

2 position, 2 way cartridge valve

- $Q_{max} = 200 \text{ l/min}$
- $p_{max} = 350 \text{ bar}$

NG 16

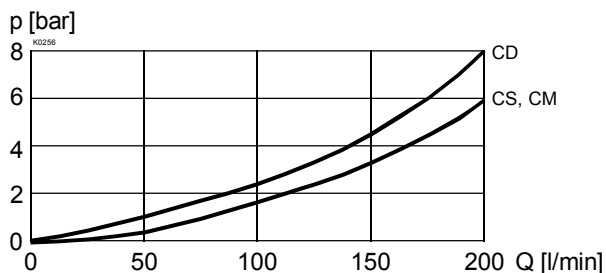
ISO 7368
DIN 24342



Type: CS16-10/.. General application: Pressure relief valve	Symbol: Opening ratio: 1:1	 Opening pressures A → B 0.5; 2.0; 5.0 bar	Type: CS16-10/..-C7 General application: Non return valve	Symbol: Opening ratio: 1:1	 Opening pressure: A → B 0.5; 2.0; 5.0 bar
Type: CS16-12/.. General application: Spool valve Type: CS16-12/..-C5 General application: Poppet valve	Symbol: Opening ratio: 1:1,2	 Opening pressure: A → B 0.5; 2.0; 5.0 bar	Type: CS16-12/..-C7 General application: Non return valve	Symbol: Opening ratio: 1:1,2	 Opening pressure: A → B 0.5; 2.0; 5.0 bar
Type: CS16-20/.. General application: Spool valve Type: CS16-20/..-C5 General application: Poppet valve	Symbol: Opening ratio: 1:2	 Opening pressure: A → B 0.5; 2.0; 5.0 bar	Type: CM16-10/.. General application: Pressure reducing valve	Symbol: Opening ratio: 1:1	 Closing pressure: B → A 3.0 bar
Type: CD16-12/.. General application: Flow valve	Symbol: Opening ratio: 1:1,2	 Opening pressure: A → B 0.5; 2.0; 5.0 bar	Type: CD16-20/..- General application: Flow valve	Symbol: Opening ratio: 1:2	 Opening pressure: A → B 0.5; 2.0; 5.0 bar

CHARACTERISTICS Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$

$\Delta p = f(Q)$ Pressure loss / flow characteristics



Opening pressures $B \rightarrow A = f$ (Area ratio opening pressure $A \rightarrow B$)

Area ratio	Opening pressure [bar]	
	A $\rightarrow$ B	B $\rightarrow$ A
1:1,2	0.5	2.5
1:1,2	2.0	10.0
1:1,2	5.0	25.0
1:2	0.5	0.5
1:2	2.0	2.0
1:2	5.0	5.0

GENERAL SPECIFICATIONS

Design	2 way cartridge valve
Installation	any
Installation dimension	to ISO 7368 / DIN 24342
	refer to data sheet: t 2.13-1021
Ambient temp.	-20...+50 °C
Weight spool	m = 0,050 kg
Weight total	m = 0,180 kg

HYDRAULIC SPECIFICATIONS

Fluid	Mineral oil, other fluid on request
Contamination	ISO 4406:1999, class 18/16/13
Efficiency	Required filtration grade ($\beta_{0.5} \dots 10 \geq 75$) (refer to data sheet Nr. 1.0-50/2)
Viscosity range	12 $\text{mm}^2/\text{s} \dots 320 \text{ mm}^2/\text{s}$
Fluid temperature	-20...+70 °C
Working pressure	$p_{\text{max}} = 350 \text{ bar}$ (connections A, B, X)
Max. volume flow	$Q_{\text{max}} = 200 \text{ l/min}$
Pilot oil volume	$Q_{\text{st}} = 1.0 \text{ cm}^3$

TYPE CODE

Slip-in cartridge C ☐ 16 - ☐ / ☐ / ☐ - ☐ # ☐

Poppet spool ☐ S

Poppet spool with damping ☐ D

Spool ☐ M

Size 16

Area ratio:

1:1	☐ 10
1:1,2	☐ 12
1:2	☐ 20 *

Opening pressure A $\rightarrow$ B: 0 bar (no spring) ☐ 0

0.5 bar	☐ 05
2.0 bar	☐ 20
3.0 bar	☐ 30
5.0 bar	☐ 50

Orifice in poppet spool:

plugged	☐ 0
0.4 mm	☐ 0.4
0.6 mm	☐ 0.6
usw.	

Omit if ordered without orifice or plug

* Omitted as no provision for orifice made

Special features for poppet spools only:

Check function X connected to B port ☐ C7

additional seal on poppet spool ☐ C5

Design-Index (subject to change)

PARTS LIST

Position	Article	Description
10	160.2266	O-Ring ID 26,64x2,62
30	160.2120	O-Ring ID 12,42x1,78
40	049.0320	Cover-Seal PU 83 rd 32/27,5x5,1
50	049.0251	Cover-Seal PU 83 rd 25/20,5x5,2
60	53.2604	Spring 1,25x9,8x38,6
	53.4100	Spring 1,6x9,8x40,8
	53.5101	Spring 2x10x39,8
70	53.2603	Spring 1,1x9,7x37,5
	53.3602	Spring 1,5x9,8x39,2
	53.4601	Spring 1,8x9,8x39,3

Position	Article	Description
80	53.2104	Spring 1x10x28,6
	53.2602	Spring 1,1x9,7x33,7
	53.3601	Spring 1,5x9,8x32
90	53.5201	Spring 1,9x10,8x29
100	246.1003	Cyl. screw M4x4 VSM 213302
	117.1001	Orifice bing M4 / 0,4
	117.1003	Orifice bing M4 / 0,6
	117.1005	Orifice bing M4 / 0,8
	117.1007	Orifice bing M4 / 1,0
110	246.1003	Cyl. screw M4x4 VSM 213302

