HYDAC INTERNATIONAL

Control covers for 2-way cartridge valves series H
LD-CCE

DESCRIPTION

HYDAC control valves are used for 2-way cartridge valves of the series H.

The optimised control cover design enables operating pressures up to 420 bar and ensures reliable function even in extreme conditions.

The control cover series includes a large selection of different functions. The integration of check and shuttle valves as well as the intersection to modular pilot control valves enables the buildup of a compact system.

The various control covers are available in sizes 16 to 63 and in some cases up to size 80.

FEATURES

- Control cover in combination with a 2-way cartridge valve for directional, pressure and check functions
- Designed for operating pressures up to 420 bar
- Large selection of functions for high flexibility in system design
- Interface according to ISO 7368:1989-08

CONTENT

MODEL CODE

LD-CCE 16 H 6 1H 2 / N / X15

Type
Control cover for 2-way cartridge valves

Nominal size (NG)
16, 25, 32, 40, 50, 63, 80 (depending on function, see chart page 2)

Series
specified by manufacturer

Model
6 = mounting thread and control holes to ISO 7368

Symbols
1D, 1H, RM, 1W, 2W, 2WR, 4W, 1WDB, DRE (see chart page 2)

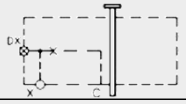
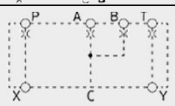
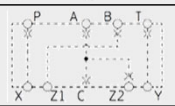
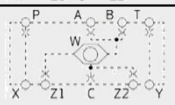
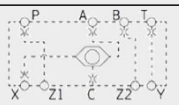
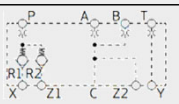
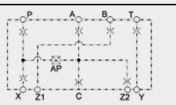
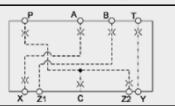
Adjustment (1H cover only)
2 = hexagonal with lock nut (standard)
9 = hexagonal with lock nut and protective cap, sealable

Sealing material [1]
N = NBR (standard)
V = FKM

Orifice configuration [1]
/YXX : Y = port P, A, B, T, X, Y, Z1, Z2, C
XX = orifice diameter (e.g. 15 = 1,5 mm)

[1] other types on request

SYMBOLS

Type	Symbols	Preferred function	Oper. pressure [bar]	NG
1D		Control cover with remote control port for directional and check function.	420	16 to 80
1H		Control cover with remote control connection and stroke limitation for directional and check function as well as for manual switch-off and manual throttle functions.	420	16 to 63
RM		Control cover with interface for a directional valve. Can be used for directional functions.	420	16 to 80
1W		Control cover with interface for a directional valve. Additional control port for a second cartridge valve. Can be used for directional and pressure relief functions.	420	16 to 63
2W		Control cover with integrated shuttle valve for use as pilot-operated check valve, with interface for a directional valve.	420 (NBR) 350 (FKM)	16 to 63
2WR		Control cover with integrated shuttle valve for use as pilot-operated check valve, with interface for a directional valve.	420 (NBR) 350 (FKM)	16 to 63
4W		Control cover with interface for a directional valve. Additional check valves are integrated to realise functions for realisation of a maximum of two pilot control pressures.	420 (NBR) 350 (FKM)	16 to 80
1WDB		Control cover in combination with a 2-way cartridge valve, two pressure relief valves in sandwich plate design and a directional valve as pilot valve for a pilot-operated pressure relief function.	420 (NBR)	16 to 63
DRE		Control cover realizes a pressure relief function by combining a 2-way cartridge pressure valve, a pressure relief valve and a directional valve.	420 (NBR)	16 to 63

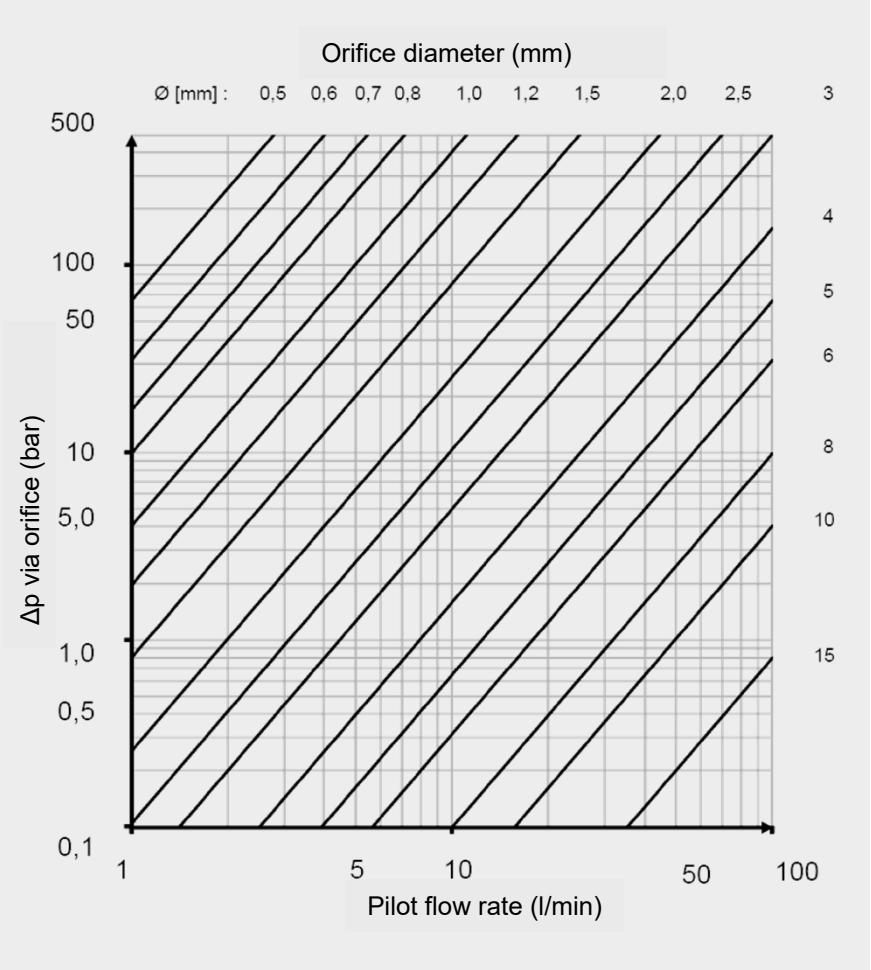
TECHNICAL DATA

General specifications		
MTTFd		150 - 1200 years, according to DIN EN ISO 13849-1:2016; Table C.1, confirmation of ISO 13849-2:2013; Tables C.1 and C.2
Ambient temperature range	[°C]	NBR: -30 to +80 FKM: -20 to +80
Installation position		No orientation restrictions
Material		Steel
Surface coating		Burnished
Hydraulic specifications		
Operating pressure	[bar]	max. 420
Operating fluid		▪ Hydraulic oil to DIN 51524 part 1, 2 and 3 ▪ NBR: HFB-/HFC- operating fluid ▪ FKM: HFD- operating fluid
Temp. range of operating fluid	[°C]	NBR: -30 to +80 FKM: -20 to +80
Viscosity	[mm²/s]	2,8 to 380
Permitted contamination level of operating fluid		class 20/18/15 to ISO 4406
Sealing material		NBR (standard), FKM

RANGE OF ORIFICE SIZE

The control covers LD-CCE of the H6 series are available with standard orifice. These types ensure the basic functionality of the comination with cover and cartridge valve and should be used if the application is not known or defined yet.

The final adjustment of the orifice diameter to optimise switching time and/or damping performance is the responsibility of the user or is only possible during application.



The size of the orifice influences the cartridge valve's opening and closing behaviour. If necessary, please use the following approximation for a different orifice diameter

$$t_{open/close} = \frac{V_{Control} \times 60}{Q}$$

$t_{open/close}$ [ms] = opening/closing time
$V_{Control}$ [cm³] = pilot volume oil of logic valve
Q [l/min] = flow via orifice (diagramm)

INSTALLATION OPTIONS OF THE ORIFICE IN THE CONTROL COVERS

Cover code	Orifice options									Orifices can be changed from the outside
	P	A	B	T	X	Y	Z1	Z2	C	
1D					X					All nominal sizes
1H					X					All nominal sizes
RM	X	X	X	X						-
1W	X	X	X	X				X	X	Z2 (for NG63 and NG80)
2W	X	X	X	X			X	X	X	Z1 und Z2 (for NG63 and NG80)
2WR	X	X	X	X	X				X	X (for NG63 and NG80)
4W	X	X	X	X				X	X	Z2 (for NG63 and NG80)
1WDB	X	X	X	X	X			X	X	AP (for all nominal sizes); X and Z2 (for NG63)
DRE	X	X	X	X				X	X	Z2 (for NG63)

Ports	Nominal sizes						
	16	25	32	40	50	63	80
P, A, B, T	M6	M6	M6	M6	M6	M10	M10
X, C, Z1, Z2, Y	M5	M6	M6	M8	M8	M10	M14

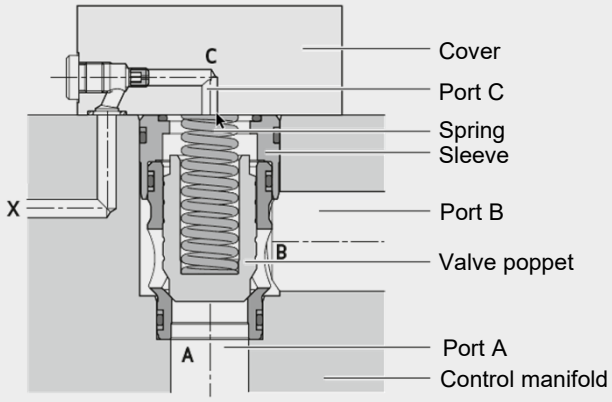
Orifice 0,8 *	Part no.
Einbaudüse Steuerdeckel M5x0,8	6071916
Einbaudüse Steuerdeckel M6x0,8	6071917
Einbaudüse Steuerdeckel M8x0,8	6071918
Einbaudüse Steuerdeckel M10x0,8	6071919

*see brochure 5.249.19 ,,Accessories for Industrial Valves“

Orifice 1,5 *	Part no.
Einbaudüse Steuerdeckel M5x1,5	6071920
Einbaudüse Steuerdeckel M6x1,5	6071921
Einbaudüse Steuerdeckel M6x1,5	6071922
Einbaudüse Steuerdeckel M10x1,5	6071923

*see brochure 5.249.19 ,,Accessories for Industrial Valves“

General directional function



For a directional function, logic valves with poppet B, C, E or F are fundamentally suitable.
Furthermore, a cover is necessary to control the forces acting on the poppet.
The pressure acting on port A and B results to an opening force. The pressure in the spring chamber results to a closing force. The valve is closed due to the sring force if there is only a small pressure or no pressure.

You can see the 1D cover in the example. The pressure acts on the poppet via the port X causing the closing gof the valve. If X is connected to the tank, only the spring force remains to close the valve.

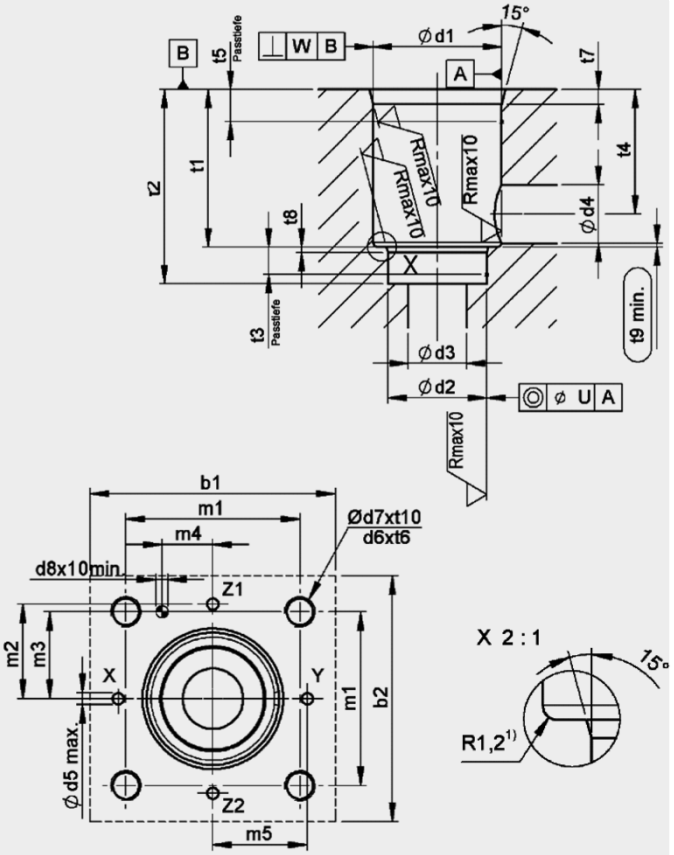
General pressure function

Typical applications for a pressure relief function in cylinder and pumps.

