

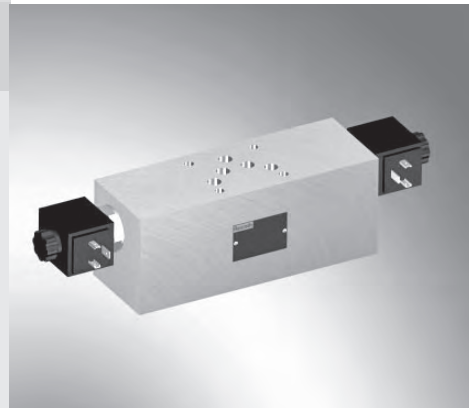
# Sandwich plates

## 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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- Complementary details	14 to 17	Discharge control	
- Check valves Z1S10	18	• Seat valve normally closed, blocking on one side	60 to 62
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- Complementary details	34	Supply control	
- Pressure relief valves, direct operated	35 to 38	• Seat valve normally closed, blocking on one side	68 to 71
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(pressure switch, see data sheet RE 50061)		- Differential circuit:	
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 Information on available spare parts:  
[www.boschrexroth.com/spc](http://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

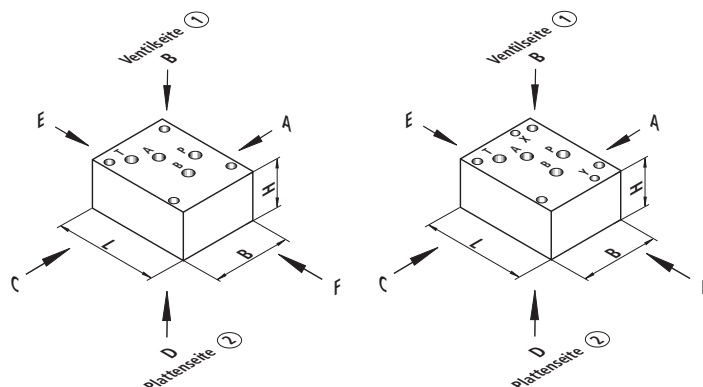
## Safety instructions

- 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
	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>HSZ 10</b> <span style="border: 1px solid black; padding: 0 5px;"> </span> <span style="border: 1px solid black; padding: 0 5px;">-</span> <span style="border: 1px solid black; padding: 0 5px;">/</span> <span style="border: 1px solid black; padding: 0 5px;"> </span> <span style="border: 1px solid black; padding: 0 5px;">*</span> </div>					
1	<input type="checkbox"/>	<b>Porting pattern:</b>	Form A10, direct operated	= A		
2	<input type="checkbox"/>	<b>Serial number</b> of the functional design from 001 ... 999 (is determined in the factory)	Form A10, pilot operated (with X and Y port)	= B		
3	<input type="checkbox"/>	<b>Series-production status:</b>	- 1X, - 2X, - 3X, - 4X			
4	<input type="checkbox"/>	<b>Seal material:</b>	NBR seals	= M (standard)		
		<b>Note:</b>	FKM seals (other seals upon request)	= V		
		Observe compatibility of seals with the hydraulic fluids used!				
5	<input type="checkbox"/>	<b>Line connection:</b>	No external connection	= 00		
			Connection according to DIN 3852 part 2	= 01		
			Thread according to DIN EN ISO 228 (pipe thread)			
6	<input type="checkbox"/>	<b>*</b>	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/ <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">15</td><td style="text-align: center;">16</td></tr><tr><td style="text-align: center;">S</td><td style="text-align: center;">S20</td></tr></table> M00	15	16	S	S20	Sandwich plate with optional valve design
15	16					
S	S20					

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.**

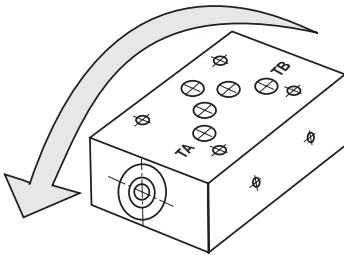
**The following serial sandwich plates with porting pattern according to ISO 4401 pilot operated (drilled for X and Y port) are part of the delivery range:**

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

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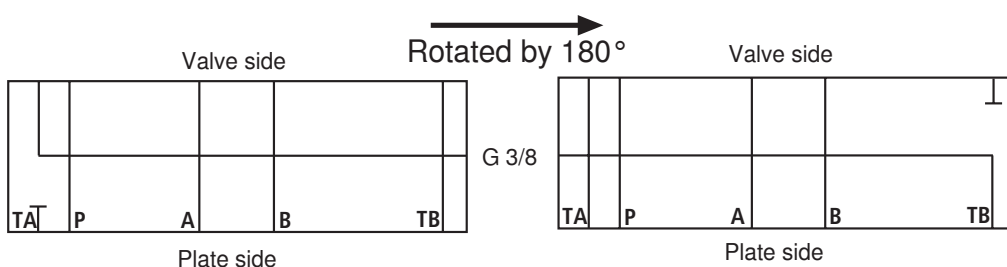
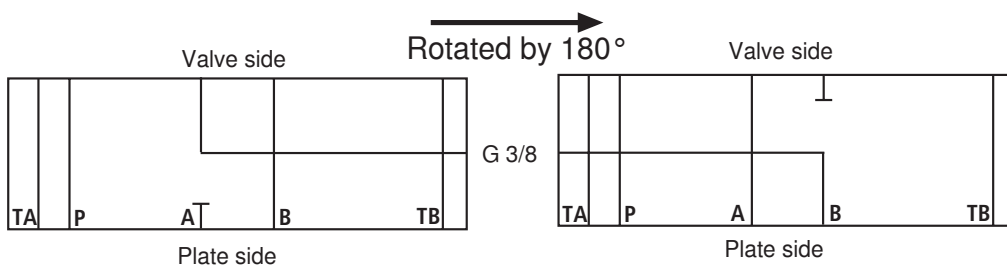
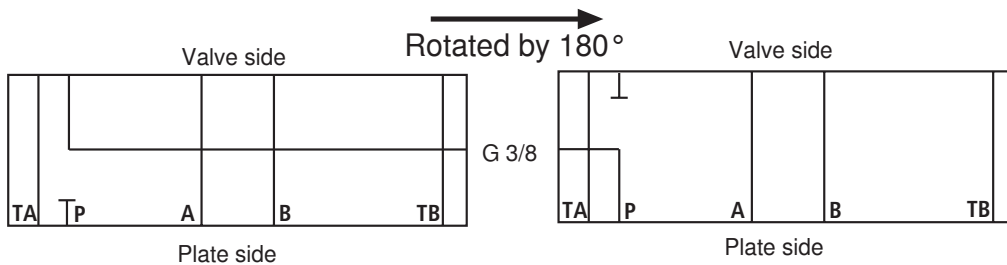
## Extended applications of HSZ 10 sandwich plates with R ring plate

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.

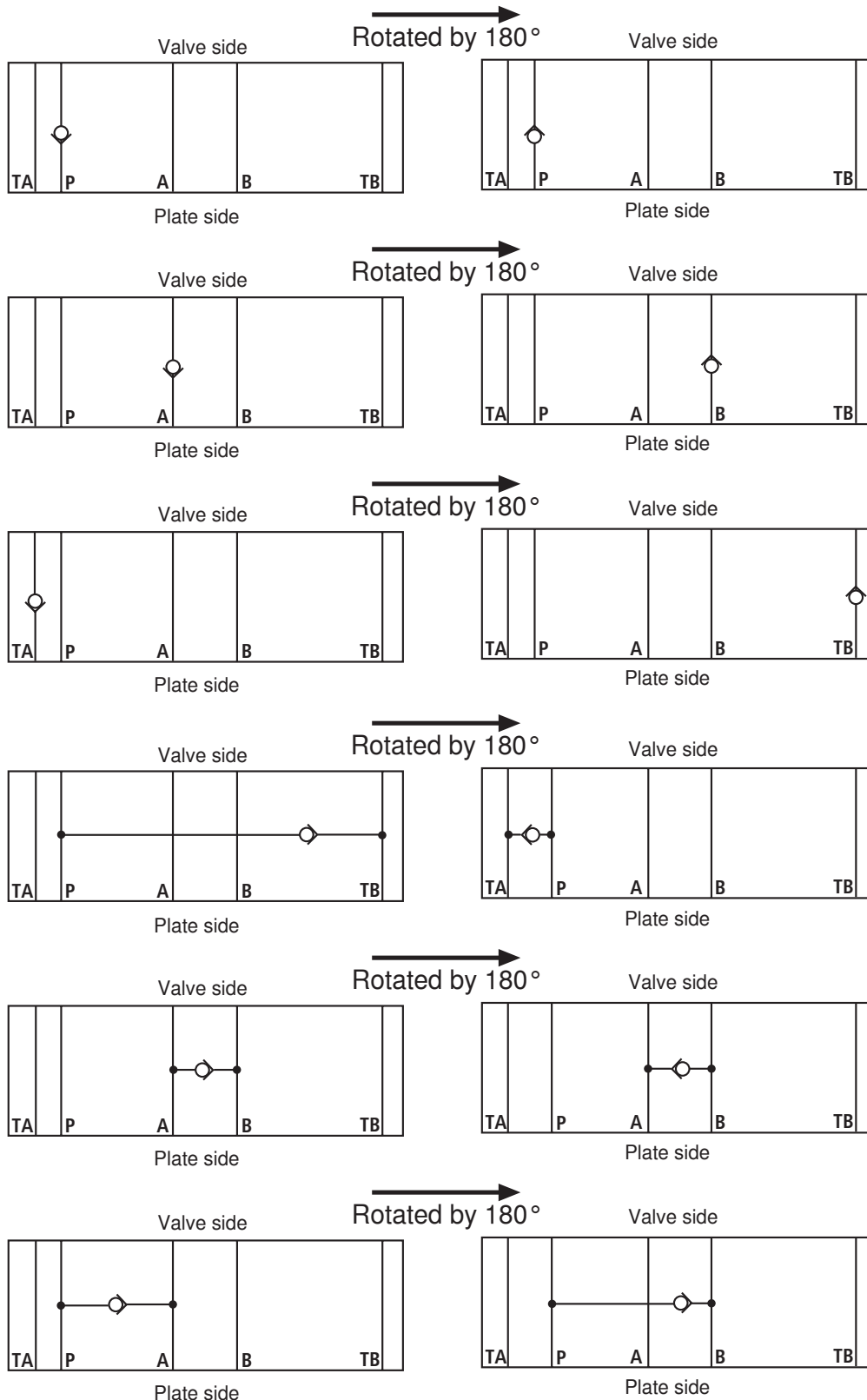


In case of sandwich plates with only one T bore (TA or TB), it has to be ensured that the connection to T is not interrupted and still ensured.

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



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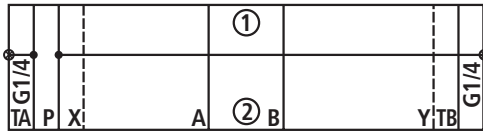
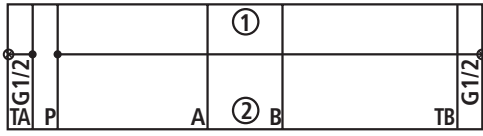
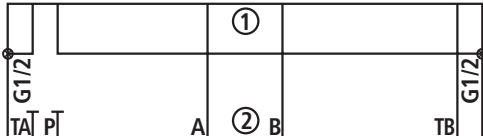
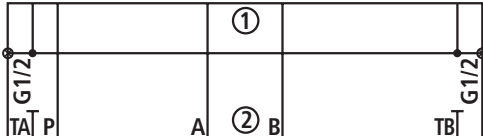
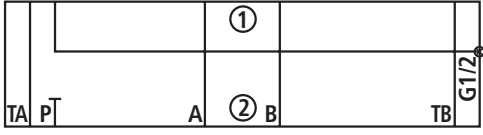
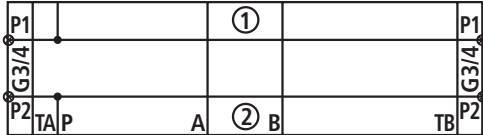
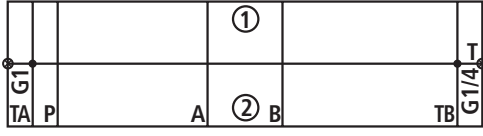
**Extended applications of HSZ 10 sandwich plates with R ring plate**
**Check valve in the P, A, B, TA or TB channel**


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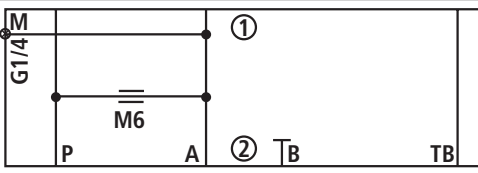
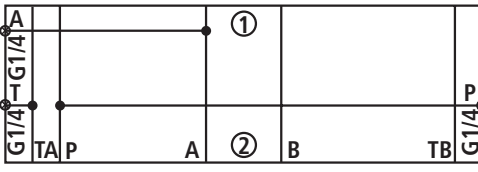
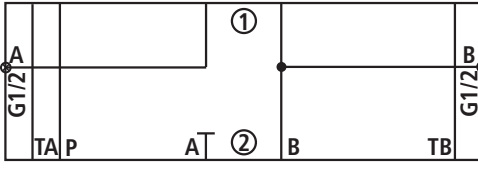
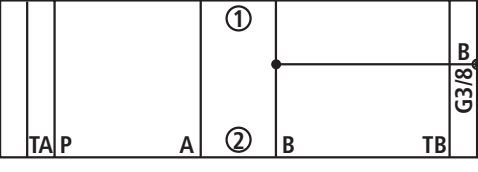
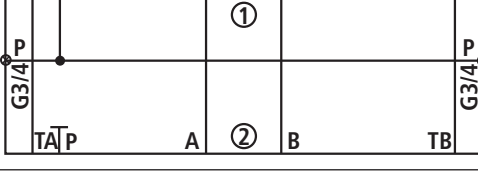
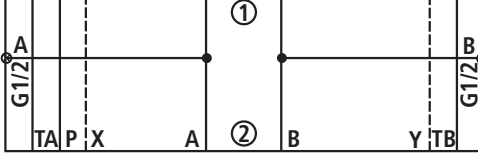
**Distance plates without port (① = component side, ② = plate side)**

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 dis- placed 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 dis- placed 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)

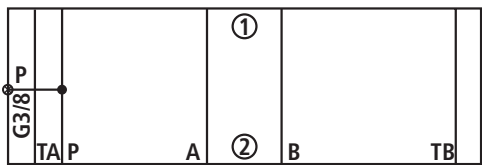
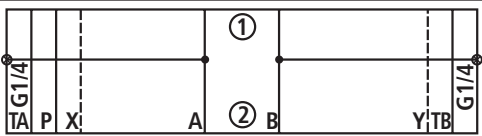
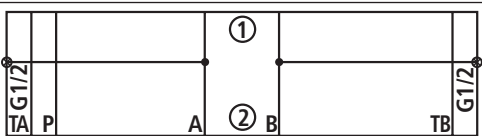
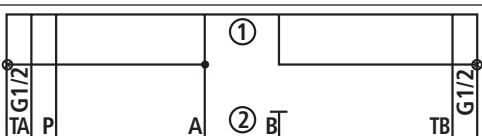
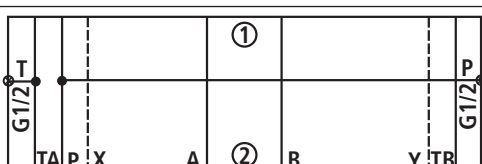
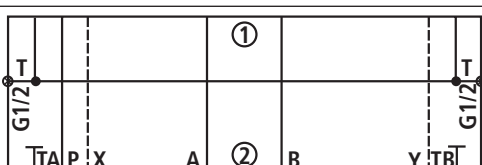
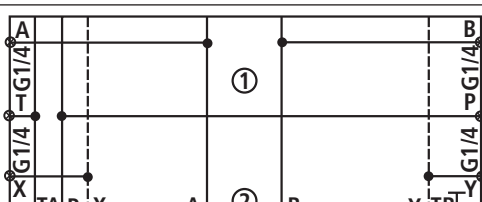
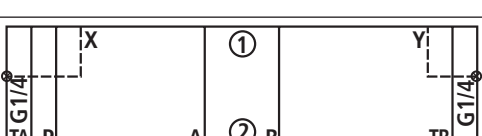
Device designation	Type designation  Material no.	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet  More information
Sandwich plate	HSZ 10 B037-3X/M01  R900515226		100 x 70 x 40 2.0 kg Side E   Side F T   P G 1/4   G 1/4	R900265392
Sandwich plate	HSZ 10 A065-3X/M01  R900528297		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 Side F P G 1/4	R900240251
Sandwich plate	HSZ 10 A040-3X/M01  R901176800		130 x 70 x 40 2.7 kg Side E A G 1/2 Side F B G 1/2	R901176802
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 Side F P G 3/4	R900259802
Sandwich plate	HSZ 10 B031-3X/M01  R900563477		130 x 70 x 40 2.6 kg Side E A G 1/2 Side F B G 1/2	R900265843



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

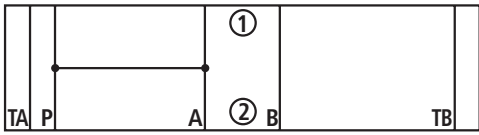
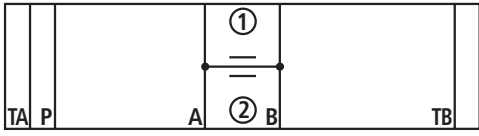
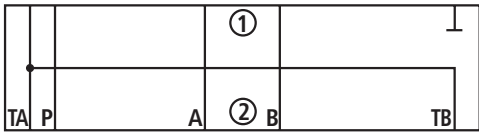
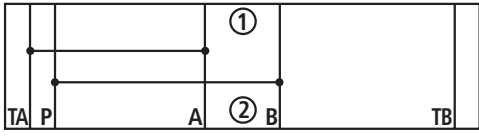
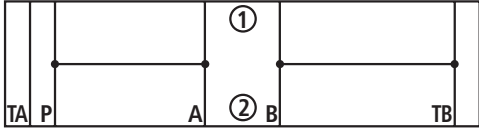
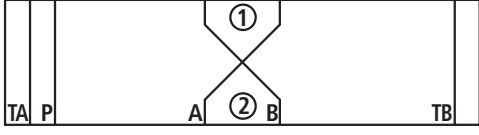
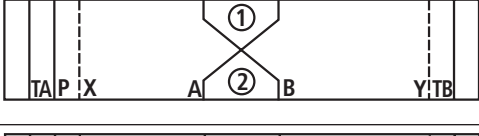
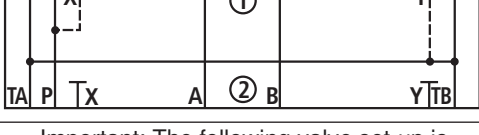
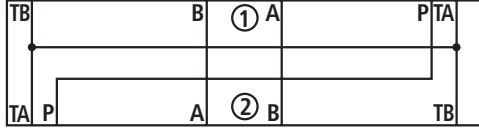
Device designation	Type designation  Material no.	Symbol	Platte L x W x H in mm  Weight  Size of the ports	Dimensional sheet  More information
Sandwich plate	HSZ 10 A024-1X/M01  R900584633		102 x 70 x 30  1.5 kg Side E P G 3/8	R900727135
Sandwich plate	HSZ 10 B035-3X/M01  R900536135		120 x 70 x 40  2.5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

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

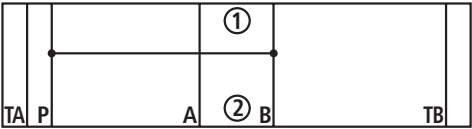
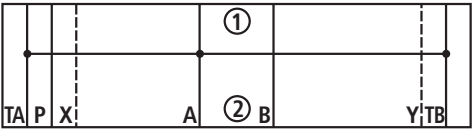
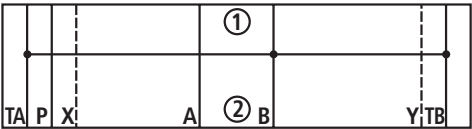
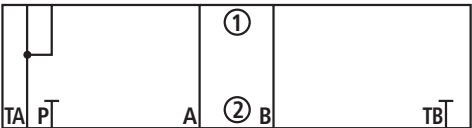
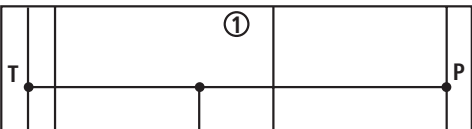
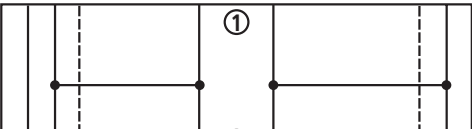
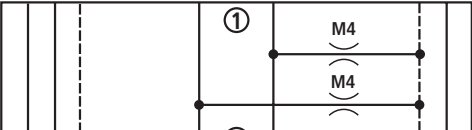
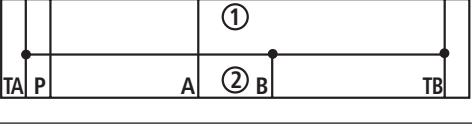
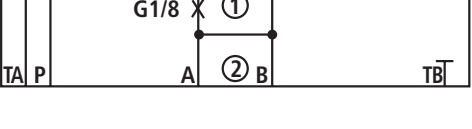
Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
	Material no.			
Sandwich plate	HSZ 10 B305-3X/M01  R901279292		110 x 70 x 40 2.2 kg Side E P G 1/4	R900265573  R900265572
Sandwich plate	HSZ 10 B307-3X/M01  R901279293		110 x 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

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

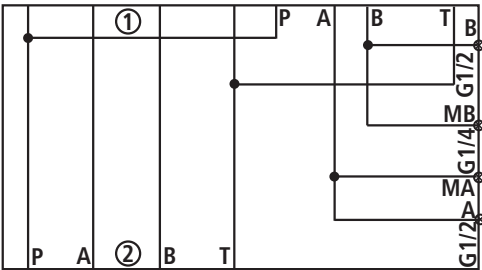
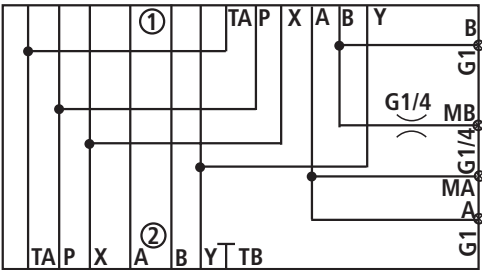
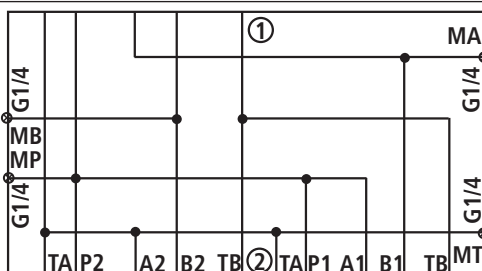
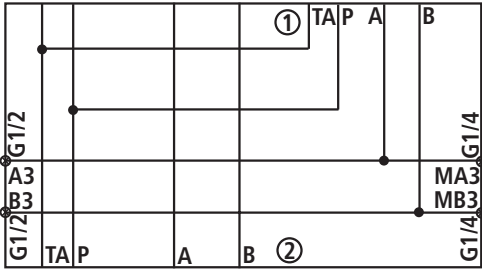
Device designation	Type designation  Material no.	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet  More information
Sandwich plate with R ring plate	HSZ 10 A019-3X/M00  R900537267		90 x 70 x 20 0.9 kg	R900265465
Sandwich plate	HSZ 10 A071-3X/M00  R900537262		90 x 70 x 30 1.4 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  Material no.	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  
A 2 – **3X** / 12 3 4

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

<b>11</b> <input style="width: 30px; height: 20px;" type="checkbox"/>	<b>Cracking pressure</b> 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
<b>12</b> <input style="width: 30px; height: 20px;" type="checkbox"/>	<b>Cracking pressure</b> 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
<b>12.1</b> <input style="width: 30px; height: 20px;" type="checkbox"/>	<b>Cracking pressure</b> 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
<b>13</b> <input style="width: 30px; height: 20px;" type="checkbox"/>	<b>Cracking pressure</b> 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
<b>14</b> <input style="width: 30px; height: 20px;" type="checkbox"/>	<b>Seal material</b>	NBR seals FKM seals (other seals upon request)	= no code = V
	<b>⚠ Attention!</b> Observe compatibility of seals with hydraulic fluid used!		
<b>26.1</b> <input style="width: 30px; height: 20px;" type="checkbox"/>	<b>Nominal voltage at the coil</b>	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
<b>35.1</b> <input style="width: 30px; height: 20px;" type="checkbox"/>	<b>Manual override</b> at directional seat valve series K...	without manual override Concealed manual override Screwable manual override	= N0 = N9 = N11

