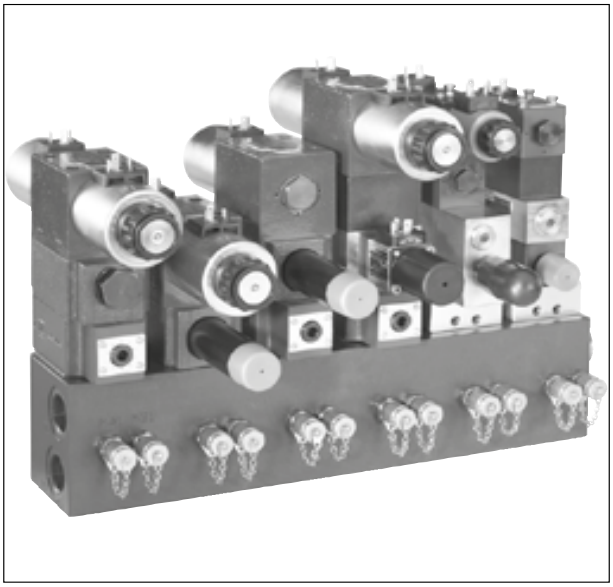
RE 48110
Edition: 2022-04
Replaces: 2018-05

rexroth
A Bosch Company

Manifolds

Type HSR 10



- Size 10
- Component series 15 and 35
- Maximum operating pressure 315 (350) bar
- 1 to 8 stations

Features

- Base element for ready-for-connection controls in vertical stacking design
- Compact hydraulic controls
- Common pump line
- Common tank line
- Separate actuator ports of the stations
- Optional measuring ports in the actuator lines
- Mounting of NG10 sandwich plates and valves
- Mounting of NG6 sandwich plates and valves possible by means of an additional adapter plate

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Ordering code

	01	02	03		04		05	06	07	08		09
Manifold		**HSR**	**10**	**–**		**/**	**01**					

Number of ready-for-connection controls in vertical stacking design

01	1 control	**1**
	2 controls	**2**
	3 controls	**3**
	4 controls	**4**
	5 controls	**5**
	6 controls	**6**
	7 controls	**7**
	8 controls	**8**

02	Manifold	**HSR**

03	Size 10	**10**

Component series

04	Port size: A, B = G1/2"; P, T = G3/4"	**15**
	With enlarged connection thread: Port size: A, B = G3/4"; P, T = G1"	**35**

Connection thread

05	Pipe thread according to DIN EN ISO 228-1	**01**

Position of actuator ports

06	Lateral	**C**
	Bottom	**D**

Maximum pressure

07	315 bar	**No code**
	350 bar	**/350** [3]

Types

08	Standard	**no code**
	With measuring ports in A and B	**SO8** [1]

Coating

09	Phosphate coating DIN EN ISO 9717	**PHOSPHATED** [2]
	Galvanic coating DIN EN ISO 19598	**FE//ZN8//CN/T0**

[1] Not possible with series 15 with lateral actuator ports
[2] Standard version (manganese or zinc phosphate coating)
[3] Only for series 3X, standard and SO8 versions. Others upon request

Description

- Manifolds are the base element for ready-for-connection controls in vertical stacking design
- Manifolds of NG10 are available with 1 to 8 stations
- On each station, highly compact hydraulic controls can be build using vertically stackable sandwich plate valves in connection with shift valves or proportional servo valves of NG10 or NG6 (adapter plate required).
- All stations have a common pump port and a common tank port
- The pump line "P" and the tank line "T" are lead through the two front sides of the manifold
- Every station is equipped with separate actuator ports "A" and "B"
- Actuator ports are either located at the bottom or laterally
- Another option are measuring ports in the actuator channels "A" and "B"

Bosch Rexroth AG, RE 48110, edition: 2022-04

Standard program: HSR 10

Coating	Measuring port	Number of mounting positions	Port size P, T	Porting pattern A, B	Port size A, B	Material no.	Type key Manifold...	Maximum pressure in bar	Weight in kg
Phosphated	without	1	G3/4	lateral	G1/2	R900815073	1HSR10-15/01C PHOSPHATED	315	6.4
		2	G3/4	lateral	G1/2	R900154881	2HSR10-15/01C PHOSPHATED	315	8.2
				bottom		R900158686	2HSR10-15/01D PHOSPHATED	315	9.4
			G1	lateral	G3/4	R901552874	2HSR10-35/01C/350 PHOSPHATED	350	12.3
				bottom		R901552977	2HSR10-35/01D/350 PHOSPHATED	350	11
		3	G3/4	lateral	G1/2	R900154882	3HSR10-15/01C PHOSPHATED	315	12.5
				bottom		R900158687	3HSR10-15/01D PHOSPHATED	315	12.3
			G1	lateral	G3/4	R901552875	3HSR10-35/01C/350 PHOSPHATED	350	18.5
				bottom		R901552978	3HSR10-35/01D/350 PHOSPHATED	350	16
		4	G3/4	lateral	G1/2	R900154883	4HSR10-15/01C PHOSPHATED	315	16.8
				bottom		R900158688	4HSR10-15/01D PHOSPHATED	315	19.2
			G1	lateral	G3/4	R901552876	4HSR10-35/01C/350 PHOSPHATED	350	24.5
				bottom		R901552979	4HSR10-35/01D/350 PHOSPHATED	350	22
		5	G3/4	lateral	G1/2	R900154884	5HSR10-15/01C PHOSPHATED	315	24.8
				bottom		R900158689	5HSR10-15/01D PHOSPHATED	315	20.6
			G1	lateral	G3/4	R901552889	5HSR10-35/01C/350 PHOSPHATED	350	31.7
				bottom		R901552980	5HSR10-35/01D/350 PHOSPHATED	350	28
		6	G3/4	lateral	G1/2	R900154885	6HSR10-15/01C PHOSPHATED	315	29.9
				bottom		R900158690	6HSR10-15/01D PHOSPHATED	315	29
			G1	lateral	G3/4	R901552890	6HSR10-35/01C/350 PHOSPHATED	350	38
				bottom		R901552981	6HSR10-35/01D/350 PHOSPHATED	350	34
		7	G3/4	lateral	G1/2	R901406300	7HSR10-15/01C PHOSPHATED	315	30
				bottom		R901406303	7HSR10-15/01D PHOSPHATED	315	29
			G1	lateral	G3/4	R901552891	7HSR10-35/01C/350 PHOSPHATED	350	44
				bottom		R901552982	7HSR10-35/01D/350 PHOSPHATED	350	40
		8	G3/4	lateral	G1/2	R901406301	8HSR10-15/01C PHOSPHATED	315	34.1
				bottom		R901406304	8HSR10-15/01D PHOSPHATED	315	40
			G1	lateral	G3/4	R901552892	8HSR10-35/01C/350 PHOSPHATED	350	50
				bottom		R901552983	8HSR10-35/01D/350 PHOSPHATED	350	46

