

Remote control manifold

Type HICFP

RE 64662

Edition: 2014-06

Replaces: 02.10



- ▶ Sizes 02, 04 and 06
- ▶ Component series 1X
- ▶ Maximum control pressure 30 bar
- ▶ Maximum flow 40 l/min

Features

- ▶ Cost-effective alternative solution to electro-hydraulic proportional controls for mobile control blocks
- ▶ Electro-hydraulic devices can be installed separately in an accessible, protected area of the machine
- ▶ Easy retrofitting from a hydraulic to an electric control
- ▶ Combines high performance with cost-effective design
- ▶ Different valve versions
- ▶ Optional flange surfaces with pilot oil, storage, filter and additional functions allow for adaptation without piping work

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Ordering code

01	02	03	04	05	06	07	08	09	10	11	12
HIC	FP		-		-	AL	-	1X	/		*

01	Hydraulic Integrated Circuit	HIC
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02	Remote control manifold	FP
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Size

03	Size 02	02
	Size 04	04
	Size 06	06

Frame size (number of proportional pressure reducing valves)

04	1 screw-in cartridge valve	1
	2 screw-in cartridge valves	2
	4 screw-in cartridge valves	4
	6 screw-in cartridge valves	6

Type of connection

05	Threaded connection, flat-sealing according to DIN 3852-2	A
	Threaded connection, taper-sealing according to ISO 228-1	B
	Flange connection, ③ flat-sealing according to DIN 3852-2	C

Manifold material

06	Aluminum	AL
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07	Component series 10 ... 19 (10 ... 19: unchanged installation and connection dimensions)	1X
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Valve fitting

08	None	XX
	Proportional pressure reducing valve type MHDRE	DR

Maximum control pressure

09	18 bar	18 ³⁾
	30 bar	30

Nominal voltage

10	DC voltage 12 V	G12
	DC voltage 24 V	G24

Electrical connection¹⁾

11	Without mating connector; connector DIN EN 175301-803	K4 ²⁾
	Without mating connector; connector DT 04-2PA (Deutsch plug)	K40
	Without mating connector; connector AMP Junior-Timer	C4 ²⁾

12	Further details in the plain text	*
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¹⁾ Mating connectors, separate order, see data sheet 08006.

²⁾ Only size 06

³⁾ Only sizes 02 and 06

① = Main port 1 (P)

② = Main port 2 (T)

③ = Main port 3 (A1, B1, A2, ...)

Technical data

(For applications outside these parameters, please consult us!)

General				
Size	Size	02	04	06
Weight	kg	see table page 6		
Installation position		any - if it is ensured that no air can collect upstream of the valve. Otherwise we recommend installing the Remote control manifold in a position with hanging valves.		
Ambient temperature range		see "Voltage tolerance" in the data sheets for the screw-in cartridge valves ¹⁾		
Storage temperature range	°C	-30 ... +80		

Hydraulic			
Maximum control pressure	► Main connection ③	bar	18; 30
Maximum inlet pressure	► Main connection ①	bar	50 100 100
Maximum counter pressure	► Main connection ②	bar	depressurized is recommended (tank pressures add up to control pressure of the screw-in cartridge valves); pressureless to a maximum: 3 100 100
Maximum flow		l/min	see data sheets for the screw-in cartridge valves ¹⁾
Hydraulic fluid			see table below
Hydraulic fluid temperature range		°C	-30 ... +100
Viscosity range		mm ² /s	5 ... 400
Maximum permissible degree of contamination of the hydraulic fluid, cleanliness class according to ISO 4406 (c)			see data sheets for the screw-in cartridge valves ¹⁾
Hysteresis (within the tolerance band)		bar	see data sheets for the screw-in cartridge valves ¹⁾
Step response		ms	see data sheets for the screw-in cartridge valves ¹⁾
Repetition accuracy		%	see data sheets for the screw-in cartridge valves ¹⁾
Load cycles	► Valves		10 Million
	► Flange		2 Million
Strainer element on the main port ① of the screw-in cartridge valve		µm	160 160 250

Hydraulic fluid	Classification	Suitable sealing materials	Standards
Mineral oils	HL, HLP, HLPD, HVLP, HVLPD	NBR, FKM	DIN 51524
Bio-degradable	► Insoluble in water	HETG	ISO 15380
		HEES	
	► soluble in water	HEPG	ISO 15380
Flame-resistant	► water-free	HFDU, HFDR	ISO 12922
	► containing water	HFC (Fuchs Hydrotherm 46M, Petrofer Ultra Safe 620)	ISO 12922



Important information on hydraulic fluids:

- For more information and data on the use of other hydraulic fluids, please refer to data sheet 90220 or contact us!
- There may be limitations regarding the technical valve data (temperature, pressure range, life cycle, maintenance intervals, etc.)!
- The flash point of the hydraulic fluid used must be 40 K higher than the maximum solenoid surface temperature.