## Functional group Blocking function

<b>35.1</b> <input type="checkbox"/>	<b>Manual override</b> at directional seat valve series OD.15...	without manual override    Screwable manual override   with manual override "pushing"   with manual override "pushing", lockable in switched position	= 1A = 3A = 3I  = 3M = 3L = 3D  = 1B = 1L  = 1C = 1M
<b>35.2</b> <input type="checkbox"/>	<b>Electrical types of connection:</b>	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	= 01 <sup>1)</sup> = K4 <sup>2)</sup>  = 20 <sup>1)</sup> = K40 <sup>2)</sup>  = 07 <sup>1)</sup> = C4 <sup>2)</sup>

<sup>1)</sup> Designation of the individual component solenoid coil  
<sup>2)</sup> 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 <sup>31</sup>  -1X/** (see page 19 - 21)

KE = Angle valve

<sup>31</sup>  


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- <sup>31</sup>  / Z1S10T** (see page 19 and 20)

<sup>31</sup>  


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 <sup>31</sup>  000**

Flow from 1 to 2

<sup>31</sup>  


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 <sup>31</sup>  000**

Flow from 2 to 1

<sup>31</sup>  


02	= 2 bar
----	---------

**For number: 490** (see page 22 and 23)

**VUCN-12A- 04.31.28.00.57 <sup>32</sup>  000**

Flow from 1 to 2

<sup>32</sup>  


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

**VURN-12A- 04.31.36.00.57 <sup>32</sup>  000**

Flow from 2 to 1

<sup>32</sup>  

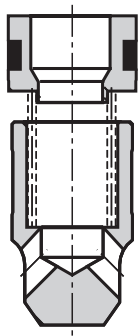

02	= 2 bar
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## Functional group Blocking function

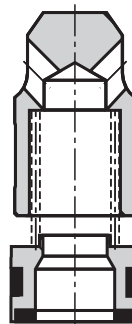
### Complementary details on check valves:

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

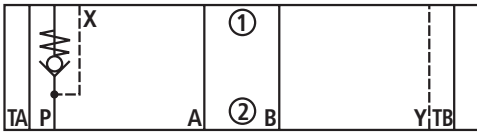
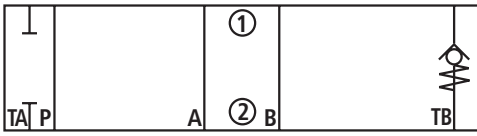
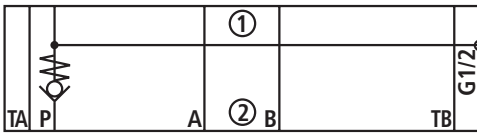
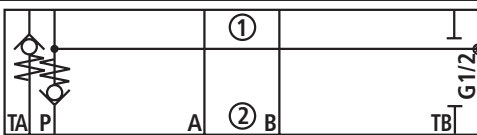
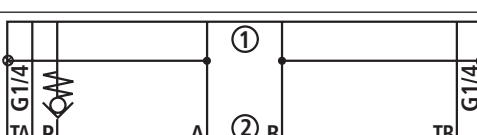
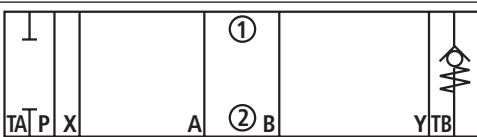
Check valve type D10...:

**Version D10-.../HSZ 187**

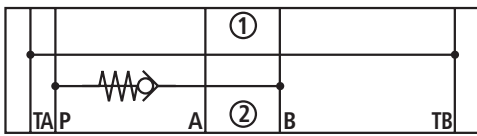
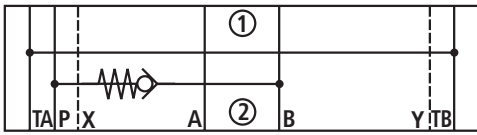
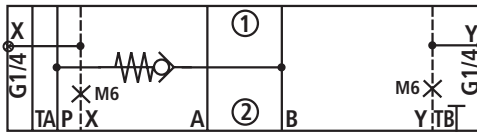
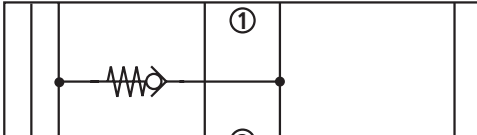
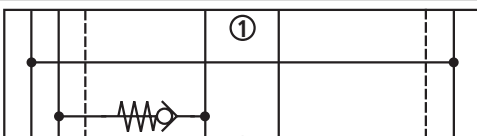
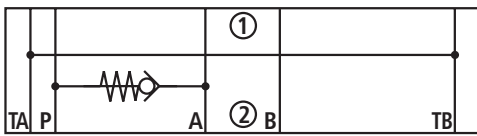
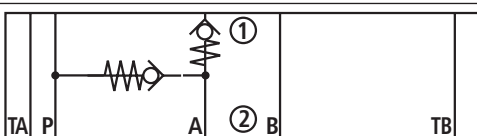
Seal material	Material no.
NBR	R900544566
FKM	R900869810

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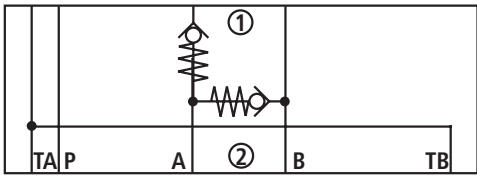
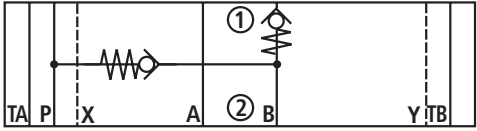
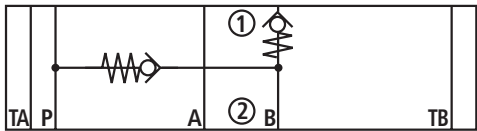
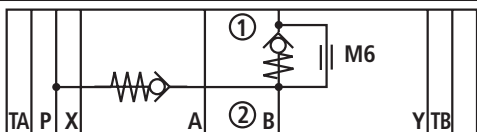
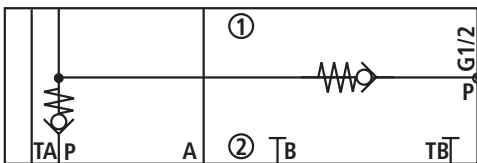
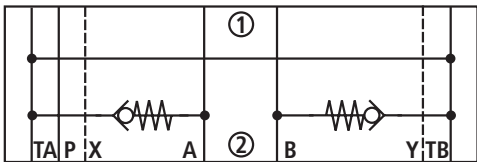
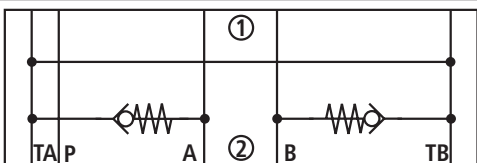
**Check valves Z1S10** (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet  More information
	Material no.			
Sandwich plate	Z1S 10 P <sup>12.1</sup> -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 <sup>12.1</sup> -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 <sup>12.1</sup> -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 <sup>12.1</sup> -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 <sup>12.1</sup> -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 <sup>12.1</sup> -3X/V S0114		91 x 70 x 50 2.5 kg	RE 21536
Amend type designation according to page 14.				

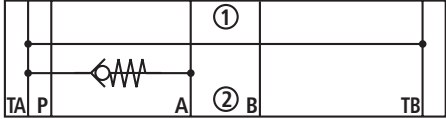
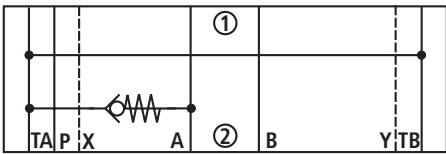
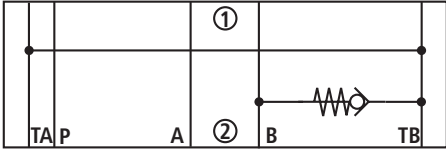
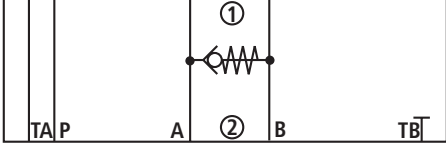
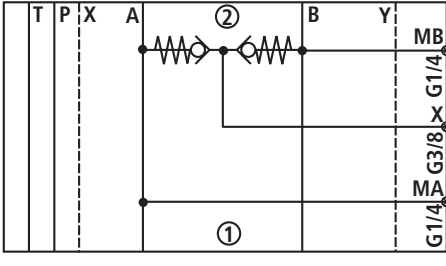
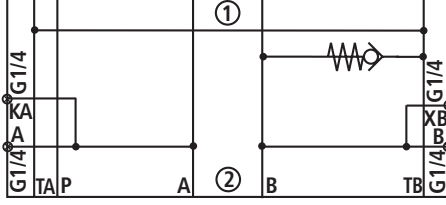
**Check valves M-SR, D8, D9 and D10** (① = component side, ② = plate side)

Device designation	Type designation  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  Fitting of the sandwich plate: RUECKSCHLAGVENTIL D8-05BAR/ <sup>14</sup> 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/ <sup>14</sup> 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/ <sup>14</sup>	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/ <sup>14</sup>	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/ <sup>14</sup> 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/ <sup>14</sup> 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/ <sup>14</sup> HSZ187 RUECKSCHLAGVENTIL D9.8-05BAR/ <sup>14</sup> 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 Material no.	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet More information
<b>Sandwich plate</b>  <b>Fitting of the sandwich plate:</b> Check valve (installation kit) <b>M-SR 10 KE05-1X/□</b> <sup>14</sup>	<b>HSZ 10 A592-3X/05M00</b> <b>R900944621</b>		140 x 71 x 90 6.5 kg	R900274704  RE 20380
<b>Sandwich plate</b>  <b>Fitting of the sandwich plate:</b> RUECKSCHLAGVENTIL D10-05BAR/□ <sup>14</sup> HSZ187 RUECKSCHLAGVENTIL D9.8-05BAR/□ <sup>14</sup> Z1S10T	<b>HSZ 10 B187-3X/05BARM00</b> <b>R901211312</b>		90 x 70 x 50 2.4 kg	R900265039
<b>Sandwich plate</b>  <b>Fitting of the sandwich plate:</b> RUECKSCHLAGVENTIL D10-05BAR/□ <sup>14</sup> HSZ187 RUECKSCHLAGVENTIL D9.8-05BAR/□ <sup>14</sup> Z1S10T	<b>HSZ 10 A187-3X/05BARM00</b> <b>R900555874</b>		90 x 70 x 50 2.4 kg	R900265058
<b>Sandwich plate</b>  <b>Fitting of the sandwich plate:</b> RUECKSCHLAGVENTIL D10-05BAR/□ <sup>14</sup> HSZ187 RUECKSCHLAGVENTIL D9.8-05BAR/□ <sup>14</sup> Z1S10T DUESE <sup>50</sup> M6-DIN 906 (material no. see p. 90)	<b>HSZ 10 B330-3X/05BAR-</b> <b>D<sup>50</sup> M00</b>		90 x 70 x 50 2.4 kg	R900265848  Internal thread M6
<b>Sandwich plate</b>  <b>Fitting of the sandwich plate:</b> Check valve (installation kit) <b>M-SR 10 KE05-1X/□</b> <sup>14</sup>	<b>HSZ 10 A468-3X/05M01</b> <b>R901010126</b>		120 x 70 x 100 6.0 kg  Side F G1/2	R901010327  RE 20380
<b>Sandwich plate</b>  <b>Fitting of the sandwich plate:</b> Check valve (installation kit) <b>M-SR 10 KE05-1X/□</b> <sup>14</sup>	<b>HSZ 10 B188-3X/02M00</b> <b>R901046500</b>		190 x 70 x 50 4.8 kg	R901046526  RE 20380
<b>Sandwich plate</b>  <b>Fitting of the sandwich plate:</b> Check valve (installation kit) <b>M-SR 10 KE05-1X/□</b> <sup>14</sup>	<b>HSZ 10 A188-3X/05M00</b> <b>R900555875</b>		190 x 70 x 50 4.9 kg	R900265095  RE 20380

**Check valves M-SR, D8, D9 and D10** (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
<b>Sandwich plate</b> with R ring plate  <b>Fitting of the sandwich plate:</b> Check valve (installation kit) <b>M-SR 10 KE05-1X/□</b> <sup>14</sup>	<b>HSZ 10 A338-3X/05M00</b> <b>R900916704</b>		140 x 70 x 50 3.5 kg	R900265416  RE 20380
<b>Sandwich plate</b> with R ring plate  <b>Fitting of the sandwich plate:</b> Check valve (installation kit) <b>M-SR 10 KE05-1X/□</b> <sup>14</sup>	<b>HSZ 10 B338-3X/M00</b> <b>R900536800</b>		140 x 70 x 40 3.5 kg	R900265449  RE 20380
<b>Sandwich plate</b> with R ring plate  <b>Fitting of the sandwich plate:</b> Check valve (installation kit) <b>M-SR 10 KE05-1X/□</b> <sup>14</sup>	<b>HSZ 10 A552-3X/05M00</b> <b>R900701086</b>		140 x 70 x 40 3.5 kg	R900265417  RE 20380
<b>Sandwich plate</b>   <b>Fitting of the sandwich plate:</b> Check valve (installation kit) <b>M-SR 10 KE05-1X/□</b> <sup>14</sup>	<b>HSZ 10 A186-3X/05V00</b> <b>R901036587</b>		100 x 70 x 50 2.5 kg	R901037041  RE 20380
<b>Sandwich plate</b>   <b>Fitting of the sandwich plate:</b> Check valve (installation kit) <b>M-SR 8 KE05-1X/□</b> <sup>14</sup>	<b>HSZ 10 B436-3X/05M01</b> <b>R900564126</b>		120 x 70 x 80 4.9 kg Side F MA, MB G1/4 X G3/8	R901024630  RE 20380
<b>Sandwich plate</b>   <b>Fitting of the sandwich plate:</b> Check valve (installation kit) <b>M-SR 10 KE05-1X/□</b> <sup>14</sup>	<b>HSZ 10 A577-3X/M01J12</b> <b>R900903267</b>		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**

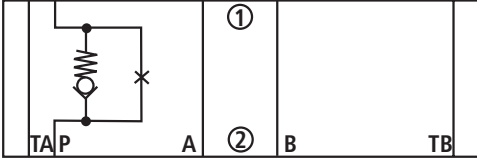
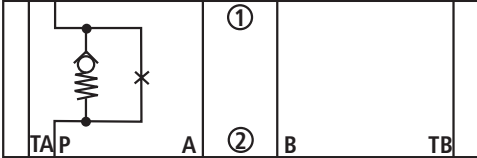
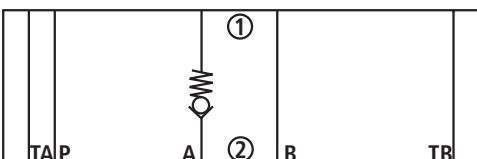
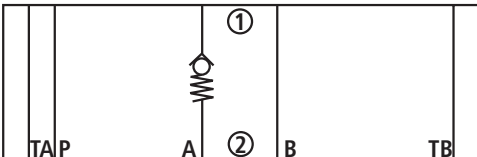
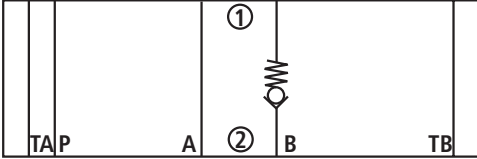
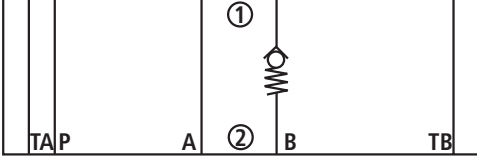
 For complete device: HSZ 10 <sup>1</sup>A 188-3X/ <sup>11</sup>05 <sup>3</sup>M <sup>4</sup>00

**Order example**

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

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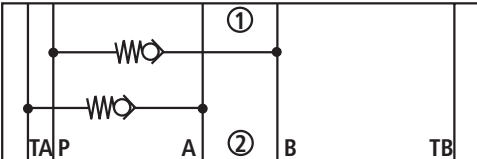
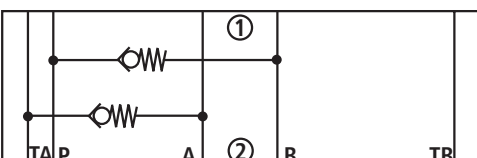
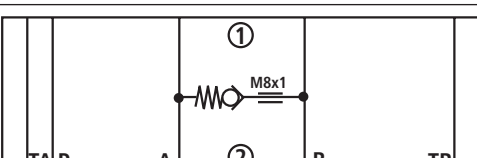
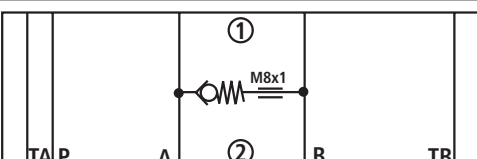
**VUCN / VURN... check valves** (① = component side, ② = plate side)

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet
	Material no.		Weight	and more information
		Size of the ports		
Sandwich plate	HSZ 10 A408-4X/ D00-20RV36M00		105 x 70 x 50	R901232101
	R901289554		2.6 kg	Plug screw M8x1
Fitting of the sandwich plate:				RE 90005-03
Check valve				
VURN-12A- 020431360057 <sup>32</sup> 02 000				
Sandwich plate	HSZ 10 A408-4X/ D00-10RV28M00		105 x 70 x 50	R901232101
	R901289489		2.6 kg	Plug screw M8x1
Fitting of the sandwich plate:				RE 90005-03
Check valve				
VUCN-12A- 000431280057 <sup>32</sup> 00 000				
Sandwich plate	HSZ 10 A490-4X/ A-20RV36M00		200 x 70 x 80	R901234326
	R901283120		7.5 kg	
Fitting of the sandwich plate:				RE 90005-03
Check valve				
VURN-12A- 020431360057 <sup>32</sup> 02 000				
Sandwich plate	HSZ 10 A490-4X/ A-10RV28M00		200 x 70 x 80	R901234326
	R901283110		7.5 kg	
Fitting of the sandwich plate:				RE 90005-03
Check valve				
VUCN-12A- 000431280057 <sup>32</sup> 00 000				
Sandwich plate	HSZ 10 A490-4X/ B-20RV36M00		200 x 70 x 80	R901234326
	R901283168		8.8 kg	
Fitting of the sandwich plate:				RE 90005-03
Check valve				
VURN-12A- 020431360057 <sup>32</sup> 02 000				
Sandwich plate	HSZ 10 A490-4X/ B-10RV28M00		200 x 70 x 80	R901234326
	R901283155		8.8 kg	
Fitting of the sandwich plate:				RE 90005-03
Check valve				
VUCN-12A- 000431280057 <sup>32</sup> 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		200 x 70 x 80 7.5 kg	R901234326  RE 90005-03
	R901283166			
Fitting of the sandwich plate:				
Check valve				
VURN-12A- 020431360057 <sup>32</sup> 02 000				
Sandwich plate	HSZ 10 A490-4X/ AB-10RV28M00		200 x 70 x 80 7.5 kg	R901234326  RE 90005-03
	R901283131			
Fitting of the sandwich plate:				
Check valve				
VUCN-12A- 000431280057 <sup>32</sup> 00 000				
Sandwich plate	HSZ 10 A519-4X/ 20RV21-25M00		105 x 70 x 50 2.6 kg	R901154552  Nozzle 2.5 mm  RE 90005-03
	R901283103			
Fitting of the sandwich plate:				
Check valve				
VURN-08A- 020431210056 <sup>32</sup> 02 000				
Sandwich plate	HSZ 10 A519-4X/ 10RV20-25M00		105 x 70 x 50 2.6 kg	R901154552  Nozzle 2.5 mm  RE 90005-03
	R901283097			
Fitting of the sandwich plate:				
Check valve				
VUCN-08A- 000431200056 <sup>32</sup> 00 000				
Sandwich plate with R ring plate	HSZ 10 A589-4X/ 20RV21-12M00		105 x 70 x 50 2.6 kg	R901155030  Nozzle 1.2 mm  RE 90005-03
	R901283162			
Fitting of the sandwich plate:				
Check valve				
VURN-08A- 020431210056 <sup>32</sup> 02 000				
Sandwich plate rotated by 180°				
Sandwich plate with R ring plate	HSZ 10 A589-4X/ 10RV20-12M00		105 x 70 x 50 2.6 kg	R901155030  Nozzle 1.2 mm  RE 90005-03
	R901283158			
Fitting of the sandwich plate:				
Check valve				
VUCN-08A- 000431200056 <sup>32</sup> 00 000				
Sandwich plate rotated by 180°				

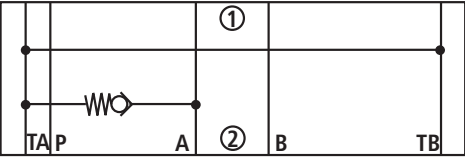
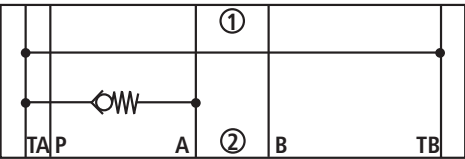
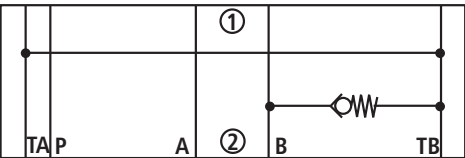
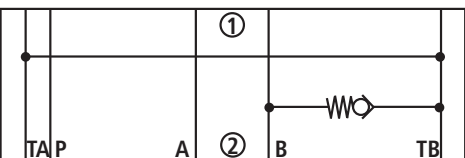
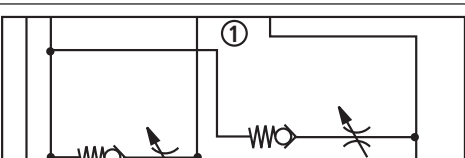
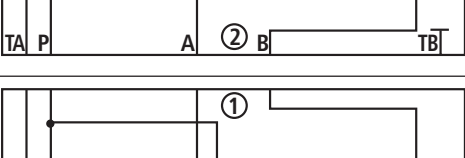
**VUCN / VURN... check valves** (1) = component side, (2) = plate side)

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

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

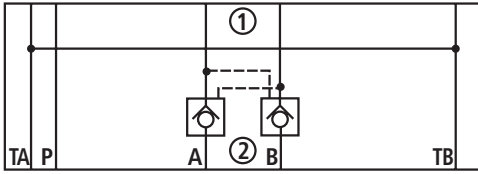
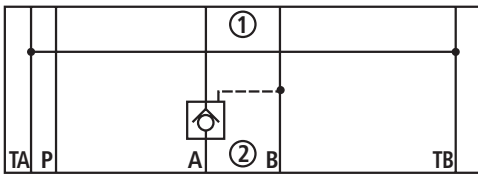
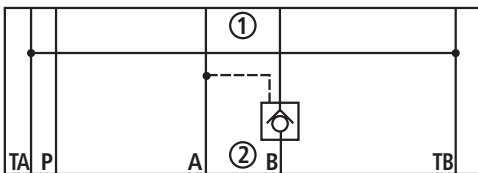
Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight	
Sandwich plate with R ring plate	HSZ 10 A667-4X/ 20RV36M00		140 x 70 x 60	R901282203  RE 90005-03
	R901283170		2.6 kg	
Fitting of the sandwich plate:				
Check valve VURN-12A- 020431360057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

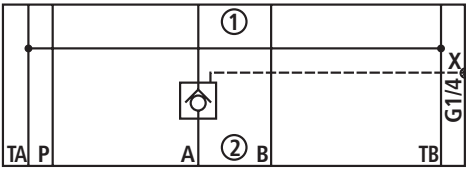
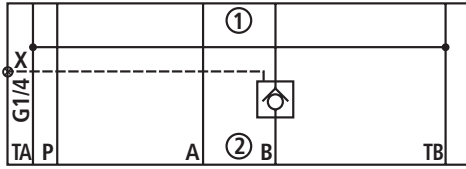
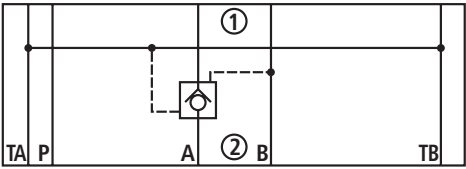
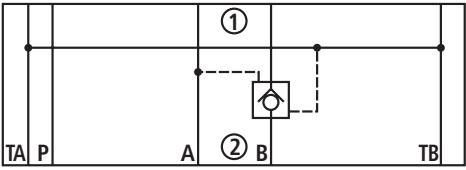
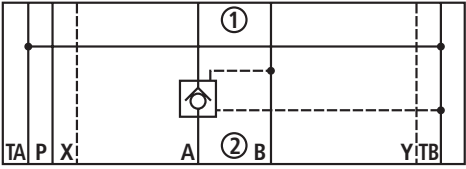
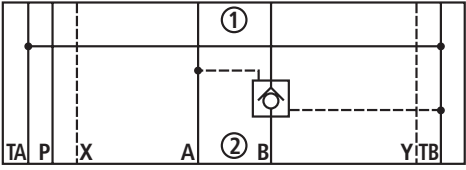
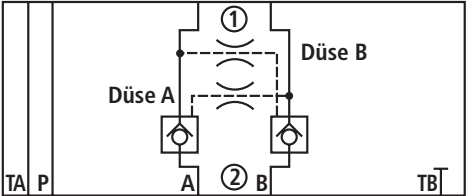
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**Check valves, pilot operated** (① = component side, ② = plate side)

