

Sandwich plates

Porting patterns according to DIN 24340 form A and ISO 4401

RE 48052/01.11
Replaces: 01.09

1/92

Type HSZ 10

Size 10
Component series 1X, 2X, 3X and 4X
Maximum operating pressure 315 bar

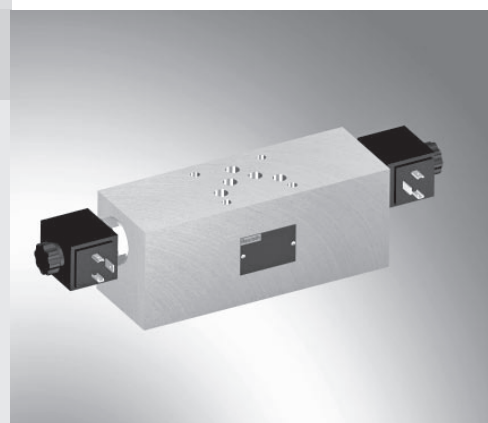


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Information on available spare parts:
www.boschrexroth.com/spc

Features

- Vertically stackable components in sandwich plate design
- Porting pattern according to ISO 4401-05-04-0-94
- Amendment to the existing sandwich plate program
- Structure as individual component or as horizontal stacking on manifolds according to data sheet RE 48110 or vario plates
- Large variability due to the possibility of different combinations as well as subsequent functional changes and extensions
- Maximum operating pressure
 - without valve function: 315 bar
 - with valve function: Maximally 315 bar (depending on the valve fitting)
- Weight indications contain the installed and/or attached valves
- Dimension L x W x H without installed and/or attached valves
- Coating: Galvanic coating DIN 50979 - Fe/Zn8/Cn/T0

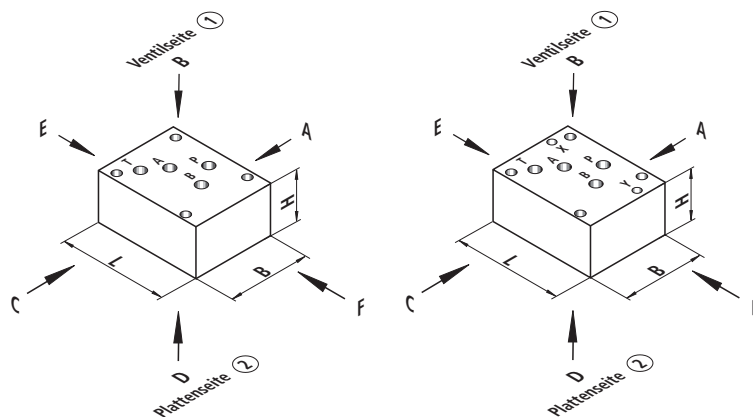
Safety instructions

- The valve mounted in the sandwich plates can block in an undefined position due to internal pollution – like e.g. polluted hydraulic fluid, wear debris or residual dirt from system components. As a result, the driven actuator may no longer be under the operator's control.
- When using a single-rod cylinder, inadmissibly high pressures may result in the discharge channel due to pressure intensification (e.g. unswitched directional seat valve / uncontrolled solenoid coil / cable break). We therefore recommend securing the cylinder by means of pressure relief valves.

Explanations of the type key for HSZ 10 sandwich plates

	1	2	3	4	5	6
	HSZ 10					*
1		Porting pattern:		Form A10, direct operated	= A	
2				Form A10, pilot operated (with X and Y port)	= B	
3		Serial number of the functional design from 001 ... 999 (is determined in the factory)				
3		Series-production status:		- 1X, - 2X, - 3X, - 4X		
4		Seal material:		NBR seals	= M (standard)	
		Note: Observe compatibility of seals with the hydraulic fluids used!		FKM seals (other seals upon request)	= V	
5		Line connection:		No external connection	= 00	
				Connection according to DIN 3852 part 2 Thread according to DIN EN ISO 228 (pipe thread)	= 01	
6		Further details in the plain text				

3D view



¹⁾ HSZ 10 A..., direct operated

²⁾ HSZ 10 B..., pilot operated (with X and Y port)

Order examples:

Material no.	Type designation	
R900515226	HSZ 10 B037-3X/M01	Sandwich plate without valve function
R900555875	HSZ 10 A188-3X/05M00	Sandwich plate with fixed valve design
R900703933	HSZ 10 A100-3X/ ¹⁵ S ¹⁶ S20 M00	Sandwich plate with optional valve design

Type key and order examples for fitted sandwich plates, see relevant functional groups!

Sandwich plates with possible valve fitting are available as both, complete device (with valves assembled) or as construction kit plate (only with seals, plug screws, name plate).

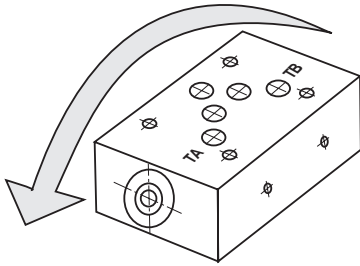
- **Other circuits and designs as specified in the data sheet are only possible after consultation!**
- **Connection threads in HSZ plates are always covered in a pressure-tight form.**
- **Installation bores / screw-in threads with unfitted sandwich plates are usually not covered in a pressure-tight form.**

The following serial sandwich plates with porting pattern according to ISO 4401 pilot operated (drilled for X and Y port) are part of the delivery range:

Type Z1S10..-3X/V SO30	RE 21536
Type Z2S10..-3X/V SO30	RE 21553
Type M-Z4SE10.1X/C..SO30	
Type Z-DB10..-4X/.V SO30	RE 25761
Type ZDR10D..-5X/.Y.SO30	RE 26585
Type ZDR10V..-3X/.Y.SO30	RE 26861
Type Z2FS10..-3X/.V SO30	RE 27518

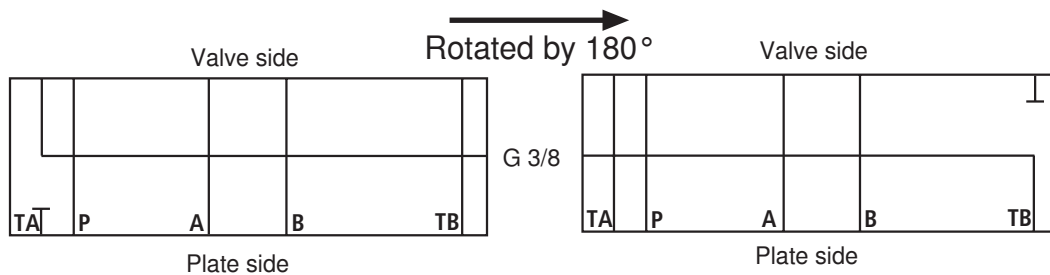
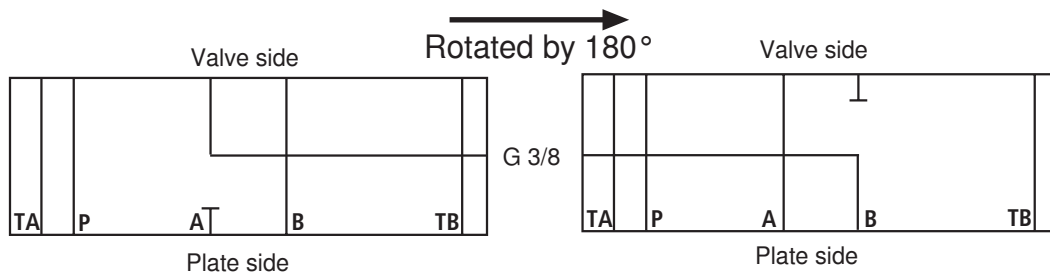
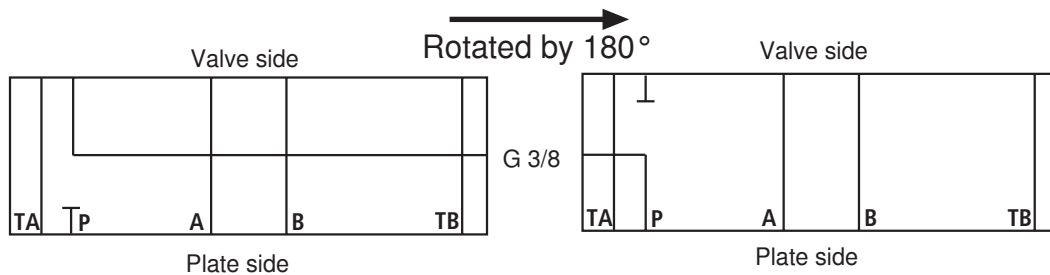
Extended applications of HSZ 10 sandwich plates with R ring plate

HSZ 10 sandwich plates with R ring plates can be rotated by 180° around the TA - TB axis. Due to the changed installation position, a different function results (circuit diagram). See the following examples.



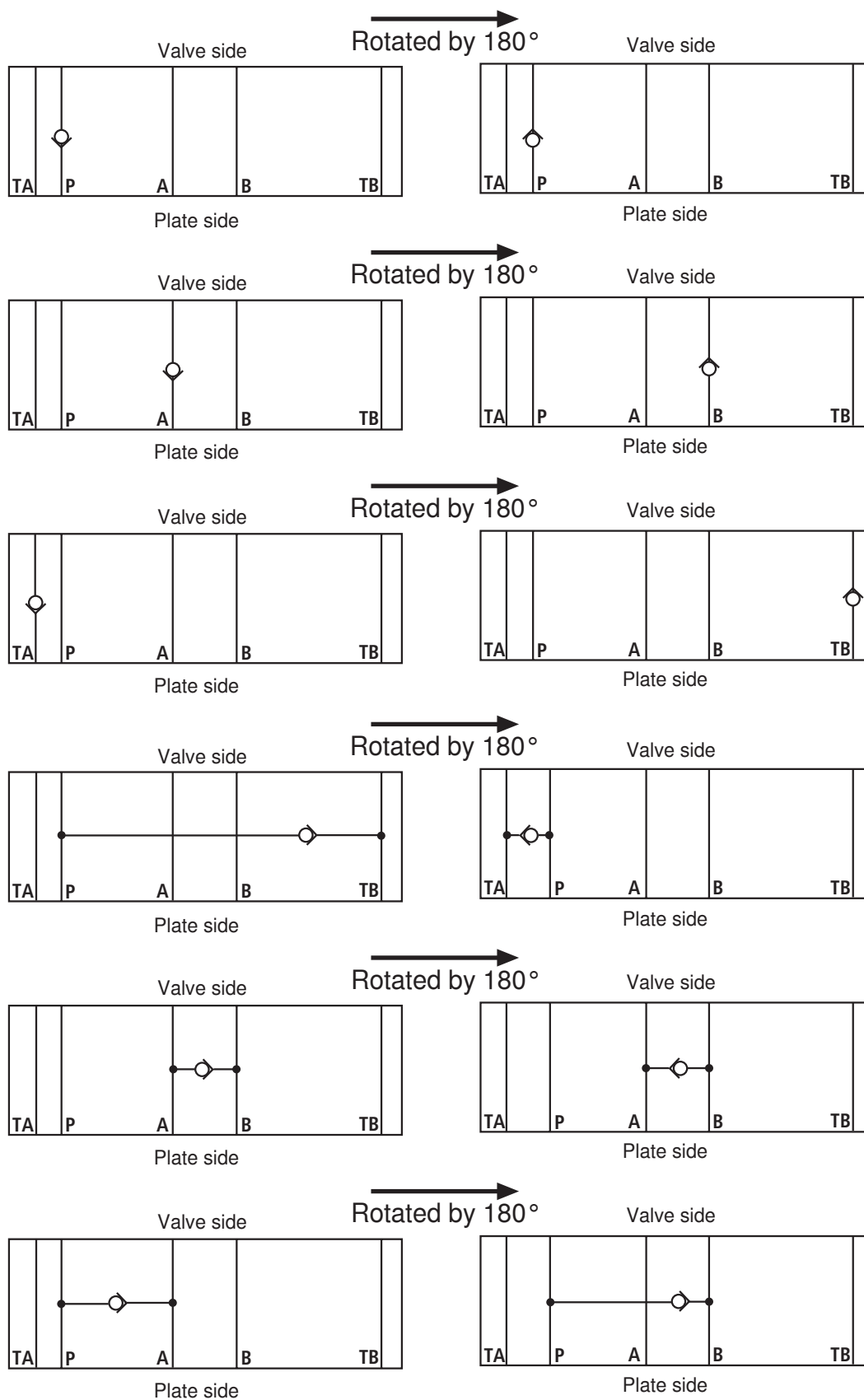
In case of sandwich plates with only one T bore (TA or TB), it has to be ensured that the connection to T is not interrupted and still ensured.

Distance plates with port in the P, A, B, TA or TB channel



Extended applications of HSZ 10 sandwich plates with R ring plate

Check valve in the P, A, B, TA or TB channel



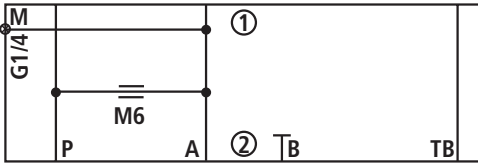
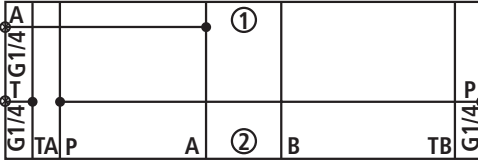
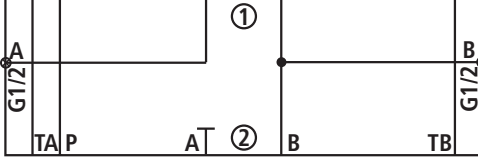
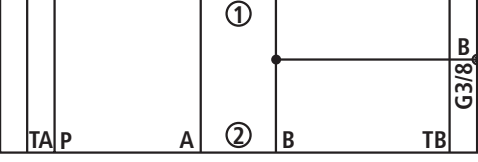
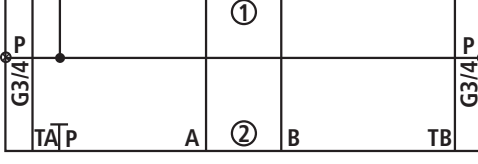
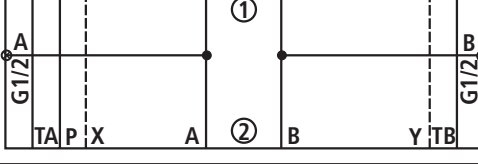
Distance plates without port (① = component side, ② = plate side)

Device designation	Type designation Material no.	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate with R ring plate	HSZ 10 A010-3X/M00 R900320784		91 x 70 x 5.5 0.3 kg	R900265368
Sandwich plate with R ring plate	HSZ 10 A345-3X/M00 R900564772		91 x 70 x 5.5 0.3 kg	R900265930
Sandwich plate with R ring plate	HSZ 10 B003-3X/M00 R900514665		90 x 70 x 11 0.5 kg	R900262119 Thread M8 x 1 in channel X and Y
Sandwich plate	HSZ 10 B007-3X/M00 R900535658		90 x 70 x 20 0.9 kg	R900265369
Sandwich plate	HSZ 10 B004-3X/M00 R900534251		90 x 70 x 50 2.4 kg	R900265212
Sandwich plate	HSZ 10 B339-3X/M00 R900536392		90 x 70 x 100 4.5 kg	R900265409
Sandwich plate	HSZ 10 A476-3X/M00 R901041896 Comment: Hole pattern displaced by 70 mm in direction A		170 x 70 x 70 6.0 kg	R901042543
Sandwich plate	HSZ 10 B029-3X/M00 R900906208 Comment: Hole pattern displaced by 14.5 mm in direction B		110 x 70 x 50 2.8 kg	R900267618
Sandwich plate	HSZ 10 B073-3X/M00 R900370156		91 x 70 x 20 0.9 kg	R900265519

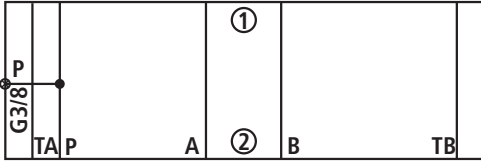
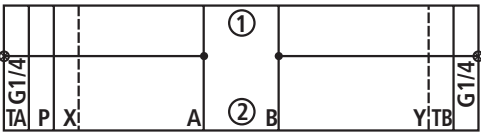
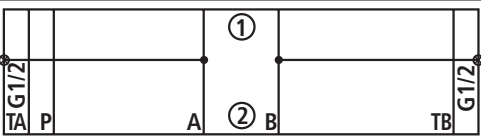
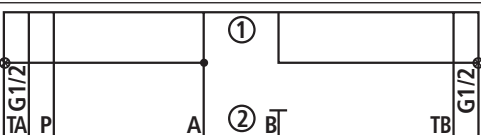
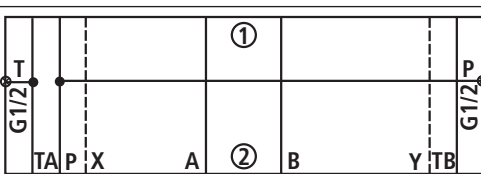
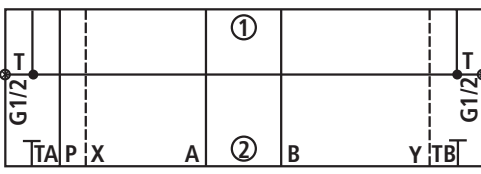
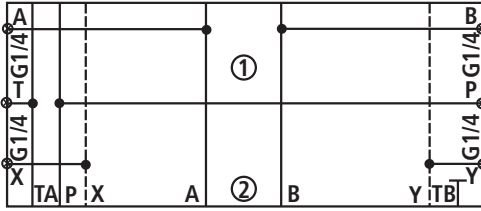
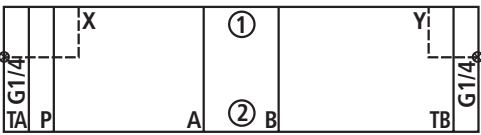
Distance plates with connections (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate	HSZ 10 B037-3X/M01 R900515226		100 x 70 x 40 2.0 kg Side E Side F T P G 1/4 G 1/4	R900265392
Sandwich plate	HSZ 10 A065-3X/M01 R900528297		130 x 70 x 40 2.7 kg Side E Side F T P G 1/2 G 1/2	R900262973
Sandwich plate	HSZ 10 A054-3X/M01 R900536190		130 x 70 x 40 2.7 kg Side E Side F T P G 1/2 G 1/2	R900265395
Sandwich plate	HSZ 10 A075-3X/M01 R900536191		110 x 70 x 40 2.0 kg Side E Side F T T G 1/2 G 1/2	R900265393
Sandwich plate	HSZ 10 A027-3X/M01 R900536244		130 x 70 x 40 2.7 kg Side F P G 1/2	R900265394
Sandwich plate	HSZ 10 A429-3X/M01 R900967602		120 x 70 x 100 6.1 kg Side E Side F P1, P2 P1, P2 G 3/4 G 3/4	R900279293
Sandwich plate	HSZ 10 A446-3X/M01 R900731748		110 x 70 x 100 5.6 kg Side E Side F T T G 1 G 1/4	R900732204

Distance plates with connections (① = component side, ② = plate side)

Device designation	Type designation Material no.	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate	HSZ 10-34854-ZA/M01 R901173176		105 x 70 x 50 2.7 kg Side E P G 1/4	R900240252 Internal thread M6
Sandwich plate	HSZ 10-34860-ZA/M01 R900975888		94 x 70 x 30 1.5 kg Side E A, T G 1/4	R900240251 Side F P G 1/4
Sandwich plate	HSZ 10 A040-3X/M01 R901176800		130 x 70 x 40 2.7 kg Side E A G 1/2	R901176802 Side F B G 1/2
Sandwich plate	HSZ 10 A058-1X/M01 R900413029		100 x 70 x 30 1.5 kg Side F B G 3/8	R900255859
Sandwich plate	HSZ 10 A066-1X/M01 R900551041		120 x 70 x 50 3.0 kg Side E P G 3/4	R900259802 Side F P G 3/4
Sandwich plate	HSZ 10 B031-3X/M01 R900563477		130 x 70 x 40 2.6 kg Side E A G 1/2	R900265843 Side F B G 1/2