Standard program: HSR 10

Coating	Measuring port	Number of mounting positions	Port size P, T	Porting pattern A, B	Port size A, B	Material no.	Type key Manifold...	Maximum pressure in bar	Weight in kg
Galvanized and thick film passivated	without	1	G3/4	lateral	G1/2	R901155507	1HSR10-15/01C FE//ZN8//CN/T0	315	6.4
		2	G3/4	lateral	G1/2	R901386710	2HSR10-15/01C FE//ZN8//CN/T0	315	8.2
				bottom		R901375945	2HSR10-15/01D FE//ZN8//CN/T0	315	9.4
			G1	lateral	G3/4	R901552900	2HSR10-35/01C/350 FE//ZN8//CN/T0	350	12.3
				bottom		R901552993	2HSR10-35/01D/350 FE//ZN8//CN/T0	350	11
		3	G3/4	lateral	G1/2	R901155528	3HSR10-15/01C FE//ZN8//CN/T0	315	12.5
				bottom		R901375946	3HSR10-15/01D FE//ZN8//CN/T0	315	12.3
			G1	lateral	G3/4	R901552901	3HSR10-35/01C/350 FE//ZN8//CN/T0	350	18.5
				bottom		R901552994	3HSR10-35/01D/350 FE//ZN8//CN/T0	350	16
		4	G3/4	lateral	G1/2	R901155620	4HSR10-15/01C FE//ZN8//CN/T0	315	16.8
				bottom		R901155846	4HSR10-15/01D FE//ZN8//CN/T0	315	19.2
			G1	lateral	G3/4	R901552902	4HSR10-35/01C/350 FE//ZN8//CN/T0	350	24.5
				bottom		R901552995	4HSR10-35/01D/350 FE//ZN8//CN/T0	350	22
		5	G3/4	lateral	G1/2	R901155702	5HSR10-15/01C FE//ZN8//CN/T0	315	24.8
				bottom		R901155866	5HSR10-15/01D FE//ZN8//CN/T0	315	20.6
			G1	lateral	G3/4	R901552903	5HSR10-35/01C/350 FE//ZN8//CN/T0	350	31.7
				bottom		R901552998	5HSR10-35/01D/350 FE//ZN8//CN/T0	350	28
		6	G3/4	lateral	G1/2	R901155792	6HSR10-15/01C FE//ZN8//CN/T0	315	29.9
				bottom		R901155870	6HSR10-15/01D FE//ZN8//CN/T0	315	29
			G1	lateral	G3/4	R901552904	6HSR10-35/01C/350 FE//ZN8//CN/T0	350	38
				bottom		R901552999	6HSR10-35/01D/350 FE//ZN8//CN/T0	350	34
		7	G3/4	lateral	G1/2	R900809783	7HSR10-15/01C FE//ZN8//CN/T0	315	30
				bottom		R900809785	7HSR10-15/01D FE//ZN8//CN/T0	315	29
			G1	lateral	G3/4	R901552905	7HSR10-35/01C/350 FE//ZN8//CN/T0	350	44
				bottom		R901553000	7HSR10-35/01D/350 FE//ZN8//CN/T0	350	40
		8	G3/4	lateral	G1/2	R900809784	8HSR10-15/01C FE//ZN8//CN/T0	315	34.1
				bottom		R900809786	8HSR10-15/01D FE//ZN8//CN/T0	315	40
			G1	lateral	G3/4	R901552906	8HSR10-35/01C/350 FE//ZN8//CN/T0	350	50
				bottom		R901553001	8HSR10-35/01D/350 FE//ZN8//CN/T0	350	46

Order example for a manifold with galvanic coating, approved for 350 bar:
Manifold 6HSR10-35/01D/350 FE//ZN8//CN/T0

Standard program: HSR 10

Coating	Measuring port	Number of mounting positions	Port size P, T	Porting pattern A, B	Port size A, B	Material no.	Type key Manifold...	Maximum pressure in bar	Weight in kg
Phosphated	mit	1	G3/4	bottom	G1/2	R901406693	1HSR10-15/01D SO8 PHOSPHATED	315	5
			G1	lateral	G3/4	R901552923	1HSR10-35/01C/350 SO8 PHOSPHATED	350	5.8
				bottom		R901553020	1HSR10-35/01D/350 SO8 PHOSPHATED	350	6.5
		2	G3/4	bottom	G1/2	R901406694	2HSR10-15/01D SO8 PHOSPHATED	315	7.8
			G1	lateral	G3/4	R901552924	2HSR10-35/01C/350 SO8 PHOSPHATED	350	12.3
				bottom		R901553021	2HSR10-35/01D/350 SO8 PHOSPHATED	350	11
		3	G3/4	bottom	G1/2	R901406696	3HSR10-15/01D SO8 PHOSPHATED	315	12
			G1	lateral	G3/4	R901552925	3HSR10-35/01C/350 SO8 PHOSPHATED	350	18.5
				bottom		R901553022	3HSR10-35/01D/350 SO8 PHOSPHATED	350	16
		4	G3/4	bottom	G1/2	R901406697	4HSR10-15/01D SO8 PHOSPHATED	315	16.3
			G1	lateral	G3/4	R901552926	4HSR10-35/01C/350 SO8 PHOSPHATED	350	24.5
				bottom		R901553023	4HSR10-35/01D/350 SO8 PHOSPHATED	350	22
		5	G3/4	bottom	G1/2	R901406700	5HSR10-15/01D SO8 PHOSPHATED	315	20.5
			G1	lateral	G3/4	R901552927	5HSR10-35/01C/350 SO8 PHOSPHATED	350	31.7
				bottom		R901553024	5HSR10-35/01D/350 SO8 PHOSPHATED	350	28
		6	G3/4	bottom	G1/2	R901406701	6HSR10-15/01D SO8 PHOSPHATED	315	24.5
			G1	lateral	G3/4	R901552928	6HSR10-35/01C/350 SO8 PHOSPHATED	350	38
				bottom		R901553025	6HSR10-35/01D/350 SO8 PHOSPHATED	350	34
		7	G3/4	bottom	G1/2	R901406702	7HSR10-15/01D SO8 PHOSPHATED	315	33.9
			G1	lateral	G3/4	R901552929	7HSR10-35/01C/350 SO8 PHOSPHATED	350	44
				bottom		R901553026	7HSR10-35/01D/350 SO8 PHOSPHATED	350	40
		8	G3/4	bottom	G1/2	R901406703	8HSR10-15/01D SO8 PHOSPHATED	315	33
			G1	lateral	G3/4	R901552930	8HSR10-35/01C/350 SO8 PHOSPHATED	350	50
				bottom		R901553027	8HSR10-35/01D/350 SO8 PHOSPHATED	350	46

Standard program: HSR 10

Coating	Measuring port	Number of mounting positions	Port size P, T	Porting pattern A, B	Port size A, B	Material no.	Type key Manifold...	Maximum pressure in bar	Weight in kg
Galvanized and thick film passivated	mit	1	G3/4	bottom	G1/2	R900815074	1HSR10-15/01D SO8 FE//ZN8//CN/T0	315	5
			G1	lateral	G3/4	R901552954	1HSR10-35/01C/350 SO8 FE//ZN8//CN/T0	350	5.8
				bottom		R901553036	1HSR10-35/01D/350 SO8 FE//ZN8//CN/T0	350	6.5
		2	G3/4	bottom	G1/2	R900180221	2HSR10-15/01D SO8 FE//ZN8//CN/T0	315	7.8
			G1	lateral	G3/4	R901552955	2HSR10-35/01C/350 SO8 FE//ZN8//CN/T0	350	12.3
				bottom		R901553037	2HSR10-35/01D/350 SO8 FE//ZN8//CN/T0	350	11
		3	G3/4	bottom	G1/2	R900180222	3HSR10-15/01D SO8 FE//ZN8//CN/T0	315	12
			G1	lateral	G3/4	R901552956	3HSR10-35/01C/350 SO8 FE//ZN8//CN/T0	350	18.5
				bottom		R901553038	3HSR10-35/01D/350 SO8 FE//ZN8//CN/T0	350	16
		4	G3/4	bottom	G1/2	R900180223	4HSR10-15/01D SO8 FE//ZN8//CN/T0	315	16.3
			G1	lateral	G3/4	R901552957	4HSR10-35/01C/350 SO8 FE//ZN8//CN/T0	350	24.5
				bottom		R901553039	4HSR10-35/01D/350 SO8 FE//ZN8//CN/T0	350	22
		5	G3/4	bottom	G1/2	R900180224	5HSR10-15/01D SO8 FE//ZN8//CN/T0	315	20.5
			G1	lateral	G3/4	R901552958	5HSR10-35/01C/350 SO8 FE//ZN8//CN/T0	350	31.7
				bottom		R901553040	5HSR10-35/01D/350 SO8 FE//ZN8//CN/T0	350	28
		6	G3/4	bottom	G1/2	R900180225	6HSR10-15/01D SO8 FE//ZN8//CN/T0	315	24.5
			G1	lateral	G3/4	R901552959	6HSR10-35/01C/350 SO8 FE//ZN8//CN/T0	350	38
				bottom		R901553041	6HSR10-35/01D/350 SO8 FE//ZN8//CN/T0	350	34
		7	G3/4	bottom	G1/2	R900830308	7HSR10-15/01D SO8 FE//ZN8//CN/T0	315	33.9
			G1	lateral	G3/4	R901552960	7HSR10-35/01C/350 SO8 FE//ZN8//CN/T0	350	44
				bottom		R901553042	7HSR10-35/01D/350 SO8 FE//ZN8//CN/T0	350	40
		8	G3/4	bottom	G1/2	R900830374	8HSR10-15/01D SO8 FE//ZN8//CN/T0	315	33
			G1	lateral	G3/4	R901552961	8HSR10-35/01C/350 SO8 FE//ZN8//CN/T0	350	50
				bottom		R901553043	8HSR10-35/01D/350 SO8 FE//ZN8//CN/T0	350	46

Order example for a manifold with galvanic coating, approved for 350 bar:
Manifold 7HSR10-35/01D/350 SO8 FE//ZN8//CN/T0