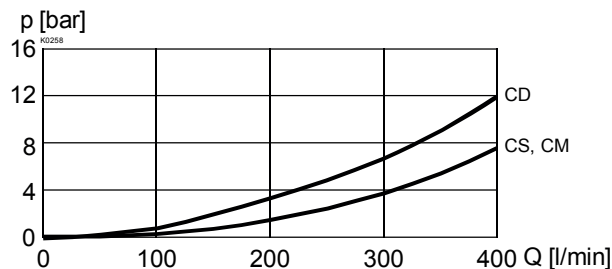
2 position, 2 way cartridge valve

- $Q_{max} = 400 \text{ l/min}$
- $p_{max} = 350 \text{ bar}$

NG 25
ISO 7368
DIN 24342



Type: CS25-10/.. General application: Pressure relief valve	Symbol: Opening ratio: 1:1	 Opening pressure: A → B 0.5; 2.0; 5.0 bar	Type: CS25-10/...-C7 General application: Non-return valve	Symbol: Opening ratio: 1:1	 Opening pressure: A → B 0.5; 2.0; 5.0 bar
Type: CS25-12/.. General application: Spool valve Type: CS25-12/...-C5 General application: Poppet valve	Symbol: Opening ratio: 1:1,2	 Opening pressure: A → B 0.5; 2.0; 5.0 bar			
Type: CS25-20/.. General application: Spool valve Type: CS25-20/...-C5 General application: Poppet valve	Symbol: Opening ratio: 1:2	 Opening pressure: A → B 0.5; 2.0; 5.0 bar	Type: CM25-10/.. General application: Pressure reducing valve	Symbol: Opening ratio: 1:1	 Closing pressure: B → A 3.0 bar
Type: CD25-12/.. General application: Flow valve	Symbol: Opening ratio: 1:1,2	 Opening pressure: A → B 0.5; 2.0; 5.0 bar	Type: CD25-20/...- General application: Flow valve	Symbol: Opening ratio: 1:2	 Opening pressure: A → B 0.5; 2.0; 5.0 bar

CHARACTERISTICS Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$
 $\Delta p = f(Q)$ Pressure loss / flow characteristics

Opening pressure $B \rightarrow A = f(\text{Area ratio Opening pressure } A \rightarrow B)$

Area ratio	Opening pressure [bar]	
	A $\rightarrow$ B	B $\rightarrow$ A
1:1,2	0.5	2.5
1:1,2	2.0	10.0
1:1,2	5.0	25.0
1:2	0.5	0.5
1:2	2.0	2.0
1:2	5.0	5.0

GENERAL SPECIFICATIONS

Design	2 way cartridge valve
Installation	any
Installation dimension	to ISO 7368 / DIN 24 342 refer to data sheet 2.13-1022
Ambient temp.	-20...+50 °C
Weight spool	m = 0,140 kg
Weight total	m = 0,420 kg

HYDRAULIC SPECIFICATIONS

Fluid	Mineral oil, other fluid on request
Contamination	ISO 4406:1999, class 18/16/13
Efficiency	Required filtration grade (B6...10 $\geq$ 75) (refer to data sheet Nr. 1.0-50/2)
Viscosity range	12 mm ² /s...320 mm ² /s
Fluid temperature	-20...+70 °C
Working pressure	$p_{\text{max}} = 350 \text{ bar}$ (connections A, B, X)
Max. volume flow	$Q_{\text{max}} = 400 \text{ l/min}$
Pilot oil volume	$Q_{\text{st}} = 3,7 \text{ cm}^3$

TYPE CODE

Slip-in cartridge		C		25		-		/		/		-		#			
Poppet spool		S															
Poppet spool with damping		D															
Spool		M															
Size 25																	
Area ratio:	1:1	10															
	1:1,2	12															
	1:2	20 *															
Opening pressure A $\rightarrow$ B:	0 bar (no spring)	0															
	0.5 bar	05															
	2.0 bar	20															
	3.0 bar	30															
	5.0 bar	50															
Orifice in poppet	spool: plugged	0															
	0.4 mm	0.4															
	0.6 mm	0.6															
	usw.																
Omit if ordered without orifice or plug																	
* Omitted as no provision for orifice made																	
Special features for poppet spools only:																	
Check function X connected to B port		C7															
additional seal on poppet spool		C5															
Design-Index (subject to change)																	

PARTS LIST

Position	Article	Description
10	160.2372	O-Ring ID 37,70x3,53
30	160.2203	O-Ring ID 20,29x2,62
40	49.0450	Cover-Seal PU 83 rd 45/38,8x6,1
50	49.0340	Cover-Seal PU 83 rd 34/29,5x5,1
60	53.4801	Spring 1,8x15,7x60,2
	53.6302	Spring 2,4x15,7x62,2
	53.7300	Spring 3x15,7x62
70	53.4300	Spring 1,6x15,7x57,3
	53.5800	Spring 2,25x15,7x59,5
	53.6800	Spring 2,6x15,7x62,3

Position	Article	Description
80	53.2800	Spring 1,1x15,2x57,6
	53.4301	Spring 1,7x15,7x56,2
	53.5900	Spring 2,1x15,7x60,5
90	53.6301	Spring 2,3x15,3x34
100	246.1003	Cyl. screw M4x4 VSM 213302
	117.1001	Orifice bing M4 / 0,4
	117.1003	Orifice bing M4 / 0,6
	117.1005	Orifice bing M4 / 0,8
	117.1007	Orifice bing M4 / 1,0
110	246.1003	Cyl. screw M4x4 VSM 213302

2 position, 2 way cartridge valve

- $Q_{max} = 700 \text{ l/min}$
- $p_{max} = 350 \text{ bar}$

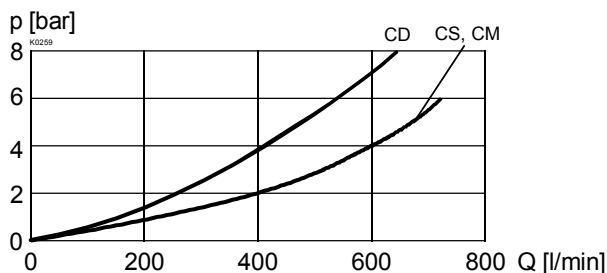
NG 32

ISO 7368

DIN 24342



Type: CS32-10/.. General application: Pressure relief valve	Symbol: Opening ratio: 1:1	 Opening pressure: A → B 0.5; 2.0; 5.0 bar	Type: CS32-10/...-C7 General application: Non-return valve	Symbol: Opening ratio: 1:1	 Opening pressure: A → B 0.5; 2.0; 5.0 bar
Type: CS32-12/.. General application: Spool valve Type: CS32-12/...-C5 General application: Poppet valve	Symbol: Opening ratio: 1:1,2	 Opening pressure: A → B 0.5; 2.0; 5.0 bar			
Type: CS32-20/.. General application: Spool valve Type: CS32-20/...-C5 General application: Poppet valve	Symbol: Opening ratio: 1:2	 Opening pressure: A → B 0.5; 2.0; 5.0 bar	Type: CM32-10/.. General application: Pressure reducing valve	Symbol: Opening ratio: 1:1	 Closing pressure: B → A 3.0 bar
Type: CD32-12/.. General application: Flow valve	Symbol: Opening ratio: 1:1,2	 Opening pressure: A → B 0.5; 2.0; 5.0 bar	Type: CD32-20/...- General application: Flow valve	Symbol: Opening ratio: 1:2	 Opening pressure: A → B 0.5; 2.0; 5.0 bar

CHARACTERISTICS Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$
 $\Delta p = f(Q)$ Pressure loss / flow characteristics

Opening pressure $B \rightarrow A = f(\text{Area ratio opening pressure } A \rightarrow B)$