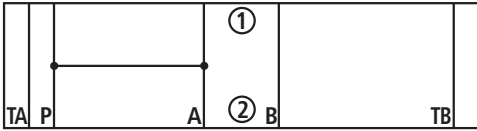
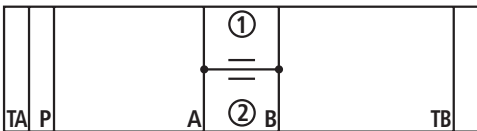
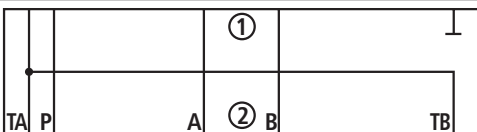
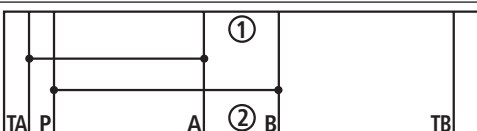
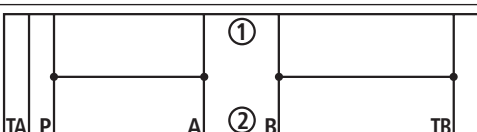
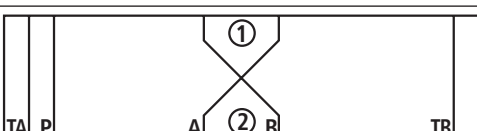
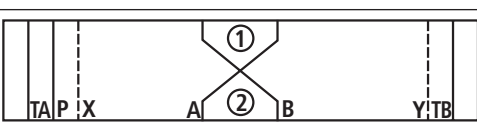
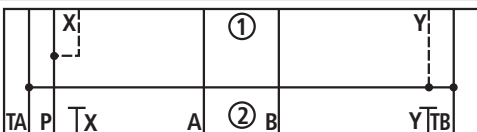
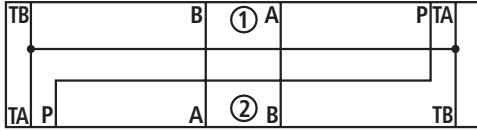
Distance plates with connections (① = component side, ② = plate side)

Device designation	Type designation Material no.	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate	HSZ 10 A024-1X/M01 R900584633		102 x 70 x 30 1.5 kg Side E P G 3/8	R900727135
Sandwich plate	HSZ 10 B035-3X/M01 R900536135		120 x 70 x 40 2.5 kg Side E A G 1/4	R900265391
Sandwich plate	HSZ 10 A031-3X/M01 R900532776		130 x 70 x 40 2.7 kg Side E A G 1/2	R900265126
Sandwich plate	HSZ 10 A331-3X/M01 R900532777		130 x 70 x 40 2.7 kg Side E A G 1/2	R900265127
Sandwich plate	HSZ 10 B065-3X/M01 R900563478		130 x 70 x 40 2.6 kg Side E T G 1/2	R900265844
Sandwich plate	HSZ 10 B075-3X/M01 R900525564		110 x 70 x 40 2.2 kg Side E T G 1/2	R900266335
Sandwich plate	HSZ 10 B096-3X/M01 R900550473		130 x 70 x 60 4.0 kg Side E A, X, T G 1/4	R900264833
Sandwich plate	HSZ 10 B097-3X/M01 R900320785		100 x 70 x 30 1.5 kg Side E X G 1/4	R900262648

Distance plates with connections (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate	HSZ 10 B305-3X/M01 R901279292		110 x 70 x 40 2.2 kg Side E P G 1/4	R900265573 R900265572
Sandwich plate	HSZ 10 B307-3X/M01 R901279293		110 x 70 x 40 2.2 kg Side F Y G 1/4	R900265574 R900265572
Sandwich plate	HSZ 10 B579-3X/M01 R900912473		110 x 70 x 40 2.2 kg Side E X1 G 1/4 Side F Y G 1/4	R900268822 R900265572
Sandwich plate	HSZ 10 B583-3X/V01 R900927893		110 x 70 x 40 2.2 kg Side E X1 G 1/4 Side F T G 1/4	R900270972 R900265572
Sandwich plate	HSZ 10 B643-3X/M01 R901145480		110 x 70 x 40 2.2 kg Side E P G 1/4 Side F T G 1/4	R901145488 R900265572
Sandwich plate	HSZ 10 B443-3X/M01 R900716990		110 x 70 x 40 2.2 kg Side E X G 1/4 Side F Y G 1/4	R900717782 R900265572
Sandwich plate	HSZ 10 B487-3X/M01 R901088182		118 x 70 x 40 2.2 kg Side E X G 1/4 Side F Y G 1/4	R901088216 R900265572
Sandwich plate	HSZ 10 B489-3X/M01 R901092645		114 x 70 x 40 2.2 kg Side E X G 1/4 Side F Y G 1/4	R901092648 R900265572
Sandwich plate	HSZ 10 B578-3X/M01 R900903619		110 x 70 x 40 2.2 kg Side E X G 1/4 Side F Y G 1/4	R900267141 R900265572

Distance plates with connections (① = component side, ② = plate side)

Device designation	Type designation Material no.	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate with R ring plate	HSZ 10 A019-3X/M00 R900537267		90 x 70 x 20 0.9 kg	R900265465
Sandwich plate	HSZ 10 A071-3X/M00 R900537262		90 x 70 x 30 1.4 kg	R900265467 Internal thread M8 x 1 between A and B channel
Sandwich plate	HSZ 10 A078-3X/M00 R900537264		90 x 70 x 20 0.9 kg	R900265463
Sandwich plate with R ring plate	HSZ 10 A077-3X/M00 R900537263		90 x 70 x 20 0.9 kg	R900265468
Sandwich plate with R ring plate	HSZ 10 A079-3X/M00 R900537265		90 x 70 x 20 0.9 kg	R900265464
Sandwich plate	HSZ 10 A061-3X/M00 R900565057		90 x 70 x 60 2.8 kg	R900265959
Sandwich plate	HSZ 10 B061-3X/M00 R900922486		90 x 70 x 60 2.7 kg	R900270096
Sandwich plate	HSZ 10 B098-3X/M00 R900439123		110 x 70 x 40 2.2 kg	R900265518 R900265572
Sandwich plate	HSZ 10 A076-3X/M00 R900515273	Important: The following valve set-up is rotated by 180°! 	90 x 70 x 50 2.5 kg	R900262149

Distance plates with connections (① = component side, ② = plate side)

Device designation	Type designation Material no.	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate with R ring plate	HSZ 10 A308-3X/V00 R900616863		90 x 70 x 20 0.9 kg	R900617187
Sandwich plate with R ring plate	HSZ 10 B529-3X/M00 R900738152		90 x 70 x 20 0.9 kg	R900738155
Sandwich plate with R ring plate	HSZ 10 B333-3X/M00 R900975306		90 x 70 x 20 0.9 kg	R900271263
Sandwich plate	HSZ 10 A055-3X/M00 R900964317		105 x 70 x 50 2.7 kg	R900756897
Sandwich plate	HSZ 10 A298-3X/M00 R901239582		90 x 71.3 x 20 0.85 kg	R901239953
Sandwich plate	HSZ 10 B079-3X/M00 R900786689		90 x 70 x 20 0.9 kg	R901001451
Sandwich plate	HSZ 10 B482-3X/A08B08M00 R901066985		90 x 70 x 20 0.9 kg	R901023531 Nozzles 0.8 mm in A + B
Sandwich plate	HSZ 10 A074-3X/M00 R901238703		90 x 71.3 x 20 0.87 kg	R901239244
Sandwich plate	HSZ 10 A495-3X/M00 R901118212		90 x 70 x 30 1.4 kg	R901118257 Plug screw G1/8 in channel A on the valve side

Distance plates with connections and two connection diagrams and external port

(① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate	HSZ 10-38003-ZA/M01 R901284807		120 x 90 x 50 3.9 kg Side E/ A G1/2 Side F/ B G1/2 Side A/ AB G1/4	R901094008 1x connection diagram 10A 1x connection diagram 06A
Sandwich plate	HSZ 10-38053-ZA/M01 R901145127		150 x 120 x 90 11.7 kg Side E/ A G1 Side F/ B G1, internal thread G1/4, MB G1/4 Side A/ MA, MB G1/4	R901146105 2x connection diagram 10B
Sandwich plate	HSZ 10-26534-Z/M01 R900548651		145 x 140 x 80 11.7 kg Side E/ MA, MT G1/4 Side F/ MB, MP G1/4	R900255919 1x connection diagram 10A
Sandwich plate	HSZ 10-26832-ZA/M01 R900725896		150 x 130 x 90 12.7 kg Side E/ MA3, MB3 G1/4 Side C/ A3, B3 G1/2	R900725942 2x connection diagram 10A

Functional group Blocking function

Example: HSZ 10 ¹ ² – 3X / ¹² ³ ⁴

Complementary details on sandwich plates with integrated blocking function (complete devices):

¹¹ 	Cracking pressure at the check valve type M-SR10 (installation kit)	0 bar (without spring) 0.5 bar 1 bar 1.8 bar 3.5 bar 5.5 bar	= 00 = 02 = 05 = 15 = 30 = 50
¹² 	Cracking pressure at the check valve type D9.8...: check valve type D8...: check valve type D10...:	0.5 bar 3.0 bar 5.0 bar	= 05 BAR = 30 BAR = 50 BAR
^{12.1} 	Cracking pressure at the check valve type Z1S6...: (installation kit / sandwich plate)	Cracking pressure 0.5 bar Cracking pressure 3.0 bar Cracking pressure 5.0 bar	= 05 = 30 = 50
¹³ 	Cracking pressure at the check valve type Z2S6...: (pilot operated)	Cracking pressure 1.5 bar Cracking pressure 3.0 bar Cracking pressure 6.0 bar Cracking pressure 10.0 bar	= 1 = 2 = 3 = 4
¹⁴ 	Seal material	NBR seals FKM seals (other seals upon request)	= no code = V
	⚠ Attention! Observe compatibility of seals with hydraulic fluid used!		
^{26.1} 	Nominal voltage at the coil	Direct voltage 12 V Direct voltage 24 V Direct voltage 26 V Direct voltage 110 V Direct voltage 220 V	= G12 = G24 = G26 = G110 = G220
^{35.1} 	Manual override at directional seat valve series K...	without manual override Concealed manual override Screwable manual override	= N0 = N9 = N11

Functional group Blocking function

35.1 	Manual override at directional seat valve series OD.15...	without manual override	= 1A	
			= 3A	
			= 3I	
		Screwable manual override	= 3M	
			= 3L	
			= 3D	
		with manual override "pushing"	= 1B	
			= 1L	
		with manual override "pushing", lockable in switched position	= 1C	
			= 1M	
35.2 	Electrical types of connection:	03pol (2+PE) DIN EN 175301-803, without mating connector	= 01 ¹⁾	= K4 ²⁾
		02pol K40 DT 04-2PA Deutsch, without mating connector	= 20 ¹⁾	= K40 ²⁾
		02pol C4/Z30 AMP Junior-Timer, without mating connector	= 07 ¹⁾	= C4 ²⁾
		¹⁾ Designation of the individual component solenoid coil		
		²⁾ Designation of the complete device HSZ range		

For the connection to AC voltage mains, a DC solenoid must be used, which is controlled via a rectifier.
In case of individual connection, a mating connector with integrated rectifier can be used (separate order).

Functional group Blocking function

Complementary details on check valves:

M-SR . KE ³¹ -1X/ (see page 19 - 21)

KE = Angle valve

³¹ 00 = without spring
 02 = 0.2 bar
 05 = 0.5 bar
 15 = 1.5 bar
 30 = 3.0 bar
 50 = 5.0 bar

RUECKSCHLAGVENTIL D 9.8- ³¹ / Z1S10T (see page 19 and 20)

³¹ 0.5 BAR
 3.0 BAR
 5.0 BAR

For numbers: 400, 401, 402, 408, 517, 519, 589 (see page 22 - 25)

VUCN- 08A- 04.31.20.00.56 ³¹ 000

Flow from 1 to 2

³¹ 00 = 1 bar 06 = 6 bar
 03 = 2.7 bar 09 = 9 bar
 05 = 5 bar 14 = 14 bar

VURN- 08A- 04.31.21.00.56 ³¹ 000

Flow from 2 to 1

³¹ 02 = 2 bar

For number: 490 (see page 22 and 23)

VUCN-12A- 04.31.28.00.57 ³² 000

Flow from 1 to 2

³² 00 = 1 bar
 05 = 5 bar
 08 = 8 bar
 15 = 15 bar

VURN-12A- 04.31.36.00.57 ³² 000

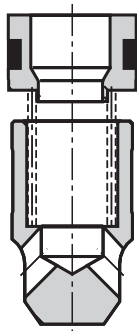
Flow from 2 to 1

³² 02 = 2 bar

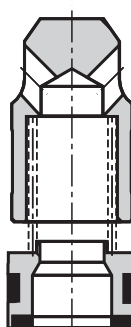
Functional group Blocking function

Complementary details on check valves:

Check valve type D9.8... installation kit (version "P" and "T"):



Version "P" (cracking pressure 0.5 bar)	
Seal material	Material no.
NBR	R900543827
FKM	R900543830



Version "T" (cracking pressure 0.5 bar)	
Seal material	Material no.
NBR	R900543839
FKM	R900543842

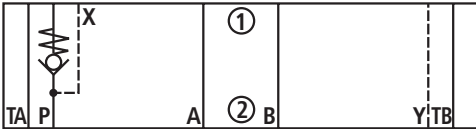
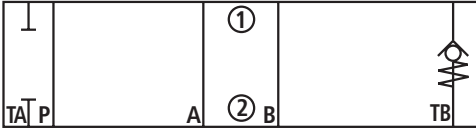
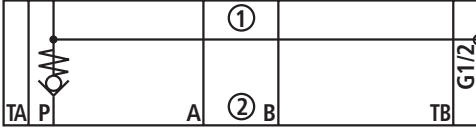
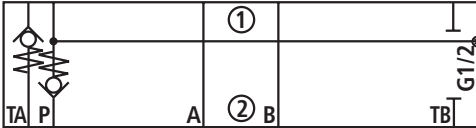
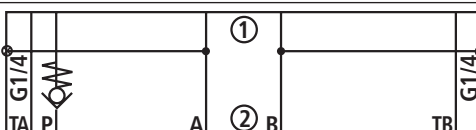
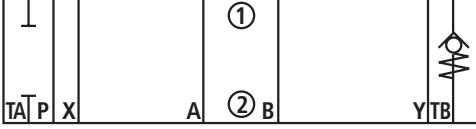
Check valve type D8.0...:

Version D8.0-.../HSZ 200 (cracking pressure 0.5 bar)	
Seal material	Material no.
NBR	R900544619
FKM	R900890139

Check valve type D10...:

Version D10-.../HSZ 187	
Seal material	Material no.
NBR	R900544566
FKM	R900869810

Check valves Z1S10 (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate	Z1S 10 P ^{12.1} □-3X/V S01		91 x 70 x 50 2.5 kg	RE 21536
Amend type designation according to page 14.				
Sandwich plate	Z1S 10 T ^{12.1} □-3X/V S0105		91 x 70 x 50 2.5 kg	RE 21536
Amend type designation according to page 14.				
Sandwich plate	Z1S 10 P ^{12.1} □-3X/V S068		91 x 70 x 50 2.5 kg Side F P G 1/2	RE 21536
Amend type designation according to page 14.				
Sandwich plate	Z1S 10 F ^{12.1} □-3X/V S068		91 x 70 x 50 2.5 kg Side F P G 1/2	RE 21536
Amend type designation according to page 14.				
Sandwich plate	Z1S 10 P ^{12.1} □-3X/V S0113		91 x 70 x 50 2.5 kg Side E A G 1/4 Side F B G 1/4	RE 21536
Amend type designation according to page 14.				
Sandwich plate	Z1S 10 T ^{12.1} □-3X/V S0114		91 x 70 x 50 2.5 kg	RE 21536
Amend type designation according to page 14.				

Check valves M-SR, D8, D9 and D10 (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate with R ring plate Fitting of the sandwich plate: RUECKSCHLAGVENTIL D8-05BAR/ ¹⁴ HSZ200	HSZ 10 A200-3X/05BARM00 R900558636		90 x 70 x 40 2.0 kg	R900265094
Sandwich plate with R ring plate Fitting of the sandwich plate: RUECKSCHLAGVENTIL D8-05BAR/ ¹⁴ HSZ200	HSZ 10 B200-3X/05BARM00 R900920897		90 x 70 x 40 2.0 kg	R900266114
Sandwich plate Fitting of the sandwich plate: Check valve (installation kit) M-SR 15 KE05-1X/ ¹⁴	HSZ 10 B650-3X/05M01 R901178011		130 x 70 x 60 4.0 kg Side E X G 1/4 Side F Y G 1/4	R901178322 2x plug screw M6 RE 20380
Sandwich plate Fitting of the sandwich plate: Check valve (installation kit) M-SR 15 KE05-1X/ ¹⁴	HSZ 10 A244-3X/05M00 R900941516		150 x 70 x 60 5.0 kg	R900262329 RE 20380
Sandwich plate with R ring plate Fitting of the sandwich plate: RUECKSCHLAGVENTIL D8-05BAR/ ¹⁴ HSZ200	HSZ 10 B192-3X/05BARM00 R900976702		90 x 70 x 40 1.8 kg	R900240603
Sandwich plate with R ring plate Fitting of the sandwich plate: RUECKSCHLAGVENTIL D8-05BAR/ ¹⁴ HSZ200	HSZ 10 A192-3X/05BARM00 R900908257		90 x 70 x 40 2.0 kg	R900265093
Sandwich plate Fitting of the sandwich plate: RUECKSCHLAGVENTIL D10-05BAR/ ¹⁴ HSZ187 RUECKSCHLAGVENTIL D9.8-05BAR/ ¹⁴ Z1S10T	HSZ 10 A184-3X/05BARM00 R900558725		90 x 70 x 50 2.4 kg	R900266032

Check valves M-SR, D8, D9 and D10 (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate	HSZ 10 A592-3X/05M00 R900944621		140 x 71 x 90 6.5 kg	R900274704 RE 20380
Sandwich plate	HSZ 10 B187-3X/05BARM00 R901211312		90 x 70 x 50 2.4 kg	R900265039
Sandwich plate	HSZ 10 A187-3X/05BARM00 R900555874		90 x 70 x 50 2.4 kg	R900265058
Sandwich plate	HSZ 10 B330-3X/05BAR-⁵⁰D □ M00		90 x 70 x 50 2.4 kg	R900265848 Internal thread M6
Sandwich plate	HSZ 10 A468-3X/05M01 R901010126		120 x 70 x 100 6.0 kg	R901010327
Sandwich plate	HSZ 10 B188-3X/02M00 R901046500		190 x 70 x 50 4.8 kg	R901046526 RE 20380
Sandwich plate	HSZ 10 A188-3X/05M00 R900555875		190 x 70 x 50 4.9 kg	R900265095 RE 20380

Fitting of the sandwich plate:

Check valve (installation kit)

M-SR 10 KE05-1X/□¹⁴
Fitting of the sandwich plate:

 RUECKSCHLAGVENTIL D10-05BAR/□¹⁴HSZ187

 RUECKSCHLAGVENTIL D9.8-05BAR/□¹⁴Z1S10T

Fitting of the sandwich plate:

 RUECKSCHLAGVENTIL D10-05BAR/□¹⁴HSZ187

 RUECKSCHLAGVENTIL D9.8-05BAR/□¹⁴Z1S10T

Fitting of the sandwich plate:

 RUECKSCHLAGVENTIL D10-05BAR/□¹⁴HSZ187

 RUECKSCHLAGVENTIL D9.8-05BAR/□¹⁴Z1S10T

DUESE⁵⁰ □ M6-DIN 906 (material no. see p. 90)

Fitting of the sandwich plate:

Check valve (installation kit)

M-SR 10 KE05-1X/□¹⁴
Fitting of the sandwich plate:

Check valve (installation kit)

M-SR 10 KE05-1X/□¹⁴
Fitting of the sandwich plate:

Check valve (installation kit)

M-SR 10 KE05-1X/□¹⁴

Check valves M-SR, D8, D9 and D10 (① = component side, ② = plate side)