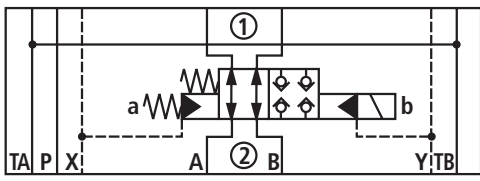
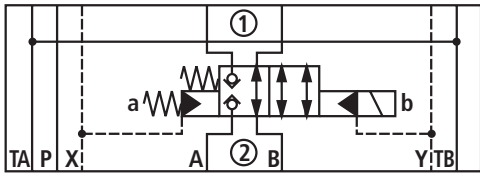
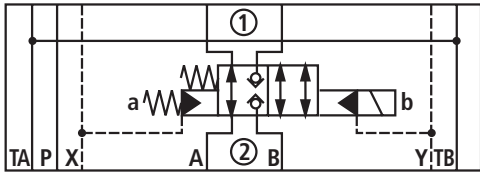
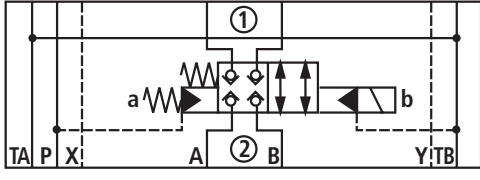
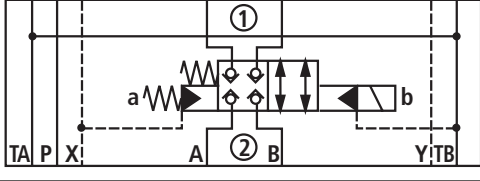
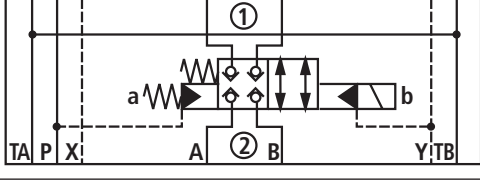
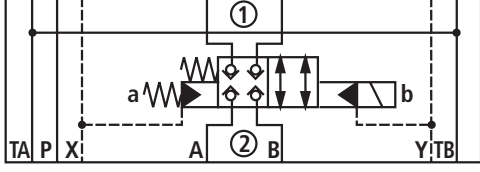
Device designation	Type designation  Material no.	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet  More information
Sandwich plate	Z2S 10 - <sup>13</sup> □ -3X/ <sup>14</sup> □		163 x 69.5 x 50 3.4 kg	RE 21553
Amend type designation according to page 14.				
Sandwich plate	Z2S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

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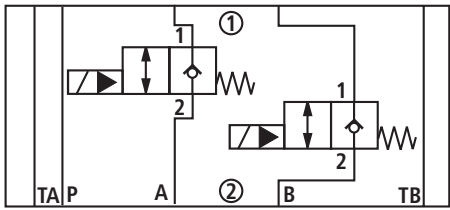
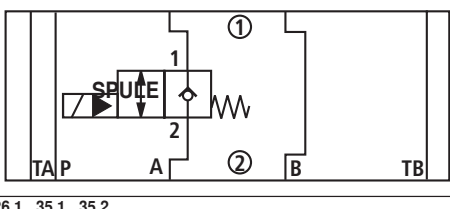
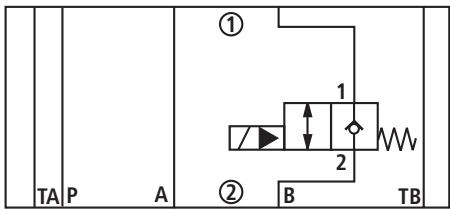
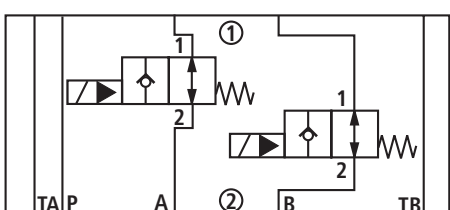
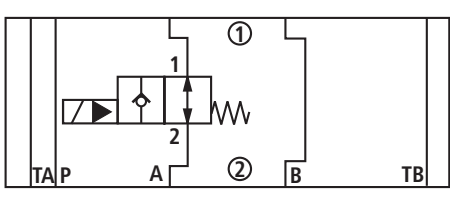
**Check valves, pilot operated** (① = component side, ② = plate side)

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 <sup>13</sup> □ -3X/ <sup>14</sup> □ 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 <sup>13</sup> □ -3X/ <sup>14</sup> □ 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 <sup>13</sup> □ -3X/ <sup>14</sup> □ S060		163 x 69.5 x 50 3.4 kg	RE 21553
Amend type designation according to page 14.				
Sandwich plate	Z2S 10 B <sup>13</sup> □ -3X/ <sup>14</sup> □ S060		163 x 69.5 x 50 3.4 kg	RE 21553
Amend type designation according to page 14.				
Sandwich plate	Z2S 10 A <sup>13</sup> □ -3X/ <sup>14</sup> □ S064		163 x 69.5 x 50 3.4 kg	RE 21553
Amend type designation according to page 14.				
Sandwich plate	Z2S 10 B <sup>13</sup> □ -3X/ <sup>14</sup> □ 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 <sup>50</sup> □ M00		260 x 70 x 80 10.7 kg	R900709357
Fitting of the sandwich plate:				
Check valve, pilot operated	FL-ERVE-R1-13X  DUESE <sup>50</sup> □ 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  Material no.	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet  More information
Sandwich plate	M-Z4SEH 10 E1- 2X/3C <sup>26</sup> □ K4		152 x 70 x 80 6.8 kg	R901071319  RE 18136-21
Sandwich plate	M-Z4SEH 10 A-2X/3C <sup>26</sup> □ K4		152 x 70 x 80 6.8 kg	R901071319  RE 18136-21
Sandwich plate	M-Z4SEH 10 B-2X/3C <sup>26</sup> □ K4		152 x 70 x 80 6.8 kg	R901071319  RE 18136-21
Sandwich plate	M-Z4SEH 10 E-2X/3C <sup>26</sup> □ ETK4		152 x 70 x 80 6.8 kg	R901071319  RE 18136-21
Sandwich plate	M-Z4SEH 10 E-2X/3C <sup>26</sup> □ TK4		152 x 70 x 80 6.8 kg	R901071319  RE 18136-21
Sandwich plate	M-Z4SEH 10 E-2X/3C <sup>26</sup> □ EK4		152 x 70 x 80 6.8 kg	R901071319  RE 18136-21
Sandwich plate	M-Z4SEH 10 E-2X/3C <sup>26</sup> □ 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		
Sandwich plate HSZ 10A 490-4X/AB-A05 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 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. <input type="checkbox"/> S0.000				
SPULE OD.02.17. <input type="checkbox"/> 30. <input type="checkbox"/> .000					
Sandwich plate HSZ 10A 490-4X/A-A05 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 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. <input type="checkbox"/> S0.000				
SPULE OD.02.17. <input type="checkbox"/> 30. <input type="checkbox"/> .000					
Sandwich plate HSZ 10A 490-4X/B-A05 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 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. <input type="checkbox"/> S0.000				
SPULE OD.02.17. <input type="checkbox"/> 30. <input type="checkbox"/> .000					
Sandwich plate HSZ 10A 490-4X/AB-A06 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 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. <input type="checkbox"/> S0.000				
SPULE OD.02.17. <input type="checkbox"/> 30. <input type="checkbox"/> .000					
Sandwich plate HSZ 10A 490-4X/A-A06 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 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. <input type="checkbox"/> S0.000				
SPULE OD.02.17. <input type="checkbox"/> 30. <input type="checkbox"/> .000					

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

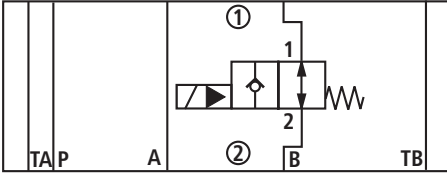
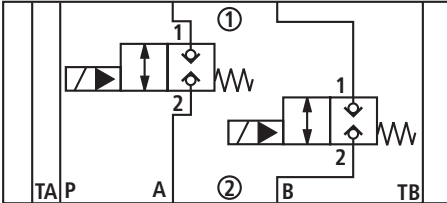
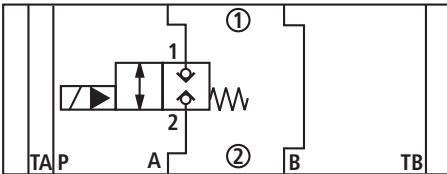
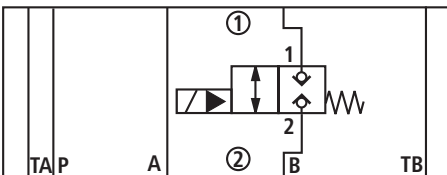
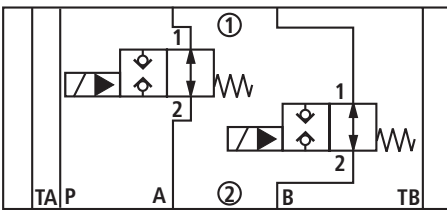
**Order example** for complete device with **two** seat valves normally closed, blocking on one side:

 HSZ 10A 490-4X/ AB-A05    K4M00

Effective in channel A and B

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**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	
Sandwich plate HSZ 10A 490-4X/B-A06	26.1 35.1 35.2 □ □ □ M00		200 x 70 x 80	R901234326 Valve on side F RE 90005-03
	Fitting of the sandwich plate:		7.64 kg	
	SITZVENTIL OD.15.05.89. □ S0.000 SPULE OD.02.17. □ 30. □ .000			
Sandwich plate HSZ 10A 490-4X/AB-B05	26.1 35.1 35.2 □ □ □ M00		200 x 70 x 80	R901234326 Valve on side E and F RE 90005-03
	Fitting of the sandwich plate:		7.64 kg	
	SITZVENTIL OD.15.05.89. □ S0.000 SPULE OD.02.17. □ 30. □ .000			
Sandwich plate HSZ 10A 490-4X/A-A05	26.1 35.1 35.2 □ □ □ M00		200 x 70 x 80	R901234326 Valve on side E RE 90005-03
	Fitting of the sandwich plate:		7.64 kg	
	SITZVENTIL OD.15.05.89. □ S0.000 SPULE OD.02.17. □ 30. □ .000			
Sandwich plate HSZ 10A 490-4X/B-B05	26.1 35.1 35.2 □ □ □ M00		200 x 70 x 80	R901234326 Valve on side F RE 90005-03
	Fitting of the sandwich plate:		7.64 kg	
	SITZVENTIL OD.15.05.89. □ S0.000 SPULE OD.02.17. □ 30. □ .000			
Sandwich plate HSZ 10A 490-4X/AB-B06	26.1 35.1 35.2 □ □ □ M00		200 x 70 x 80	R901234326 Valve on side E and F RE 90005-03
	Fitting of the sandwich plate:		7.64 kg	
	SITZVENTIL OD.15.05.89. □ S0.000 SPULE OD.02.17. □ 30. □ .000			

**Order example**

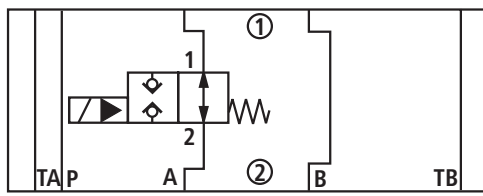
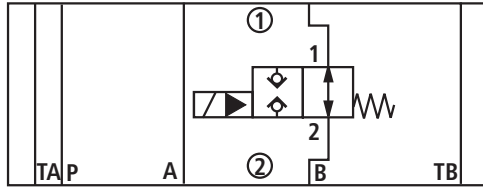
For complete device with one seat valve normally closed, blocking on both sides:

 HSZ 10A 490-4X/ A -B05 □ K4M00

Effective in channel A

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

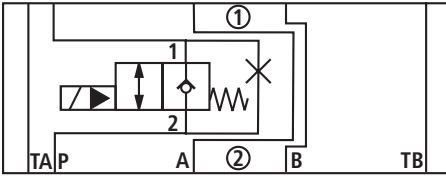
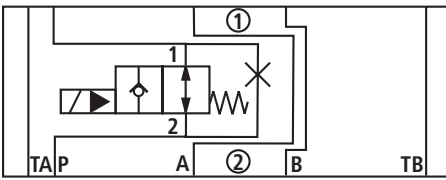
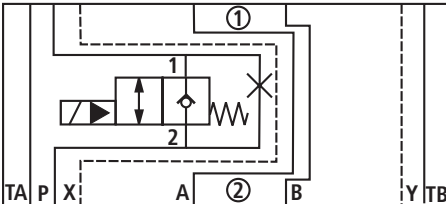
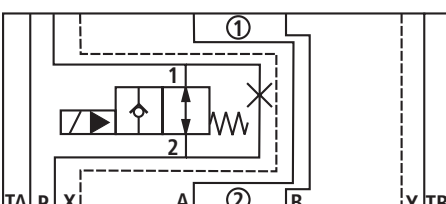
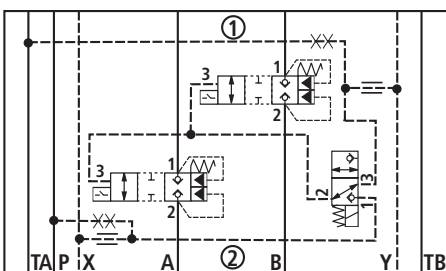
Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight	
<b>Sandwich plate HSZ 10A 490-4X/A-B06</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. <input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

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

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**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	
Sandwich plate HSZ 10A 408-4X/D00-A05	26.1 35.1 35.2 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> M00		170 x 70 x 80	R901039207 Valve on side F Plug screw M8x1 RE 90005-03
	Fitting of the sandwich plate:		7.3 kg	
	SITZVENTIL OD.15.05.89. <input type="checkbox"/> S0.000 SPULE OD.02.17. <input type="checkbox"/> 30. <input type="checkbox"/> .000			
Sandwich plate HSZ 10A 408-4X/D00-A06	26.1 35.1 35.2 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> M00		170 x 70 x 80	R901039207 Valve on side F Plug screw M8x1 RE 90005-03
	Fitting of the sandwich plate:		7.3 kg	
	SITZVENTIL OD.15.05.89. <input type="checkbox"/> S0.000 SPULE OD.02.17. <input type="checkbox"/> 30. <input type="checkbox"/> .000			
Sandwich plate HSZ 10B 408-4X/D00-A05	26.1 35.1 35.2 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> M00		170 x 70 x 80	R901217086 Valve on side F Plug screw M8x1 RE 90005-03
	Fitting of the sandwich plate:		7.3 kg	
	SITZVENTIL OD.15.05.89. <input type="checkbox"/> S0.000 SPULE OD.02.17. <input type="checkbox"/> 30. <input type="checkbox"/> .000			
Sandwich plate HSZ 10B 408-4X/D00-A06	26.1 35.1 35.2 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> M00		170 x 70 x 80	R901217086 Valve on side F Plug screw M8x1 RE 90005-03
	Fitting of the sandwich plate:		7.3 kg	
	SITZVENTIL OD.15.05.89. <input type="checkbox"/> S0.000 SPULE OD.02.17. <input type="checkbox"/> 30. <input type="checkbox"/> .000			
Sandwich plate HSZ 10B 670-4X/LKHC-ZD-KSC	26.1 35.1 35.2 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> M00		454 x 70 x 80	R901287658 Internal thread M6 Double plug in XP and YT RE 18136-21
	Fitting of the sandwich plate:		16.7 kg	
	SITZVENTIL OD.15.05.89. <input type="checkbox"/> S0.000 SPULE OD.02.17. <input type="checkbox"/> 30. <input type="checkbox"/> .000			

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

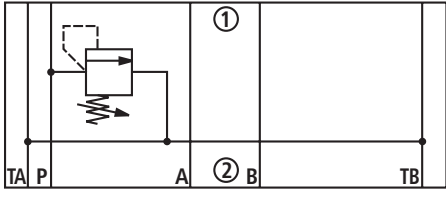
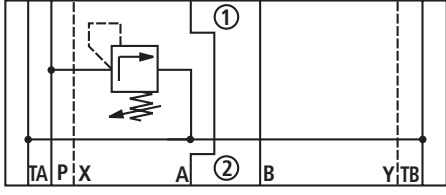
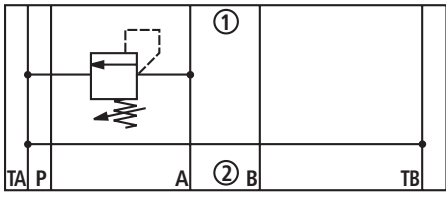
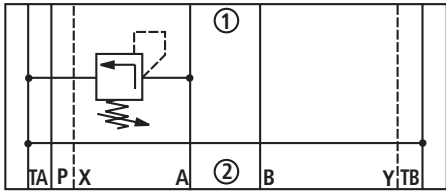
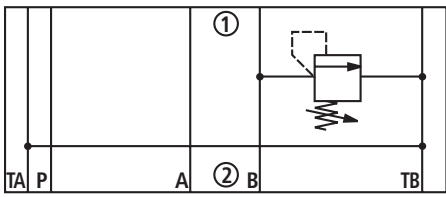
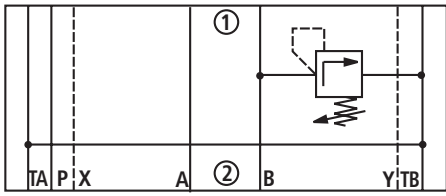
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**Functional group Pressure function**

 Example: **HSZ 10**   – **3X** /    
**Complementary details on sandwich plates with integrated pressure function (complete devices):**

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

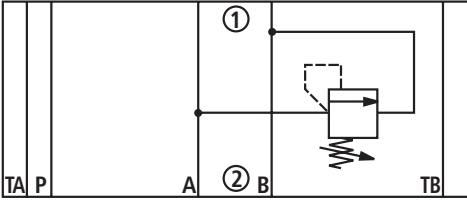
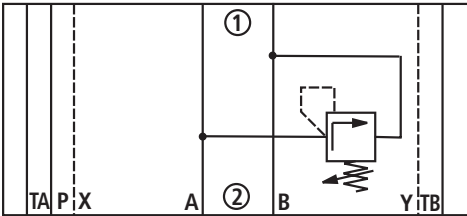
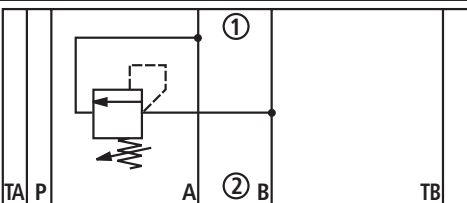
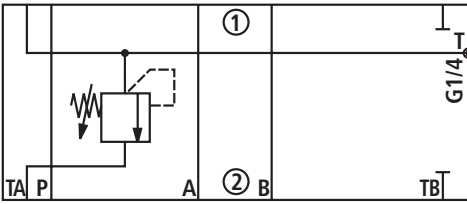
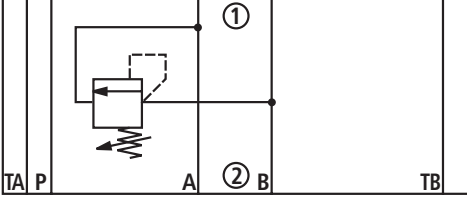
**Pressure relief valves, direct operated** (① = component side, ② = plate side)

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  <b>Fitting of the sandwich plate:</b>  Pressure relief valve, direct operated	<b>HSZ 10 A100-3X/</b> <sup>15</sup> <sup>16</sup> <input type="checkbox"/> <input type="checkbox"/> <b>M00</b>  <b>DBD</b> <sup>15</sup> <input type="checkbox"/> <b>10 K1X/</b> <sup>16</sup> <sup>14</sup> <input type="checkbox"/> <input type="checkbox"/>		170 x 70 x 50 4.5 kg	R900262854  RE 25402 DBD on side E
Sandwich plate with R ring plate  <b>Fitting of the sandwich plate:</b>  Pressure relief valve, direct operated	<b>HSZ 10 B100-3X/</b> <sup>15</sup> <sup>16</sup> <input type="checkbox"/> <input type="checkbox"/> <b>M00</b>  <b>DBD</b> <sup>15</sup> <input type="checkbox"/> <b>10 K1X/</b> <sup>16</sup> <sup>14</sup> <input type="checkbox"/> <input type="checkbox"/>		170 x 70 x 50 4.5 kg	R900262855  RE 25402 DBD on side E
Sandwich plate with R ring plate  <b>Fitting of the sandwich plate:</b>  Pressure relief valve, direct operated	<b>HSZ 10 A106-3X/</b> <sup>15</sup> <sup>16</sup> <input type="checkbox"/> <input type="checkbox"/> <b>M00</b>  <b>DBD</b> <sup>15</sup> <input type="checkbox"/> <b>10 K1X/</b> <sup>16</sup> <sup>14</sup> <input type="checkbox"/> <input type="checkbox"/>		170 x 70 x 50 4.3 kg	R900262857  RE 25402 DBD on side E
Sandwich plate with R ring plate  <b>Fitting of the sandwich plate:</b>  Pressure relief valve, direct operated	<b>HSZ 10 B106-3X/</b> <sup>15</sup> <sup>16</sup> <input type="checkbox"/> <input type="checkbox"/> <b>M00</b>  <b>DBD</b> <sup>15</sup> <input type="checkbox"/> <b>10 K1X/</b> <sup>16</sup> <sup>14</sup> <input type="checkbox"/> <input type="checkbox"/>		170 x 70 x 50 4.3 kg	R900241588  RE 25402 DBD on side E
Sandwich plate with R ring plate  <b>Fitting of the sandwich plate:</b>  Pressure relief valve, direct operated	<b>HSZ 10 A107-3X/</b> <sup>15</sup> <sup>16</sup> <input type="checkbox"/> <input type="checkbox"/> <b>M00</b>  <b>DBD</b> <sup>15</sup> <input type="checkbox"/> <b>10 K1X/</b> <sup>16</sup> <sup>14</sup> <input type="checkbox"/> <input type="checkbox"/>		170 x 70 x 50 4.3 kg	R900262856  RE 25402 DBD on side F
Sandwich plate with R ring plate  <b>Fitting of the sandwich plate:</b>  Pressure relief valve, direct operated	<b>HSZ 10 B107-3X/</b> <sup>15</sup> <sup>16</sup> <input type="checkbox"/> <input type="checkbox"/> <b>M00</b>  <b>DBD</b> <sup>15</sup> <input type="checkbox"/> <b>10 K1X/</b> <sup>16</sup> <sup>14</sup> <input type="checkbox"/> <input type="checkbox"/>		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/** <sup>15</sup> <sup>16</sup> <sup>3</sup> <sup>4</sup> **S** **100** **M** **00**

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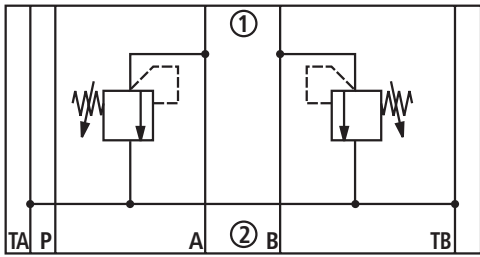
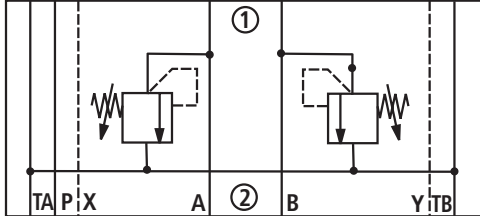
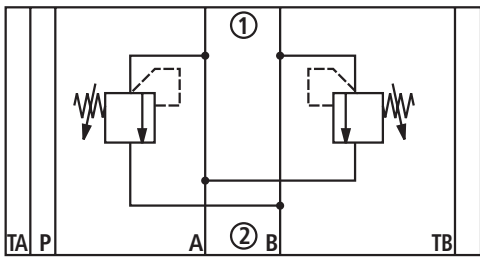
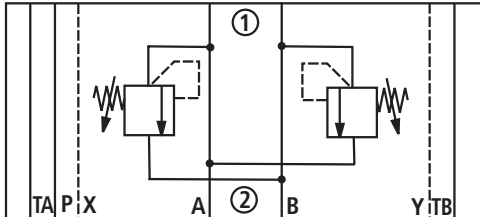
**Pressure relief valves, direct operated (① = component side, ② = plate side)**

