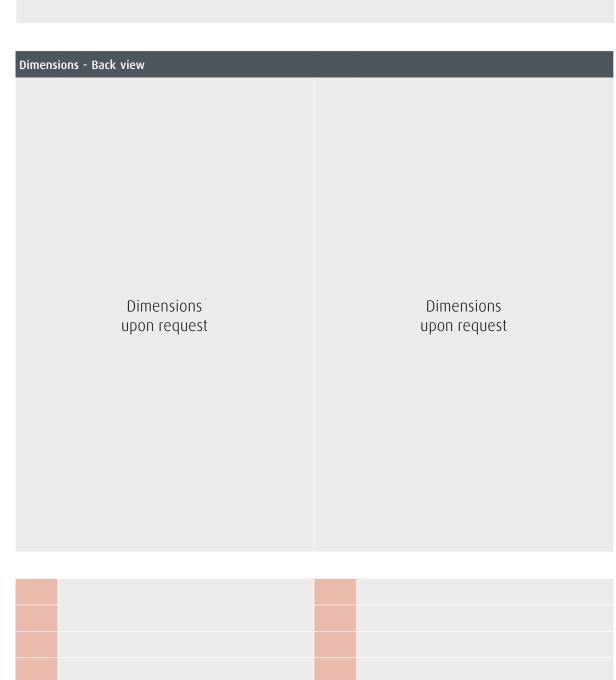
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



## Technical Specification | Work Ports | Axial Twin Ports | ISO SAE | CMV 215

Dimensions - Side view	
Dimensions upon request	Dimensions upon request







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### ISO 6162-2

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

SIDE PORTS

In combination with

CMV 60-215

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

### RADIAL TWIN PORTS

ISO 3019-1 / SAE J744

CMV 60-215

In combination with

### AXIAL TWIN PORTS

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

ISO 6162-2

ISO 3019-1 / SAE J744

In combination with

CMV 60-215

In combination with

ISO 6162-2

In combination with

ISO 3019-2 metric

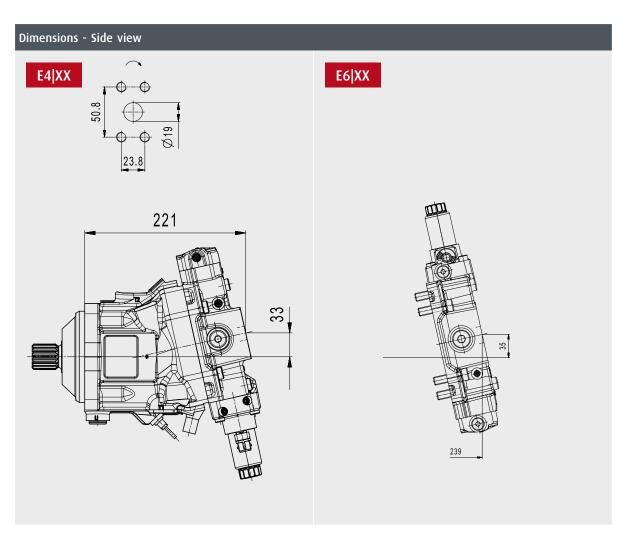
CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

## Technical Specification | Work Ports | Axial Twin Ports | ISO METR | CMV 60

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.



High pressure work port, ISO 6162-2,

If pressurised - motor runs clockwise

High pressure work port, ISO 6162-2,

Nom. pres.: 450 bar, max. press.: 500 bar

Nom. pres.: 450 bar, max. press.: 500 bar

If pressurised - motor runs counter-clockwise

Configuration with negative control (E4 displacement

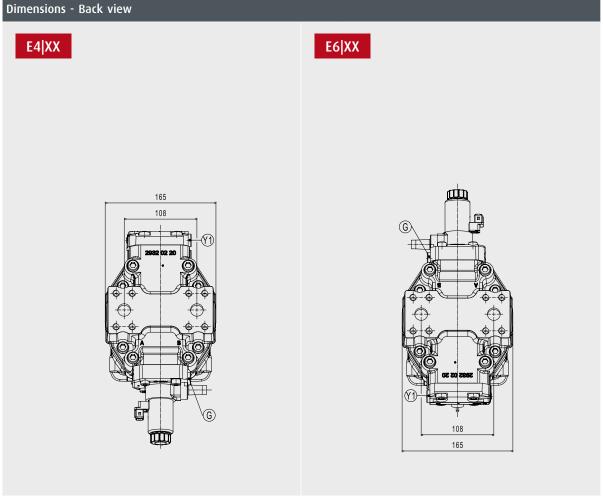
control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement



Pressure equalization port

T1 Drain / vent port, ISO 6149

T2 Drain / vent port, ISO 6149

ВХ

Ext. control pressure supply, ISO 6149

Bearing flush port, ISO 6149

Y1 Measuring port, ISO 6149







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### ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

CMV 60-215

In combination with ISO 3019-2 metric

**RADIAL TWIN PORTS** 

In combination with

CMV 60-215

In combination with

CMV 60-215

### **AXIAL TWIN PORTS**

CMV 60-215

In combination with

In combination with ISO 3019-1 / SAE J744

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

### ISO 6162-2

ISO 3019-1 / SAE J744

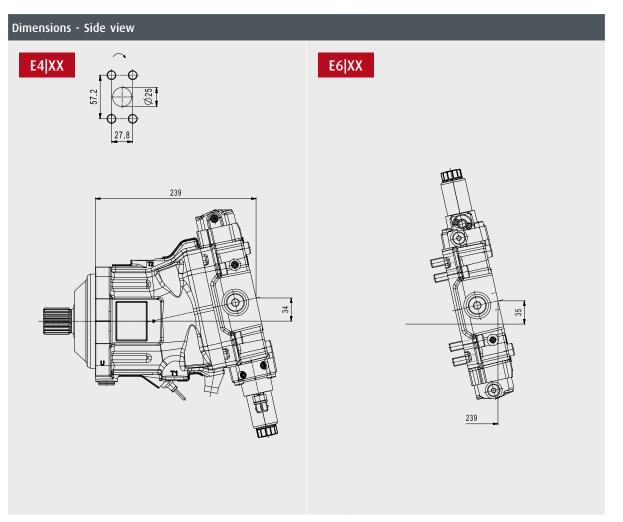
ISO 3019-2 metric

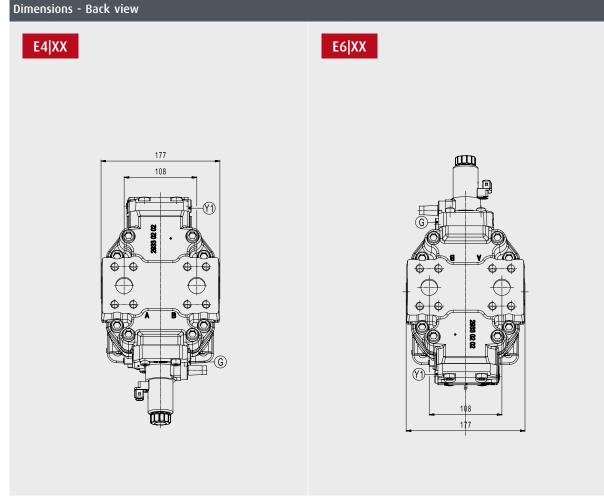
CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

## Technical Specification | Work Ports | Axial Twin Ports | ISO METR | CMV 85

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.	High pressure work port, ISO 6162-2, SAE 1 If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

Configuration with positive control (E6 displacement

E6|XX control). The other options shown do not determine the position of the w. ports and are chosen as an example.

High pressure work port, ISO 6162-2, SAE 1"
If pressurised - motor runs counter-clockwise
Nom pres · 450 har max press · 500 har

AX	Occupant and the second	G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep
ВХ	BX Pressure equalization port		Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep
T1	Drain / vent port, ISO 6149, M22x1.5, 15.5 mm deep	Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep
T2	Drain / vent port, ISO 6149, M27x2, 19 mm deep		





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Functions/Options

### ISO 6162-2

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

ISO 6162-2

In combination with

CMV 60-215

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

In combination with

AXIAL TWIN PORTS

In combination with ISO 3019-1 / SAE J744

SIDE PORTS

ISO 3019-1 / SAE J744

In combination with

CMV 60-215

In combination with CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



High pressure work port, ISO 6162-2, SAE 1"

High pressure work port, ISO 6162-2, SAE 1"

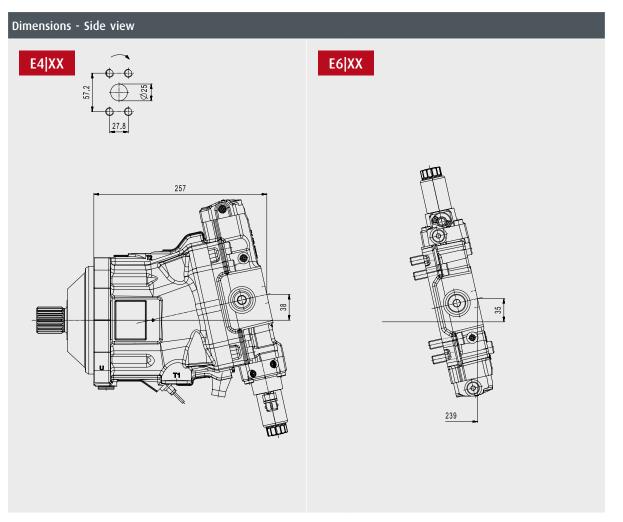
If pressurised - motor runs counter-clockwise

Nom. pres.: 450 bar, max. press.: 500 bar

Nom. pres.: 450 bar, max. press.: 500 bar

If pressurised - motor runs clockwise

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.



Configuration with negative control (E4 displacement

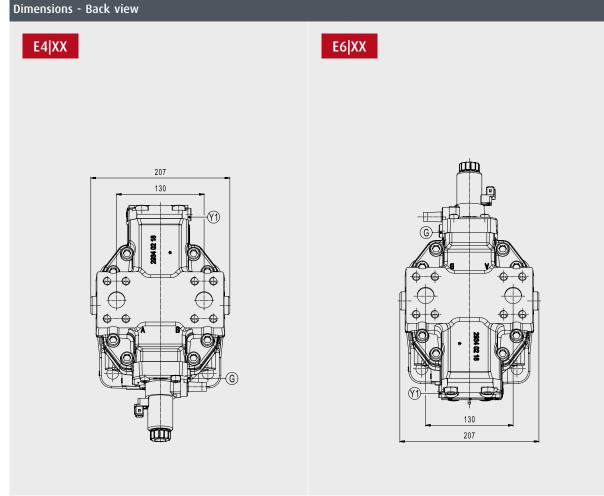
control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement



Pressure equalization port

Drain / vent port, ISO 6149, M27x2, 19 mm deep

T2 Drain / vent port, ISO 6149, M33x2, 19 mm deep

ВХ

Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep

Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep

Y1 Measuring port, ISO 6149, M14x1.5, 11.5 mm deep







Key Facts

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**Auxiliary Ports** 

Functions/Options

## ISO 6162-2

ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

ISO 6162-2

In combination with ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

In combination with

CMV 60-215

### AXIAL TWIN PORTS

In combination with

CMV 60-215

In combination with CMV 60-215

SIDE PORTS

In combination with ISO 3019-1 / SAE J744

CMV 60-215

CMV 60-215

In combination with CMV 60-215

#### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

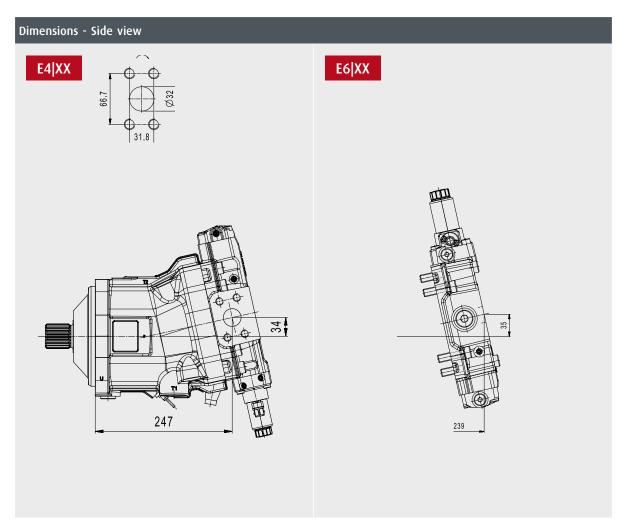
ISO 3019-2 metric

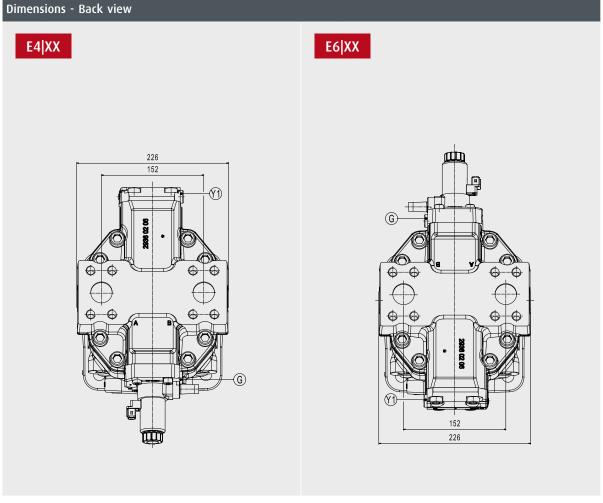
CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

## Technical Specification | Work Ports | Axial Twin Ports | ISO METR | CMV 140

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.







Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

AX	Dragging a qualification part	G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep
ВХ	Pressure equalization port  BX		Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep
T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep	Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep
T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep		







Key Facts

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**Auxiliary Ports** 

Functions/Options

### ISO 6162-2

CMV 60-215

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

#### RADIAL TWIN PORTS ISO 6162-2

ISO 3019-1 / SAE J744

CMV 60-215

In combination with

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

AXIAL TWIN PORTS

In combination with ISO 3019-1 / SAE J744

In combination with

CMV 60-215

In combination with

In combination with

CMV 60-215

In combination with

In combination with

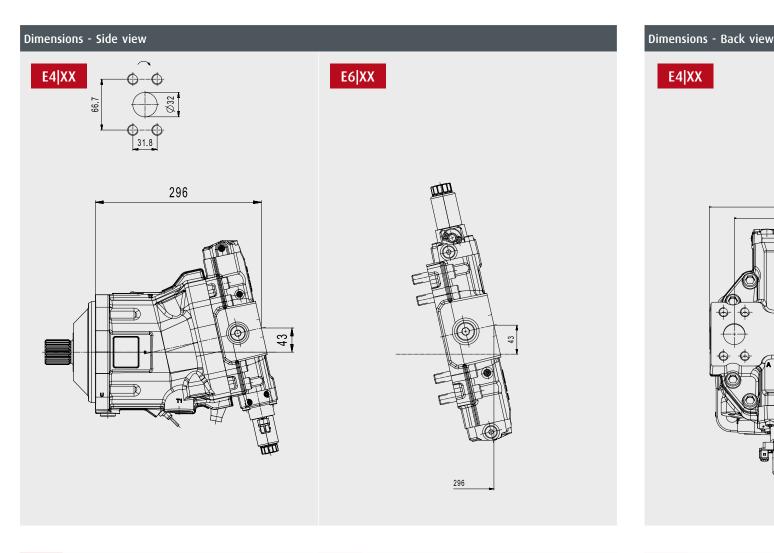
ISO 3019-2 metric

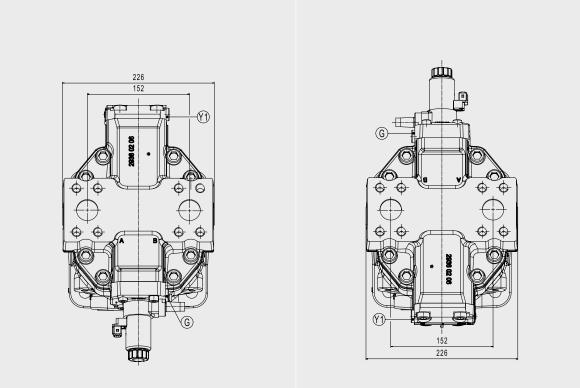
CMV 60-215

## Technical Specification | Work Ports | Axial Twin Ports | ISO METR | CMV 170

E4|XX

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





E6|XX

Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement control). The other options shown do not determine the

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

AX	Pressure equalization port, ISO 6149, M14x1.5, 11.5 mm deep	G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm dee
ВХ		U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep
T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep	Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep
T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep		







Key Facts

CONFIGURATION

Modelcode & Availability

#### **TECHNICAL SPECIFICATION**

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Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

Functions/Options

#### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

#### SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

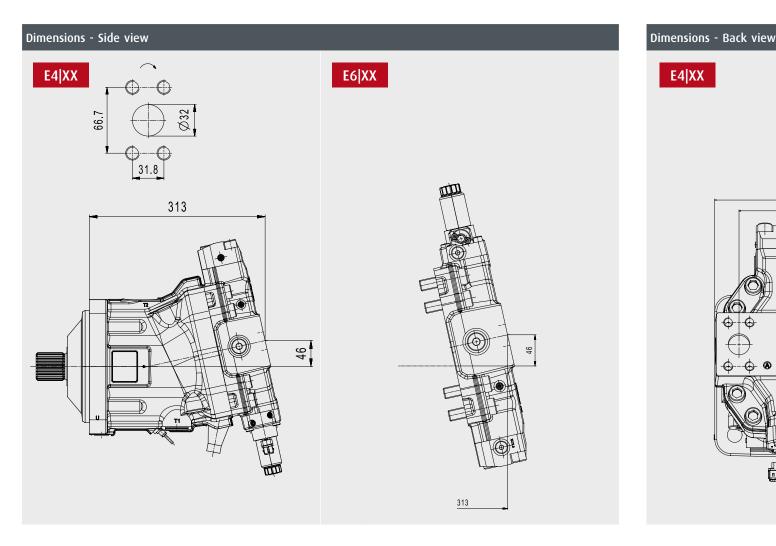
CMV 60-215

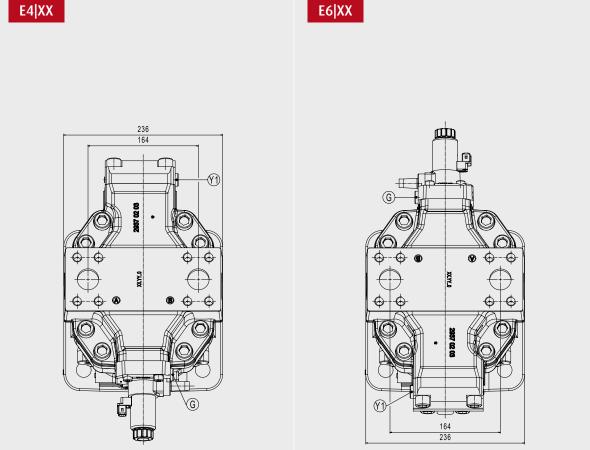
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

## Technical Specification | Work Ports | Axial Twin Ports | ISO METR | CMV 215

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Pressure equalization port, ISO 6149,

T1 Drain / vent port, ISO 6149, M33x2, 19 mm deep

T2 Drain / vent port, ISO 6149, M42x2, 19.5 mm deep

M22x1.5, 15.5 mm deep

Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep

Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep

Y1 Measuring port, ISO 6149, M14x1.5, 11.5 mm deep

Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

Configuration with positive control (E6 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, SAE 1 1/4"





Key Facts

CONFIGURATION

Modelcode & Availability

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Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

Functions/Options

### ISO 6162-2

CMV 60-215

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

In combination with

CMV 60-215

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

#### **RADIAL TWIN PORTS** ISO 6162-2

In combination with

In combination with

**AXIAL TWIN PORTS** 

In combination with ISO 3019-1 / SAE J744

In combination with

CMV 60-215

In combination with

ISO 3019-1 / SAE J744

In combination with

In combination with

ISO 3019-1 / SAE J744

In combination with ISO 3019-2 metric

CMV 60-215

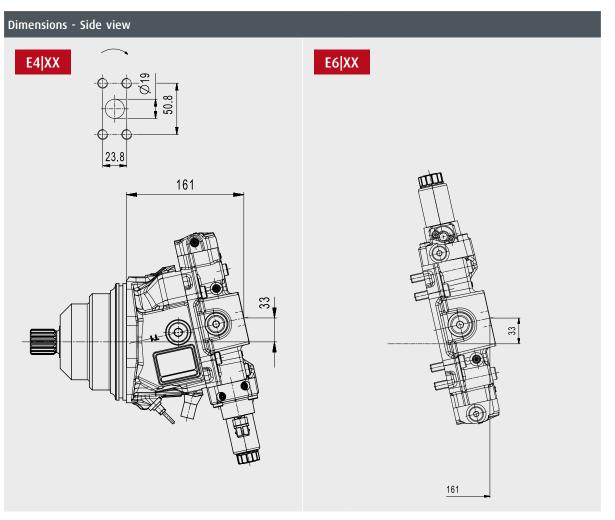
PLUG-IN, SIM. TO ISO 3019-2

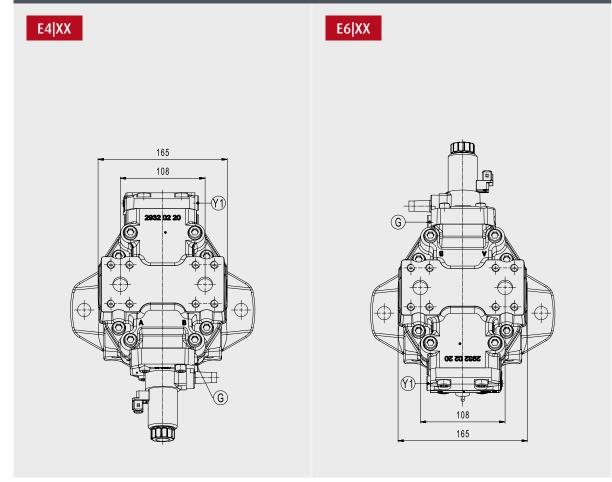
CMV 60-215



## Technical Specification | Work Ports | Axial Twin Ports | Plug-In | CMV 60

Dimensions - Back view





4 XX	Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.	А	High pressure work port, ISO 6162-2, If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar
6 XX	Configuration with positive control (E6 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.		High pressure work port, ISO 6162-2, If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