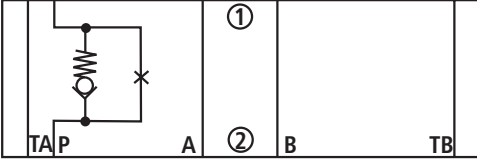
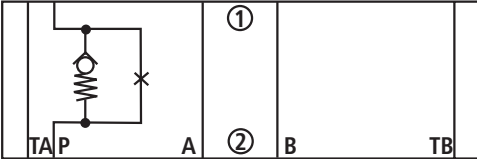
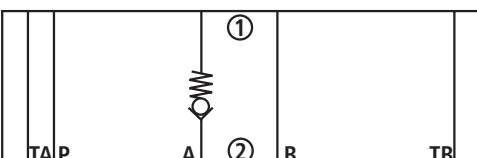
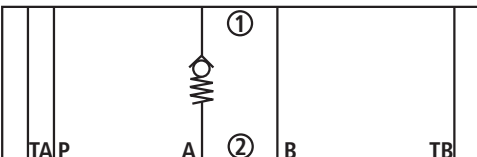
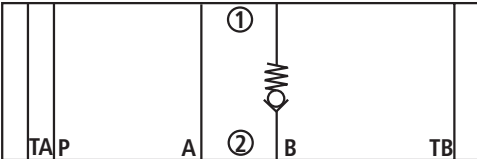
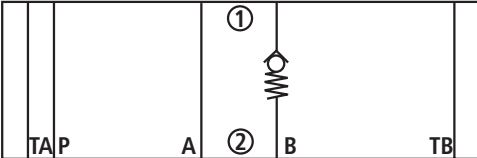
Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate with R ring plate Fitting of the sandwich plate: Check valve (installation kit) M-SR 10 KE05-1X/□	HSZ 10 A338-3X/05M00 R900916704		140 x 70 x 50 3.5 kg	R900265416 RE 20380
Sandwich plate with R ring plate Fitting of the sandwich plate: Check valve (installation kit) M-SR 10 KE05-1X/□	HSZ 10 B338-3X/M00 R900536800		140 x 70 x 40 3.5 kg	R900265449 RE 20380
Sandwich plate with R ring plate Fitting of the sandwich plate: Check valve (installation kit) M-SR 10 KE05-1X/□	HSZ 10 A552-3X/05M00 R900701086		140 x 70 x 40 3.5 kg	R900265417 RE 20380
Sandwich plate Fitting of the sandwich plate: Check valve (installation kit) M-SR 10 KE05-1X/□	HSZ 10 A186-3X/05V00 R901036587		100 x 70 x 50 2.5 kg	R901037041 RE 20380
Sandwich plate Fitting of the sandwich plate: Check valve (installation kit) M-SR 8 KE05-1X/□	HSZ 10 B436-3X/05M01 R900564126		120 x 70 x 80 4.9 kg Side F MA, MB G1/4 X G3/8	R901024630 RE 20380
Sandwich plate Fitting of the sandwich plate: Check valve (installation kit) M-SR 10 KE05-1X/□	HSZ 10 A577-3X/M01J12 R900903267		140 x 70 x 80 11.0 kg Side E A, XA G 1/4 Side F B, XB G 1/4	R900267100 RE 20380

Order example

For complete device: **HSZ 10** ¹**A** ¹¹**188-3X/** ³**05** ⁴**M** ⁰⁰**00**
Order example

For complete device: **HSZ 10** ¹²**B330-3X/** ⁵⁰**05BAR** ³**-D** ⁴**08** ⁰⁰**M** ⁰⁰**00**

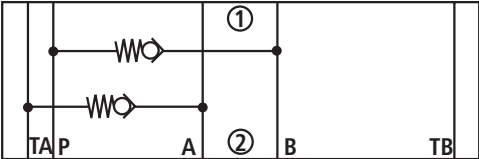
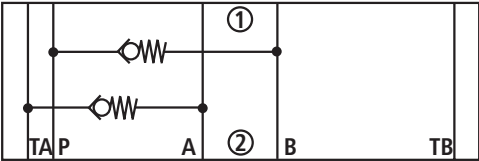
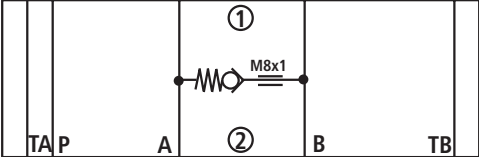
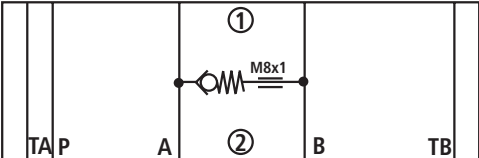
VUCN / VURN... check valves (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate	HSZ 10 A408-4X/ D00-20RV36M00 R901289554		105 x 70 x 50 2.6 kg	R901232101 Plug screw M8x1 RE 90005-03
Fitting of the sandwich plate: Check valve VURN-12A- 020431360057 ³² 02 000				
Sandwich plate	HSZ 10 A408-4X/ D00-10RV28M00 R901289489		105 x 70 x 50 2.6 kg	R901232101 Plug screw M8x1 RE 90005-03
Fitting of the sandwich plate: Check valve VUCN-12A- 000431280057 ³² 00 000				
Sandwich plate	HSZ 10 A490-4X/ A-20RV36M00 R901283120		200 x 70 x 80 7.5 kg	R901234326 RE 90005-03
Fitting of the sandwich plate: Check valve VURN-12A- 020431360057 ³² 02 000				
Sandwich plate	HSZ 10 A490-4X/ A-10RV28M00 R901283110		200 x 70 x 80 7.5 kg	R901234326 RE 90005-03
Fitting of the sandwich plate: Check valve VUCN-12A- 000431280057 ³² 00 000				
Sandwich plate	HSZ 10 A490-4X/ B-20RV36M00 R901283168		200 x 70 x 80 8.8 kg	R901234326 RE 90005-03
Fitting of the sandwich plate: Check valve VURN-12A- 020431360057 ³² 02 000				
Sandwich plate	HSZ 10 A490-4X/ B-10RV28M00 R901283155		200 x 70 x 80 8.8 kg	R901234326 RE 90005-03
Fitting of the sandwich plate: Check valve VUCN-12A- 000431280057 ³² 00 000				

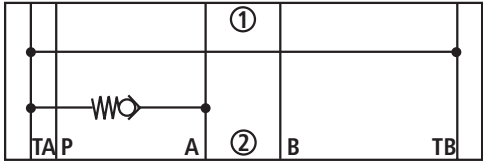
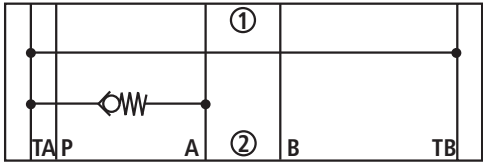
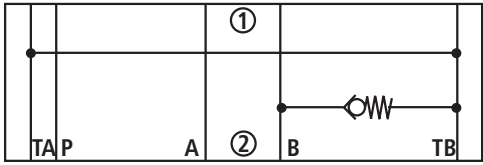
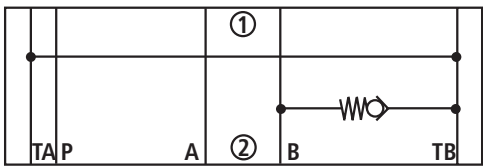
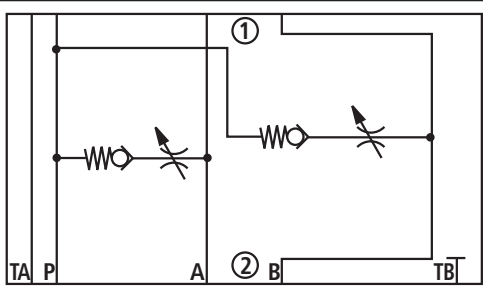
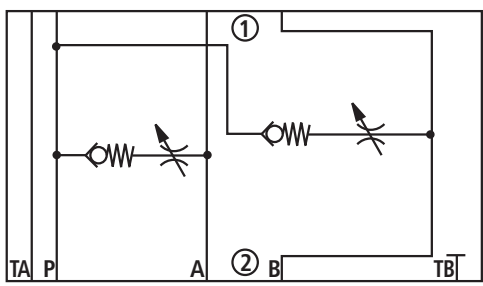
VUCN / VURN... check valves (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate	HSZ 10 A490-4X/ AB-20RV36M00 R901283166		200 x 70 x 80 7.5 kg	R901234326 RE 90005-03
Fitting of the sandwich plate: Check valve VURN-12A- 020431360057 ³² 02 000				
Sandwich plate	HSZ 10 A490-4X/ AB-10RV28M00 R901283131		200 x 70 x 80 7.5 kg	R901234326 RE 90005-03
Fitting of the sandwich plate: Check valve VUCN-12A- 000431280057 ³² 00 000				
Sandwich plate	HSZ 10 A519-4X/ 20RV21-25M00 R901283103		105 x 70 x 50 2.6 kg	R901154552 Nozzle 2.5 mm RE 90005-03
Fitting of the sandwich plate: Check valve VURN-08A- 020431210056 ³² 02 000				
Sandwich plate	HSZ 10 A519-4X/ 10RV20-25M00 R901283097		105 x 70 x 50 2.6 kg	R901154552 Nozzle 2.5 mm RE 90005-03
Fitting of the sandwich plate: Check valve VUCN-08A- 000431200056 ³² 00 000				
Sandwich plate with R ring plate	HSZ 10 A589-4X/ 20RV21-12M00 R901283162		105 x 70 x 50 2.6 kg	R901155030 Nozzle 1.2 mm RE 90005-03
Fitting of the sandwich plate: Check valve VURN-08A- 020431210056 ³² 02 000				
Sandwich plate rotated by 180°				
Sandwich plate with R ring plate	HSZ 10 A589-4X/ 10RV20-12M00 R901283158		105 x 70 x 50 2.6 kg	R901155030 Nozzle 1.2 mm RE 90005-03
Fitting of the sandwich plate: Check valve VUCN-08A- 000431200056 ³² 00 000				
Sandwich plate rotated by 180°				

VUCN / VURN... check valves (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate	HSZ 10 A587-4X/ 20RV21M00 R901283157		100 x 70 x 80 4.0 kg	R901028290 RE 90005-03
Fitting of the sandwich plate: Check valve VURN-08A- 020431210056 ³² 02 000				
Sandwich plate	HSZ 10 A587-4X/ 10RV20M00 R901283156		100 x 70 x 80 4.0 kg	R901028290 RE 90005-03
Fitting of the sandwich plate: Check valve VUCN-08A- 000431200056 ³² 00 000				
Sandwich plate	HSZ 10 A517-4X/ 20RV21M00 R901283093		105 x 70 x 50 2.8 kg	R901154552 Internal thread M8x1 RE 90005-03
Fitting of the sandwich plate: Check valve VURN-08A- 020431210056 ³² 02 000				
Sandwich plate	HSZ 10 A517-4X/ 10RV20M00 R901283092		120 x 70 x 50 3.0 kg	R901153919 Internal thread M8x1 RE 90005-03
Fitting of the sandwich plate: Check valve VUCN-08A- 020431200056 ³² 00 000				

VUCN / VURN... check valves (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate with R ring plate	HSZ 10 A667-4X/ 20RV36M00		140 x 70 x 60 2.6 kg	R901282203
	R901283170		RE 90005-03	
Fitting of the sandwich plate: Check valve VURN-12A- 020431360057 ³¹ 02 000				
Sandwich plate with R ring plate	HSZ 10 A667-4X/ 10RV28M00		140 x 70 x 60 2.6 kg	R901282203
	R901283169		RE 90005-03	
Fitting of the sandwich plate: Check valve VUCN-12A- 000431280057 ³¹ 00 000				
Sandwich plate with R ring plate	HSZ 10 A668-4X/ 20RV36M00		140 x 70 x 60 2.6 kg	R901282212
	R901283174		RE 90005-03	
Fitting of the sandwich plate: Check valve VURN-12A- 020431360057 ³¹ 02 000				
Sandwich plate with R ring plate	HSZ 10 A668-4X/ 10RV28M00		140 x 70 x 60 2.6 kg	R901282212
	R901283172		RE 90005-03	
Fitting of the sandwich plate: Check valve VUCN-12A- 000431280057 ³¹ 00 000				
Sandwich plate	HSZ 10 A648-3X/ DV-10RV20M00		120 x 70 x 80 5.2 kg	R901164210
	R901283230		RE 90005-03	
Fitting of the sandwich plate: Check valve VUCN-08A- 000431200056 ³¹ 00 000				
Sandwich plate	HSZ 10 A648-3X/ DV-20RV21M00		120 x 70 x 80 5.2 kg	R901164210
	R901283237		RE 90005-03	
Fitting of the sandwich plate: Check valve VURN-08A- 020431210056 ³¹ 02 000				

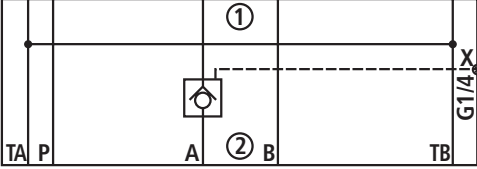
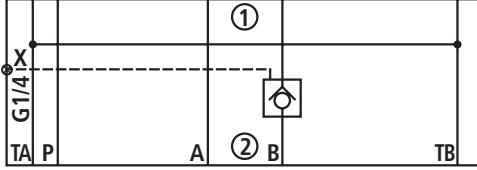
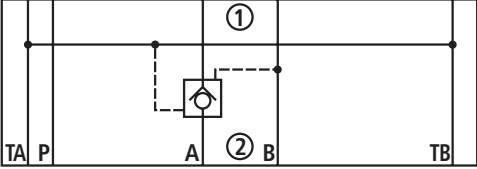
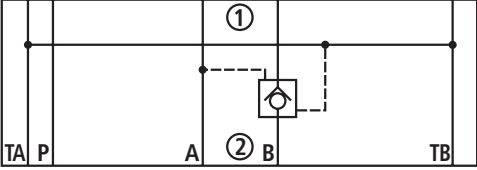
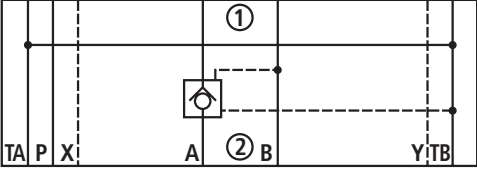
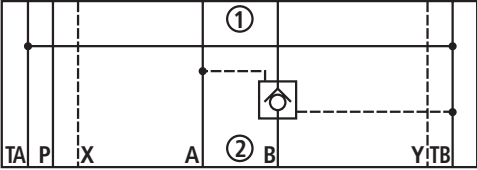
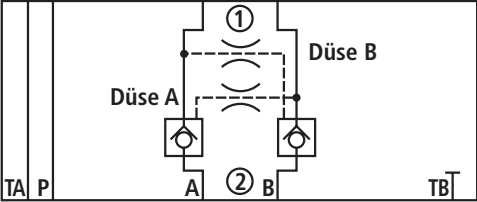
Check valves, pilot operated (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate	HSZ 10-38083-AA/HM01 R901177093		245 x 87 x 150 16.6 kg Attention! Special width	R901179168 Internal thread M8x1 RE 21468
Sandwich plate	HSZ 10-38083-BA/HM01 R901241879		245 x 87 x 150 16.6 kg Attention! Special width	R901242942 Internal thread M8x1 RE 21468
Sandwich plate	HSZ 10 A645-3X/VSON-10M01 R901160546		168 x 70 x 130 9.9 kg	R901161570 RE 90005-03
Sandwich plate	HSZ 10 A463-3X/ERVE-S315-280M01 R901004076		250 x 70 x 90 11.4 kg	R901005500 RE 25402
Sandwich plate	HSZ 10 A467-3X/ERVE-M01 R901007427		180 x 70 x 80 7.3 kg	R901008435
Sandwich plate	HSZ 10 A488-3X/ERVE-S315-280M01 R901091588		280 x 71 x 160 7.3 kg	R901091623 RE 25402

Check valves, pilot operated (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
	Material no.			
Sandwich plate	Z2S 10 - ¹³ □ -3X/ ¹⁴ □		163 x 69.5 x 50 3.4 kg	RE 21553
Amend type designation according to page 14.				
Sandwich plate	Z2S 10 A ¹³ □ -3X/ ¹⁴ □		163 x 69.5 x 50 3.4 kg	RE 21553
Amend type designation according to page 14.				
Sandwich plate	Z2S 10 B ¹³ □ -3X/ ¹⁴ □		163 x 69.5 x 50 3.4 kg	RE 21553
Amend type designation according to page 14.				

Check valves, pilot operated (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
	Material no.			
Sandwich plate	Z2S 10 A ¹³ □ -3X/ ¹⁴ □ S040		163 x 69.5 x 50 3.4 kg Side F X G 1/4	RE 21553
Amend type designation according to page 14.				
Sandwich plate	Z2S 10 B ¹³ □ -3X/ ¹⁴ □ S040		163 x 69.5 x 50 3.4 kg Side E X G 1/4	RE 21553
Amend type designation according to page 14.				
Sandwich plate	Z2S 10 A ¹³ □ -3X/ ¹⁴ □ S060		163 x 69.5 x 50 3.4 kg	RE 21553
Amend type designation according to page 14.				
Sandwich plate	Z2S 10 B ¹³ □ -3X/ ¹⁴ □ S060		163 x 69.5 x 50 3.4 kg	RE 21553
Amend type designation according to page 14.				
Sandwich plate	Z2S 10 A ¹³ □ -3X/ ¹⁴ □ S064		163 x 69.5 x 50 3.4 kg	RE 21553
Amend type designation according to page 14.				
Sandwich plate	Z2S 10 B ¹³ □ -3X/ ¹⁴ □ S064		163 x 69.5 x 50 3.4 kg	RE 21553
Amend type designation according to page 14.				
Sandwich plate	HSZ 10 A527-3X/ERVE-D ⁵⁰ □ M00		260 x 70 x 80 10.7 kg	R900709357
Fitting of the sandwich plate:				
Check valve, pilot operated	FL-ERVE-R1-13X DUESE ⁵⁰ □ M6-DIN 906 Material no. see p. 90			RN115.06

Blocking function, electrically switchable, normally open (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
	Material no.			
Sandwich plate	M-Z4SEH 10 E1- 2X/3C ²⁶ □ K4		152 x 70 x 80 6.8 kg	R901071319 RE 18136-21
Sandwich plate	M-Z4SEH 10 A-2X/3C ²⁶ □ K4		152 x 70 x 80 6.8 kg	R901071319 RE 18136-21
Sandwich plate	M-Z4SEH 10 B-2X/3C ²⁶ □ K4		152 x 70 x 80 6.8 kg	R901071319 RE 18136-21
Sandwich plate	M-Z4SEH 10 E-2X/3C ²⁶ □ ETK4		152 x 70 x 80 6.8 kg	R901071319 RE 18136-21
Sandwich plate	M-Z4SEH 10 E-2X/3C ²⁶ □ TK4		152 x 70 x 80 6.8 kg	R901071319 RE 18136-21
Sandwich plate	M-Z4SEH 10 E-2X/3C ²⁶ □ EK4		152 x 70 x 80 6.8 kg	R901071319 RE 18136-21
Sandwich plate	M-Z4SEH 10 E-2X/3C ²⁶ □ K4		152 x 70 x 80 6.8 kg	R901071319 RE 18136-21

Blocking function, electrically switchable (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate HSZ 10A 490-4X/AB-A05	☐ 26.1 ☐ 35.1 ☐ 35.2 M00		200 x 70 x 80 7.64 kg	R901234326 Valve on side E and F RE 90005-03
Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ☐ 35.1 S0.000 SPULE OD.02.17. ☐ 35.2 ☐ 26.1 30. ☐ .000				
Sandwich plate HSZ 10A 490-4X/A-A05	☐ 26.1 ☐ 35.1 ☐ 35.2 M00		200 x 70 x 80 7.64 kg	R901234326 Valve on side E RE 90005-03
Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ☐ 35.1 S0.000 SPULE OD.02.17. ☐ 35.2 ☐ 26.1 30. ☐ .000				
Sandwich plate HSZ 10A 490-4X/B-A05	☐ 26.1 ☐ 35.1 ☐ 35.2 M00		200 x 70 x 80 7.64 kg	R901234326 Valve on side F RE 90005-03
Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ☐ 35.1 S0.000 SPULE OD.02.17. ☐ 35.2 ☐ 26.1 30. ☐ .000				
Sandwich plate HSZ 10A 490-4X/AB-A06	☐ 26.1 ☐ 35.1 ☐ 35.2 M00		200 x 70 x 80 7.64 kg	R901234326 Valve on side E and F RE 90005-03
Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ☐ 35.1 S0.000 SPULE OD.02.17. ☐ 35.2 ☐ 26.1 30. ☐ .000				
Sandwich plate HSZ 10A 490-4X/A-A06	☐ 26.1 ☐ 35.1 ☐ 35.2 M00		200 x 70 x 80 7.64 kg	R901234326 Valve on side E RE 90005-03
Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ☐ 35.1 S0.000 SPULE OD.02.17. ☐ 35.2 ☐ 26.1 30. ☐ .000				

 $q_{V \max}$ seat valve = 150 l/min

Order example for complete device with **two** seat valves normally closed, blocking on one side:

 HSZ 10A 490-4X/ AB-A05 ☐ 26 ☐ K4M00

Effective in channel A and B

Blocking function, electrically switchable (① = component side, ② = plate side)