Technical data

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

General		
Size		10
Material		GGG40
Surface coating		Phosphate coating [1] according to DIN EN ISO 9717 with after-treatment (greases, oils, lubricants) Galvanic coating according to DIN EN ISO 19598 – Galvanized and thick film passivated
Hydraulic fluid		Hydraulic oils HL, HLP, HVLP according to DIN 51524 For further information refer to data sheet 90220. For other hydraulic fluids, please contact us
Maximum operating pressure [2]	bar	See tables on page 3 ... 6

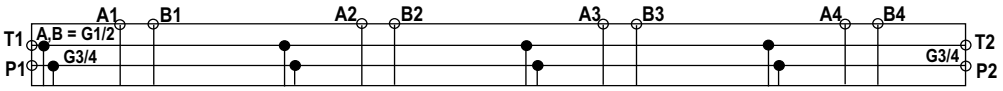
[1] Manganese or zinc phosphate coating

[2] Manifold without valve fitting

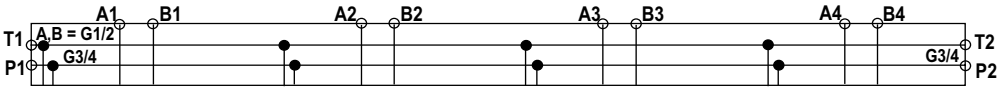
Notice:
For the assembly, commissioning and maintenance of hydraulic systems, see data sheet 07900

Switching symbols for manifolds with 4 stations

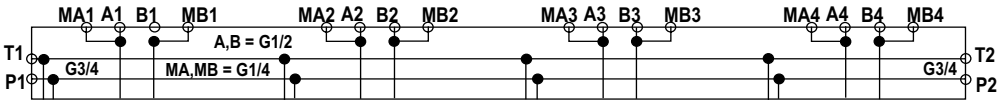
Manifold HSR10-15/01C



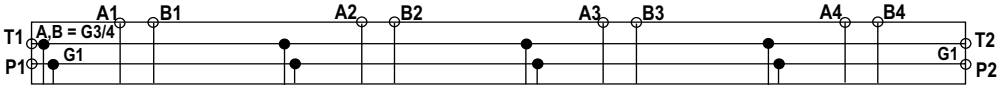
Manifold HSR10-15/01D



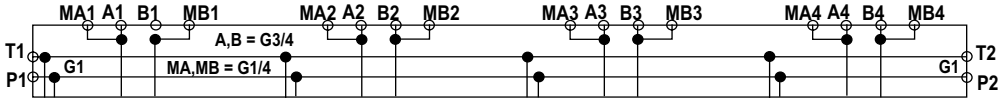
Manifold HSR10-15/01D SO8



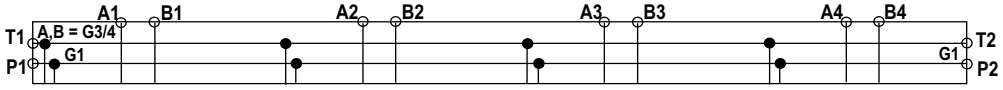
Manifold HSR10-35/01C/350



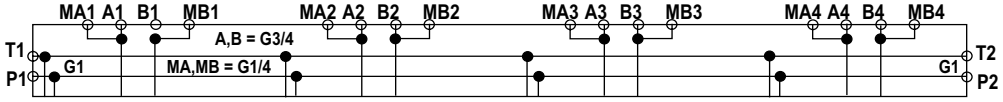
Manifold HSR10-35/01C/350 SO8



Manifold HSR10-35/01D/350

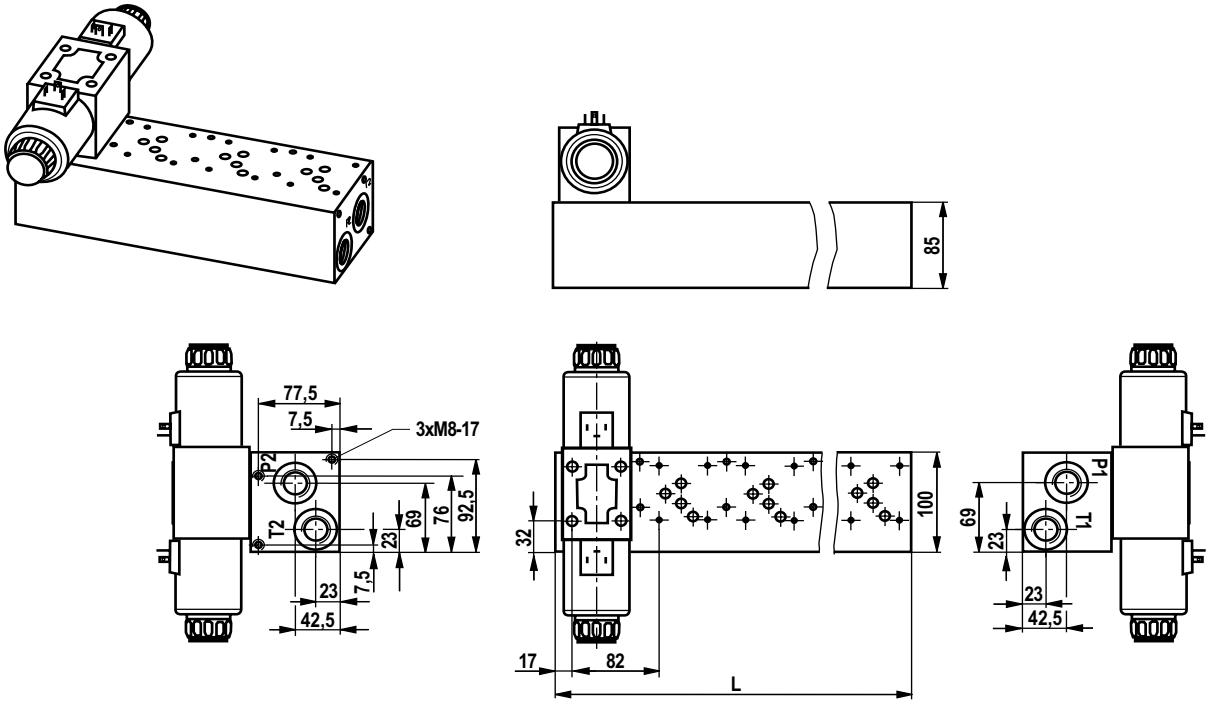


Manifold HSR10-35/01D/350 SO8



RE 48110, edition: 2022-04, **Bosch Rexroth AG**

Dimensions: **Manifold 2...8HSR10-15/01C**
(dimensions in mm)



Dimensional table (all dimensions in mm)

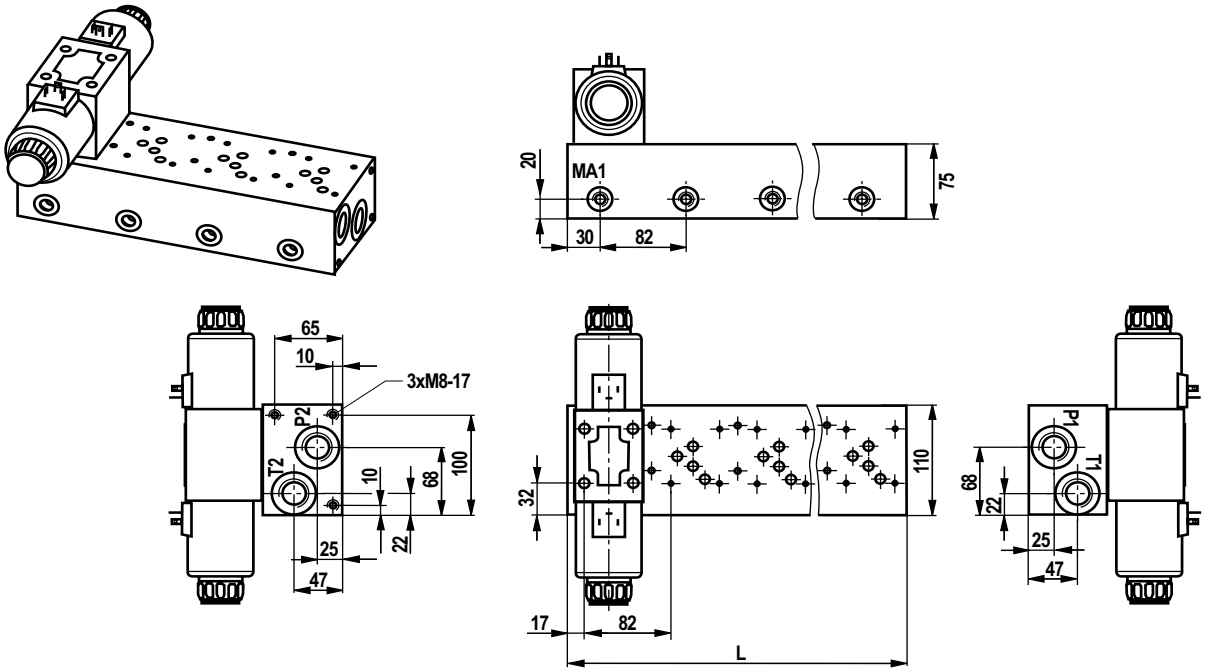
Number of stations	Overall length L	Fixing holes [1]						
		L1	L2	L3	L4	L5	L6	L7
2	157	81						
3	239	81	163					
4	321	81	163	245				
5	403	81	163	245	327			
6	485	81	163	245	327	409		
7	567	81	163	245	327	409	491	
8	649	81	163	245	327	409	491	573

Thread type	Pipe thread according to DIN EN ISO 228-1	
Port	A1 ... A8 B1 ... B8	P1; P2 T1; T2
Threat diameter	G1/2	G3/4
Thread depth	15	17
Counter bore diameter	34	42
Recess depth	0.2	0.2

[1] If valves, sandwich, adapter and cover plates have a width of more than 70 mm, not all through holes can be used for the fixation of the manifolds.