Area ratio	Opening pressure [bar]	
	A $\rightarrow$ B	B $\rightarrow$ A
1:1,2	0.5	2.5
1:1,2	2.0	10.0
1:1,2	5.0	25.0
1:2	0.5	0.5
1:2	2.0	2.0
1:2	5.0	5.0

GENERAL SPECIFICATIONS

Design	2 way cartridge valve
Installation	any
Installation dimension	to ISO 7368 / DIN 24 342 refer to data sheet 2.13-1023
Ambient temp.	-20...+50 °C
Weight spool	m = 0,267 kg
Weight total	m = 0,895 kg

HYDRAULIC SPECIFICATIONS

Fluid	Mineral oil, other fluid on request
Contamination	ISO 4406:1999, class 18/16/13
Efficiency	Required filtration grade ($\beta_{6...10} \geq 75$) (refer to data sheet Nr. 1.0-50/2)
Viscosity range	12 mm ² /s ... 320 mm ² /s
Fluid temperature	-20...+70 °C
Working pressure	$p_{\max} = 350 \text{ bar}$ (Connections A, B, X)
Max. volume flow	$Q_{\max} = 700 \text{ l/min}$
Pilot oil volume	$Q_{st} = 7,8 \text{ cm}^3$

TYPE CODE

Slip-in cartridge		C		☐	32	-	☐	/	☐	/	☐	-	☐	#	☐
Poppet spool	☐ S														
Poppet spool with damping	☐ D														
Spool	☐ M														
Size 32															
Area ratio:	1:1 ☐ 10														
	1:1,2 ☐ 12														
	1:2 ☐ 20 *														
Opening pressure A $\rightarrow$ B:	0 bar (no spring) ☐ 0														
	0.5 bar ☐ 05														
	2.0 bar ☐ 20														
	3.0 bar ☐ 30														
	5.0 bar ☐ 50														
Orifice in poppet spool:	plugged ☐ 0														
	0.4 mm ☐ 0.4														
	0.6 mm ☐ 0.6														
	usw.														
Omit if ordered without orifice or plug															
* Omitted as no provision for orifice made															
Special features for poppet spools only:															
Check function X connected to B port	☐ C7														
additional seal on poppet spool	☐ C5														
Design-Index (subject to change)															

PARTS LIST

Position	Article	Description
10	160.2522	O-Ring ID 52,39x3,53
30	160.2266	O-Ring ID 26,64x2,62
40	49.0600	Cover-Seal PU 83 rd 60/53,8x6,1
50	49.0451	Cover-Seal PU 83 rd 45/40,5x5,1
60	53.5401	Spring 2x20,5x82,1
	53.6901	Spring 2,8x20,5x83,7
	53.7900	Spring 3,8x20,5x78,4
70	53.4900	Spring 1,8x20,5x79,4
	53.6902	Spring 2,6x20,5x79,3
	53.7403	Spring 3,4x20,5x77,5

Position	Article	Description
80	53.3900	Spring 1,5x20,5x70,2
	53.5901	Spring 2,2x20,5x67,3
	53.7404	Spring 3x20,5x63,5
90	52.6405	Spring 2,5x22,5x54
100	246.1003	Cyl. screw M4x4 VSM 213302
	117.1001	Orifice bing M4 / 0,4
	117.1003	Orifice bing M4 / 0,6
	117.1005	Orifice bing M4 / 0,8
	117.1007	Orifice bing M4 / 1,0
110	246.1003	Cyl. screw M4x4 VSM 213302

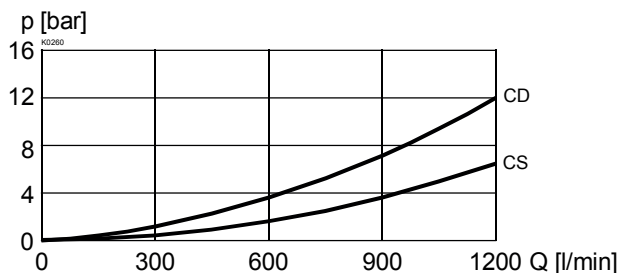
2 position, 2 way cartridge valve

- $Q_{max} = 1'200 \text{ l/min}$
- $p_{max} = 350 \text{ bar}$

NG 40
ISO 7368
DIN 24342



Type: CS40-10/.. General application: Pressuer relief valve	Symbol: Opening ratio: 1:1 Opening pressure: A → B 0.5; 2.0; 5.0 bar	 Opening pressure: A → B 0.5; 2.0; 5.0 bar
Type: CS40-10/..-C7 General application: Non-return valve	Symbol: Opening ratio: 1:1 Opening pressure: A → B 0.5; 2.0; 5.0 bar	 Opening pressure: A → B 0.5; 2.0; 5.0 bar
Type: CS40-12/.. General application: Spool valve Type: CS40-12/..-C5 General application: Poppet valve	Symbol: Opening ratio: 1:1,2 Opening pressure: A → B 0.5; 2.0; 5.0 bar	 Opening pressure: A → B 0.5; 2.0; 5.0 bar
Type: CS40-20/.. General application: Spool valve Type: CS40-20/..-C5 General application: Poppet valve	Symbol: Opening ratio: 1:2 Opening pressure: A → B 0.5; 2.0; 5.0 bar	 Opening pressure: A → B 0.5; 2.0; 5.0 bar
Type: CD40-12/.. General application: Flow valve	Symbol: Opening ratio: 1:1,2 Opening pressure: A → B 0.5; 2.0; 5.0 bar	 Opening pressure: A → B 0.5; 2.0; 5.0 bar
Type: CD40-20/.. General application: Flow valve	Symbol: Opening ratio: 1:2 Opening pressure: A → B 0.5; 2.0; 5.0 bar	 Opening pressure: A → B 0.5; 2.0; 5.0 bar

CHARACTERISTICS Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$
 $\Delta p = f(Q)$ Pressure loss / flow characteristics

Opening pressures $B \rightarrow A = f(\text{Area ratio opening pressure } A \rightarrow B)$

Area ratio	Opening pressure [bar]	
	A $\rightarrow$ B	B $\rightarrow$ A
1:1,2	0.5	2.5
1:1,2	2.0	10.0
1:1,2	5.0	25.0
1:2	0.5	0.5
1:2	2.0	2.0
1:2	5.0	5.0

GENERAL SPECIFICATIONS

Design	2 way cartridge valve
Installation	any
Installation dimension	to ISO 7368 / DIN 24342 refer to data sheet 2.13-1024
Ambient temp.	-20...+50 °C
Weight spool	$m = 0,485 \text{ kg}$
Weight total	$m = 1,650 \text{ kg}$

HYDRAULIC SPECIFICATIONS

Fluid	Mineral oil, other fluid on request
Contamination	ISO 4406:1999, class 18/16/13
Efficiency	Required filtration grade ($\beta_{6...10} \geq 75$) (refer to data sheet Nr. 1.0-50/2)
Viscosity range	12 mm^2/s ...320 mm^2/s
Fluid temperature	-20...+70 °C
Working pressure	$p_{\text{max}} = 350 \text{ bar}$ (Connections A, B, X)
Max. volume flow	$Q_{\text{max}} = 1'200 \text{ l/min}$
Pilot oil volume	$Q_{\text{st}} = 15.1 \text{ cm}^3$

TYPE CODE

Slip-in cartridge

Poppet spool ☐ S

Poppet spool with damping ☐ D

Size 40

Area ratio: 1:1 ☐ 10, 1:1,2 ☐ 12, 1:2 ☐ 20 *

Opening pressure A $\rightarrow$ B: 0 bar (no spring) ☐ 0, 0.5 bar ☐ 05, 2.0 bar ☐ 20, 5.0 bar ☐ 50

Orifice in poppet spool: plugged ☐ 0, 0.4 mm ☐ 0.4, 0.6 mm ☐ 0.6, usw.

