Remote control plate

Type HICFP

RE 64663
Edition: 05.2022
Replaces: 01.2022

H7653

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

Features

- Cost-effective solution variant for electro-hydraulic proportional control systems of mobile control blocks
- Separate accommodation of the electro-hydraulic devices in the accessible and protected area of the machine
- Easy retrofitting from hydraulic to electric control system
- Combines high performance and cost-effective design
- Different valve versions

Contents

Ordering code

01	02	03		04	05		06		07		08	09	10	11	12	13	14
HIC	**FP**		**–**			**–**	**AL**	**–**	**1X**	**/**						**V**	*****

01	Hydraulic Integrated Circuit	**HIC**

02	Remote control plate	**FP**

Size

03	Size 02	**02**
	Size 04	**04**
	Size 06	**06**

Frame size (Number of screw-in cartridge valves)

04	2 screw-in cartridge valves	**02**
	4 screw-in cartridge valves	**04**
	6 screw-in cartridge valves	**06**

Type of connection

05	Threaded connection, flat-sealing according to DIN 3852-2	**A**
	Threaded connection, taper-sealing according to DIN EN ISO 6149	**B**
	Threaded connection UNF-2B ANSI B1.1 according to ISO 11926	**D**

Manifold material

06	Aluminum	**AL**

Component series

07	Component series 10 ... 19 (10 ... 19: unchanged installation and connection dimensions)	**1X**

Valve fitting

08	**No** valve fitting	**XX/FTXX**
	MHDRE 06	**DR**
	FTDRE 02 / 04	**FTDR**
	FTWE 02 / 04	**FTWE**
	FTMX [3]	**FTMX**

Maximum control pressure

09	18 bar	**18**
	30 bar [4]	**30**
	Valve fitting WE	**00**

Nominal voltage

10	DC 12 V	**G12**
	DC 24 V	**G24**

Manual override [2]

11	**Without** manual override (preferred)	**N0**
	With manual override	**N9**

Electrical connection [1]

12	**Without** mating connector, **with** connector plug DT 04-2PA (Deutsch connector)	**K40**
	Without mating connector, **with** connector plug AMP Junior-Timer	**C4**

Seal material

13	FKM seals	**V**

14	Further details in the plain text	*****

[1] Mating connector (separate order) see data sheet 08006
[2] Manual override (N9) not available for BG 06.
Without manual override (N0) not available for FTWE.
[3] SO variant (mixture of FTWE and FTDRE)
[4] FTDRE 02 upon request

Preferred types

30 bar, standard is without manual override

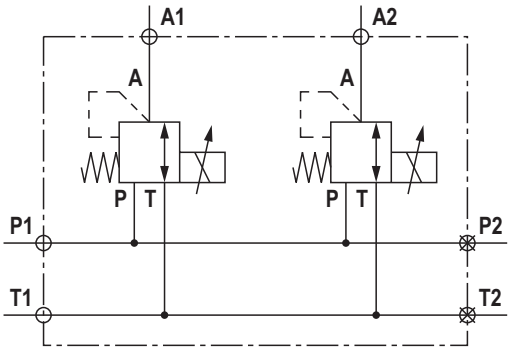
Frame size	**24 V** (K40)		**12 V** (K40)		**not fitted**	
	Type	**Material no.**	**Type**	**Material no.**	**Type**	**Material no.**
BG 02	HICFP02-2A-AL-1X/ FTDR30G24N0K40V	**R901166632**	HICFP02-2A-AL-1X/ FTDR30G12N0K40V	**R901167066**	HICFP02-2A-AL-1X/FTXX	**R901434588**
	HICFP02-4A-AL-1X/ FTDR30G24N0K40V	**R901166804**	HICFP02-4A-AL-1X/ FTDR30G12N0K40V	**R901167269**	HICFP02-4A-AL-1X/FTXX	**R901434592**
	HICFP02-6A-AL-1X/ FTDR30G24N0K40V	**R901166838**	HICFP02-6A-AL-1X/ FTDR30G12N0K40V	**R901167301**	HICFP02-6A-AL-1X/FTXX	**R901434594**