Bosch Rexroth AG, RE 48110, edition: 2022-04

Dimensions: **Manifold 2...8HSR10-15/01D** (without measuring ports MA, MB)
Manifold 2...8HSR10-15/01D SO8 (with measuring ports MA, MB)
(dimensions in mm)



Dimensional table (all dimensions in mm)

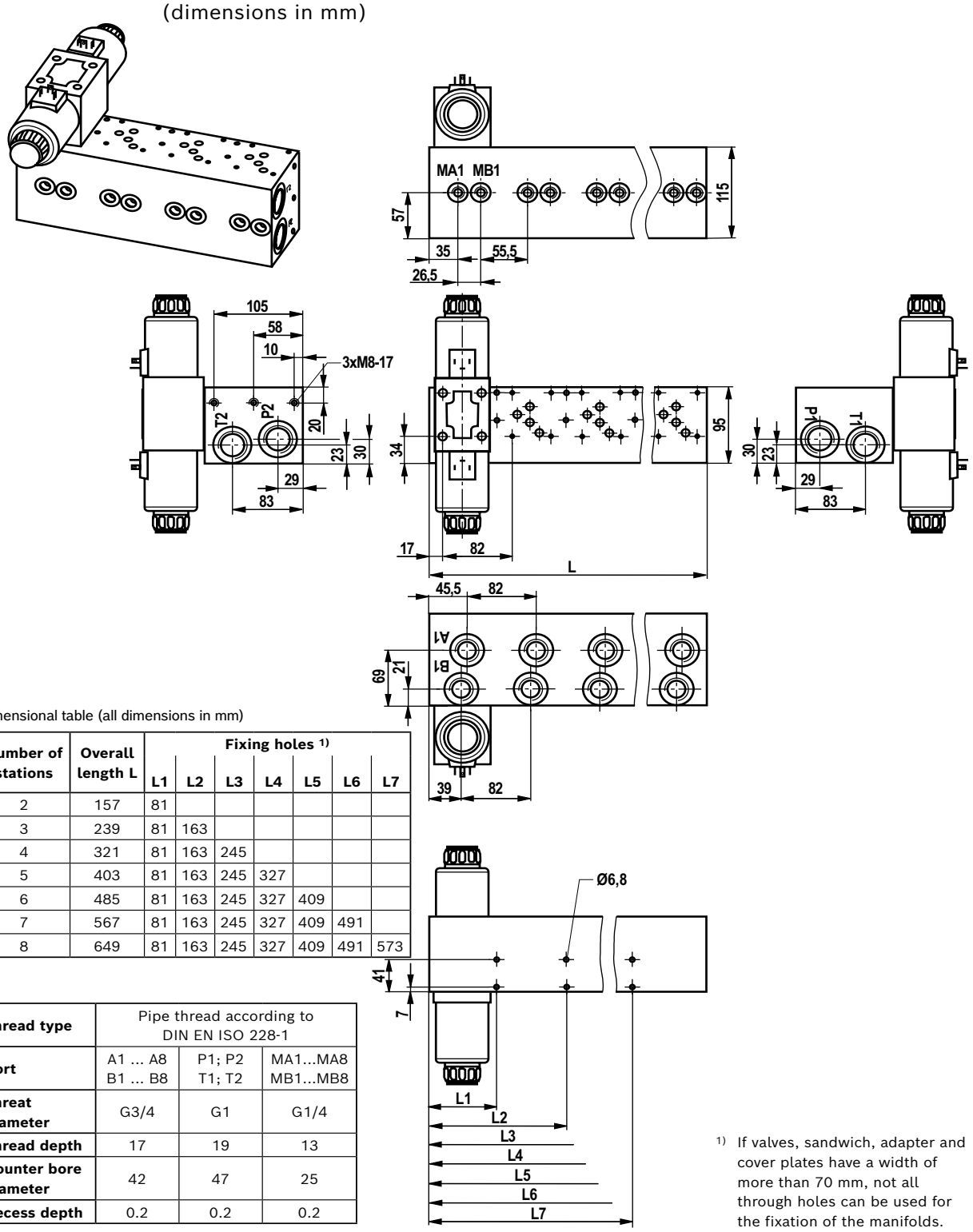
Number of stations	Overall length L	Fixing holes [1]						
		L1	L2	L3	L4	L5	L6	L7
2	157	81						
3	239	81	163					
4	321	81	163	245				
5	403	81	163	245	327			
6	485	81	163	245	327	409		
7	567	81	163	245	327	409	491	
8	649	81	163	245	327	409	491	573

Thread type	Pipe thread according to DIN EN ISO 228-1		
Port	A1 ... A8 B1 ... B8	P1; P2 T1; T2	MA1...MA8 MB1...MB8
Threat diameter	G1/2	G3/4	G1/4
Thread depth	15	17	13
Counter bore diameter	34	42	25
Recess depth	0.2	0.2	0.2

[1] If valves, sandwich, adapter and cover plates have a width of more than 70 mm, not all through holes can be used for the fixation of the manifolds.

RE 48110, edition: 2022-04, **Bosch Rexroth AG**

Dimensions: **Manifold 2...8HSR10-35/01C/350** (without measuring ports MA, MB)
Manifold 2...8HSR10-35/01C/350 SO8 (with measuring ports MA, MB)
(dimensions in mm)



Dimensional table (all dimensions in mm)