► Flame-resistant – contains water:

- Maximum pressure differential per control edge 50 bar
- Pressure pre-loading at the tank port >20 % of the pressure differential, otherwise increased cavitation
- Life cycle as compared to operation with mineral oil HL, HLP 50 to 100 %

- **Bio-degradable:** When using bio-degradable hydraulic fluids that are also zinc-solvent, zinc may accumulate in the fluid (700 mg zinc per pole tube).

¹⁾ Proportional pressure reducing valve

- Type MHDRE 02 according to data sheet 64658
- Type MHDRE 04 according to data sheet 64666
- Type MHDRE 06 according to data sheet 64655

Technical data


(For applications outside these parameters, please consult us!)

Electrical							
Size	Size	02	04	06	02	04	06
Supply voltage	V	12 DC			24 DC		
Maximum control current	A	1.7	1.7	1.45	0.95	0.95	0.7
Coil resistance at 20 °C	Ω	3.5	3.5	5	11.1	11.1	22.5
Duty cycle (ED) ²⁾	%	100					
Maximum coil temperature ³⁾	°C	185					
Protection class according to DIN EN 60529	▶ Version "K4"	IP 65 (with mating connector mounted and locked)					
	▶ Version "C4"	IP 66 (with mating connector mounted and locked)					
		IP 69K (with Rexroth mating connector, material no. R901022127)					
	▶ Version "K40"	IP 69K (with mating connector mounted and locked)					
Chopper frequency (recommended) ⁴⁾	Hz	150					
Control electronics		Analog amplifier RA, see data sheet 95230 BODAS control unit RC, see data sheet 95200					
Design		as per VDE 0580					

²⁾ In case of use in altitudes > 2000 m above sea level, we recommend consulting the manufacturer.

³⁾ Surface temperature > 50 °C possible, provide contact protection in accordance with standards ISO 13732-1 and ISO 4413 .

⁴⁾ The chopper frequency should be optimized for the application. The working temperature range should be taken into consideration.

 **Notice:**

- ▶ The technical data were determined at a viscosity of 46 mm²/s (HLP46; 40 °C).
- ▶ For further information relating to correct usage of Rexroth hydraulic products, refer to data sheet 64020-B, "Hydraulic valves for mobile applications – General information".

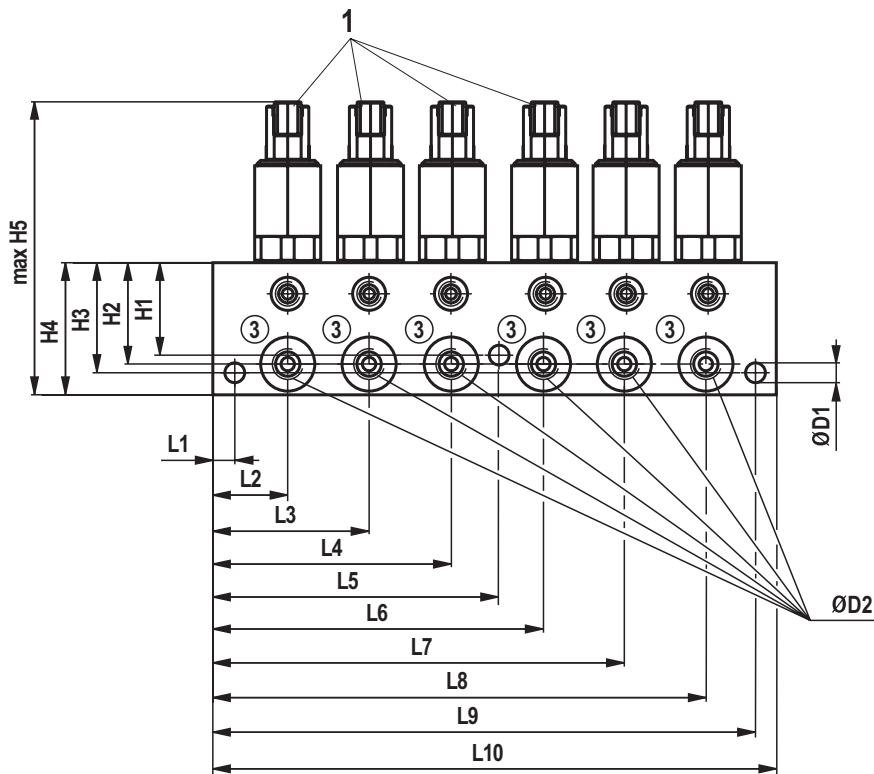
① = Main port 1 (P)