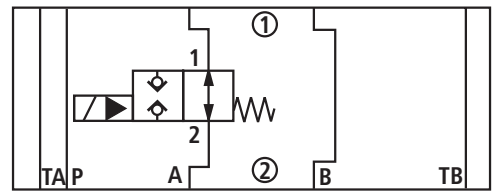
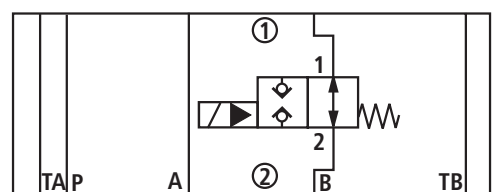
Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate HSZ 10A 490-4X/B-A06 ^{26.1} ^{35.1} ^{35.2} ☐ ☐ ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ^{26.1} ☐ 30. ☐ .000			200 x 70 x 80 7.64 kg	R901234326 Valve on side F RE 90005-03
Sandwich plate HSZ 10A 490-4X/AB-B05 ^{26.1} ^{35.1} ^{35.2} ☐ ☐ ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ^{26.1} ☐ 30. ☐ .000			200 x 70 x 80 7.64 kg	R901234326 Valve on side E and F RE 90005-03
Sandwich plate HSZ 10A 490-4X/A-A05 ^{26.1} ^{35.1} ^{35.2} ☐ ☐ ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ^{26.1} ☐ 30. ☐ .000			200 x 70 x 80 7.64 kg	R901234326 Valve on side E RE 90005-03
Sandwich plate HSZ 10A 490-4X/B-B05 ^{26.1} ^{35.1} ^{35.2} ☐ ☐ ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ^{26.1} ☐ 30. ☐ .000			200 x 70 x 80 7.64 kg	R901234326 Valve on side F RE 90005-03
Sandwich plate HSZ 10A 490-4X/AB-B06 ^{26.1} ^{35.1} ^{35.2} ☐ ☐ ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ^{26.1} ☐ 30. ☐ .000			200 x 70 x 80 7.64 kg	R901234326 Valve on side E and F RE 90005-03

Order example

For complete device with one seat valve normally closed, blocking on both sides:

HSZ 10A 490-4X/ ²⁶ A -B05 ☐ K4M00
 Effective in channel A

Blocking function, electrically switchable (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight	
			Size of the ports	
Sandwich plate HSZ 10A 490-4X/A-B06 ^{26.1} ☐ ^{35.1} ☐ ^{35.2} ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ☐ 30. ^{26.1} ☐ .000			200 x 70 x 80 7.64 kg	R901234326 Valve on side E RE 90005-03
				
Sandwich plate HSZ 10A 490-4X/B-B06 ^{26.1} ☐ ^{35.1} ☐ ^{35.2} ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ☐ 30. ^{26.1} ☐ .000			200 x 70 x 80 7.64 kg	R901234326 Valve on side F RE 90005-03
				

 $q_{V \max}$ seat valve = 150 l/min

Blocking function, electrically switchable (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate HSZ 10A 408-4X/D00-A05	26.1 35.1 35.2 M00		170 x 70 x 80 7.3 kg	R901039207 Valve on side F Plug screw M8x1 RE 90005-03
	Fitting of the sandwich plate:			
	SITZVENTIL OD.15.05.89. 35.1 SPULE OD.02.17. 35.2 26.1 30. 0.000			
Sandwich plate HSZ 10A 408-4X/D00-A06	26.1 35.1 35.2 M00		170 x 70 x 80 7.3 kg	R901039207 Valve on side F Plug screw M8x1 RE 90005-03
	Fitting of the sandwich plate:			
	SITZVENTIL OD.15.05.89. 35.1 SPULE OD.02.17. 35.2 26.1 30. 0.000			
Sandwich plate HSZ 10B 408-4X/D00-A05	26.1 35.1 35.2 M00		170 x 70 x 80 7.3 kg	R901217086 Valve on side F Plug screw M8x1 RE 90005-03
	Fitting of the sandwich plate:			
	SITZVENTIL OD.15.05.89. 35.1 SPULE OD.02.17. 35.2 26.1 30. 0.000			
Sandwich plate HSZ 10B 408-4X/D00-A06	26.1 35.1 35.2 M00		170 x 70 x 80 7.3 kg	R901217086 Valve on side F Plug screw M8x1 RE 90005-03
	Fitting of the sandwich plate:			
	SITZVENTIL OD.15.05.89. 35.1 SPULE OD.02.17. 35.2 26.1 30. 0.000			
Sandwich plate HSZ 10B 670-4X/LKHC-ZD-KSC	26.1 35.1 35.2 M00		454 x 70 x 80 16.7 kg	R901287658 Internal thread M6 Double plug in XP and YT RE 18136-21
	Fitting of the sandwich plate:			
	SITZVENTIL OD.15.05.89. 35.1 SPULE OD.02.17. 35.2 26.1 30. 0.000			

 $q_{V \max}$ seat valve = 150 l/min

Functional group Pressure function

Example: **HSZ 10** 1 2 – 3X / 15 16 3 4

Complementary details on sandwich plates with integrated pressure function (complete devices):

14 	Seal material Important: Observe compatibility of seals with hydraulic fluid used!	NBR seals FKM seals (other seals upon request)	= no code = V	1) Please observe the installation dimensions!
15 	Adjustment element at the pressure relief valve type DBD..10...:	Setscrew with hexagon and protective cap Rotary knob Lockable rotary knob	= S = H ¹⁾ = A ¹⁾	
16 	Setting pressure at the pressure relief valve type DBD..10...:	up to 25 bar up to 50 bar up to 100 bar up to 200 bar up to 315 bar	= 25 (025) = 50 (050) = 100 = 200 = 315	
37 	Adjustment element at the pressure sequence valve Pressure reducing valve	Type ZDZ 10 D.. Rotary knob Type ZDR 10 D.. Bushing with hexagon and protective cap Type ZDR 10 V.. Lockable rotary knob with scale Type DR 10 K.. Spindle with internal hexagon and scale Rotary knob with scale	= 1 = 2 = 3 – = 7	ZDR 10 D... ZDZ 10 D... DR 10 K... ZDR 10 V... = 4 = 5 = 6 – = 7
38 	Setting pressure at the pressure relief valve type DR 10 K...: Note: Spelling () with complete type!	Secondary pressure up to 50 bar up to 100 bar up to 200 bar up to 315 bar	= 50 (050) = 100 = 200 = 315	
18 	Setting pressure at the valve type ZDR 10 V...:	up to 50 bar up to 100 bar up to 200 bar up to 315 bar	= 50 = 100 = 200 = 315	
19 	Setting pressure at the valve type ZDR 10 D... , ZDZ 10 D...:	up to 25 bar ²⁾ up to 75 bar ²⁾ up to 150 bar up to 210 bar	= 25 = 75 = 150 = 210	²⁾ Not with version SO129!

Pressure relief valves, direct operated (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
	Material no.			
Sandwich plate with R ring plate Fitting of the sandwich plate: Pressure relief valve, direct operated	HSZ 10 A100-3X/ ¹⁵ ¹⁶ ☐ ☐ M00 DBD ¹⁵ ¹⁶ ☐ 10 K1X/ ☐ ☐		170 x 70 x 50 4.5 kg	R900262854 RE 25402 DBD on side E
Sandwich plate with R ring plate Fitting of the sandwich plate: Pressure relief valve, direct operated	HSZ 10 B100-3X/ ¹⁵ ¹⁶ ☐ ☐ M00 DBD ¹⁵ ¹⁶ ☐ 10 K1X/ ☐ ☐		170 x 70 x 50 4.5 kg	R900262855 RE 25402 DBD on side E
Sandwich plate with R ring plate Fitting of the sandwich plate: Pressure relief valve, direct operated	HSZ 10 A106-3X/ ¹⁵ ¹⁶ ☐ ☐ M00 DBD ¹⁵ ¹⁶ ☐ 10 K1X/ ☐ ☐		170 x 70 x 50 4.3 kg	R900262857 RE 25402 DBD on side E
Sandwich plate with R ring plate Fitting of the sandwich plate: Pressure relief valve, direct operated	HSZ 10 B106-3X/ ¹⁵ ¹⁶ ☐ ☐ M00 DBD ¹⁵ ¹⁶ ☐ 10 K1X/ ☐ ☐		170 x 70 x 50 4.3 kg	R900241588 RE 25402 DBD on side E
Sandwich plate with R ring plate Fitting of the sandwich plate: Pressure relief valve, direct operated	HSZ 10 A107-3X/ ¹⁵ ¹⁶ ☐ ☐ M00 DBD ¹⁵ ¹⁶ ☐ 10 K1X/ ☐ ☐		170 x 70 x 50 4.3 kg	R900262856 RE 25402 DBD on side F
Sandwich plate with R ring plate Fitting of the sandwich plate: Pressure relief valve, direct operated	HSZ 10 B107-3X/ ¹⁵ ¹⁶ ☐ ☐ M00 DBD ¹⁵ ¹⁶ ☐ 10 K1X/ ☐ ☐		170 x 70 x 50 4.3 kg	R900262869 RE 25402 DBD on side F

Order example: For complete device with **one** pressure relief valve: **HSZ 10 A100-3X/** ¹⁵ ¹⁶ ☐ ☐ **S** ³ ⁴ ☐ ☐ **M** ⁰⁰

Pressure relief valves, direct operated (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Plate L x W x H in mm Weight Size of the ports	Dimensional sheet
	Material no.			More information
Sandwich plate with R ring plate Fitting of the sandwich plate: Pressure relief valve, direct operated	HSZ 10 A102-3X/ ^{15 16} ☐ ☐ M00 DBD ¹⁵ ☐ 10 K1X/ ^{16 14} ☐ ☐		170 x 70 x 70 6.1 kg	R900262852 RE 25402 DBD on side F
Sandwich plate with R ring plate Fitting of the sandwich plate: Pressure relief valve, direct operated	HSZ 10 B102-3X/ ^{15 16} ☐ ☐ M00 DBD ¹⁵ ☐ 10 K1X/ ^{16 14} ☐ ☐		170 x 70 x 70 6.5 kg	R900262853 RE 25402 DBD on side F
Sandwich plate with R ring plate Fitting of the sandwich plate: Pressure relief valve, direct operated	HSZ 10 A118-3X/ ^{15 16} ☐ ☐ M00 DBD ¹⁵ ☐ 10 K1X/ ^{16 14} ☐ ☐		170 x 70 x 70 5.7 kg	R900265627 RE 25402 DBD on side E
Sandwich plate Fitting of the sandwich plate: Pressure relief valve, direct operated	HSZ 10 A117-3X/ ^{15 16} ☐ ☐ M01 DBD ¹⁵ ☐ 10 K1X/ ^{16 14} ☐ ☐		170 x 70 x 70 6.0 kg Side F T G 1/4	R900262884 RE 25402 DBD on side E
Sandwich plate with R ring plate Fitting of the sandwich plate: Pressure relief valve, direct operated	HSZ 10 24833-AA/HM01 R900560418 DBDS 10 K1X/25		220 x 70 x 70 8.2 kg	R900245033 RE 25402 DBD on side E and F

Order example

 For complete device with **one** pressure relief valve: **HSZ 10 A102-3X/** ¹⁵ ☐ ¹⁶ ☐ ³ ☐ ⁴ ☐

Pressure relief valves, direct operated (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate	HSZ 10 A105-3X/A ¹⁵ ¹⁶ ☐ ☐ -B ¹⁵ ¹⁶ ☐ ☐ M00		250 x 70 x 70 8.8 kg	R900262812
Fitting of the sandwich plate: Pressure relief valve, direct operated	DBD ¹⁵ ☐ 10 K1X/ ¹⁶ ¹⁴ ☐ ☐			RE 25402 DBD on side E and F
Sandwich plate	HSZ 10 B105-3X/A ¹⁵ ¹⁶ ☐ ☐ -B ¹⁵ ¹⁶ ☐ ☐ M00		250 x 70 x 70 8.8 kg	R900271893
Fitting of the sandwich plate: Pressure relief valve, direct operated	DBD ¹⁵ ☐ 10 K1X/ ¹⁶ ¹⁴ ☐ ☐			RE 25402 DBD on side E and F
Sandwich plate	HSZ 10 A108-3X/A ¹⁵ ¹⁶ ☐ ☐ -B ¹⁵ ¹⁶ ☐ ☐ M00		220 x 70 x 80 8.9 kg	R900262880
Fitting of the sandwich plate: Pressure relief valve, direct operated	DBD ¹⁵ ☐ 10 K1X/ ¹⁶ ¹⁴ ☐ ☐			RE 25402 DBD on side E and F
Sandwich plate	HSZ 10 B108-3X/A ¹⁵ ¹⁶ ☐ ☐ -B ¹⁵ ¹⁶ ☐ ☐ M00		220 x 70 x 80 8.9 kg	R900268669
Fitting of the sandwich plate: Pressure relief valve, direct operated	DBD ¹⁵ ☐ 10 K1X/ ¹⁶ ¹⁴ ☐ ☐			RE 25402 DBD on side E and F

Order example

For complete device with **two** pressure relief valves: **HSZ 10 A105-3X/A** ¹⁵ ¹⁶ ☐ ☐ **S** **315** - **B** ¹⁵ ¹⁶ ☐ ☐ **S** **315** **M** ³ ⁴ ☐ ☐

Pressure relief valves, direct operated (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Plate L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate	Material no. HSZ 10-38008-AA/HM01 R901098088		170 x 70 x 80 6.8 kg	R901195298 RE 25402 DBD on side F
Fitting of the sandwich plate: Pressure relief valve, direct operated	DBDS 10 K1X/50			
Sandwich plate	Material no. HSZ 10 A124-3X/ ¹⁵ ¹⁶ M00		197 x 70 x 90 6.0 kg	R900271893 RE 25402
Fitting of the sandwich plate: Pressure relief valve, direct operated	DBDS 6 K1X/2...			

Pressure relief valves, direct operated, electrically switchable (① = component side, ② = plate side)

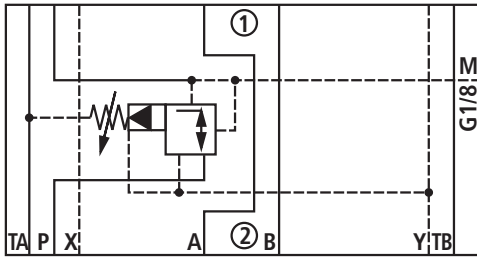
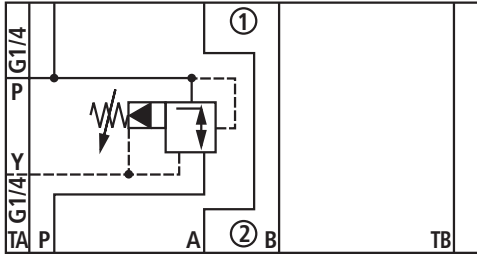
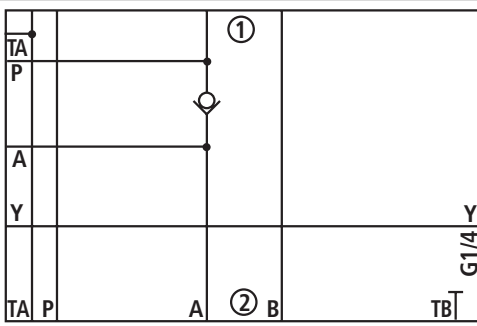
Device designation	Type designation Material no.	Symbol	Plate L x W x H Weight Size of the ports	Dimensional sheet and more information
Sandwich plate	Material no. HSZ 10A 493-3X/03-05-A06 ^{26.1} ^{35.1} ^{35.2} M01		120 x 70 x 90 5.2 kg	R901116019 RE 90005-03
Fitting of the sandwich plate: SITZVENTIL OD.15.05.18... Pressure relief valve 04.11.49...				
Sandwich plate	Material no. HSZ 10A 493-3X/03-05-A05 ^{26.1} ^{35.1} ^{35.2} M01		120 x 70 x 90 5.2 kg	R901116019 RE 90005-03
Fitting of the sandwich plate: SITZVENTIL OD.15.05.18... Pressure relief valve 04.11.49...				

Pressure reducing valves, direct operated (① = component side, ② = plate side)

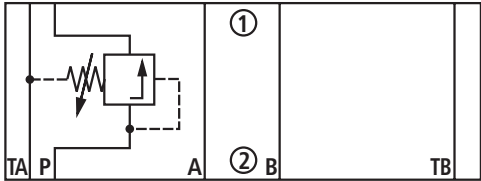
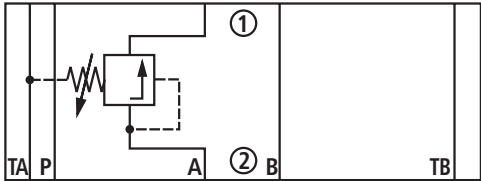
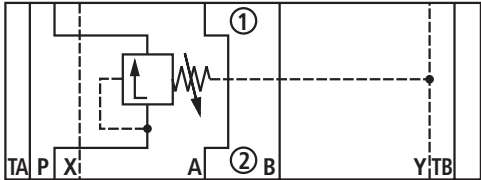
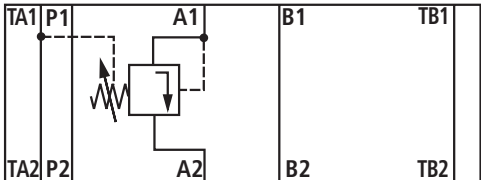
Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
	Material no.			
Sandwich plate	ZDR 10 DA ³⁷ □-5X/ ¹⁹ □ YMS0129		104 x 69 x 50 2.8 kg	Installation dimensions see RE 26585
Amend type designation according to page 30.				
Sandwich plate	ZDR 10 DB ³⁷ □-5X/ ¹⁹ □ YMS033		91 x 69 x 50 3.2 kg	Installation dimensions see RE 26585
Amend type designation according to page 30.				
Sandwich plate	ZDR 10 DP ³⁷ □-5X/ ¹⁹ □ YMS033		91 x 69 x 50 3.2 kg	Installation dimensions see RE 26585
Amend type designation according to page 30.				
Sandwich plate	ZDR 10 DB ³⁷ □-5X/ ¹⁹ □ YMS0138		91 x 69 x 50 3.2 kg	Installation dimensions see RE 26585
Amend type designation according to page 30.				
Sandwich plate	ZDR 10 DP ³⁷ □-5X/ ¹⁹ □ YMS0138		91 x 69 x 50 3.2 kg	Installation dimensions see RE 26585
Amend type designation according to page 30.				

For more versions see RE 26585

Pressure reducing valves, pilot operated (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate	ZDR 10 VP ³⁷ □-3X/ ¹⁸ □ YMSO107		104 x 69 x 50 2.3 kg	Installation di- mensions see RE 26861
Amend type designation according to page 34.				
Sandwich plate	HSZ 10 A550-3X/ ³⁷ □- ³⁸ □ M01		140 x 70 x 80 5.7 kg	R900265979
Fitting of the sandwich plate:				
Pressure re- ducing valve, pilot operated	DR 10 K ³⁷ □-3X/ ³⁸ □ YM ¹⁴ □		Side E P, Y G 1/4	RE 26850
Amend type designation according to page 34.				
Sandwich plate	HSZ 10 A441-3X/ 05M01 R900705578		140 x 70 x 220 15.6 kg	R900706722
Fitting of the sandwich plate:				
Check valve (installation kit)	M-SR 10 KE...1X/...		Side E Y G 1/4	Comment: lateral hole pattern for 3DRE...10P- 7X/... RE 29286 RE 20380

Pressure sequence valves (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate	ZDZ 10 DP ³⁷ □ -5X/ ¹⁹ □ YM		91 x 69 x 50 3.2 kg	R900258415 Installation dimensions see RE 26585
Amend type designation according to page 34.				
Sandwich plate	ZDZ 10 DC ³⁷ □ -5X/ ¹⁹ □ YM		91 x 69 x 50 3.2 kg	R900257429 Installation dimensions see RE 26585
Amend type designation according to page 34.				
Sandwich plate	ZDZ 10 DP ³⁷ □ -5X/ ¹⁹ □ YMSO131		91 x 69 x 50 3.2 kg	R900262838 Installation dimensions see RE 26585
Amend type designation according to page 34.				
Sandwich plate	ZDZ 10 DA ³⁷ □ -5X/ ¹⁹ □ YM		91 x 69 x 50 3.2 kg	R900267758 Installation dimensions see RE 26585
Amend type designation according to page 34.				