Omit if ordered without orifice or plug

* Omitted as no provision for orifice made

Special features for poppet spools only:

Check function X connected to B port ☐ C7

additional seal on poppet spool ☐ C5

Design-Index (subject to change)

C ☐ 40 - ☐ / ☐ / ☐ - ☐ # ☐

PARTS LIST

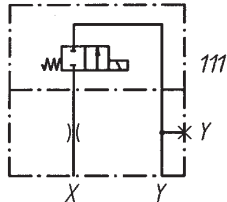
Position	Article	Description
10	160.2628	O-Ring ID 62,87x5,33
30	160.2328	O-Ring ID 32,92x3,53
40	49.0750	Cover-Seal PU 83 rd 75/65,6x8,8
50	49.0550	Cover-Seal PU 83 rd 55/48,8x6,1
60	53.6403	Spring 2,5x26x105
	53.7902	Spring 3,6x26x104,2
	53.8903	Spring 4,5x26x102,3
70	53.6404	Spring 2,5x26x96,5
	53.7901	Spring 3,6x26x94,7
	53.8400	Spring 4,25x26x98,1

Position	Article	Description
80	53.5400	Spring 2x26x83,6
	53.7402	Spring 3x26x82,7
	53.7903	Spring 3,6x26x83
100	246.1003	Cyl. screw M4x4 VSM 213302
	117.1001	Orifice bing M4 / 0,4
	117.1003	Orifice bing M4 / 0,6
	117.1005	Orifice bing M4 / 0,8
	117.1007	Orifice bing M4 / 1,0
110	246.1003	Cyl. screw M4x4 VSM 213302

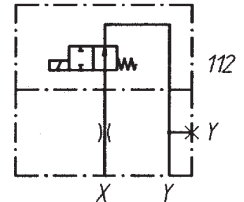
**Control cover
for directional function**
• $p_{\max} = 350 \text{ bar}$

NG 16
ISO 7368
DIN 24342

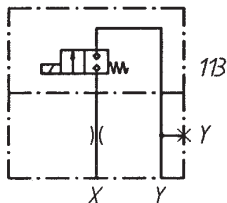
Pilot no. 111
Cover with 2/2-way
spool valve



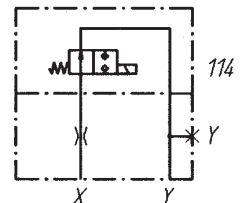
Pilot no. 112
Cover with 2/2-way
spool valve



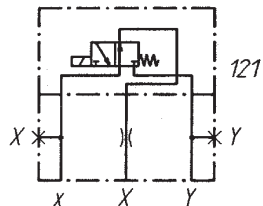
Pilot no. 113
Cover with 2/2-way
poppet valve



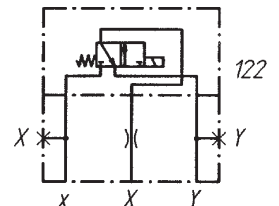
Pilot no. 114
Cover with 2/2-way
poppet valve



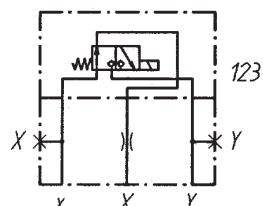
Pilot no. 121
Cover with 3/2-way
spool valve



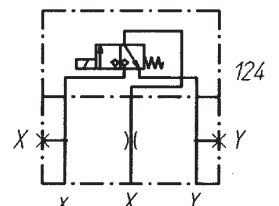
Pilot no. 122
Cover with 3/2-way
spool valve



Pilot no. 123
Cover with 3/2-way
poppet valve



Pilot no. 124
Cover with 3/2-way
poppet valve



GENERAL SPECIFICATIONS

Construction	Control cover for directional function
Mounting position	any
Installation dimension	see dimension to ISO 7368 / DIN 24 342 see data sheet 2.13-1021
Ambient temperature	-20 ... +50 °C
Fastening torque	M _D = 25 Nm (Qual. 8.8) for fixing screw

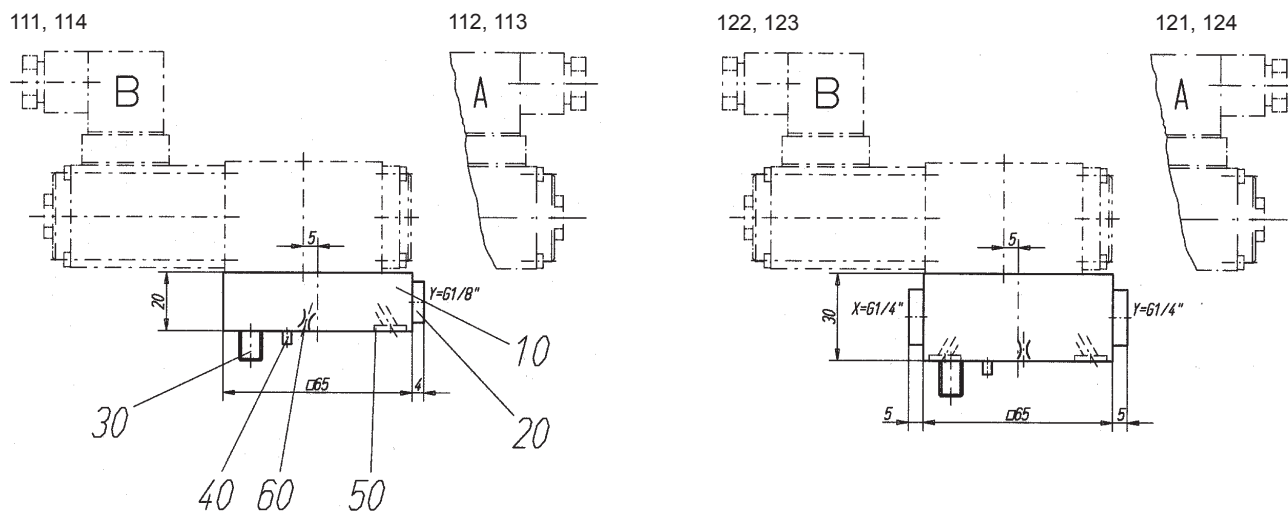
HYDRAULIC SPECIFICATIONS

Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 18/16/13 (Required filtration grade β ₆ ...10≥75) see data sheet no. 1.0-50/2
Viscosity range	12 mm ² /s bis 320 mm ² /s
Fluid temperature	-20 ... +70 °C
Operation pressure	p _{max} = 350 bar