Frame size	**24 V** (K40)		**12 V** (K40)		**not fitted**	
	Type	**Material no.**	**Type**	**Material no.**	**Type**	**Material no.**
BG 04	HICFP04-2A-AL-1X/ FTDR30G24N0K40V	**R901434345**	HICFP04-2A-AL-1X/ FTDR30G12N0K40V	**R901434370**	HICFP04-2A-AL-1X/FTXX	**R901426715**
	HICFP04-4A-AL-1X/ FTDR30G24N0K40V	**R901182076**	HICFP04-4A-AL-1X/ FTDR30G12N0K40V	**R901434372**	HICFP04-4A-AL-1X/FTXX	**R901415571**
	HICFP04-6A-AL-1X/ FTDR30G24N0K40V	**R901182153**	HICFP04-6A-AL-1X/ FTDR30G12N0K40V	**R901434373**	HICFP04-6A-AL-1X/FTXX	**R901415575**

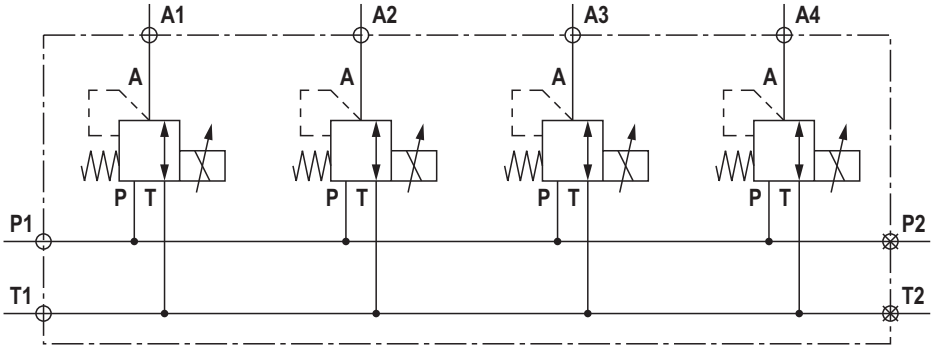
Frame size	**24 V** (K40)		**12 V** (K40)		**not fitted**	
	Type	**Material no.**	**Type**	**Material no.**	**Type**	**Material no.**
BG 06	HICFP06-2A-AL-1X/ DR30G24N0K40V	**R901391736**	HICFP06-2A-AL-1X/ DR30G12N0K40V	**R901434490**	HICFP06-2A-AL-1X/XX	**R901267591**
	HICFP06-4A-AL-1X/ DR30G24N0K40V	**R901420952**	HICFP06-4A-AL-1X/ DR30G12N0K40V	**R901434493**	HICFP06-4A-AL-1X/XX	**R901434484**
	HICFP06-6A-AL-1X/ DR30G24N0K40V	**R901368620**	HICFP06-6A-AL-1X/ DR30G12N0K40V	**R901434494**	HICFP06-6A-AL-1X/XX	**R901434485**

Symbols: Size 02 - Size 04 - Size 06

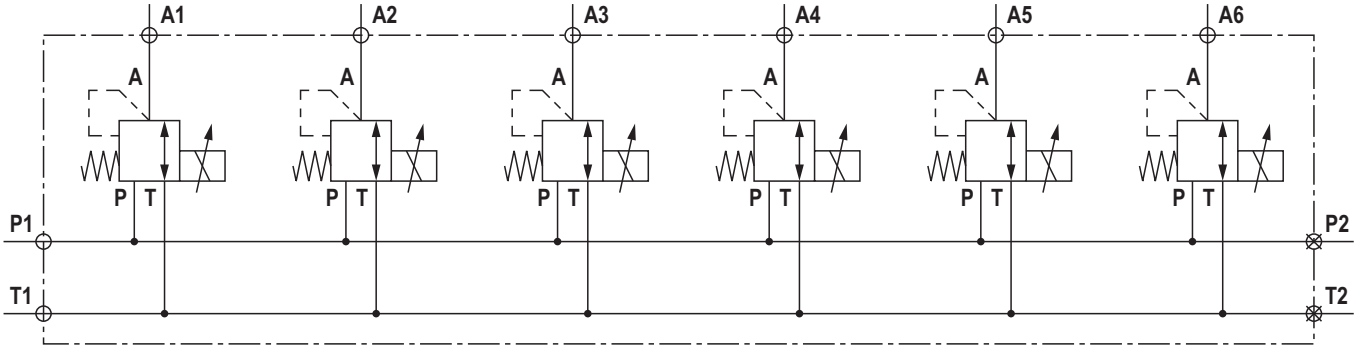
2-fold fitting HICFP02-2./FT - HICFP04-2./FT - HICFP06-2