Functional group Combination pressure and blocking function

Example lowering brake function: **HSZ 10**

1	2
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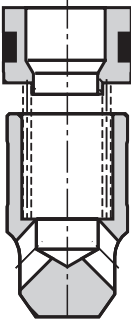
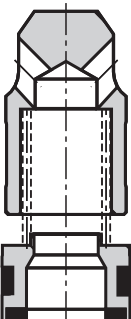
 – 3X / L

39	45	3	4
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Complementary details on sandwich plates with integrated pressure and blocking function (complete devices):

15		Adjustment element at the pressure relief valve type DBD..10...:	Setscrew with hexagon and protective cap Rotary knob Lockable rotary knob	= S = H ¹⁾ = A ¹⁾	¹⁾ Please observe the installation dimensions!
16		Setting pressure at the pressure relief valve type DBD..10...:	up to 25 bar up to 50 bar up to 100 bar up to 200 bar up to 315 bar	= 25 (025) = 50 (050) = 100 = 200 = 315	
		Note: Spelling () with complete type!			
12		Cracking pressure at the check valve type D9.8...:	without spring 0.2 bar 0.5 bar 1.5 bar 3.0 bar 5.0 bar	= 00 = 02 = 05 = 15 = 30 = 50	

Installation kit (version "P" and "T"):

	Version "P" (cracking pressure 0.5 bar)			Version "T" (cracking pressure 0.5 bar)	
	Seal material	Material no.		Seal material	Material no.
	NBR	R900543827		NBR	R900543839
	FKM	R900543830		FKM	R900543842

14		Seal material	NBR seals FKM seals (other seals upon request)	= no code = V
		Important: Observe compatibility of seals with hydraulic fluid used!		
11		Cracking pressure at the check valve type M-SR10...: (installation kit)	Cracking pressure 1.0 bar	= 05

Functional group Combination pressure and blocking function

44		Control open ratio at the lower- ing brake valve	Control open ratio 4.5 : 1 (standard) for systems with vari- able load conditions and structure- related fluctuations	= G
		More control open ratios on request!	Control open ratio 10 : 1 for systems with relatively constant load	= H
39		Setting range	70 to 175 bar (setting 140)	= K
			140 to 350 bar (setting 210)	= J
45		Control open ratio	1 : 1	= 1
			3 : 1	= 3
			4.5 : 1	= 4
			5 : 1	= 5
			10 : 1	= 10

Pressure feed function (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate	HSZ 10 A421-3X/02- AS315-BS315M01 R900966328		359 x 70 x 100 11.4 kg	R900279039 RE 25402 RE 20380

Sandwich plate Fitting of the sandwich plate: Pressure relief valve, direct operated Check valve (installation kit)	HSZ 10 A214-3X/A ^{15 16} ☐ ☐ ^{15 16} ☐ ☐ -B ☐ ☐ M01 DBD ¹⁵ ☐ 10 K1X/ ^{16 14} ☐ ☐ M-SR 10 KE05-1X/ ¹⁴ ☐		250 x 70 x 100 13.2 kg Side E A G 1/4 Side F B G 1/4	R900262954 RE 25402 DBD on side E and F RE 20380
Sandwich plate Fitting of the sandwich plate: Pressure relief valve, direct operated Check valve (installation kit)	HSZ 10 B214-3X/A ^{15 16} ☐ ☐ ^{15 16} ☐ ☐ -B ☐ ☐ M01 DBD ¹⁵ ☐ 10 K1X/ ^{16 14} ☐ ☐ M-SR 10 KE05-1X/ ¹⁴ ☐		250 x 70 x 100 13.2 kg Side E A G 1/4 Side F B G 1/4	R900262955 RE 25402 DBD on side E and F RE 20380
Sandwich plate Fitting of the sandwich plate: Pressure relief valve, direct operated Check valve (installation kit)	HSZ 10 B207-3X/A ^{15 16} ☐ ☐ ^{15 16} ☐ ☐ -B ☐ ☐ M01 DBD ¹⁵ ☐ 10 K1X/ ^{16 14} ☐ ☐ M-SR 10 KE05-1X/ ¹⁴ ☐		250 x 70 x 100 13.2 kg Side E T G 1/2	R900262956 RE 25402 DBD on side E and F RE 20380

Order example

 For complete device: **HSZ 10 A214-3X/A** ^{15 16} ☐ ☐ **S** ^{15 16} ☐ ☐ **-B** ^{3 4} ☐ ☐ **S** ^{3 4} ☐ ☐ **M** **01**

Secured channel

Pressure feed function (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet
	Material no.			More information
Sandwich plate Fitting of the sandwich plate: Pressure relief valve, direct operated Check valve (installation kit)	HSZ 10 A222-3X/ ¹⁵ ¹⁶ ☐ ☐ M01 DBD ¹⁵ ¹⁶ ☐ ☐ 10K1X/ ☐ ☐ M-SR 10 KE05-1X/ ¹⁴ ☐		180 x 70 x 100 9.4 kg Side E A G 1/4 Side F B G 1/4	R900262745 RE 25402 DBD on side E RE 20380

Order example
 For complete device: **HSZ 10 A222-3X/** ¹⁵ ¹⁶ ³ ⁴ ☐ ☐ ☐ ☐ **S** **200** **M** **01**
Pressure feed function with accumulator connection M42x1.5 (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet
	Material no.			More information
Sandwich plate Fitting of the sandwich plate: Pressure relief valve, direct operated Check valve (installation kit)	HSZ 10-26640-AA/02 R900924793 DBD ¹⁵ ¹⁶ ☐ ☐ 10K1X/ ☐ ☐ M-SR 15 KE02-1X/ ¹⁴ ☐		230 x 70 x 230 27.0 kg Side E TA G 1/4 Side F TA M42x 1.5	R900270748 RE 25402 DBD on side E RE 20380

Counterholding function (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
	Material no.			
Sandwich plate with R ring plate Fitting of the sandwich plate: Pressure relief valve, direct operated	HSZ 10 A217-3X/A ☐ ¹⁵ ☐ ¹⁶ ☐ ¹⁵ ☐ ¹⁶ -B ☐ ☐ M01 DBD ☐ ¹⁵ 10 K1X/ ☐ ¹⁶ ☐ ¹⁴ RUECKSCHLAGVENTIL D9.8- ☐ ¹² ☐ ¹⁴ Z1S10P		250 x 70 x 80 11.4 kg Side E A G 1/4 Side F B G 1/4	R900262923 RE 25402 DBD on side E and F
Sandwich plate with R ring plate Fitting of the sandwich plate: Pressure relief valve, direct operated	HSZ 10 B217-3X/A ☐ ¹⁵ ☐ ¹⁶ ☐ ¹⁵ ☐ ¹⁶ -B ☐ ☐ M01 DBD ☐ ¹⁵ 10 K1X/ ☐ ¹⁶ ☐ ¹⁴ RUECKSCHLAGVENTIL D9.8- ☐ ¹² ☐ ¹⁴ Z1S10P		250 x 70 x 80 11.4 kg Side E A G 1/4 Side F B G 1/4	R900259743 RE 25402 DBD on side E and F
Sandwich plate with R ring plate Fitting of the sandwich plate: Pressure relief valve, direct operated	HSZ 10 A216-3X/ ☐ ¹⁵ ☐ ¹⁶ M01 DBD ☐ ¹⁵ 10 K1X/ ☐ ¹⁶ ☐ ¹⁴ RUECKSCHLAGVENTIL D9.8- ☐ ¹² ☐ ¹⁴ Z1S10P		170 x 70 x 80 7.7 kg Side E A G 1/4	R900262921 RE 25402 DBD on side E
Sandwich plate with R ring plate Fitting of the sandwich plate: Pressure relief valve, direct operated	HSZ 10 B216-3X/ ☐ ¹⁵ ☐ ¹⁶ M01 DBD ☐ ¹⁵ 10 K1X/ ☐ ¹⁶ ☐ ¹⁴ RUECKSCHLAGVENTIL D9.8- ☐ ¹² ☐ ¹⁴ Z1S10P		170 x 70 x 80 7.7 kg Side E A G 1/4	R900262922 RE 25402 DBD on side F

Order example

For complete device: **HSZ 10** ¹ **A** ¹⁵ **216-3X/** ¹⁶ **S** ³ **050** ⁴ **M** **01**
Order example

For complete device: **HSZ 10** ¹ **A** ¹⁵ **217-3X/A** ¹⁶ **S** ¹⁵ **200** ¹⁶ **-B** ³ **S** ⁴ **200** **M** **01**

Secured channel

Counterholding function (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
	Material no.			
Sandwich plate Fitting of the sandwich plate: Pressure relief valve, direct operated	HSZ 10-34857-AA/HM01 DBD ¹⁵ 20 K1X/ ¹⁶ ¹⁴		280 x 70 x 130 18.8 kg Side F MA, MP G 1/4	R900240254 RE 25402 RE 20380
RUECKSCHLAGVENTIL M-SR 20 KE05-1X/				
Sandwich plate Fitting of the sandwich plate: Pressure relief valve, direct operated	HSZ 10 A218-3X/ ¹⁵ ¹⁶ M01 DBD ¹⁵ 10 K1X/ ¹⁶ ¹⁴		170 x 70 x 80 7.7 kg Side F B G 1/4	R900262925 RE 25402 DBD on side F
RUECKSCHLAGVENTIL D9.8- ¹² ¹⁴ Z1S10P				
Sandwich plate Fitting of the sandwich plate: Pressure relief valve, direct operated	HSZ 10 B218-3X/ ¹⁵ ¹⁶ M01 DBD ¹⁵ 10 K1X/ ¹⁶ ¹⁴		170 x 70 x 80 7.7 kg Side F B G 1/4	R900262926 RE 25402 DBD on side F
RUECKSCHLAGVENTIL D9.8- ¹² ¹⁴ Z1S10P				

Counterholding function with feed-in from channel B to P (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
	Material no.			
Sandwich plate Fitting of the sandwich plate: Pressure relief valve, direct operated	HSZ 10 B219-2X/ ¹⁵ ¹⁶ M00 DBD ¹⁵ 10 K1X/ ¹⁶ ¹⁴		155 x 70 x 80 6.8 kg	R900268146
RUECKSCHLAGVENTIL D9.8- ¹² ¹⁴ Z1S10P				

Lowering brake function (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
	Material no.			
Sandwich plate Fitting of the sandwich plate: SENKBREMSVENTIL CBE ☐ ⁴⁴ -L ☐ ³⁹ N	HSZ 10 A430-1X/L ☐ ³⁹ ☐ ⁴⁵ M00		170 x 70 x 70 6.2 kg	R900702921 Valve on side E
Sandwich plate Fitting of the sandwich plate: SENKBREMSVENTIL CBE ☐ ⁴⁴ -L ☐ ³⁹ N	HSZ 10 A431-1X/L ☐ ³⁹ ☐ ⁴⁵ M00		170 x 70 x 70 6.2 kg	R900239724 Valve on side F

Order example

 For complete device with **one** lowering brake valve: **HSZ 10** ¹**A** **430-1X/L** ³⁹**K** ⁴⁵**4** ³**M** ⁴**00**

Sandwich plate Fitting of the sandwich plate: SENKBREMSVENTIL CBE ☐ ⁴⁴ -L ☐ ³⁹ N	HSZ 10 A426-1X/AL ☐ ³⁹ ☐ ⁴⁵ -BL ☐ ³⁹ ☐ ⁴⁵ M00		170 x 70 x 70 6.3 kg	R900278364 Valve on side E and F
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Order example

 For complete device with **two** lowering brake valves: **HSZ 10** ¹**A** **426-1X/AL** ³⁹**J** ⁴⁵**4** **-BL** ³⁹**J** ⁴⁵**4** ³**M** ⁴**00**

Secured channel

Preload of the check valve = 2 bar

Not suitable when using a proportional directional valve and differential circuits (please contact us!)

Hydraulic backpressures add 1:1 to the response pressure set at the adjustment as the spring chamber of the lowering brake valve is connected to the port (discharge side) of the valve side.

For more technical information refer to:

Mounting cavity R/T-2A; R901029931

Amend type designation according to page 12

Lowering brake function (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet
	Material no.			More information
Sandwich plate	HSZ 10 B661-1X/AL ^{39 45} ^{39 45} -BL ^{39 45} M00		200 x 70 x 90 6.3 kg	R901256982 Valve on side E and F

Preload of the check valve = 2 bar

Suitable when using a proportional directional valve; however, the hydraulic backpressures add in port T 1:1 to the response pressure set at the adjustment.

For more technical information refer to:
Mounting cavity R/T-22A; R901054082

Functional group Flow control function

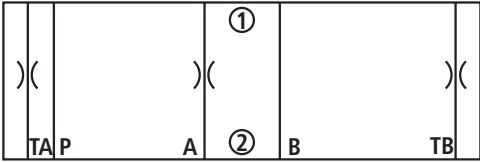
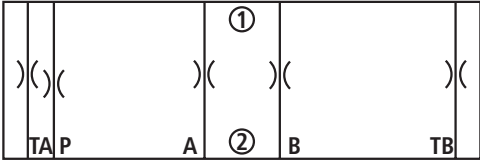
Example: **HSZ 10** 1 2 – **3X/ M** 20 17 21 22 3 4

Complementary details on sandwich plates with flow control function (complete devices):

17 	Adjustment element at the 2-way flow control valve type 2FRM 6...	Lockable rotary knob with scale Rotary knob with scale	= 3 = 7
20 	2-way flow control valve type 2FRM 6...	with closing of the pressure compensator (suppression of the start-up jump) without closing of the pressure compensator	= A = B
21 	Flow (progressive) at the 2-way flow control valve type 2FRM 6...: Note: Spelling (!) with complete type!	up to 0.2 l/min up to 0.6 l/min up to 1.5 l/min up to 3.0 l/min up to 6.0 l/min up to 10.0 l/min up to 16.0 l/min up to 25.0 l/min up to 32.0 l/min	= 0.2Q = 0.6Q = 1.5Q = 3Q = 6Q = 10Q = 16Q = 25Q = 32Q (Q00.2) (Q00.6) (Q01.5) (Q03.0) (Q06.0) (Q10.0) (Q16.0) (Q25.0) (Q32.0)
22 	Flow control valve	with check valve without check valve	= R = M

Important: Flow control also possible with proportional flow control valve according to data sheet RE 29188!

Throttle valves (① = component side, ② = plate side)

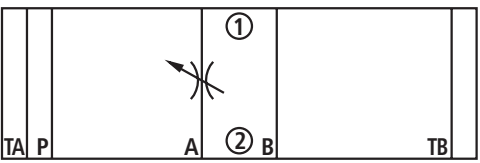
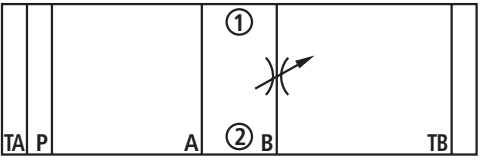
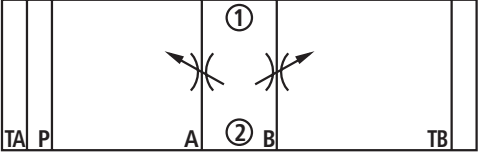
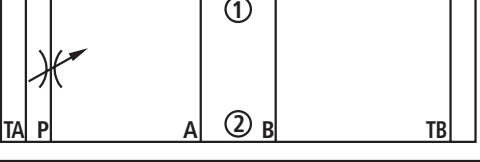
Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate	HSZ 10-A658-3X/ A45TA45TB45M00		140 x 70 x 50	R901195410
	R901195404		3.1 kg Thread G1/8	
Sandwich plate	HSZ 10A 085-3X/A ⁵² B ⁵² P ⁵² T ⁵² M00		90 x 70 x 10	R900262120
	Fitting of the sandwich plate: DUESE ⁵² R1/8-DIN906		0.5 kg Thread G1/8 available in all channels	

Order example

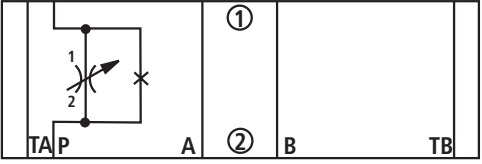
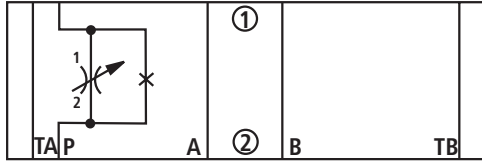
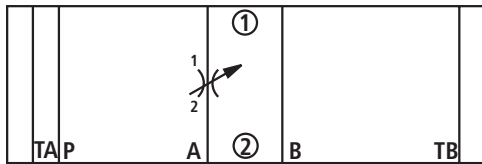
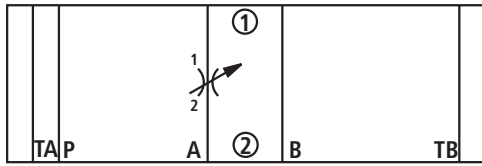
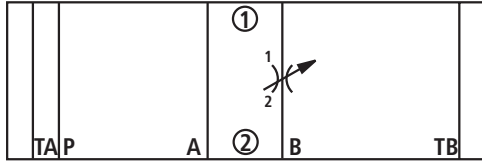
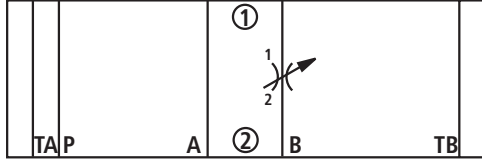
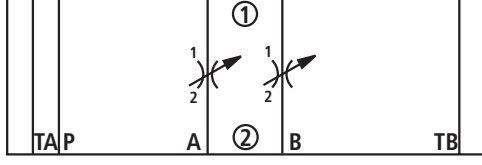
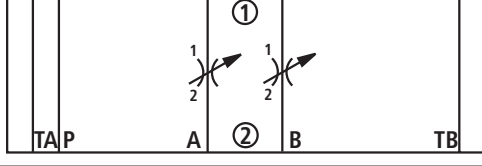
For complete device with nozzle in channel B and P:

HSZ 10A 085-3X/ ⁵² B ¹⁵ P ⁵² ² ³ ²⁰ M00

Fitted channel

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate with R ring plate	Z1FG 10 A5-3X/V		153 x 70 x 50	R900265547
	R900566445		2.5 kg	
Sandwich plate with R ring plate	Z1FG 10 B5-3X/V		153 x 70 x 50	R900265547
	R900538832		2.5 kg	
Sandwich plate with R ring plate	Z1FG 10-5-3X/V		153 x 70 x 50	R900265547
	R900987000		2.5 kg	
Sandwich plate with R ring plate	Z1FG 10 P5-3X/V		153 x 70 x 50	R900265547
	R901162976		2.5 kg	

Throttle valves (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate	HSZ 10-A408-4X/ D00-DV04M00		105 x 70 x 50	R901232101
	R901282503		2.6 kg	Plug screw M8x1 RE 90005-03
Sandwich plate	HSZ 10-A408-4X/ D00-DV03M00		105 x 70 x 50	R901232101
	R901282491		2.6 kg	Plug screw M8x1 RE 90005-03
Sandwich plate	HSZ 10-A490-4X/ A-DV04M00		200 x 70 x 80	R901234326
	R901282519		7.5 kg	RE 90005-03
Sandwich plate	HSZ 10-A490-4X/ A-DV03M00		200 x 70 x 80	R901234326
	R901282513		7.5 kg	RE 90005-03
Sandwich plate	HSZ 10-A490-4X/ B-DV04M00		200 x 70 x 80	R901234326
	R901282549		8.8 kg	RE 90005-03
Sandwich plate	HSZ 10-A490-4X/ B-DV03M00		200 x 70 x 80	R901234326
	R901282546		8.8 kg	RE 90005-03
Sandwich plate	HSZ 10-A490-4X/ AB-DV04M00		200 x 70 x 80	R901234326
	R901282540		7.9 kg	RE 90005-03
Sandwich plate	HSZ 10-A490-4X/ AB-DV03M00		200 x 70 x 80	R901234326
	R901282523		7.9 kg	RE 90005-03