AX	BX Pressure equalization port	G	Ext. control pressure supply, ISO 6149
ВХ		U	Bearing flush port, ISO 6149
T1	Drain / vent port, ISO 6149	Y1	Measuring port, ISO 6149
T2	Drain / vent port, ISO 6149		





Key Facts

CONFIGURATION

Modelcode & Availability

#### **TECHNICAL SPECIFICATION**

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Functions/Options

#### AXIAL TWIN PORTS ISO 6162-2

ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

CMV 60-215

In combination with

In combination with

In combination with

In combination with

CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

ISO 3019-2 metric

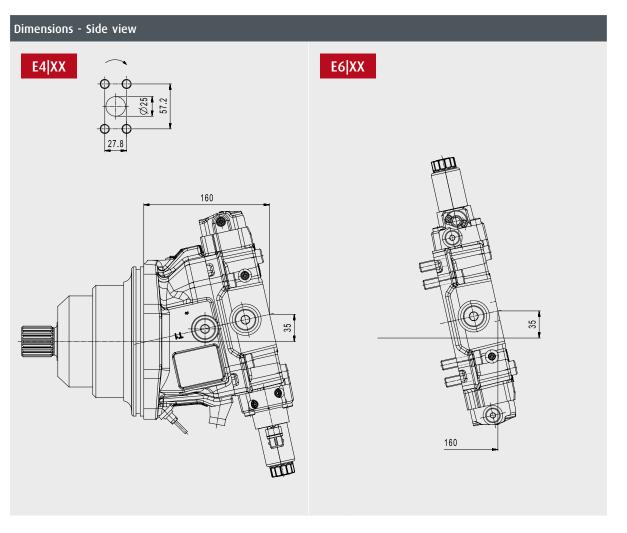
CMV 60-215

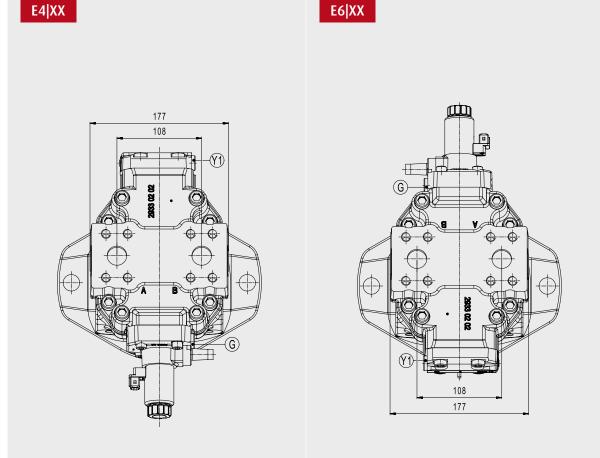
PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

## Technical Specification | Work Ports | Axial Twin Ports | Plug-In | CMV 85

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement

High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

АХ	Pressure equalization port	
ВХ		
T1	Drain / vent port, ISO 6149, M22x1.5, 15.5 mm deep	Υ
T2	Drain / vent port, ISO 6149, M27x2, 19 mm deep	

Dimensions - Back view

Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep Measuring port, ISO 6149, M14x1.5, 11.5 mm deep







Key Facts

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Functions/Options

### ISO 6162-2

ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS

In combination with

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

In combination with

CMV 60-215

PLUG-IN, SIM. TO ISO 3019-2

### AXIAL TWIN PORTS

In combination with

In combination with

ISO 6162-2

ISO 3019-1 / SAE J744

CMV 60-215

In combination with

CMV 60-215

In combination with

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

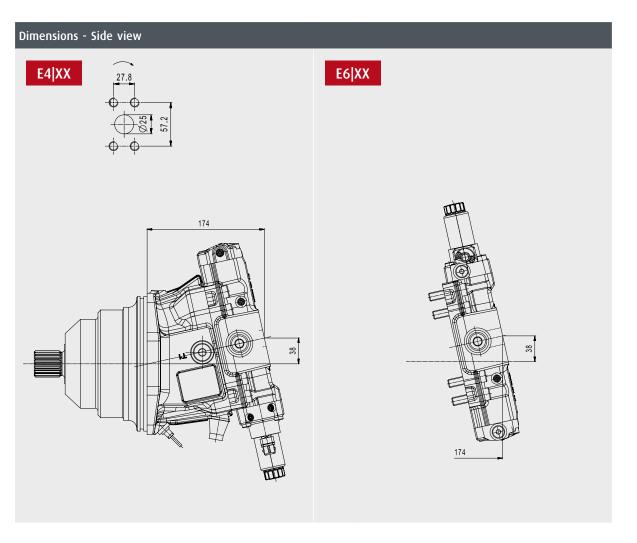
ISO 3019-2 metric

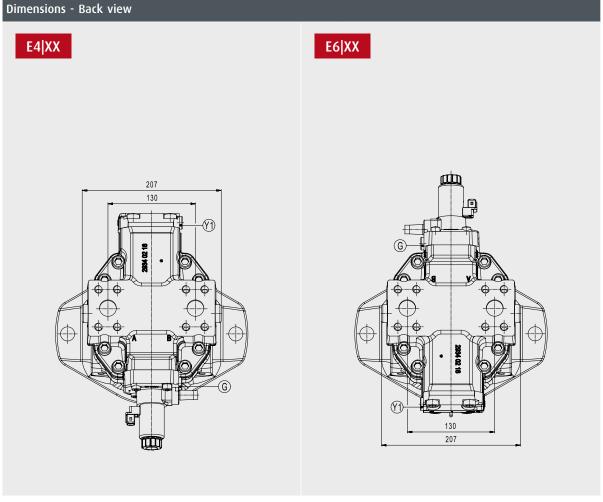
In combination with

CMV 60-215

## Technical Specification | Work Ports | Axial Twin Ports | Plug-In | CMV 115

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement

High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

, ,, ,	Pressure equalization port
ВХ	riessule equalization port
T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep Measuring port, ISO 6149, M14x1.5, 11.5 mm deep







Key Facts

CONFIGURATION

Modelcode & Availability

#### **TECHNICAL SPECIFICATION**

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Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

Functions/Options

## ISO 6162-2

ISO 3019-1 / SAE J744

CMV 60-215

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

In combination with

In combination with ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

#### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

AXIAL TWIN PORTS

In combination with

In combination with

CMV 60-215

In combination with

ISO 3019-1 / SAE J744

CMV 60-215

CMV 60-215

In combination with

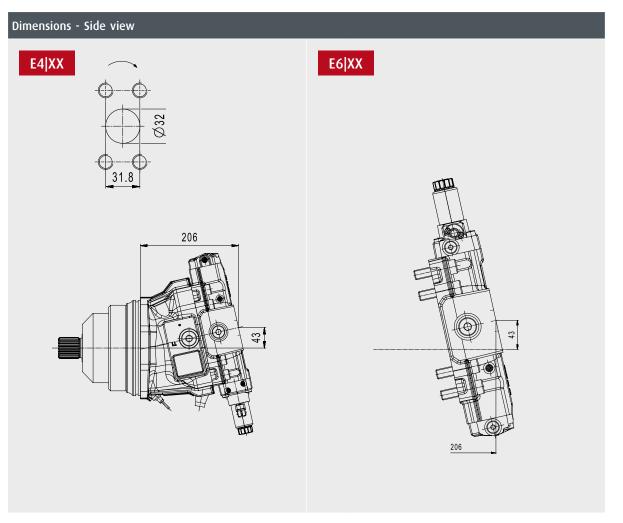
CMV 60-215

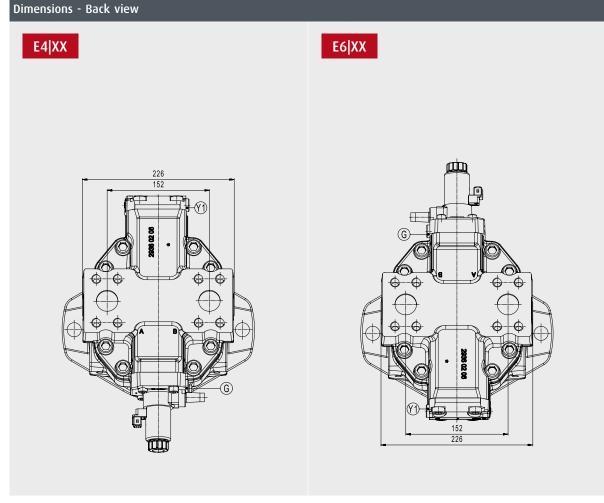
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

## Technical Specification | Work Ports | Axial Twin Ports | Plug-In | CMV 140

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

If pressurised - motor runs counter-clockwise

Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, SAE 1 1/4"

Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep Pressure equalization port ВХ Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep T1 Drain / vent port, ISO 6149, M27x2, 19 mm deep Y1 Measuring port, ISO 6149, M14x1.5, 11.5 mm deep T2 Drain / vent port, ISO 6149, M33x2, 19 mm deep







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Functions/Options

## ISO 6162-2

ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

In combination with

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

RADIAL TWIN PORTS

In combination with ISO 3019-1 / SAE J744

In combination with

### AXIAL TWIN PORTS

In combination with

ISO 3019-1 / SAE J744

CMV 60-215

In combination with

CMV 60-215

In combination with CMV 60-215

### ISO 6162-2

CMV 60-215

In combination with ISO 3019-2 metric

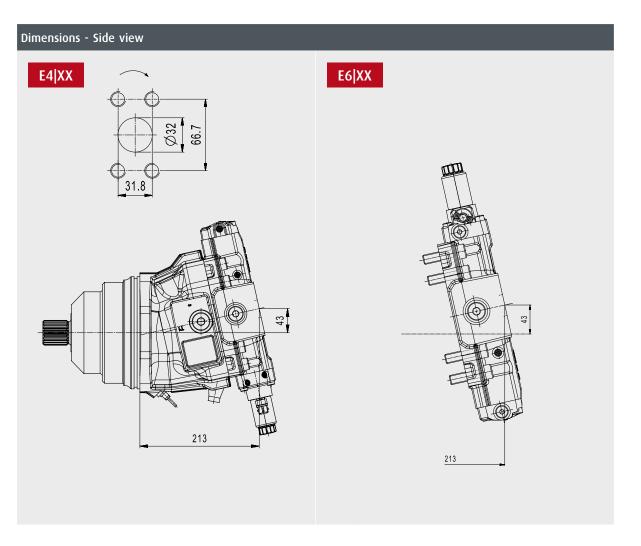
CMV 60-215

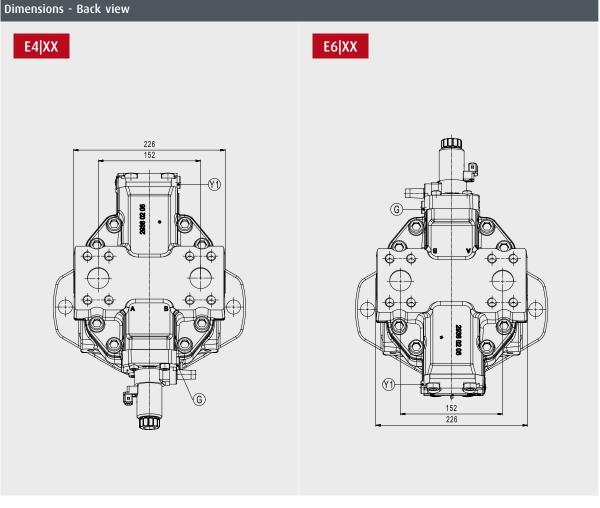
PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

## Technical Specification | Work Ports | Axial Twin Ports | Plug-In | CMV 170

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

AX	Pressure equalization port, ISO 6149,	G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep
ВХ		U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep
T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep	Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep
T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep		







Key Facts

CONFIGURATION

Modelcode & Availability

#### **TECHNICAL SPECIFICATION**

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Work Ports

**Auxiliary Ports** 

Functions/Options

### ISO 6162-2

ISO 3019-1 / SAE J744

ISO 3019-2 metric

CMV 60-215

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

In combination with

CMV 60-215

### AXIAL TWIN PORTS

In combination with

CMV 60-215

In combination with

In combination with

In combination with ISO 3019-1 / SAE J744

CMV 60-215

CMV 60-215

#### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

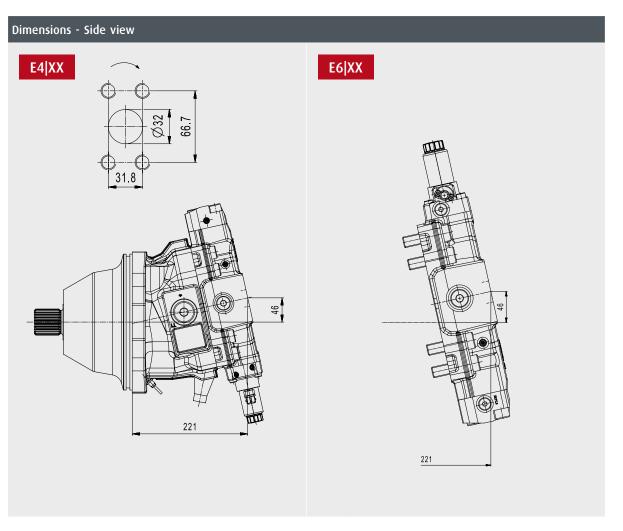
ISO 3019-2 metric

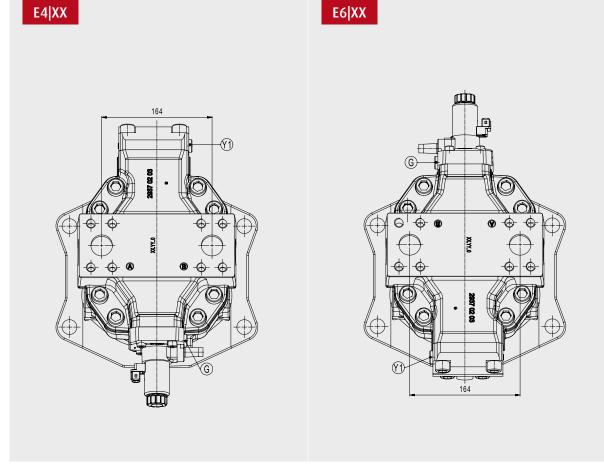
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

## Technical Specification | Work Ports | Axial Twin Ports | Plug-In | CMV 215

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

ΑX	Pressure equalization port, ISO 6149, M22x1 5 15 5 mm deen	G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep
ВХ		U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep
T1	Drain / vent port, ISO 6149, M33x2, 19 mm deep	Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep
T2	Drain / vent port, ISO 6149, M42x2, 19.5 mm deep		

Dimensions - Back view







**Key Facts** 

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Connectors

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Work Ports

Auxiliary Ports

Functions/Options

#### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

#### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

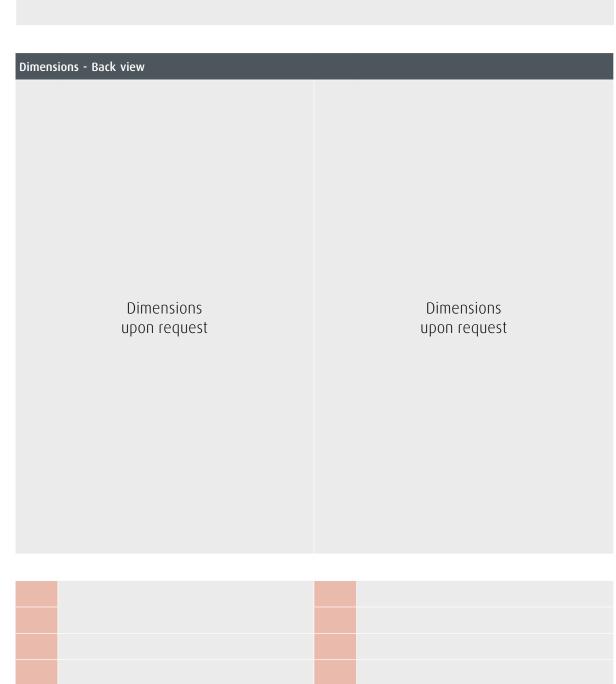
CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



## Technical Specification | Work Ports | Side Ports | ISO SAE | CMV 60







Key Facts

CONFIGURATION

Modelcode & Availability

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Connectors

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Work Ports

Auxiliary Ports

Functions/Options

#### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

#### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

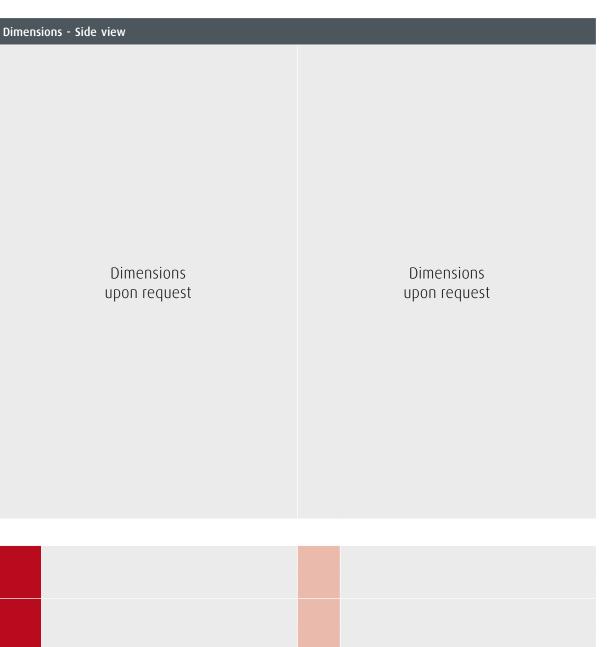
CMV 60-215

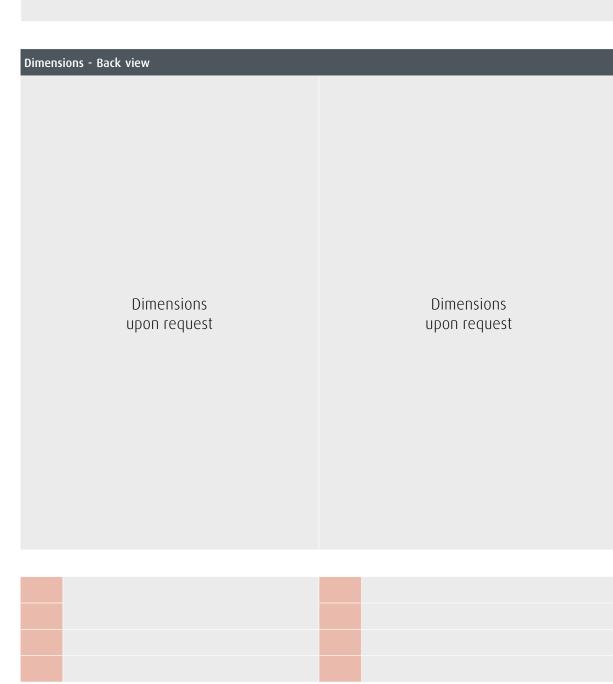
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

# (A)

## Technical Specification | Work Ports | Side Ports | ISO SAE | CMV 85









Key Facts

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Work Ports

**Auxiliary Ports** 

Functions/Options

#### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

#### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

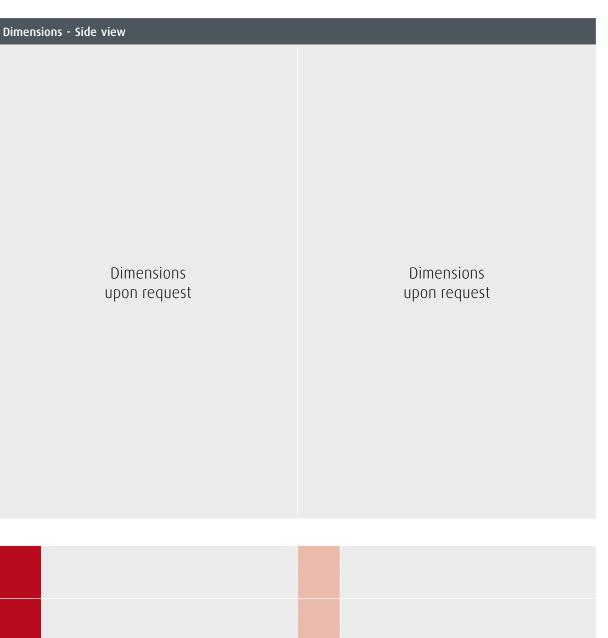
CMV 60-215

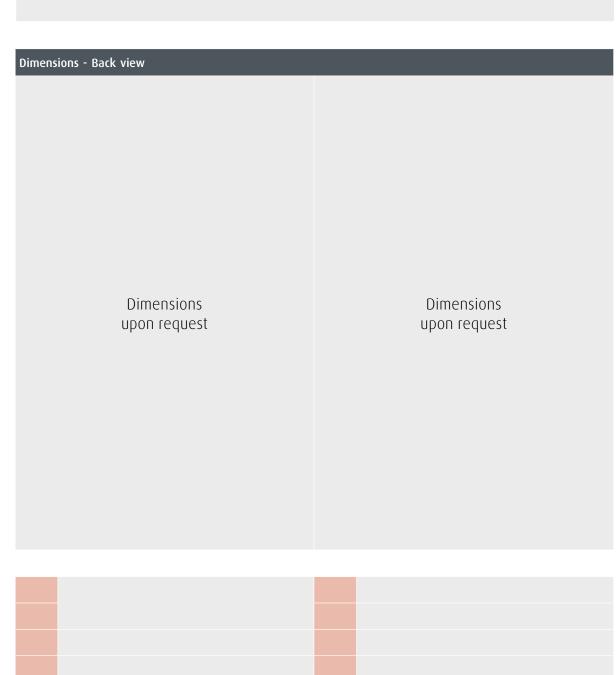
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