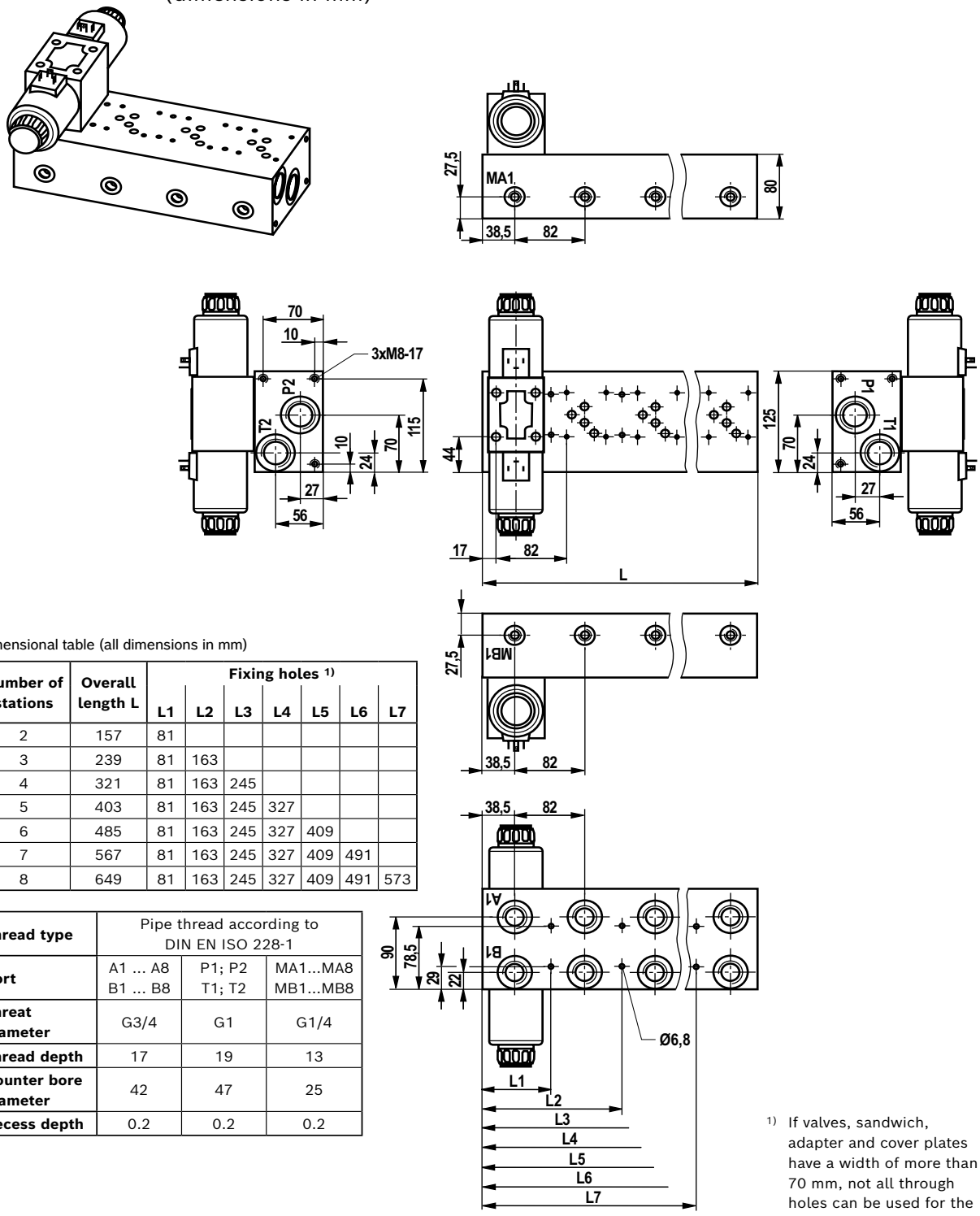
Number of stations	Overall length L	Fixing holes [1]						
		L1	L2	L3	L4	L5	L6	L7
2	157	81						
3	239	81	163					
4	321	81	163	245				
5	403	81	163	245	327			
6	485	81	163	245	327	409		
7	567	81	163	245	327	409	491	
8	649	81	163	245	327	409	491	573

Thread type	Pipe thread according to DIN EN ISO 228-1		
Port	A1 ... A8 B1 ... B8	P1; P2 T1; T2	MA1...MA8 MB1...MB8
Threat diameter	G3/4	G1	G1/4
Thread depth	17	19	13
Counter bore diameter	42	47	25
Recess depth	0.2	0.2	0.2

[1] If valves, sandwich, adapter and cover plates have a width of more than 70 mm, not all through holes can be used for the fixation of the manifolds.

Bosch Rexroth AG, RE 48110, edition: 2022-04

Dimensions: **Manifold 2...8HSR10-35/01D/350** (without measuring ports MA, MB)
Manifold 2...8HSR10-35/01D/350 SO8 (with measuring ports MA, MB)
(dimensions in mm)



Dimensional table (all dimensions in mm)

Number of stations	Overall length L	Fixing holes [1]						
		L1	L2	L3	L4	L5	L6	L7
2	157	81						
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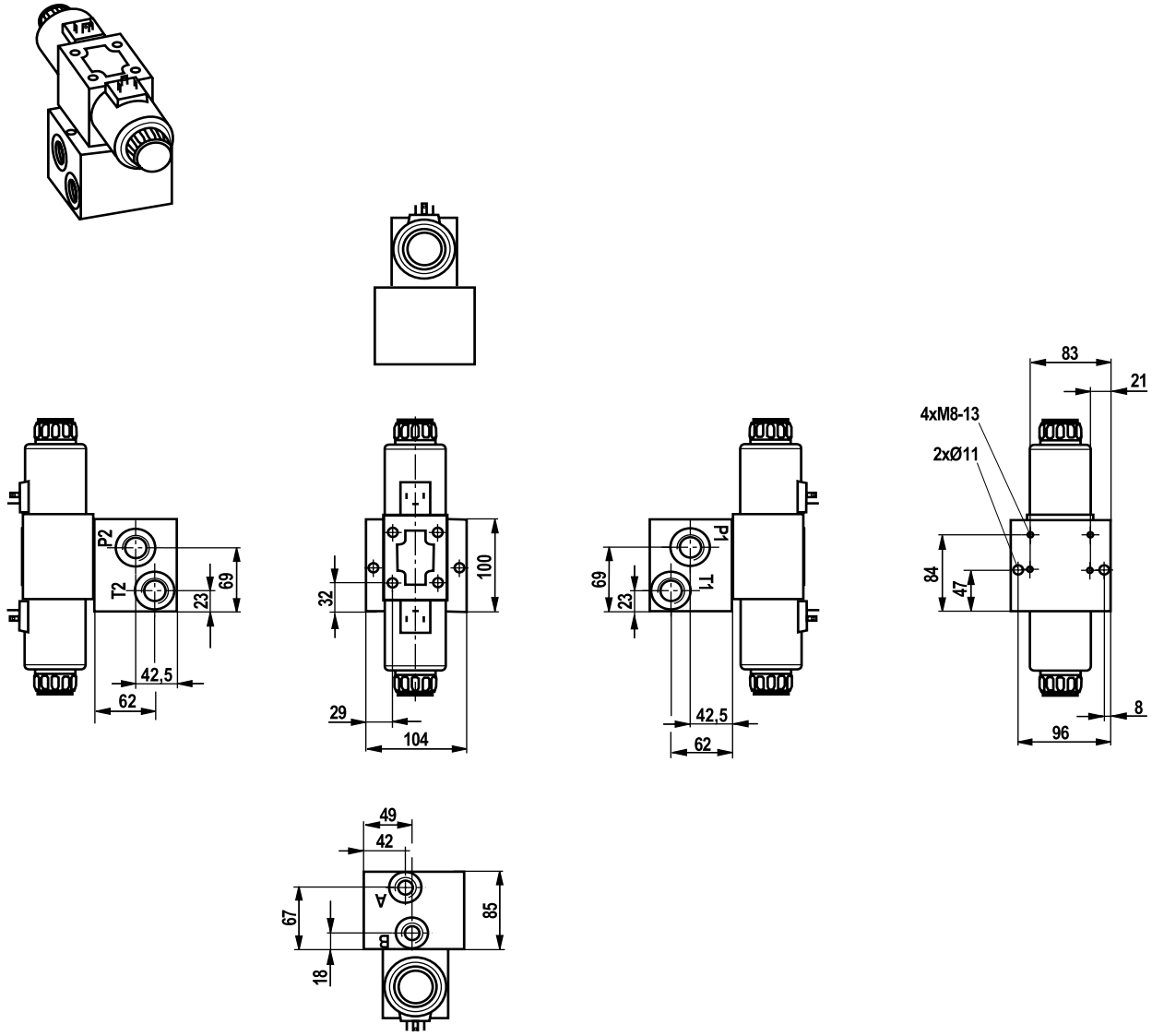
Recess depth	0.2	0.2	0.2

[1] If valves, sandwich, adapter and cover plates have a width of more than 70 mm, not all through holes can be used for the fixation of the manifolds.

RE 48110, edition: 2022-04, **Bosch Rexroth AG**

Dimensions: Manifold 1HSR10-15/01C (dimensions in mm)