② = Main port 2 (T)

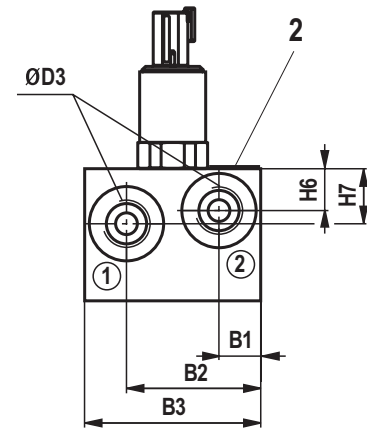
③ = Main port 3 (A1, B1, A2, ...)

Dimensions

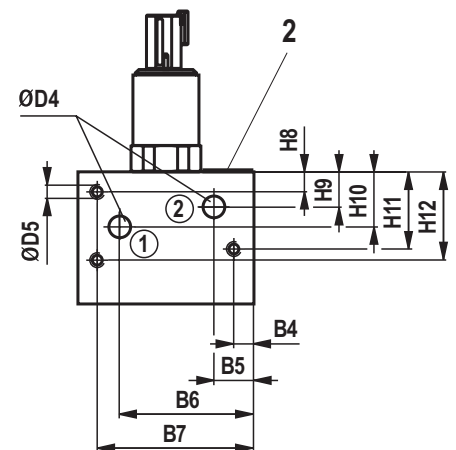
(dimensions in mm)



Connection types "A" and "B"



Connection type "C"



- 1** Proportional pressure reducing valves
- ▶ Type MHDRE 02 according to data sheet 64658
 - ▶ Type MHDRE 04 according to data sheet 64666
 - ▶ Type MHDRE 06 according to data sheet 64655
- 2** Name plate

- ① = Main port 1 (P)
 ② = Main port 2 (T)
 ③ = Main port 3 (A1, B1, A2, ...)

Dimensions see page 7.

Notice:

The direction of the plug can vary with sizes 02 and 04.

Dimensions

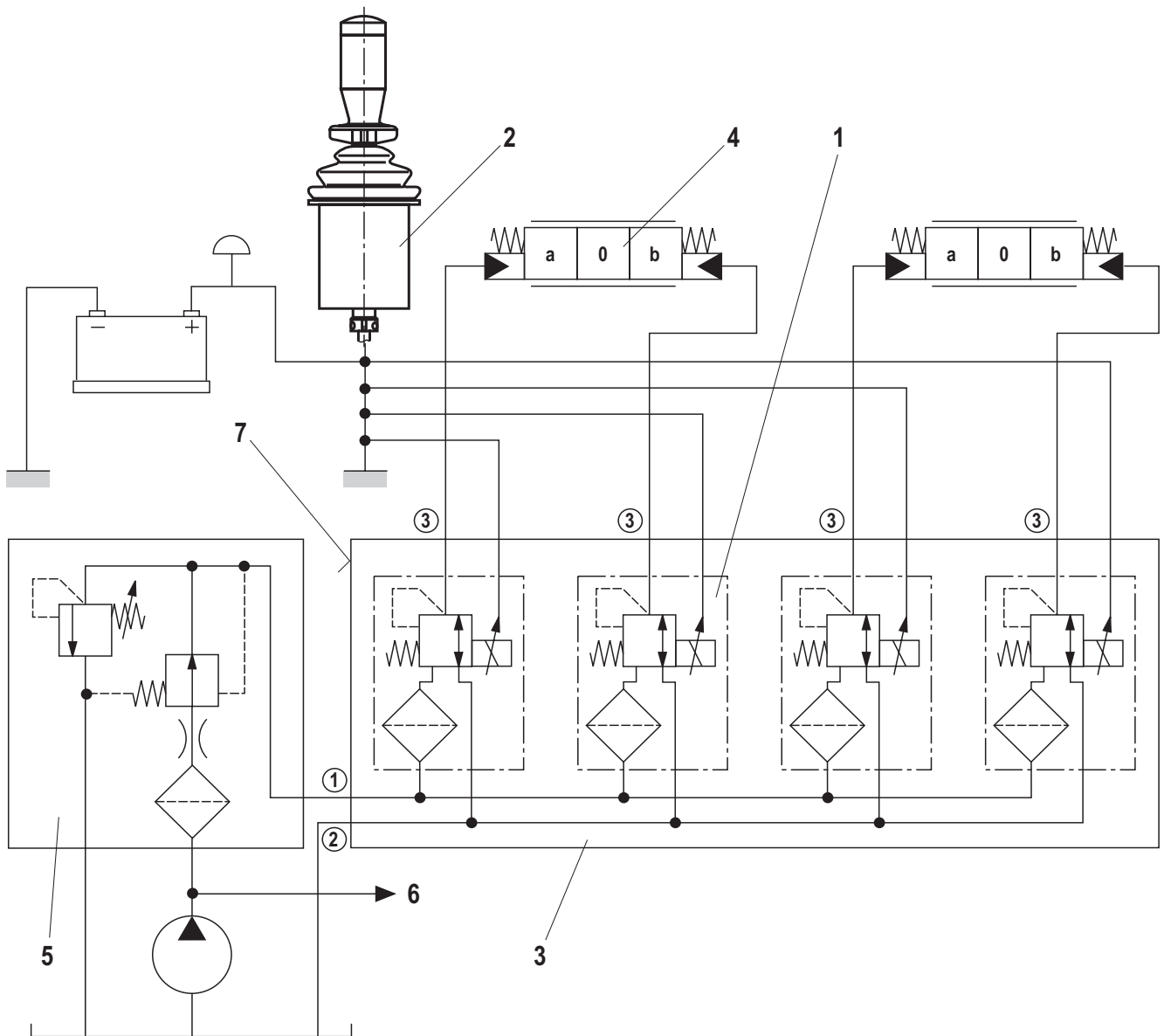
(dimensions in mm)