## Technical Specification | Work Ports | Side Ports | ISO SAE | CMV 115









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Modelcode & Availability

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\_

Snart

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Work Ports

Auxiliary Ports

Functions/Options

#### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

#### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

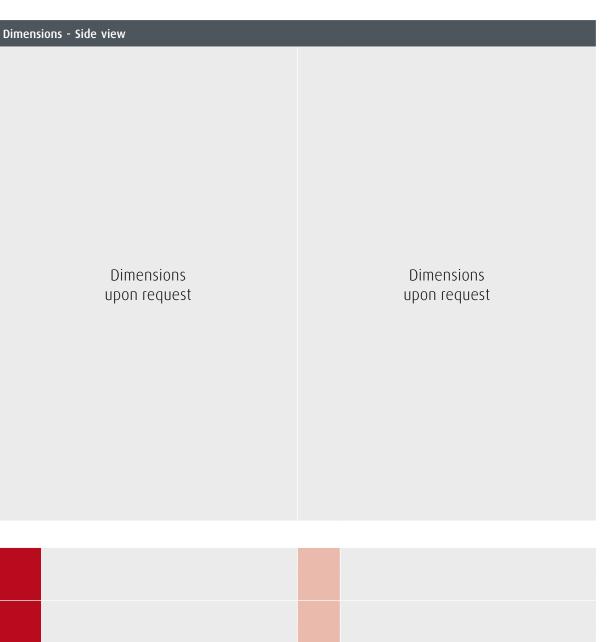
CMV 60-215

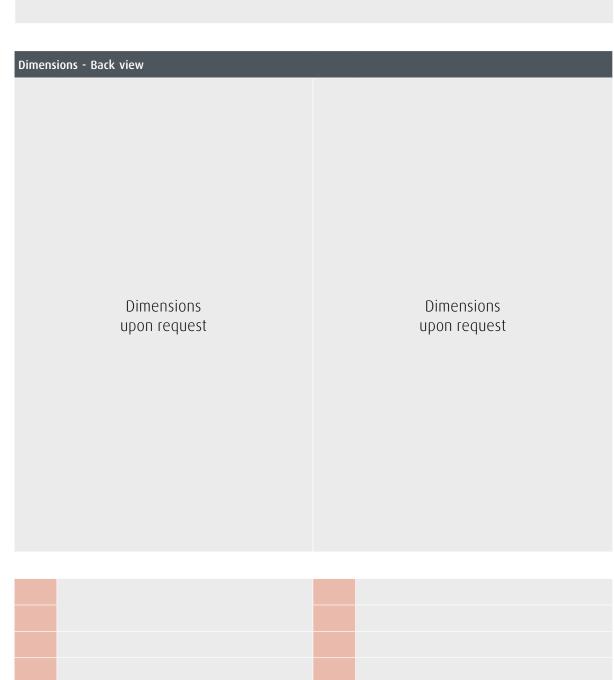
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



## Technical Specification | Work Ports | Side Ports | ISO SAE | CMV 140









Key Facts

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Modelcode & Availability

#### **TECHNICAL SPECIFICATION**

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Shaft

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Work Ports

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Functions/Options

#### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

#### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

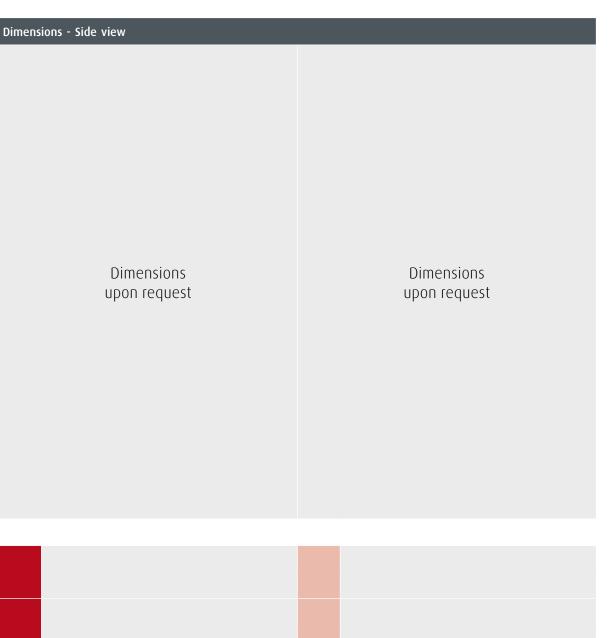
CMV 60-215

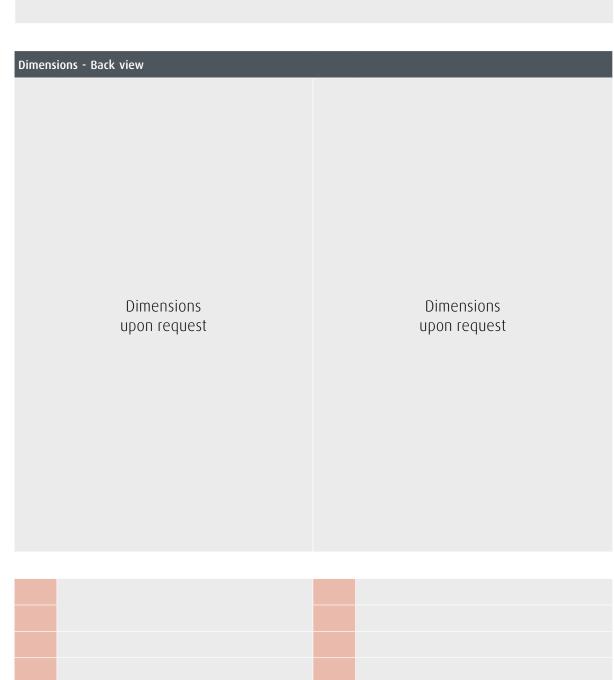
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



## Technical Specification | Work Ports | Side Ports | ISO SAE | CMV 170









Key Facts

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Modelcode & Availability

#### **TECHNICAL SPECIFICATION**

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Functions/Options

#### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

#### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

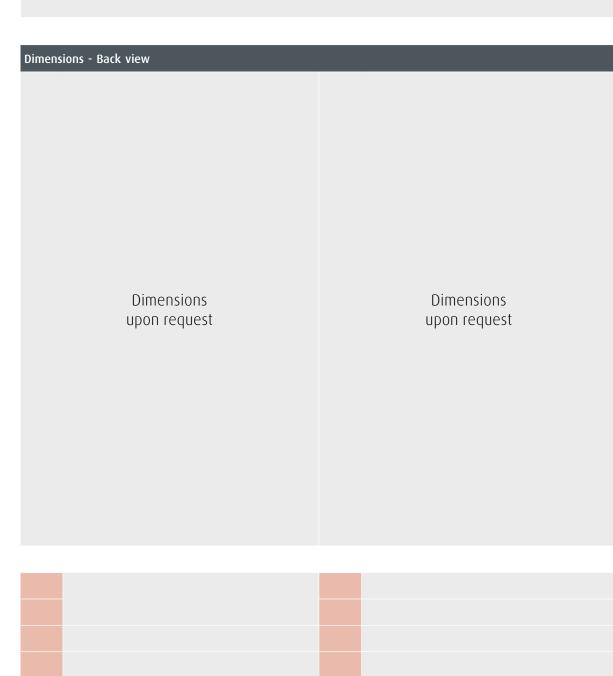
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



## Technical Specification | Work Ports | Side Ports | ISO SAE | CMV 215

Dimensions - Side view	
Dimensions upon request	Dimensions upon request







Key Facts

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Functions/Options

### ISO 6162-2

ISO 3019-1 / SAE J744

In combination with ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

In combination with ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

**RADIAL TWIN PORTS** 

In combination with

CMV 60-215

CMV 60-215

In combination with

**AXIAL TWIN PORTS** 

In combination with

CMV 60-215

CMV 60-215

In combination with

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with

CMV 60-215

### ISO 6162-2

ISO 3019-1 / SAE J744

In combination with ISO 3019-2 metric

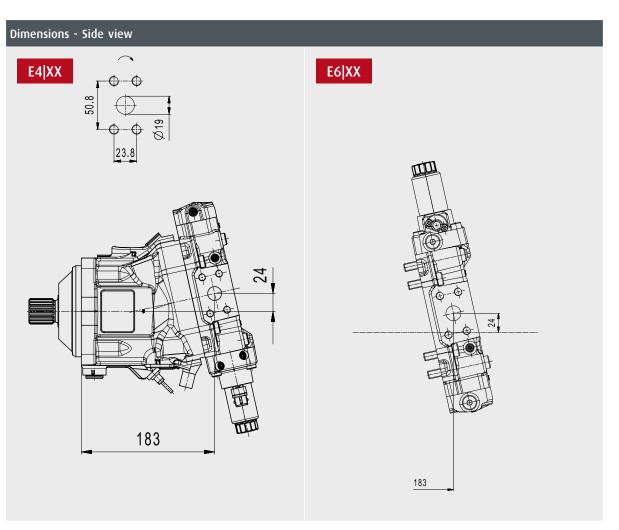
PLUG-IN, SIM. TO ISO 3019-2

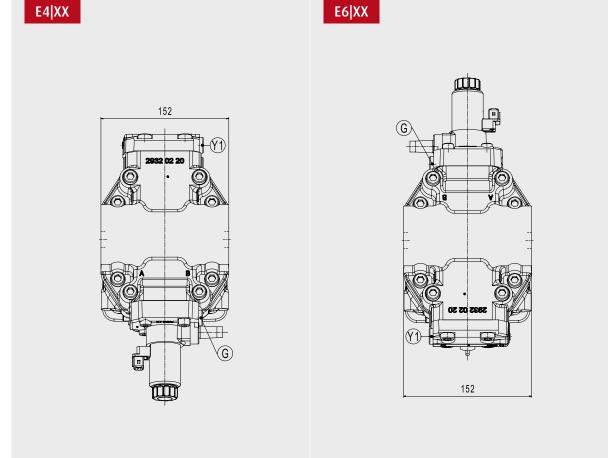
CMV 60-215



## Technical Specification | Work Ports | Side Ports | ISO METR | CMV 60

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Dimensions - Back view

E4 XX	Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.	А	High pressure work port, ISO 6162-2, If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar
E6 XX	Configuration with positive control (E6 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.	В	High pressure work port, ISO 6162-2, If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

AX	Pressure equalization port	G	Ext. control pressure supply, ISO 6149
ВХ		U	Bearing flush port, ISO 6149
T1	Drain / vent port, ISO 6149	Y1	Measuring port, ISO 6149
T2	Drain / vent port, ISO 6149		





Key Facts

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Modelcode & Availability

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**Auxiliary Ports** 

Functions/Options

## ISO 6162-2

CMV 60-215

In combination with ISO 3019-2 metric

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

In combination with

CMV 60-215

In combination with ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

ISO 6162-2

ISO 3019-1 / SAE J744

CMV 60-215

In combination with

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

**AXIAL TWIN PORTS** 

In combination with ISO 3019-1 / SAE J744

CMV 60-215

ISO 3019-1 / SAE J744

CMV 60-215

In combination with CMV 60-215

RADIAL TWIN PORTS

In combination with

ISO 3019-2 metric

CMV 60-215

## Technical Specification | Work Ports | Side Ports | ISO METR | CMV 85

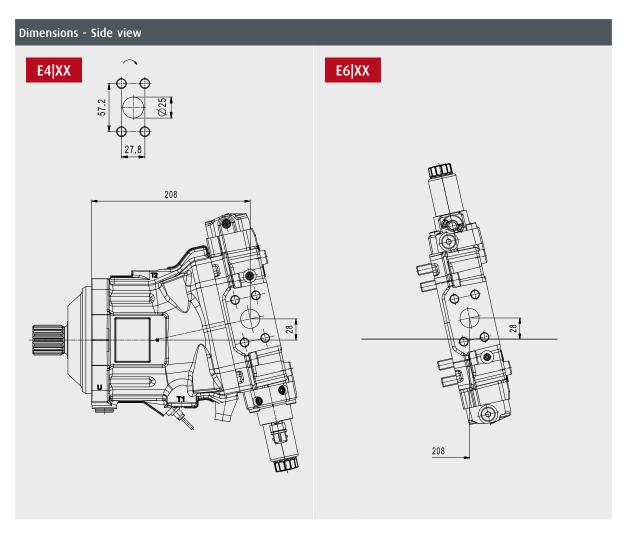
Dimensions - Back view

T1 Drain / vent port, ISO 6149, M22x1.5, 15.5 mm deep

T2 Drain / vent port, ISO 6149, M27x2, 19 mm deep

E4|XX

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.



Configuration with negative control (E4 displacement

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

control). The other options shown do not determine the position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement

High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	

Nom. pres.: 450 bar, max. press.: 500 bar
High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise Nom press : 450 bar max press : 500 bar

A If pressurised - i

	164  The state of		G WANNED WANNED TO THE TOTAL PROPERTY OF THE
АХ	Pressure equalization port	G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep
ВХ	Tressure equalization part	U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep

Y1 Measuring port, ISO 6149, M14x1.5, 11.5 mm deep

E6|XX







Key Facts

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## ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

ISO 3019-2 metric

In combination with PLUG-IN, SIM. TO ISO 3019-2

> SIDE PORTS ISO 6162-2

PLUG-IN, SIM. TO ISO 3019-2

ISO 6162-2

ISO 3019-1 / SAE J744

CMV 60-215

In combination with

In combination with PLUG-IN, SIM. TO ISO 3019-2

AXIAL TWIN PORTS

In combination with

CMV 60-215

CMV 60-215

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with CMV 60-215

RADIAL TWIN PORTS

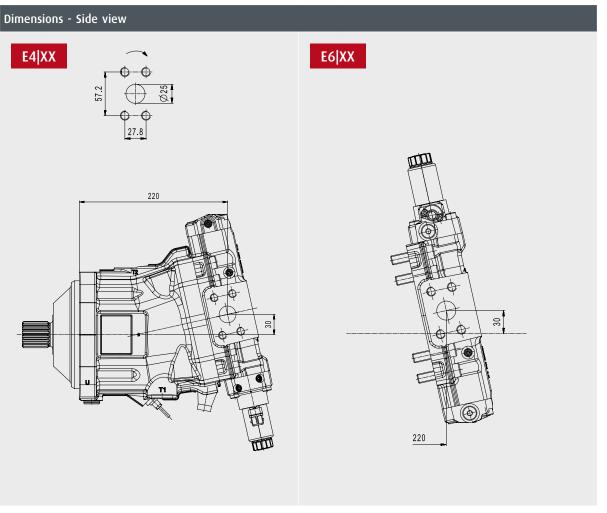
In combination with

ISO 3019-2 metric CMV 60-215

CMV 60-215

## Technical Specification | Work Ports | Side Ports | ISO METR | CMV 115

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.



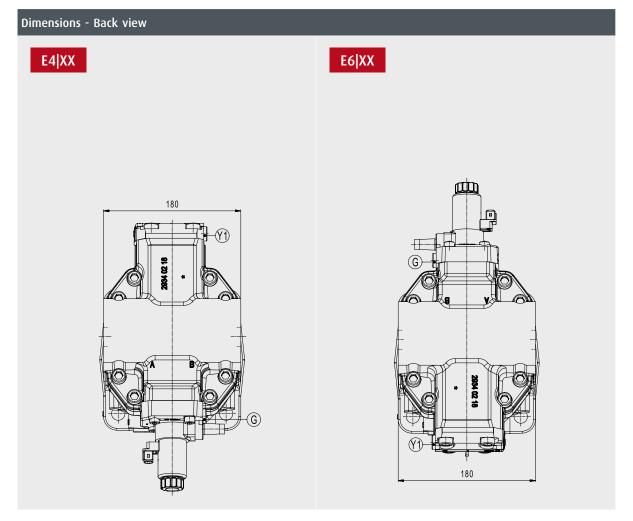
Configuration with negative control (E4 displacement control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

control). The other options shown do not determine the position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement

High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar
High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar



Pressure equalization port

Drain / vent port, ISO 6149, M27x2, 19 mm deep

T2 Drain / vent port, ISO 6149, M33x2, 19 mm deep

ВХ

G Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep

Y1 Measuring port, ISO 6149, M14x1.5, 11.5 mm deep

Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep







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## ISO 6162-2

ISO 3019-1 / SAE J744

CMV 60-215

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

In combination with

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

ISO 6162-2

CMV 60-215

In combination with

**AXIAL TWIN PORTS** 

In combination with

In combination with

CMV 60-215

In combination with

ISO 3019-1 / SAE J744

CMV 60-215

In combination with

CMV 60-215

In combination with CMV 60-215

RADIAL TWIN PORTS

In combination with ISO 3019-1 / SAE J744

ISO 3019-2 metric

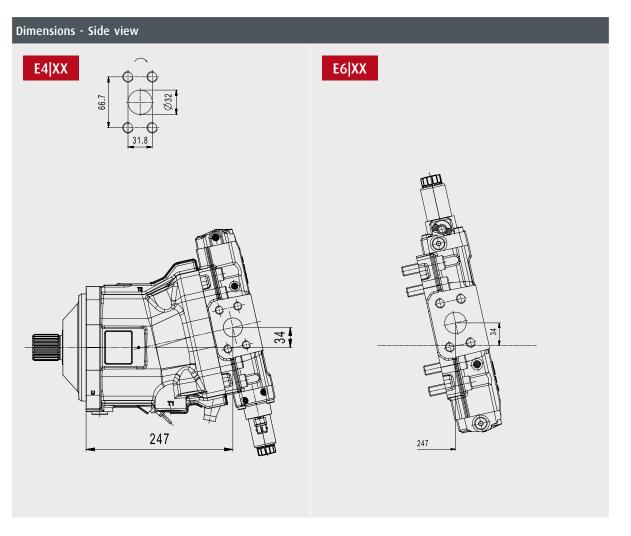
CMV 60-215

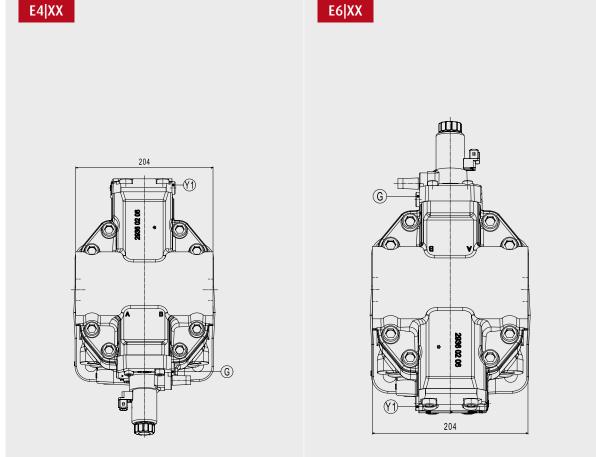
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

## Technical Specification | Work Ports | Side Ports | ISO METR | CMV 140

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Dimensions - Back view

Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement control). The other options shown do not determine the

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

AX	Pressure equalization port	G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep
ВХ		U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep
T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep	Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep
T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep		







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### ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

ISO 6162-2

In combination with

ISO 3019-2 metric

CMV 60-215

#### RADIAL TWIN PORTS ISO 6162-2

ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

### **AXIAL TWIN PORTS**

In combination with

SIDE PORTS

ISO 3019-1 / SAE J744

CMV 60-215

In combination with

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

In combination with

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



## Technical Specification | Work Ports | Side Ports | ISO METR | CMV 170

High pressure work port, ISO 6162-2, SAE 1 1/4"

High pressure work port, ISO 6162-2, SAE 1 1/4"

If pressurised - motor runs counter-clockwise

If pressurised - motor runs clockwise

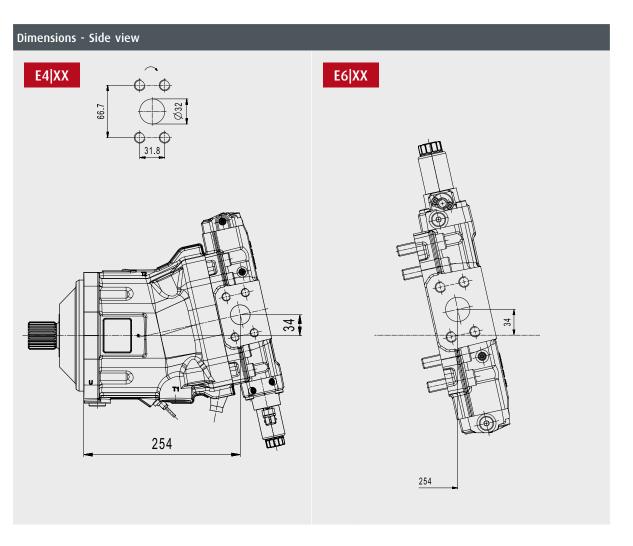
Nom. pres.: 450 bar, max. press.: 500 bar

Nom. pres.: 450 bar, max. press.: 500 bar

Dimensions - Back view

E4|XX

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.



Configuration with negative control (E4 displacement

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement

AX	Pressure equalization port, ISO 6149,	G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep
ВХ	M14x1.5, 11.5 mm deep	U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep
T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep	Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep
T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep		

E6|XX





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**Auxiliary Ports** 

Functions/Options

## ISO 6162-2

ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

PLUG-IN, SIM. TO ISO 3019-2

SIDE PORTS ISO 6162-2

In combination with

CMV 60-215

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

### RADIAL TWIN PORTS

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with

CMV 60-215

In combination with

CMV 60-215

### **AXIAL TWIN PORTS**

In combination with

In combination with CMV 60-215

ISO 3019-1 / SAE J744

In combination with

CMV 60-215

In combination with

ISO 6162-2

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

## Technical Specification | Work Ports | Side Ports | ISO METR | CMV 215

High pressure work port, ISO 6162-2, SAE 1 1/4"

High pressure work port, ISO 6162-2, SAE 1 1/4"

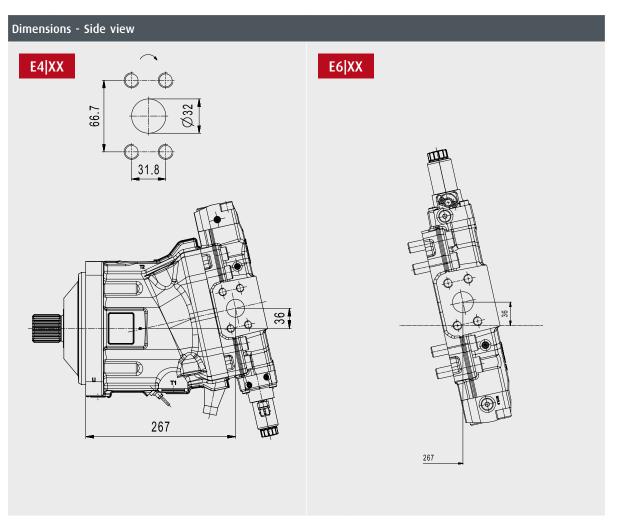
If pressurised - motor runs counter-clockwise

If pressurised - motor runs clockwise

Nom. pres.: 450 bar, max. press.: 500 bar

Nom. pres.: 450 bar, max. press.: 500 bar

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.