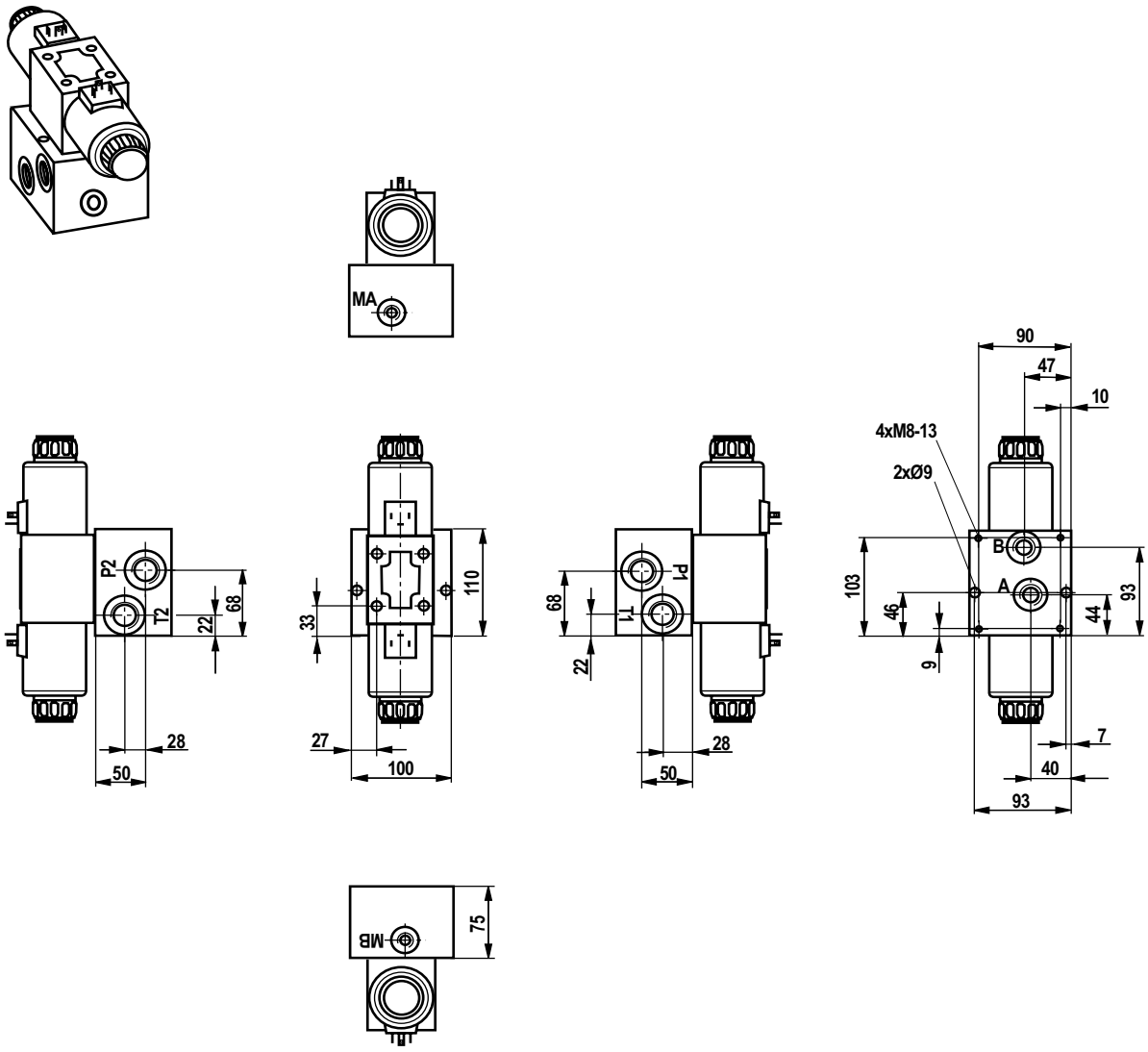


Thread type	Pipe thread according to DIN EN ISO 228-1	
Port	A; B	P1; P2; T1; T2
Threat diameter	G1/2	G3/4
Thread depth	15	17
Counter bore diameter	34	42
Recess depth	0.2	0.2

If valves, sandwich adapter and cover plates have a width of more than 72 mm, not all through holes can be used for the fixation of the manifolds!

Bosch Rexroth AG, RE 48110, edition: 2022-04

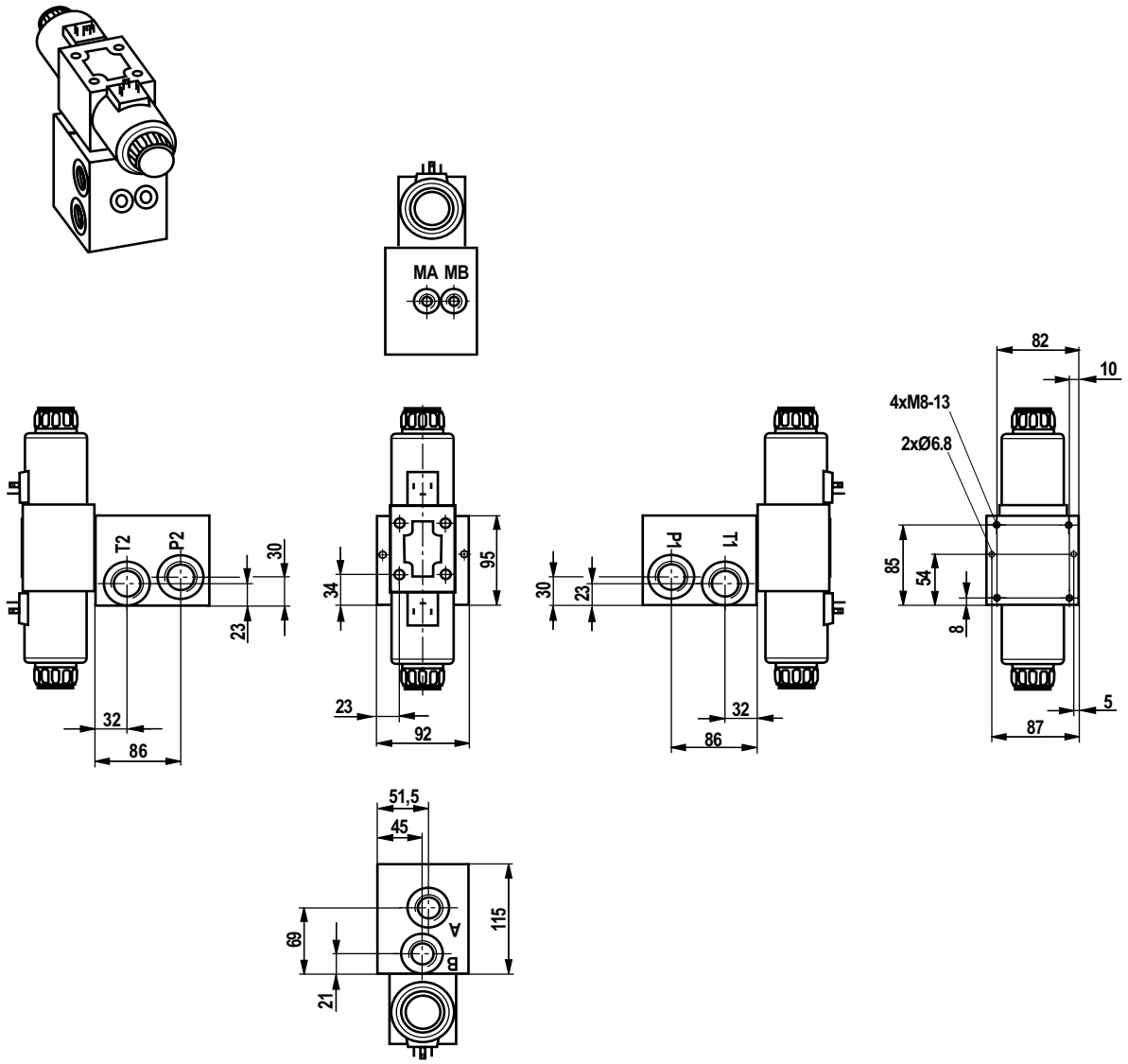
Dimensions: Manifold 1HSR10-15/01D SO8 (dimensions in mm)



Thread type	Pipe thread according to DIN EN ISO 228-1		
Port	A; B	P1; P2; T1; T2	MA; MB
Threat diameter	G1/2	G3/4	G1/4
Thread depth	15	17	13
Counter bore diameter	34	42	25
Recess depth	0.2	0.2	0.2

If valves, sandwich adapter and cover plates have a width of more than 73 mm, not all through holes can be used for the fixation of the manifolds!

Dimensions: Manifold 1HSR10-35/01C/350 SO8 (dimensions in mm)