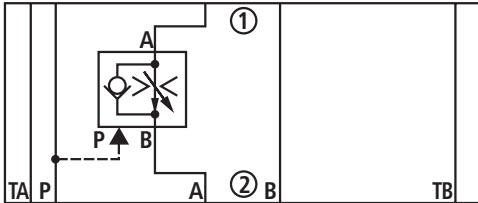
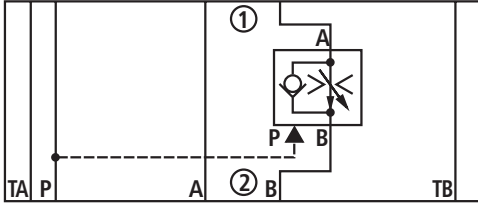
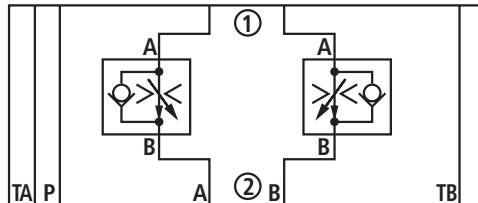
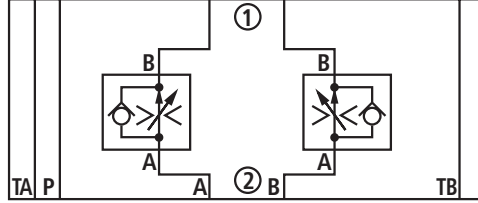
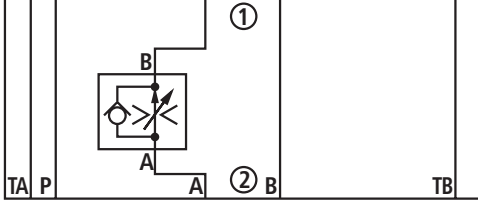
Throttle valves (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate	HSZ 10-A519-4X/ DV03M00		105 x 70 x 50 2.6 kg	R901154552 Internal thread M8x1 RE 90005-03
	R901232719			
Sandwich plate	HSZ 10-A519-4X/ DV04M00		105 x 70 x 50 2.6 kg	R901154552 Internal thread M8x1 RE 90005-03
	R901235249			
Sandwich plate	HSZ 10-A589-4X/ DV03M00		105 x 70 x 50 2.6 kg	R901155030 Internal thread M8x1 RE 90005-03
	R901282555			
Sandwich plate	HSZ 10-A589-4X/ DV04M00		105 x 70 x 50 2.6 kg	R901155030 Internal thread M8x1 RE 90005-03
	R901155058			
Sandwich plate	HSZ 10-A587-4X/ DV04M00		100 x 70 x 80 4.0 kg	R901028290 RE 90005-03
	R901282512			
Sandwich plate	HSZ 10-A587-4X/ DV03M00		100 x 70 x 80 4.0 kg	R901028290 RE 90005-03
	R901282509			
Sandwich plate	HSZ 10-A517-4X/ DV03M00		105 x 70 x 50 2.6 kg	R901154552 Internal thread M8x1 RE 90005-03
	R901263448			
Sandwich plate	HSZ 10-A517-4X/ DV04M00		120 x 70 x 50 3.0 kg	R901153919 Internal thread M8x1 RE 90005-03
	R901263449			

Throttle check valves (① = component side, ② = plate side)

Device designation	Type designation Material no.	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate with R ring plate	HSZ 10 A425-3X/M00 R901252668		155 x 70 x 80 6.4 kg	R900278390 Qmax 95 l/min
Sandwich plate with R ring plate	HSZ 10 A453-3X/ANCFB- LC-BNCFB-LCM00 R901266602		220 x 70 x 80 6.4 kg	R901268320 Qmax 95 l/min

Flow control valves (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
	Material no.			
Sandwich plate with R ring plate	HSZ 10 A174-3X/ M ^{20 17 21 22} ☐ ☐ ☐ ☐ M00		120 x 70 x 70 5.2 kg	R900265412 RE 28163
Fitting of the sandwich plate: 2-way flow control valve	2FRM 6 ^{20 17} ☐ ☐ 6-3X/ ^{21 22} ☐ ☐ V (Valve mounting screws are part of the sandwich plate)			
Sandwich plate with R ring plate	HSZ 10 A176-3X/ M ^{20 17 21 22} ☐ ☐ ☐ ☐ M00		120 x 70 x 70 5.2 kg	R900265410 RE 28163
Fitting of the sandwich plate: 2-way flow control valve	2FRM 6 ^{20 17} ☐ ☐ 6-3X/ ^{21 22} ☐ ☐ V (Valve mounting screws are part of the sandwich plate)			
Sandwich plate with R ring plate	HSZ 10 A154-3X/AM ^{17 21 22} ☐ ☐ ☐ -BM ^{17 21 22} ☐ ☐ ☐ M00	Supply control  Discharge control 	120 x 70 x 70 6.1 kg	R900265414 RE 28163
Fitting of the sandwich plate: 2-way flow control valve	2FRM 6 B ¹⁷ ☐ ☐ 6-3X/ ^{21 22} ☐ ☐ V (Valve mounting screws are part of the sandwich plate)			
Sandwich plate with R ring plate	HSZ 10 A175-3X/M ^{17 21 22} ☐ ☐ ☐ M00		120 x 70 x 70 4.1 kg	R900265413 RE 28163
Fitting of the sandwich plate: 2-way flow control valve	2FRM 6 B ¹⁷ ☐ ☐ 6-3X/ ^{21 22} ☐ ☐ V (Valve mounting screws are part of the sandwich plate)			

Flow control valves (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate with R ring plate	HSZ 10 A177-3X/M 17 21 22 □ □ □ M00		120 x 70 x 70 5.2 kg	R900265411 RE 28163
Fitting of the sandwich plate: 2-way flow control valve	2FRM 6 B 17 □ 6-3X/ 21 22 □ V	(Valve mounting screws are part of the sandwich plate)		
Sandwich plate	HSZ 10 A150-3X/M 17 21 □ □ M00		120 x 70 x 70 4.3 kg	R900266266 RE 28163
Fitting of the sandwich plate: 2-way flow control valve	2FRM 6 B 17 □ 6-3X/ 21 □ MV	(Valve mounting screws are part of the sandwich plate)		
Sandwich plate	HSZ 10 B150-3X/M 17 21 □ □ M00		120 x 70 x 70 4.3 kg	R900266267 RE 28163
Fitting of the sandwich plate: 2-way flow control valve	2FRM 6 B 17 □ 6-3X/ 21 □ MV	(Valve mounting screws are part of the sandwich plate)		
Sandwich plate	HSZ 10 A348-3X/M 17 21 □ □ M01		120 x 70 x 90 5.3 kg	R900266123 RE 28163
Fitting of the sandwich plate: 2-way flow control valve	2FRM 6 B 17 □ 6-3X/ 21 □ MV	(Valve mounting screws are part of the sandwich plate)		

Order example 1

 For complete device with 2-way flow control valve: **HSZ 10 A150-3X/M** 17 21 3 4
 3 Q03.0 M 00

Order example 2

 For complete device with 2-way flow control valve: **HSZ 10 A174-3X/M** 20 17 21 22 3 4
 A 3 Q03.0 M M 00

Order example 3

 For complete device with 2-way flow control valve: **HSZ 10 A154-3X/A M** 17 21 22 17 21 22 3 4
 3 Q06.0 R -B M 3 Q03.0 R M 00

Controlled channel

Flow control valves (① = component side, ② = plate side)

Device designation	Type designation Material no.	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate with R ring plate	HSZ 10 A425-3X/FDEA- LAN-M00 R900963779		155 x 70 x 80 6.4 kg	R900278390 Qmax 95 l/min
Sandwich plate with R ring plate	HSZ 10 A453-3X/AFDEA- LA-BFDEA-LAM00 R901277089		220 x 70 x 80 6.4 kg	R901268320 Qmax 95 l/min

35.2

**Electrical types of connection:**03pol (2+PE) DIN EN 175301-803,
without mating connector**= 01¹⁾ = K4²⁾**02pol K40 DT 04-2PA Deutsch,
without mating connector**= 20¹⁾ = K40²⁾**02pol C4/Z30 AMP Junior-Timer,
without mating connector**= 07¹⁾ = C4²⁾**¹⁾ Designation of the individual component solenoid coil²⁾ Designation of the complete device HSZ range

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**Flow control with nozzle "D"**

Example nozzle M8x1 with ø0.6 mm

= 06

(see page 69)

Fitting possible from ø0.4 mm to 4.5 mm

Important:We recommend selecting a nozzle diameter ≥ 0.6 mm

For the connection to AC voltage mains, a DC solenoid must be used, which is controlled via a rectifier.
In case of individual connection, a mating connector with integrated rectifier can be used (separate order).

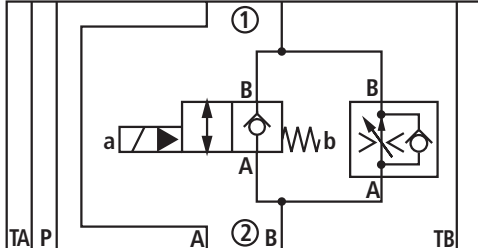
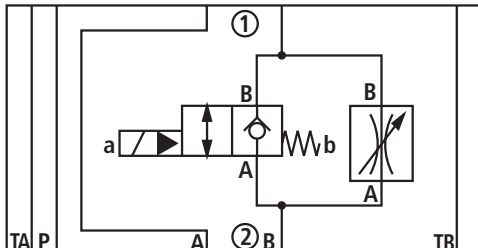
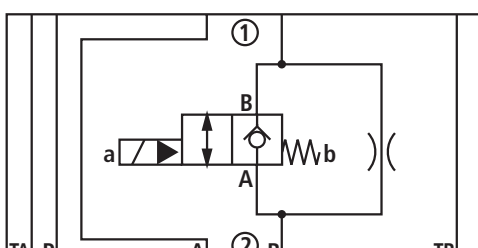
Rapid motion - creep speed function, normally closed (blocking on one side) – discharge control (① = component side, ② = plate side)

Flow control cartridge valve

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate HSZ 10 A400-4X/FRM ^{21.2} ☐ -A05 ^{26.1} ☐ ^{35.1} ☐ ^{35.2} ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ☐ 30. ^{26.1} ☐ .000 2-way flow control valve: 2FRM 6 K2-1X/ ^{21.2} ☐ RV			170 x 70 x 80 7.3 kg	R901248406 Valve on side F RE 90005-03 RE 28155 Valve on side E
Sandwich plate HSZ 10 A400-4X/FGM1 ^{26.1} ☐ ^{35.1} ☐ ^{35.2} ☐ -A05 ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ☐ 30. ^{26.1} ☐ .000 Throttle valve: FGM 6 K2-1X/1QV			170 x 70 x 80 6.6 kg	R901248406 RE 90005-03
Sandwich plate HSZ 10 A400-4X/D ⁵¹ ☐ -A05 ^{26.1} ☐ ^{35.1} ☐ ^{35.2} ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ☐ 30. ^{26.1} ☐ .000 Nozzle ⁵¹ ☐ M8x1-DIN906 Material no. see page 90			170 x 70 x 80 6.5 kg	R901248406 RE 90005-03 RN115.06

Order examples, see page 77

Rapid motion - creep speed function, normally closed (blocking on one side) – discharge control (① = component side, ② = plate side)
Flow control cartridge valve

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate HSZ 10 A401-4X/FRM -A05 ☐ ☐ ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ☐ S0.000 SPULE OD.02.17. ☐ 30. ☐ .000 2-way flow control valve: 2FRM 6 K2-1X/ ☐ RV			170 x 70 x 80 7.3 kg	R901267133 Valve on side E RE 90005-03 RE 28155 Valve on side F
Sandwich plate HSZ 10 A401-4X/FGM1 -A05 ☐ ☐ ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ☐ S0.000 SPULE OD.02.17. ☐ 30. ☐ .000 Throttle valve: FGM 6 K2-1X/1QV			170 x 70 x 80 6.6 kg	R901267133 RE 90005-03
Sandwich plate HSZ 10 A401-4X/D ☐ ⁵¹ -A05 ☐ ☐ ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ☐ S0.000 SPULE OD.02.17. ☐ 30. ☐ .000 Nozzle ☐ ⁵¹ M8x1-DIN906 Material no. see page 90			170 x 70 x 80 6.5 kg	R901267133 RE 90005-03 RN115.06

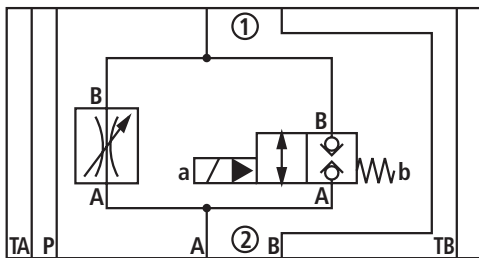
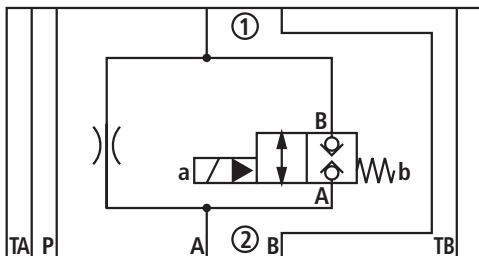
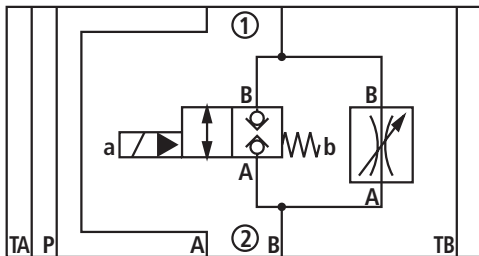
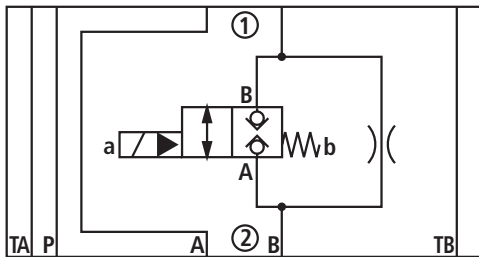
Order examples, see page 77

Rapid motion - creep speed function, normally closed (blocking on one side) – discharge control (① = component side, ② = plate side)
Flow control cartridge valve

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate HSZ 10 A402-4X/FRM ^{21.2} ☐ -A05 ^{26.1} ☐ ^{35.1} ☐ ^{35.2} ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ☐ 30. ^{26.1} ☐ .000 2-way flow control valve: 2FRM 6 K2-1X/ ^{21.2} ☐ RV			180 x 70 x 80 7.6 kg	R901248405 Valve on side F RE 90005-03 RE 28155 Valve on side E
Sandwich plate HSZ 10 A402-4X/FGM1 -A05 ^{26.1} ☐ ^{35.1} ☐ ^{35.2} ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ☐ 30. ^{26.1} ☐ .000 Throttle valve: FGM 6 K2-1X/1QV			180 x 70 x 80 6.6 kg	R901248405 RE 90005-03
Sandwich plate HSZ 10 A402-4X/D ⁵¹ ☐ -A05 ^{26.1} ☐ ^{35.1} ☐ ^{35.2} ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ☐ 30. ^{26.1} ☐ .000 Nozzle ⁵¹ ☐ M8x1-DIN906 Material no. see page 90			180 x 70 x 80 6.5 kg	R901248405 RE 90005-03 RN115.06

Order examples, see page 77

Rapid motion - creep speed function, normally closed (blocking on both sides) – discharge control (① = component side, ② = plate side)
Flow control cartridge valve

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate HSZ 10 A400-4X/FGM1 -B05 26.1 35.1 35.2 M00	Fitting of the sandwich plate: SITZVENTIL OD.15.31.89. 35.1 S0.000 SPULE OD.02.17. 35.2 30. 26.1 .000 Throttle valve: FGM 6 K2-1X/1QV		170 x 70 x 80	R901248406 Valve on side F RE 90005-03 RE 28155 Valve on side E
			7.3 kg	
Sandwich plate HSZ 10 A400-4X/D 51 -B05 26.1 35.1 35.2 M00	Fitting of the sandwich plate: SITZVENTIL OD.15.31.89. 35.1 S0.000 SPULE OD.02.17. 35.2 30. 26.1 .000 Nozzle 51 M8x1-DIN906 Material no. see page 90		170 x 70 x 80	R901248406 RE 90005-03 RN115.06
			6.5 kg	
Sandwich plate HSZ 10 A401-4X/FGM1 -B05 26.1 35.1 35.2 M00	Fitting of the sandwich plate: SITZVENTIL OD.15.31.89. 35.1 S0.000 SPULE OD.02.17. 35.2 30. 26.1 .000 Throttle valve: FGM 6 K2-1X/1QV		170 x 70 x 80	R901248406 Valve on side E RE 90005-03 Valve on side F
			7.3 kg	
Sandwich plate HSZ 10 A401-4X/D 51 -B05 26.1 35.1 35.2 M00	Fitting of the sandwich plate: SITZVENTIL OD.15.31.89. 35.1 S0.000 SPULE OD.02.17. 35.2 30. 26.1 .000 Nozzle 51 M8x1-DIN906 Material no. see page 90		170 x 70 x 80	R901248406 RE 90005-03 RN115.06
			6.5 kg	

Order examples, see page 77

Rapid motion - creep speed function, normally open (blocking on one side) – discharge control (① = component side, ② = plate side)
Flow control cartridge valve

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate HSZ 10 A400-4X/FRM ^{21.2} ☐ -A06 ^{26.1} ☐ ^{35.1} ☐ ^{35.2} ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.06.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ☐ 30. ^{26.1} ☐ .000 2-way flow control valve: 2FRM 6 K2-1X/ ^{21.2} ☐ RV			170 x 70 x 80 7.3 kg	R901248406 Valve on side F RE 90005-03 RE 28155 Valve on side E
Sandwich plate HSZ 10 A400-4X/FGM1 ^{26.1} ☐ ^{35.1} ☐ ^{35.2} ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.06.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ☐ 30. ^{26.1} ☐ .000 Throttle valve: FGM 6 K2-1X/1QV			170 x 70 x 80 6.6 kg	R901248406 RE 90005-03
Sandwich plate HSZ 10 A400-4X/D ⁵¹ ☐ -A06 ^{26.1} ☐ ^{35.1} ☐ ^{35.2} ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.06.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ☐ 30. ^{26.1} ☐ .000 Nozzle ⁵¹ ☐ M8x1-DIN906 Material no. see page 90			170 x 70 x 80 6.5 kg	R901248406 RE 90005-03 RN115.06

Order examples, see page 77

Rapid motion - creep speed function, normally open (blocking on one side) – discharge control (① = component side, ② = plate side)
Flow control cartridge valve

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight	
			Size of the ports	
Sandwich plate HSZ 10 A401-4X/FRM -A06 26.1 35.1 35.2 M00			170 x 70 x 80	R901267133
Fitting of the sandwich plate: 35.1 SITZVENTIL OD.15.06.89. S0.000 35.2 26.1 SPULE OD.02.17. 30. .000 2-way flow control valve: 2FRM 6 K2-1X/ 21.2 RV			7.3 kg	Valve on side E RE 90005-03 RE 28155 Valve on side F
Sandwich plate HSZ 10 A401-4X/FGM1 -A06 26.1 35.1 35.2 M00			170 x 70 x 80	R901267133
Fitting of the sandwich plate: 35.1 SITZVENTIL OD.15.06.89. S0.000 35.2 26.1 SPULE OD.02.17. 30. .000 Throttle valve: FGM 6 K2-1X/1QV			6.6 kg	RE 90005-03
Sandwich plate HSZ 10 A401-4X/D 51 26.1 35.1 35.2 -A06 M00			170 x 70 x 80	R901267133
Fitting of the sandwich plate: 35.1 SITZVENTIL OD.15.06.89. S0.000 35.2 26.1 SPULE OD.02.17. 30. .000 51 Nozzle M8x1-DIN906 Material no. see page 90			6.5 kg	RE 90005-03 RN115.06

Order examples, see page 77

Flow control cartridge valve

Order examples, see page 77

Rapid motion - creep speed function, normally open (blocking on both sides) – discharge control (① = component side, ② = plate side)

Flow control cartridge valve

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate HSZ 10 A400-4X/FGM1 -B06 ☐ ☐ ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.32.89. ☐ S0.000 SPULE OD.02.17. ☐ 30. ☐ .000 Throttle valve: FGM 6 K2-1X/1QV			170 x 70 x 80 7.3 kg	R901248406 Valve on side F RE 90005-03 RE 28155 Valve on side E
Sandwich plate HSZ 10 A400-4X/D ☐ ☐ ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.32.89. ☐ S0.000 SPULE OD.02.17. ☐ 30. ☐ .000 Nozzle ☐ M8x1-DIN906 Material no. see page 90			170 x 70 x 80 6.5 kg	R901248406 RE 90005-03 RN115.06
Sandwich plate HSZ 10 A401-4X/FGM1 -B06 ☐ ☐ ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.32.89. ☐ S0.000 SPULE OD.02.17. ☐ 30. ☐ .000 Throttle valve: FGM 6 K2-1X/1QV			170 x 70 x 80 7.3 kg	R901267133 Valve on side E RE 90005-03 Valve on side F
Sandwich plate HSZ 10 A401-4X/D ☐ ☐ ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.32.89. ☐ S0.000 SPULE OD.02.17. ☐ 30. ☐ .000 Nozzle ☐ M8x1-DIN906 Material no. see page 90			170 x 70 x 80 6.5 kg	R901267133 RE 90005-03 RN115.06