4-fold fitting HICFP02-4./FT - HICFP04-4./FT - HICFP06-4



6-fold fitting HICFP02-6./FT - HICFP04-6./FT - HICFP06-6



Technical data
(For application outside these values, please consult us!)

general					
Valve type			**FTDRE**		**MHDRE**
Size		NG	**02**	**04**	**06**
Weight		kg	Page 7 ... 9		
Installation position			Any - if it is ensured that no air can collect upstream the valves. Otherwise we recommend mounting the remote control plate in a position with hanging valves.		
Ambient temperature range			See "Voltage tolerance" in the data sheets of the screw-in cartridge valves [1]		
Storage temperature range		°C	–30 ... +80		

hydraulic					
Maximum control pressure	Main port 1 (A1, A2, A3)	bar	18; 30		
Maximum inlet pressure	Main port 1 (P1, P2)	bar	100	100	100
Maximum counter pressure	Main port 1 (T1, T2)		Depressurized recommended (occurring tank pressures add up to the control pressure of the screw-in cartridge valves); depressurized up to a maximum of:		
		bar	30	30	100
Maximum flow		l/min	See data sheets of the screw-in cartridge valves [1]		
Hydraulic fluid			See table below		
Hydraulic fluid temperature range		°C	–30 ... +100	–30 ... +100	–30 ... +100
Viscosity range		mm^2/s	10 ... 380	10 ... 380	10 ... 380
Maximum admissible degree of contamination of the hydraulic fluid Cleanliness class according to ISO 4406 (c)			See data sheets of the screw-in cartridge valves [1]		
Hysteresis (within tolerance band)		bar	See data sheets of the screw-in cartridge valves [1]		
Step response		ms	See data sheets of the screw-in cartridge valves [1]		
Repetition accuracy		%	See data sheets of the screw-in cartridge valves [1]		
Load cycles	Valves	Million	5	5	10
Strainer element at the main port 2 "P" of the screw-in cartridge valves		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	NBR, FKM	ISO 15380
		HEES	FKM	
	Soluble in water	HEPG	FKM	ISO 15380

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

[1] Proportional pressure reducing valves
Type FTDRE 02 according to data sheet 58032
Type FTDRE 04 according to data sheet 58038
Type MHDRE 06 according to data sheet 64655

Technical data
(For application outside these values, please consult us!)

electric									
Valve type			**FTDRE**		**MHDRE**	**FTDRE**		**MHDRE**
Size		NG	**02**	**04**	**06**	**02**	**04**	**06**
Supply voltage		V	**12 DC**			**24 DC**		
Voltage type			Direct voltage					
Maximum control current	18 bar	mA	1800	1800	1450	800	800	700
	30 bar	mA	1900			850		
Coil resistance (cold value at 20 °C)		Ω	2.4		5	12		22.5
Duty cycle		%	100 (see characteristic curves in data sheets)					
Maximum coil temperature [1]		°C	150		185	150		185
Protection class according to VDE 0470-1 (DIN EN 60529), DIN 40050-9	Version "C4"		See data sheets of the screw-in cartridge valves					
	Version "K40"		See data sheets of the screw-in cartridge valves					
Control electronics (separate order)			Analog amplifier type RA... (Data sheet 95230) BODAS control unit type RC.. (Data sheet 95200)					
Recommended sealer frequency (PWM) Chopper frequency (recommended) [2]		Hz	150	200	150	150	200	150
Design			According to VDE 0580					

[1] Due to the surface temperatures of the solenoid coils, the standards ISO 13732-1 and ISO 4413 need to be adhered to!