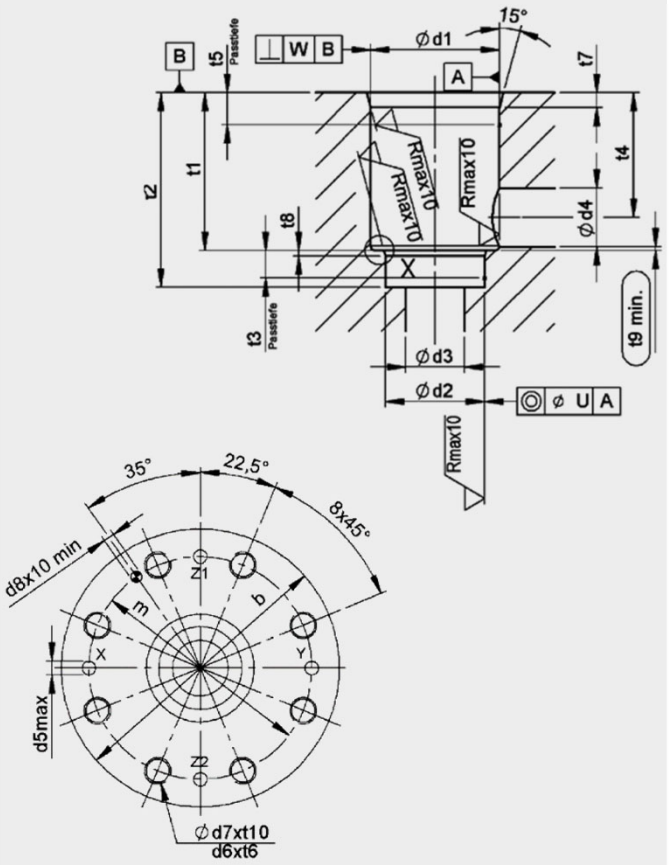
For a pressure function, logic valves with poppet A and EX are fundamentally suitable. The special feature of these types is a minimal area ratio or no area ratio between port A and B. This leaves only two control areas (A and C).

The limited pressure is on port A, but is also channelled to port C of the cover at the same time. If the pressure in port A exceeds the value of the current pressure setting of pilot valve in port C, the valve opens.

DIMENSIONS NG 16 to 63
Cavity (directional and pressure function)



DIMENSIONS NG 80
Cavity (directional and pressure function)

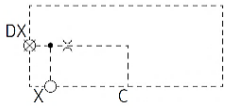


Measure [mm]	Nominal size						
	16	**25**	**32**	**40**	**50**	**63**	**80**
b1	65	85	102	125	140	200	b_{max} = 200
b2	65	85	102	125	140	180	
d1H7 [1]	32	45	60	75	90	120	145
d2H7 [1]	25	34	45	55	68	90	110
d3	16	25	32	40	50	63	80
d4	16	25	32	40	50	63	80
d4max. [1]	25	32	40	50	63	80	100
d5max.	4	6	8	10	10	12	16
d6	M8	M12	M16	M20	M20	M30	M24
d7	6,8	10,2	14	17,5	17,5	26,5	21
d8 H13	4	6	6	6	8	8	10
m1	46	58	70	85	100	125	-
m2	25	33	41	50	58	75	-
m3	23	29	35	42,5	50	62,5	-
m4	10,5	16	17	23	30	38	-
m5	25	33	41	50	58	75	-
t1	43	58	70	87	100	130	175
t2	56	72	85	105	122	155	205
t3	11	12	13	15	17	20	25
t4	34	44	52	64	72	95	130
t4 an d4max.	29,5	40,5	48	59	65,5	86,5	120
t5	20	30	30	30	35	40	40
t6	14	20	26	33	33	50	39
t7	2	2,5	2,5	3	4	4	5
t8	2	2,5	2,5	3	3	4	5
t9	0,5	1	1,5	2,5	2,5	3	3
t10	17	24	31	38	38	56	45
U	0,03	0,03	0,03	0,05	0,05	0,05	0,05
W	0,05	0,05	0,1	0,1	0,1	0,2	0,2

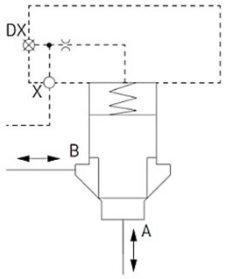
[1] Recommendation deviated from the standard

Control cover function 1D
NG 16 to 80

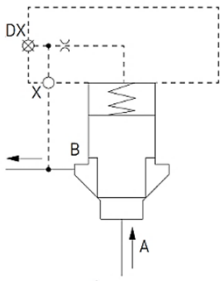
Symbol



Directional function



Check function



FUNCTION

- Control cover in combination with a 2-way cartridge valve for directional and check functions – depending on port X
- Control cover with remote control port to ISO 7368
- Orifice can be installed at port X
- The control cover 1D can be combined with 2-way cartridge valves with poppet B, C, E and F.

DIRECTIONAL VALVE FUNCTION [1]

If a 1D cover is used in combination with a 2-way cartridge valve, the pressure at cover port X relieves to the tank by realising a 2-way function – flow direction from A → B or B → A.
The highest system pressure or the highest pressure from A or B on port X of the cover results a blocking of the flow from A to B – and conversely.

CHECK FUNCTION [1]

If a 1D cover is used in combination with a 2-way cartridge valve, a check function can be realised by connecting control port X to port B - flow direction A → B (B → A blocked).

[1] see chart „Possible valve combinations“ on page 26
Hint: Spare parts seal kits see brochure 5.249.19 „Accessories for Industrial Valves“

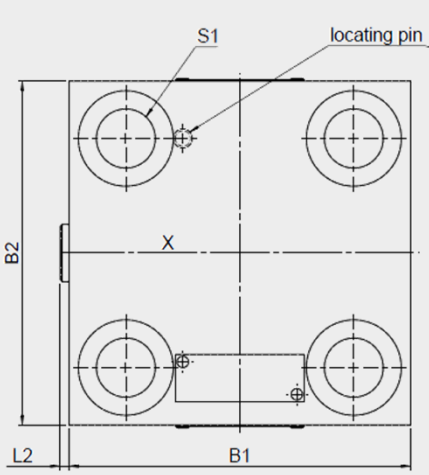
Standard models

The 1D cover is equipped with a single orifice in X, which can be accessed from the outside. This orifice is used to limit the flow from and to the C port of the cover and thus limit the opening and closing rate of the logic valve. For support with orifice configuration, please contact HYDAC Fluidtechnik GmbH.

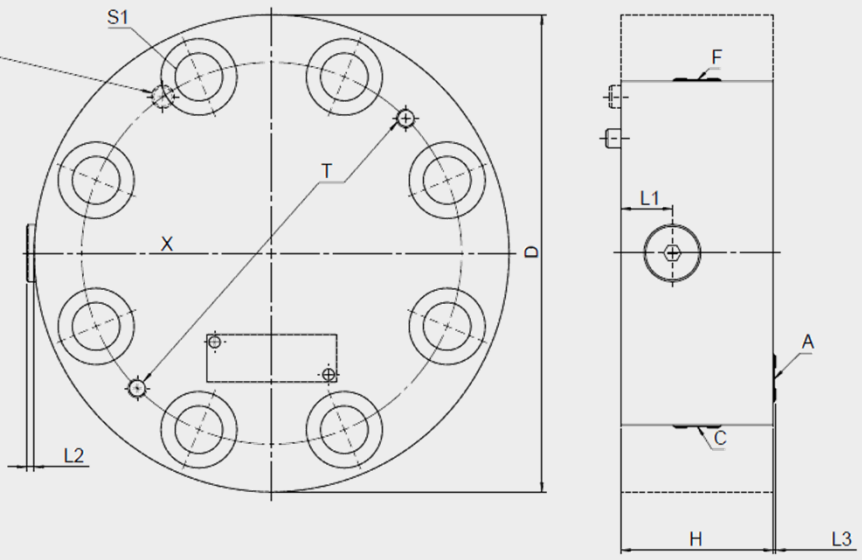
NG	Without orifice		With standard orifice	
	Code	Part no.	Code	Part no.
16	LD-CCE 16 H 6 1D/N	4085071	LD-CCE 16 H 6 1D/N/X15	4091191
25	LD-CCE 25 H 6 1D/N	4085105	LD-CCE 25 H 6 1D/N/X15	4091206
32	LD-CCE 32 H 6 1D/N	4085106	LD-CCE 32 H 6 1D/N/X25	4091208
40	LD-CCE 40 H 6 1D/N	4085107	LD-CCE 40 H 6 1D/N/X30	4091212
50	LD-CCE 50 H 6 1D/N	4085108	LD-CCE 50 H 6 1D/N/X35	4091225
63	LD-CCE 63 H 6 1D/N	4085109	LD-CCE 63 H 6 1D/N/X35	4091227
80	LD-CCE 80 H 6 1D/N	4085139	LD-CCE 80 H 6 1D/N/X40	4091229

DIMENSIONS

NG 16 to 63



NG 80



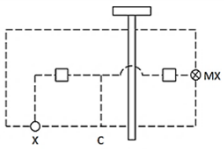
NG	16	25	32	40	50	63	80
B1 [mm (in)]	65 (2.56)	85 (3.35)	102 (4.02)	125 (4.92)	140 (5.51)	180 (7.09)	-
B2 [mm (in)]	65 (2.56)	85 (3.35)	102 (4.02)	125 (4.92)	140 (5.51)	180 (7.09)	-
D [mm (in)]	-	-	-	-	-	-	250 (9.84)
H [mm (in)]	35 (1.38)	35 (1.38)	45 (1.77)	60 (2.36)	60 (2.36)	80 (3.15)	80 (3.15)
L1 [mm (in)]	17 (0.67)	12 (0.47)	21 (0.83)	20 (0.79)	14 (0.55)	27 (1.06)	19 (0.75)
L2 [mm (in)]	3.5 (0.14)	3.5 (0.14)	4.5 (0.18)	4.5 (0.18)	4.5 (0.18)	4.5 (0.18)	4 (0.16)
L3 [mm (in)]	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)
T (eye bolt thread)	-	-	-	-	-	-	M10
Name plate position	A	C	F	C	A	A	A
Plug DX	G 1/8 "	G 1/8"	G 1/4"	G 1/4"	G 1/4"	G 3/8"	G 1/2"
Torque [Nm (ft-lbs)]	12 (9)	12 (9)	27 (20)	27 (20)	27 (20)	56 (41)	72 (53)
Hex. size [mm]	5	5	6	6	6	8	10
Interface ISO 7368	BA-06-2-A	BB-08-2-A	BC-09-2-A	BD-10-2-A	BE-11-2-A	BF-12-2-A	BG-13-2-A
Mounting srews S1 *	M8x35-10.9	M12x40-10.9	M16x50-10.9	M20x70-10.9	M20x70-10.9	M30x90-10.9	M24x90-12.9
Torque [Nm (ft-lbs)]	30 (22)	100 (74)	300 (221)	550 (406)	550 (406)	1,800 (1,328)	900 (664)
Weight [kg (lb)]	1.1 (2.43)	1.7 (3.75)	3.1 (6.84)	6.3 (13.89)	8.2 (18.08)	17.0 (37.49)	27.0 (59.54)

* Not included in delivery, see brochure 5.249.19 „Accessories for Industrial Valves“

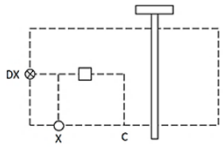
Control cover function 1H
NG 16 to 80

Symbol

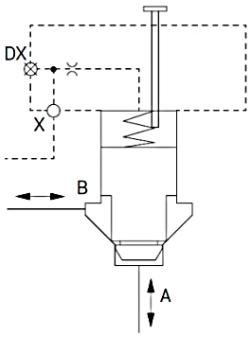
NG 18



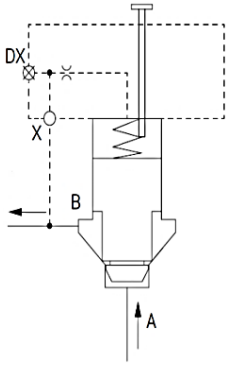
NG 25 to 63



Directional and throttle function



Check function



FUNCTION

- Control cover in combination with a 2-way cartridge valve for directional and check functions – depending on port X
- Control cover with remote control port to ISO 7368
- Orifice can be installed at port X
- Adjustable stroke limitation (throttle function)
- The control cover 1H can be combined with 2-way cartridge valves with poppet B, C, E and F.