Configuration with negative control (E4 displacement

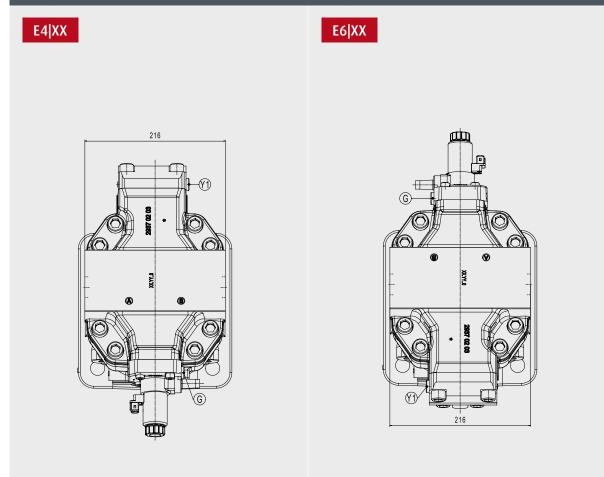
control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement



Dimensions - Back view

А	٨X	Pressure equalization port, ISO 6149, M22x1.5, 15.5 mm deep	G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep
В	3X		U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep
Т	1	Drain / vent port, ISO 6149, M33x2, 19 mm deep	Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep
Т	2	Drain / vent port, ISO 6149, M42x2, 19.5 mm deep		





Key Facts

CONFIGURATION

Modelcode & Availability

#### **TECHNICAL SPECIFICATION**

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Hydraulical Interfaces

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**Auxiliary Ports** 

Functions/Options

## ISO 6162-2

ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

CMV 60-215

In combination with ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

#### RADIAL TWIN PORTS ISO 6162-2

In combination with

CMV 60-215

In combination with

In combination with

**AXIAL TWIN PORTS** 

In combination with

CMV 60-215

In combination with

In combination with ISO 3019-1 / SAE J744

In combination with

ISO 3019-1 / SAE J744

ISO 3019-2 metric

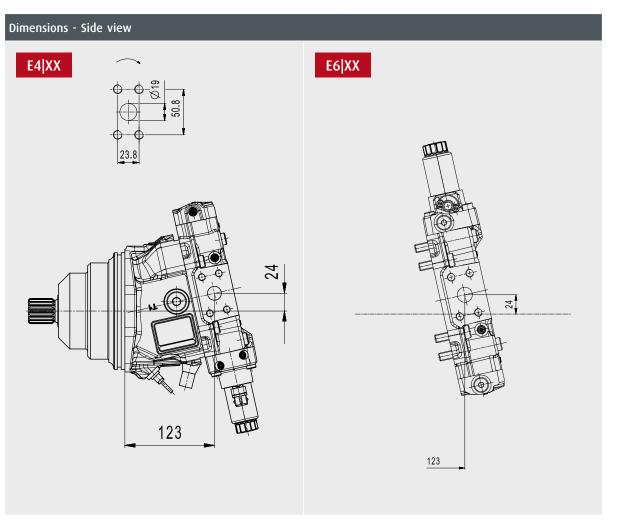
CMV 60-215

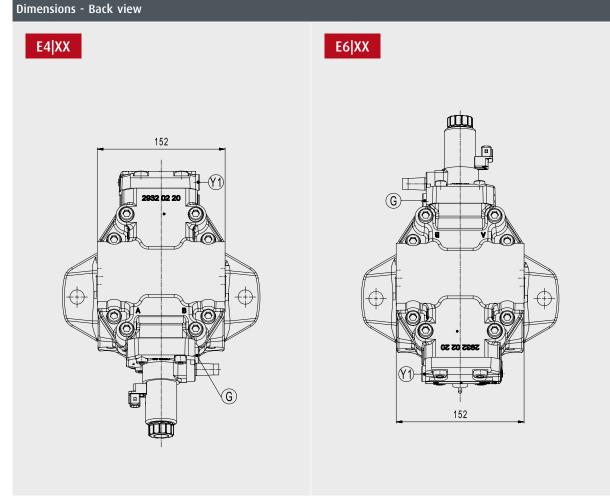
PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

## Technical Specification | Work Ports | Side Ports | PLUG-IN | CMV 60

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

High pressure work port, ISO 6162-2, If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

AX		G	Ext. control pressure supply, ISO 6149
ВХ	Pressure equalization port	U	Bearing flush port, ISO 6149
T1	Drain / vent port, ISO 6149	Y1	Measuring port, ISO 6149
T2	Drain / vent port, ISO 6149		







Key Facts

CONFIGURATION

Modelcode & Availability

#### **TECHNICAL SPECIFICATION**

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Work Ports

**Auxiliary Ports** 

Functions/Options

### ISO 6162-2

In combination with ISO 3019-2 metric

CMV 60-215

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

CMV 60-215

In combination with ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

RADIAL TWIN PORTS

In combination with

CMV 60-215

### **AXIAL TWIN PORTS**

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with CMV 60-215

ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

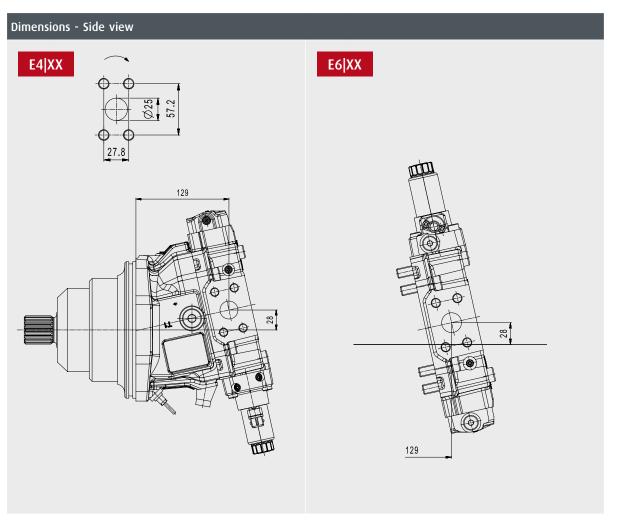
ISO 3019-2 metric

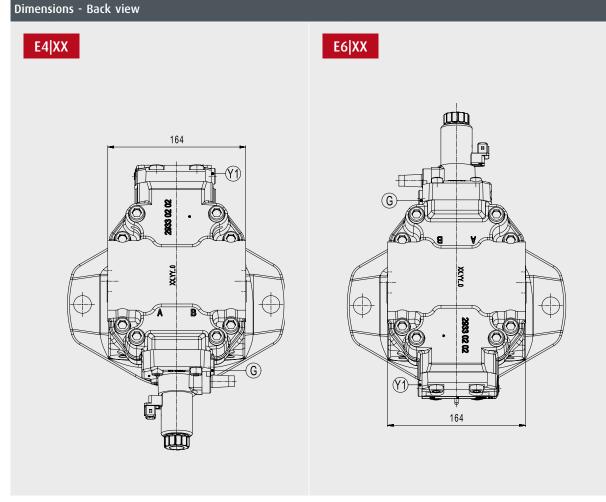
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

## Technical Specification | Work Ports | Side Ports | PLUG-IN | CMV 85

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

Configuration with positive control (E6 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

АХ		
ВХ	Pressure equalization port	
T1	Drain / vent port, ISO 6149, M22x1.5, 15.5 mm deep	
T2	Drain / vent port, ISO 6149, M27x2, 19 mm deep	

Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep
Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep
Measuring port, ISO 6149, M14x1.5, 11.5 mm deep







Key Facts

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#### **TECHNICAL SPECIFICATION**

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**Electric Interfaces** 

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Work Ports

**Auxiliary Ports** 

Functions/Options

## ISO 6162-2

CMV 60-215

ISO 3019-2 metric

In combination with PLUG-IN, SIM. TO ISO 3019-2

> SIDE PORTS ISO 6162-2

In combination with ISO 3019-2 metric

CMV 60-215

In combination with

ISO 6162-2

ISO 3019-1 / SAE J744

CMV 60-215

CMV 60-215

In combination with

AXIAL TWIN PORTS

In combination with ISO 3019-1 / SAE J744

In combination with

CMV 60-215

CMV 60-215

In combination with ISO 3019-1 / SAE J744

CMV 60-215

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

RADIAL TWIN PORTS

In combination with

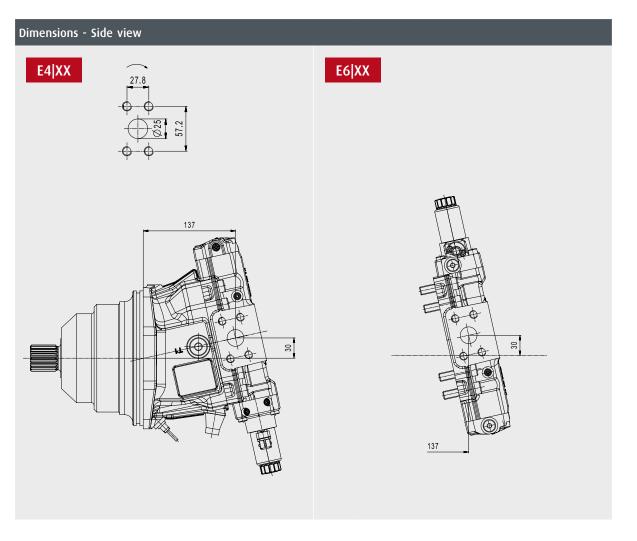
In combination with ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

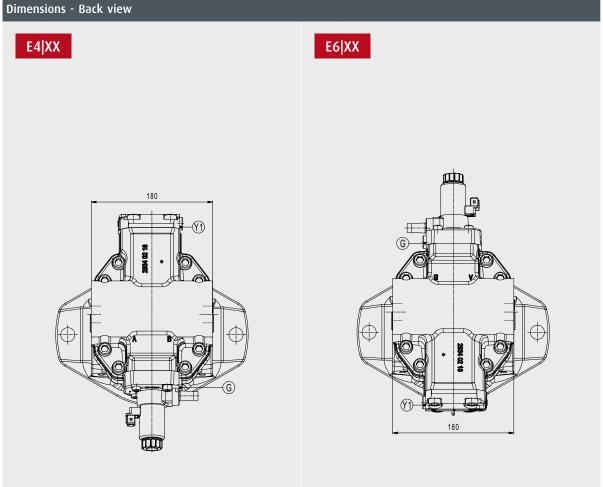
CMV 60-215

## Technical Specification | Work Ports | Side Ports | PLUG-IN | CMV 115

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.



Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.	А	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar
Configuration with positive control (E6 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.	В	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar



Pressure equalization port

Drain / vent port, ISO 6149, M27x2, 19 mm deep

T2 Drain / vent port, ISO 6149, M33x2, 19 mm deep

ВХ

G Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep

Y1 Measuring port, ISO 6149, M14x1.5, 11.5 mm deep

Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep







Key Facts

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Work Ports

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Functions/Options

## ISO 6162-2

CMV 60-215

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

CMV 60-215

ISO 3019-2 metric

In combination with PLUG-IN, SIM. TO ISO 3019-2

RADIAL TWIN PORTS

In combination with

CMV 60-215

In combination with

In combination with

## AXIAL TWIN PORTS

In combination with ISO 3019-1 / SAE J744

In combination with

CMV 60-215

In combination with

In combination with ISO 3019-1 / SAE J744

In combination with

CMV 60-215

CMV 60-215

### ISO 6162-2

ISO 3019-1 / SAE J744

ISO 3019-2 metric

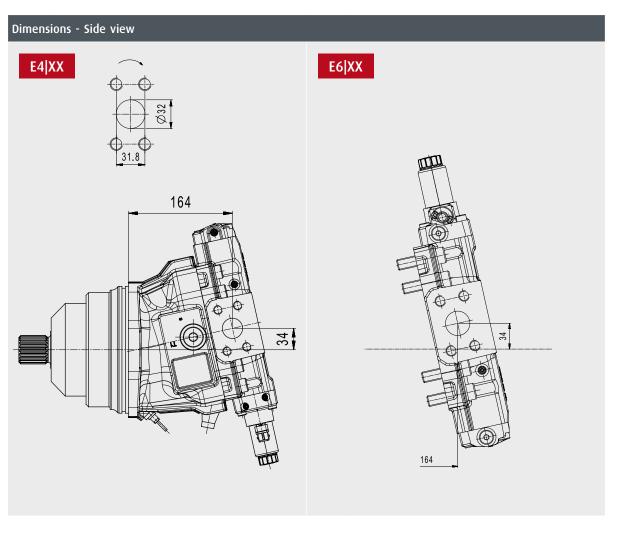
CMV 60-215

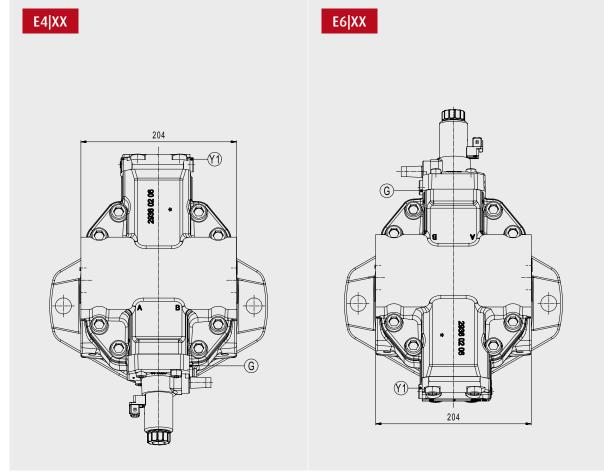
PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

## Technical Specification | Work Ports | Side Ports | PLUG-IN | CMV 140

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Dimensions - Back view

Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement control). The other options shown do not determine the

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

AX	Pressure equalization port	G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm dee
ВХ		U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep
T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep	Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep
T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep		







Key Facts

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Modelcode & Availability

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**Mechanical Interfaces** 

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Work Ports

**Auxiliary Ports** 

Functions/Options

## ISO 6162-2

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

> SIDE PORTS ISO 6162-2

ISO 3019-2 metric

In combination with PLUG-IN, SIM. TO ISO 3019-2

RADIAL TWIN PORTS

In combination with

CMV 60-215

In combination with

CMV 60-215

### AXIAL TWIN PORTS

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with

CMV 60-215

CMV 60-215

## ISO 6162-2

ISO 3019-1 / SAE J744

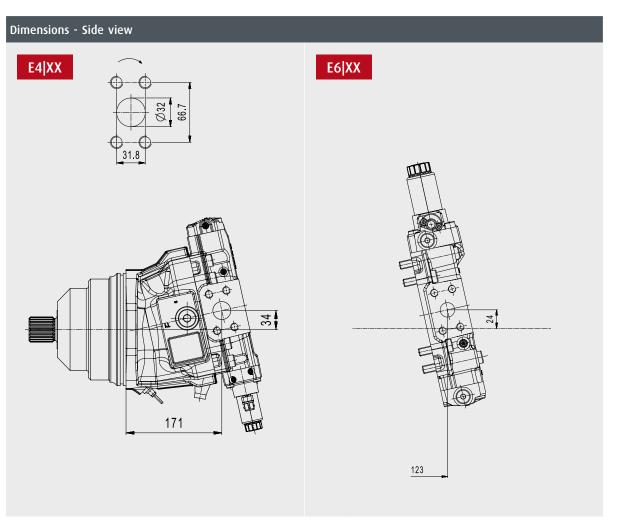
ISO 3019-2 metric

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

## Technical Specification | Work Ports | Side Ports | PLUG-IN | CMV 170

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.



Configuration with negative control (E4 displacement

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement

High pressure work port, ISO 6162-2, SAE 1 1/4"

Pressure equalization port, ISO 6149,

T1 Drain / vent port, ISO 6149, M27x2, 19 mm deep

T2 Drain / vent port, ISO 6149, M33x2, 19 mm deep

M14x1.5, 11.5 mm deep

Nom. pres.: 450 bar, max. press.: 500 bar High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

If pressurised - motor runs clockwise

Dimensions - Back view E4|XX E6|XX 204

G Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep

Y1 Measuring port, ISO 6149, M14x1.5, 11.5 mm deep

Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep







**Key Facts** 

CONFIGURATION

Modelcode & Availability

#### **TECHNICAL SPECIFICATION**

General Technical Data

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**Electric Interfaces** 

**Mechanical Interfaces** 

Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

Functions/Options

#### AXIAL TWIN PORTS ISO 6162-2

CMV 60-215

ISO 3019-2 metric

CMV 60-215

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

In combination with ISO 3019-2 metric

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

RADIAL TWIN PORTS

In combination with

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with ISO 3019-1 / SAE J744

In combination with

In combination with

CMV 60-215

CMV 60-215

ISO 6162-2

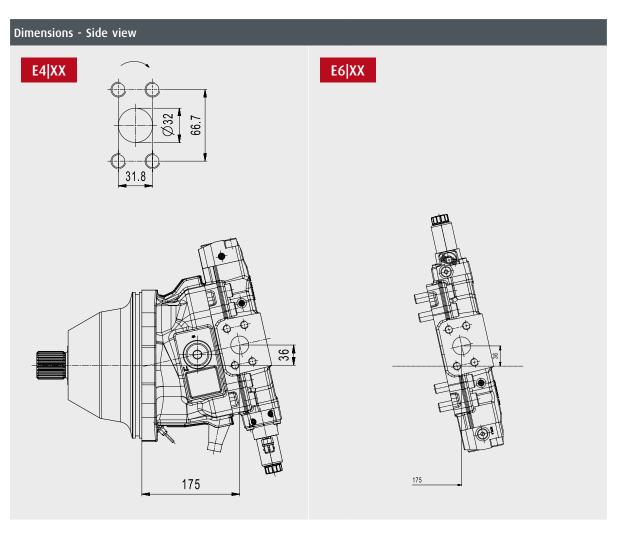
ISO 3019-1 / SAE J744

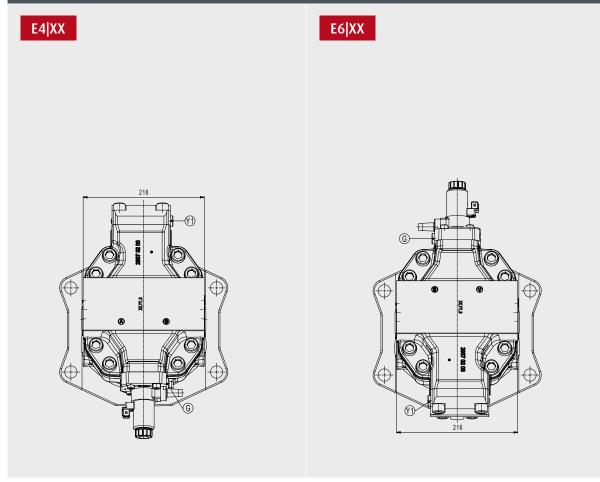
CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

## Technical Specification | Work Ports | Side Ports | PLUG-IN | CMV 215

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement control). The other options shown do not determine the

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

AX	Pressure equalization port, ISO 6149, M22x1.5, 15.5 mm deep	
ВХ		
T1	Drain / vent port, ISO 6149, M33x2, 19 mm deep	
T2	Drain / vent port, ISO 6149, M42x2, 19.5 mm deep	

Dimensions - Back view

Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep Measuring port, ISO 6149, M14x1.5, 11.5 mm deep







**Key Facts** 

CONFIGURATION

Modelcode & Availability

#### **TECHNICAL SPECIFICATION**

General Technical Data

Operating Parameters

Control

Sensor

Electric Interfaces

Connectors

Mechanical Interfaces

\_

Hydraulical Interfaces

Work Ports

Auxiliary Ports

Functions/Options

#### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

#### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

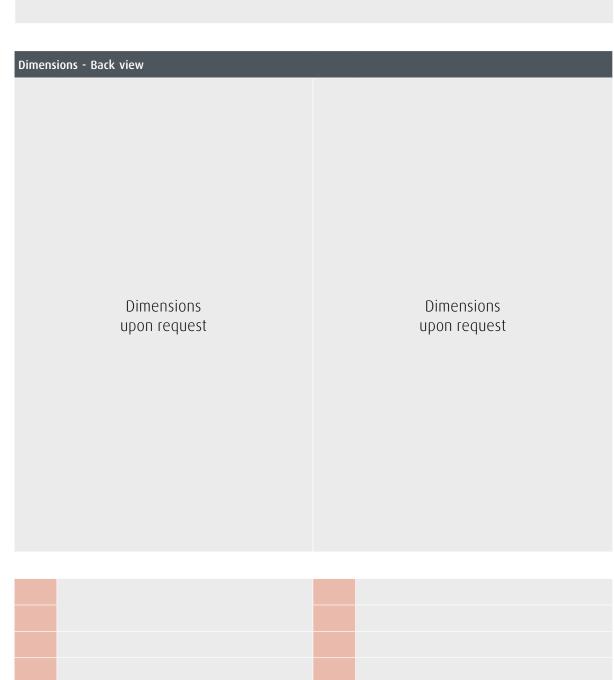
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

# (d)

## Technical Specification | Work Ports | Radial Twin Ports | ISO SAE | CMV 60

Dimensions - Side view	
Dimensions upon request	Dimensions upon request







Key Facts

CONFIGURATION

Modelcode & Availability

#### **TECHNICAL SPECIFICATION**

General Technical Data

Operating Parameters

Control

Sensor

Electric Interfaces

Connectors

Mechanical Interfaces

\_

Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

Functions/Options

#### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

#### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

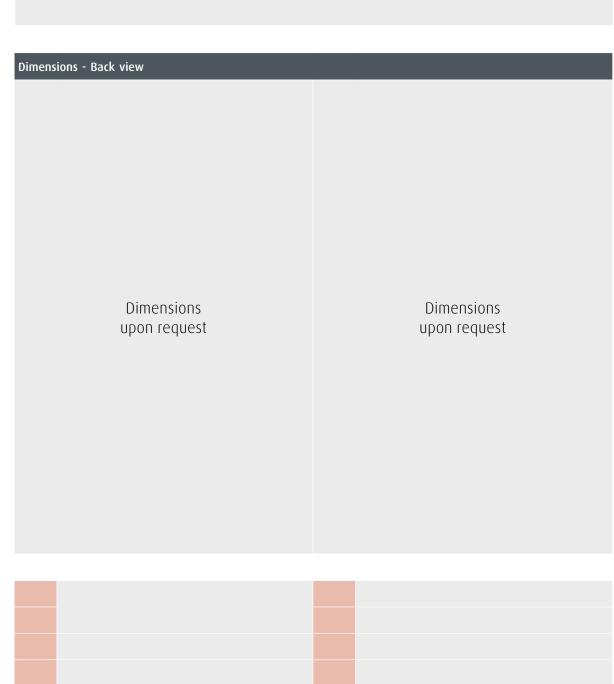
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