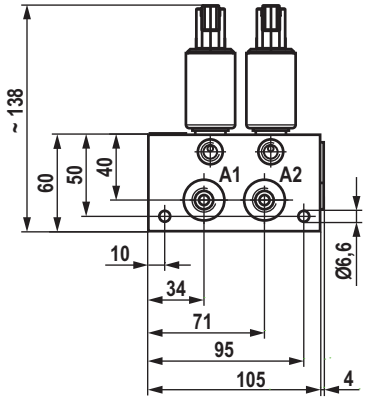
[2] The chopper frequency is to be optimized depending on the application. In this regard, observe the working temperature range of the application.

☞ **Notice:**
The technical data were determined at a viscosity of 46 mm²/s (HLP46; 40 °C).
You can find further information on the correct handling of Rexroth hydraulic products in data sheet 64020-B, "Hydraulic valves for mobile applications - General information".

Dimensions: Size 02 (dimensions in mm)

2-fold fitting
HICFP02-2./FT

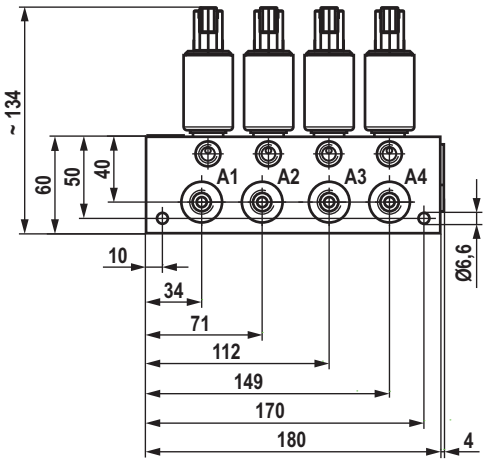
Weight approx. 1.8 kg



Type of connection A, connections DIN 3852-2	
G3/8	P1, T1, P2, T2
G1/4	A1, A2, A3, A4, A5, A6
Type of connection B, connections ISO 6149	
G3/8	P1, T1, P2, T2
G1/4	A1, A2, A3, A4, A5, A6
Type of connection D, connections ISO 11926	
3/4-16 UNF	P1, T1, P2, T2
9/16-18 UNF	A1, A2, A3, A4, A5, A6