TYPE CODE

Control cover		D 16		-		/		#	
Size 16									
Pilot no. 111...124									
Solenoid type for pilot valve									
Standard: 111, 112, 121, 122,		M							
113, 114, 123, 124,		S							
Standard nominal voltage U _N		12 VDC		G12		110 VAC		R110	
		24 VDC		G24		115 VAC		R115	
						230 VAC		R230	
Orifice in cover:		0.6 mm		0.6					
		1.0 mm		1.0		usw.			
Omit if without orifice									
Design-Index (Subject to change)									

DIMENSIONS



PILOT VALVES

Pilot operated valves: 111, 122	BM4Z40b	Data sheet 1.2-31
112, 121	BM4Z40a	Data sheet 1.2-31
113	BS22041a	Data sheet 1.11-2120
114	BS22040b	Data sheet 1.11-2120
123	BS32040b	Data sheet 1.11-2120
124	BS32041a	Data sheet 1.11-2120

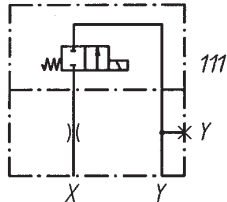
PARTS LIST

Position	Article	Description
10	63.0009 63.0026	Plate to 111, 112, 113, 114 Plate to other types
20	238.1405 238.2406	Locking screw VSTI G1/8" Locking screw VSTI G1/4"
30	246.4120 246.4130	Cylinder screw M8x20 DIN912 Cylinder screw M8x30 DIN912
40	221.2255	Pin Ø3x10 DIN1481
50	160.2061	O-Ring ID 6,02x2,62
60	118.2007 118.2008 118.2010 118.2011 118.2012	Orifice M5 / 0,6 x 5 Orifice M5 / 0,7 x 5 Orifice M5 / 0,8 x 5 Orifice M5 / 0,9 x 5 Orifice M5 / 1,0 x 5

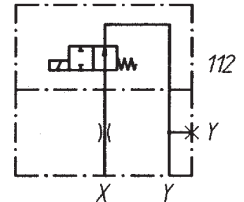
**Control cover
for directional function**
• $p_{\max} = 350 \text{ bar}$

NG 25
ISO 7368
DIN 24342

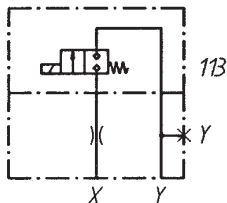
Pilot no. 111
Cover with 2/2-way
spool valve



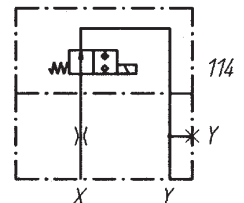
Pilot no. 112
Cover with 2/2-way
spool valve



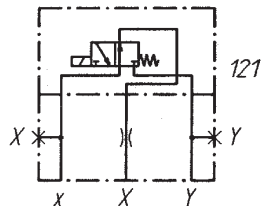
Pilot no. 113
Cover with 2/2-way
poppet valve



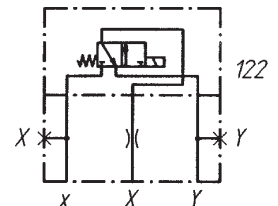
Pilot no. 114
Cover with 2/2-way
poppet valve



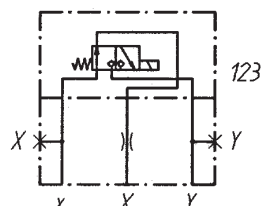
Pilot no. 121
Cover with 3/2-way
spool valve



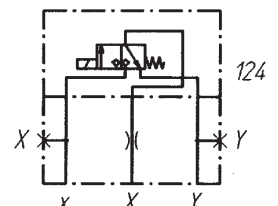
Pilot no. 122
Cover with 3/2-way
spool valve



Pilot no. 123
Cover with 3/2-way
poppet valve



Pilot no. 124
Cover with 3/2-way
poppet valve



GENERAL SPECIFICATIONS

Construction	Control cover for directional function
Mounting position	any
Installation dimension	see dimension to ISO 7368 / DIN 24 342 see data sheet 2.13-1022
Ambient temperature	-20...+50 °C
Fastening torque	M _D = 80 Nm (Qual. 8.8) for fixing screw

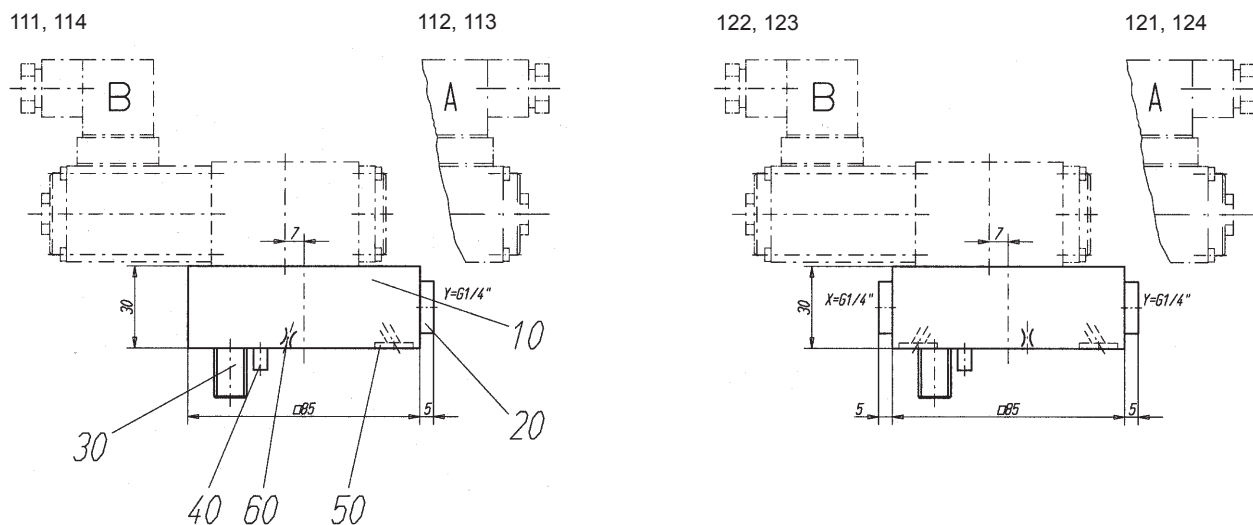
HYDRAULIC SPECIFICATIONS

Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 18/16/13 (Required filtration grade β ₆ ...10≥75) see data sheet no. 1.0-50/2
Viscosity range	12 mm ² /s bis 320 mm ² /s
Fluid temperature	-20...+70 °C
Operation pressure	p _{max} = 350 bar