DIRECTIONAL VALVE FUNCTION [1]

If a 1H cover is used in combination with a 2-way cartridge valve, the pressure at cover port X relieves to the tank by realising a 2-way function – flow direction from A → B or B → A.
The highest system pressure or the highest pressure from A or B on port X of the cover results a blocking of the flow in both directions.

THROTTLE FUNCTION [1]

The adjustable stroke limitation throttles the flow in both directions.
Adjustment of the stroke limitation is only partially possible under pressure.
The stroke limitation could also cause the 2-way cartridge valve to close – but this is not the standard function.

CHECK FUNCTION [1]

If port X of the 1H cover is connected to port B of the logic, a check function is realised. There is flow from A to B, but it is blocked in the opposite direction.

Hint

The 1H cover is incompatible with the following 2-way cartridge valves and must not be used with them: poppet A.
Other cartridge types, e.g. other cartridge series (D) or cartridge valves from other suppliers are not compatible with the 1H cover.

[1] see chart „Possible valve combinations“ on page 26
Hint: Spare parts seal kits see brochure 5.249.19 „Accessories for Industrial Valves“

Standard models

The 1D cover is equipped with a single orifice in X, which can be accessed from the outside. This orifice is used to limit the flow from and to the C port of the cover and thus limit the opening and closing rate of the logic valve. For support with orifice configuration, please contact HYDAC Fluidtechnik GmbH.

NG	Without orifice		With standard orifice	
	Code	Part no.	Code	Part no.
16	LD-CCE 16 H 6 1H 2/N	4085218	LD-CCE 16 H 6 1H 2/N/X15	4091194
	LD-CCE 16 H 6 1H 9/N	4085219	LD-CCE 16 H 6 1H 9/N/X15	4091205
25	LD-CCE 25 H 6 1H 2/N	4085220	LD-CCE 25 H 6 1H 2/N/X15	4091207
			LD-CCE 25 H 6 1H 9/N/X15	4093430
32	LD-CCE 32 H 6 1H 2/N	4085221	LD-CCE 32 H 6 1H 2/N/X25	4091209
	LD-CCE 32 H 6 1H 9/N	4085223	LD-CCE 32 H 6 1H 9/N/X25	4091211
40	LD-CCE 40 H 6 1H 2/N	4085224	LD-CCE 40 H 6 1H 2/N/X30	4091214
50	LD-CCE 50 H 6 1H 2/N	4085265	LD-CCE 50 H 6 1H 2/N/X35	4091226
63	LD-CCE 63 H 6 1H 2/N	4085457	LD-CCE 63 H 6 1H 2/N/X35	4091228

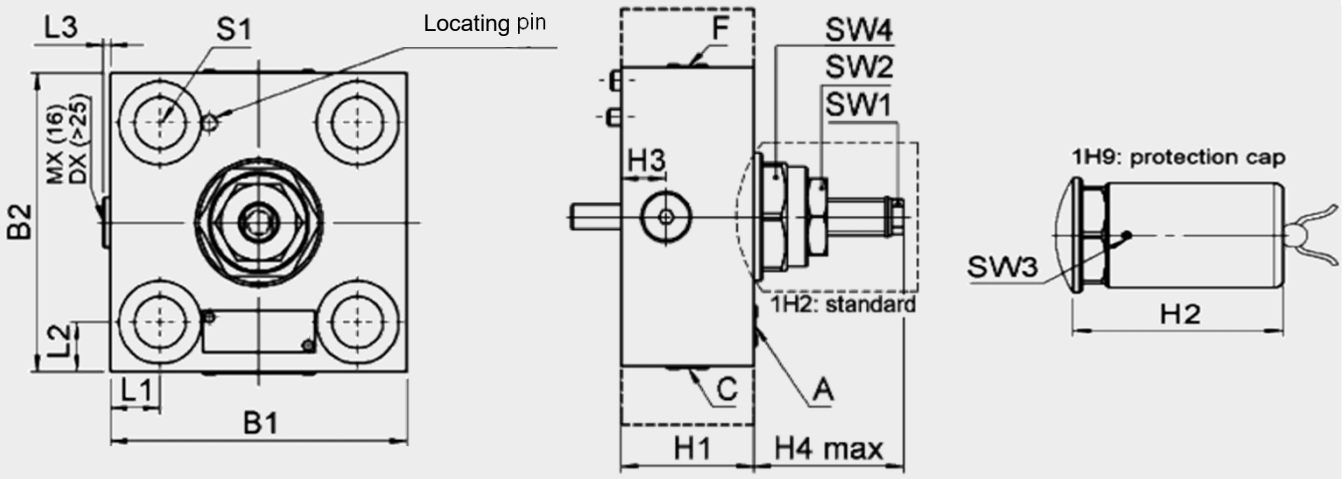
CONTROL COVER - DETAILS

NG	16	25	32	40	50	63
Plug MX, DX	G 1/8 "	G 1/8"	G 1/4"	G 1/4"	G 1/4"	G 3/8"
Hex. size [mm]	5	5	6	6	6	8
Torque [Nm (ft-lbs)]	12 (9)	12 (9)	27 (20)	27 (20)	27 (20)	56 (41)
Stroke limiter SW1						
Schlüsselweite [mm]	8	8	8	13	13	17
Counter nut SW2						
Wrench size [mm]	19	19	19	27	27	46
Torque [Nm (ft-lbs)]	65 (48)	65 (48)	65 (48)	85 (63)	85 (63)	150 (111)
Cover screw SW3						
Wrench size [mm]	2,5	2,5	2,5	2,5	2,5	2,5
Torque [Nm (ft-lbs)]	5 (4)	5 (4)	5 (4)	5 (4)	5 (4)	5 (4)
Spindle guide SW4						
Schlüsselweite [mm]	36	36	36	36	36	65
Torque [Nm (ft-lbs)]	110 (81)	110 (81)	110 (81)	150 (111)	150 (111)	350 (258)
Mounting screws S1 *	M8x35-10.9	M12x40-10.9	M16x50-10.9	M20x70-10.9	M20x70-10.9	M30x90-10.9
Torque [Nm (ft-lbs)]	30 (22)	100 (74)	300 (221)	550 (406)	550 (406)	1,800 (1,328)
Weight [kg (lb)]	1.7 (3.75)	2.4 (5.29)	3.6 (7.94)	7.3 (16.1)	9.13 (20.13)	19.3 (42.56)

* Not included in delivery, see brochure 5.249.19 ,,Accessories for Industrial Valves“

DIMENSIONS

NG 16 to 63



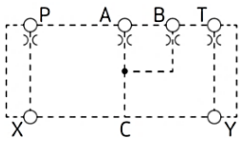
Hint for adjustment
1H covers ordered with adjustment 9 are supplied with a cover set for tamper protection. This set is delivered in a disassembled state with the cover and must be attached by the user.
The set consists of a protective cap, 1 pcs. mounting srew, 1 pcs. wire und 1 pcs. seal.
Covers ordered in standard adjustment 2 are delivered without protective cap.

NG	16	25	32	40	50	63
B1 [mm (in)]	65 (2.56)	85 (3.35)	102 (4.02)	125 (4.92)	140 (5.51)	180 (7.09)
B2 [mm (in)]	65 (2.56)	85 (3.35)	102 (4.02)	125 (4.92)	140 (5.51)	180 (7.09)
H1 [mm (in)]	35 (1.38)	35 (1.38)	45 (1.77)	60 (2.36)	60 (2.36)	80 (3.15)
H2 [mm (in)]	86.5 (3.41)	86.5 (3.41)	86.5 (3.41)	83.5 (3.29)	74 (2.91)	120 (4.72)
H3 [mm (in)]	9 (0.35)	9 (0.35)	21 (0.83)	20 (0.79)	14 (0.55)	27 (1.06)
H4 max [mm (in)]	56.5 (2.22)	56.5 (2.22)	62 (2.44)	71 (2.8)	64 (2.52)	90 (3.54)
L1 [mm (in)]	9.5 (0.37)	13.5 (0.53)	16 (0.63)	20 (0.79)	20 (0.79)	27.5 (1.08)
L2 [mm (in)]	9.5 (0.37)	13.5 (0.53)	16 (0.63)	20 (0.79)	20 (0.79)	27.5 (1.08)
L3 [mm (in)]	3.5 (0.14)	3.5 (0.14)	4.5 (0.18)	4.5 (0.18)	4.5 (0.18)	4.5 (0.18)
Name plate position	C	C	F	C	A	A
Interface ISO 7368	BA-06-2-A	BB-08-2-A	BC-09-2-A	BD-10-2-A	BE-11-2-A	BF-12-2-A

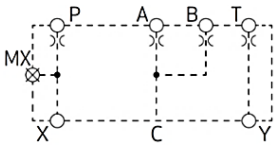
Control cover function RM NG 16 to 80

Symbol

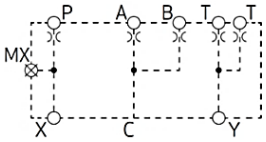
NG 16 to 25



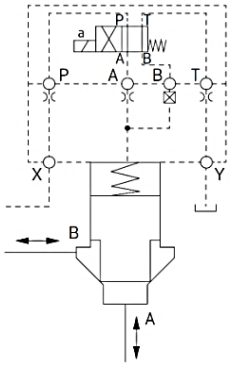
NG 32 to 50



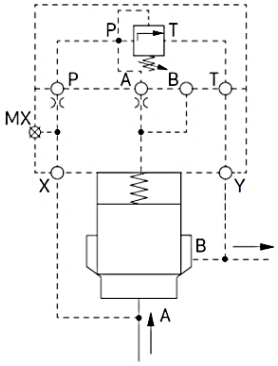
NG 63 to 80



Directional function



Pressure relief function



FUNCTION

- Control cover with remote control port to ISO 7368
- Orifice can be installed at port P, A, B, T
- Pilot port interface size 6 and 10 (size 6 pilot valves can be used up to control cover size 50, and size 10 pilot valves for control covers size 63 and above)
- Depending on the function, control cover RM can be combined with the following 2-way cartridge valves:
  - Pilot-operated directional function:
    2-way cartridge valves with poppet B, C, E and F.
  - Pilot-operated pressure relief function:
    2-way cartridge valve with valve poppet A or E.

DIRECTIONAL VALVE FUNCTION [1]

If an RM cover is used in combination with a 2-way cartridge valve and a 4/2-way pilot valve, a 2-way function is realised ich the solenoid is energized and a plug is in port B of the cover - with flow direction A → B or B → A. This is achieved by pressure release of the spring chamber of 2-way cartridge valve. If the solenoid is not energized and a plug is in port B of the cover, the pilot pressure is applied to the spring chamber at port X. Depending on the pilot pressure, the corresponding flows are blocked. If the plug is installed in port A of the cover, the function for energized and de-energized solenoids is precisely the opposite.

PRESSURE RELIEF FUNCTION [1]

If an RM cover is used with a 2-way cartridge valve and a pilot pressure relief valve, a pressure relief function can be realised.

[1] see chart „Possible valve combinations“ on page 26

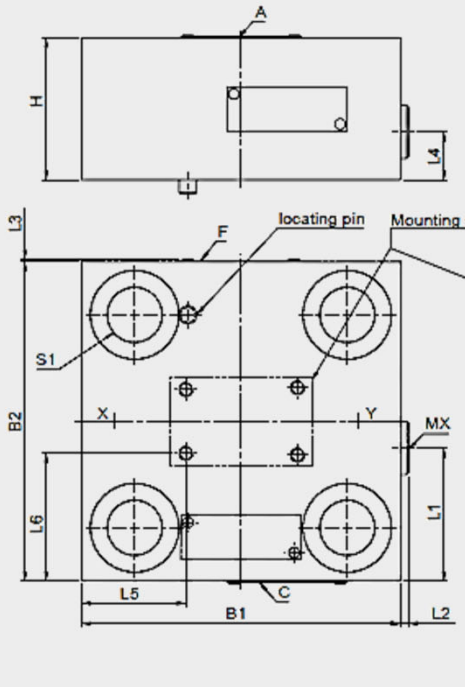
Hint: Spare parts seal kits see brochure 5.249.19 „Accessories for Industrial Valves“

Standard models
The orifice configurations possible with this cover are numerous and dependent on the pilot valve and the desired function.
For further support with orifice configuration, please contact HYDAC Fluidtechnik GmbH.