Device designation	Type designation  Material no.	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet  More information
<b>Sandwich plate</b> with R ring plate  <b>Fitting of the sandwich plate:</b> Pressure relief valve, direct operated	<b>HSZ 10 A102-3X/</b> <sup>15</sup> <sup>16</sup> <input type="checkbox"/> <input type="checkbox"/> <b>M00</b>  <b>DBD</b> <sup>15</sup> <input type="checkbox"/> <b>10 K1X/</b> <sup>16</sup> <input type="checkbox"/> <input type="checkbox"/>		170 x 70 x 70 6.1 kg	R900262852  RE 25402 DBD on side F
<b>Sandwich plate</b> with R ring plate  <b>Fitting of the sandwich plate:</b> Pressure relief valve, direct operated	<b>HSZ 10 B102-3X/</b> <sup>15</sup> <sup>16</sup> <input type="checkbox"/> <input type="checkbox"/> <b>M00</b>  <b>DBD</b> <sup>15</sup> <input type="checkbox"/> <b>10 K1X/</b> <sup>16</sup> <input type="checkbox"/> <input type="checkbox"/>		170 x 70 x 70 6.5 kg	R900262853  RE 25402 DBD on side F
<b>Sandwich plate</b> with R ring plate  <b>Fitting of the sandwich plate:</b> Pressure relief valve, direct operated	<b>HSZ 10 A118-3X/</b> <sup>15</sup> <sup>16</sup> <input type="checkbox"/> <input type="checkbox"/> <b>M00</b>  <b>DBD</b> <sup>15</sup> <input type="checkbox"/> <b>10 K1X/</b> <sup>16</sup> <input type="checkbox"/> <input type="checkbox"/>		170 x 70 x 70 5.7 kg	R900265627  RE 25402 DBD on side E
<b>Sandwich plate</b>  <b>Fitting of the sandwich plate:</b> Pressure relief valve, direct operated	<b>HSZ 10 A117-3X/</b> <sup>15</sup> <sup>16</sup> <input type="checkbox"/> <input type="checkbox"/> <b>M01</b>  <b>DBD</b> <sup>15</sup> <input type="checkbox"/> <b>10 K1X/</b> <sup>16</sup> <input type="checkbox"/> <input type="checkbox"/>		170 x 70 x 70 6.0 kg Side F T G 1/4	R900262884  RE 25402 DBD on side E
<b>Sandwich plate</b> with R ring plate  <b>Fitting of the sandwich plate:</b> Pressure relief valve, direct operated	<b>HSZ 10 24833-AA/HM01</b> <b>R900560418</b>  <b>DBDS 10 K1X/25</b>		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/** <sup>15</sup>  <sup>16</sup>  <sup>3</sup>  <sup>4</sup>  **S** **100** **M** **00**

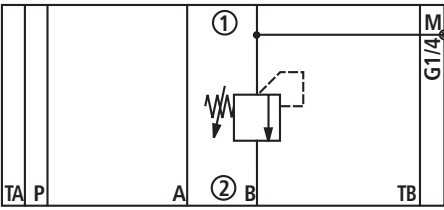
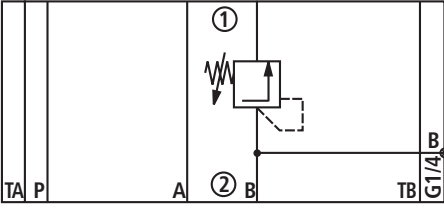
**Pressure relief valves, direct operated** (① = component side, ② = plate side)

Device designation	Type designation  Material no.	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet  More information
<b>Sandwich plate</b>  Fitting of the sandwich plate:  Pressure relief valve, direct operated	<b>HSZ 10 A105-3X/A</b> <input type="checkbox"/> <input type="checkbox"/> <sup>15 16</sup> <b>-B</b> <input type="checkbox"/> <input type="checkbox"/> <sup>15 16</sup> M00  <b>DBD</b> <input type="checkbox"/> <sup>15</sup> 10 K1X/ <input type="checkbox"/> <sup>16 14</sup>		250 x 70 x 70 8.8 kg	R900262812  RE 25402 DBD on side E and F
<b>Sandwich plate</b>  Fitting of the sandwich plate:  Pressure relief valve, direct operated	<b>HSZ 10 B105-3X/A</b> <input type="checkbox"/> <input type="checkbox"/> <sup>15 16</sup> <b>-B</b> <input type="checkbox"/> <input type="checkbox"/> <sup>15 16</sup> M00  <b>DBD</b> <input type="checkbox"/> <sup>15</sup> 10 K1X/ <input type="checkbox"/> <sup>16 14</sup>		250 x 70 x 70 8.8 kg	R900271893  RE 25402 DBD on side E and F
<b>Sandwich plate</b>  Fitting of the sandwich plate:  Pressure relief valve, direct operated	<b>HSZ 10 A108-3X/A</b> <input type="checkbox"/> <input type="checkbox"/> <sup>15 16</sup> <b>-B</b> <input type="checkbox"/> <input type="checkbox"/> <sup>15 16</sup> M00  <b>DBD</b> <input type="checkbox"/> <sup>15</sup> 10 K1X/ <input type="checkbox"/> <sup>16 14</sup>		220 x 70 x 80 8.9 kg	R900262880  RE 25402 DBD on side E and F
<b>Sandwich plate</b>  Fitting of the sandwich plate:  Pressure relief valve, direct operated	<b>HSZ 10 B108-3X/A</b> <input type="checkbox"/> <input type="checkbox"/> <sup>15 16</sup> <b>-B</b> <input type="checkbox"/> <input type="checkbox"/> <sup>15 16</sup> M00  <b>DBD</b> <input type="checkbox"/> <sup>15</sup> 10 K1X/ <input type="checkbox"/> <sup>16 14</sup>		220 x 70 x 80 8.9 kg	R900268669  RE 25402 DBD on side E and F

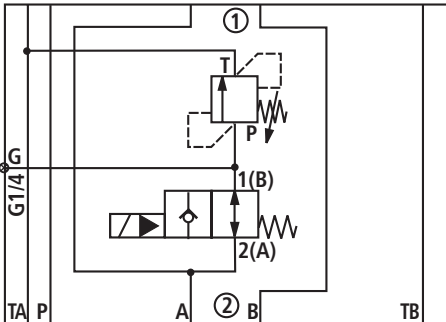
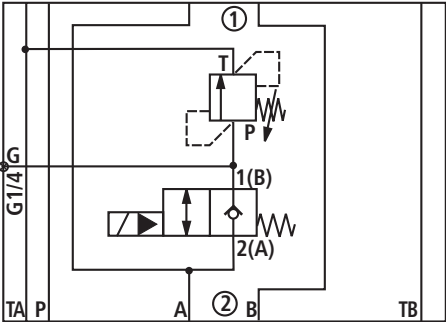
**Order example**

 For complete device with **two** pressure relief valves: **HSZ 10 A105-3X/A**  <sup>15 16</sup>  <sup>15 16</sup> - **B**  <sup>15 16</sup>  <sup>15 16</sup>  <sup>3</sup>  <sup>4</sup>

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

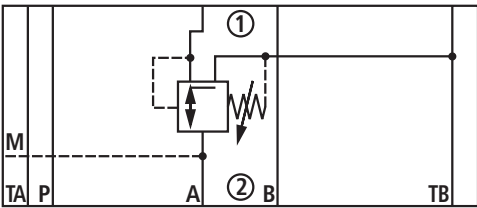
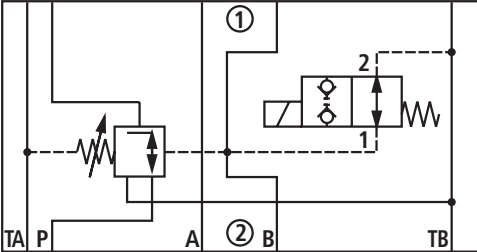
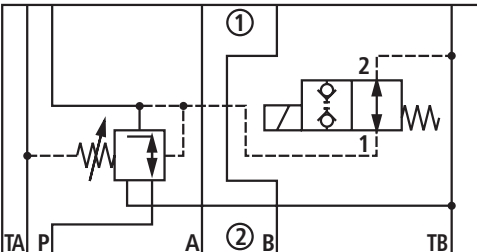
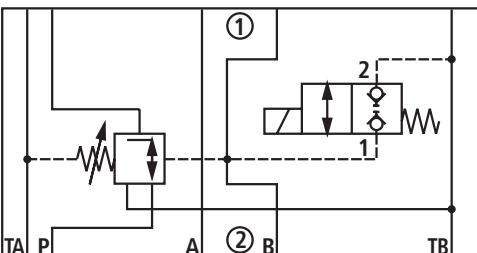
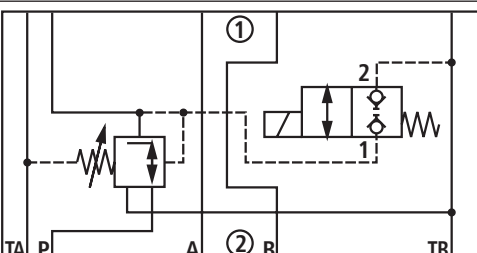
Device designation	Type designation Material no.	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet  More information
Sandwich plate	HSZ 10-38008-AA/HM01 R901098088		170 x 70 x 80 6.8 kg	R901195298
Fitting of the sandwich plate:  Pressure relief valve, direct operated	DBDS 10 K1X/50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

**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	HSZ 10A 493-3X/03-05-A06 <sup>26.1</sup> <sup>35.1</sup> <sup>35.2</sup> M01		120 x 70 x 90 5.2 kg	R901116019
Fitting of the sandwich plate:  SITZVENTIL OD.15.05.18...  Pressure relief valve 04.11.49...				RE 90005-03
Sandwich plate	HSZ 10A 493-3X/03-05-A05 <sup>26.1</sup> <sup>35.1</sup> <sup>35.2</sup> M01		120 x 70 x 90 5.2 kg	R901116019
Fitting of the sandwich plate:  SITZVENTIL OD.15.05.18...  Pressure relief valve 04.11.49...				RE 90005-03

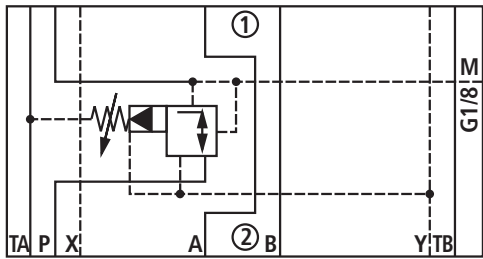
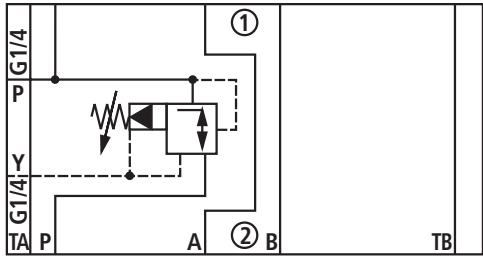
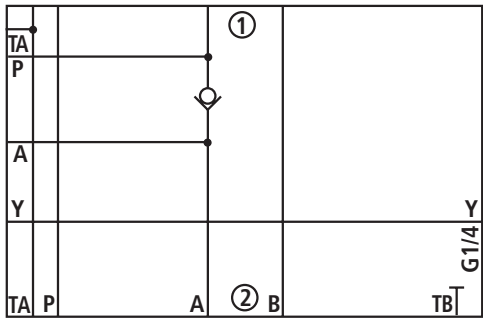
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**Pressure reducing valves, direct operated** (① = component side, ② = plate side)

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	ZDR 10 DA <sup>37</sup> □-5X/ <sup>19</sup> □ YMS0129		104 x 69 x 50 2.8 kg	Installation di- mensions see RE 26585
Amend type designation according to page 30.				
Sandwich plate	ZDR 10 DB <sup>37</sup> □-5X/ <sup>19</sup> □ YMS033		91 x 69 x 50 3.2 kg	Installation di- mensions see RE 26585
Amend type designation according to page 30.				
Sandwich plate	ZDR 10 DP <sup>37</sup> □-5X/ <sup>19</sup> □ YMS033		91 x 69 x 50 3.2 kg	Installation di- mensions see RE 26585
Amend type designation according to page 30.				
Sandwich plate	ZDR 10 DB <sup>37</sup> □-5X/ <sup>19</sup> □ YMS0138		91 x 69 x 50 3.2 kg	Installation di- mensions see RE 26585
Amend type designation according to page 30.				
Sandwich plate	ZDR 10 DP <sup>37</sup> □-5X/ <sup>19</sup> □ YMS0138		91 x 69 x 50 3.2 kg	Installation di- mensions see RE 26585
Amend type designation according to page 30.				

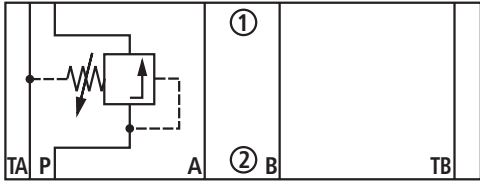
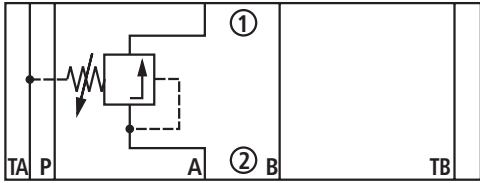
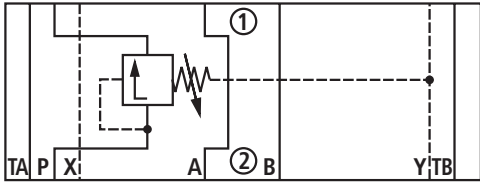
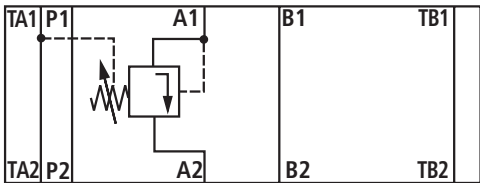
For more versions see RE 26585

**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
	<b>Material no.</b>			
<b>Sandwich plate</b>	ZDR 10 VP <sup>37</sup> □-3X/ <sup>18</sup> □ YMSO107		104 x 69 x 50 2.3 kg	Installation di- mensions see RE 26861
Amend type designation according to page 34.				
<b>Sandwich plate</b>	HSZ 10 A550-3X/ <sup>37</sup> □-□ <sup>38</sup> M01		140 x 70 x 80 5.7 kg	R900265979
<b>Fitting of the sandwich plate:</b>	DR 10 K <sup>37</sup> □-3X/ <sup>38</sup> □ YM <sup>14</sup> □		Side E P, Y G 1/4	RE 26850
Amend type designation according to page 34.				
<b>Sandwich plate</b>	HSZ 10 A441-3X/ 05M01  R900705578		140 x 70 x 220 15.6 kg	R900706722
<b>Fitting of the sandwich plate:</b>	M-SR 10 KE...1X/...		Side E Y G 1/4	Comment: lateral hole pattern for 3DRE...10P- 7X/...  RE 29286 RE 20380
Check valve (installation kit)				



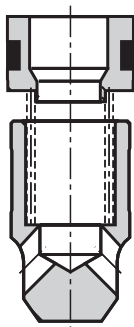
**Pressure sequence valves** (① = component side, ② = plate side)

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  Amend type designation according to page 34.	ZDZ 10 DP <sup>37</sup> □ -5X/ <sup>19</sup> □ YM		91 x 69 x 50 3.2 kg	R900258415  Installation dimensions see RE 26585
Sandwich plate  Amend type designation according to page 34.	ZDZ 10 DC <sup>37</sup> □ -5X/ <sup>19</sup> □ YM		91 x 69 x 50 3.2 kg	R900257429  Installation dimensions see RE 26585
Sandwich plate  Amend type designation according to page 34.	ZDZ 10 DP <sup>37</sup> □ -5X/ <sup>19</sup> □ YMSO131		91 x 69 x 50 3.2 kg	R900262838  Installation dimensions see RE 26585
Sandwich plate  Amend type designation according to page 34.	ZDZ 10 DA <sup>37</sup> □ -5X/ <sup>19</sup> □ YM		91 x 69 x 50 3.2 kg	R900267758  Installation dimensions see RE 26585

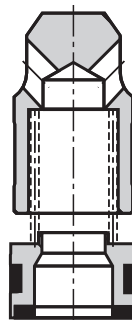
**Functional group Combination pressure and blocking function**

 Example lowering brake function: **HSZ 10**   - **3X** / **L**    
**Complementary details on sandwich plates with integrated pressure and blocking function (complete devices):**

<input type="checkbox"/> 15	<b>Adjustment element</b> at the pressure relief valve type DBD..10...:	Setscrew with hexagon and protective cap Rotary knob Lockable rotary knob	= S = H <sup>1)</sup> = A <sup>1)</sup>	<sup>1)</sup> Please observe the installation dimensions!
<input type="checkbox"/> 16	<b>Setting pressure</b> 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	
<b>Note:</b> Spelling () with complete type!				
<input type="checkbox"/> 12	<b>Cracking pressure</b> 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)	
Seal material	Material no.
NBR	R900543827
FKM	R900543830



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

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

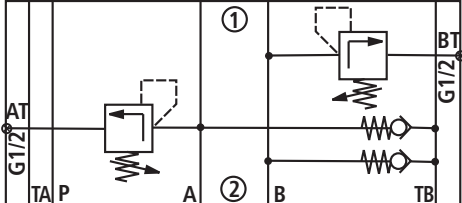
## Functional group Combination pressure and blocking function

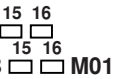


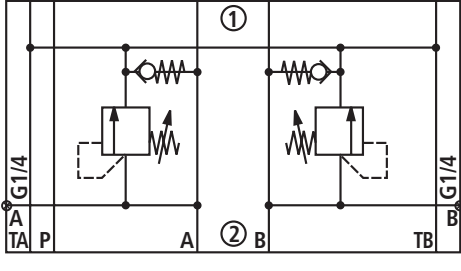
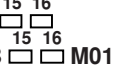


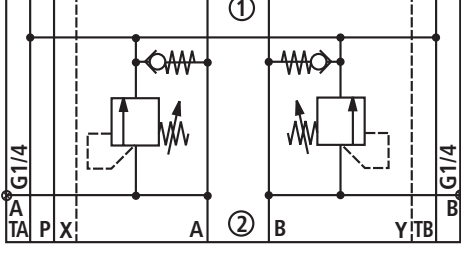
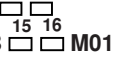


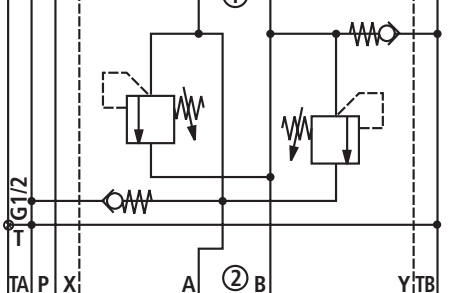
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<p>44</p> <input style="width: 30px; height: 20px;" type="checkbox"/>	<p><b>Control open ratio</b> at the lowering brake valve</p> <p>More control open ratios on request!</p>	<p>Control open ratio 4.5 : 1 (standard) for systems with variable load conditions and structure-related fluctuations</p> <p>Control open ratio 10 : 1 for systems with relatively constant load</p>	<p>= <b>G</b></p> <p>= <b>H</b></p>
<p>39</p> <input style="width: 30px; height: 20px;" type="checkbox"/>	<p><b>Setting range</b></p>	<p>70 to 175 bar (setting 140)</p> <p>140 to 350 bar (setting 210)</p>	<p>= <b>K</b></p> <p>= <b>J</b></p>
<p>45</p> <input style="width: 30px; height: 20px;" type="checkbox"/>	<p><b>Control open ratio</b></p>	<p>1 : 1</p> <p>3 : 1</p> <p>4.5 : 1</p> <p>5 : 1</p> <p>10 : 1</p>	<p>= <b>1</b></p> <p>= <b>3</b></p> <p>= <b>4</b></p> <p>= <b>5</b></p> <p>= <b>10</b></p>

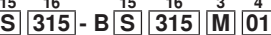
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**Pressure feed function** (① = component side, ② = plate side)

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 A421-3X/02- AS315-BS315M01  R900966328		359 x 70 x 100 11.4 kg	R900279039  RE 25402 RE 20380

<b>Sandwich plate</b> HSZ 10 A214-3X/A  <b>Fitting of the sandwich plate:</b> Pressure relief valve, direct operated DBD  Check valve (installation kit) M-SR 10 KE05-1X/ 		250 x 70 x 100 13.2 kg	R900262954  RE 25402 DBD on side E and F  RE 20380
<b>Sandwich plate</b> HSZ 10 B214-3X/A  <b>Fitting of the sandwich plate:</b> Pressure relief valve, direct operated DBD  Check valve (installation kit) M-SR 10 KE05-1X/ 		250 x 70 x 100 13.2 kg	R900262955  RE 25402 DBD on side E and F  RE 20380
<b>Sandwich plate</b> HSZ 10 B207-3X/A  <b>Fitting of the sandwich plate:</b> Pressure relief valve, direct operated DBD  Check valve (installation kit) M-SR 10 KE05-1X/ 		250 x 70 x 100 13.2 kg	R900262956  RE 25402 DBD on side E and F  RE 20380

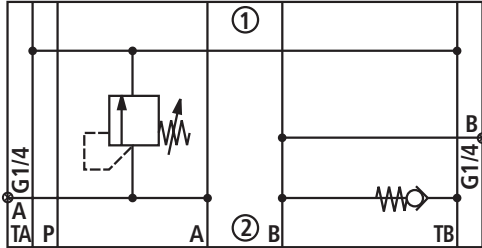
**Order example**

 For complete device: HSZ 10 A214-3X/A 

Secured channel

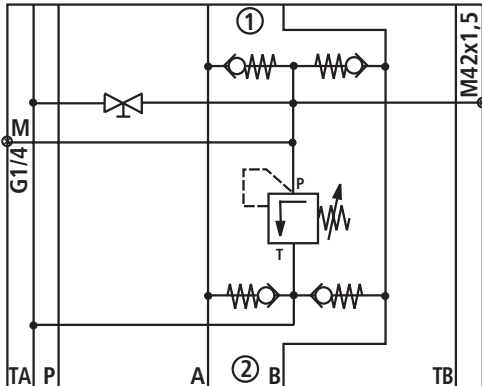
Archivierung 02/2018

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

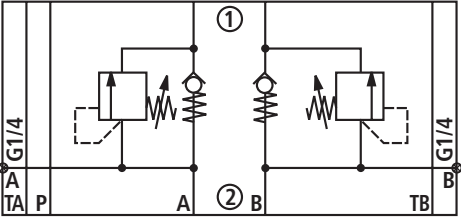
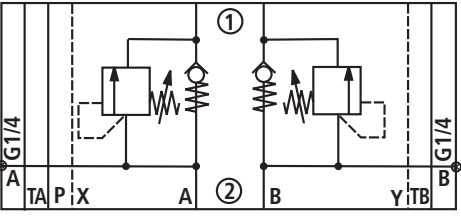
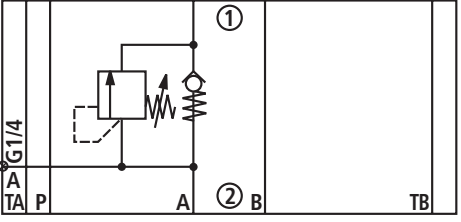
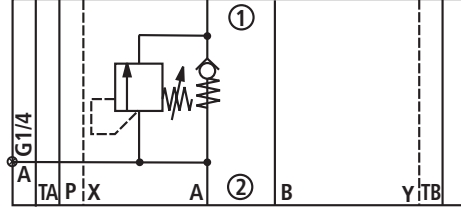
Device designation	Type designation  Material no.	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet  More information
<b>Sandwich plate</b>  <b>Fitting of the sandwich plate:</b> Pressure relief valve, direct operated Check valve (installation kit)	<b>HSZ 10 A222-3X/</b> <input type="checkbox"/> <sup>15</sup> <input type="checkbox"/> <sup>16</sup> <b>M01</b>  <b>DBD</b> <input type="checkbox"/> <sup>15</sup> <b>10K1X/</b> <input type="checkbox"/> <sup>16</sup> <input type="checkbox"/> <sup>14</sup>  <b>M-SR 10 KE05-1X/</b> <input type="checkbox"/> <sup>14</sup>		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/**  <sup>15</sup>  <sup>16</sup>  <sup>3</sup>  <sup>4</sup> **S200M01**
**Pressure feed function with accumulator connection M42x1.5 (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
<b>Sandwich plate</b>  <b>Fitting of the sandwich plate:</b> Pressure relief valve, direct operated Check valve (installation kit)	<b>HSZ 10-26640-AA/02</b> <b>R900924793</b>  <b>DBD</b> <input type="checkbox"/> <sup>15</sup> <b>10K1X/</b> <input type="checkbox"/> <sup>16</sup> <input type="checkbox"/> <sup>14</sup>  <b>M-SR 15 KE02-1X/</b> <input type="checkbox"/> <sup>14</sup>		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  Material no.	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet  More information
<b>Sandwich plate</b> with R ring plate  <b>Fitting of the sandwich plate:</b>  Pressure relief valve, direct operated	<b>HSZ 10 A217-3X/A</b> <sup>15 16</sup> <input type="checkbox"/> <input type="checkbox"/> <b>-B</b> <sup>15 16</sup> <input type="checkbox"/> <input type="checkbox"/> <b>M01</b>		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
<b>Sandwich plate</b> with R ring plate  <b>Fitting of the sandwich plate:</b>  Pressure relief valve, direct operated	<b>HSZ 10 B217-3X/A</b> <sup>15 16</sup> <input type="checkbox"/> <input type="checkbox"/> <b>-B</b> <sup>15 16</sup> <input type="checkbox"/> <input type="checkbox"/> <b>M01</b>		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
<b>Sandwich plate</b> with R ring plate  <b>Fitting of the sandwich plate:</b>  Pressure relief valve, direct operated	<b>HSZ 10 A216-3X/</b> <sup>15 16</sup> <input type="checkbox"/> <input type="checkbox"/> <b>M01</b>		170 x 70 x 80 7.7 kg Side E A G 1/4	R900262921   RE 25402 DBD on side E
<b>Sandwich plate</b> with R ring plate  <b>Fitting of the sandwich plate:</b>  Pressure relief valve, direct operated	<b>HSZ 10 B216-3X/</b> <sup>15 16</sup> <input type="checkbox"/> <input type="checkbox"/> <b>M01</b>		170 x 70 x 80 7.7 kg Side E A G 1/4	R900262922   RE 25402 DBD on side F