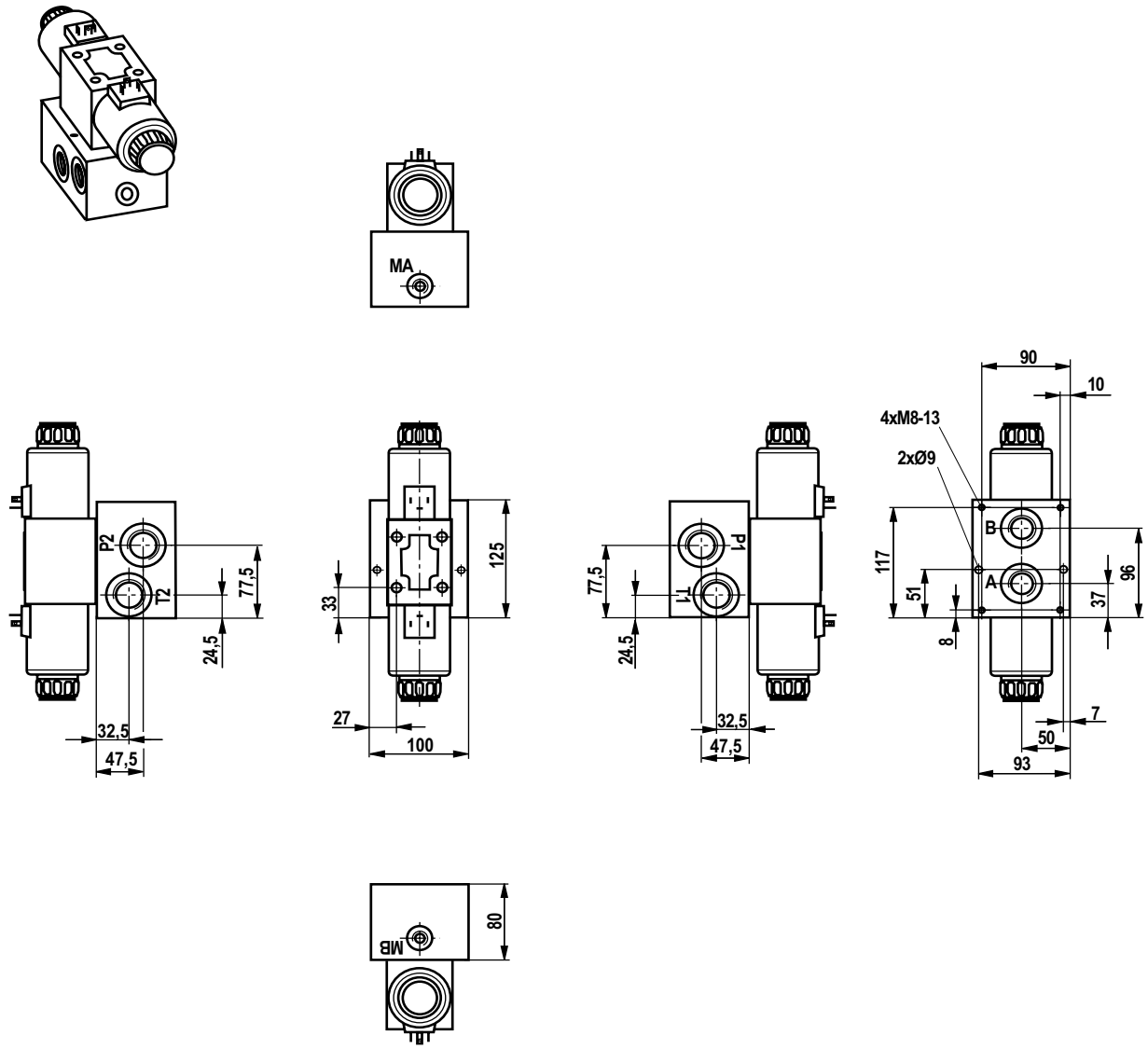


Thread type	Pipe thread according to DIN EN ISO 228-1		
Port	A; B	P1; P2; T1; T2	MA; MB
Threat diameter	G3/4	G1	G1/4
Thread depth	17	19	13
Counter bore diameter	42	47	25
Recess depth	0.2	0.2	0.2

If valves, sandwich adapter and cover plates have a width of more than 72 mm, not all through holes can be used for the fixation of the manifolds!

Bosch Rexroth AG, RE 48110, edition: 2022-04

Dimensions: Manifold 1HSR10-35/01D/350 SO8 (dimensions in mm)



Thread type	Pipe thread according to DIN EN ISO 228-1		
Port	A; B	P1; P2; T1; T2	MA; MB
Threat diameter	G3/4	G1	G1/4
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Counter bore diameter	42	47	25
Recess depth	0.2	0.2	0.2

If valves, sandwich adapter and cover plates have a width of more than 73 mm, not all through holes can be used for the fixation of the manifolds!

Mounting screws depending on valve fitting

Screw selection table for vertical stacking in combination with size 10 directional valves

Number of sandwich plates	Clamping lengths Sandwich plates	Hexagon socket head cap screws according to ISO 4762; stud screws according to DIN 939		Stability	Material no.
1	1 x 50 mm	M6 x 90	ISO 4762	10.9	R913048089
2	2 x 50 mm	M6 x 140	ISO 4762	10.9	R913043041
3	3 x 50 mm	M6 x 190	DIN 939	10.9	R913024015
4	4 x 50 mm	M6 x 240	DIN 939	10.9	R913024017
5	5 x 50 mm	M6 x 295	DIN 939	10.9	R913024018
For the torques of the screws, please refer to the corresponding data sheets of the valves					

☞ **Notice!**
- The clamping lengths of the mounted sandwich plates and valves must be checked for each individual case.

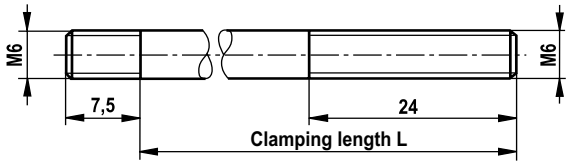
Example for mountable sandwich plates with a clamping length of 50 mm:
Pressure reducing valve ZDR 10 D...5X/... (data sheet 26585), pressure relief valve ZDB 10...4X (data sheet 25761), Twin check valve Z2S10...-3X/... (data sheet 21553), check valve Z1S10...4X/... (data sheet 21537), twin throttle check valve Z2FS10...3X/..., pressure switch with sandwich plate HED8OH-2X/... (data sheet 50061)

Directional valve	Hexagon socket head cap screws according to ISO 4762;		Stability	Material no.
direct operated directional valve WE 10	M6 x 40	ISO 4762	10.9	R913051533
pilot operated directional valve WEH 10	M6 x 45	ISO 4762	10.9	R913043777
direct operated proportional valve WRA 10, WRE 10	M6 x 40	ISO 4762	10.9	R913051533
pilot operated proportional valve WRK 10, WRZ 10	M6 x 45	ISO 4762	10.9	R913043777
For the torques of the screws, please refer to the corresponding data sheets of the valves				

☞ **Notice!**
- The screw selection table does not apply to directional valves in their seawater-protected version due to differences in the clamping lengths on the directional valve (dimensions see data sheets – seawater-protected directional valves).

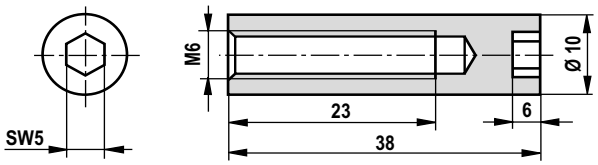
☞ **Notice!**
- Directional valves with central ports "D", "DL", "DZ" and "DZL" can only be used with hexagon socket head cap screws or stud screws and round nut according to ZN 10035, material no. R913020310.

Stud screw M6 DIN 939, property class 10.9



L see screw selection table

Round nut ZN10035-M6-ST, material no. R913020310



Project planning information

Pressure reducing valve in connection with double check valve
The pressure reducing valve ZDR..DA (pressure reduction in channel A) **must** always be installed between the directional valve and the double check valve Z2S... This ensures that the double check valve can block in a leak-free manner.

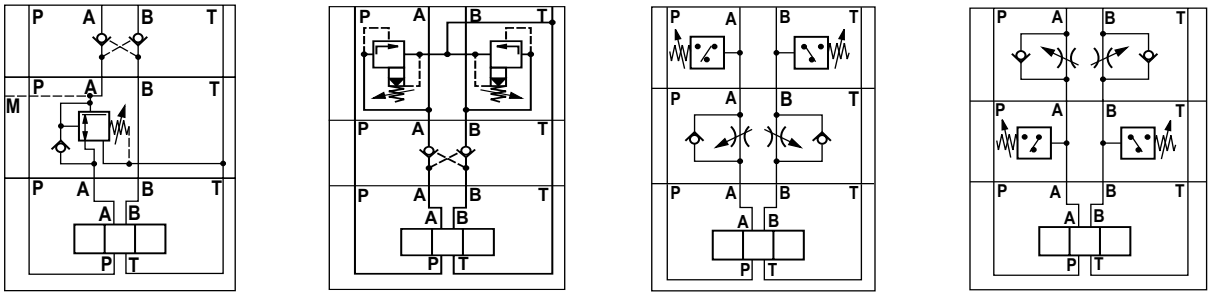
Pressure relief valve in connection with double check valve
Leak-free blocking of the actuator is **not** possible if a pressure relief valve ZDB../Z2DB.. is effective in channel A and/or B and a double check valve is installed.

Notice!
The installation of sandwich plates with two pressure switches on manifolds with lateral ports "C" is **not possible**.

Pressure switches in connection with twin throttle check valve

Supply control
The pressure switch HED 8 OH, effective in channel A and/or B, is installed between the subplate and the twin throttle check valve Z2FS.