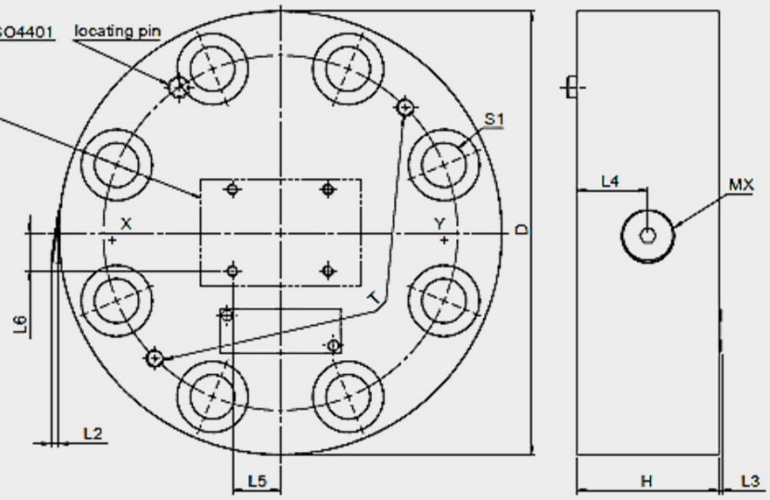
NG	Code	Part no.
16	LD-CCE 16 H 6 RM/N	4085380
25	LD-CCE 25 H 6 RM/N	4085388
32	LD-CCE 32 H 6 RM/N	4085398
40	LD-CCE 40 H 6 RM/N	4085438
50	LD-CCE 50 H 6 RM/N	4085444
63	LD-CCE 63 H 6 RM/N	4085464
80	LD-CCE 80 H 6 RM/N	4085476

DIMENSIONS

NG 16 to 63



NG 80



NG	16	25	32	40	50	63	80
B1 [mm (in)]	80 (3.15)	85 (3.35)	102 (4.02)	125 (4.92)	140 (5.51)	180 (7.09)	-
B2 [mm (in)]	65 (2.56)	85 (3.35)	102 (4.02)	125 (4.92)	140 (5.51)	180 (7.09)	-
D [mm (in)]	-	-	-	-	-	-	250 (9.84)
H [mm (in)]	35 (1.38)	40 (1.57)	45 (1.77)	60 (2.36)	60 (2.36)	80 (3.15)	80 (3.15)
L1 [mm (in)]	-	-	61.3 (2.41)	73 (2.87)	80.4 (3.17)	74.9 (2.95)	-
L2 [mm (in)]	-	-	3.5 (0.14)	4.5 (0.18)	4.5 (0.18)	4.5 (0.18)	2.5 (0.1)
L3 [mm (in)]	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5´ (0.06)	1.5 (0.06)
L4 [mm (in)]	-	-	27.0 (1.06)	30.0 (1.18)	30.0 (1.18)	57.0 (2.24)	40.0 (1.57)
L5 [mm (in)]	7.0 (0.28)	23.5 (0.93)	32.0 (1.26)	43.5 (1.71)	51.0 (2.01)	63.0 (2.48)	27.0(1.06)
L6 [mm (in)]	16.25 (0.64)	26.25 (1.03)	34.65 (1.36)	46.25 (1.82)	53.75 (2.12)	68.6 (2.7)	21.4 (0.84)
T (eye bolt thread)	-	-	-	-	-	-	M10
Name plate position	C	C	F	C	A	A	A
Interface ISO 7368	BA-06-2-A	BB-08-2-A	BC-09-2-A	BD-10-2-A	BE-11-2-A	BF-12-2-A	BG-13-2-A

CONTROL COVER - DETAILS

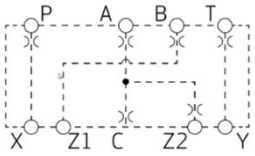
NG	16	25	32	40	50	63	80
Pilot port Interface ISO 4401	03-02-0-05	03-02-0-05	03-02-0-05	03-02-0-05	03-02-0-05	05-04-0-05	05-04-0-05
Plug MX	-	-	G 1/8"	G 1/4"	G 1/4"	G 1/4"	G 3/8"
Hex. size [mm]	-	-	12 (9)	27 (20)	27 (20)	27 (20)	56 (41)
Torque [Nm (ft-lbs)]	-	-	5	6	6	6	8
Mounting screws S1 *	M8x35-10.9	M12x40-10.9	M16x50-10.9	M20x70-10.9	M20x70-10.9	M30x90-10.9	M24x90-12.9
Torque [Nm (ft-lbs)]	30 (22)	100 (74)	300 (221)	550 (406)	550 (406)	1,800 (1,328)	900 (664)
Wight [kg (lb)]	1.3 (2.87)	2.0 (4.41)	3.0 (6.62)	6.2 (13.67)	8.0 (17.64)	17.0 (37.49)	26.0 (57.33)

* Not included in delivery, see brochure 5.249.19 ,,Accessories for Industrial Valves“

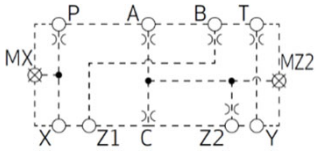
Control cover function 1W
NG 16 to 63

Symbol

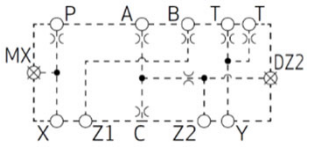
NG 16 to 25



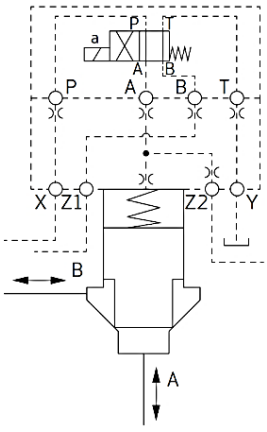
NG 32 to 50



NG 63



Directional function



FUNCTION

- Control cover with remote control port to ISO 7368
- Orifice can be installed at port P, A, B, T
- Pilot port interface size 6 and 10 (size 6 4/2-way pilot valves can be used up to control cover size 50, and size 10 4/2-way pilot valves for control covers size 63 and above)
- The control cover 1W can be combined with 2-way cartridge valves with poppet B, C, E and F.

DIRECTIONAL VALVE FUNCTION [1]

If a 1W cover is used in combination with a 2-way cartridge valve and a pilot valve, the same function is realised as RM cover.
If the solenoid of the directional valve is energized, the spring chamber of the cartridge valve is connected to the tank. This enables flow from port A to B, and conversely.
If the solenoid is de-energized, the spring chmaber is supplied with pilot pressure from port X.
If this pilot pressure comes from port A of the cartridge valve, flow from A → B is blocked; if it comes from port B, it is blocked in the opposite direction.
Furthermore, port Z1 and Z2 can be used to actuate another 2-way cartridge valve.

Standard models

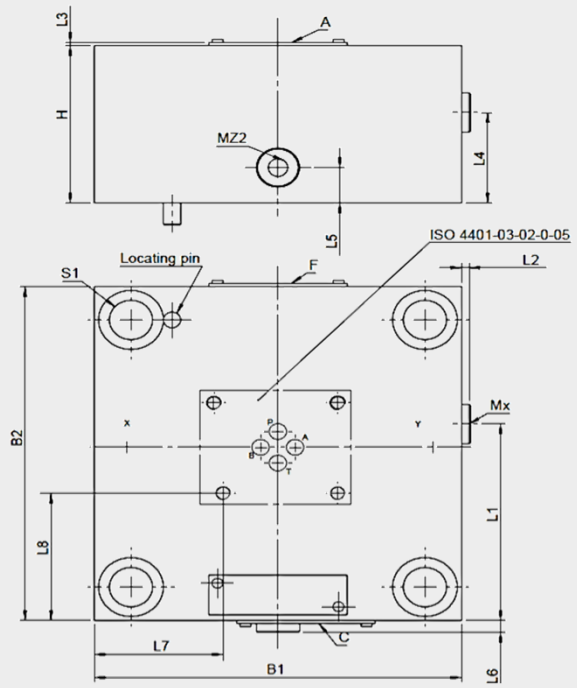
The orifice configurations possible with this cover are numerous and dependent on the pilot valve used and the desired function.
For further support with orifice configuration, please contact HYDAC Fluidtechnik GmbH.

NG	Code	Part no.
16	LD-CCE 16 H 6 1W/N	4085375
25	LD-CCE 25 H 6 1W/N	4085381
32	LD-CCE 32 H 6 1W/N	4085391
40	LD-CCE 40 H 6 1W/N	4085399
50	LD-CCE 50 H 6 1W/N	4085440
63	LD-CCE 63 H 6 1W/N	4085458

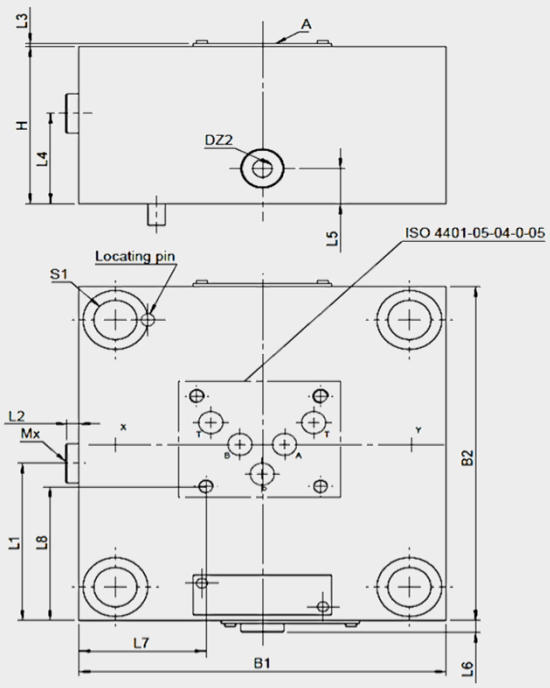
[1] see chart „Possible valve combinations“ on page 26
Hint: Spare parts seal kits see brochure 5.249.19 „Accessories for Industrial Valves“

DIMENSIONS

NG 16 to 50



NG 63



NG	16	25	32	40	50	63
B1 [mm (in)]	80 (3.15)	85 (3.35)	102 (4.02)	125 (4.92)	140 (5.51)	180 (7.09)
B2 [mm (in)]	65 (2.56)	85 (3.35)	102 (4.02)	125 (4.92)	140 (5.51)	180 (7.09)
H [mm (in)]	35 (1.38)	35 (1.38)	45 (1.77)	60 (2.36)	60 (2.36)	80 (3.15)
L1 [mm (in)]	-	-	61.3 (2.41)	80 (3.15)	80.4 (3.17)	74.9 (2.95)
L2 [mm (in)]	-	-	3.5 (0.14)	4.5 (0.18)	4.5 (0.18)	4.5 (0.18)
L3 [mm (in)]	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)
L4 [mm (in)]	-	-	26 (1.02)	33.9 (1.33)	37.5 (1.48)	57 (2.24)
L5 [mm (in)]	-	-	15 (0.59)	20 (0.79)	21 (0.83)	26.25 (1.03)
L6 [mm (in)]	-	-	3.5 (0.14)	4.5 (0.18)	4.5 (0.18)	4.5 (0.18)
L7 [mm (in)]	7 (0.28)	23.5 (0.93)	32 (1.26)	43.5 (1.71)	51 (2.01)	63 (2.48)
L8 [mm (in)]	16.25 (0.64)	26.25 (1.03)	34.75 (1.37)	46.25 (1.82)	53.75 (2.12)	68.6 (2.7)
Name plate position	C	C	F	C	A	A
Interface ISO 7368	BA-06-2-A	BB-08-2-A	BC-09-2-A	BD-10-2-A	BE-11-2-A	BF-12-2-A

CONTROL COVER – DETAILS

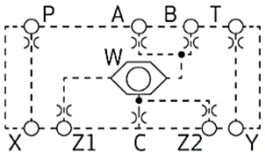
NG	16	25	32	40	50	63
Pilot port Interface ISO 4401	03-02-0-05	03-02-0-05	03-02-0-05	03-02-0-05	03-02-0-05	05-04-0-05
Plug MP, MZ2 + DZ2	-	-	G 1/8"	G 1/4"	G 1/4"	G 1/4"
hex. size [mm]	-	-	5	6	6	6
Torque [Nm (ft-lbs)]	-	-	12 (9)	27 (20)	27 (20)	27 (20)
Mounting screws S1 *	M8x35-10.9	M12x40-10.9	M16x50-10.9	M20x70-10.9	M20x70-10.9	M30x90-10.9
Torque [Nm (ft-lbs)]	30 (22)	100 (74)	300 (221)	550 (406)	550 (406)	1,800 (1,328)
Weight [kg (lb)]	1.3 (2.87)	1.7 (3.75)	3.0 (6.62)	6.2 (13.67)	8.0 (17.64)	17.0 (37.49)

* Not included in delivery, see brochure 5.249.19 ,,Accessories for Industrial Valves“

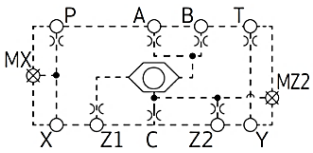
Control cover function 2W
NG 16 to 63

Symbol

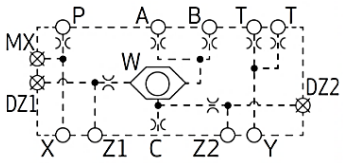
NG 16 to 25



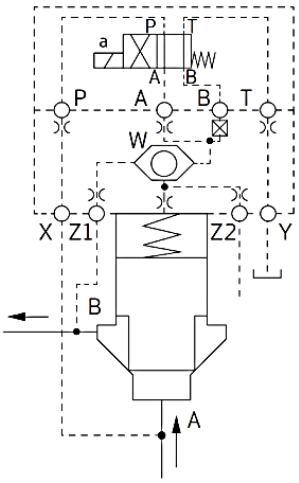
NG 32 to 50



NG 63



Pilot operated check function



FUNCTION

- Control cover with integrated dhuttle valve
- Control cover with remote control port to ISO 7368
- Orifice can be installed at port P, A, B, T, C, Z2
- Pilot port interface size 6 and 10 (size 6 4/2-way pilot valves can be used up to control cover size 50, and size 10 4/2-way pilot valves for control covers size 63 and above)
- The control cover 2W can be combined with 2-way cartridge valves with poppet B, C, E and F.