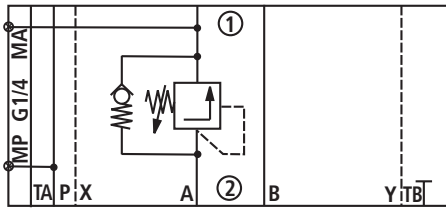
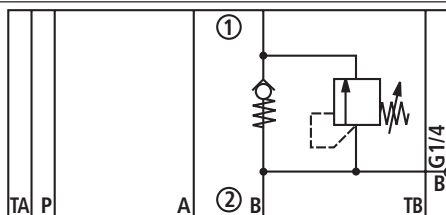
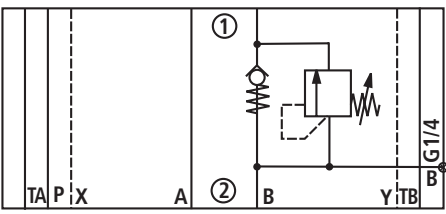
**Order example**  
 For complete device: **HSZ 10** <sup>1</sup> **A** <sup>15 16</sup> **216-3X/** <sup>3 4</sup> **S** **050** **M** **01**

**Order example**  
 For complete device: **HSZ 10 A217-3X/A** <sup>15 16</sup> **S** **200** **-B** <sup>15 16</sup> **S** **200** <sup>3 4</sup> **M** **01**

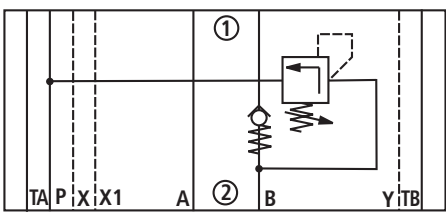
Secured channel

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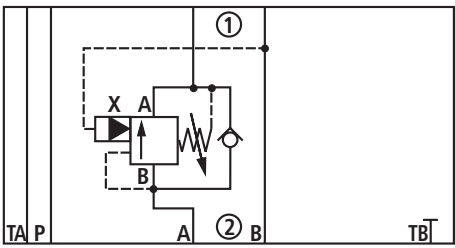
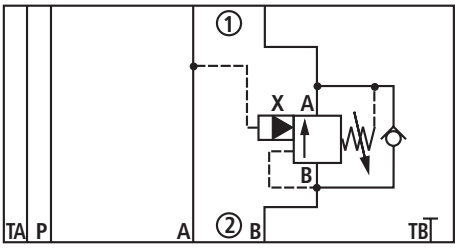
**Counterholding function** (① = component side, ② = plate side)

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

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

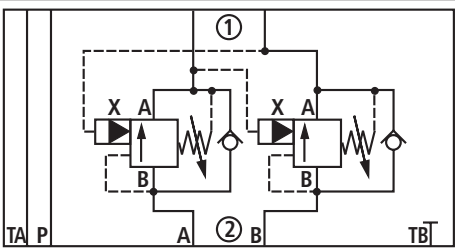
Device designation	Type designation  Material no.	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet  More information
<b>Sandwich plate</b>  Fitting of the sandwich plate:  Pressure relief valve, direct operated	<b>HSZ 10 B219-2X/</b> □ □ <sup>15</sup> <sup>16</sup> <b>M00</b>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

**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
	<b>Material no.</b>			
Sandwich plate	HSZ 10 A430-1X/L <input type="checkbox"/> <sup>39</sup> <input type="checkbox"/> <sup>45</sup> M00		170 x 70 x 70 6.2 kg	R900702921  Valve on side E
Fitting of the sandwich plate: SENBREMSVENTIL CBE <input type="checkbox"/> <sup>44</sup> -L <input type="checkbox"/> <sup>39</sup> N				
Sandwich plate	HSZ 10 A431-1X/L <input type="checkbox"/> <sup>39</sup> <input type="checkbox"/> <sup>45</sup> M00		170 x 70 x 70 6.2 kg	R900239724  Valve on side F
Fitting of the sandwich plate: SENBREMSVENTIL CBE <input type="checkbox"/> <sup>44</sup> -L <input type="checkbox"/> <sup>39</sup> N				

**Order example**

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

Sandwich plate	HSZ 10 A426-1X/AL <input type="checkbox"/> <sup>39</sup> <input type="checkbox"/> <sup>45</sup> <input type="checkbox"/> <sup>39</sup> <input type="checkbox"/> <sup>45</sup> M00 -BL <input type="checkbox"/> <input type="checkbox"/> M00		170 x 70 x 70 6.3 kg	R900278364  Valve on side E and F
Fitting of the sandwich plate: SENBREMSVENTIL CBE <input type="checkbox"/> <sup>44</sup> -L <input type="checkbox"/> <sup>39</sup> N				

**Order example**

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

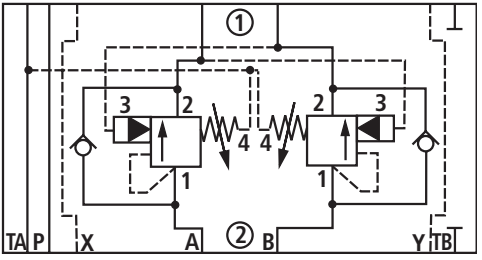
Mounting cavity R/T-2A; R901029931

Amend type designation according to page 12

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**Lowering brake function** (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       <b>Fitting of the sandwich plate:</b> SENKBREMSVENTIL CWE <input type="checkbox"/> -L <input type="checkbox"/> N	HSZ 10 B661-1X/AL <input type="checkbox"/> <sup>39</sup> <input type="checkbox"/> <sup>45</sup> <input type="checkbox"/> <sup>39</sup> <input type="checkbox"/> <sup>45</sup> -BL <input type="checkbox"/> <input type="checkbox"/> 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

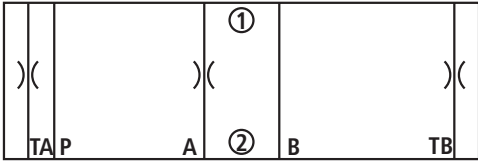
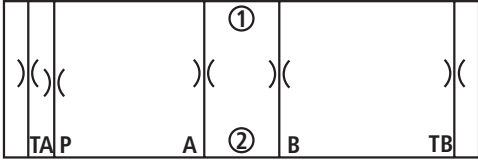
Example: HSZ 10  <sup>1</sup>  <sup>2</sup> – 3X/ M  <sup>20</sup>  <sup>17</sup>  <sup>21</sup>  <sup>22</sup>  <sup>3</sup>  <sup>4</sup>

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

<sup>17</sup> <input type="checkbox"/>	<b>Adjustment element</b> at the 2-way flow control valve type 2FRM 6...:	Lockable rotary knob with scale Rotary knob with scale	= 3 = 7
<sup>20</sup> <input type="checkbox"/>	<b>2-way flow control valve</b> type 2FRM 6...:	<b>with</b> closing of the pressure compensator (suppression of the start-up jump) <b>without</b> closing of the pressure compensator	= A = B
<sup>21</sup> <input type="checkbox"/>	<b>Flow</b> (progressive) at the 2-way flow control valve type 2FRM 6...: <b>Note:</b> 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 (Q00.2) = 0.6Q (Q00.6) = 1.5Q (Q01.5) = 3Q (Q03.0) = 6Q (Q06.0) = 10Q (Q10.0) = 16Q (Q16.0) = 25Q (Q25.0) = 32Q (Q32.0)
<sup>22</sup> <input type="checkbox"/>	<b>Flow control valve</b>	<b>with</b> check valve <b>without</b> 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)

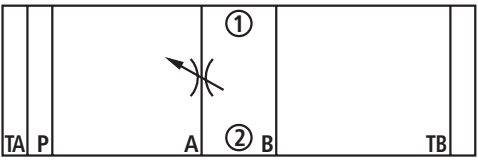
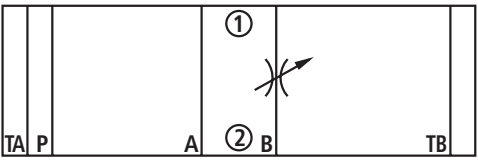
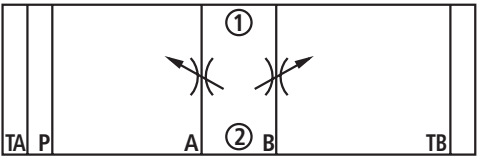
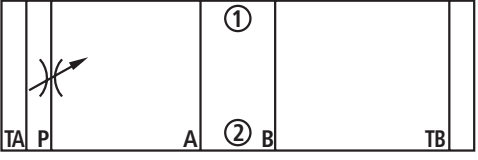
Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight	
Sandwich plate	HSZ 10-A658-3X/ A45TA45TB45M00		140 x 70 x 50	R901195410
	R901195404		3.1 kg Thread G1/8	
Sandwich plate	HSZ 10A 085-3X/A <input type="checkbox"/> B <input type="checkbox"/>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

**Order example**

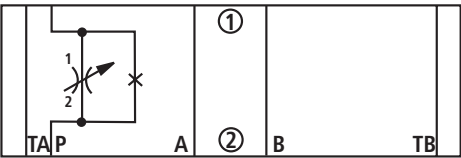
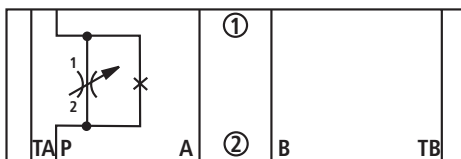
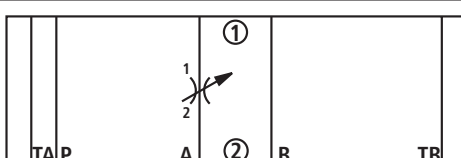
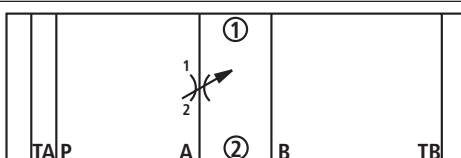
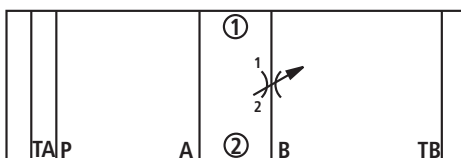
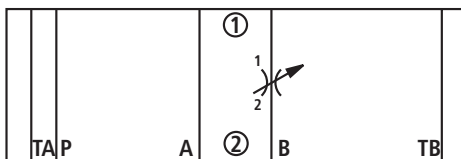
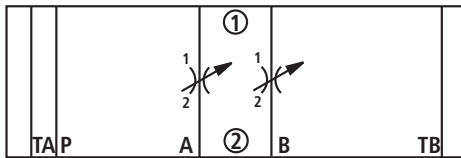
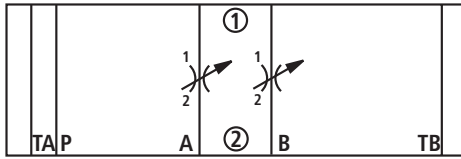
For complete device with nozzle in channel B and P:

 HSZ 10A 085-3X/ B <sup>52</sup>15 P <sup>52</sup>20 <sup>2</sup>M <sup>3</sup>00

Fitted channel

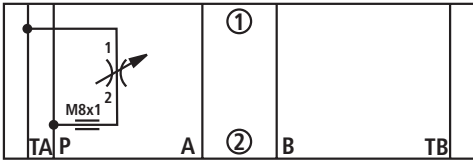
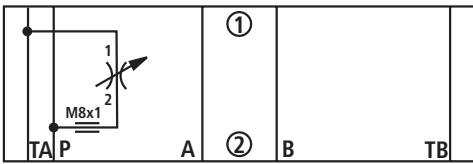
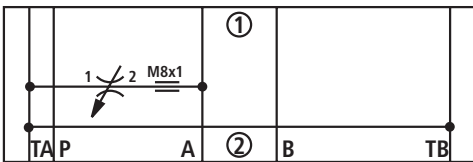
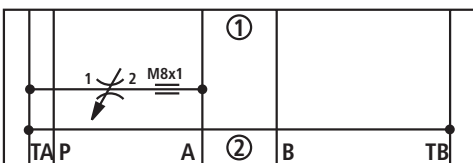
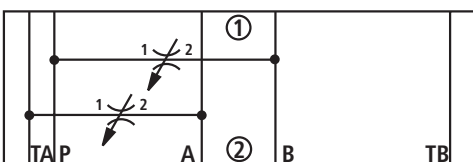
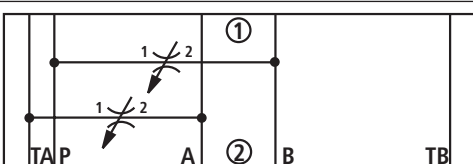
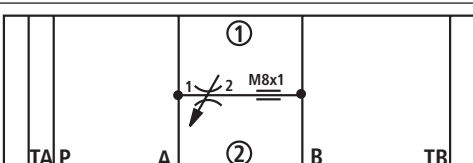
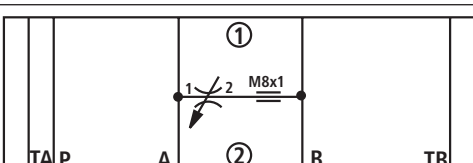
Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight	
Sandwich plate with R ring plate	Z1FG 10 A5-3X/V		153 x 70 x 50	R900265547
	R900566445		2.5 kg RE 27488	
Sandwich plate with R ring plate	Z1FG 10 B5-3X/V		153 x 70 x 50	R900265547
	R900538832		2.5 kg RE 27488	
Sandwich plate with R ring plate	Z1FG 10-5-3X/V		153 x 70 x 50	R900265547
	R900987000		2.5 kg RE 27488	
Sandwich plate with R ring plate	Z1FG 10 P5-3X/V		153 x 70 x 50	R900265547
	R901162976		2.5 kg RE 27488	

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

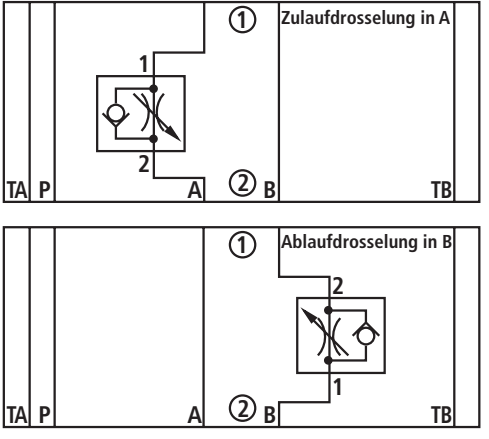
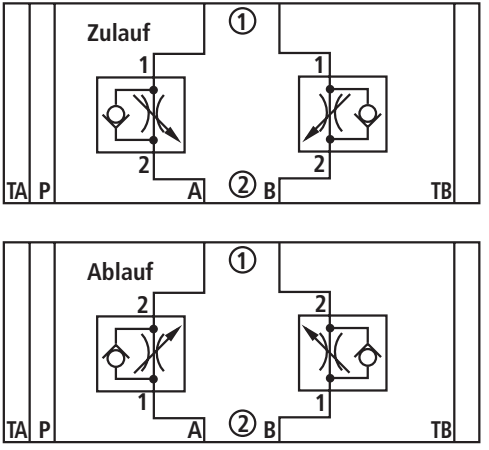
Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information	
	Material no.		Weight		
		Size of the ports			
Sandwich plate	HSZ 10-A408-4X/ D00-DV04M00		105 x 70 x 50	R901232101	
	R901282503		2.6 kg		Plug screw M8x1 RE 90005-03
Sandwich plate	HSZ 10-A408-4X/ D00-DV03M00		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

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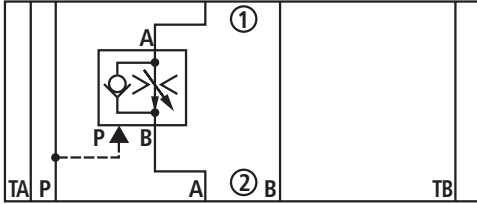
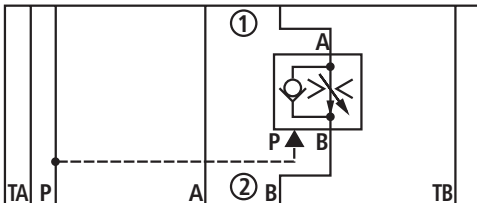
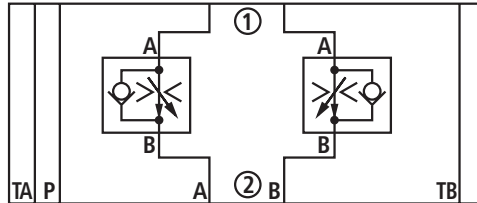
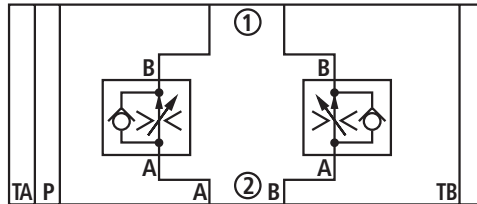
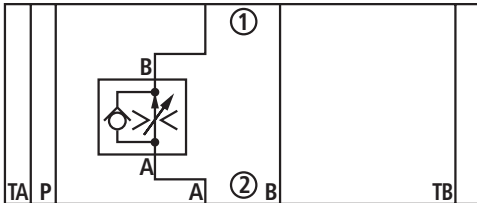
**Throttle valves** (① = component side, ② = plate side)

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	R901154552 Internal thread M8x1  RE 90005-03
	R901232719		2.6 kg	
Sandwich plate	HSZ 10-A519-4X/ DV04M00		105 x 70 x 50	R901154552 Internal thread M8x1  RE 90005-03
	R901235249		2.6 kg	
Sandwich plate	HSZ 10-A589-4X/ DV03M00		105 x 70 x 50	R901155030 Internal thread M8x1  RE 90005-03
	R901282555		2.6 kg	
Sandwich plate	HSZ 10-A589-4X/ DV04M00		105 x 70 x 50	R901155030 Internal thread M8x1  RE 90005-03
	R901155058		2.6 kg	
Sandwich plate	HSZ 10-A587-4X/ DV04M00		100 x 70 x 80	R901028290  RE 90005-03
	R901282512		4.0 kg	
Sandwich plate	HSZ 10-A587-4X/ DV03M00		100 x 70 x 80	R901028290  RE 90005-03
	R901282509		4.0 kg	
Sandwich plate	HSZ 10-A517-4X/ DV03M00		105 x 70 x 50	R901154552 Internal thread M8x1  RE 90005-03
	R901263448		2.6 kg	
Sandwich plate	HSZ 10-A517-4X/ DV04M00		120 x 70 x 50	R901153919 Internal thread M8x1  RE 90005-03
	R901263449		3.0 kg	

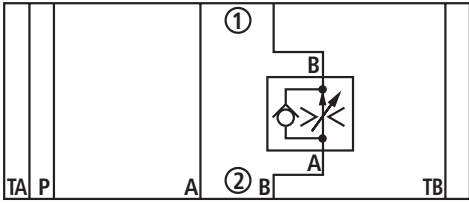
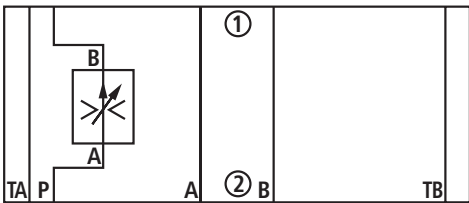
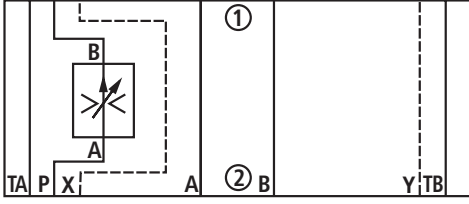
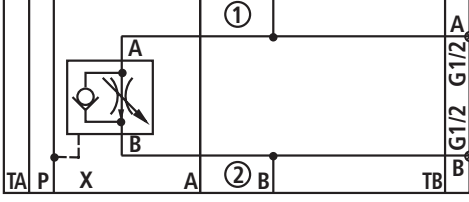
**Throttle check valves** (① = component side, ② = plate side)

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	<b>HSZ 10 A425-3X/M00</b>  <b>R901252668</b>		155 x 70 x 80 6.4 kg	R900278390  Qmax 95 l/min
Sandwich plate with R ring plate	<b>HSZ 10 A453-3X/ANCFB-LC-BNCFB-LCM00</b>  <b>R901266602</b>		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
<b>Sandwich plate</b> with R ring plate  <b>Fitting of the sandwich plate:</b>  2-way flow control valve (Valve mounting screws are part of the sandwich plate)	<b>HSZ 10 A174-3X/</b> <b>M</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <b>M00</b> 20 17 21 22		120 x 70 x 70 5.2 kg	R900265412  RE 28163
<b>Sandwich plate</b> with R ring plate  <b>Fitting of the sandwich plate:</b>  2-way flow control valve (Valve mounting screws are part of the sandwich plate)	<b>HSZ 10 A176-3X/</b> <b>M</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <b>M00</b> 20 17 21 22		120 x 70 x 70 5.2 kg	R900265410  RE 28163
<b>Sandwich plate</b> with R ring plate  <b>Fitting of the sandwich plate:</b>  2-way flow control valve (Valve mounting screws are part of the sandwich plate)	<b>HSZ 10 A154-3X/AM</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <b>-BM</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <b>M00</b> 17 21 22 17 21 22	<b>Supply control</b>   <b>Discharge control</b> 	120 x 70 x 70 6.1 kg	R900265414  RE 28163
<b>Sandwich plate</b> with R ring plate  <b>Fitting of the sandwich plate:</b>  2-way flow control valve (Valve mounting screws are part of the sandwich plate)	<b>HSZ 10 A175-3X/M</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <b>M00</b> 17 21 22		120 x 70 x 70 4.1 kg	R900265413  RE 28163

**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
<b>Sandwich plate</b> with R ring plate  <b>Fitting of the sandwich plate:</b>  2-way flow control valve (Valve mounting screws are part of the sandwich plate)	<b>HSZ 10 A177-3X/M</b> <sup>17 21 22</sup> $\square \square \square$ M00		120 x 70 x 70 5.2 kg	R900265411  RE 28163
<b>Sandwich plate</b>  <b>Fitting of the sandwich plate:</b>  2-way flow control valve (Valve mounting screws are part of the sandwich plate)	<b>HSZ 10 A150-3X/M</b> <sup>17 21</sup> $\square \square$ M00		120 x 70 x 70 4.3 kg	R900266266  RE 28163
<b>Sandwich plate</b>  <b>Fitting of the sandwich plate:</b>  2-way flow control valve (Valve mounting screws are part of the sandwich plate)	<b>HSZ 10 B150-3X/M</b> <sup>17 21</sup> $\square \square$ M00		120 x 70 x 70 4.3 kg	R900266267  RE 28163
<b>Sandwich plate</b>  <b>Fitting of the sandwich plate:</b>  2-way flow control valve (Valve mounting screws are part of the sandwich plate)	<b>HSZ 10 A348-3X/M</b> <sup>17 21</sup> $\square \square$ M01		120 x 70 x 90 5.3 kg	R900266123  RE 28163