Size	Frame size	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	ØD1	ØD2	ØD3	ØD4	ØD5
02	1	10	34	-	-	-	-	-	-	55	65	6.6	G1/4	G3/8	8	M6/12
	2	10	34	71	-	-	-	-	-	95	105	6.6	G1/4	G3/8	8	M6/12
	4	10	34	71	-	91	112	149	-	170	180	6.6	G1/4	G3/8	8	M6/12
	6	10	34	71	108	129	149	186	223	245	255	6.6	G1/4	G3/8	8	M6/12
04	1	10	34	-	-	-	-	-	-	55	65	9	G1/4	G1/2	10	M6/12
	2	10	34	71	-	-	-	-	-	95	105	9	G1/4	G1/2	10	M6/12
	4	10	34	71	-	91	112	149	-	170	180	9	G1/4	G1/2	10	M6/12
	6	10	34	71	118	129	149	186	223	245	255	9	G1/4	G1/2	10	M6/12
06	1	25	50	-	-	-	-	-	-	75	85	11	G3/8	G3/4	18	M8/16
	2	25	50	95	-	-	-	-	-	120	130	11	G3/8	G3/4	18	M8/16
	4	25	50	95	-	123	150	195	-	220	230	11	G3/8	G3/4	18	M8/16
	6	25	50	95	145	172	200	245	295	320	330	11	G3/8	G3/4	18	M8/16

Size	Frame size	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12
02	1	-	40	50	59	140	16	23	9	14	23	30	35
	2	-	40	50	59	140	16	23	9	14	23	30	35
	4	36	40	50	59	140	16	23	9	14	23	30	35
	6	36	40	50	59	140	16	23	9	14	23	30	35
04	1	-	45	50	59	140	19	25	9	16	25	35	40
	2	-	45	50	59	140	19	25	9	16	25	35	40
	4	42	45	50	59	140	19	25	9	16	25	35	40
	6	42	45	50	59	140	19	25	9	16	25	35	40
06	1	-	53	60	69	150	27	33	10	22	33	45	60
	2	-	53	60	69	150	27	33	10	22	33	45	60
	4	55	53	60	69	150	27	33	10	22	33	45	60
	6	55	53	60	69	150	27	33	10	22	33	45	60