# (d)

## Technical Specification | Work Ports | Radial Twin Ports | ISO SAE | CMV 85

Dimensions - Side view  Dimensions upon request	Dimensions upon request







Key Facts

CONFIGURATION

Modelcode & Availability

#### **TECHNICAL SPECIFICATION**

General Technical Data

Operating Parameters

Control

Sensor

Electric Interfaces

Connectors

Mechanical Interfaces

\_

Work Ports

Hydraulical Interfaces

Auxiliary Ports

Functions/Options

#### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

#### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

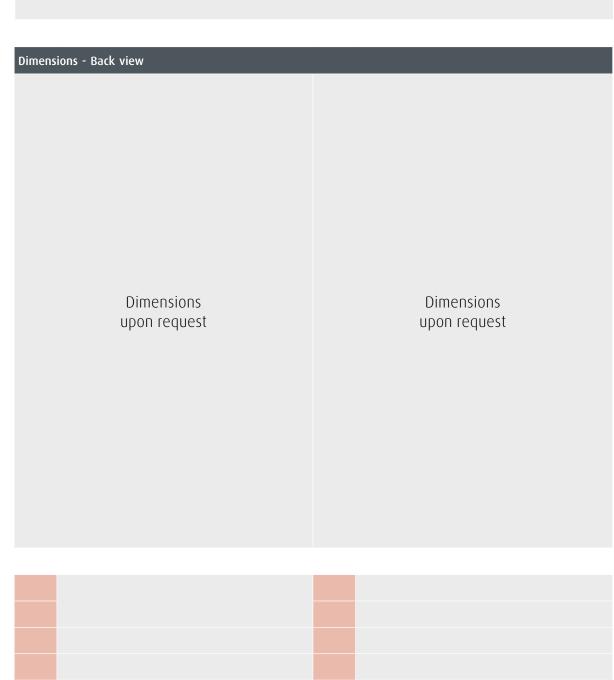
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



## Technical Specification | Work Ports | Radial Twin Ports | ISO SAE | CMV 115

Dimensions - Side view	
Dimensions upon request	Dimensions upon request







**Key Facts** 

CONFIGURATION

Nodelcode & Availability

#### **TECHNICAL SPECIFICATION**

General Technical Data

Operating Parameters

Control

Sensor

Electric Interfaces

Connectors

Mechanical Interfaces

\_

Shaft

Hydraulical Interfaces

Work Ports

Auxiliary Ports

Functions/Options

#### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

#### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

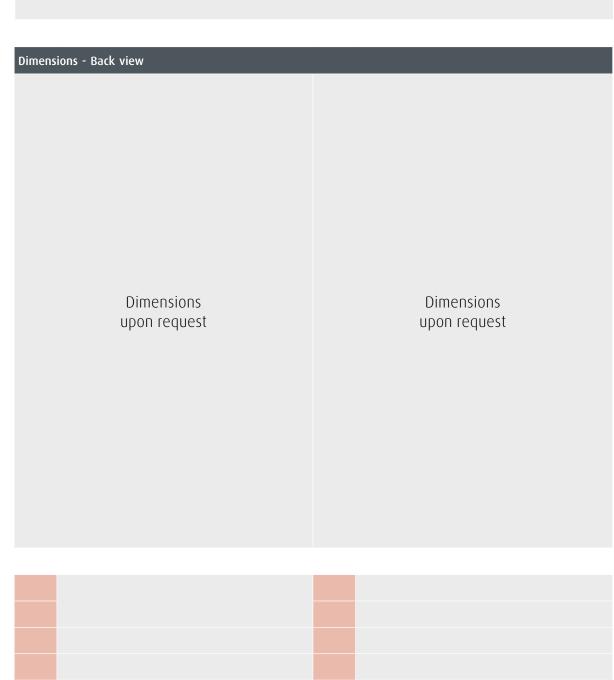
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



## Technical Specification | Work Ports | Radial Twin Ports | ISO SAE | CMV 140

Dimensions - Side view	
Dimensions upon request	Dimensions upon request







Key Facts

CONFIGURATION

Modelcode & Availability

### **TECHNICAL SPECIFICATION**

General Technical Data

Operating Parameters

Controls

Sensor

Electric Interfaces

Connectors

Mechanical Interfaces

\_

Shaft

Hydraulical Interfaces

Work Ports

Auxiliary Ports

Functions/Options

### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

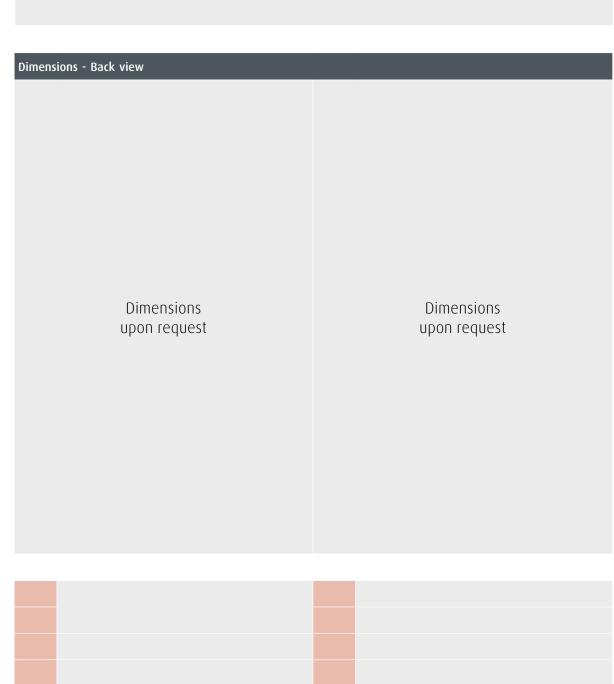
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



# Technical Specification | Work Ports | Radial Twin Ports | ISO SAE | CMV 170

Dimensions - Side view	
Dimensions upon request	Dimensions upon request







Key Facts

CONFIGURATION

Modelcode & Availability

### **TECHNICAL SPECIFICATION**

General Technical Data

Operating Parameters

Control

Sensors

Electric Interfaces

Connectors

Mechanical Interfaces

Snart

Hydraulical Interfaces

Work Ports

Auxiliary Ports

Functions/Options

### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

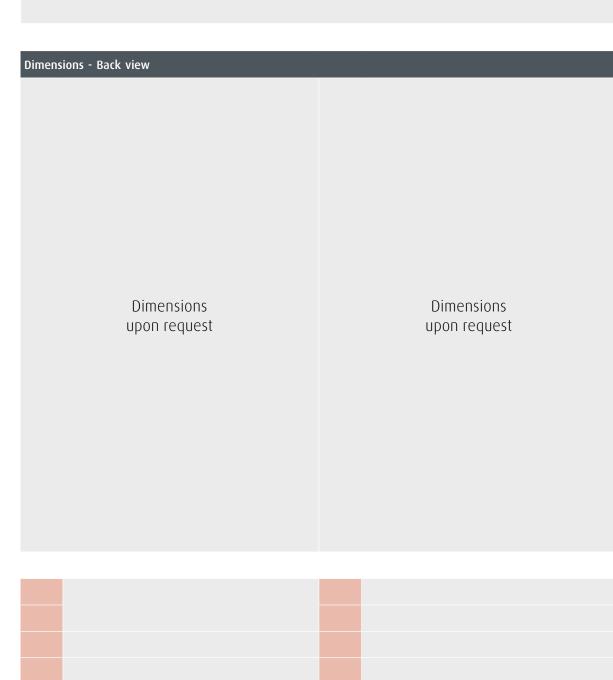
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



# Technical Specification | Work Ports | Radial Twin Ports | ISO SAE | CMV 215

Dimensions - Side view	
Dimensions upon request	Dimensions upon request







Key Facts

CONFIGURATION

Modelcode & Availability

### **TECHNICAL SPECIFICATION**

General Technical Data

Operating Parameters

Control

Sensor

Electric Interfaces

Connectors

Mechanical Interfaces

\_

Shafts

Hydraulical Interfaces

Work Ports

Auxiliary Ports

Functions/Options

### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

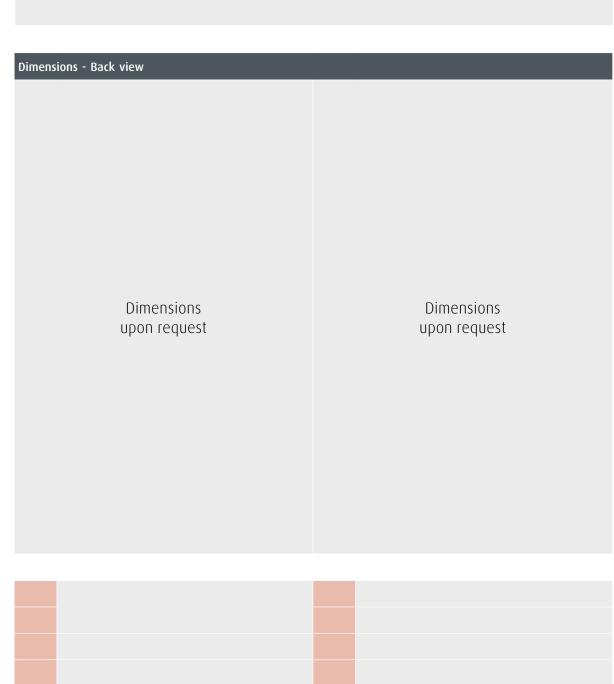
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

# (C)

# Technical Specification | Work Ports | Radial Twin Ports | ISO METR | CMV 60

Dimensions - Side view	
Dimensions upon request	Dimensions upon request







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### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

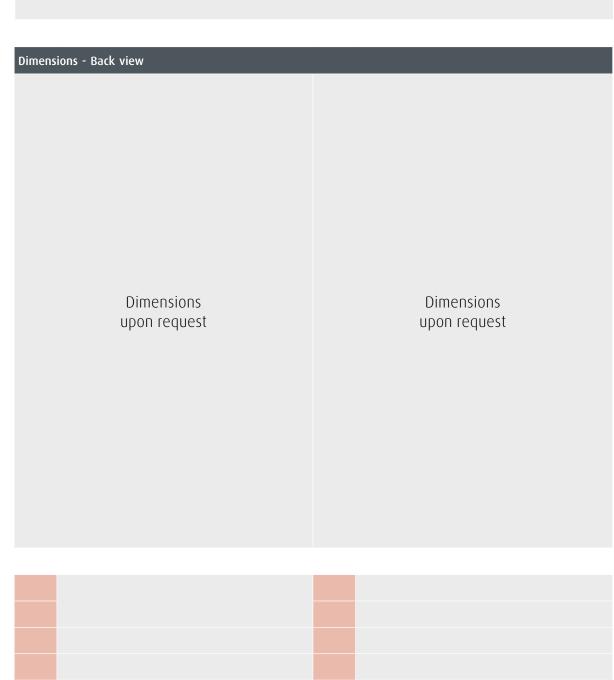
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



# Technical Specification | Work Ports | Radial Twin Ports | ISO METR | CMV 85

Dimensions - Side view	
Dimensions upon request	Dimensions upon request







Key Facts

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### **TECHNICAL SPECIFICATION**

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### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

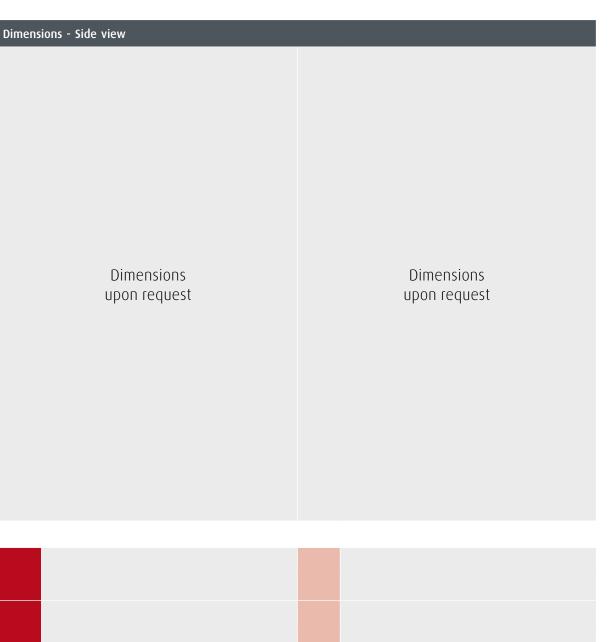
CMV 60-215

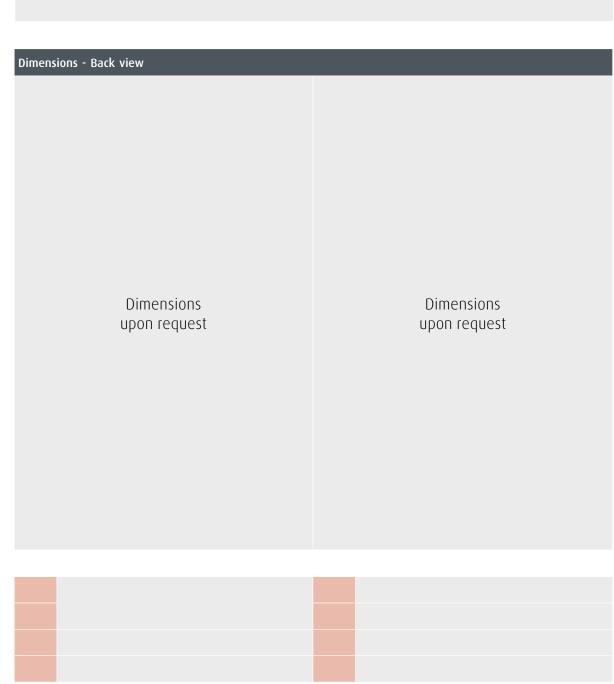
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



# Technical Specification | Work Ports | Radial Twin Ports | ISO METR | CMV 115









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### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

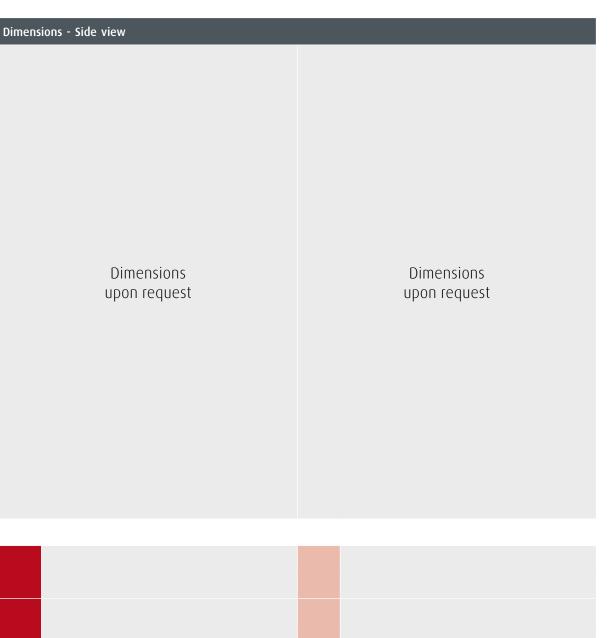
CMV 60-215

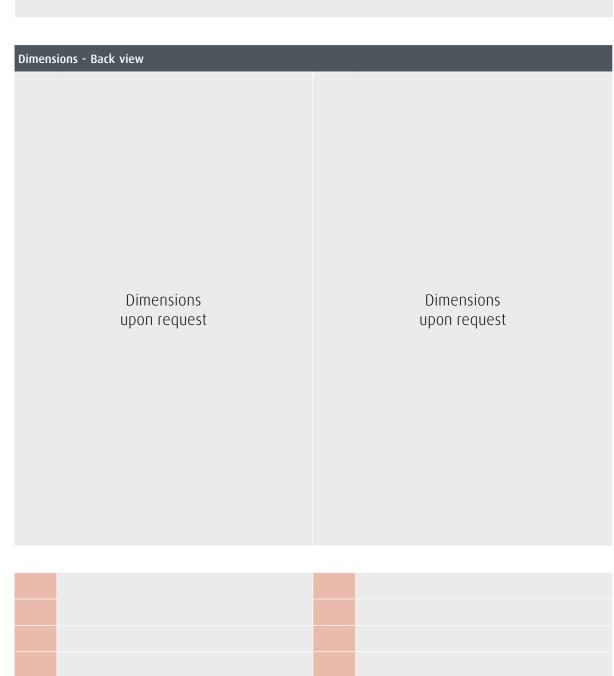
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



# Technical Specification | Work Ports | Radial Twin Ports | ISO METR | CMV 140









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### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

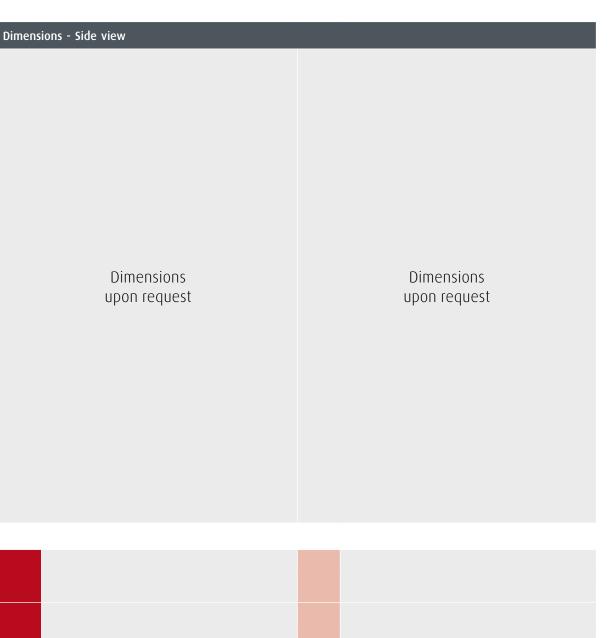
CMV 60-215

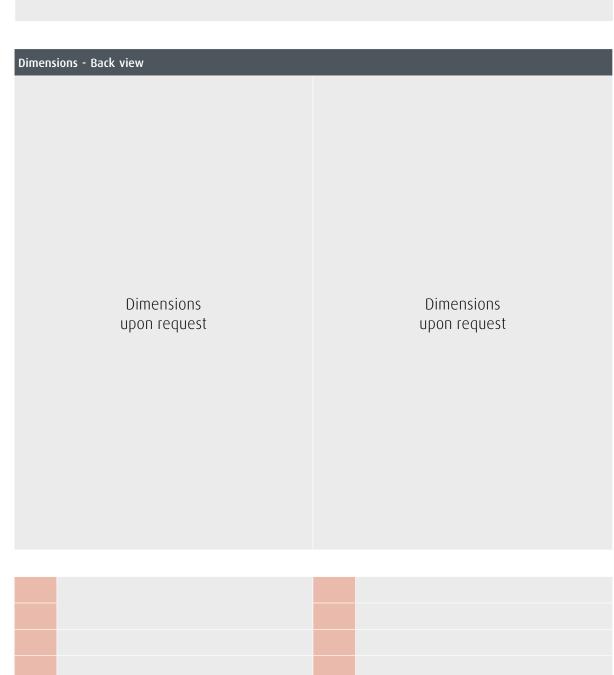
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



# Technical Specification | Work Ports | Radial Twin Ports | ISO METR | CMV 170









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### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

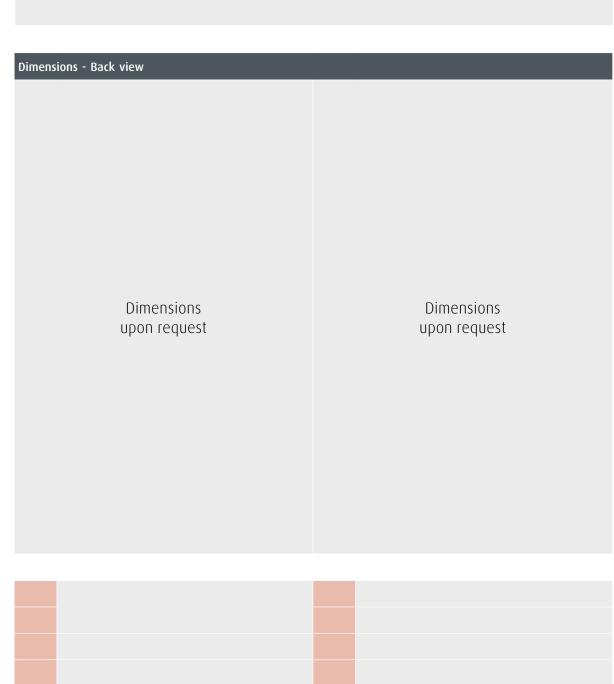
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



# Technical Specification | Work Ports | Radial Twin Ports | ISO METR | CMV 215

Dimensions - Side view	
Dimensions upon request	Dimensions upon request







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### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-2<u>15</u>

In combination with ISO 3019-2 metric

CMV 60-215

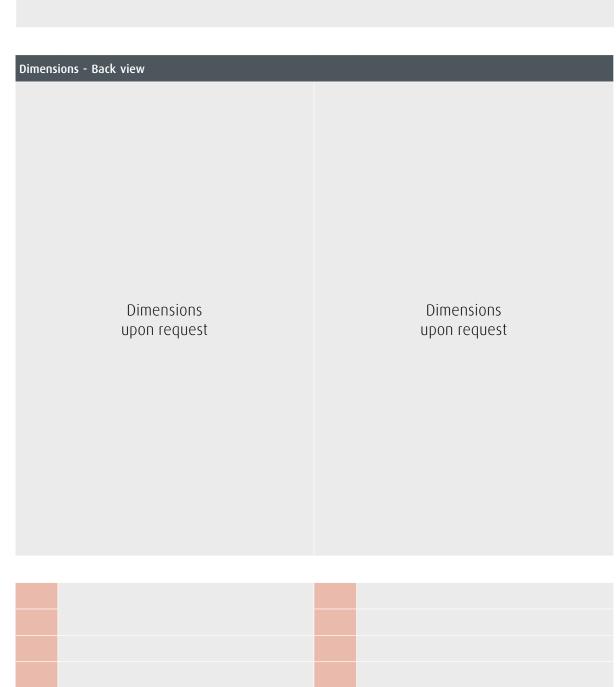
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