**Order example 1**

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

**Order example 2**

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

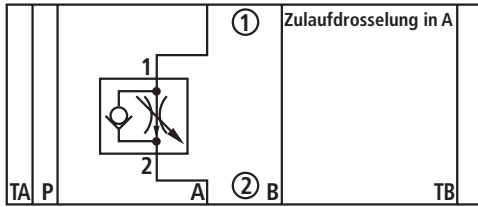
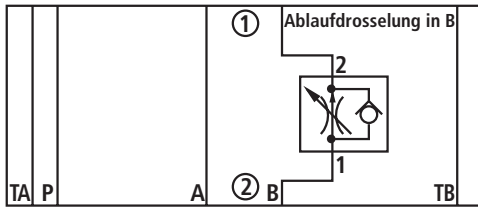
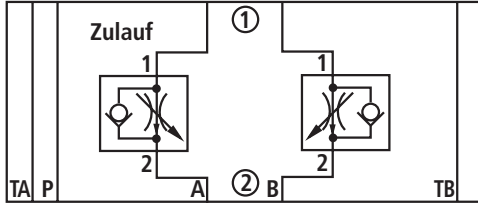
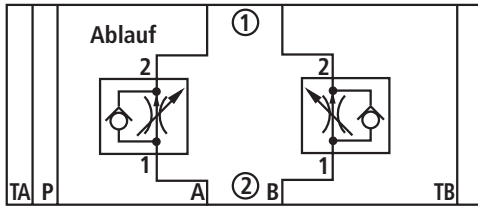
**Order example 3**

 For complete device with 2-way flow control valve: **HSZ 10 A154-3X/A M** <sup>17</sup>3 <sup>21</sup>Q06.0 <sup>22</sup>R -B M <sup>17</sup>3 <sup>21</sup>Q03.0 <sup>22</sup>R <sup>3</sup>M <sup>4</sup>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	<b>HSZ 10 A425-3X/FDEA- LAN-M00</b>  <b>R900963779</b>	 <p>① Zulaufdrosselung in A</p>	155 x 70 x 80 6.4 kg	R900278390  Qmax 95 l/min
		 <p>① Ablaufdrosselung in B</p>		
Sandwich plate with R ring plate	<b>HSZ 10 A453-3X/AFDEA- LA-BFDEA-LAM00</b>  <b>R901277089</b>	 <p>Zulauf ①</p>	220 x 70 x 80 6.4 kg	R901268320  Qmax 95 l/min
		 <p>Ablauf ①</p>		

**Functional group Rapid motion - creep speed function, normally open and closed**

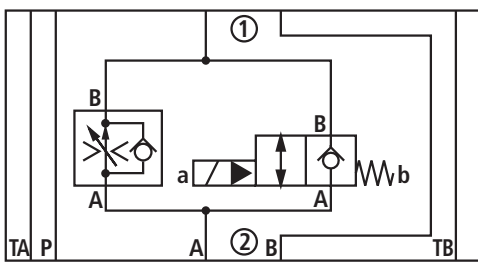
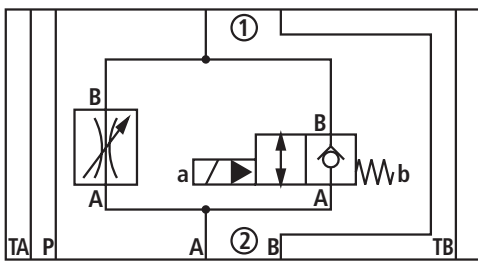
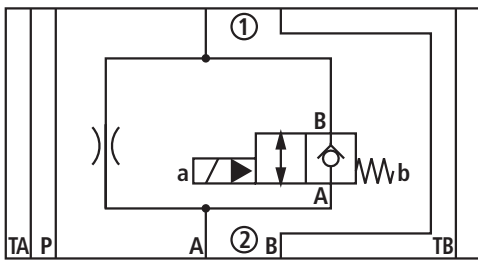
 Example: HSZ 10 <sup>1</sup>A <sup>2</sup> - 3X/ <sup>41</sup> <sup>21.2</sup> - <sup>42</sup> <sup>43</sup> G24K4 <sup>3</sup> <sup>4</sup>
**Complementary details on sandwich plates with rapid motion - creep speed function**

<b>21.2</b> <input type="text"/>	<b>Maximum flow</b> (A → B) at the 2-way flow control valve type 2FRM 6 (cartridge valve): <b>Note:</b> Spelling () with complete type!	up to 6.0 l/min up to 32.0 l/min	= 6Q (06) = 32Q (32)
<b>26.1</b> <input type="text"/>	<b>Nominal voltage at the coil</b>	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
<b>42</b> <input type="text"/>	<b>Blocking function</b> at the 2/2-directional seat valve:	Blocking on one side Blocking on both sides	= A = B
<b>43</b> <input type="text"/>	<b>Spool position</b> at the 2/2-directional seat valve:	Normally closed Normally open	= 05 = 06
<b>41</b> <input type="text"/>	<b>Flow control</b> creep speed:	<b>with</b> nozzle <b>with</b> throttle <b>with</b> flow controller cartridge	= D * = FGM = FRM
<b>35.1</b> <input type="text"/>	<b>Manual override</b> at directional seat valve series OD.15...	without manual override  Screwable manual override  with manual override "pushing"  with manual override "pushing", lockable in switched position Archivierung 02/2018	= 1A = 3A = 3I  = 3M = 3L = 3D  = 1B = 1L  = 1C = 1M

<b>35.2</b> <input style="width: 30px; height: 20px;" type="checkbox"/>	<b>Electrical types of connection:</b>	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	= 01 <sup>1)</sup> = K4 <sup>2)</sup> = 20 <sup>1)</sup> = K40 <sup>2)</sup> = 07 <sup>1)</sup> = C4 <sup>2)</sup>
		<sup>1)</sup> Designation of the individual component solenoid coil <sup>2)</sup> Designation of the complete device HSZ range	
<b>* 51</b> <input style="width: 30px; height: 20px;" type="checkbox"/>	<b>Flow control with nozzle "D"</b>	Example nozzle M8x1 with $\varnothing$ 0.6 mm (see page 69) Fitting possible from $\varnothing$ 0.4 mm to 4.5 mm <b>Important:</b> We recommend selecting a nozzle diameter $\geq$ 0.6 mm	= 06

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).

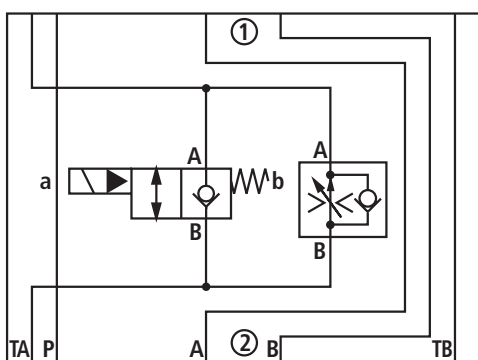
**Rapid motion - creep speed function, normally closed (blocking on one side) – discharge control** (① = component side, ② = plate side)  
**Flow control cartridge valve**

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information
	Material no.		Weight	
<b>Sandwich plate HSZ 10 A400-4X/FRM</b> <input type="checkbox"/> <sup>21.2</sup> -A05 <input type="checkbox"/> <sup>26.1</sup> <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> M00 <b>Fitting of the sandwich plate:</b> SITZVENTIL OD.15.05.89. <input type="checkbox"/> <sup>35.1</sup> S0.000 SPULE OD.02.17. <input type="checkbox"/> <sup>35.2</sup> 30. <input type="checkbox"/> <sup>26.1</sup> .000 2-way flow control valve: <b>2FRM 6 K2-1X/</b> <input type="checkbox"/> <sup>21.2</sup> RV		170 x 70 x 80 7.3 kg	R901248406  Valve on side F RE 90005-03 RE 28155 Valve on side E	
<b>Sandwich plate HSZ 10 A400-4X/FGM1</b> <input type="checkbox"/> <sup>26.1</sup> -A05 <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> M00 <b>Fitting of the sandwich plate:</b> SITZVENTIL OD.15.05.89. <input type="checkbox"/> <sup>35.1</sup> S0.000 SPULE OD.02.17. <input type="checkbox"/> <sup>35.2</sup> 30. <input type="checkbox"/> <sup>26.1</sup> .000 Throttle valve: <b>FGM 6 K2-1X/1QV</b>		170 x 70 x 80 6.6 kg	R901248406  RE 90005-03	
<b>Sandwich plate HSZ 10 A400-4X/D</b> <input type="checkbox"/> <sup>51</sup> -A05 <input type="checkbox"/> <sup>26.1</sup> <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> M00 <b>Fitting of the sandwich plate:</b> SITZVENTIL OD.15.05.89. <input type="checkbox"/> <sup>35.1</sup> S0.000 SPULE OD.02.17. <input type="checkbox"/> <sup>35.2</sup> 30. <input type="checkbox"/> <sup>26.1</sup> .000 Nozzle <input type="checkbox"/> <sup>51</sup> 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

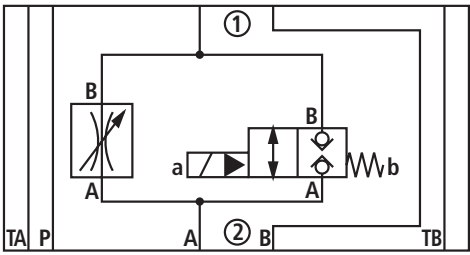
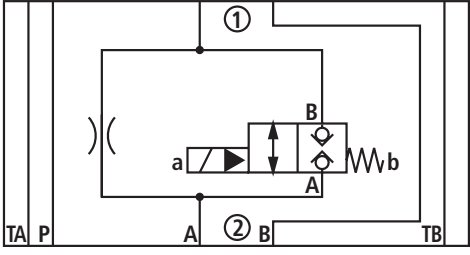
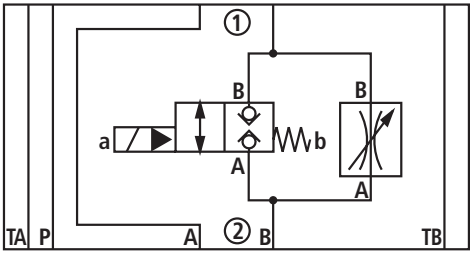
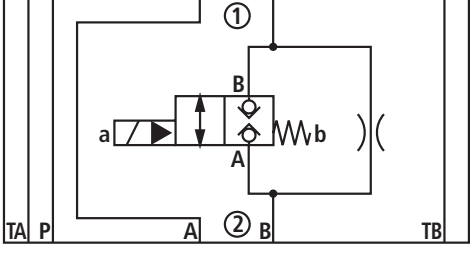


**Rapid motion - creep speed function, normally closed (blocking on one side) – discharge control** (① = component side, ② = plate side)  
**Flow control cartridge valve**

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information		
	Material no.		Weight			
<b>Sandwich plate HSZ 10 A402-4X/FRM</b> <input type="checkbox"/> 21.2 -A05 <input type="checkbox"/> 26.1 <input type="checkbox"/> 35.1 <input type="checkbox"/> 35.2 M00 <b>Fitting of the sandwich plate:</b>  SITZVENTIL OD.15.05.89. <input type="checkbox"/> 35.1 S0.000  SPULE OD.02.17. <input type="checkbox"/> 35.2 <input type="checkbox"/> 26.1 30. <input type="checkbox"/> .000  2-way flow control valve: <b>2FRM 6 K2-1X/</b> <input type="checkbox"/> 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		
	<b>Sandwich plate HSZ 10 A402-4X/FGM1</b> <input type="checkbox"/> 26.1 -A05 <input type="checkbox"/> 35.1 <input type="checkbox"/> 35.2 M00 <b>Fitting of the sandwich plate:</b>  SITZVENTIL OD.15.05.89. <input type="checkbox"/> 35.1 S0.000  SPULE OD.02.17. <input type="checkbox"/> 35.2 <input type="checkbox"/> 26.1 30. <input type="checkbox"/> .000  Throttle valve: <b>FGM 6 K2-1X/1QV</b>				180 x 70 x 80 6.6 kg	R901248405  RE 90005-03
	<b>Sandwich plate HSZ 10 A402-4X/D</b> <input type="checkbox"/> 51 -A05 <input type="checkbox"/> 26.1 <input type="checkbox"/> 35.1 <input type="checkbox"/> 35.2 M00 <b>Fitting of the sandwich plate:</b>  SITZVENTIL OD.15.05.89. <input type="checkbox"/> 35.1 S0.000  SPULE OD.02.17. <input type="checkbox"/> 35.2 <input type="checkbox"/> 26.1 30. <input type="checkbox"/> .000  Nozzle <input type="checkbox"/> 51 M8x1-DIN906 Material no. see page 90				180 x 70 x 80 6.5 kg	

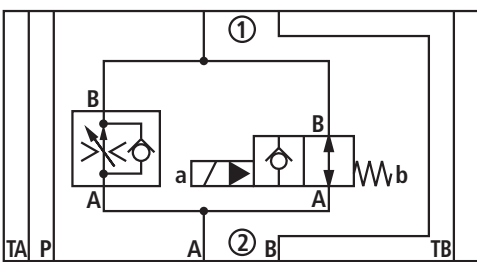
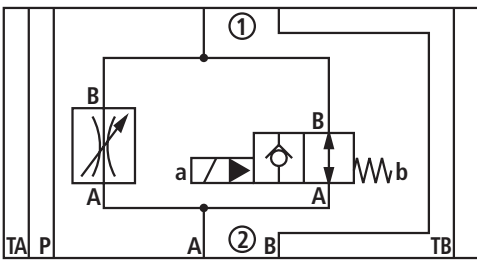
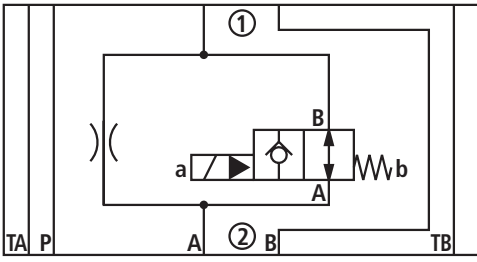
Order examples, see page 77

**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 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> M00 Fitting of the sandwich plate: SITZVENTIL OD.15.31.89. <input type="checkbox"/> S0.000 SPULE OD.02.17. <input type="checkbox"/> 30. <input type="checkbox"/> .000 Throttle valve: FGM 6 K2-1X/1QV	26.1 <input type="checkbox"/> 35.1 <input type="checkbox"/> 35.2 <input type="checkbox"/>		170 x 70 x 80 7.3 kg	R901248406  Valve on side F RE 90005-03 RE 28155 Valve on side E		
	51 <input type="checkbox"/>		26.1 <input type="checkbox"/> 35.1 <input type="checkbox"/> 35.2 <input type="checkbox"/>		170 x 70 x 80 6.5 kg	
	Fitting of the sandwich plate: SITZVENTIL OD.15.31.89. <input type="checkbox"/> S0.000 SPULE OD.02.17. <input type="checkbox"/> 30. <input type="checkbox"/> .000 Nozzle <input type="checkbox"/> M8x1-DIN906 Material no. see page 90		51 <input type="checkbox"/>			R901248406  RE 90005-03  RN115.06
	51 <input type="checkbox"/>		26.1 <input type="checkbox"/> 35.1 <input type="checkbox"/> 35.2 <input type="checkbox"/>		170 x 70 x 80 7.3 kg	
Sandwich plate HSZ 10 A401-4X/FGM1 -B05 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> M00 Fitting of the sandwich plate: SITZVENTIL OD.15.31.89. <input type="checkbox"/> S0.000 SPULE OD.02.17. <input type="checkbox"/> 30. <input type="checkbox"/> .000 Throttle valve: FGM 6 K2-1X/1QV	26.1 <input type="checkbox"/> 35.1 <input type="checkbox"/> 35.2 <input type="checkbox"/>		170 x 70 x 80 7.3 kg	R901248406  Valve on side E RE 90005-03  Valve on side F		
	51 <input type="checkbox"/>		26.1 <input type="checkbox"/> 35.1 <input type="checkbox"/> 35.2 <input type="checkbox"/>		170 x 70 x 80 6.5 kg	
	Fitting of the sandwich plate: SITZVENTIL OD.15.31.89. <input type="checkbox"/> S0.000 SPULE OD.02.17. <input type="checkbox"/> 30. <input type="checkbox"/> .000 Nozzle <input type="checkbox"/> M8x1-DIN906 Material no. see page 90		51 <input type="checkbox"/>			R901248406  RE 90005-03  RN115.06
	51 <input type="checkbox"/>		26.1 <input type="checkbox"/> 35.1 <input type="checkbox"/> 35.2 <input type="checkbox"/>		170 x 70 x 80 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	
<b>Sandwich plate HSZ 10 A400-4X/FRM</b> <input type="checkbox"/> 21.2 -A06 <input type="checkbox"/> 26.1 <input type="checkbox"/> 35.1 <input type="checkbox"/> 35.2 M00 <b>Fitting of the sandwich plate:</b> SITZVENTIL OD.15.06.89. <input type="checkbox"/> 35.1 S0.000 SPULE OD.02.17. <input type="checkbox"/> 35.2 <input type="checkbox"/> 26.1 30. <input type="checkbox"/> 0.000 2-way flow control valve: <b>2FRM 6 K2-1X/</b> <input type="checkbox"/> 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
<b>Sandwich plate HSZ 10 A400-4X/FGM1</b> <input type="checkbox"/> 26.1 <input type="checkbox"/> 35.1 <input type="checkbox"/> 35.2 -A06 <input type="checkbox"/> M00 <b>Fitting of the sandwich plate:</b> SITZVENTIL OD.15.06.89. <input type="checkbox"/> 35.1 S0.000 SPULE OD.02.17. <input type="checkbox"/> 35.2 <input type="checkbox"/> 26.1 30. <input type="checkbox"/> 0.000 Throttle valve: <b>FGM 6 K2-1X/1QV</b>			170 x 70 x 80 6.6 kg	R901248406  RE 90005-03
<b>Sandwich plate HSZ 10 A400-4X/D</b> <input type="checkbox"/> 51 <input type="checkbox"/> 26.1 <input type="checkbox"/> 35.1 <input type="checkbox"/> 35.2 -A06 <input type="checkbox"/> M00 <b>Fitting of the sandwich plate:</b> SITZVENTIL OD.15.06.89. <input type="checkbox"/> 35.1 S0.000 SPULE OD.02.17. <input type="checkbox"/> 35.2 <input type="checkbox"/> 26.1 30. <input type="checkbox"/> 0.000 Nozzle <input type="checkbox"/> 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



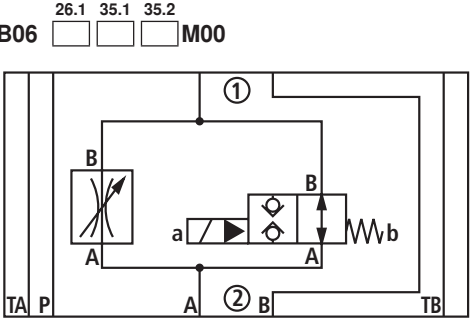
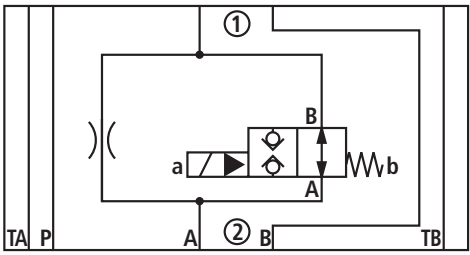
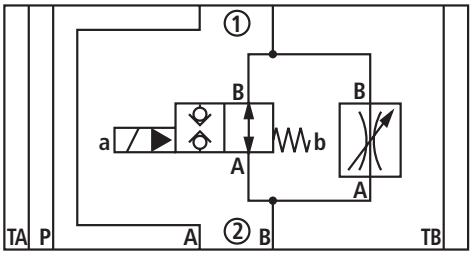
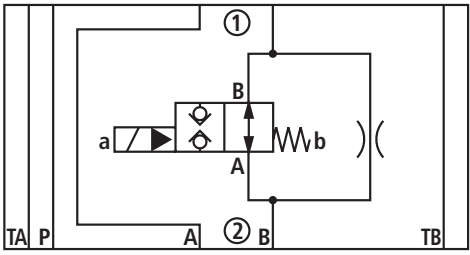


**Rapid motion - creep speed function, normally open (blocking on one side) – discharge control** (① = component side, ② = plate side)  
**Flow control cartridge valve**

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information			
	Material no.		Weight				
Sandwich plate HSZ 10 A402-4X/FRM <input type="checkbox"/> -A06 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> M00 Fitting of the sandwich plate:  SITZVENTIL OD.15.06.89. <input type="checkbox"/> S0.000  SPULE OD.02.17. <input type="checkbox"/> 30. <input type="checkbox"/> 0.000  2-way flow control valve: <b>2FRM 6 K2-1X/</b> <input type="checkbox"/> RV	21.2 26.1 35.1 35.2 <input type="checkbox"/> -A06 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> M00		180 x 70 x 80 7.6 kg	R901248405  Valve on side F RE 90005-03 RE 28155 Valve on side E			
	35.1 SITZVENTIL OD.15.06.89. <input type="checkbox"/> S0.000  35.2 26.1 SPULE OD.02.17. <input type="checkbox"/> 30. <input type="checkbox"/> 0.000  Throttle valve: <b>FGM 6 K2-1X/1QV</b>		26.1 35.1 35.2 <input type="checkbox"/> -A06 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> M00		180 x 70 x 80 6.6 kg	R901248405  RE 90005-03	
	51 Nozzle <input type="checkbox"/> M8x1-DIN906  Material no. see page 90		26.1 35.1 35.2 <input type="checkbox"/> -A06 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> M00		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 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	
<b>Sandwich plate HSZ 10 A400-4X/FGM1 -B06</b> <input type="checkbox"/> <sup>26.1</sup> <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> <b>M00</b> Fitting of the sandwich plate: <b>SITZVENTIL OD.15.32.89.</b> <input type="checkbox"/> <sup>35.1</sup> <b>S0.000</b> <b>SPULE OD.02.17.</b> <input type="checkbox"/> <sup>35.2</sup> <b>30.</b> <input type="checkbox"/> <sup>26.1</sup> <b>.000</b> Throttle valve: <b>FGM 6 K2-1X/1QV</b>		170 x 70 x 80 7.3 kg	R901248406  Valve on side F RE 90005-03 RE 28155 Valve on side E	
<b>Sandwich plate HSZ 10 A400-4X/D</b> <input type="checkbox"/> <sup>51</sup> <b>-B06</b> <input type="checkbox"/> <sup>26.1</sup> <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> <b>M00</b> Fitting of the sandwich plate: <b>SITZVENTIL OD.15.32.89.</b> <input type="checkbox"/> <sup>35.1</sup> <b>S0.000</b> <b>SPULE OD.02.17.</b> <input type="checkbox"/> <sup>35.2</sup> <b>30.</b> <input type="checkbox"/> <sup>26.1</sup> <b>.000</b> <b>Nozzle</b> <input type="checkbox"/> <sup>51</sup> <b>M8x1-DIN906</b> Material no. see page 90		170 x 70 x 80 6.5 kg	R901248406  RE 90005-03  RN115.06	
<b>Sandwich plate HSZ 10 A401-4X/FGM1 -B06</b> <input type="checkbox"/> <sup>26.1</sup> <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> <b>M00</b> Fitting of the sandwich plate: <b>SITZVENTIL OD.15.32.89.</b> <input type="checkbox"/> <sup>35.1</sup> <b>S0.000</b> <b>SPULE OD.02.17.</b> <input type="checkbox"/> <sup>35.2</sup> <b>30.</b> <input type="checkbox"/> <sup>26.1</sup> <b>.000</b> Throttle valve: <b>FGM 6 K2-1X/1QV</b>		170 x 70 x 80 7.3 kg	R901267133  Valve on side E RE 90005-03  Valve on side F	
<b>Sandwich plate HSZ 10 A401-4X/D</b> <input type="checkbox"/> <sup>51</sup> <b>-B06</b> <input type="checkbox"/> <sup>26.1</sup> <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> <b>M00</b> Fitting of the sandwich plate: <b>SITZVENTIL OD.15.32.89.</b> <input type="checkbox"/> <sup>35.1</sup> <b>S0.000</b> <b>SPULE OD.02.17.</b> <input type="checkbox"/> <sup>35.2</sup> <b>30.</b> <input type="checkbox"/> <sup>26.1</sup> <b>.000</b> <b>Nozzle</b> <input type="checkbox"/> <sup>51</sup> <b>M8x1-DIN906</b> Material no. see page 90		170 x 70 x 80 6.5 kg	R901267133  RE 90005-03  RN115.06	

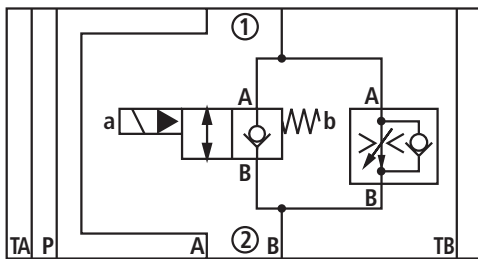
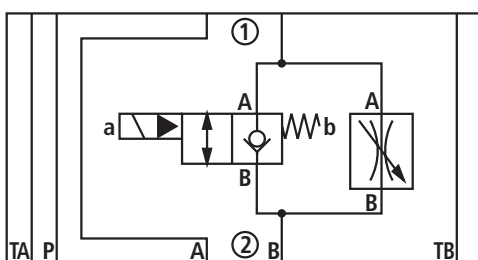
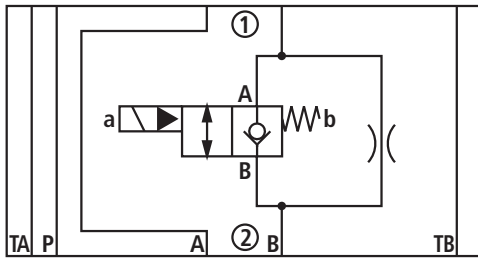
Order examples, see page 77