Size	Frame size	B1	B2	B3	B4	B5	B6	B7	Weight in kg		
									Plate	per screw-in cartridge valve	preparation
02	1	17	58	80	9	18	58	71	0.8	0.25	1.1
	2	17	58	80	9	18	58	71	1.3	0.25	1.8
	4	17	58	80	9	18	58	71	2.2	0.25	3.2
	6	17	58	80	9	18	58	71	3.1	0.25	4.6
04	1	19	61	80	9	18	61	71	0.8	0.25	1.1
	2	19	61	80	9	18	61	71	1.3	0.25	1.8
	4	19	61	80	9	18	61	71	2.2	0.25	3.2
	6	19	61	80	9	18	61	71	3.1	0.25	4.6
06	1	92	32	110	10	27	81	100	1.6	0.7	2.3
	2	92	32	110	10	27	81	100	2.5	0.7	3.9
	4	92	32	110	10	27	81	100	4.5	0.7	7.3
	6	92	32	110	10	26	81	100	6.4	0.7	10.6

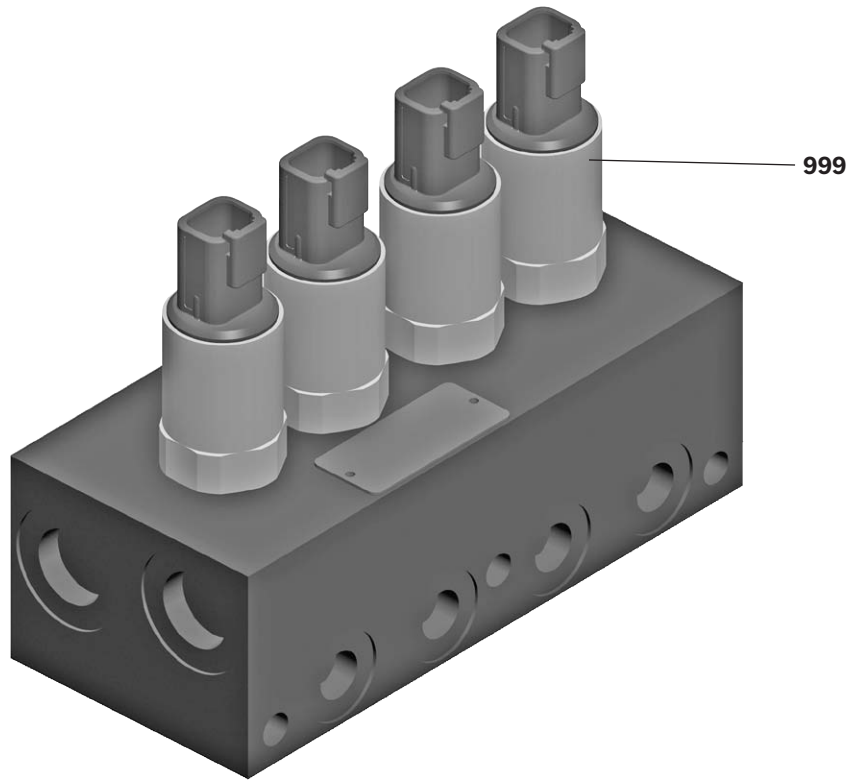
Circuit example



- 1 Proportional pressure reducing valves
 - ▶ Type MHDRE 02 according to data sheet 64658
 - ▶ Type MHDRE 04 according to data sheet 64666
 - ▶ Type MHDRE 06 according to data sheet 64655
- 2 Electronic remote control and module (see overview according to data sheet 64013)
- 3 Remote control manifold HICFP
- 4 Directional valve, hydraulically operated
- 5 Pilot oil supply system (not in scope of delivery). With connection type "C", a customer-specific pilot oil supply can be directly flanged onto the Remote control manifold (see item. 7)
- 6 Work hydraulic
- 7 Optional connection flange (see item 3)

- ① = Main port 1 (P)
 ② = Main port 2 (T)
 ③ = Main port 3 (A1, B1, A2, ...)

Individual components available for delivery



Item	Denomination	Data sheet no.		
		Size 02	Size 04	Size 06
999	Proportional pressure reducing valve	64658	64666	64655

More information

- ▶ Proportional pressure reducing valve type MHDRE 02
- ▶ Proportional pressure reducing valve type MHDRE 04
- ▶ Proportional pressure reducing valve type MHDRE 06
- ▶ BODAS control unit RC
- ▶ Analog amplifier RA
- ▶ Hydraulic valves for mobile applications
- ▶ Mineral-oil-based hydraulic fluids
- ▶ Filter range

Data sheet 64658

Data sheet 64666

Data sheet 64655

Data sheet 95200

Data sheet 95230

Data sheet 64020-B

Data sheet 90220

www.boschrexroth.com/filter

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