Discharge control
The pressure switch HED 8 OH, effective in channel A and/or B, is installed between the directional valve and the twin throttle check valve Z2FS.

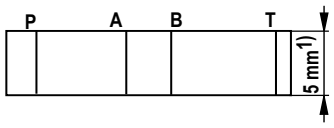


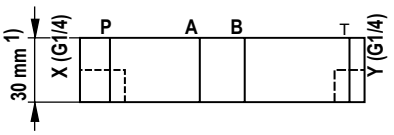
The illustrated sections of circuit diagrams are examples. The project planning information must also be observed for valves with a similar function.

Sandwich plate (with or without separate port X, Y) **for use with pilot operated valve**

Notice!
When using pilot operated valves to seal channels X and Y on manifold version "C" (lateral actuator ports), the sandwich plate with material no. **R900320784** (NBR) or **R900321346** (FKM) is required!

Notice!
For all designs, the external pilot oil supply is only possible if the sandwich plate with material no. **R900320785** (NBR) or **R900321347** (FKM) can be used!





1) Plate clamping length

Notice:
Due to the valves and sandwich plates with "excessive width", some through holes for the fixation of the manifold cannot be used. The end user is responsible for evaluating, assessing and taking the responsibility with regard to the decision whether the mounting screws in these positions can be renounced.
Possible countermeasures may include:
- Use of a narrower distance plate under the broader valves and sandwich plates e.g.: R900516529 Sandwich plate HSZ 06 A003-3X/M00
- Exchanging the order of the sandwich plates of the individual vertical stackings unless this impairs the function.
- It may possibly also be useful to change the order of the vertical stackings.

Alternatively, you can use available mounting threads for the fixation.

Selection of available subplate-mounted valves

Sandwich plates NG10	Data sheet
Sandwich plates HSZ	48052
Pressure reducing valve ZDR	26585
Pressure relief valve ZDB	25761
Double check valve Z2S	21553
Check valve Z1S	21537
Twin throttle check valve Z2FS	27518
Pressure switch HED8	50061

Adapter plate NG10	Data sheet
HSE	48045

Cover plate NG10	Data sheet
HSA	48042

Directional valves size 10	Data sheet
WE (electrically operated)	23327
WMM, WP and WN (mechanically, manually, fluidically operated)	22334
WEH (pilot operated)	24751 [1]

Proportional valves size 10	Data sheet
WRA (direct operated, without feedback)	29055
WRE (direct operated, with el. feedback)	29061
WRZ/WRH (pilot operated without feedback)	29115 [1]

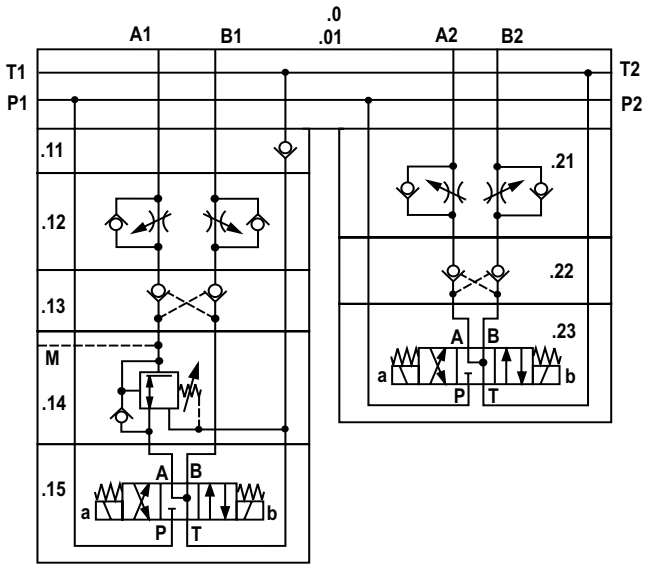
[1] Observe notice on page 16

NG = size

If adapter plates are used, valves of other sizes can also be mounted.

Required ordering code of a completely mounted manifold

Example:
2-fold manifold



Position	Quantity	Device designation	Type designation	Material no.
.0	1	Manifold	2HSR 10 C1X/... [1]	[1]
.01	1	Manifold	2HSR10-35/01C/350 SO8 PHOSPHATED	R901552924
.11	1	Check valve	Z1S 10 TA05-2TB9-4X/F	R901274760
.12	1	Twin throttle check valve	Z2FS 10-5-3X/V	R900517812
.13	1	Double check valve	Z2S 10-2-3X/	R900421985
.14	1	Pressure reducing valve	ZDR 10 DA2-5X/150Y	R900406178
.15	1	Directional valve	4WE10 J5X/EG24N9K4/M	R901278744
	4	Stud screw	M6 x 240-10.9 DIN 939	R900024864
	4	Round nut	Round nut ZN10035-M6-ST	R913020310
.21	1	Twin throttle check valve	Z2FS 10-5-3X/V	R900517812
.22	1	Double check valve	Z2S 10-2-3X/	R900421985
.23	1	Directional valve	4WE10 J5X/EG24N9K4/M	R901278744
	4	Hexagon socket head cap screw	M6 x 140-10.9 DIN 912	R913043041

[1] Material number and type designation are determined by the plant or the manifold configurator

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The manifold configurator on www.boschrexroth.com/ics/hsr

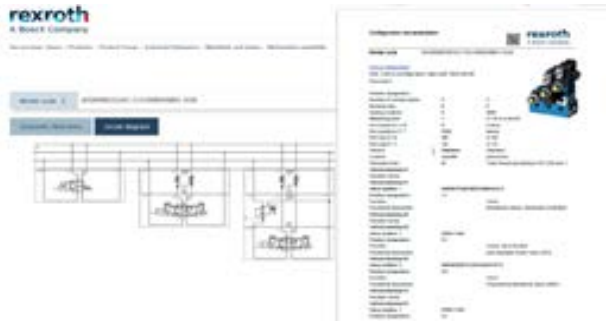
The configurator for manifold type HRS helps you configure your individual manifold or vertical stacking type HSH in a simple and convenient way.
You can do this online by selecting relevant features of the base element (e.g. size, number of stations and port size) and the mounted product components (e.g. size, pressure, type of actuation).

☞ **Notice:**
The configurator cannot be used for unfitted plates.

☞ **Notice:**
Tutorials for operating the configurator can be found at: https://bit.ly/3onTqoZ

Thanks to the intuitive menu navigation, you are guided safely through the required configuration steps.
Related features are clearly arranged on one page.
By connecting components from various product areas, you can choose from a range of approx. 1000 different functions.

The individual components are selected either by type code or by material number using a configuration based on the circuit diagram or a "step by step" selection of the individual functional properties of the valve or the sandwich plate.



When the configuration is complete, a collision check offers various possibilities of fixing existing collisions.
When the configuration is finished, you can have the complete configuration documentation sent to you via email including material list, circuit diagram, 2D drawing and 3D model (STEP). This is done by way of an automatic request to your local distributor who will promptly contact you and send you an offer.

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Further information

▶ Pressure reducing valve, direct operated, type ZDR 10 D	Data sheet 26585
▶ Pressure relief valve, pilot operated, type ZDB and Z2DB	Data sheet 25761
▶ Check valve, hydraulically unlockable, type Z2S	Data sheet 21553
▶ Check valve type Z1S	Data sheet 21537
▶ Throttle check valve type Z2FS	Data sheet 27518
▶ Pressure switch with sandwich plate type HED8O.2X/...	Data sheet 50061
▶ Sandwich plates type HSZ	Data sheet 48052
▶ Adapter plates, type HSE	Data sheet 48045
▶ Cover plate, type HSA	Data sheet 48042
▶ Directional spool valves, direct operated, with solenoid actuation, type WE	Data sheet 23327
▶ Directional spool valves, direct operated, with manual and fluidic operation, type WMM, WN and WP	Data sheet 22334
▶ Directional spool valves, pilot-operated, with hydraulic or electro-hydraulic actuation, type WEH and WH	Data sheet 24751
▶ Information on available spare parts	Data sheet 90220
▶ Hydraulic fluids on mineral oil basis	Data sheet 90221
▶ Environmentally compatible hydraulic fluids	

Standards	DIN EN ISO 9717
▶ Metallic and other inorganic coatings – phosphate coatings on metals	DIN EN ISO 19598
▶ Metallic coatings – Galvanic zinc and zinc alloy coatings on iron materials with additional Cr(VI)-free treatments	
▶ Pipe thread for non-threaded connections	DIN EN ISO 228-1
▶ Hexagon socket head cap screws with internal hexagon	DIN EN ISO 4762
▶ Stud screws	DIN 939

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