**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 <input type="checkbox"/> <sup>21.2</sup> -A05 <input type="checkbox"/> <sup>26.1</sup> <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. <input type="checkbox"/> <sup>35.1</sup> S0.000 SPULE OD.02.17. <input type="checkbox"/> <sup>35.2</sup> 30. <input type="checkbox"/> <sup>26.1</sup> . <input type="checkbox"/> .000 2-way flow control valve: 2FRM 6 K2-1X/ <input type="checkbox"/> <sup>21.2</sup> 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 <input type="checkbox"/> <sup>26.1</sup> -A05 <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. <input type="checkbox"/> <sup>35.1</sup> S0.000 SPULE OD.02.17. <input type="checkbox"/> <sup>35.2</sup> 30. <input type="checkbox"/> <sup>26.1</sup> . <input type="checkbox"/> .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 <input type="checkbox"/> <sup>51</sup> -A05 <input type="checkbox"/> <sup>26.1</sup> <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> M00 Fitting of the sandwich plate: SITZVENTIL OD.15.05.89. <input type="checkbox"/> <sup>35.1</sup> S0.000 SPULE OD.02.17. <input type="checkbox"/> <sup>35.2</sup> 30. <input type="checkbox"/> <sup>26.1</sup> . <input type="checkbox"/> .000 Nozzle <input type="checkbox"/> <sup>51</sup> M8x1-DIN906 Material no. see page 90		170 x 70 x 80 7.3 kg	R901248403  RE 90005-03  RN115.06	

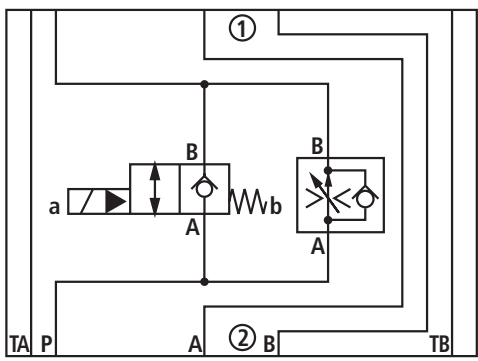
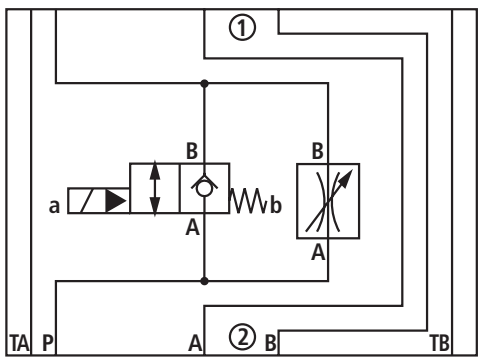
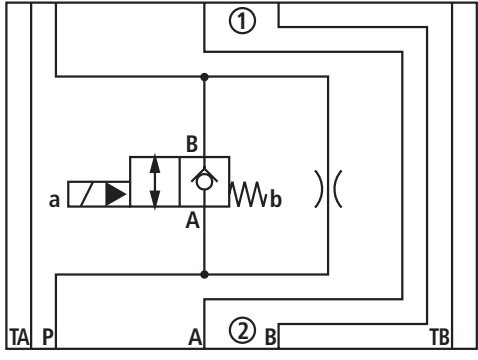
Order examples, see page 77

**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	
<b>Sandwich plate HSZ 10 A407-4X/FRM -A05</b> <input type="checkbox"/> <sup>26.1</sup> <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> <b>M00</b> <b>Fitting of the sandwich plate:</b> <b>SITZVENTIL OD.15.05.89.</b> <input type="checkbox"/> <sup>35.1</sup> <b>S0.000</b> <b>SPULE OD.02.17.</b> <input type="checkbox"/> <sup>35.2</sup> <b>30.</b> <input type="checkbox"/> <sup>26.1</sup> <b>.000</b> 2-way flow control valve: <b>2FRM 6 K2-1X/</b> <input type="checkbox"/> <sup>21.2</sup> <b>RV</b>		170 x 70 x 80 7.3 kg	R901276486  Valve on side E RE 90005-03 RE 28155 Valve on side F	
<b>Sandwich plate HSZ 10 A407-4X/FGM1 -A05</b> <input type="checkbox"/> <sup>26.1</sup> <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> <b>M00</b> <b>Fitting of the sandwich plate:</b> <b>SITZVENTIL OD.15.05.89.</b> <input type="checkbox"/> <sup>35.1</sup> <b>S0.000</b> <b>SPULE OD.02.17.</b> <input type="checkbox"/> <sup>35.2</sup> <b>30.</b> <input type="checkbox"/> <sup>26.1</sup> <b>.000</b> Throttle valve: <b>FGM 6 K2-1X/1QV</b>		170 x 70 x 80 6.6 kg	R901276486  RE 90005-03	
<b>Sandwich plate HSZ 10 A407-4X/D</b> <input type="checkbox"/> <sup>51</sup> <b>-A05</b> <input type="checkbox"/> <sup>26.1</sup> <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> <b>M00</b> <b>Fitting of the sandwich plate:</b> <b>SITZVENTIL OD.15.05.89.</b> <input type="checkbox"/> <sup>35.1</sup> <b>S0.000</b> <b>SPULE OD.02.17.</b> <input type="checkbox"/> <sup>35.2</sup> <b>30.</b> <input type="checkbox"/> <sup>26.1</sup> <b>.000</b> <b>Nozzle</b> <input type="checkbox"/> <sup>51</sup> <b>M8x1-DIN906</b> Material no. see page 90		170 x 70 x 80 6.5 kg	R901276486  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		
<b>Sandwich plate HSZ 10 A408-4X/FRM</b> <input type="checkbox"/> <sup>21.2</sup> -A05 <input type="checkbox"/> <sup>26.1</sup> <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> M00 <b>Fitting of the sandwich plate:</b> <b>SITZVENTIL OD.15.05.89.</b> <input type="checkbox"/> <sup>35.1</sup> S0.000 <b>SPULE OD.02.17.</b> <input type="checkbox"/> <sup>35.2</sup> <input type="checkbox"/> <sup>26.1</sup> <input type="checkbox"/> <sup>30.</sup> <input type="checkbox"/> <sup>0.000</sup> 2-way flow control valve: <b>2FRM 6 K2-1X/</b> <input type="checkbox"/> <sup>21.2</sup> RV		180 x 70 x 80 7.3 kg	R901232101  Valve on side F RE 90005-03 RE 28155 Valve on side E	
<b>Sandwich plate HSZ 10 A408-4X/FGM1</b> <input type="checkbox"/> <sup>26.1</sup> -A05 <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> M00 <b>Fitting of the sandwich plate:</b> <b>SITZVENTIL OD.15.05.89.</b> <input type="checkbox"/> <sup>35.1</sup> S0.000 <b>SPULE OD.02.17.</b> <input type="checkbox"/> <sup>35.2</sup> <input type="checkbox"/> <sup>26.1</sup> <input type="checkbox"/> <sup>30.</sup> <input type="checkbox"/> <sup>0.000</sup> Throttle valve: <b>FGM 6 K2-1X/1QV</b>		180 x 70 x 80 6.6 kg	R901232101  RE 90005-03	
<b>Sandwich plate HSZ 10 A408-4X/D</b> <input type="checkbox"/> <sup>51</sup> -A05 <input type="checkbox"/> <sup>26.1</sup> <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> M00 <b>Fitting of the sandwich plate:</b> <b>SITZVENTIL OD.15.05.89.</b> <input type="checkbox"/> <sup>35.1</sup> S0.000 <b>SPULE OD.02.17.</b> <input type="checkbox"/> <sup>35.2</sup> <input type="checkbox"/> <sup>26.1</sup> <input type="checkbox"/> <sup>30.</sup> <input type="checkbox"/> <sup>0.000</sup> <b>Nozzle</b> <input type="checkbox"/> <sup>51</sup> M8x1-DIN906 Material no. see page 90		180 x 70 x 80 6.5 kg	R901232101  RE 90005-03  RN115.06	

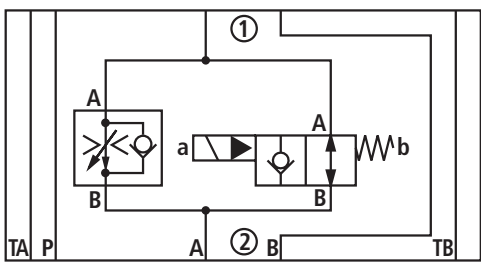
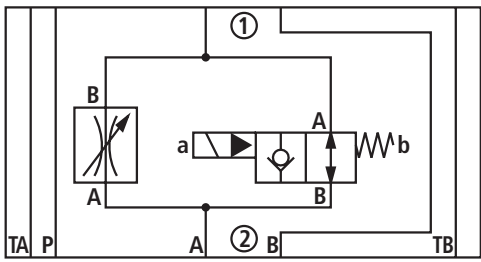
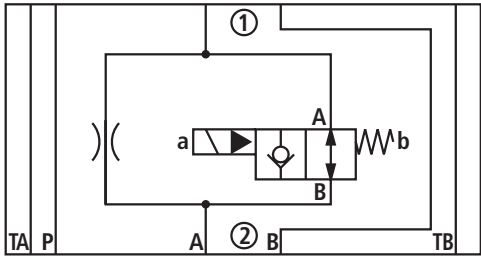
Order examples, see page 77





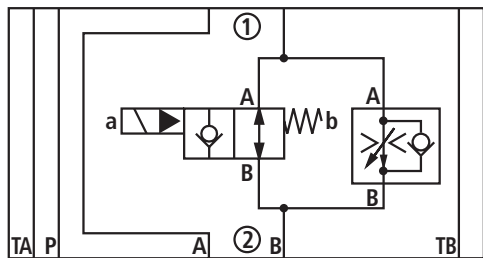
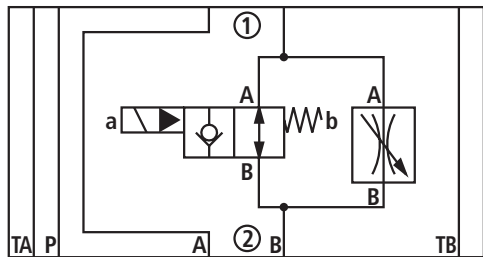
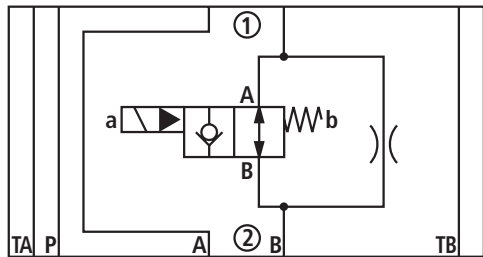


**Rapid motion - creep speed function, normally open (blocking on one side) – supply control** (① = component side, ② = plate side)  
**Flow control cartridge valve**

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 <input type="checkbox"/> <sup>21.2</sup> -A06 <input type="checkbox"/> <sup>26.1</sup> <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> M00 <b>Fitting of the sandwich plate:</b> SITZVENTIL OD.15.06.89. <input type="checkbox"/> <sup>35.1</sup> S0.000 SPULE OD.02.17. <input type="checkbox"/> <sup>35.2</sup> 30. <input type="checkbox"/> <sup>26.1</sup> .000 2-way flow control valve: <b>2FRM 6 K2-1X/</b> <input type="checkbox"/> <sup>21.2</sup> 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 <input type="checkbox"/> <sup>26.1</sup> -A06 <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> M00 <b>Fitting of the sandwich plate:</b> SITZVENTIL OD.15.06.89. <input type="checkbox"/> <sup>35.1</sup> S0.000 SPULE OD.02.17. <input type="checkbox"/> <sup>35.2</sup> 30. <input type="checkbox"/> <sup>26.1</sup> .000 Throttle valve: <b>FGM 6 K2-1X/1QV</b>		170 x 70 x 80 7.3 kg	R901248403  RE 90005-03
	Sandwich plate HSZ 10 A406-4X/D <input type="checkbox"/> <sup>51</sup> -A06 <input type="checkbox"/> <sup>26.1</sup> <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> M00 <b>Fitting of the sandwich plate:</b> SITZVENTIL OD.15.06.89. <input type="checkbox"/> <sup>35.1</sup> S0.000 SPULE OD.02.17. <input type="checkbox"/> <sup>35.2</sup> 30. <input type="checkbox"/> <sup>26.1</sup> .000 Nozzle <input type="checkbox"/> <sup>51</sup> M8x1-DIN906 Material no. see page 90		170 x 70 x 80 7.3 kg	R901248403  RE 90005-03  RN115.06

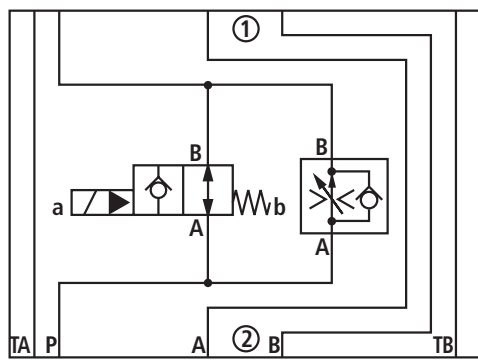
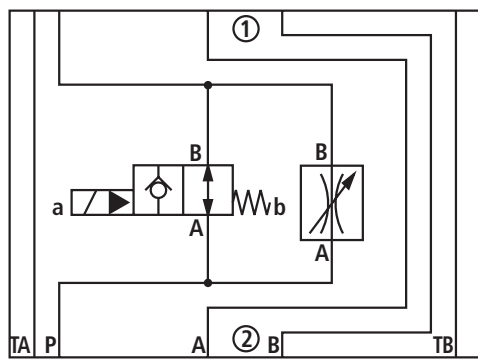
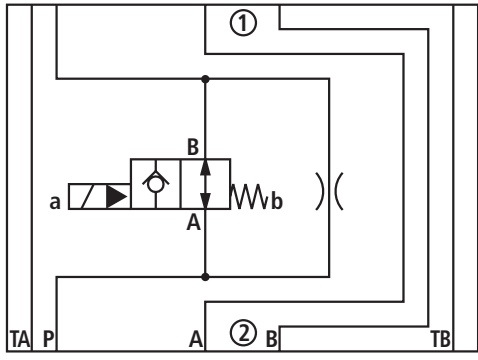
Order examples, see page 77

**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	
<b>Sandwich plate HSZ 10 A407-4X/FRM -A06</b> <input type="checkbox"/> <sup>26.1</sup> <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> <b>M00</b> Fitting of the sandwich plate: SITZVENTIL OD.15.06.89. <input type="checkbox"/> <sup>35.1</sup> <b>S0.000</b> SPULE OD.02.17. <input type="checkbox"/> <sup>35.2</sup> <input type="checkbox"/> <sup>26.1</sup> <b>30.000</b> 2-way flow control valve: <b>2FRM 6 K2-1X/</b> <input type="checkbox"/> <sup>21.2</sup> <b>RV</b>		170 x 70 x 80 7.3 kg	R901276486  Valve on side E RE 90005-03 RE 28155 Valve on side F	
<b>Sandwich plate HSZ 10 A407-4X/FGM1 -A06</b> <input type="checkbox"/> <sup>26.1</sup> <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> <b>M00</b> Fitting of the sandwich plate: SITZVENTIL OD.15.06.89. <input type="checkbox"/> <sup>35.1</sup> <b>S0.000</b> SPULE OD.02.17. <input type="checkbox"/> <sup>35.2</sup> <input type="checkbox"/> <sup>26.1</sup> <b>30.000</b> Throttle valve: <b>FGM 6 K2-1X/1QV</b>		170 x 70 x 80 7.3 kg	R901276486  RE 90005-03	
<b>Sandwich plate HSZ 10 A407-4X/D</b> <input type="checkbox"/> <sup>51</sup> <b>-A06</b> <input type="checkbox"/> <sup>26.1</sup> <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> <b>M00</b> Fitting of the sandwich plate: SITZVENTIL OD.15.06.89. <input type="checkbox"/> <sup>35.1</sup> <b>S0.000</b> SPULE OD.02.17. <input type="checkbox"/> <sup>35.2</sup> <input type="checkbox"/> <sup>26.1</sup> <b>30.000</b> Nozzle <input type="checkbox"/> <sup>51</sup> <b>M8x1-DIN906</b> Material no. see page 90		170 x 70 x 80 6.5 kg	R901276486  RE 90005-03  RN115.06	

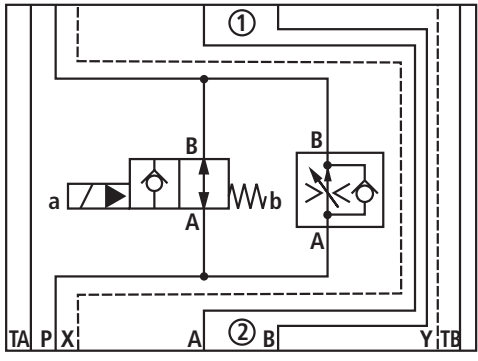
Order examples, see page 77

**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 <input type="checkbox"/> <sup>21.2</sup> -A06 <input type="checkbox"/> <sup>26.1</sup> <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> M00 Fitting of the sandwich plate: SITZVENTIL OD.15.06.89. <input type="checkbox"/> <sup>35.1</sup> S0.000 SPULE OD.02.17. <input type="checkbox"/> <sup>35.2</sup> 30. <input type="checkbox"/> <sup>26.1</sup> .000 2-way flow control valve: <b>2FRM 6 K2-1X/</b> <input type="checkbox"/> <sup>21.2</sup> 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 -A06 <input type="checkbox"/> <sup>26.1</sup> <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> M00 Fitting of the sandwich plate: SITZVENTIL OD.15.06.89. <input type="checkbox"/> <sup>35.1</sup> S0.000 SPULE OD.02.17. <input type="checkbox"/> <sup>35.2</sup> 30. <input type="checkbox"/> <sup>26.1</sup> .000 Throttle valve: <b>FGM 6 K2-1X/1QV</b>		170 x 70 x 80 6.75 kg	R901232101  RE 90005-03
	Sandwich plate HSZ 10 A408-4X/D <input type="checkbox"/> <sup>51</sup> -A06 <input type="checkbox"/> <sup>26.1</sup> <input type="checkbox"/> <sup>35.1</sup> <input type="checkbox"/> <sup>35.2</sup> M00 Fitting of the sandwich plate: SITZVENTIL OD.15.06.89. <input type="checkbox"/> <sup>35.1</sup> S0.000 SPULE OD.02.17. <input type="checkbox"/> <sup>35.2</sup> 30. <input type="checkbox"/> <sup>26.1</sup> .000 Nozzle <input type="checkbox"/> <sup>51</sup> 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

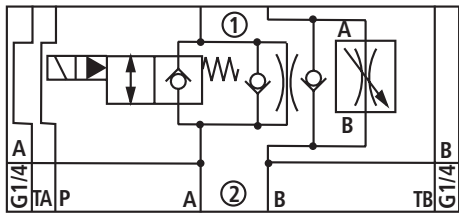
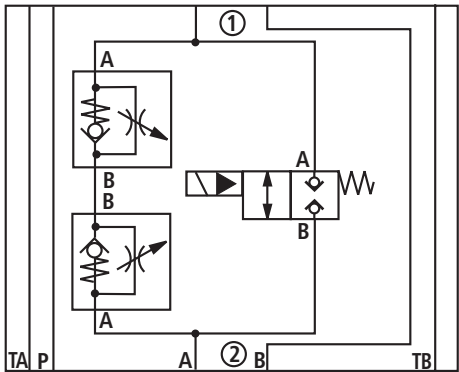
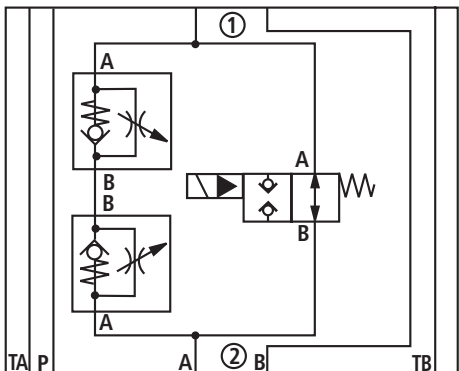
**Rapid motion - creep speed function, normally open (blocking on one side) – supply control** (① = component side, ② = plate side)  
**Flow control cartridge valve**

Device designation	Type designation	Symbol	Plate L x W x H	Dimensional sheet and more information			
	Material no.		Weight				
Sandwich plate HSZ 10 B408-4X/FRM <input type="checkbox"/> -A06 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> M00 Fitting of the sandwich plate:  SITZVENTIL OD.15.06.89. <input type="checkbox"/> S0.000  SPULE OD.02.17. <input type="checkbox"/> 30. <input type="checkbox"/> 0.000  2-way flow control valve: 2FRM 6 K2-1X/ <input type="checkbox"/> RV	21.2 <input type="checkbox"/> 26.1 <input type="checkbox"/> 35.1 <input type="checkbox"/> 35.2 <input type="checkbox"/>		170 x 70 x 80 6.7 kg	R901217086  Valve on side F RE 90005-03 RE 28155 Valve on side E			
	35.1 <input type="checkbox"/> S0.000  35.2 <input type="checkbox"/> 26.1 <input type="checkbox"/> 0.000  21.2 <input type="checkbox"/> RV		26.1 <input type="checkbox"/> 35.1 <input type="checkbox"/> 35.2 <input type="checkbox"/>		170 x 70 x 80 6.7 kg	R901217086  RE 90005-03	
	35.1 <input type="checkbox"/> S0.000  35.2 <input type="checkbox"/> 26.1 <input type="checkbox"/> 0.000  Throttle valve: FGM 6 K2-1X/1QV		26.1 <input type="checkbox"/> 35.1 <input type="checkbox"/> 35.2 <input type="checkbox"/>		170 x 70 x 80 6.5 kg		R901217086  RE 90005-03  RN115.06
	51 <input type="checkbox"/> M8x1-DIN906  Material no. see page 90		26.1 <input type="checkbox"/> 35.1 <input type="checkbox"/> 35.2 <input type="checkbox"/>				

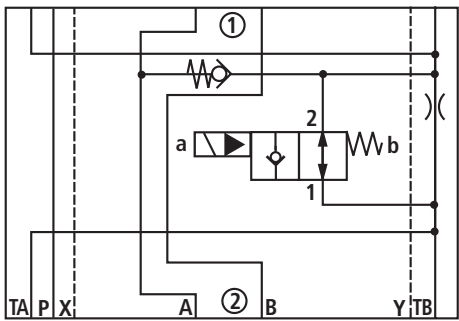
Order examples, see page 77



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

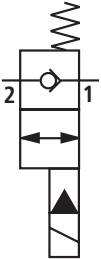
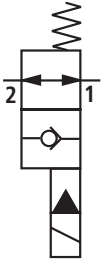
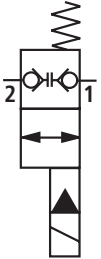
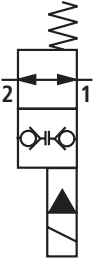
Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet  More information
Sandwich plate	<b>HSZ 10</b> <b>A420-4X/FGM1-A05</b> $\square$ <sup>26.1</sup> $\square$ <sup>35.1</sup> $\square$ <sup>35.2</sup> -D08M01 <b>R901247995</b> Fitting of the sandwich plate: $\square$ <sup>35.1</sup> OD.15.05.36. $\square$ .S8.00		240 x 70 x 80 8.0 kg Side E + F G1/4	R901248409 Nozzle M6 $\varnothing$ 0.8 mm RE 90005-03
Sandwich plate	<b>HSZ 10</b> <b>A486-4X/DRVP-B05</b> $\square$ $\square$ $\square$ M00 $\square$ <sup>26.1</sup> $\square$ <sup>35.1</sup> $\square$ <sup>35.2</sup> Fitting of the sandwich plate: $\square$ <sup>35.1</sup> OD.15.31.89. $\square$ .S8.00		140 x 70 x 70 8.7 kg	R901248408 RE 90005-03
Sandwich plate	<b>HSZ 10</b> <b>A486-4X/DRVP-B06</b> $\square$ $\square$ $\square$ M00 $\square$ <sup>26.1</sup> $\square$ <sup>35.1</sup> $\square$ <sup>35.2</sup> Fitting of the sandwich plate: $\square$ <sup>35.1</sup> OD.15.31.89. $\square$ .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	<b>HSZ 10</b> <b>B410-4X/D10-03BAR-A06</b> $\square$ $\square$ $\square$ M00 $\square$ <sup>26.1</sup> $\square$ <sup>35.1</sup> $\square$ <sup>35.2</sup> <b>R901277608</b> Fitting of the sandwich plate: $\square$ <sup>35.1</sup> OD.15.04.04. $\square$ .S0.00 $\square$ <sup>35.2</sup> OD.02.17. $\square$ .30.OC.00		220 x 90 x 70 10.7 kg	R901279169 Nozzle M8x1 $\varnothing$ 1.0 mm RE 90005-03
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**Functional group Miscellaneous**
**Complementary details on sandwich plates with short-circuit valves**