4-fold fitting
HICFP02-4./FT

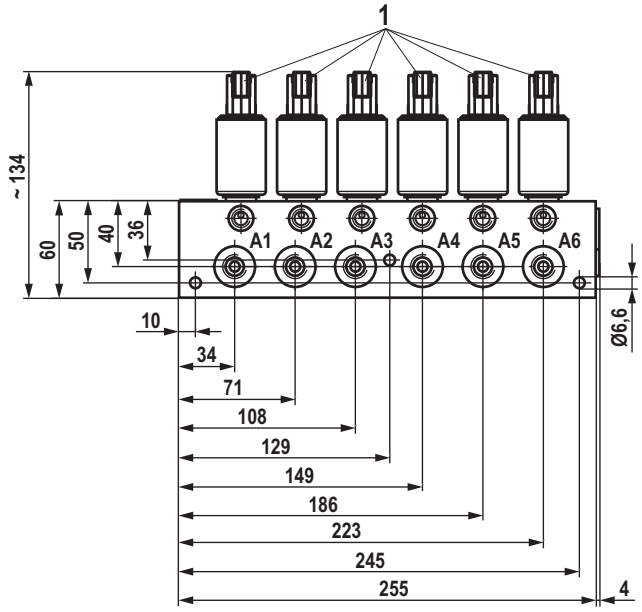
Weight approx. 3.2 kg

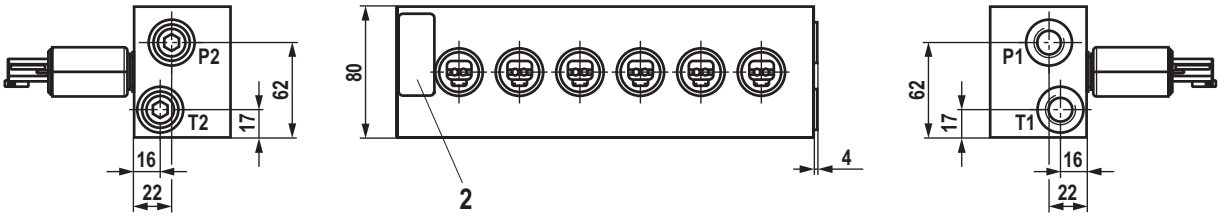


A = Control pressure port
P = Pump port
T = Tank port

6-fold fitting
HICFP02-6./FT

Weight approx. 4.6 kg

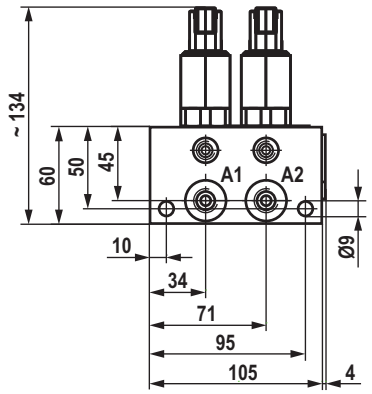




Dimensions: Size 04 (dimension in mm)

2-fold fitting
HICFP04-2./FT

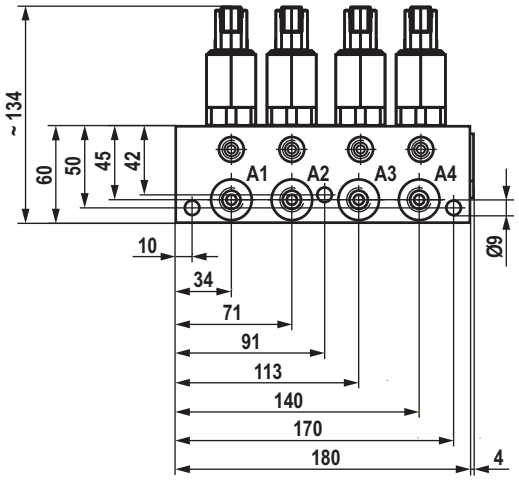
Weight approx. 1.8 kg



Type of connection A, connections DIN 3852-2	
G1/2	P1, T1, P2, T2
G1/4	A1, A2, A3, A4, A5, A6
Type of connection B, connections IS0 6149	
G1/2	P1, T1, P2, T2
G1/4	A1, A2, A3, A4, A5, A6
Type of connection D, connections IS0 11926	
3/4-16 UNF	P1, T1, P2, T2
9/16-18 UNF	A1, A2, A3, A4, A5, A6