TYPE CODE

Control cover	D	25		-		/	#	
Size 25								
Pilot no. 111...124								
Solenoid type for pilot valve								
111, 112, 121, 122,								
113, 114, 123, 124,								
Standard nominal voltage U _N	12 VDC	G12	110 VAC	R110				
	24 VDC	G24	115 VAC	R115				
			230 VAC	R230				
Orifice in cover:	0.6 mm	0.6						
	1.0 mm	1.0	usw.					
Omit without orifice								
Design-Index (Subject to change)								

DIMENSIONS



PILOT VALVES

Pilot operated valves:	111, 122	BM4Z40b	Data sheet 1.2-31
	112, 121	BM4Z40a	Data sheet 1.2-31
	113	BS22041a	Data sheet 1.11-2120
	114	BS22040b	Data sheet 1.11-2120
	123	BS32040b	Data sheet 1.11-2120
	124	BS32041a	Data sheet 1.11-2120

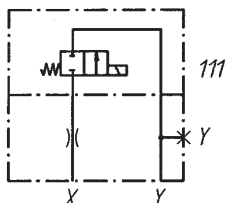
PARTS LIST

Position	Article	Description
10	63.1013 63.1011	Plate to 111, 112, 113, 114 Plate to other types
20	238.2406	Locking screw VSTI G1/4"
30	246.6135	Cylinder screw M12x35 DIN912
40	221.2470	Pin Ø5x16 DIN1481
50	160.2092	O-Ring ID 9,19x2,62
60	118.2007 118.2008 118.2010 118.2011 118.2012	Orifice M5 / 0,6 x 5 Orifice M5 / 0,7 x 5 Orifice M5 / 0,8 x 5 Orifice M5 / 0,9 x 5 Orifice M5 / 1,0 x 5

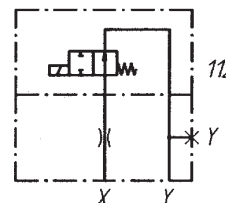
**Control cover
for directional function**
• $p_{\max} = 350 \text{ bar}$

NG 32
ISO 7368
DIN 24342

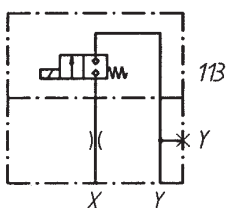
Pilot no. 111
Cover with 2/2-way
spool valve



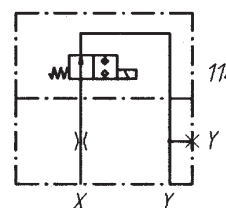
Pilot no. 112
Cover with 2/2-way
spool valve



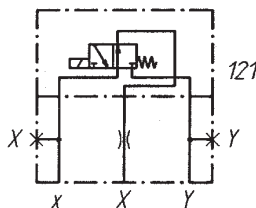
Pilot no. 113
Cover with 2/2-way
poppet valve



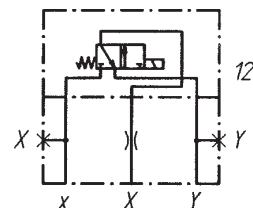
Pilot no. 114
Cover with 2/2-way
poppet valve



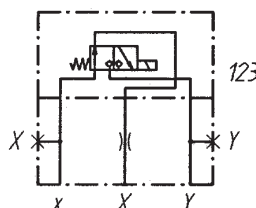
Pilot no. 121
Cover with 3/2-way
spool valve



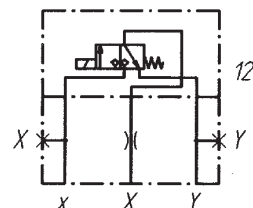
Pilot no. 122
Cover with 3/2-way
spool valve



Pilot no. 123
Cover with 3/2-way
poppet valve



Pilot no. 124
Cover with 3/2-way
poppet valve



HYDRAULIC SPECIFICATIONS

Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 18/16/13 (Required filtration grade $\beta_{6...10} \geq 75$) see data sheet no. 1.0-50/2
Viscosity range	12 mm ² /s bis 320 mm ² /s
Fluid temperature	-20...+70 °C
Operation pressure	p _{max} = 350 bar

						D	32		-			/		#	
Control cover															
Size 32															
Pilot no. 111...124															
Solenoid type for pilot valve															
Standard:							111, 112, 121, 122,	M							
							113, 114, 123, 124,	S							
Standard nominal voltage U _N							12 VDC	G12		110 VAC	R110				
							24 VDC	G24		115 VAC	R115				
										230 VAC	R230				
Orifice in cover:							0.8 mm	0.8							
							1.0 mm	1.0		usw.					
Omit if without orifice															
Design-Index (Subject to change)															

Technical drawings of two mechanical parts, 112 and 121, showing front and side views with dimensions and labels.

Part 112, 113: The front view shows a rectangular block with a central slot. Dimensions include a total width of 100 (labeled $\varnothing 100$), a slot width of 40, a slot depth of 30, and a total height of 60. A section line X-X is indicated. The side view (111, 114) shows a profile with a radius $R=61/4$ and a thickness of 5. Labels 30, 40, 60, and 50 are present.

Part 121, 124: The front view shows a similar rectangular block with a central slot. Dimensions include a total width of 100 (labeled $\varnothing 100$), a slot width of 40, a slot depth of 30, and a total height of 60. A section line X-X is indicated. The side view (122, 123) shows a profile with a radius $R=61/4$ and a thickness of 5. Labels 30, 40, 60, and 50 are present.