HSZ 10A ...-4X/  <sup>31</sup>  <sup>26.1</sup>  <sup>35.1</sup>  <sup>35.2</sup>  <sup>51</sup> (see p. 77 to 86)  
**B**

<input type="checkbox"/> <sup>31</sup>	<b>Symbols of the 2/2 directional seat valve:</b>	<b>= A05</b>	<b>= A06</b>	<b>= B05</b>	<b>= B06</b>
					
<input type="checkbox"/> <sup>26.1</sup>	<b>Nominal voltage at the coil</b>	Direct voltage 12 V = <b>G12</b> Direct voltage 24 V = <b>G24</b> Direct voltage 26 V = <b>G26</b> Direct voltage 110 V = <b>G110</b> Direct voltage 220 V = <b>G220</b>			
<input type="checkbox"/> <sup>35.1</sup>	<b>Manual override at directional seat valve series OD.15...</b>	without manual override = <b>A</b> <b>with</b> throttle = <b>3A</b> <b>with</b> flow controller cartridge = <b>3I</b>  Screwable manual override = <b>3M</b> = <b>3L</b> = <b>3D</b>  with manual override "pushing" = <b>1B</b> = <b>1L</b>  with manual override "pushing", lockable in switched position = <b>1C</b> = <b>1M</b>			
<input type="checkbox"/> <sup>35.2</sup>	<b>Electrical types of connection:</b>	03pol (2+PE) DIN EN 175301-803, without mating connector = <b>K4</b> 02pol K40 DT 04-2PA Deutsch, without mating connector = <b>K40</b> 02pol C4/Z30 AMP Junior-Timer, without mating connector = <b>C4</b>			

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## Functional group Miscellaneous

51



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

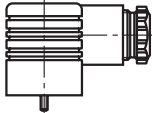
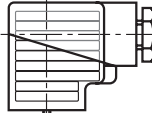
Example: **10**: Nozzle M8X1 with Ø1.0 mm fitting from  
 Ø0.4 mm to Ø4.5 mm possible

= 10

**Important:**

We recommend selecting a nozzle diameter  $\geq 0.6$  mm

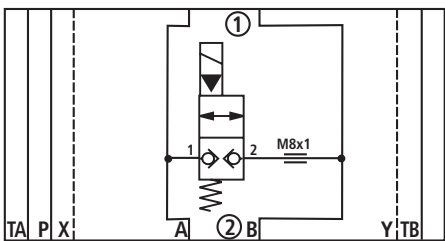
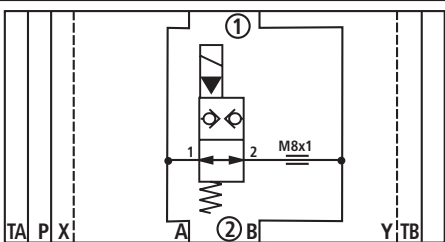
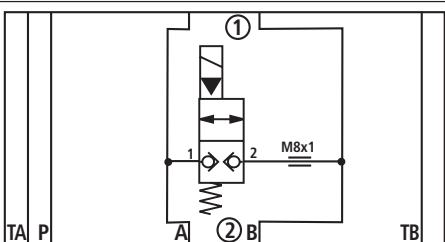
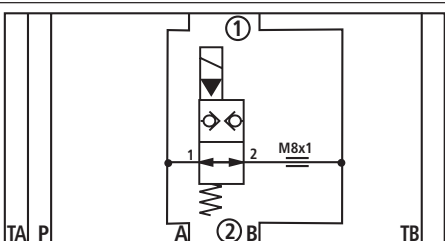
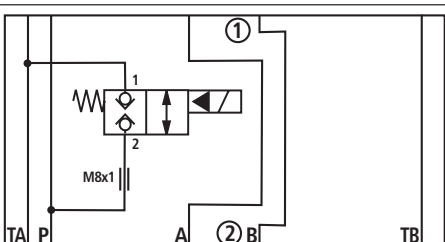
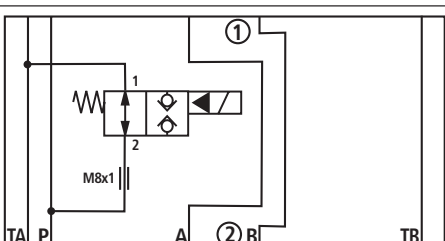
### Ordering code: Mating connectors according to DIN EN 175301-803 and ISO 4400 for connector "K4"

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

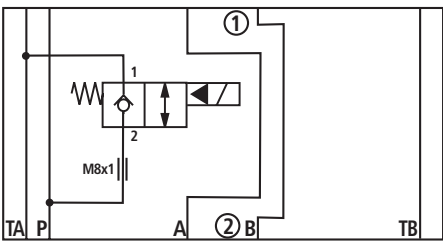
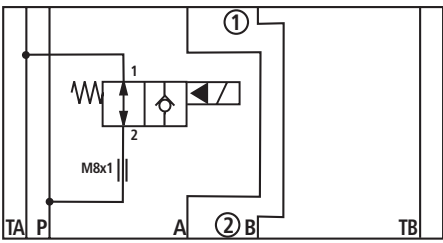
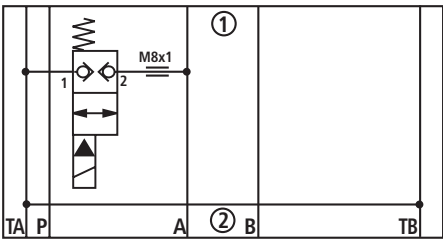
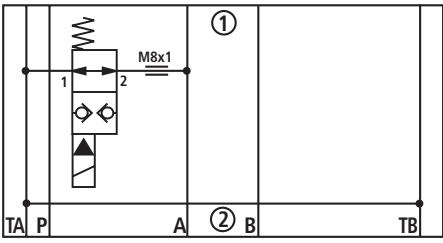
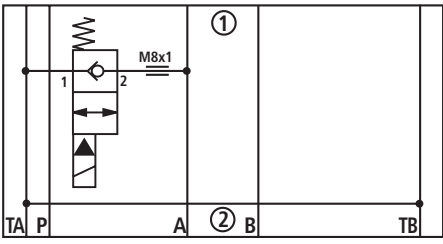
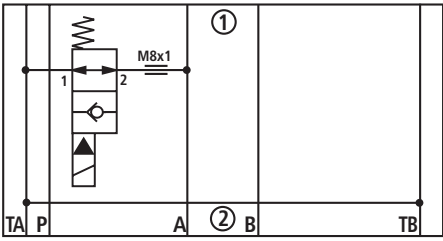
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**Short-circuit valves** (① = component side, ② = plate side)

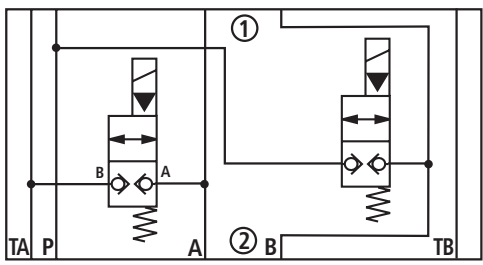
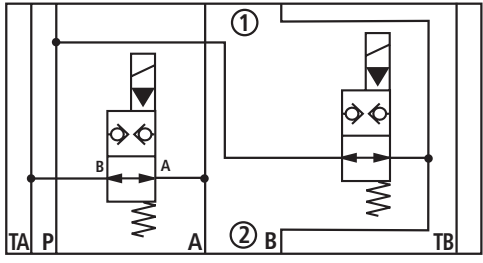
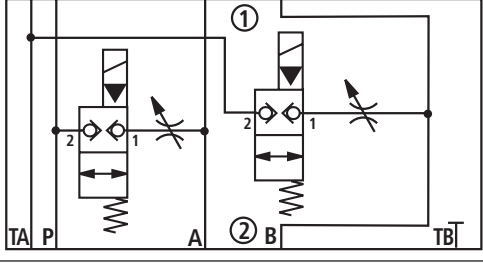
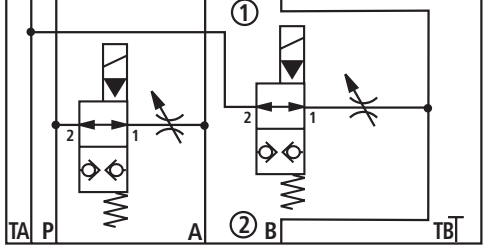
Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet  More information
Sandwich plate	<b>HSZ 10</b> <b>B517-4X/B05</b> 26.1 35.1 35.2 51 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> M00		120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

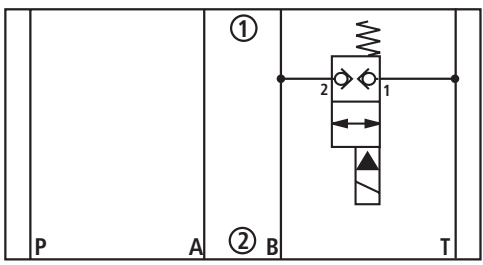
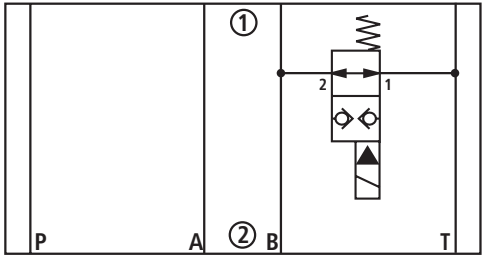
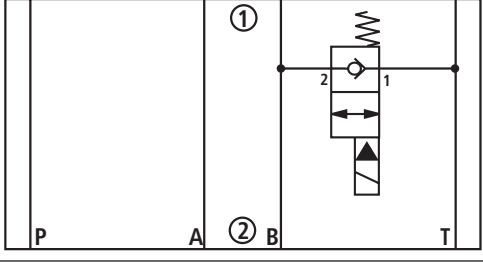
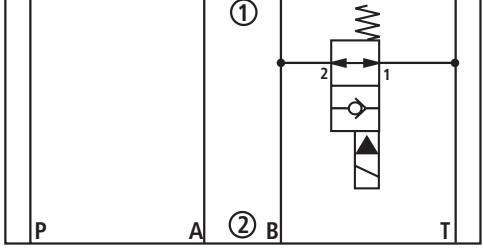
Device designation	Type designation  Material no.	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet  More information
Sandwich plate	<b>HSZ 10 A519-4X/A05</b> 26.1 35.1 35.2 51 □ □ □ □ M00		105 x 70 x 50 2.6 kg	R901154552 RE 90005-03  Internal thread M8x1
Sandwich plate	<b>HSZ 10 A519-4X/A06</b> 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	<b>HSZ 10 A589-4X/B05</b> 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	<b>HSZ 10 A589-4X/B06</b> 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	<b>HSZ 10 A589-4X/A05</b> 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	<b>HSZ 10 A589-4X/A06</b> 26.1 35.1 35.2 51 □ □ □ □ M00		105 x 70 x 50 2.6 kg	R901155030 RE 90005-03  Internal thread M8x1

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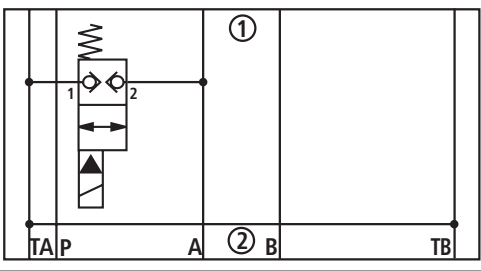
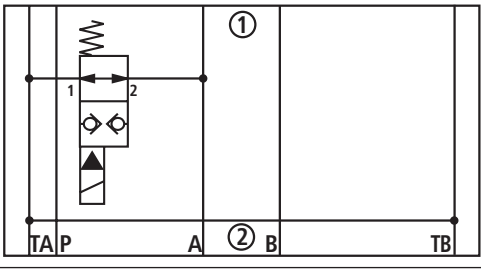
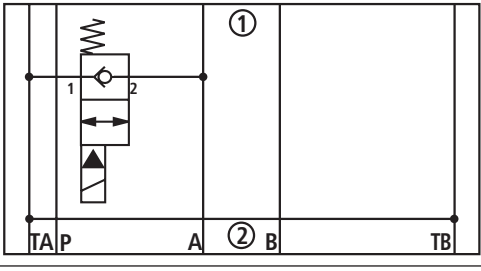
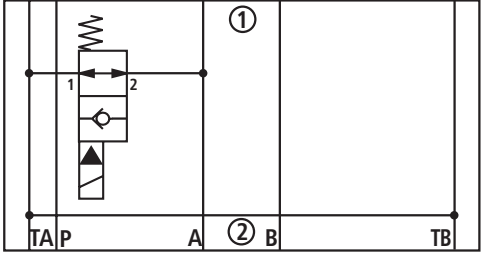
**Short-circuit valves** (① = component side, ② = plate side)

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	<b>HSZ 10</b> <b>A587-4X/B05</b> 26.1 35.1 35.2 □ □ □ M00		100 x 70 x 80 4.0 kg	R901028290  RE 90005-03
Sandwich plate	<b>HSZ 10</b> <b>A587-4X/B06</b> 26.1 35.1 35.2 □ □ □ M00		100 x 70 x 80 4.0 kg	R901028290  RE 90005-03
Sandwich plate	<b>HSZ 10</b> <b>A648-4X/B05</b> 26.1 35.1 35.2 □ □ □ M00		120 x 70 x 80 5.4 kg	R901164210  RE 90005-03
Sandwich plate	<b>HSZ 10</b> <b>A648-4X/B06</b> 26.1 35.1 35.2 □ □ □ M00		120 x 70 x 80 5.4 kg	R901164210  RE 90005-03

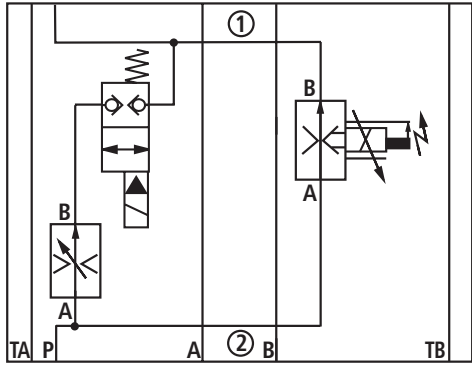
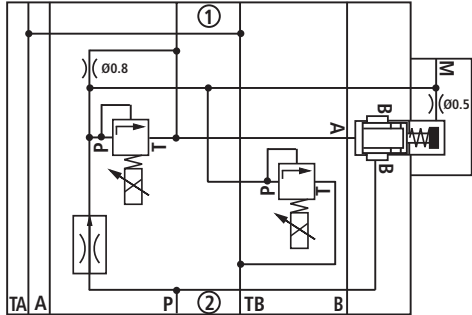
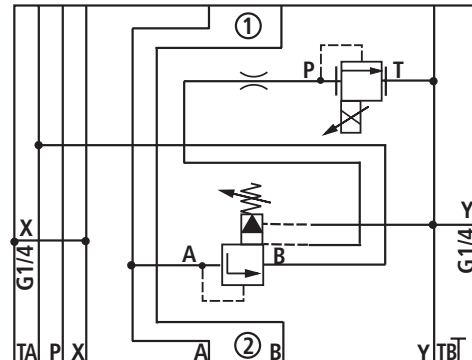
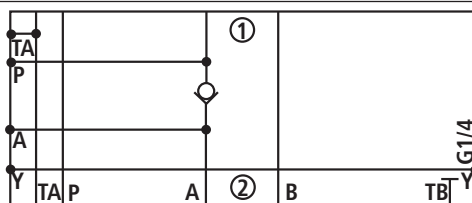
**Short-circuit valves for high flow** (① = component side, ② = plate side)

Device designation	Type designation  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	<b>HSZ 10 A668-4X/B05</b> 26.1 35.1 35.2 □ □ □ M00		120 x 70 x 80	R901282212  RE 90005-03
Sandwich plate with R ring plate	<b>HSZ 10 A668-4X/B06</b> 26.1 35.1 35.2 □ □ □ M00		120 x 70 x 80	R901282212  RE 90005-03
Sandwich plate with R ring plate	<b>HSZ 10 A668-4X/A05</b> 26.1 35.1 35.2 □ □ □ M00		120 x 70 x 80	R901282212  RE 90005-03
Sandwich plate with R ring plate	<b>HSZ 10 A668-4X/A06</b> 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  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	<b>HSZ 10 A667-4X/B05</b> 26.1 35.1 35.2 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> M00		120 x 70 x 80	R901282203  RE 90005-03
Sandwich plate with R ring plate	<b>HSZ 10 A667-4X/B06</b> 26.1 35.1 35.2 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> M00		120 x 70 x 80	R901282203  RE 90005-03
Sandwich plate with R ring plate	<b>HSZ 10 A667-4X/A05</b> 26.1 35.1 35.2 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> M00		120 x 70 x 80	R901282203  RE 90005-03
Sandwich plate with R ring plate	<b>HSZ 10 A667-4X/A06</b> 26.1 35.1 35.2 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 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

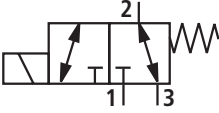
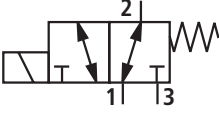
**Functional group Clamping hydraulics**

 Example: **HSZ 10 A 433 – 3X/PRFB –**

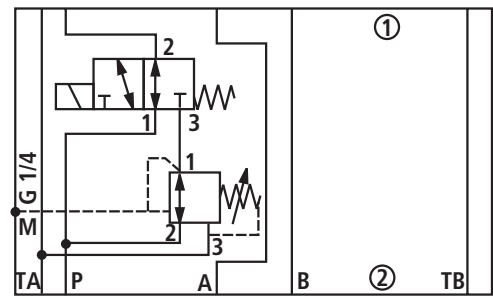
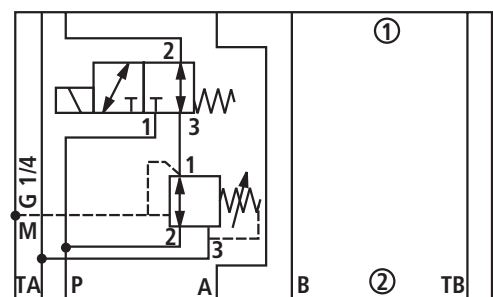
46	47	47.2									
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**– K1**

48	49	50	51	2	3
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<b>46</b>	<input type="checkbox"/>	<b>Adjustment element</b> at the 3-way pressure control valve	Setscrew with internal hexagon Hand wheel Adjustment protection, set in the factory	= L = K = C
<b>47</b>	<input type="checkbox"/>	<b>Set pressure</b> 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
<b>47.2</b>	<input type="checkbox"/>	<b>Seal material</b> <b>⚠ Attention!</b> Observe compatibility of seals with hydraulic fluid used!	NBR seals FKM seals (other seals upon request)	= N = V
<b>48</b>	<input type="checkbox"/>	<b>Symbol</b> of the 3/2 directional spool valve:		= C
				= U
<b>49</b>	<input type="checkbox"/>	<b>Solenoid voltage</b> 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
<b>50</b>	<input type="checkbox"/>	<b>Manual override</b> at the 3/2 directional spool valve:	without manual override Concealed manual override	= N0 = N9
<b>51</b>	<input type="checkbox"/>	<b>Electrical types of connection</b>	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		
<b>Sandwich plate</b>	HSZ 10A 433 – 3X/PRFB – <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> – K1 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> M01		200 x 70 x 80	R901080416
<b>Fitting of the sandwich plate:</b>			9.73 kg	
<b>Pressure control valve</b>	PRFB – see below		Side F	Valve PRFB on side E
3/2 directional spool valve	KKDER1 <input type="checkbox"/> <input type="checkbox"/> A/H <input type="checkbox"/> V		M	
	SPULE GZ37-4 24VDC 22W		G 1/4	RE 18136-04 Valve on side F
<b>Sandwich plate</b>	HSZ 10A 433 – 3X/PRFB – <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> – K1 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> M01		200 x 70 x 80	R901080416
<b>Fitting of the sandwich plate:</b>			9.73 kg	
<b>Pressure control valve</b>	PRFB – see below		Side F	Valve PRFB on side E
3/2 directional spool valve	KKDER1 <input type="checkbox"/> <input type="checkbox"/> A/H <input type="checkbox"/> V		M	
	SPULE GZ37-4 24VDC 22W		G 1/4	RE 18136-04 Valve on side F

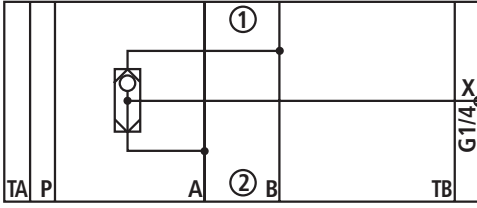
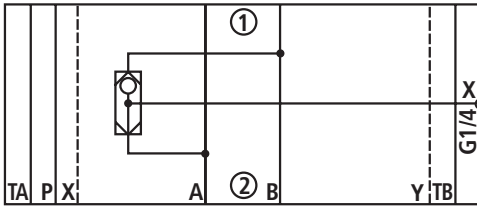
**Order example**

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

 HSZ 10A 433 – 3X/PRFB –     – K1



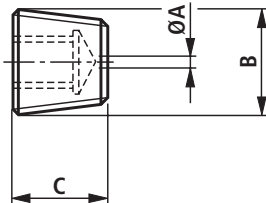
**Shuttle valves** (1) = component side, (2) = plate side)

Device designation	Type designation	Symbol	Platte L x W x H in mm Weight Size of the ports	Dimensional sheet  More information
	<b>Material no.</b>			
<b>Sandwich plate</b>	<b>HSZ 10 A235-3X/LG6M01</b> R900555882		130 x 70 x 50 3.3 kg Side F X G 1/4	R900265137
<b>Fitting of the sandwich plate:</b>				
Shuttle valve	<b>LG 6 S-2X/</b>			
<b>Sandwich plate</b>	<b>HSZ 10 B235-3X/LG6M01</b> R900571975		130 x 70 x 50 3.3 kg Side F X G 1/4	R900266410
<b>Fitting of the sandwich plate:</b>				
Shuttle valve	<b>LG 6 S-2X/</b>			

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## Nozzles

Form 7 (RN 115.06)  
 Plug screw DIN 906



**Important:**  
 Spelling ( ) with  
 complete type!

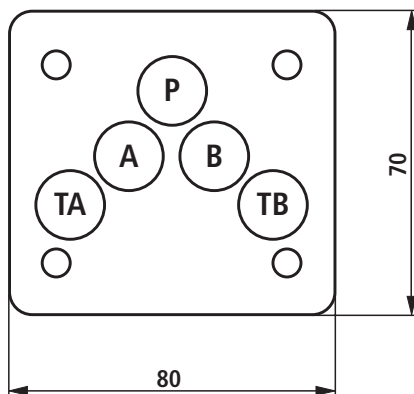
	50	51	52	53
<b>B</b>	M6	M8 x 1	R1/8	R3/8
<b>C</b>	6	8	8	10
<b>ØA</b>	<b>Material no.</b>			
<b>0.6 (06)</b>	R900157934	R900149430	R900188667	-
<b>0.7 (07)</b>	R900157931	R900143957	R901082918	-
<b>0.8 (08)</b>	R900152276	R900136843	R900144212	R901187136
<b>0.9 (09)</b>	R901192875	R901195589	-	-
<b>1.0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

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## R ring plates, seal kits

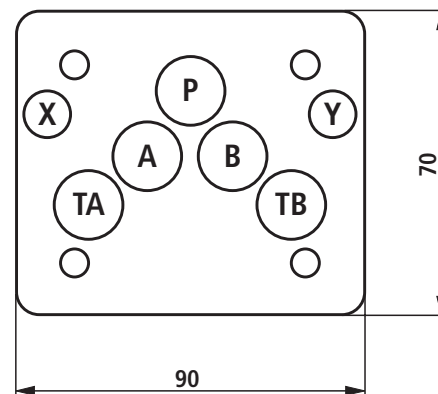
### R ring plate hole type 10A (1.5 high)

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 X; 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



# Niehues

Hydraulik · Automation

## Notes

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Bosch Rexroth AG  
Hydraulics  
Zum Eisengießer 1  
97816 Lohr am Main, Germany  
Phone +49 (0) 93 52 / 18-0  
Fax +49 (0) 93 52 / 18-23 58  
documentation@boschrexroth.de  
www.boschrexroth.de

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