CHECK FUNCTION [1]

2W cover with a 4/2-way pilot valve results in a pilot operated check function. As long as no port Z2 is not relieved - flow from port B → A is constantly blocked.
The flow direction A – B can be influenced by the switching position of the pilot directional valve. If there is a plug in B, flow A to B is open if the solenoid is energized; if the solenoid is de-energized, A to B is blocked.
If there is a plug in port A, the pilot function is conversely.
Depressurising Z2 opens flow from A to B on both sides.
Additionally, Z2 can be used to actuate other valves.

Standard models

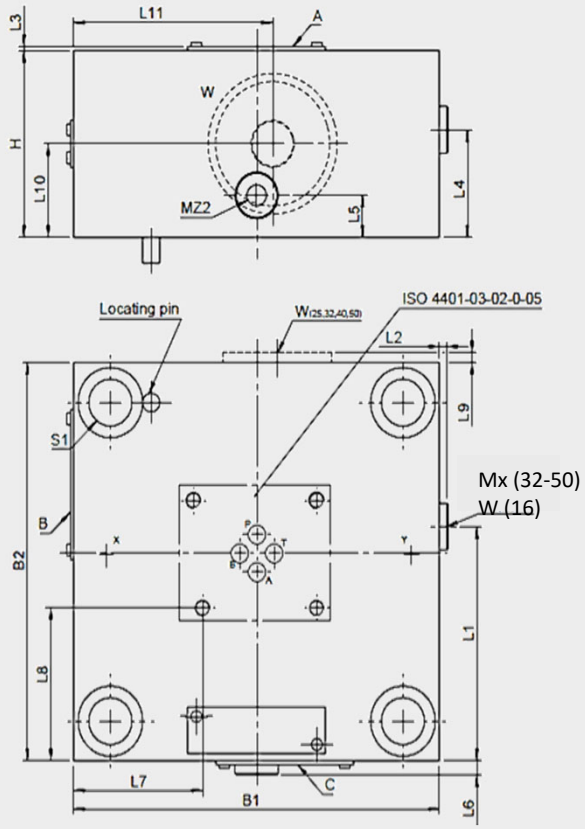
The orifice configurations possible with this cover are numerous and dependent on the pilot valve used and the desired function.
For further support with orifice configuration, please contact HYDAC Fluidtechnik GmbH.

NG	Code	Part no.
16	LD-CCE 16 H 6 2W/N	4085377
25	LD-CCE 25 H 6 2W/N	4085384
32	LD-CCE 32 H 6 2W/N	4085394
40	LD-CCE 40 H 6 2W/N	4085403
50	LD-CCE 50 H 6 2W/N	4085441
63	LD-CCE 63 H 6 2W/N	4085460

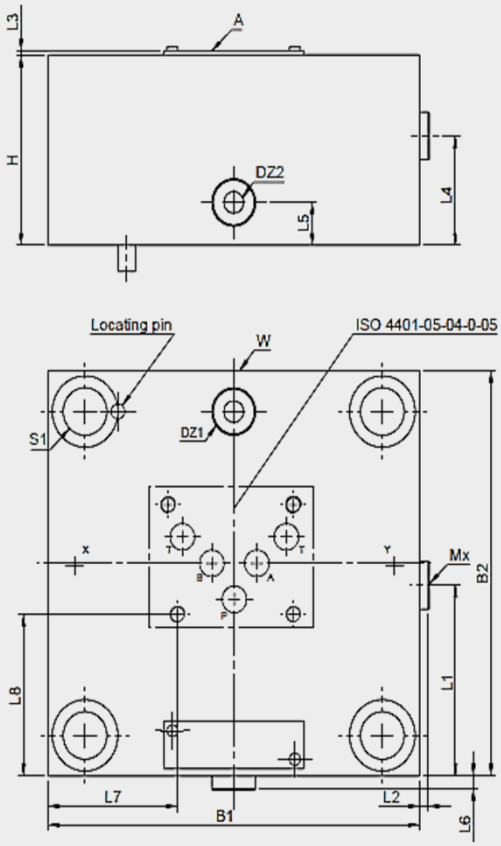
[1] see chart „Possible valve combinations“ on page 26
Hint: Spare parts seal kits see brochure 5.249.19 „Accessories for Industrial Valves“

DIMENSIONS

NG 16 to 50



NG 63



NG	16	25	32	40	50	63
B1 [mm (in)]	80 (3.15)	85 (3.35)	102 (4.02)	125 (4.92)	140 (5.51)	180 (7.09)
B2 [mm (in)]	65 (2.56)	85 (3.35)	102 (4.02)	125 (4.92)	140 (5.51)	180 (7.09)
H [mm (in)]	40 (1.57)	40 (1.57)	45 (1.77)	60 (2.36)	60 (2.36)	80 (3.15)
L1 [mm (in)]	35 (1.38)	-	58.9 (2.32)	73 (2.87)	80.4 (3.17)	74.5 (2.93)
L2 [mm (in)]	-	-	3.5 (0.14)	4.5 (0.18)	4.5 (0.18)	4.5 (0.18)
L3 [mm (in)]	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)
L4 [mm (in)]	21 (0.83)	-	34 (1.34)	40.5 (1.59)	41 (1.61)	56 (2.2)
L5 [mm (in)]	-	-	21 (0.83)	17 (0.67)	18.5 (0.73)	26.25 (1.03)
L6 [mm (in)]	-	1.0 (0.04)	3.5 (0.14)	4.5 (0.18)	4.5 (0.18)	4.5 (0.18)
L7 [mm (in)]	7 (0.28)	23.5 (0.93)	32 (1.26)	43.5 (1.71)	51 (2.01)	63 (2.48)
L8 [mm (in)]	16.25 (0.64)	26.25 (1.03)	34.65 (1.36)	46.25 (1.82)	53.75 (2.12)	68.6 (2.7)
L9 [mm (in)]	1.6 (0.06)	2.5 (0.1)	-	-	-	-
L10 [mm (in)]	18 (0.71)	23 (0.91)	21 (0.83)	31 (1.22)	32 (1.26)	40 (1.57)
L11 [mm (in)]	46.2 (1.82)	45 (1.77)	51 (2.01)	62.5 (2.46)	70 (2.76)	79.7 (3.14)
Name plate position	C	C	B	C	A	A
Interface ISO 7368	BA-06-2-A	BB-08-2-A	BC-09-2-A	BD-10-2-A	BE-11-2-A	BF-12-2-A

CONTROL COVER - DETAILS

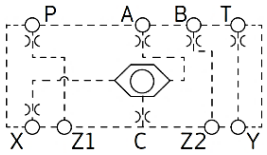
NG	16	25	32	40	50	63
Pilot port Interface ISO 4401	03-02-0-05	03-02-0-05	03-02-0-05	03-02-0-05	03-02-0-05	05-04-0-05
Plug Mx,MZ2,DZ1 + DZ2	-	-	G 1/8"	G 1/4"	G 1/4"	G 1/4"
Hex. size [mm]	-	-	5	6	6	6
Torque [Nm (ft-lbs)]	-	-	12 (9)	27 (20)	27 (20)	27 (20)
Plug W	G 3/8"	G 3/8"	G 3/8"	G 3/8"	G 3/8"	G 1/2"
Hex. size [mm]	8	8	8	8	8	10
Drehmoment [Nm (ft-lbs)]	56 (41)	56 (41)	56 (41)	56 (41)	56 (41)	72 (53)
Mounting screws S1 *	M8x35-10.9	M12x40-10.9	M16x50-10.9	M20x70-10.9	M20x70-10.9	M30x90-10.9
Torque [Nm (ft-lbs)]	30 (22)	100 (74)	300 (221)	550 (406)	550 (406)	1,800 (1,328)
Weight [kg (lb)]	1.5 (3.31)	2.0 (4.41)	3.0 (6.62)	6.2 (13.67)	8.0 (17.46)	16.5 (36.38)

* Not included in delivery, see brochure 5.249.19 ,,Accessories for Industrial Valves“

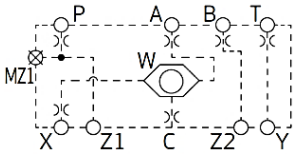
Control cover function 2WR
NG 16 to 63

Symbol

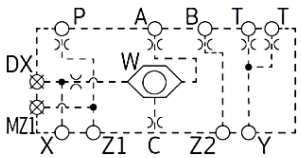
NG 16 to 25



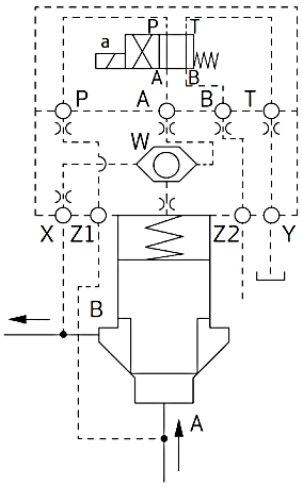
NG 32 to 50



NG 63



Pilot operated check function



FUNCTION

- Control cover with integrated shuttle valve
  → maximum available pilot pressure is applied in the spring chamber (port C)
- Control cover with remote control port to ISO 7368
- Orifice can be installed at port P, A, B, T, X, C
- Pilot port interface size 6 and 10 (size 6 4/2-way pilot valves can be used up to control cover size 50, and size 10 4/2-way pilot valves for control covers size 63 and above)
- The control cover 2WR can be combined with 2-way cartridge valves with poppet B, C, E and F.

CHECK FUNCTION [1]

If a 2WR cover is used in combination with a 2-way cartridge valve and a 4/2-way pilot valve, this results free flow from port A to B if the solenoid is energized.
If the pressure in port B exceeds the pressure in port A, the 2-way cartridge valve is closed and flow in direction B to A is blocked.
If the solenoid is de-energized, flow in both directions (A → B and B → A) is blocked.
Furthermore, port Z2 can be used to actuate other 2-way cartridge valves.

Standard models

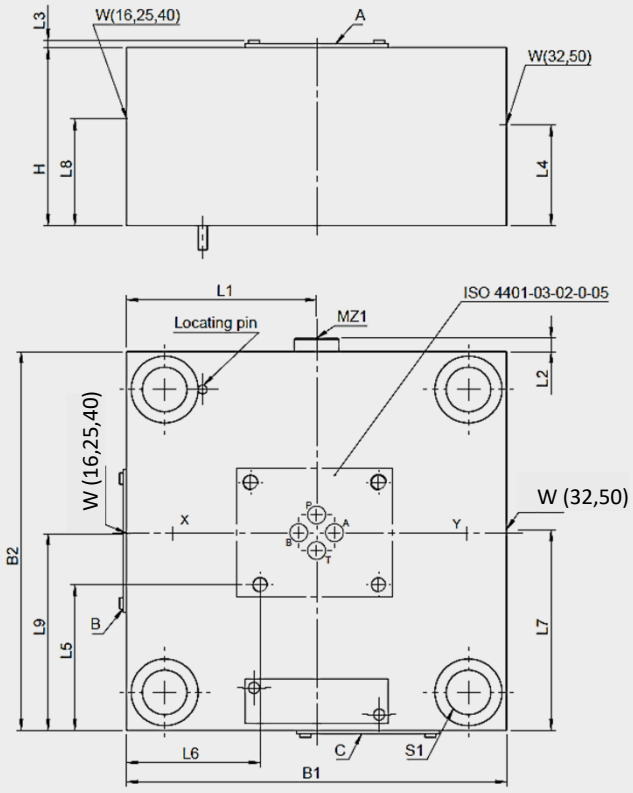
The orifice configurations possible with this cover are numerous and dependent on the pilot valve used and the desired function.
For further support with orifice configuration, please contact HYDAC Fluidtechnik GmbH.