# Technical Specification | Work Ports | Radial Twin Ports | PLUG-IN | CMV 60

Dimensions - Side view	
Dimensions upon request	Dimensions upon request







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### AXIAL TWIN PORTS ISO 6162-2

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CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-2<u>15</u>

In combination with ISO 3019-2 metric

CMV 60-215

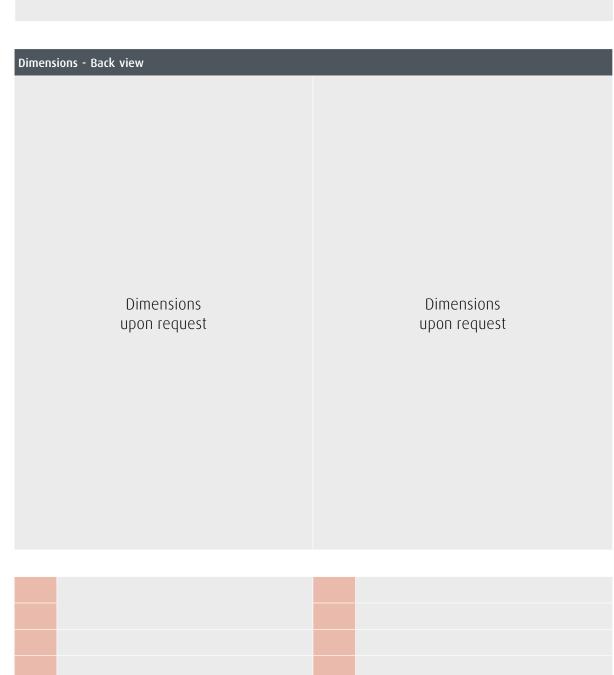
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



# Technical Specification | Work Ports | Radial Twin Ports | PLUG-IN | CMV 85

Dimensions - Side view	
Dimensions upon request	Dimensions upon request







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### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

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In combination with ISO 3019-2 metric

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In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

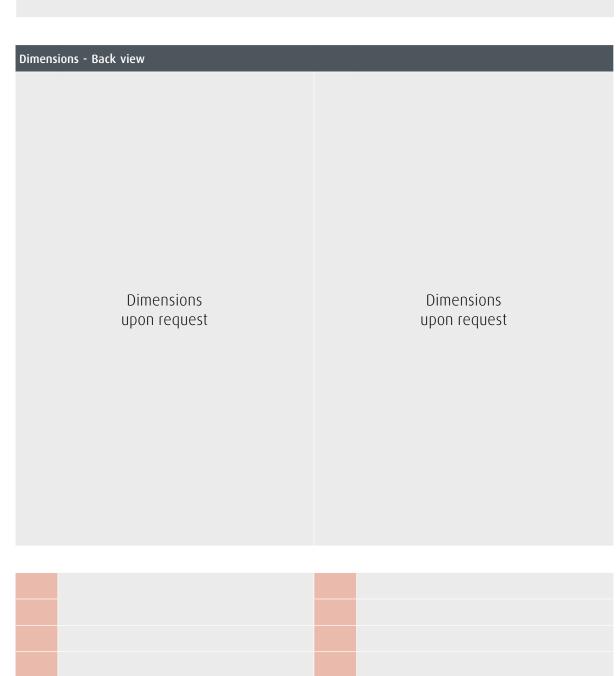
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



# Technical Specification | Work Ports | Radial Twin Ports | PLUG-IN | CMV 115

Dimensions - Side view	
Dimensions upon request	Dimensions upon request







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### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

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In combination with ISO 3019-2 metric

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In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

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In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

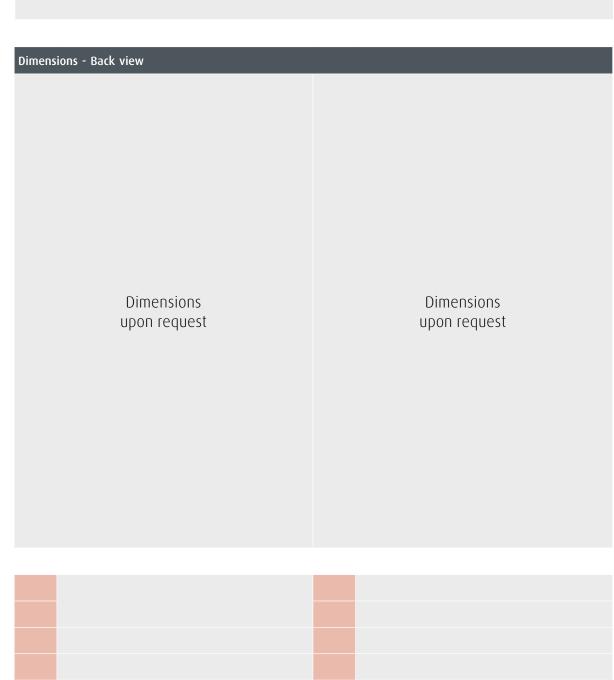
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



# Technical Specification | Work Ports | Radial Twin Ports | PLUG-IN | CMV 140

Dimensions - Side view	
Dimensions upon request	Dimensions upon request







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### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

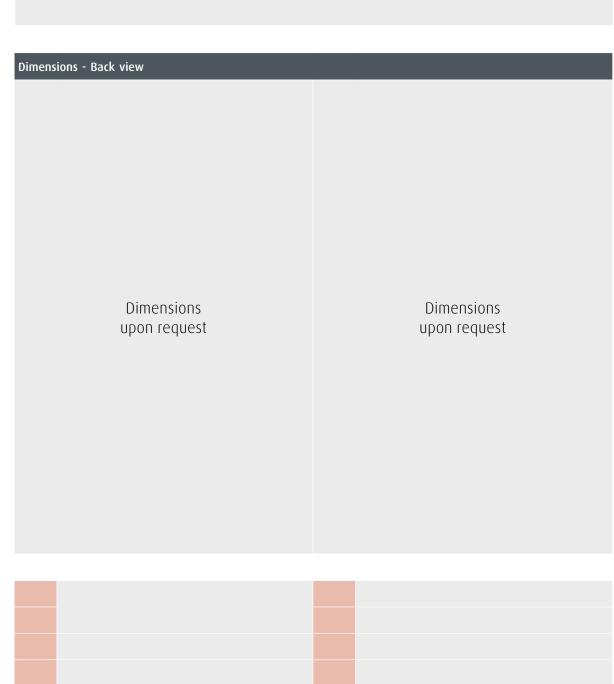
CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

# Technical Specification | Work Ports | Radial Twin Ports | PLUG-IN | CMV 170

Dimensions - Side view	
Dimensions upon request	Dimensions upon request







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### AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

### RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

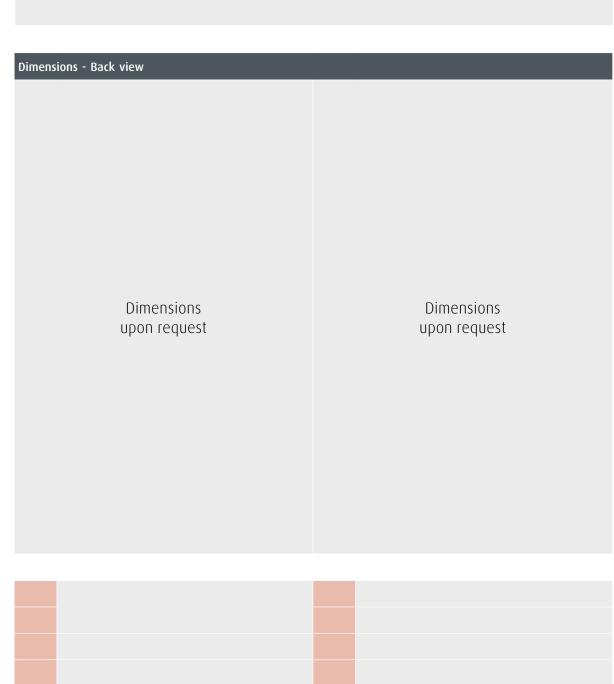
CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

# Technical Specification | Work Ports | Radial Twin Ports | PLUG-IN | CMV 215

Dimensions - Side view	
Dimensions	Dimensions
Dimensions upon request	Dimensions upon request







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### Flushing

In combination with ISO 3019-1 / SAE J744 CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



# Technical Specification | Functions/Options | Flushing | ISO SAE | CMV 60-215

In the following you will find the technical specifications of the flushing function. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.

The flushing function is used in closed circuit applications. Its primary function is to remove heat from the hydraulic circuit by flushing the housing. It also ensures the minimum charge pressure. In order to achieve this, the pressure fluid is discharged from the respective low-pressure side into the motor housing. Along with the leakage, this is discharged into the tank. The extracted pressure fluid is replaced with cooled pressure fluid by charge pump. The flushing function is mounted on the port plate housing.

Specification				
Nominal size				
0	Opening pressure	Flushing relief valve Shuttle valve		1
Pressure	Switching pressure			bar
Flow	Flushing flow	at 20 bar on low pressure side and viscosity of approx. 15 cst		I/min

60	85	115	140	170	215	
13	13	13	13	13	13	
10	10	10	10	10	10	
6 to 25 (optional)						



**OVERVIEW** Key Facts CONFIGURATION **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters **Electric Interfaces** Mechanical Interfaces Hydraulical Interfaces Work Ports

**Auxiliary Ports** 

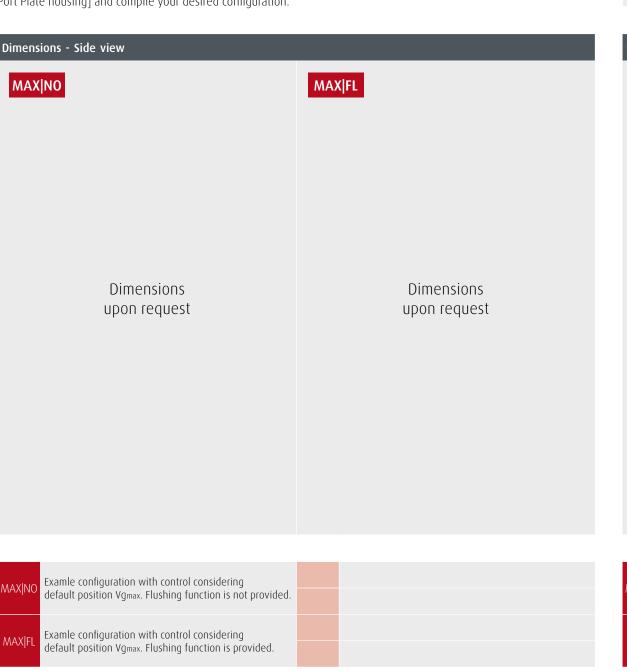
Functions/Options

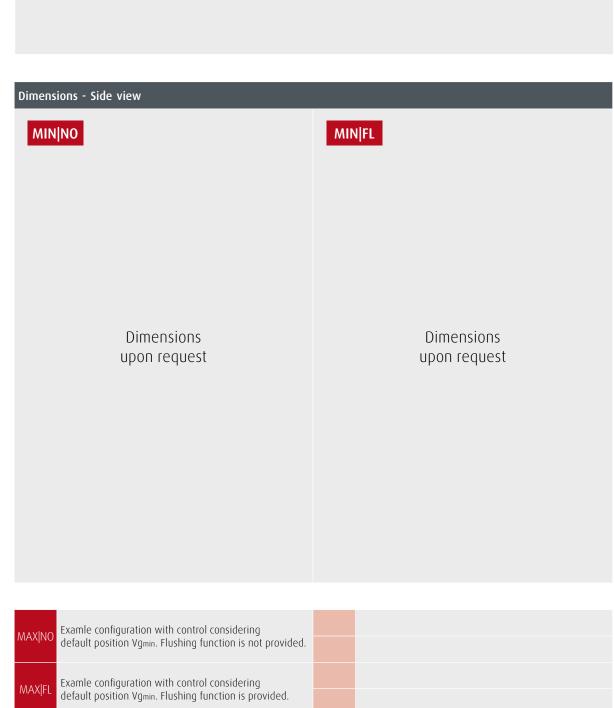
# Flushing In combination with ISO 3019-1 / SAE J744 CMV 60-215 In combination with ISO 3019-2 metric CMV 60-215 In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



# Technical Specification | Functions/Options | Flushing | ISO SAE | CMV 60







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In combination with ISO 3019-1 / SAE J744
CMV 60-215
In combination with ISO 3019-2 metric
CMV 60-215
In combination with

PLUG-IN, SIM. TO ISO 3019-2

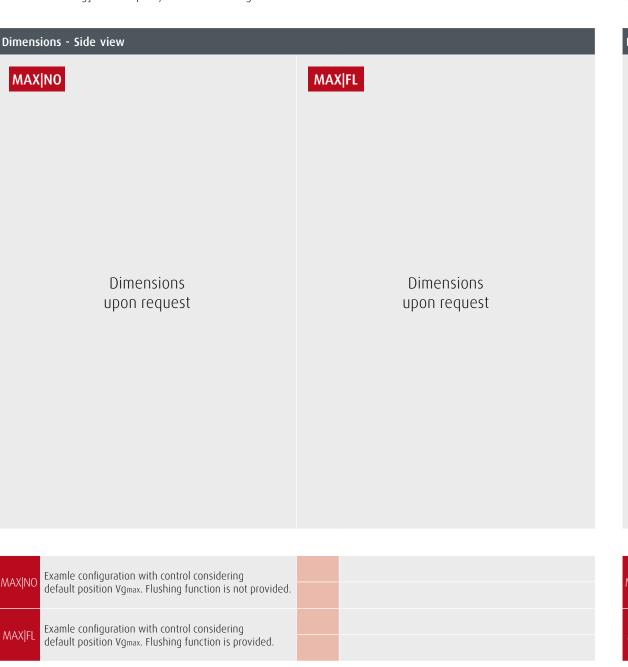
CMV 60-215

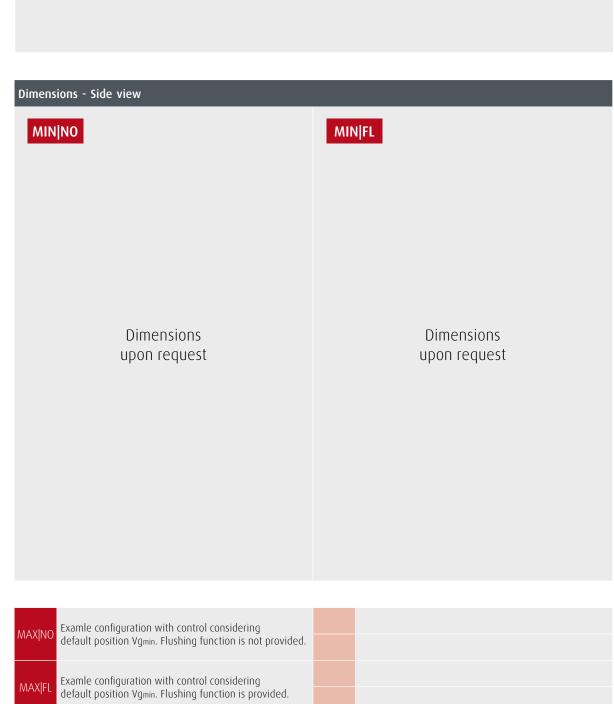
Auxiliary Ports
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# Technical Specification | Functions/Options | Flushing | ISO SAE | CMV 85









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**Auxiliary Ports** 

Functions/Options

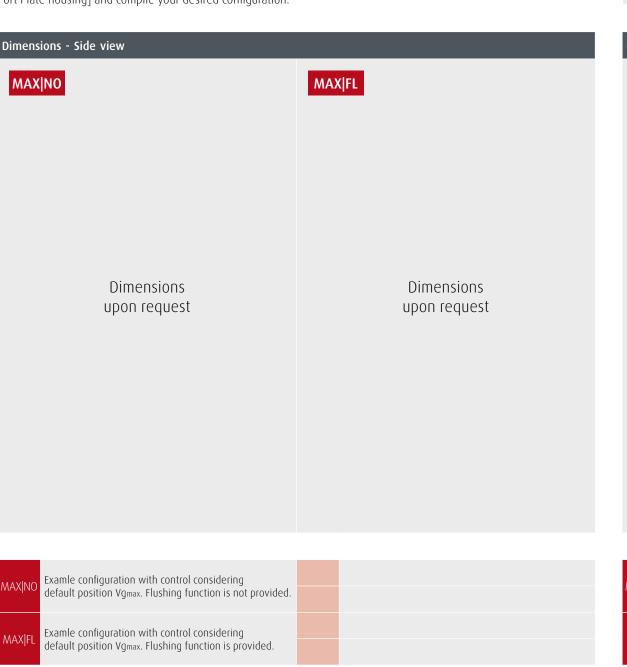
# Flushing In combination with ISO 3019-1 / SAE J744 CMV 60-215 In combination with ISO 3019-2 metric CMV 60-215 In combination with

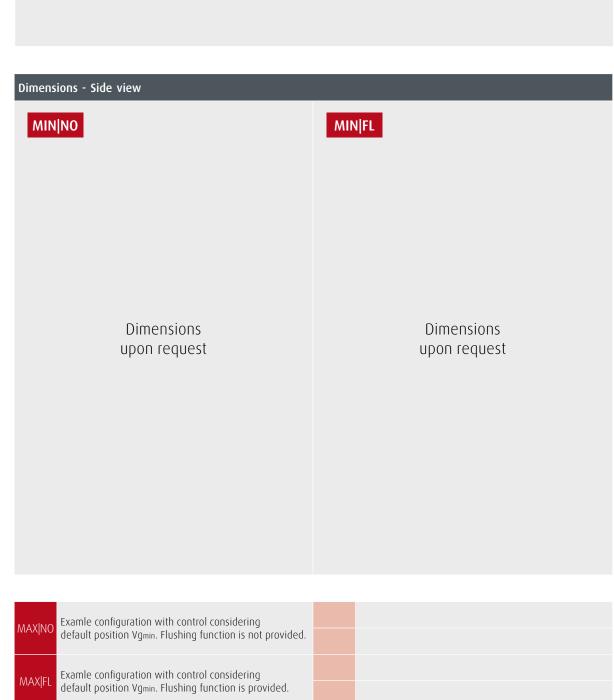
PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



# Technical Specification | Functions/Options | Flushing | ISO SAE | CMV 115







**OVERVIEW** Key Facts CONFIGURATION **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters **Electric Interfaces** Mechanical Interfaces Hydraulical Interfaces Work Ports

**Auxiliary Ports** 

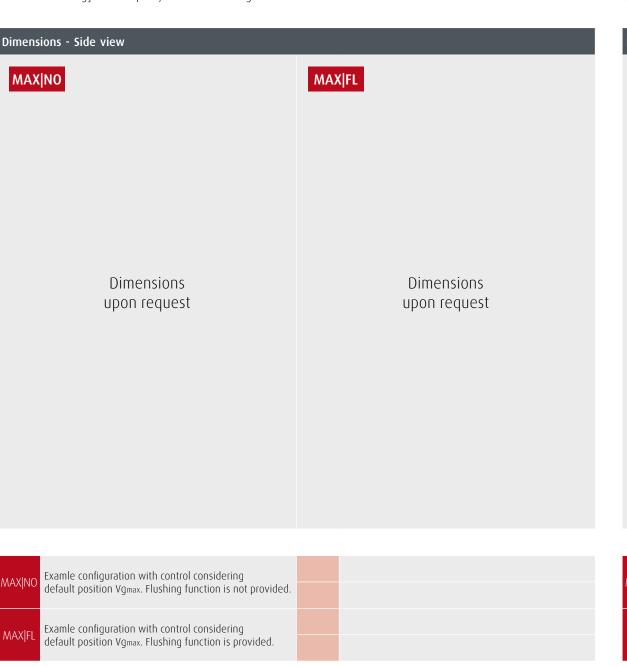
Functions/Options

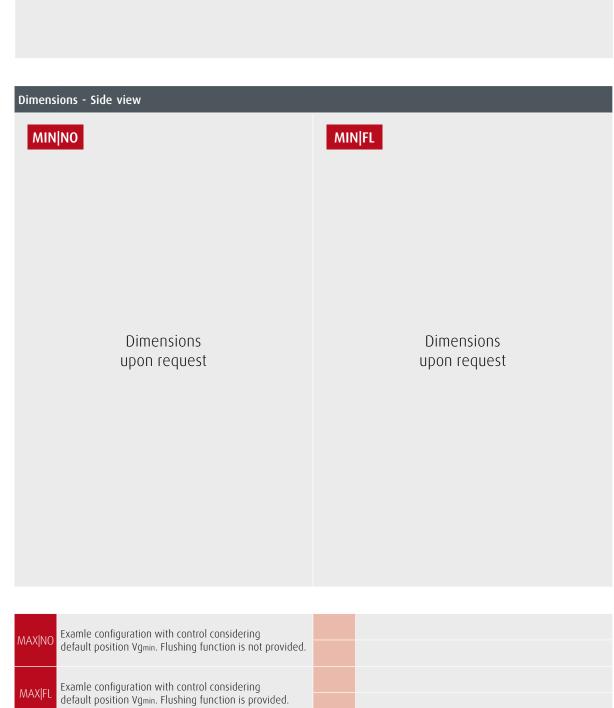
# Flushing In combination with ISO 3019-1 / SAE J744 CMV 60-215 In combination with ISO 3019-2 metric CMV 60-215 In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