4-fold fitting
HICFP04-4./FT

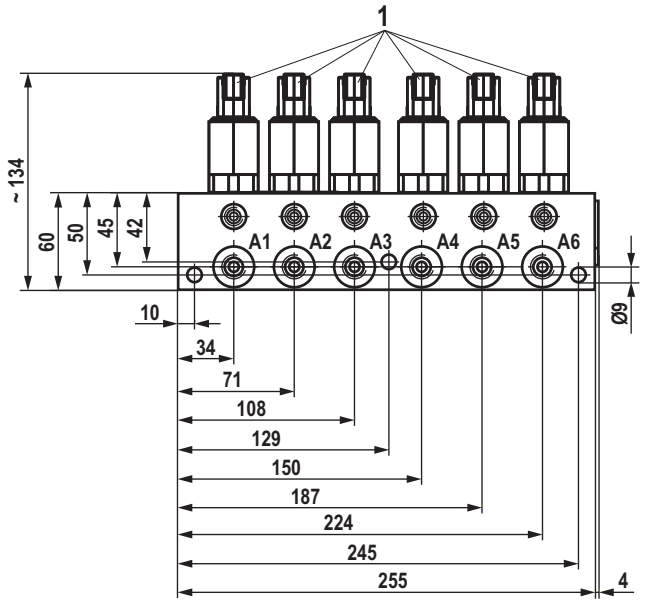
Weight approx. 3.2 kg

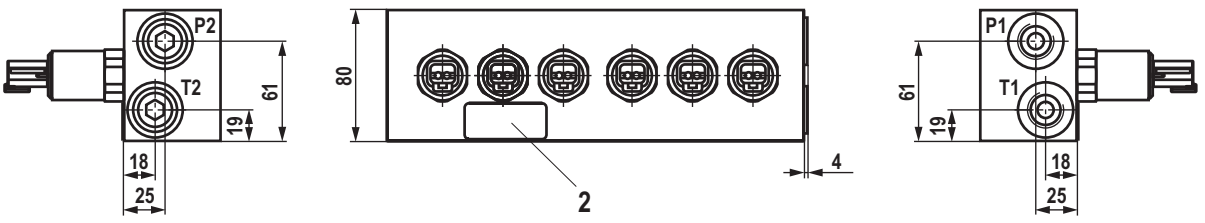


A = Control pressure port
P = Pump port
T = Tank port

6-fold fitting
HICFP04-6./FT

Weight approx. 4.6 kg

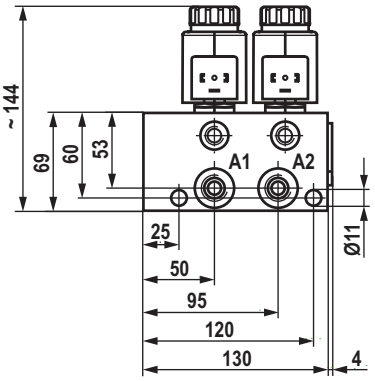




Dimensions: Size 06 (dimension in mm)

2-fold fitting
HICFP06-2

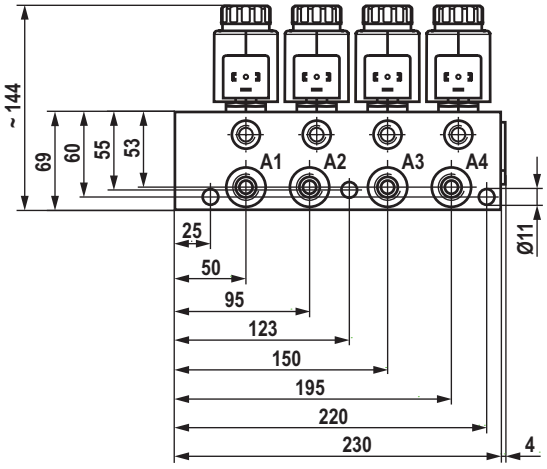
Weight approx. 3.9 kg



Type of connection A, connections DIN 3852-2	
G3/4	P1, T1, P2, T2
G3/8	A1, A2, A3, A4, A5, A6
Type of connection B, connections IS0 6149	
G3/4	P1, T1, P2, T2
G3/8	A1, A2, A3, A4, A5, A6