NG	Code	Part no.
16	LD-CCE 16 H 6 2WR/N	4085378
25	LD-CCE 25 H 6 2WR/N	4085385
32	LD-CCE 32 H 6 2WR/N	4085395
40	LD-CCE 40 H 6 2WR/N	4085435
50	LD-CCE 50 H 6 2WR/N	4087273
63	LD-CCE 63 H 6 2WR/N	4085461

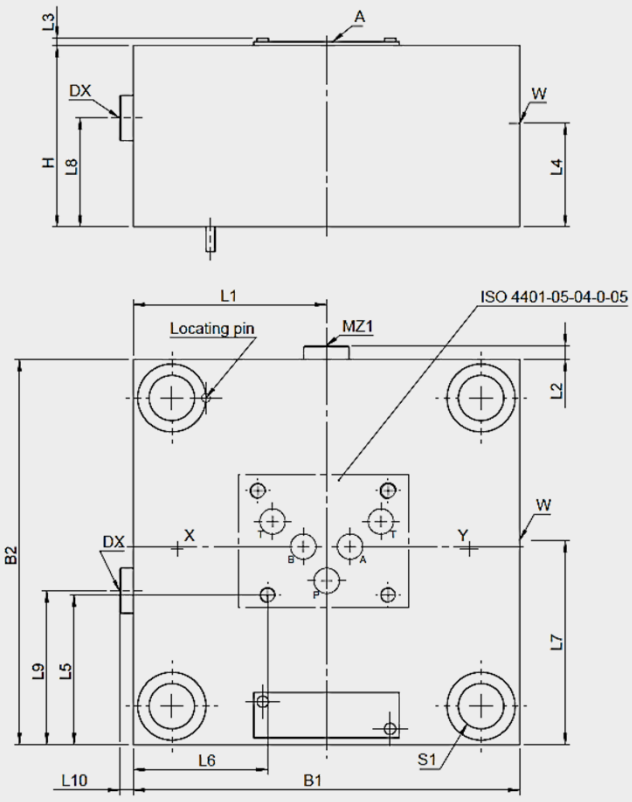
[1] see chart „Possible valve combinations“ on page 26
Hint: Spare parts seal kits see brochure 5.249.19 „Accessories for Industrial Valves“

DIMENISONS

NG 16 to 50



NG 63



NG	16	25	32	40	50	63
B1 [mm (in)]	80 (3.15)	85 (3.35)	102 (4.02)	125 (4.92)	140 (5.51)	180 (7.09)
B2 [mm (in)]	65 (2.56)	85 (3.35)	102 (4.02)	125 (4.92)	140 (5.51)	180 (7.09)
H [mm (in)]	40 (1.57)	40 (1.57)	45 (1.77)	60 (2.36)	60 (2.36)	80 (3.15)
L1 [mm (in)]	-	-	51 (2.01)	62.5 (2.46)	70 (2.76)	90 (3.54)
L2 [mm (in)]	-	-	3.5 (0.14)	4.5 (0.18)	4.5 (0.18)	4.5 (0.18)
L3 [mm (in)]	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)
L4 [mm (in)]	-	-	17.5 (0.69)	-	31 (1.22)	44 (1.73)
L5 [mm (in)]	16.25 (0.64)	26.25 (1.03)	34.65 (1.36)	46.25 (1.82)	73 (2.87)	68.6 (2.7)
L6 [mm (in)]	7 (0.28)	23.5 (0.93)	32 (1.26)	43.5 (1.71)	53.75 (2.12)	63 (2.48)
L7 [mm (in)]	-	-	63 (2.48)	-	51 (2.01)	70 (2.76)
L8 [mm (in)]	16.5 (0.65)	21 (0.83)	-	34.5 (1.36)	-	44 (1.73)
L9 [mm (in)]	31.5 (1.24)	43.5 (1.71)	-	64 (2.52)	-	70 (2.76)
L10 [mm (in)]	-	-	-	-	-	4.5 (0.18)
Name plate position	C	C	B	C	A	A
Interface ISO 7368	BA-06-2-A	BB-08-2-A	BC-09-2-A	BD-10-2-A	BE-11-2-A	BF-12-2-A

CONTROL COVER - DETAILS

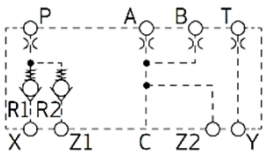
NG	16	25	32	40	50	63
Pilot port Interface ISO 4401	03-02-0-05	03-02-0-05	03-02-0-05	03-02-0-05	03-02-0-05	05-04-0-05
Plug DX + MZ1	-	-	G 1/8"	G 1/4"	G 1/4"	G 1/4"
Hex. size [mm]	-	-	12 (9)	27 (20)	27 (20)	27 (20)
Torque [Nm (ft-lbs)]	-	-	5	6	6	6
Plug W	G 3/8"	G 3/8"	G 3/8"	G 3/8"	G 3/8"	G 3/4"
Hex. size [mm]	8	8	8	8	8	12
Torque [Nm (ft-lbs)]	56 (41)	56 (41)	56 (41)	56 (41)	56 (41)	120 (89)
Mounting screws S1 *	M8x35-10.9	M12x40-10.9	M16x50-10.9	M20x70-10.9	M20x70-10.9	M30x90-10.9
Torque [Nm (ft-lbs)]	30 (22)	100 (74)	300 (221)	550 (406)	550 (406)	1,800 (1,328)
Weight [kg (lb)]	1.5 (3.31)	2.0 (4.41)	3.0 (6.62)	6.2 (13.67)	9.0 (19.85)	23.6 (52.04)

* Not included in delivery, see brochure 5.249.19 ,,Accessories for Industrial Valves“

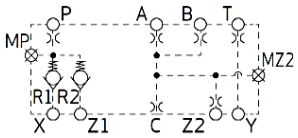
Control cover function 4W
NG 16 to 80

Symbol

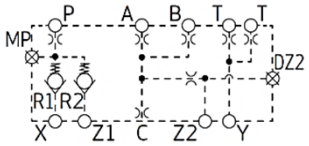
NG 16 to 25



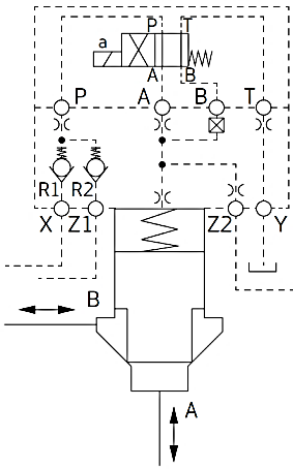
NG 32 to 50



NG 63 to 80



Directional function



FUNCTION

- Control cover with parallel check valves at port X and Z1
  → The higher pressure of both is at port P
  → This feature is useful in applications where the risk of the 2-way cartridge valve briefly opening during the pilot pressure change needs to be fully eliminated.
- Control cover with remote control port to ISO 7368
- Orifice can be installed at port P, A, B, T, C, Z2
- Pilot port interface size 6 and 10 (size 6 4/2-way pilot valves can be used up to control cover size 50, and size 10 4/2-way pilot valves for control covers size 63 and above)
- The control cover 4W can be combined with 2-way cartridge valves with poppet B, C, E and F.

DIRECTIONAL VALVE FUNCTION [1]

If a 4W cover is used in combination with a 2-way cartridge valve and a pilot valve, a bidirectional directional function or a check function can be realised.
If the solenoid is energized and a plug is installed in port B of the cover, the spring chamber of the cartridge valve is connected to the tank. This enables flow via 2-way cartridge valve in both directions.
If the solenoid is de-energized, the higher of the two pilot pressures is at port X and Z1 in the spring chamber. This enables a check function - depending on location decrease of pilot pressure at port A or B in the corresponding direction:

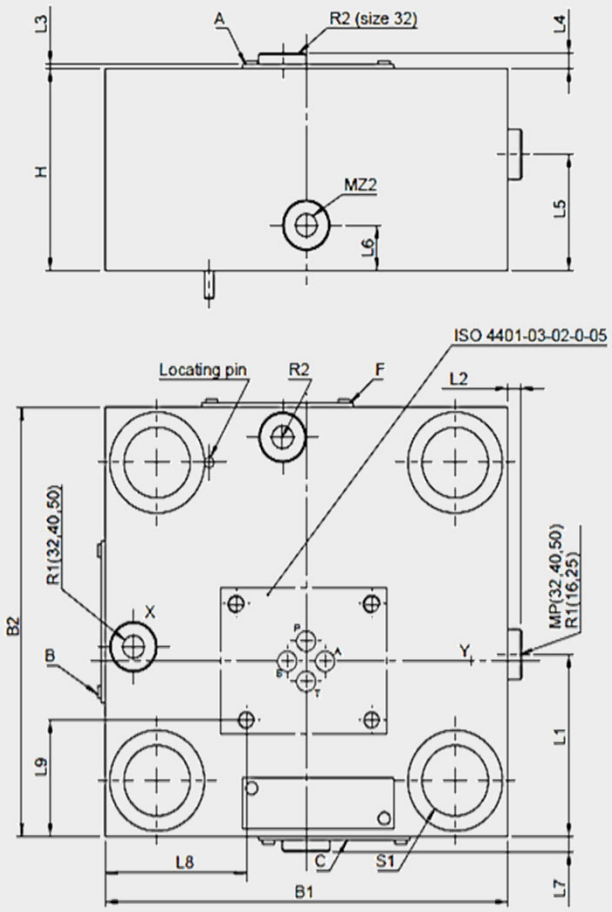
- If the pilot pressure of port A is reduced, flow from A to B is blocked.
- If the pilot pressure of port B is reduced, flow from B to A is blocked.

Precisely the opposite functions are achieved in terms of a switching valve, which is on and off if a plug is installed in port A instead of port B.
Furthermore, port Z2 can be used to actuate a second 2-way cartridge valve.

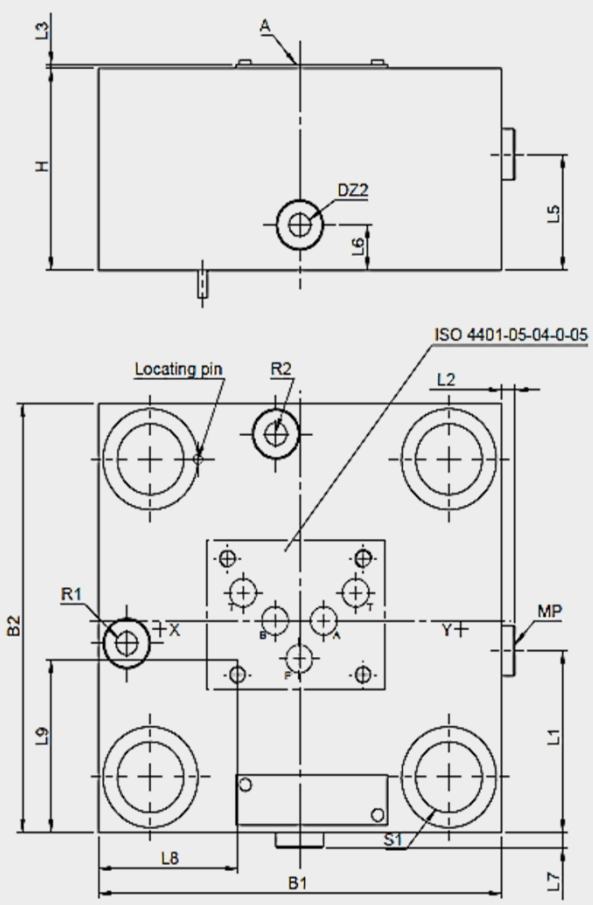
[1] see chart „Possible valve combinations“ on page 26
Hint: Spare parts seal kits see brochure 5.249.19 „Accessories for Industrial Valves“