# Technical Specification | Functions/Options | Flushing | ISO SAE | CMV 140







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**Auxiliary Ports** 

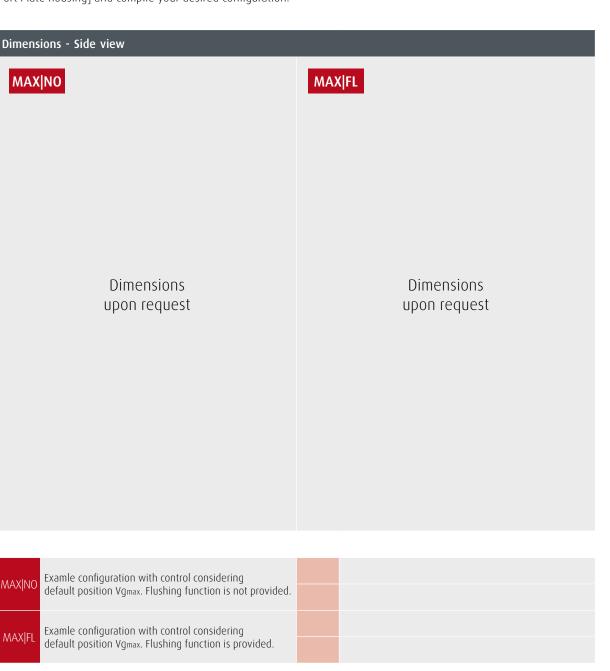
Functions/Options

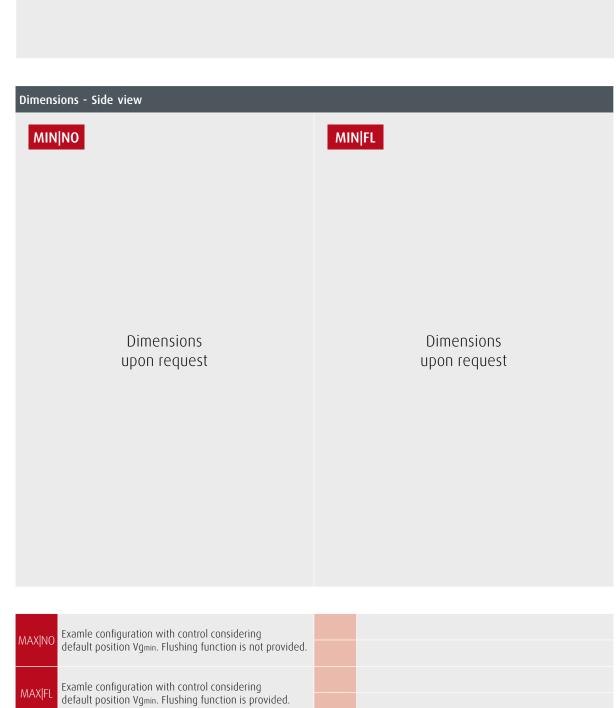
# Flushing In combination with ISO 3019-1 / SAE J744 CMV 60-215 In combination with ISO 3019-2 metric CMV 60-215 In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



# Technical Specification | Functions/Options | Flushing | ISO SAE | CMV 170







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CMV 60-215
In combination with
ISO 3019-2 metric
CMV 60-215
In combination with

PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

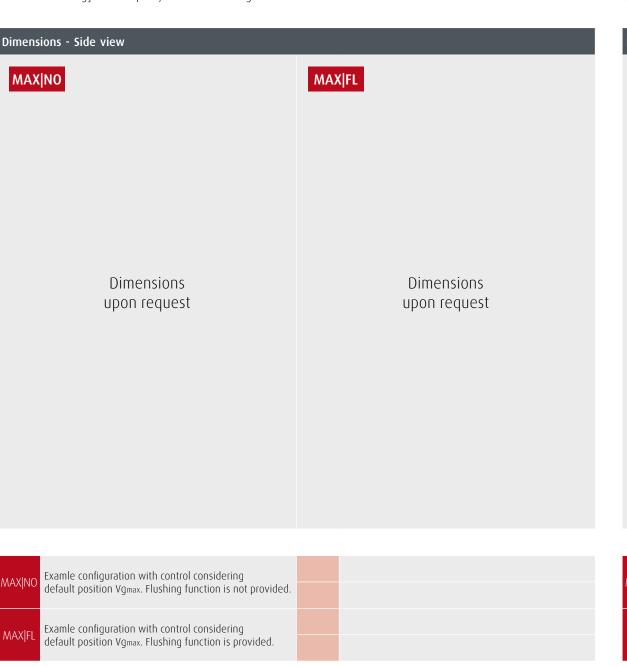
Functions/Options

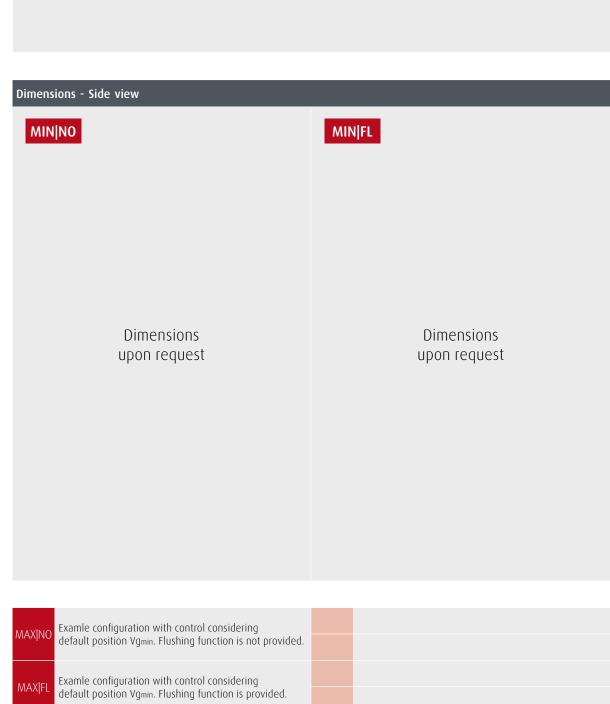
**Auxiliary Ports** 

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# Technical Specification | Functions/Options | Flushing | ISO SAE | CMV 215











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### Flushing

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



# Technical Specification | Functions / Options | Flushing | ISO SAE | CMV 60-215

In the following you will find the technical specifications of the flushing function. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.

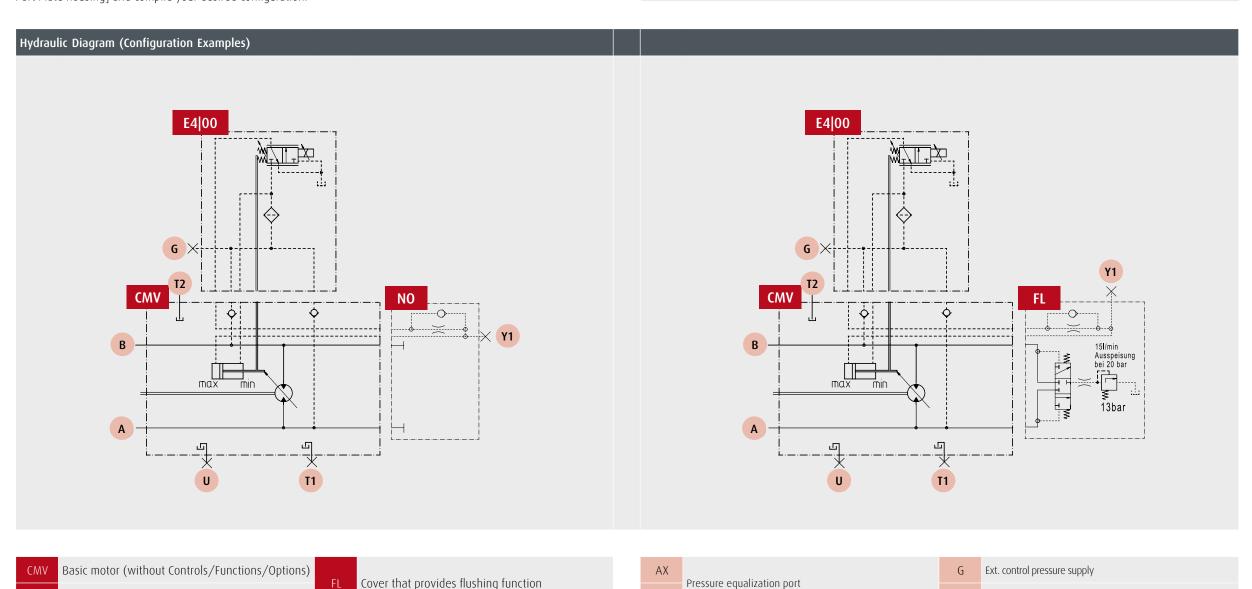
A High pressure work port

B High pressure work port

Displ. Contrl. E4 + Press. Contrl. 00

Blind cover that closes the interface of the

portplate and does not provide flushing function



ВХ

Drain / vent port

Bearing flush port

Y1 Measuring port





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### Flushing

In combination with

ISO 3019-1 / SAE J744

CMV 60-215

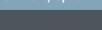
function and nor combina

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



# Technical Specification | Functions/Options | Flushing | ISO METR | CMV 60-215

In the following you will find the technical specifications of the flushing function. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.

The flushing function is used in closed circuit applications. Its primary function is to remove heat from the hydraulic circuit by flushing the housing. It also ensures the minimum charge pressure. In order to achieve this, the pressure fluid is discharged from the respective low-pressure side into the motor housing. Along with the leakage, this is discharged into the tank. The extracted pressure fluid is replaced with cooled pressure fluid by charge pump. The flushing function is mounted on the port plate housing.

Specification				
Nominal size				
Pressure	Opening pressure	Flushing relief valve		
	Switching pressure	Shuttle valve		
Flow	Flushing flow	at 20 bar on low pressure side and viscosity of approx. 15 cst		

60	85	115	140	170	215	
13	13	13	13	13	13	
10	10	10	10	10	10	
6 to 25 (optional)						



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Hydraulical Interfaces

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**Auxiliary Ports** 

Functions/Options

### Flushing

In combination with ISO 3019-1 / SAE J744 CMV 60-215

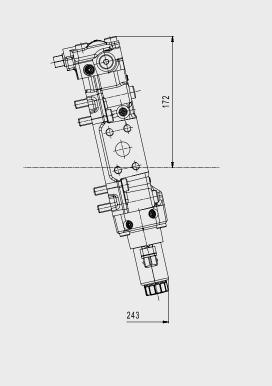
In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

# MAXINO Examle configuration with control considering default position Vgmax. Flushing function is not provided.



Technical Specification | Functions/Options | Flushing | ISO METR | CMV 60

In the following you will find the technical specifications of the flushing function. They are clustered according to the

related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this

function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in

combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10.

Port Plate housing] and compile your desired configuration.

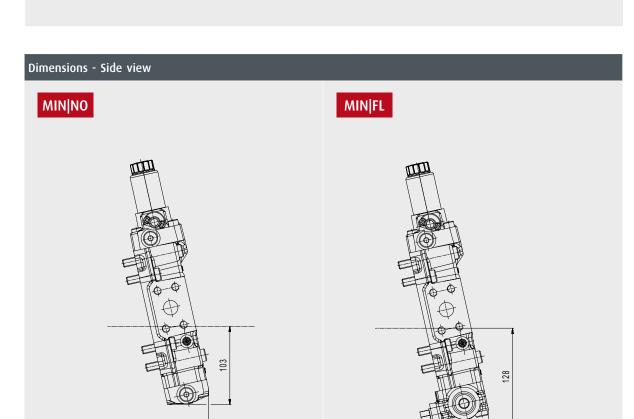
Examle configuration with control considering

default position Vgmax. Flushing function is provided.

Dimensions - Side view

MAX|NO











Flushing

In combination with

ISO 3019-1 / SAE J744

CMV 60-215

In combination with

ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

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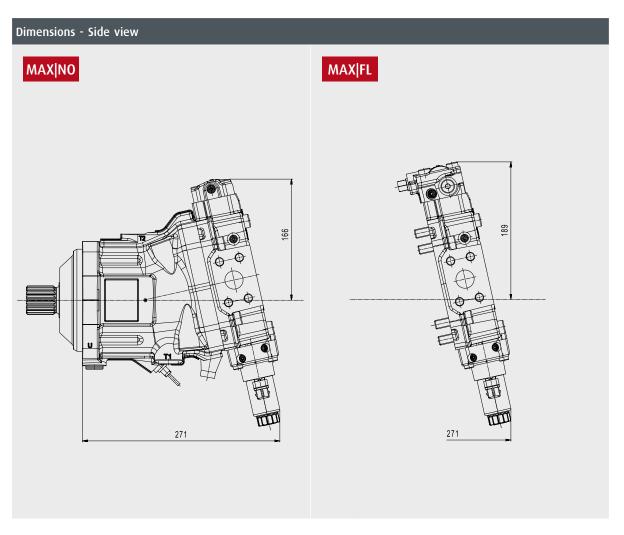
Hydraulical Interfaces

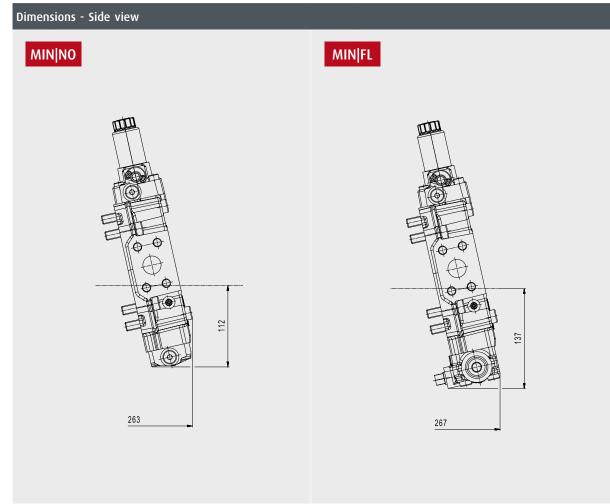
Work Ports

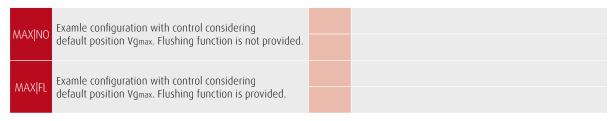
**Auxiliary Ports** 

Functions/Options

# Technical Specification | Functions/Options | Flushing | ISO METR | CMV 85















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**Auxiliary Ports** 

Functions/Options

### Flushing

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

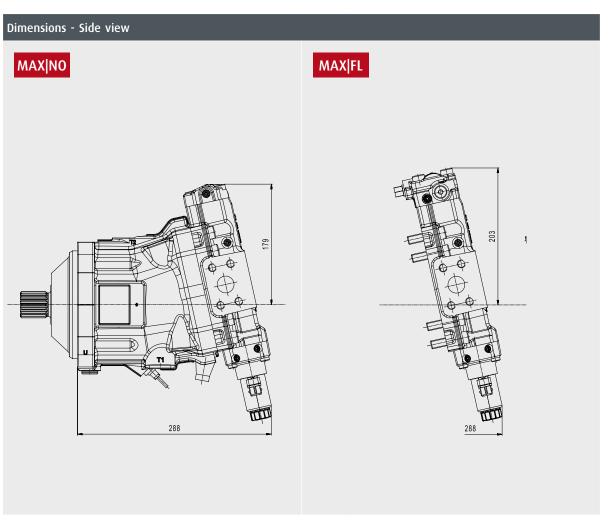
In combination with PLUG-IN, SIM. TO ISO 3019-2

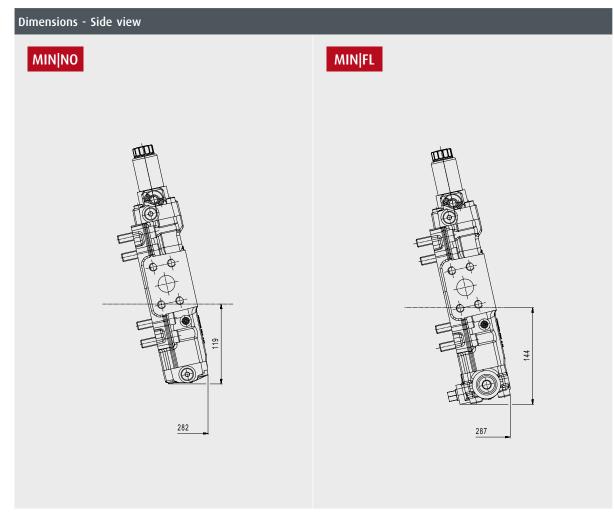
CMV 60-215



# Technical Specification | Functions/Options | Flushing | ISO METR | CMV 115

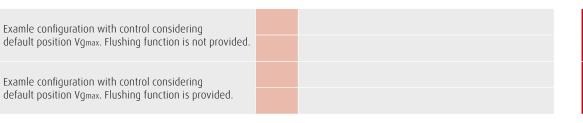
In the following you will find the technical specifications of the flushing function. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Examle configuration with control considering default position Vgmin. Flushing function is not provided.

Examle configuration with control considering default position Vgmin. Flushing function is provided.





Flushing

In combination with

ISO 3019-1 / SAE J744

CMV 60-215

In combination with

ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

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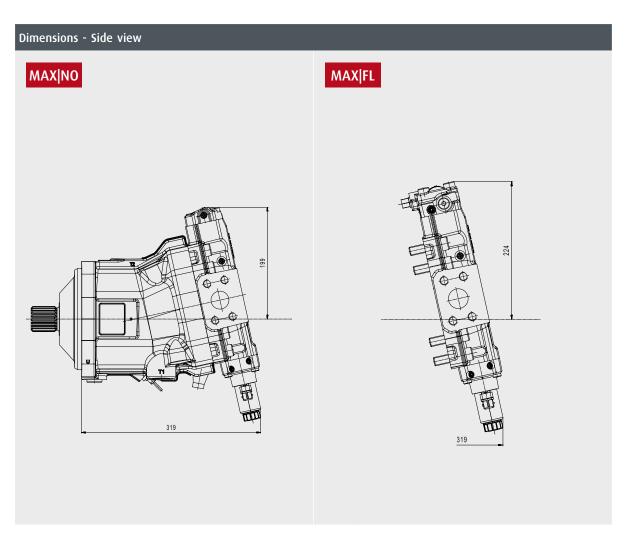
Work Ports

**Auxiliary Ports** 

Functions/Options

# Technical Specification | Functions/Options | Flushing | ISO METR | CMV 140

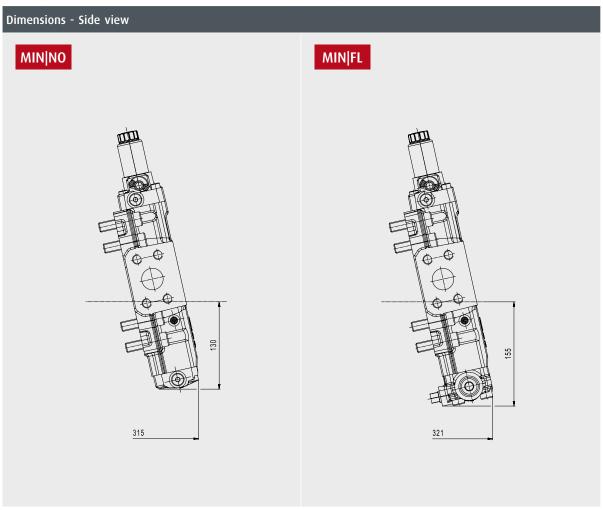
In the following you will find the technical specifications of the flushing function. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.



Examle configuration with control considering default position Vgmax. Flushing function is not provided.

Examle configuration with control considering

default position Vgmax. Flushing function is provided.



Examle configuration with control considering default position Vgmin. Flushing function is not provided.

Examle configuration with control considering default position Vgmin. Flushing function is provided.





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Functions/Options

### 

In combination with ISO 3019-1 / SAE J744 CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

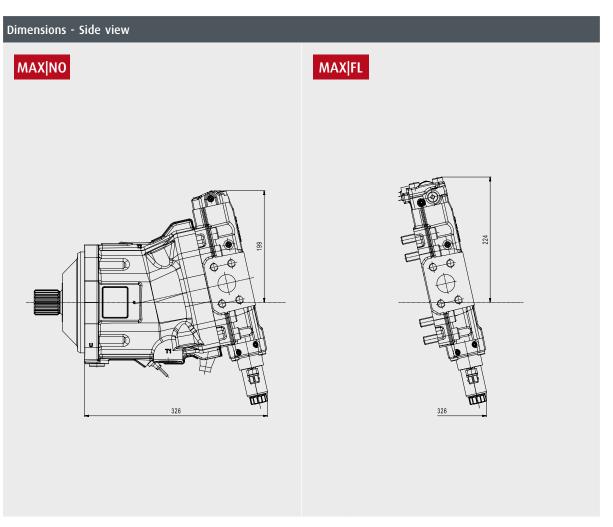
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



# Technical Specification | Functions/Options | Flushing | ISO METR | CMV 170

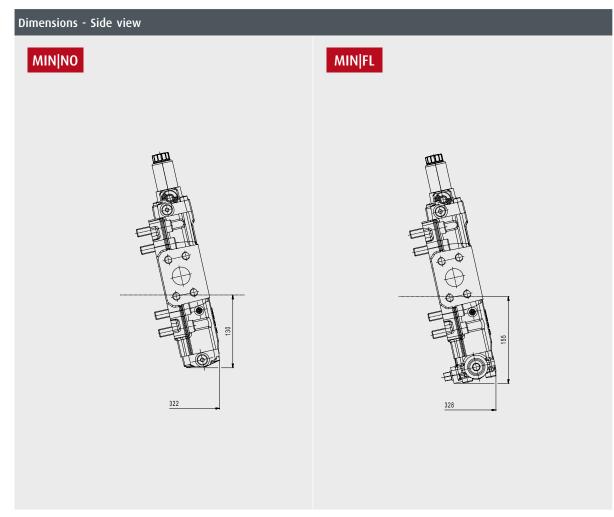
In the following you will find the technical specifications of the flushing function. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.



Examle configuration with control considering default position Vgmax. Flushing function is not provided.

Examle configuration with control considering

default position Vgmax. Flushing function is provided.



MAX|NO

Examle configuration with control considering default position Vgmin. Flushing function is not provided.

MAX|FL

Examle configuration with control considering default position Vgmin. Flushing function is provided.



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Hydraulical Interfaces

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**Auxiliary Ports** 

Functions/Options

### Flushing

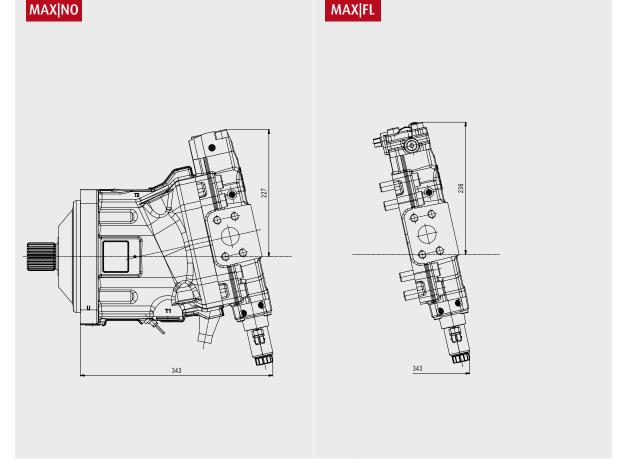
In combination with ISO 3019-1 / SAE J744

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

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In the following you will find the technical specifications of the flushing function. They are clustered according to the

related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this

function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in

combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10.