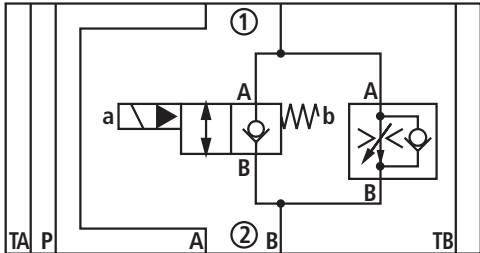
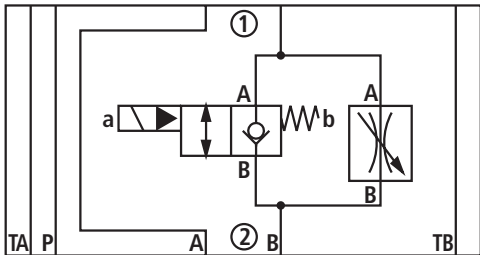
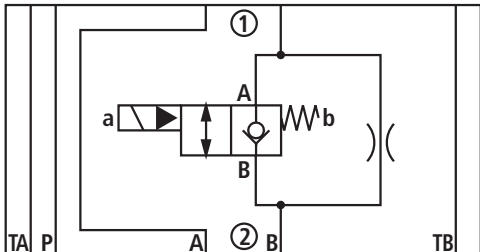
Order examples, see page 77

Rapid motion - creep speed function, normally closed (blocking on one side) – supply control (① = component side, ② = plate side)
Flow control cartridge valve

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate HSZ 10 A406-4X/FRM ^{21.2} ☐ -A05 ^{26.1} ☐ ^{35.1} ☐ ^{35.2} ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ☐ 30. ^{26.1} ☐ .000 2-way flow control valve: 2FRM 6 K2-1X/ ^{21.2} ☐ RV			170 x 70 x 80 7.3 kg	R901248403 Valve on side F RE 90005-03 RE 28155 Valve on side E
Sandwich plate HSZ 10 A406-4X/FGM1 ^{26.1} ☐ ^{35.1} ☐ ^{35.2} ☐ -A05 ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ☐ 30. ^{26.1} ☐ .000 Throttle valve: FGM 6 K2-1X/1QV			170 x 70 x 80 7.3 kg	R901248403 RE 90005-03
Sandwich plate HSZ 10 A406-4X/D ⁵¹ ☐ ^{26.1} ☐ ^{35.1} ☐ ^{35.2} ☐ -A05 ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ☐ 30. ^{26.1} ☐ .000 Nozzle ⁵¹ ☐ M8x1-DIN906 Material no. see page 90			170 x 70 x 80 7.3 kg	R901248403 RE 90005-03 RN115.06

Order examples, see page 77

Rapid motion - creep speed function, normally closed (blocking on one side) – supply control (① = component side, ② = plate side)
Flow control cartridge valve

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight	
			Size of the ports	
Sandwich plate HSZ 10 A407-4X/FRM -A05 26.1 35.1 35.2 M00			170 x 70 x 80	R901276486
Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. 35.1 S0.000 SPULE OD.02.17. 35.2 26.1 30. 26.1 .000 2-way flow control valve: 2FRM 6 K2-1X/ 21.2 RV			7.3 kg	Valve on side E RE 90005-03 RE 28155 Valve on side F
				
Sandwich plate HSZ 10 A407-4X/FGM1 -A05 26.1 35.1 35.2 M00			170 x 70 x 80	R901276486
Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. 35.1 S0.000 SPULE OD.02.17. 35.2 26.1 30. 26.1 .000 Throttle valve: FGM 6 K2-1X/1QV			6.6 kg	RE 90005-03
				
Sandwich plate HSZ 10 A407-4X/D 51 26.1 35.1 35.2 -A05 26.1 35.1 35.2 M00			170 x 70 x 80	R901276486
Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. 35.1 S0.000 SPULE OD.02.17. 35.2 26.1 30. 26.1 .000 Nozzle 51 M8x1-DIN906 Material no. see page 90			6.5 kg	RE 90005-03 RN115.06
				

Order examples, see page 77

Rapid motion - creep speed function, normally closed (blocking on one side) – supply control (① = component side, ② = plate side)
Flow control cartridge valve

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate HSZ 10 A408-4X/FRM ☐ 21.2 ☐ 26.1 ☐ 35.1 ☐ 35.2 -A05 ☐ ☐ ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ☐ 35.1 S0.000 SPULE OD.02.17. ☐ 35.2 30. ☐ 26.1 .000 2-way flow control valve: 2FRM 6 K2-1X/ ☐ 21.2 RV			180 x 70 x 80 7.3 kg	R901232101 Valve on side F RE 90005-03 RE 28155 Valve on side E
Sandwich plate HSZ 10 A408-4X/FGM1 ☐ 26.1 ☐ 35.1 ☐ 35.2 -A05 ☐ ☐ ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ☐ 35.1 S0.000 SPULE OD.02.17. ☐ 35.2 30. ☐ 26.1 .000 Throttle valve: FGM 6 K2-1X/1QV			180 x 70 x 80 6.6 kg	R901232101 RE 90005-03
Sandwich plate HSZ 10 A408-4X/D ☐ 51 ☐ 26.1 ☐ 35.1 ☐ 35.2 -A05 ☐ ☐ ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ☐ 35.1 S0.000 SPULE OD.02.17. ☐ 35.2 30. ☐ 26.1 .000 Nozzle ☐ 51 M8x1-DIN906 Material no. see page 90			180 x 70 x 80 6.5 kg	R901232101 RE 90005-03 RN115.06

Order examples, see page 77

Rapid motion - creep speed function, normally closed (blocking on one side) – supply control (① = component side, ② = plate side)
Flow control cartridge valve

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate HSZ 10 B408-4X/FRM ^{21.2} ☐ -A05 ^{26.1} ☐ ^{35.1} ☐ ^{35.2} ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ☐ 30. ^{26.1} ☐ .000 2-way flow control valve: 2FRM 6 K2-1X/ ^{21.2} ☐ RV			170 x 70 x 80 6.7 kg	R901217086 Valve on side F RE 90005-03 RE 28155 Valve on side E
Sandwich plate HSZ 10 B408-4X/FGM1 -A05 ^{26.1} ☐ ^{35.1} ☐ ^{35.2} ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ☐ 30. ^{26.1} ☐ .000 Throttle valve: FGM 6 K2-1X/1QV			170 x 70 x 80 6.7 kg	R901217086 RE 90005-03
Sandwich plate HSZ 10 B408-4X/D ⁵¹ ☐ -A05 ^{26.1} ☐ ^{35.1} ☐ ^{35.2} ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ☐ 30. ^{26.1} ☐ .000 Nozzle ⁵¹ ☐ M8x1-DIN906 Material no. see page 90			170 x 70 x 80 6.5 kg	R901217086 RE 90005-03 RN115.06

Order examples, see page 77

Rapid motion - creep speed function, normally closed (blocking on both sides) – supply control (① = component side, ② = plate side)
Flow control cartridge valve

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate HSZ 10 A406-4X/FGM1 -B05	26.1 35.1 35.2 M00		170 x 70 x 80 6.6 kg	R901243712 Valve on side F RE 90005-03 RE 28155 Valve on side E
Fitting of the sandwich plate: SITZVENTIL OD.15.31.89. 35.1 S0.000 SPULE OD.02.17. 35.2 30. 26.1 .000 Throttle valve: FGM 6 K2-1X/1QV				
Sandwich plate HSZ 10 A406-4X/D	51 26.1 35.1 35.2 M00		170 x 70 x 80 6.5 kg	R901243712 RE 90005-03 RN115.06
Fitting of the sandwich plate: SITZVENTIL OD.15.31.89. 35.1 S0.000 SPULE OD.02.17. 35.2 30. 26.1 .000 Nozzle 51 M8x1-DIN906 Material no. see page 90				
Sandwich plate HSZ 10 A407-4X/FGM1 -B05	26.1 35.1 35.2 M00		170 x 70 x 80 7.3 kg	R901276486 Valve on side E RE 90005-03 Valve on side F
Fitting of the sandwich plate: SITZVENTIL OD.15.31.89. 35.1 S0.000 SPULE OD.02.17. 35.2 30. 26.1 .000 Throttle valve: FGM 6 K2-1X/1QV				
Sandwich plate HSZ 10 A407-4X/D	51 26.1 35.1 35.2 M00		170 x 70 x 80 6.5 kg	R901276486 RE 90005-03 RN115.06
Fitting of the sandwich plate: SITZVENTIL OD.15.31.89. 35.1 S0.000 SPULE OD.02.17. 35.2 30. 26.1 .000 Nozzle 51 M8x1-DIN906 Material no. see page 90				

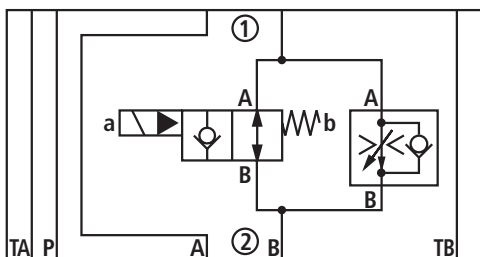
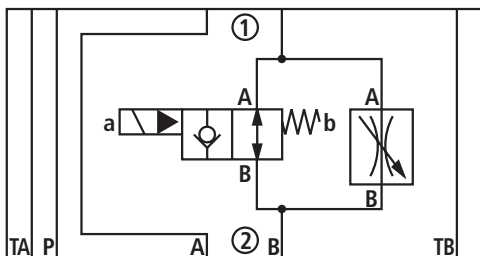
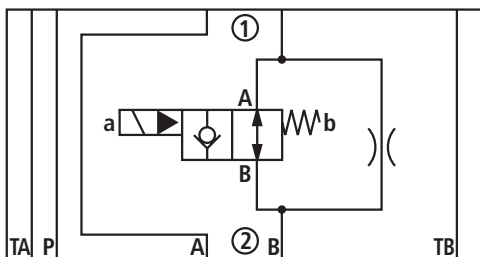
Order examples, see page 77

Rapid motion - creep speed function, normally open (blocking on one side) – supply control (① = component side, ② = plate side)
Flow control cartridge valve

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate HSZ 10 A406-4X/FRM ☐ 21.2 -A06 ☐ 26.1 ☐ 35.1 ☐ 35.2 M00 Fitting of the sandwich plate: SITZVENTIL OD.15.06.89. ☐ 35.1 S0.000 SPULE OD.02.17. ☐ 35.2 30. ☐ 26.1 .000 2-way flow control valve: 2FRM 6 K2-1X/ ☐ 21.2 RV			170 x 70 x 80 7.3 kg	R901248403 Valve on side F RE 90005-03 RE 28155 Valve on side E
Sandwich plate HSZ 10 A406-4X/FGM1 ☐ 26.1 -A06 ☐ 35.1 ☐ 35.2 M00 Fitting of the sandwich plate: SITZVENTIL OD.15.06.89. ☐ 35.1 S0.000 SPULE OD.02.17. ☐ 35.2 30. ☐ 26.1 .000 Throttle valve: FGM 6 K2-1X/1QV			170 x 70 x 80 7.3 kg	R901248403 RE 90005-03
Sandwich plate HSZ 10 A406-4X/D ☐ 51 -A06 ☐ 26.1 ☐ 35.1 ☐ 35.2 M00 Fitting of the sandwich plate: SITZVENTIL OD.15.06.89. ☐ 35.1 S0.000 SPULE OD.02.17. ☐ 35.2 30. ☐ 26.1 .000 Nozzle ☐ 51 M8x1-DIN906 Material no. see page 90			170 x 70 x 80 7.3 kg	R901248403 RE 90005-03 RN115.06

Order examples, see page 77

Rapid motion - creep speed function, normally open (blocking on one side) – supply control (① = component side, ② = plate side)
Flow control cartridge valve

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate HSZ 10 A407-4X/FRM -A06 26.1 35.1 35.2 M00	Fitting of the sandwich plate: SITZVENTIL OD.15.06.89. 35.1 S0.000 SPULE OD.02.17. 35.2 30. 26.1 .000 2-way flow control valve: 2FRM 6 K2-1X/ 21.2 RV		170 x 70 x 80	R901276486
			7.3 kg	Valve on side E RE 90005-03 RE 28155 Valve on side F
Sandwich plate HSZ 10 A407-4X/FGM1 -A06 26.1 35.1 35.2 M00	Fitting of the sandwich plate: SITZVENTIL OD.15.06.89. 35.1 S0.000 SPULE OD.02.17. 35.2 30. 26.1 .000 Throttle valve: FGM 6 K2-1X/1QV		170 x 70 x 80	R901276486
			7.3 kg	RE 90005-03
Sandwich plate HSZ 10 A407-4X/D 51 26.1 35.1 35.2 -A06 M00	Fitting of the sandwich plate: SITZVENTIL OD.15.06.89. 35.1 S0.000 SPULE OD.02.17. 35.2 30. 26.1 .000 Nozzle 51 M8x1-DIN906 Material no. see page 90		170 x 70 x 80	R901276486
			6.5 kg	RE 90005-03
				RN115.06

Order examples, see page 77

Rapid motion - creep speed function, normally open (blocking on one side) – supply control (① = component side, ② = plate side)
Flow control cartridge valve

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate HSZ 10 A408-4X/FRM ☐ 21.2 -A06 ☐ 26.1 ☐ 35.1 ☐ 35.2 M00 Fitting of the sandwich plate: SITZVENTIL OD.15.06.89. ☐ 35.1 S0.000 SPULE OD.02.17. ☐ 35.2 30. ☐ 26.1 .000 2-way flow control valve: 2FRM 6 K2-1X/ ☐ 21.2 RV			170 x 70 x 80 6.75 kg	R901232101 Valve on side F RE 90005-03 RE 28155 Valve on side E
Sandwich plate HSZ 10 A408-4X/FGM1 ☐ 26.1 -A06 ☐ 35.1 ☐ 35.2 M00 Fitting of the sandwich plate: SITZVENTIL OD.15.06.89. ☐ 35.1 S0.000 SPULE OD.02.17. ☐ 35.2 30. ☐ 26.1 .000 Throttle valve: FGM 6 K2-1X/1QV			170 x 70 x 80 6.75 kg	R901232101 RE 90005-03
Sandwich plate HSZ 10 A408-4X/D ☐ 51 -A06 ☐ 26.1 ☐ 35.1 ☐ 35.2 M00 Fitting of the sandwich plate: SITZVENTIL OD.15.06.89. ☐ 35.1 S0.000 SPULE OD.02.17. ☐ 35.2 30. ☐ 26.1 .000 Nozzle ☐ 51 M8x1-DIN906 Material no. see page 90			170 x 70 x 80 7.2 kg	R901232101 RE 90005-03 RN115.06

Order examples, see page 77

Rapid motion - creep speed function, normally open (blocking on one side) – supply control (① = component side, ② = plate side)
Flow control cartridge valve

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate HSZ 10 B408-4X/FRM ^{21.2} ☐ -A06 ^{26.1} ☐ ^{35.1} ☐ ^{35.2} ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.06.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ☐ 30. ^{26.1} ☐ .000 2-way flow control valve: 2FRM 6 K2-1X/ ^{21.2} ☐ RV			170 x 70 x 80 6.7 kg	R901217086 Valve on side F RE 90005-03 RE 28155 Valve on side E
Sandwich plate HSZ 10 B408-4X/FGM1 ^{26.1} ☐ ^{35.1} ☐ ^{35.2} ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.06.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ☐ 30. ^{26.1} ☐ .000 Throttle valve: FGM 6 K2-1X/1QV			170 x 70 x 80 6.7 kg	R901217086 RE 90005-03
Sandwich plate HSZ 10 B408-4X/D ⁵¹ ☐ -A06 ^{26.1} ☐ ^{35.1} ☐ ^{35.2} ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.06.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2} ☐ 30. ^{26.1} ☐ .000 Nozzle ⁵¹ ☐ M8x1-DIN906 Material no. see page 90			170 x 70 x 80 6.5 kg	R901217086 RE 90005-03 RN115.06

Order examples, see page 77

Rapid motion - creep speed function, normally open (blocking on both sides) – supply control (① = component side, ② = plate side)
Flow control cartridge valve

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight Size of the ports	
Sandwich plate HSZ 10 A406-4X/FGM1 -B06 ^{26.1 35.1 35.2} ☐ ☐ ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.32.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2 26.1} ☐ 30. ☐ .000 Throttle valve: FGM 6 K2-1X/1QV			170 x 70 x 80 7.3 kg	R901248404 Valve on side F RE 90005-03 RE 28155 Valve on side E
Sandwich plate HSZ 10 A406-4X/D ^{51 26.1 35.1 35.2} ☐ -B06 ☐ ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.32.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2 26.1} ☐ 30. ☐ .000 Nozzle ⁵¹ ☐ M8x1-DIN906 Material no. see page 90			170 x 70 x 80 7.3 kg	R901248404 RE 90005-03 RN115.06
Sandwich plate HSZ 10 A407-4X/FGM1 -B06 ^{26.1 35.1 35.2} ☐ ☐ ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.32.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2 26.1} ☐ 30. ☐ .000 Throttle valve: FGM 6 K2-1X/1QV			170 x 70 x 80 7.3 kg	R901276486 Valve on side E RE 90005-03 Valve on side F
Sandwich plate HSZ 10 A407-4X/D ^{51 26.1 35.1 35.2} ☐ -B06 ☐ ☐ M00 Fitting of the sandwich plate: SITZVENTIL OD.15.32.89. ^{35.1} ☐ S0.000 SPULE OD.02.17. ^{35.2 26.1} ☐ 30. ☐ .000 Nozzle ⁵¹ ☐ M8x1-DIN906 Material no. see page 90			170 x 70 x 80 6.5 kg	R901276486 RE 90005-03 RN115.06

Order examples

For complete device with 2/2 directional seat valve and 2-way flow control valve: **HSZ 10 A400-1X/** ⁴¹ FRM ^{21.2} 06 ⁴² - ⁴³ A ⁰⁵ G24K4 ³ M ⁴ 00

For complete device with 2/2 directional seat valve and throttle valve: **HSZ 10 A401-1X/** ⁴¹ FGM ¹⁻ ⁴² A ⁴³ 05 G24K4 ³ M ⁴ 00

For complete device with 2/2 directional seat valve and nozzle: **HSZ 10 A401-1X/** ⁴¹ D ⁵¹ 10 ⁴² - ⁴³ A ⁰⁵ G24K4 ³ M ⁴ 00

Rapid motion, electrically switchable (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate	HSZ 10 A420-4X/FGM1-A05 ^{26.1} ^{35.1} ^{35.2} ^{35.1} -D08M01 R901247995 Fitting of the sandwich plate: ^{35.1} OD.15.05.36. ^{35.1} .S8.00		240 x 70 x 80 8.0 kg Side E + F G1/4	R901248409 Nozzle M6 ø0.8 mm RE 90005-03
Sandwich plate	HSZ 10 A486-4X/DRV-P-B05 ^{26.1} ^{35.1} ^{35.2} M00 Fitting of the sandwich plate: ^{35.1} OD.15.31.89. ^{35.1} .S8.00		140 x 70 x 70 8.7 kg	R901248408 RE 90005-03
Sandwich plate	HSZ 10 A486-4X/DRV-P-B06 ^{26.1} ^{35.1} ^{35.2} M00 Fitting of the sandwich plate: ^{35.1} OD.15.31.89. ^{35.1} .S8.00		140 x 70 x 70 8.7 kg	R901248408 RE 90005-03

Differential circuit directional valve, electrically switchable (① = component side, ② = plate side)

Sandwich plate	HSZ 10 B410-4X/D10-03BAR-A06 ^{26.1} ^{35.1} ^{35.2} M00 R901277608 Fitting of the sandwich plate: ^{35.1} OD.15.04.04. ^{35.1} .S0.00 ^{35.2} OD.02.17. ^{35.2} .30.OC.00		220 x 90 x 70 10.7 kg	R901279169 Nozzle M8x1 ø1.0 mm RE 90005-03
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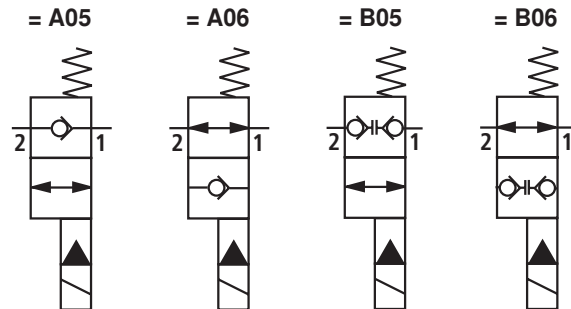
Functional group Miscellaneous