DIMENSIONS

NG 16 to 50



NG 63

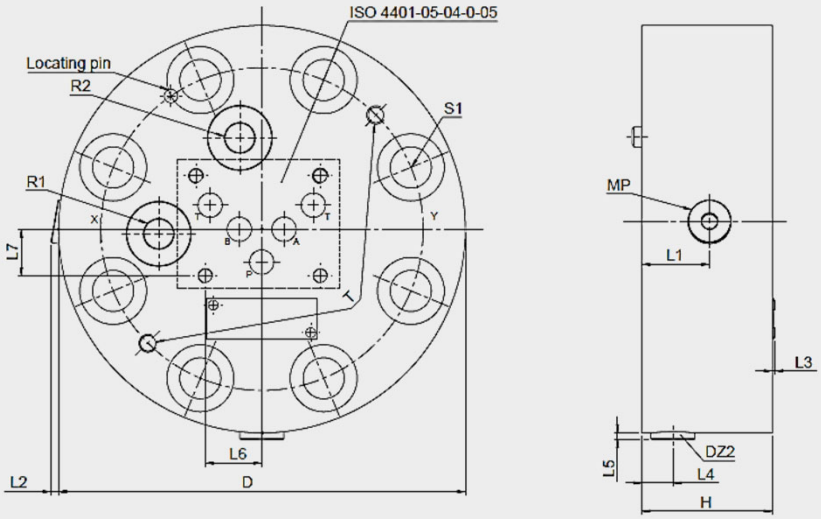


NG	16	25	32	40	50	63
B1 [mm (in)]	80 (3.15)	85 (3.35)	102 (4.02)	125 (4.92)	140 (5.51)	180 (7.09)
B2 [mm (in)]	65 (2.56)	85 (3.35)	102 (4.02)	125 (4.92)	140 (5.51)	180 (7.09)
H [mm (in)]	40 (1.57)	40 (1.57)	45 (1.77)	60 (2.36)	60 (2.36)	80 (3.15)
L1 [mm (in)]	43 (1.69)	53 (2.09)	59.5 (2.34)	73 (2.87)	82 (3.23)	74.5 (2.93)
L2 [mm (in)]	-	-	3.5 (0.14)	4.5 (0.18)	4.5 (0.18)	4.5 (0.18)
L3 [mm (in)]	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)
L4 [mm (in)]	-	-	1 (0.04)	-	-	-
L5 [mm (in)]	17 (0.67)	20 (0.79)	24 (0.94)	38.5 (1.52)	39 (1.54)	45 (1.77)
L6 [mm (in)]	11.5 (0.45)	-	15 (0.94)	19 (0.75)	19 (0.75)	26.25 (1.03)
L7 [mm (in)]	1.4 (0.06)	-	3.5 (0.14)	4.5 (0.18)	4.5 (0.18)	4.5 (0.18)
L8 [mm (in)]	7 (0.28)	23.5 (0.93)	32 (1.26)	43.5 (1.71)	51 (2.01)	63 (2.48)
L9 [mm (in)]	16.25 (0.64)	26.25 (1.03)	34.65 (1.36)	46.25 (1.82)	53.75 (2.12)	68.6 (2.7)
Name plate position	C	C	F	C	A	A
Interface ISO 7368	BA-06-2-A	BB-08-2-A	BC-09-2-A	BD-10-2-A	BE-11-2-A	BF-12-2-A

DIMENSIONS

NG	80
D [mm (in)]	250 (9.84)
H [mm (in)]	80 (3.15)
L1 [mm (in)]	41.5 (1.63)
L2 [mm (in)]	2.5 (0.1)
L3 [mm (in)]	1.5 (0.06)
L4 [mm (in)]	18 (0.71)
L5 [mm (in)]	4 (0.16)
L6 [mm (in)]	27 (1.06)
L7 [mm (in)]	21.4 (1.06)
T (eye bolt thread)	M10
Interface ISO 7368	BG-13-2-A

NG 80



Standard models

The orifice configurations possible with this cover are numerous and dependent on the pilot valve used and the desired function.

For further support with orifice configuration, please contact HYDAC Fluidtechnik GmbH.

NG	Code	Part no.
16	LD-CCE 16 H 6 4W/N	4085379
25	LD-CCE 25 H 6 4W/N	4085387
32	LD-CCE 32 H 6 4W/N	4085397
40	LD-CCE 40 H 6 4W/N	4085436
50	LD-CCE 50 H 6 4W/N	4085443
63	LD-CCE 63 H 6 4W/N	4085463
80	LD-CCE 80 H 6 4W/N	4085475

CONTROL COVER - DETAILS

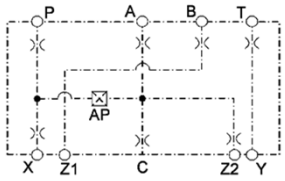
NG	16	25	32	40	50	63	80
Pilot port Interface ISO 4401	03-02-0-05	03-02-0-05	03-02-0-05	03-02-0-05	03-02-0-05	05-04-0-05	05-04-0-05
Plug MP, MZ2, DZ2	-	-	G 1/8"	G 1/4"	G 1/4"	G 1/4"	G 3/8 "
Hex. size [mm]	-	-	12 (9)	27 (20)	27 (20)	27 (20)	56 (41)
Torque [Nm (ft-lbs)]	-	-	5	6	6	6	8
Plug R1 + R2	G 1/8"	G 1/8"	G 1/4"	G 3/8"	G 3/8"	G 1/2"	G 1"
Hex. size [mm]	12 (9)	12 (9)	27 (20)	56 (41)	56 (41)	80 (59)	170 (125)
Torque [Nm (ft-lbs)]	5	5	6	8	8	10	17
Mounting screws S1 *	M8x35-10.9	M12x40-10.9	M16x50-10.9	M20x70-10.9	M20x70-10.9	M30x90-10.9	M24x90-12.9
Torque [Nm (ft-lbs)]	30 (22)	100 (74)	300 (221)	550 (406)	550 (406)	1,800 (1,328)	900 (664)
Weight [kg (lb)]	1.5 (3.31)	2 (4.41)	3.0 (6.62)	6.2 (13.67)	9.0 (19.85)	16.5 (36.38)	26 (57.33)

* Not included in delivery, see brochure 5.249.19 ,,Accessories for Industrial Valves“

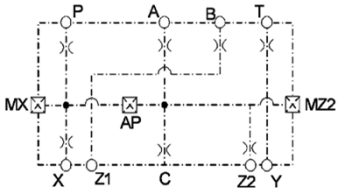
Control cover function 1WDB
NG 16 to 63

Symbol

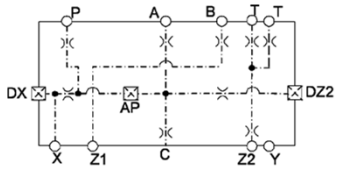
NG 16 to 25



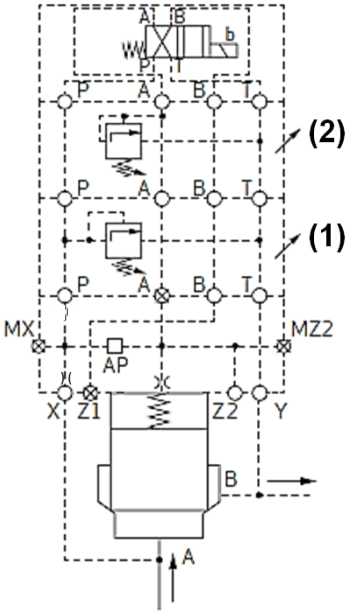
NG 32 to 50



NG 63



Pilot operated pressure relief function



FUNCTION

- Control cover especially for complex pressure control functions with multiple pilot valves
- Orifice installation option at port P, A, B, T, X, Z2, C
- Pilot port interface NG6 and NG10 (up to control cover NG50 it can be used 4/2-way pilot valves NG6 or up to control cover NG63 it can be used 4/2-way pilot valves NG10)
- The control cover 1WDB can be combined with 2-way cartridge valves with poppet A and EX.

PILOT OPERATED PRESSURE RELIEF FUNCTION [1]

When using a 1WDB cover in combination with a 2-way cartridge valve, two pressure relief valves in sandwich plate design and a directional control valve as pilot valve, a pilot operated pressure relief function can be realized.
Due to a two-stage pressure relief function, it is possible to work with two preset pressures.
When the directional valve is energized, port P is connected to port A. The pressure in port X is passed to the pilot valve (2) via port A on the directional control valve, acting on both pilot valves. The lower pressure setting opens the pilot valve (2). After overcoming the spring force, the cartridge valve opens from port A to port B. If the directional valve is not energized, the pilot valve (2) is switched to the low-pressure side. This limits the pressure at the pilot valve (1) and the cartridge valve opens.

Standard models

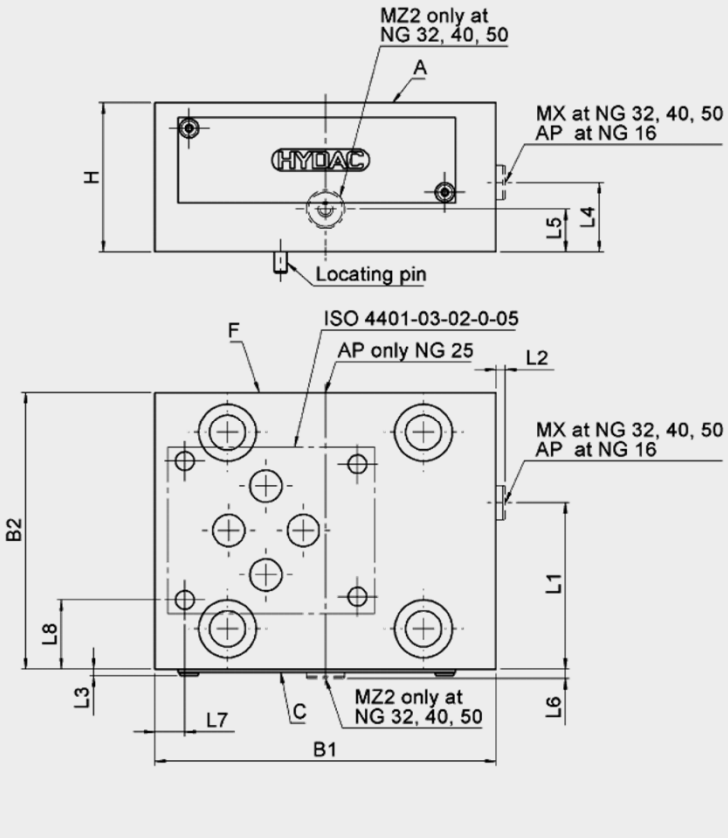
The orifice configurations possible with this cover are numerous and dependent on the pilot valve used and the desired function.
For further support with orifice configuration, please contact HYDAC Fluidtechnik GmbH.

NG	Code	Part no.
16	LD-CCE 16 H 6 1WDB/N	4481042
25	LD-CCE 25 H 6 1WDB/N	4481043
32	LD-CCE 32 H 6 1WDB/N	4481044
40	LD-CCE 40 H 6 1WDB/N	4481075
50	LD-CCE 50 H 6 1WDB/N	4481076
63	LD-CCE 63 H 6 1WDB/N	4481077

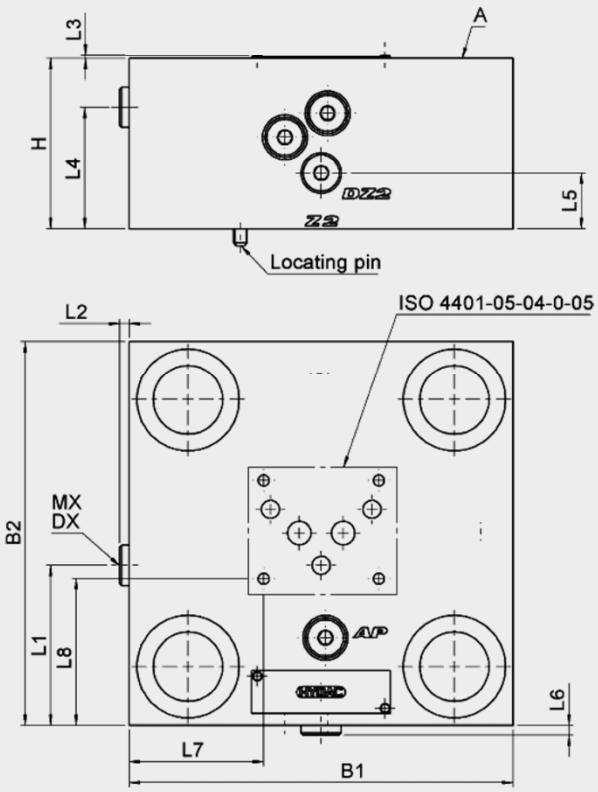
[1] see chart „Possible valve combinations“ on page 26
Hint: Spare parts seal kits see brochure 5.249.19 „Accessories for Industrial Valves“