4-fold fitting
HICFP06-4

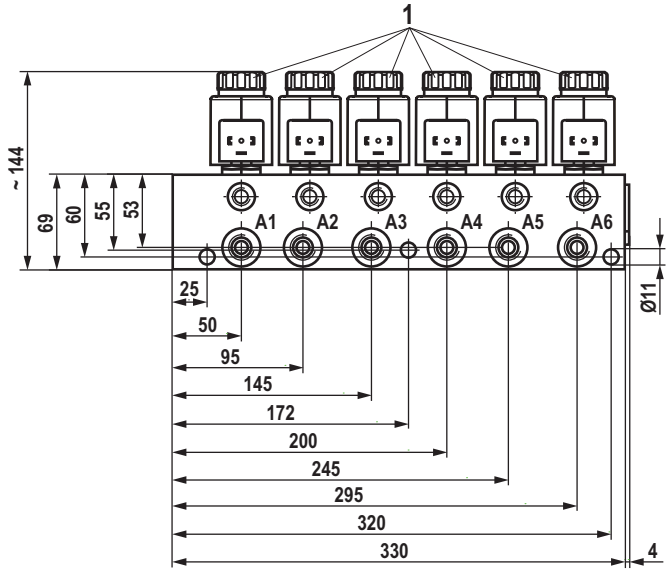
Weight approx. 7.3 kg

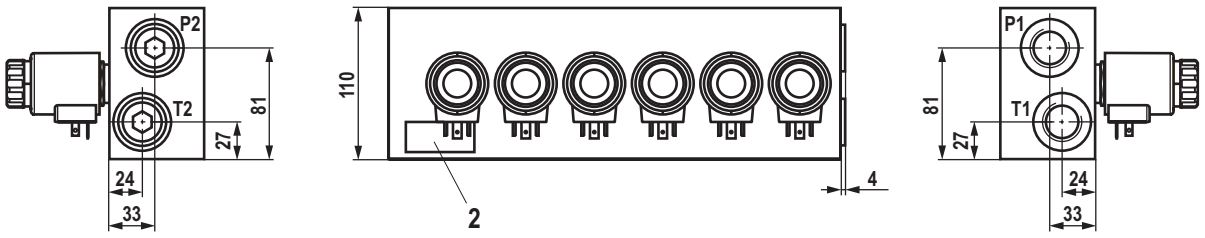


A = Control pressure port
P = Pump port
T = Tank port

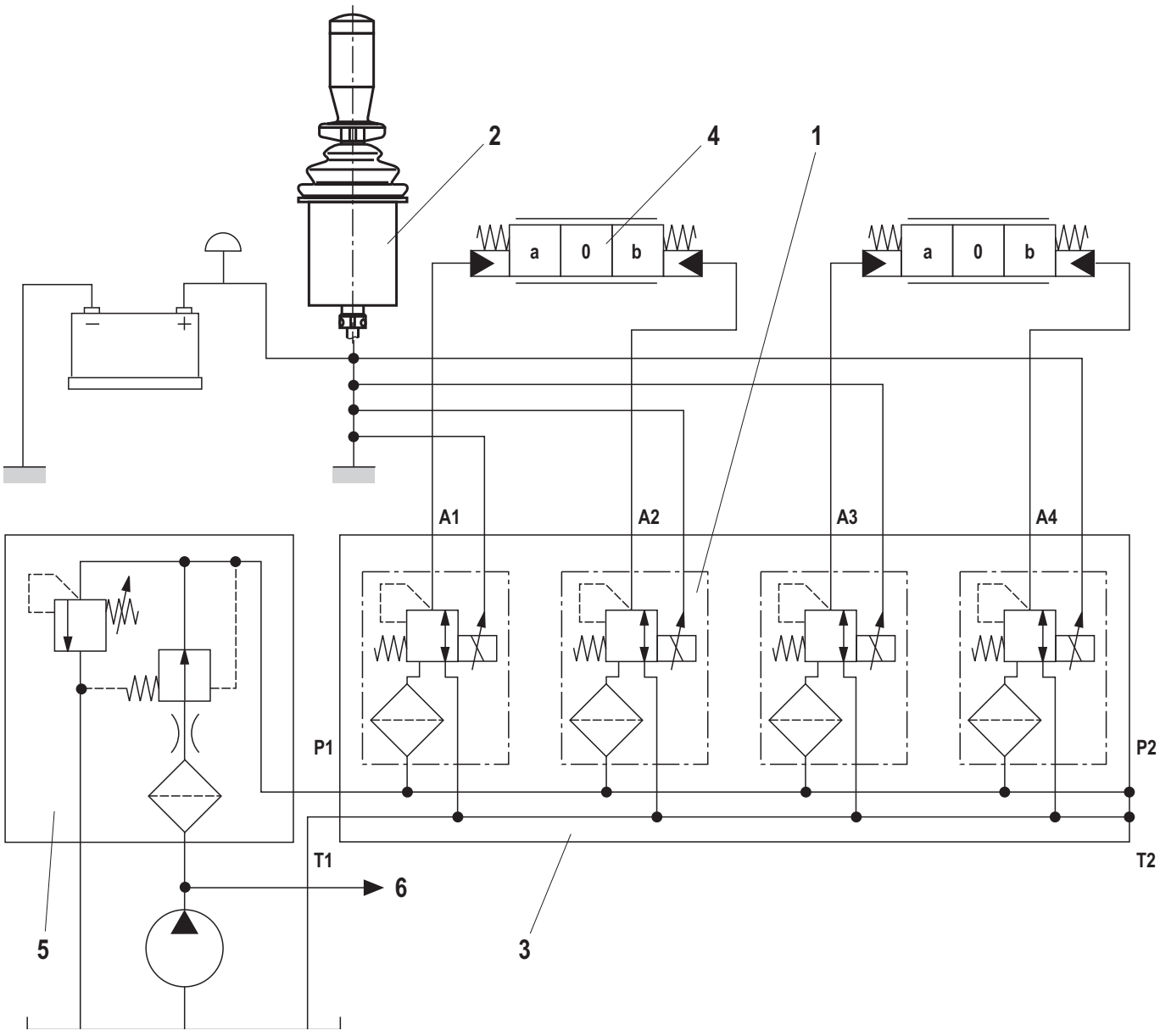
6-fold fitting
HICFP06-6

Weight approx. 10.6 kg





Circuit example



1 Proportional pressure reducing valves
Type MHDRE 06 according to data sheet 64655

2 Electronic remote control and modules (see overview according to data sheet 64013)

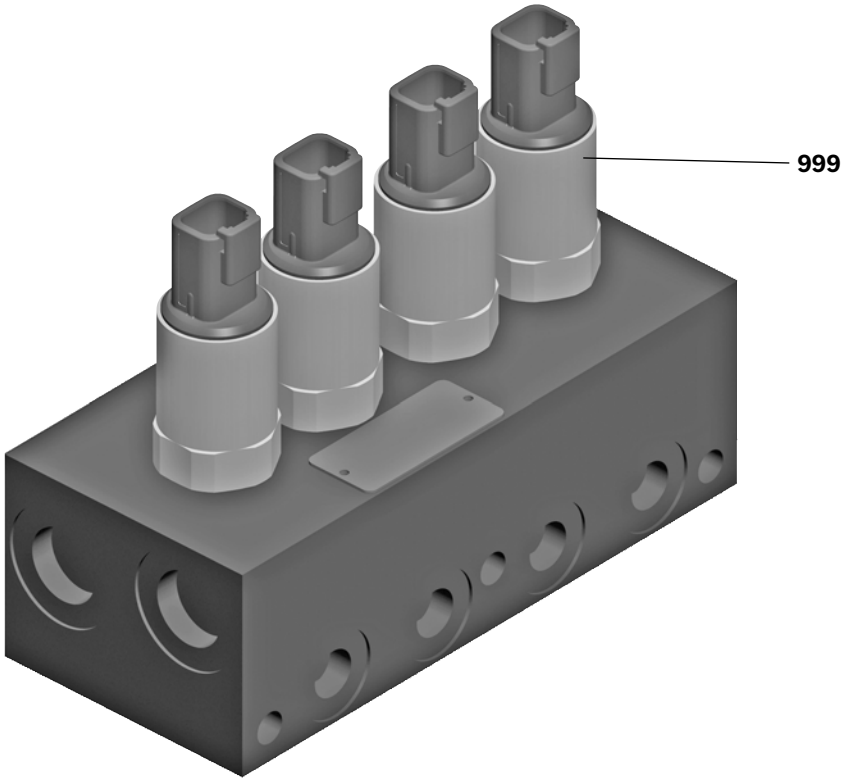
3 Remote control plate HICFP

4 Directional valve, hydraulically actuated

5 Pilot oil supply system (not included in the scope of delivery)

6 Work hydraulics

Available individual components



Example

Item	Denomination	Data sheet no. NG02
999	Proportional pressure reducing valve	58032

Further information

Proportional pressure reducing valve type FTDRE 02	Data sheet 58032
Proportional pressure reducing valve type FTDRE 04	Data sheet 58038
Proportional pressure reducing valve type MHDRE 06	Data sheet 64655
Proportional pressure reducing valve type FTWE 02	Data sheet 58007
Proportional pressure reducing valve type FTWE 04	Data sheet 58008
BODAS control unit RC	Data sheet 95200
Analog amplifier RA	Data sheet 95230
Hydraulic valves for mobile applications	Data sheet 64020-B
Hydraulic fluids on mineral oil basis	Data sheet 90220
Selection of the filters	www.boschrexroth.com/filter

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