Port Plate housing] and compile your desired configuration.

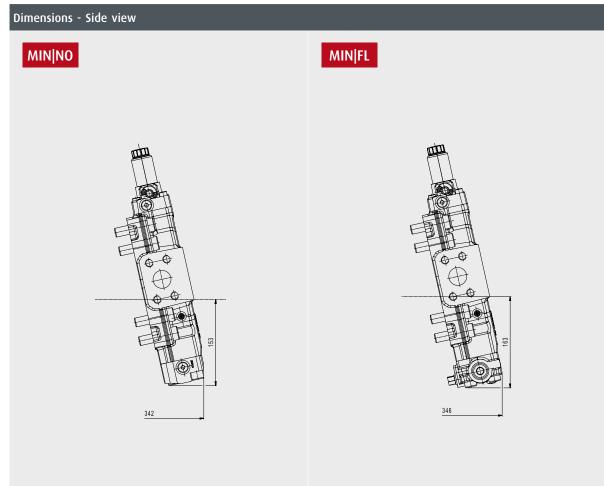
Examle configuration with control considering default position Vgmax. Flushing function is not provided.

Examle configuration with control considering

default position Vgmax. Flushing function is provided.

Dimensions - Side view

Technical Specification | Functions/Options | Flushing | ISO METR | CMV 215



Examle configuration with control considering default position Vgmin. Flushing function is not provided.

Examle configuration with control considering default position Vgmin. Flushing function is provided.







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# Flushing In combination with

ISO 3019-1 / SAE J744 CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



# Technical Specification | Functions/Options | Flushing | ISO METR | CMV 60-215

In the following you will find the technical specifications of the flushing function. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.

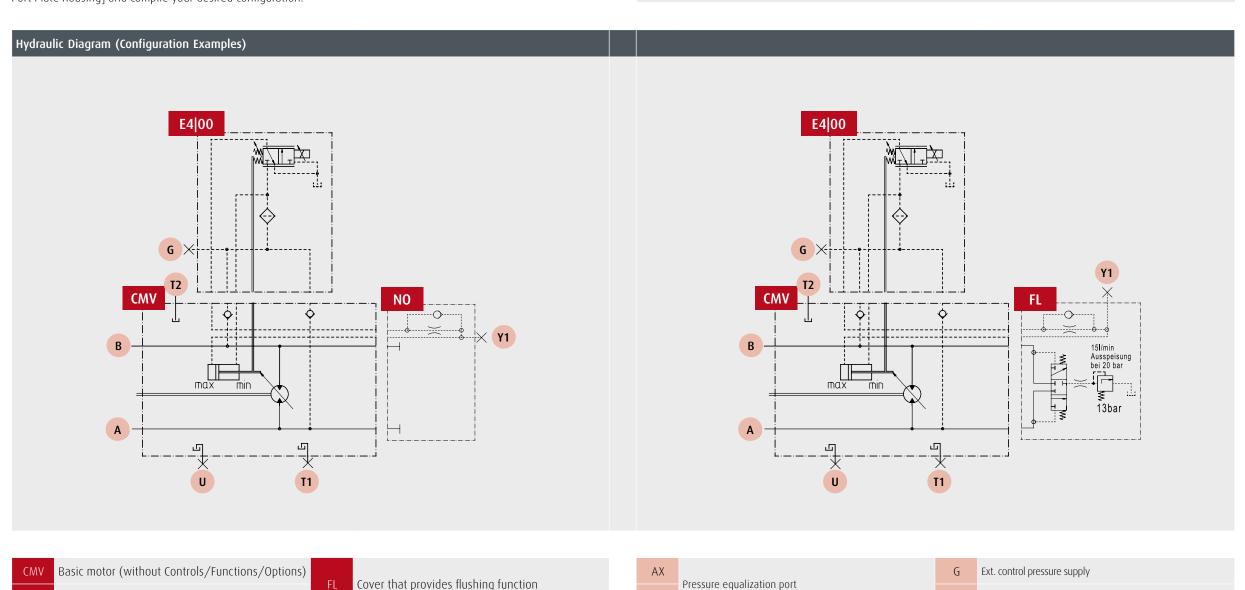
A High pressure work port

B High pressure work port

Displ. Contrl. E4 + Press. Contrl. 00

Blind cover that closes the interface of the

portplate and does not provide flushing function



ВХ

Drain / vent port

Bearing flush port

Y1 Measuring port





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Hydraulical Interfaces

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**Auxiliary Ports** 

Functions/Options

### Flushing

In combination with ISO 3019-1 / SAE J744 CMV 60-215

In combination with

ISO 3019-2 metric CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



# Technical Specification | Functions/Options | Flushing | Plug-In | CMV 60-215

In the following you will find the technical specifications of the flushing function. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.

The flushing function is used in closed circuit applications. Its primary function is to remove heat from the hydraulic circuit by flushing the housing. It also ensures the minimum charge pressure. In order to achieve this, the pressure fluid is discharged from the respective low-pressure side into the motor housing. Along with the leakage, this is discharged into the tank. The extracted pressure fluid is replaced with cooled pressure fluid by charge pump. The flushing function is mounted on the port plate housing.

Specification				
Nominal size				
Pressure	Opening pressure	Flushing relief valve		
	Switching pressure	Shuttle valve		
Flow	Flushing flow	at 20 bar on low pressure side and viscosity of approx. 15 cst		

60	85	115	140	170	215	
13	13	13	13	13	13	
10	10	10	10	10	10	
6 to 25 (optional)						





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### Flushing

related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10.

Port Plate housing] and compile your desired configuration.

Dimensions - Side view

MAX|NO

ISO 3019-1 / SAE J744 CMV 60-215

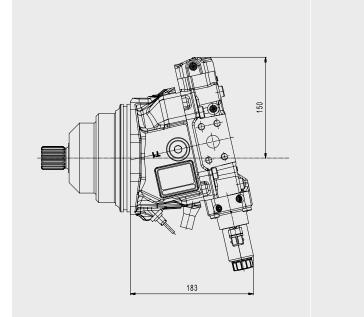
In combination with

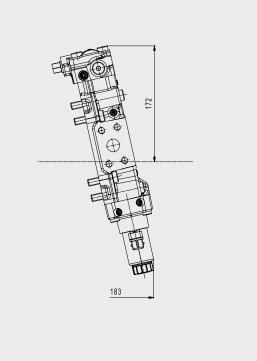
In combination with ISO 3019-2 metric

CMV 60-215

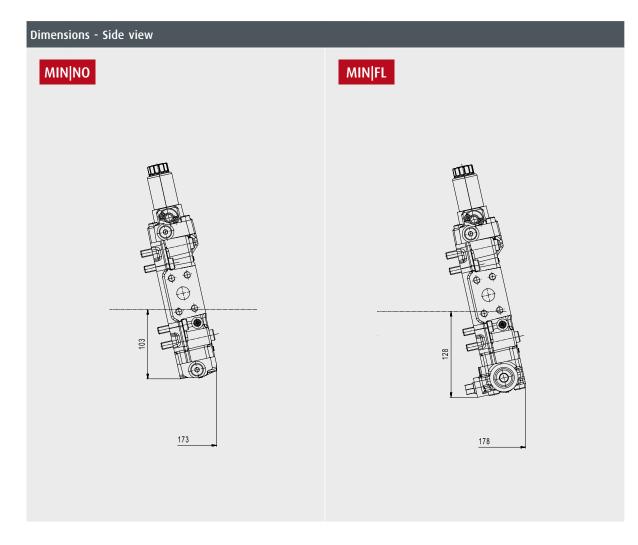
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



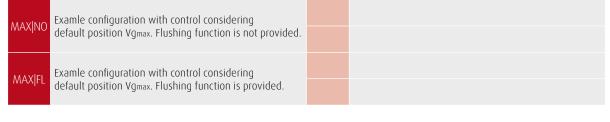


Technical Specification | Functions/Options | Flushing | Plug-In | CMV 60



Examle configuration with control considering default position Vgmin. Flushing function is not provided.

Examle configuration with control considering default position Vgmin. Flushing function is provided.



In the following you will find the technical specifications of the flushing function. They are clustered according to the





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Functions/Options

# Flushing

In combination with

ISO 3019-1 / SAE J744 CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

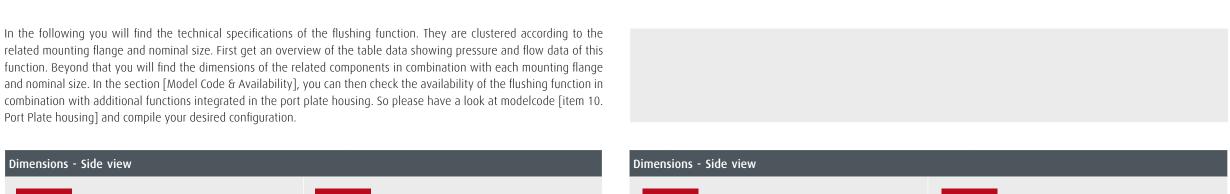
# Examle configuration with control considering default position Vgmax. Flushing function is not provided. Examle configuration with control considering default position Vgmax. Flushing function is provided.

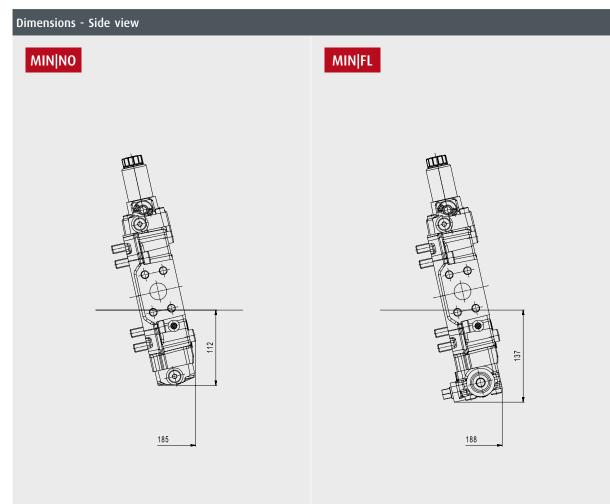
Port Plate housing] and compile your desired configuration.

Dimensions - Side view

MAX|NO

Technical Specification | Functions/Options | Flushing | Plug-In | CMV 85











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Snarts

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Functions/Options

### Flushing

In combination with ISO 3019-1 / SAE J744

CMV 60-215

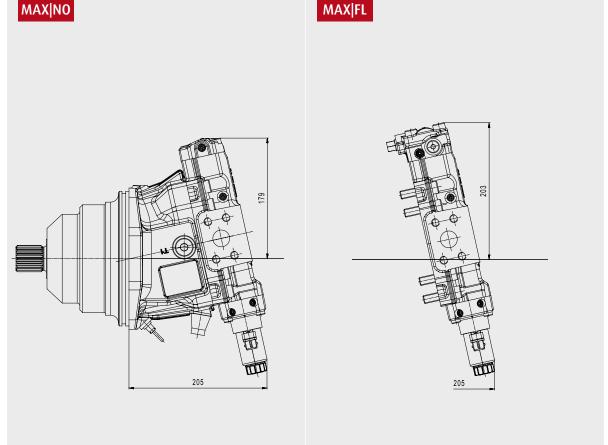
In combination with ISO 3019-2 metric

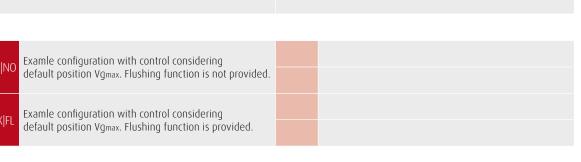
Dimensions - Side view

CMV 60-215

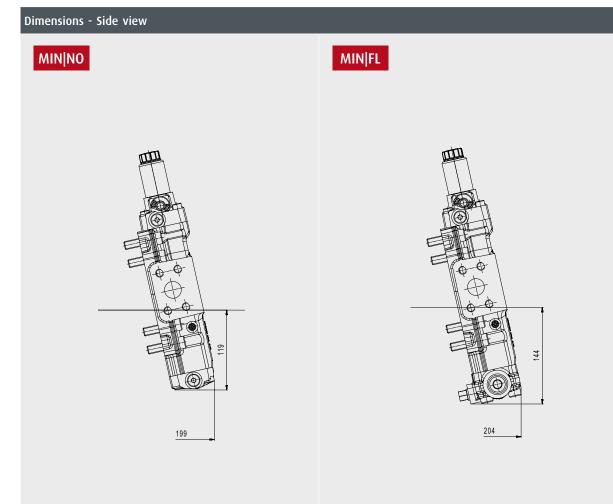
In combination with PLUG-IN, SIM. TO ISO 3019-2

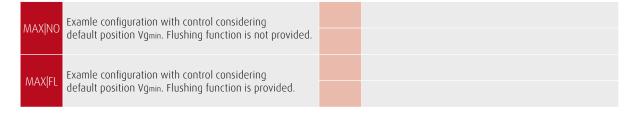
CMV 60-215





# Technical Specification | Functions/Options | Flushing | Plug-In | CMV 115









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General Technical Data

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**Electric Interfaces** 

Connectors

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Work Ports

**Auxiliary Ports** 

Functions/Options

### Flushing

In combination with ISO 3019-1 / SAE J744

CMV 60-215

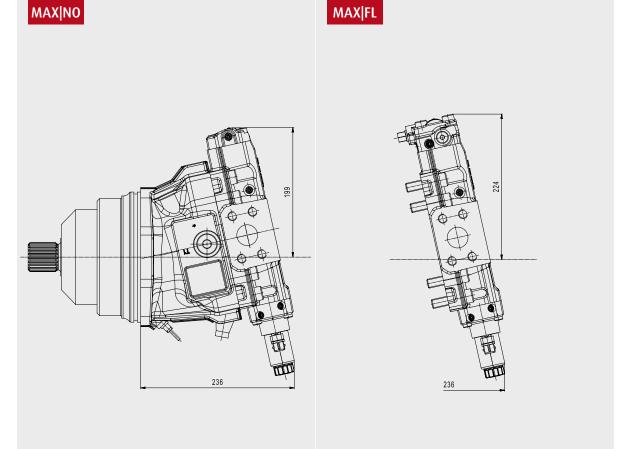
In combination with ISO 3019-2 metric

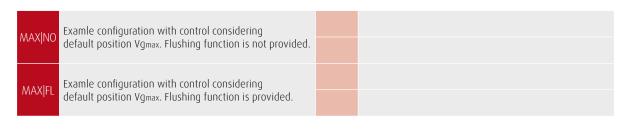
Dimensions - Side view

CMV 60-215

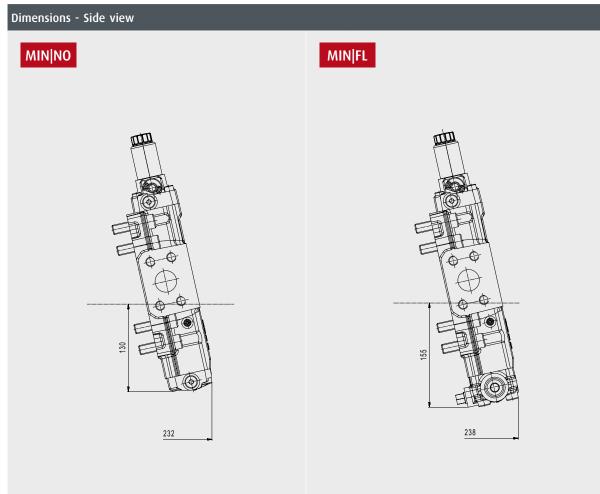
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215





# Technical Specification | Functions/Options | Flushing | Plug-In | CMV 140









Key Facts

CONFIGURATION

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**TECHNICAL SPECIFICATION** 

General Technical Data

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Control

Sensor

**Electric Interfaces** 

Connectors

**Mechanical Interfaces** 

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Hydraulical Interfaces

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# Flushing

Flushing
In combination with
ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

# MAX|NO MAX|FL

In the following you will find the technical specifications of the flushing function. They are clustered according to the

related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this

function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in

combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10.

Port Plate housing] and compile your desired configuration.

Examle configuration with control considering default position Vgmax. Flushing function is not provided.

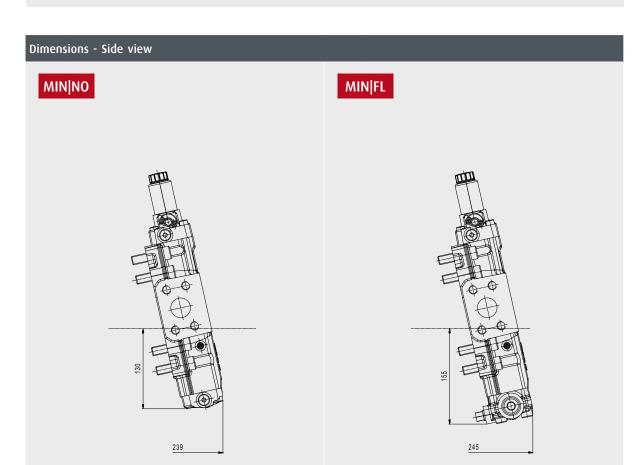
Examle configuration with control considering

default position Vgmax. Flushing function is provided.

Dimensions - Side view



Technical Specification | Functions/Options | Flushing | Plug-In | CMV 170









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**Electric Interfaces** 

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Hydraulical Interfaces

Work Ports

**Auxiliary Ports** 

Functions/Options

# Flushing In combination with

ISO 3019-1 / SAE J744 CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

# MAXINO MAXIFL

In the following you will find the technical specifications of the flushing function. They are clustered according to the

related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this

function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in

combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10.

Port Plate housing] and compile your desired configuration.

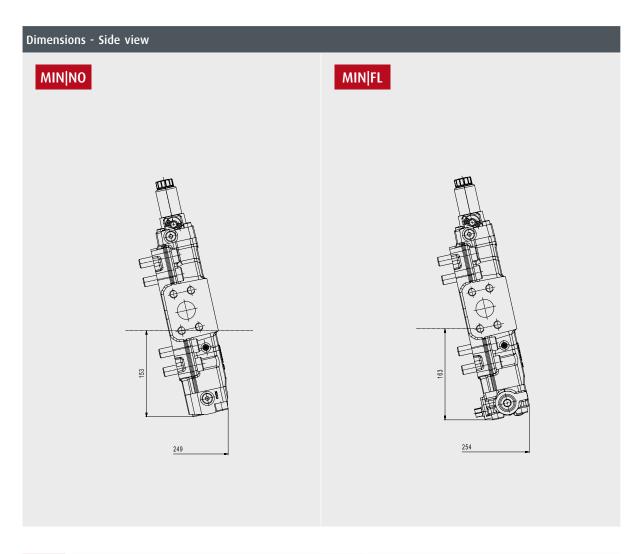
Examle configuration with control considering default position Vgmax. Flushing function is not provided.

Examle configuration with control considering

default position Vgmax. Flushing function is provided.

Dimensions - Side view

Technical Specification | Functions/Options | Flushing | Plug-In | CMV 215



Examle configuration with control considering default position Vgmin. Flushing function is not provided.

Examle configuration with control considering default position Vgmin. Flushing function is provided.







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### Flushing

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



# Technical Specification | Functions/Options | Flushing | Plug-In | CMV 60-215

In the following you will find the technical specifications of the flushing function. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.

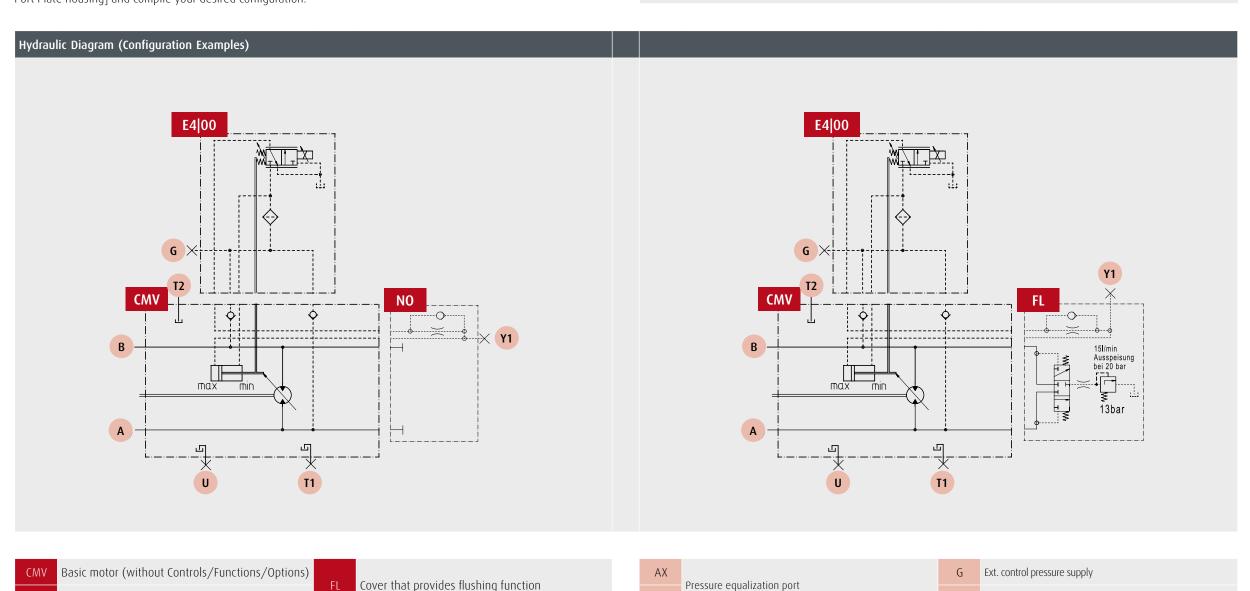
A High pressure work port

B High pressure work port

Displ. Contrl. E4 + Press. Contrl. 00

Blind cover that closes the interface of the

portplate and does not provide flushing function



ВХ

Drain / vent port

Bearing flush port

Y1 Measuring port

# Linde Hydraulics GmbH & Co. KG

Wailandtstrasse 13, 63741 Aschaffenburg, Germany Phone +49.60 21.150-00, Fax +49.60 21.150-115 70 info@linde-hydraulics.com www.linde-hydraulics.com