DIMENSIONS

NG 16 to 50



NG 63



NG	16	25	32	40	50	63
B1 [mm (in)]	80 (3.15)	85 (3.35)	102 (4.02)	125 (4.92)	140 (5.51)	180 (7.09)
B2 [mm (in)]	65 (2.56)	85 (3.35)	102 (4.02)	125 (4.92)	140 (5.51)	180 (7.09)
H [mm (in)]	35 (1.38)	40 (1.57)	45 (1.77)	60 (2.36)	60 (2.36)	80 (3.15)
L1 [mm (in)]	-	-	61.3 (2.41)	80 (2.87)	80.4 (3.17)	74.9 (2.95)
L2 [mm (in)]	-	-	3.5 (0.14)	4.5 (0.18)	4.5 (0.18)	4.5 (0.18)
L3 [mm (in)]	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)
L4 [mm (in)]	-	-	26 (1.02)	33.9 (1.33)	37.5 (1.48)	57 (2.24)
L5 [mm (in)]	-	-	15 (0.59)	20 (0.79)	21 (0.83)	26.25 (1.03)
L6 [mm (in)]	-	-	3.5 (0.14)	4.5 (0.18)	4.5 (0.18)	4.5 (0.18)
L7 [mm (in)]	7 (0.28)	23.5 (0.93)	32 (1.26)	43.5 (1.71)	51 (2.01)	63 (2.48)
L8 [mm (in)]	16.25 (0.64)	26.25 (1.03)	34.65 (1.36)	46.25 (1.82)	53.75 (2.12)	68.6 (2.70)
Name plate position	C	C	F	C	A	A
Interface ISO 7368	BA-06-2-A	BB-08-2-A	BC-09-2-A	BD-10-2-A	BE-11-2-A	BF-12-2-A

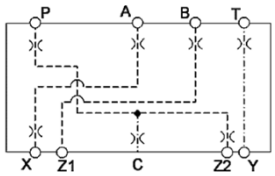
CONTROL COVER - DETAILS

NG	16	25	32	40	50	63
Pilot port Interface ISO 4401	03-02-0-05	03-02-0-05	03-02-0-05	03-02-0-05	03-02-0-05	05-04-0-05
Plug AP,MX,MZ2 + DZ2	G 1/8"	G 1/8"	G 1/8"	G 1/4"	G 1/4"	G 1/4"
Hex. size [mm]	5	5	5	6	6	6
Torque [Nm (ft-lbs)]	12 (9)	12(9)	12 (9)	27 (20)	27 (20)	27 (20)
Weight [kg (lb)]	1.27 (2.80)	1.9 (4.19)	3.06 (6.75)	6.16 (13.58)	9.04 (19.93)	16.7 (36.82)

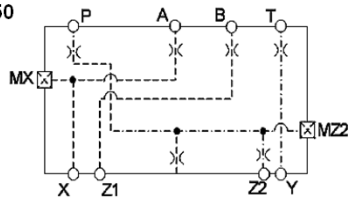
Control cover function DRE
NG 16 to 63

Symbol

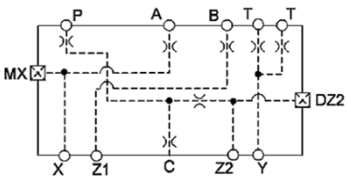
NG 16 to 25



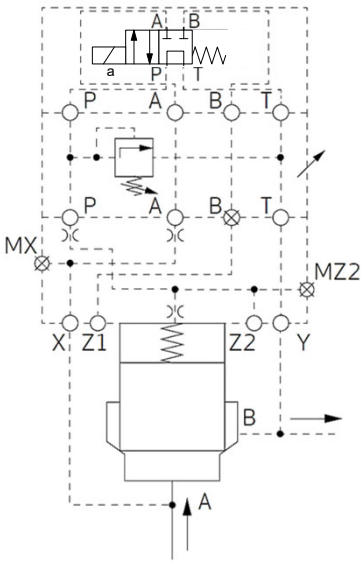
NG 32 to 50



NG 63



Pressure relief function



FUNCTION

- Control cover especially for complex pressure relief functions with multiple pilot valves
- Orifice installation option at port P, A, B, T, Z2, C
- Pilot port interface NG6 and NG10 (up to control cover NG50 it can be used 4/2-way pilot valves NG6 or up to control cover NG63 it can be used 4/2-way pilot valves NG10)
- The control cover DRE can be combined with 2-way cartridge valves with poppet A and EX.

PRESSURE RELIEF FUNCTION [1]

When using a DRE cover in combination with a 2-way pressure cartridge valve, a pressure relief valve and a directional valve, a pressure relief function can be realized.
When the directional valve is energized, port P is connected to A. The cartridge valve opens when the pressure is higher than the pressure setting on the pressure relief valve. The spring chamber is relieved by the orifice in port A.
If the directional valve is de-energized, a pressureless circulation from port A to port B of the cartridge valve results and the oil flows to the tank after overcoming the spring force.

Standard models

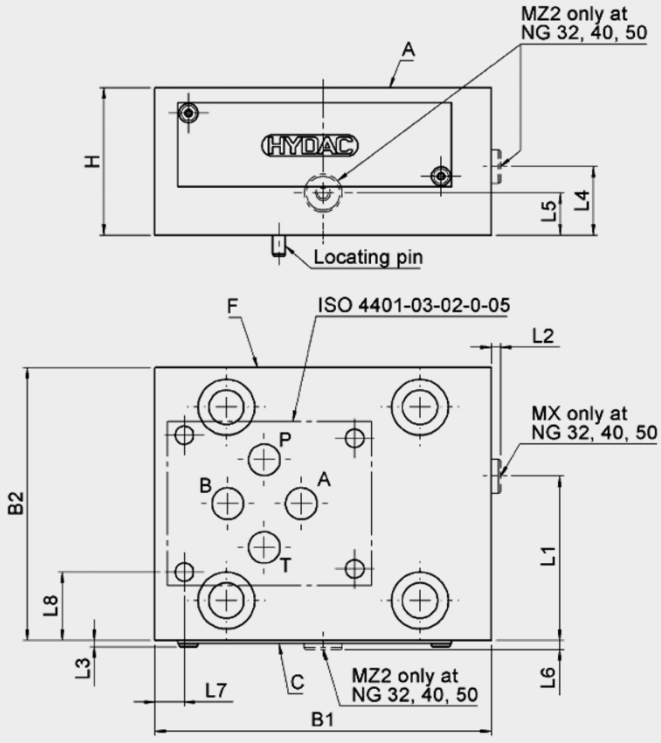
The orifice configurations possible with this cover are numerous and dependent on the pilot valve used and the desired function.
For further support with orifice configuration, please contact HYDAC Fluidtechnik GmbH.

NG	Code	Part no.
16	LD-CCE 16 H 6 DRE/N	4480068
25	LD-CCE 25 H 6 DRE/N	4480069
32	LD-CCE 32 H 6 DRE/N	4480070
40	LD-CCE 40 H 6 DRE/N	4480071
50	LD-CCE 50 H 6 DRE/N	4480072
63	LD-CCE 63 H 6 DRE/N	4480073

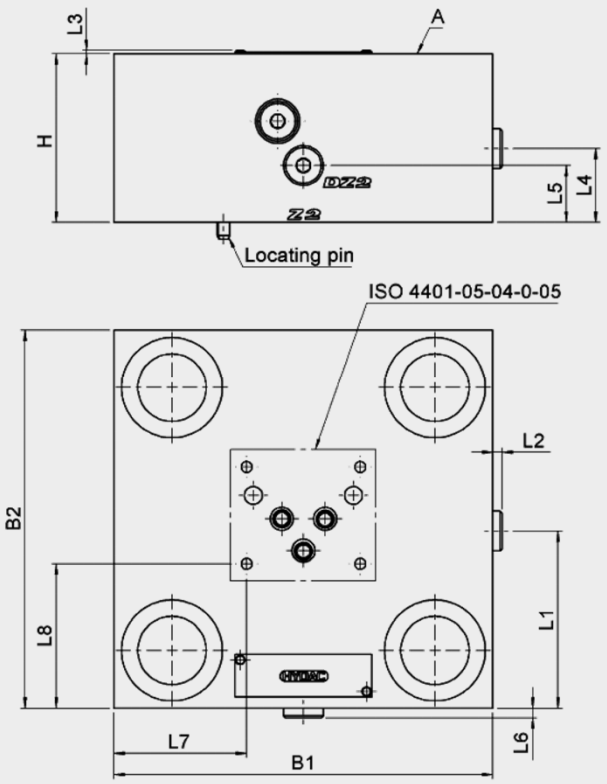
[1] see chart „Possible valve combinations“ on page 26
Hint: Spare parts seal kits see brochure 5.249.19 „Accessories for Industrial Valves“

DIMENSIONS

NG 16 to 50



NG 63



NG	16	25	32	40	50	63
B1 [mm (in)]	80 (3.15)	85 (3.35)	102 (4.02)	125 (4.92)	140 (5.51)	180 (7.09)
B2 [mm (in)]	65 (2.56)	85 (3.35)	102 (4.02)	125 (4.92)	140 (5.51)	180 (7.09)
H [mm (in)]	35 (1.38)	35 (1.38)	45 (1.77)	60 (2.36)	60 (2.36)	80 (3.15)
L1 [mm (in)]	-	-	50.9 (2.00)	62.5 (2.46)	70 (2.76)	84.15 (3.31)
L2 [mm (in)]	-	-	3.5 (0.14)	4.5 (0.18)	4.5 (0.18)	4.5 (0.18)
L3 [mm (in)]	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)
L4 [mm (in)]	-	-	26 (1.02)	33.9 (1.33)	34.5 (1.36)	35 (1.38)
L5 [mm (in)]	-	-	18 (0.71)	22.9 (0.90)	20 (0.79)	27 (1.06)
L6 [mm (in)]	-	-	3.5 (0.14)	4.5 (0.18)	4.5 (0.18)	4.5 (0.18)
L7 [mm (in)]	7 (0.28)	23.5 (0.93)	32 (1.26)	43.5 (1.71)	51 (2.01)	63 (2.48)
L8 [mm (in)]	16.25 (0.64)	26.25 (1.03)	34.65 (1.36)	46.25 (1.82)	53.75 (2.12)	68.6 (2.70)
Name plate position	C	C	F	C	A	A
Interface ISO 7368	BA-06-2-A	BB-08-2-A	BC-09-2-A	BD-10-2-A	BE-11-2-A	BF-12-2-A

CONTROL COVER - DETAILS

NG	16	25	32	40	50	63
Pilot port Interface ISO 4401	03-02-0-05	03-02-0-05	03-02-0-05	03-02-0-05	03-02-0-05	05-04-0-05
Plug MX, MZ2 + DZ2	-	-	G 1/8"	G 1/4"	G 1/4"	G 1/4"
Hex. size [mm]	-	-	5	6	6	6
Torque [Nm (ft-lbs)]	-	-	12 (9)	27 (20)	27 (20)	27 (20)
Weight [kg (lb)]	1.28 (2.82)	1.67 (3.68)	3.08 (6.79)	6.18 (13.62)	9.07 (20.00)	16.7 (36.82)

ACCESSORIES

Seal kits (independent of cover function)	Nominal size	Code	Part no.
	16	LD-FS 16 H 6/N	4167630
	25	LD-FS 25 H 6/N	4167631
	32	LD-FS 32 H 6/N	4167632
	40	LD-FS 40/50 H 6 /N	4167633
	50	LD-FS 40/50 H 6 /N	4167633
	63	LD-FS 63 H 6/N	4167655
	80	LD-FS 80 H 6/N	4167657

POSSIBLE VALVE COMBINATIONS

Cover	Valves	Brochure no.
RM	4WE6/ 4WE10 DB4E + housing DPAT06020-01X (395270) + locking screw (277643)	5.202/ 5.244.3 5.161/ 5.300
1W	4WE6/ 4WE10	5.202/ 5.244.3
2W	4WE6/ 4WE10	5.202/ 5.244.3
2WR	4WE6/ 4WE10	5.202/ 5.244.3
4W	4WE6/ 4WE10	5.202/ 5.244.3
1WDB	4WE6/ 4WE10 ZW-DB06/ ZW-DB10	5.202/ 5.244.3 5.249.27/ 5.249.28
DRE	4WE6/ 4WE10 ZW-DB06/ ZW-DB10	5.202/ 5.244.3 5.249.27/ 5.249.28

Note
The information in this brochure relates to the operating conditions and applications described. For applications not described, please contact the relevant technical department.
All technical details are subject to change without notice.

HYDAC Fluidtechnik GmbH
Justus-von-Liebig-Str.
D-66280 Sulzbach/Saar
Tel: 0 68 97 /509-01
Fax: 0 68 97 /509-598
E-Mail: valves@hydac.com