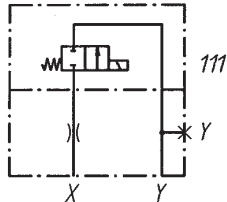
Pilot operated valves:	111, 122	WDMFA06-AB2	Data sheet	1.2-55
	112, 121	WDMFA06-AB1	Data sheet	1.2-55
	113	AS22061a	Data sheet	1.11-2140
	114	AS22060b	Data sheet	1.11-2140
	123	AS32060b	Data sheet	1.11-2140
	124	AS32061a	Data sheet	1.11-2140

Position	Article	Description
10	63.2030 63.2017	Plate to 111, 112, 113, 114 Plate to other types
20	238.2406	Locking screw VSTI G1/4"
30	246.7135	Cylinder screw M16x35 DIN912
40	221.2470	Pin Ø5x16 DIN1481
50	160.2092	O-Ring ID 9,19x2,62
60	118.2010 118.2011 118.2012 118.2020 118.2021	Orifice M5 / 0,8 x 5 Orifice M5 / 0,9 x 5 Orifice M5 / 1,0 x 5 Orifice M5 / 1,2 x 5 Orifice M5 / 1,5 x 5

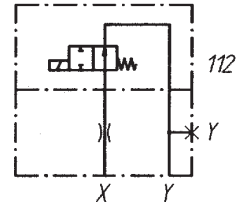
**Control cover
for directional function**
• $p_{\max} = 350 \text{ bar}$

NG 40
ISO 7368
DIN 24342

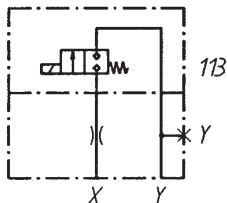
Pilot no. 111
Cover with 2/2-way
spool valve



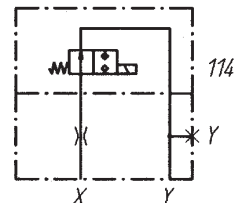
Pilot no. 112
Cover with 2/2-way
spool valve



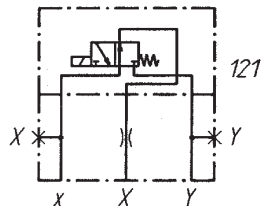
Pilot no. 113
Cover with 2/2-way
poppet valve



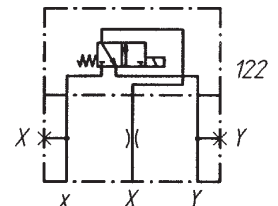
Pilot no. 114
Cover with 2/2-way
poppet valve



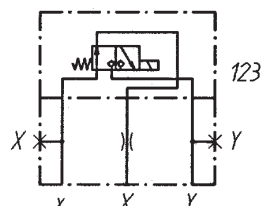
Pilot no. 121
Cover with 3/2-way
spool valve



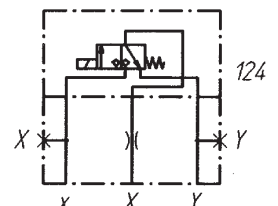
Pilot no. 122
Cover with 3/2-way
spool valve



Pilot no. 123
Cover with 3/2-way
poppet valve



Pilot no. 124
Cover with 3/2-way
poppet valve



GENERAL SPECIFICATIONS

Construction	Control cover for directional function
Mounting position	any
Installation dimension	see dimension to ISO 7368 / DIN 24342 see data sheet 2.13-1024
Ambient temperature	-20...+50 °C
Fastening torque	M _D = 370 Nm (qual. 8.8) for fixing screws

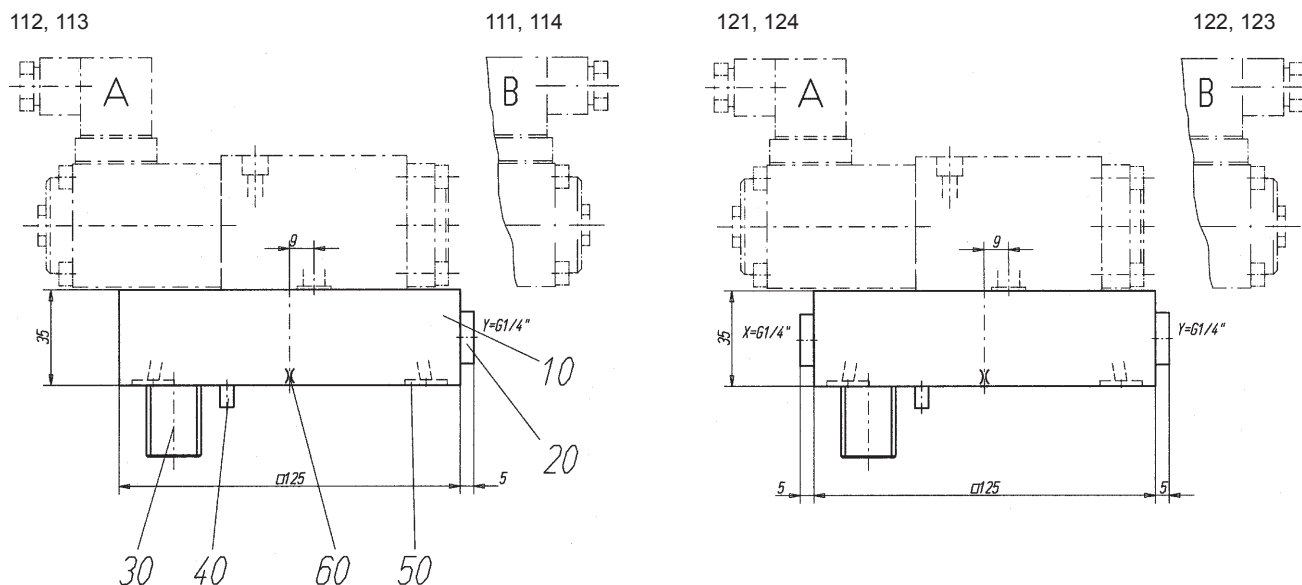
HYDRAULIC SPECIFICATIONS

Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 18/16/13 (Required filtration grade β ₆ ...10≥75) see data sheet no. 1.0-50/2
Viscosity range	12 mm ² /s bis 320 mm ² /s
Fluid temperature	-20...+70 °C
Operation pressure	p _{max} = 350 bar

TYPE CODE

Control cover		D 40		-		/		#	
Size 40									
Pilot no. 111...124									
Solenoid type for pilot valve									
Standard: 111, 112, 121, 122,		M							
113, 114, 123, 124,		S							
Standard nominal voltage U _N 12 VDC		G12		110 VAC		R110			
24 VDC		G24		115 VAC		R115			
				230 VAC		R230			
Orifice in cover: 0.8 mm		0.8							
1.0 mm		1.0		usw.					
Omit if without orifice									
Design-Index (Subject to change)									

DIMENSIONS



PILOT VALVES

Pilot operated valves:	111, 122	WDMFA06-AB2	Data sheet 1.2-55
	112, 121	WDMFA06-AB1	Data sheet 1.2-55
	113	AS22061a	Data sheet 1.11-2140
	114	AS22060b	Data sheet 1.11-2140
	123	AS32060b	Data sheet 1.11-2140
	124	AS32061a	Data sheet 1.11-2140