Complementary details on sandwich plates with short-circuit valves

HSZ 10A ...-4X/ ☐ ☐ ☐ ☐ ☐ (see p. 77 to 86)
B

31
☐

Symbols of the
2/2 directional seat valve:



26.1
☐

Nominal voltage at the coil

Direct voltage 12 V	= G12
Direct voltage 24 V	= G24
Direct voltage 26 V	= G26
Direct voltage 110 V	= G110
Direct voltage 220 V	= G220

35.1
☐

Manual override
at directional seat valve series OD.15...

without manual override	= A
with throttle	= 3A
with flow controller cartridge	= 3I
Screwable manual override	= 3M
	= 3L
	= 3D
with manual override "pushing"	= 1B
	= 1L
with manual override "pushing", lockable in switched position	= 1C
	= 1M

35.2
☐

Electrical types of connection:

03pol (2+PE) DIN EN 175301-803, without mating connector	= K4
02pol K40 DT 04-2PA Deutsch, without mating connector	= K40
02pol C4/Z30 AMP Junior-Timer, without mating connector	= C4

Functional group Miscellaneous

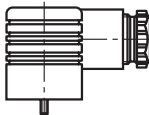
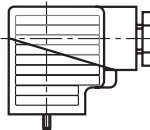


Nozzle fitting with 517, 519, 589
(internal thread M8X1):

Example: **10**: Nozzle M8X1 with Ø1.0 mm fitting from **= 10**
Ø0.4 mm to Ø4.5 mm possible

Important:
We recommend selecting a nozzle diameter >= 0.6 mm

Ordering code: Mating connectors according to DIN EN 175301-803 and ISO 4400 for connector "K4"

More mating connectors see RE 08006				
	Material no.			
	without circuitry	with indicator light 12 ... 240 V	with rectifier 12 ... 240 V	with indicator light and Zener diode suppression circuit 24 V
Gray	R901017010	—	—	—
Black	R901017011	—	—	—
Black	—	R901017022	R901017025	R901017026

Short-circuit valves (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate	HSZ 10 B517-4X/B05 26.1 35.1 35.2 51 □ □ □ □ M00		120 x 70 x 50 3.4 kg	R901154348 RE 90005-03 Internal thread M8x1
Sandwich plate	HSZ 10 B517-4X/B06 26.1 35.1 35.2 51 □ □ □ □ M00		120 x 70 x 50 3.4 kg	R901154348 RE 90005-03 Internal thread M8x1
Sandwich plate	HSZ 10 A517-4X/B05 26.1 35.1 35.2 51 □ □ □ □ M00		120 x 70 x 50 3.4 kg	R901154348 RE 90005-03 Internal thread M8x1
Sandwich plate	HSZ 10 A517-4X/B06 26.1 35.1 35.2 51 □ □ □ □ M00		120 x 70 x 50 3.4 kg	R901154348 RE 90005-03 Internal thread M8x1
Sandwich plate	HSZ 10 A519-4X/B05 26.1 35.1 35.2 51 □ □ □ □ M00		105 x 70 x 50 2.6 kg	R901154552 RE 90005-03 Internal thread M8x1
Sandwich plate	HSZ 10 A519-4X/B06 26.1 35.1 35.2 51 □ □ □ □ M00		105 x 70 x 50 2.6 kg	R901154552 RE 90005-03 Internal thread M8x1

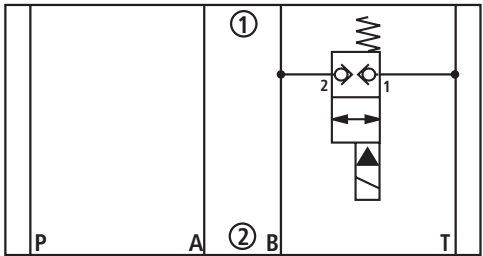
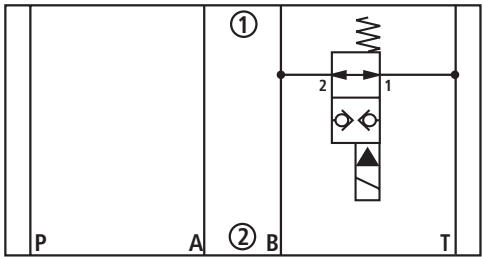
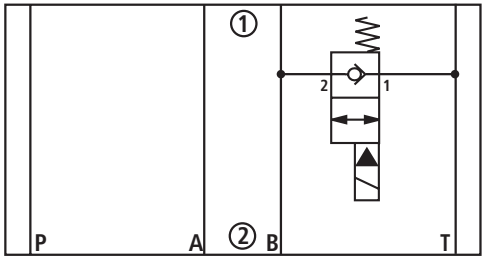
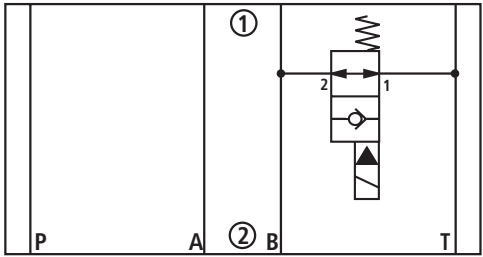
Short-circuit valves (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate	HSZ 10 A519-4X/A05 26.1 35.1 35.2 51 M00		105 x 70 x 50 2.6 kg	R901154552 RE 90005-03 Internal thread M8x1
Sandwich plate	HSZ 10 A519-4X/A06 26.1 35.1 35.2 51 M00		105 x 70 x 50 2.6 kg	R901154552 RE 90005-03 Internal thread M8x1
Sandwich plate	HSZ 10 A589-4X/B05 26.1 35.1 35.2 51 M00		105 x 70 x 50 2.6 kg	R901155030 RE 90005-03 Internal thread M8x1
Sandwich plate	HSZ 10 A589-4X/B06 26.1 35.1 35.2 51 M00		105 x 70 x 50 2.6 kg	R901155030 RE 90005-03 Internal thread M8x1
Sandwich plate	HSZ 10 A589-4X/A05 26.1 35.1 35.2 51 M00		105 x 70 x 50 2.6 kg	R901155030 RE 90005-03 Internal thread M8x1
Sandwich plate	HSZ 10 A589-4X/A06 26.1 35.1 35.2 51 M00		105 x 70 x 50 2.6 kg	R901155030 RE 90005-03 Internal thread M8x1

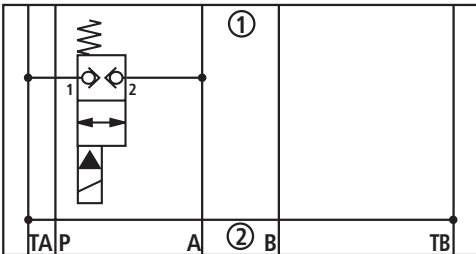
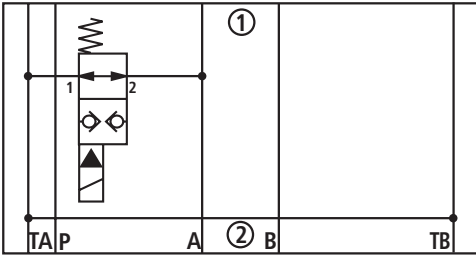
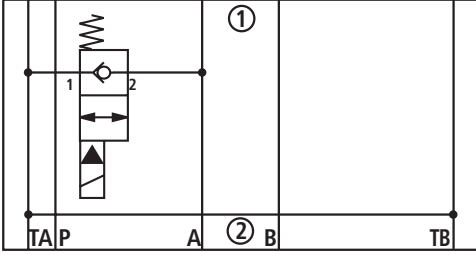
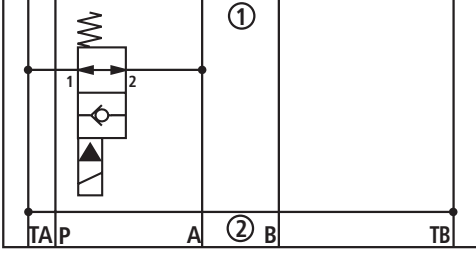
Short-circuit valves (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate	HSZ 10 A587-4X/B05 26.1 35.1 35.2 □ □ □ M00		100 x 70 x 80 4.0 kg	R901028290 RE 90005-03
Sandwich plate	HSZ 10 A587-4X/B06 26.1 35.1 35.2 □ □ □ M00		100 x 70 x 80 4.0 kg	R901028290 RE 90005-03
Sandwich plate	HSZ 10 A648-4X/B05 26.1 35.1 35.2 □ □ □ M00		120 x 70 x 80 5.4 kg	R901164210 RE 90005-03
Sandwich plate	HSZ 10 A648-4X/B06 26.1 35.1 35.2 □ □ □ M00		120 x 70 x 80 5.4 kg	R901164210 RE 90005-03

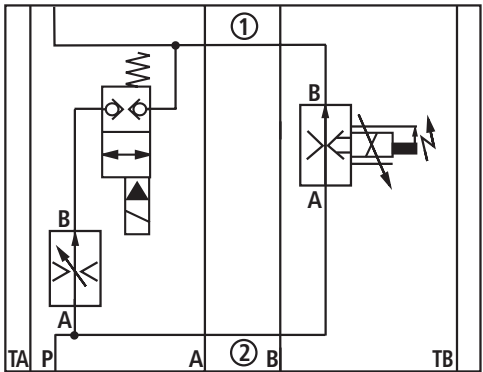
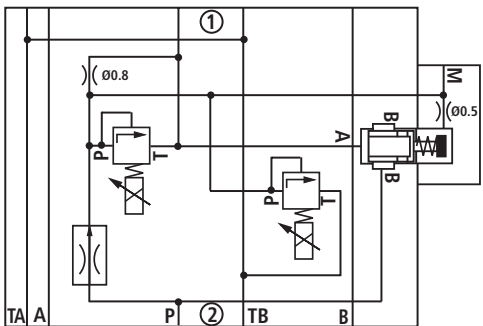
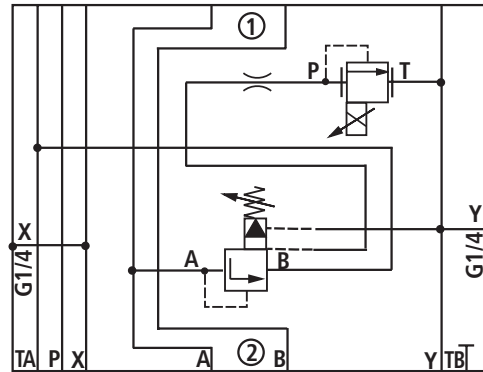
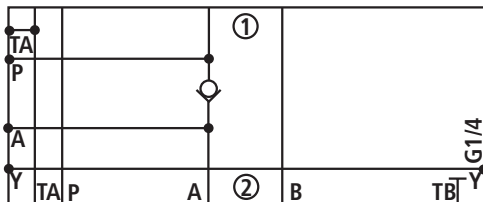
Short-circuit valves for high flow (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate with R ring plate	HSZ 10 A668-4X/B05 26.1 35.1 35.2 □ □ □ M00		120 x 70 x 80	R901282212 RE 90005-03
Sandwich plate with R ring plate	HSZ 10 A668-4X/B06 26.1 35.1 35.2 □ □ □ M00		120 x 70 x 80	R901282212 RE 90005-03
Sandwich plate with R ring plate	HSZ 10 A668-4X/A05 26.1 35.1 35.2 □ □ □ M00		120 x 70 x 80	R901282212 RE 90005-03
Sandwich plate with R ring plate	HSZ 10 A668-4X/A06 26.1 35.1 35.2 □ □ □ M00		120 x 70 x 80	R901282212 RE 90005-03

Short-circuit valves for high flow (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate with R ring plate	HSZ 10 A667-4X/B05 26.1 35.1 35.2 □ □ □ M00		120 x 70 x 80	R901282203 RE 90005-03
Sandwich plate with R ring plate	HSZ 10 A667-4X/B06 26.1 35.1 35.2 □ □ □ M00		120 x 70 x 80	R901282203 RE 90005-03
Sandwich plate with R ring plate	HSZ 10 A667-4X/A05 26.1 35.1 35.2 □ □ □ M00		120 x 70 x 80	R901282203 RE 90005-03
Sandwich plate with R ring plate	HSZ 10 A667-4X/A06 26.1 35.1 35.2 □ □ □ M00		120 x 70 x 80	R901282203 RE 90005-03

Proportional valves (① = component side, ② = plate side)

Device designation	Type designation Material no.	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate	HSZ 10-26908-AA/G24K4M00 R901014628		472 x 70 x 120 10.5 kg	R901019734 RE 28163 RE 29188 RE 90005-03
Sandwich plate	HSZ 10-26896-ZA/HM00 R901004474 Unfitted, fitting on request		225 x 95 x 90 13.9 kg	R901002270
Sandwich plate	HSZ 10 B470-3X/2-315XYU-PG24K4-08M01 R901011922		160 x 70 x 100 8.2 kg Side E + F G1/4	R901013511 RE 25818 RD 18139-04
Sandwich plate	HSZ 10 A441-3X/05M01 R900705578 Fitting: M-SR10KE05-1X additional fitting upon request Comment: Lateral connection diagram 3DREE 10		140 x 70 x 220 15.6 kg Side E G1/4	R900706722 RE 20380 RE 29286

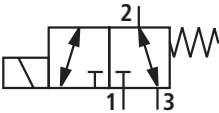
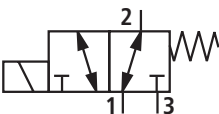
Functional group Clamping hydraulics

Example: **HSZ 10 A 433 – 3X/PRFB –**

46	47	47.2

– K1

48	49	50	51	2	3

46 	Adjustment element at the 3-way pressure control valve	Setscrew with internal hexagon Hand wheel Adjustment protection, set in the factory	= L = K = C
47 	Set pressure at the 3-way pressure control valve:	50 to 210 bar – Setting 49 bar 20 to 105 bar – Setting 14 bar 14 to 55 bar – Setting 14 bar 7 to 28 bar – Setting 14 bar 3.5 to 14 bar – Setting 14 bar	= A = B = D = E = S
47.2 	Seal material ⚠ Attention! Observe compatibility of seals with hydraulic fluid used!	NBR seals FKM seals (other seals upon request)	= N = V
48 	Symbol of the 3/2 directional spool valve:	 	= C = U
49 	Solenoid voltage at the directional spool valve:	Direct voltage 12 V Direct voltage 24 V Direct voltage 48 V Direct voltage 96 V Direct voltage 205 V	= G12 = G24 = G48 = G96 = G205
50 	Manual override at the 3/2 directional spool valve:	without manual override Concealed manual override	= N0 = N9
51 	Electrical types of connection	03pol (2+PE) DIN EN 175301-803, without mating connector 02pol K40 DT 04-2PA Deutsch, without mating connector 02pol C4/Z30 AMP Junior-Timer, without mating connector	= K4 = K40 = C4

Clamping hydraulics (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information	
	Material no.		Weight		
Size of the ports					
Sandwich plate	HSZ 10A 433 – 3X/PRFB – 46 47 47.2 – K1 48 49 50 51 M01		200 x 70 x 80	R901080416	
Fitting of the sandwich plate:			9.73 kg	Side F M G 1/4	Valve PRFB on side E RE 18136-04 Valve on side F
Pressure control valve	PRFB – see below				
3/2 directional spool valve	KKDER1 48 U A/H 35.1 V				
SPULE GZ37-4 24VDC 22W					
Sandwich plate	HSZ 10A 433 – 3X/PRFB – 46 47 47.2 – K1 48 49 50 51 M01		200 x 70 x 80	R901080416	
Fitting of the sandwich plate:			9.73 kg	Side F M G 1/4	Valve PRFB on side E RE 18136-04 Valve on side F
Pressure control valve	PRFB – see below				
3/2 directional spool valve	KKDER1 48 C A/H 35.1 V				
SPULE GZ37-4 24VDC 22W					

Order example

For complete device with 3/2 directional seat valve and pressure control valve:

HSZ 10A 433 – 3X/PRFB –

46

47

47.2

 – K1

48

49

50

51

2

3

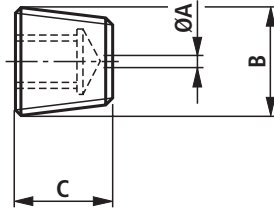
Shuttle valves (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
Sandwich plate	HSZ 10 A235-3X/LG6M01 R900555882		130 x 70 x 50 3.3 kg	R900265137
Fitting of the sandwich plate:			Side F X G 1/4	
Shuttle valve	LG 6 S-2X/			
Sandwich plate	HSZ 10 B235-3X/LG6M01 R900571975		130 x 70 x 50 3.3 kg	R900266410
Fitting of the sandwich plate:			Side F X G 1/4	
Shuttle valve	LG 6 S-2X/			

Nozzles

Form 7 (RN 115.06)

Plug screw DIN 906



Important:

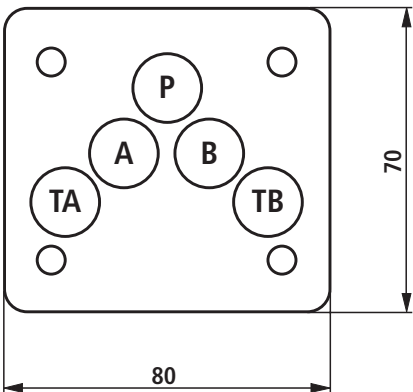
Spelling (!) with complete type!

	50	51	52	53
B	M6	M8 x 1	R1/8	R3/8
C	6	8	8	10
ØA	Material no.			
0.6 (06)	R900157934	R900149430	R900188667	–
0.7 (07)	R900157931	R900143957	R901082918	–
0.8 (08)	R900152276	R900136843	R900144212	R901187136
0.9 (09)	R901192875	R901195589	–	–
1.0 (10)	R900149335	R900136842	R900135607	R900159032
1.1 (11)	R900645667	R900144763	–	–
1.2 (12)	R900152286	R900139101	R900146270	R900159032
1.3 (13)	R900152291	R900144762	R900891295	R900163839
1.4 (14)	R901193341	R900158791	R900135606	–
1.5 (15)	R900148823	R900133712	R900144910	R900159031
1.6 (16)	R901106248	R900816128	R900137422	–
1.7 (17)	R900164852	R901062795	–	–
1.8 (18)	R900157932	R900150953	R900142840	R900159030
1.9 (19)	–	R900165257	–	–
2.0 (20)	R900156650	R900137299	R900155897	R900159029
2.1 (21)	–	R901247812	–	–
2.2 (22)	R900152292	R900161379	–	R900152475
2.3 (23)	–	R900871140	–	–
2.4 (24)	–	R900185333	–	–
2.5 (25)	R900157929	R900137445	R900148351	R900146259
2.6 (26)	R901213522	–	R913010492	–
2.7 (27)	–	R901131052	R901020741	–
2.8 (28)	–	R900826709	R901171511	R900149053
2.9 (29)	–	R901121836	–	–
3.0 (30)	R900181894	R900144761	R900111282	R900149044
3.1 (31)	–	–	R913010491	–
3.2 (32)	–	R900855716	R900892343	–
3.5 (35)	–	R900136079	R900688752	R900146258
4.0 (40)	–	R900802480	R900178466	R900149052
4.5 (45)	–	R900151944	R900644143	–
5.0 (50)	–	–	R900167529	R900152287
5.5 (55)	–	–	–	R900149428
6.0 (60)	–	–	–	R900135774
7.0 (70)	–	–	–	R900152289
7.1 (71)	–	–	–	R900152294
7.5 (75)	–	–	–	R900137643
8.0 (80)	–	–	–	R900626397
8.8 (88)	–	–	–	R900743487

R ring plates, seal kits

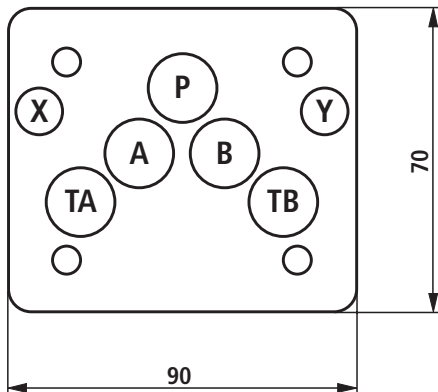
R ring plate hole type 10A (1.5 high)

R ring plate	Material no.
HSZ 10 A001-3X/M00	R900329776
HSZ 10 A001-3X/V00	R900329777



R ring plate hole type 10B (with X and Y; 1.5 high)

R ring plate	Material no.
HSZ 10 B001-3X/M00	R900315950
HSZ 10 B001-3X/V00	R900315951



Seal kit - plate: For porting pattern 10A and 10B	
Seal material	Material no.
NBR	R900313194
FKM	R900313195

Notes