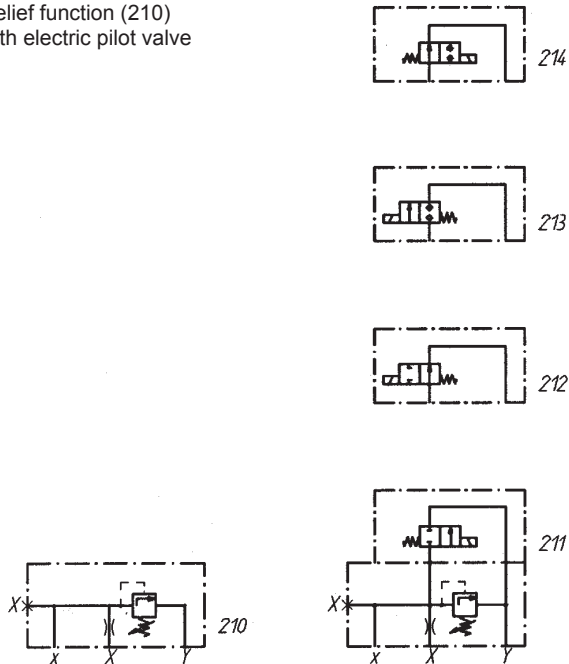
PARTS LIST

Position	Article	Description
10	63.3018 63.3015	Plate to 111, 112, 113, 114 Plate to other types
20	238.2406	Locking screw VSTI G1/4"
30	246.8140	Cyl. screw M20x40 DIN912
40	221.2470	Pin Ø5x16 DIN1481
50	160.2107	O-Ring ID 10,77x2,62
60	118.2010	Orifice M5 / 0,8 x 5
	118.2011	Orifice M5 / 0,9 x 5
	118.2012	Orifice M5 / 1,0 x 5
	118.2020	Orifice M5 / 1,2 x 5
	118.2021	Orifice M5 / 1,5 x 5

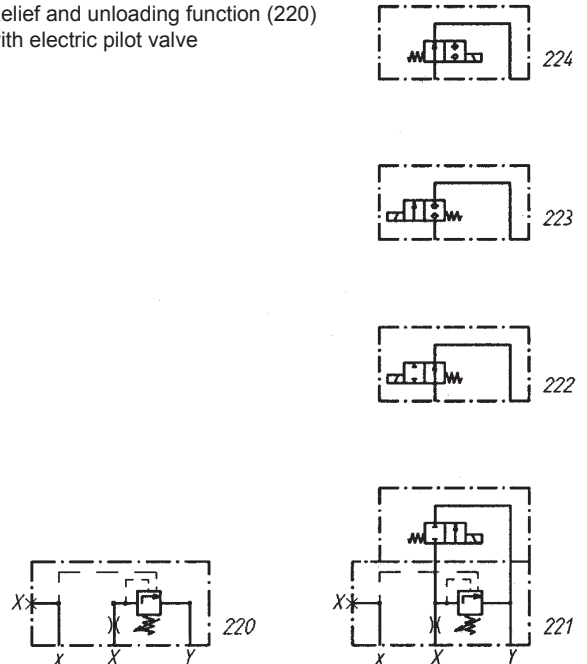
**Control cover
for pressure function**
• $p_{\max} = 350 \text{ bar}$

NG 16
ISO 7368
DIN 24342

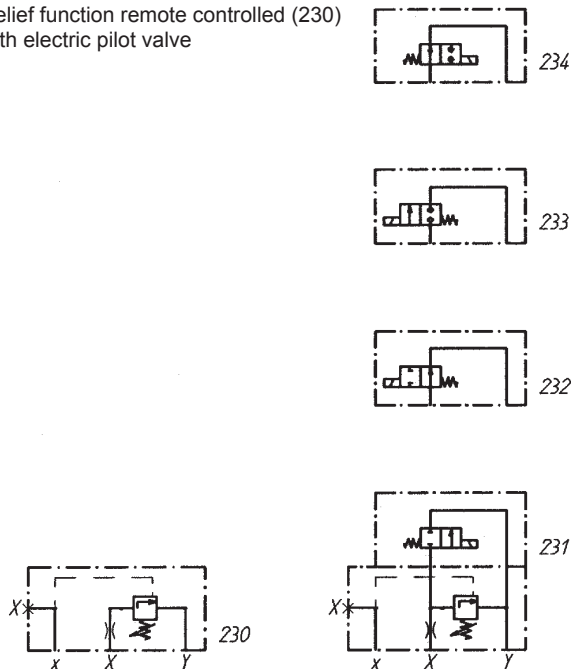
Relief function (210)
with electric pilot valve



Relief and unloading function (220)
with electric pilot valve



Relief function remote controlled (230)
with electric pilot valve



Proportional relief function (240)



GENERAL SPECIFICATIONS

Construction	Control cover for directional function
Mounting position	any
Installation dimension	see dimension to ISO 7368 / DIN 24342 see data sheet 2.13-1021
Ambient temperature	-20...+50 °C
Fastening torque	M _D = 25 Nm (qual. 8.8) for fixing screws

HYDRAULIC SPECIFICATIONS

Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 18/16/13 (Required filtration grade β ₆ ...10≥75) see data sheet no. 1.0-50/2
Viscosity range	12 mm²/s bis 320 mm²/s
Fluid temperature	-20...+70 °C
Operation pressure	p _{max} = 350 bar

TYPE CODE

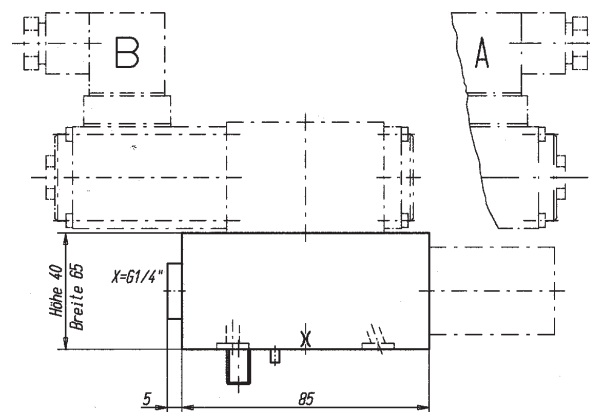
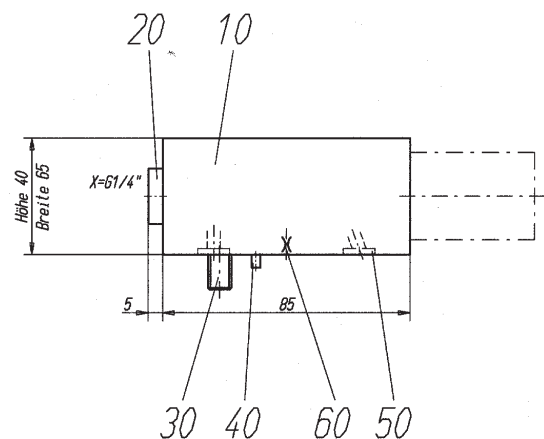
Control cover		D 16		-		/		#	
Size 16									
Pilot no. 210...240									
Solenoid type for pilot valve									
Standard:		211, 212, 221, 222, 231, 232		[M]					
		213, 214, 223, 224, 233, 234		[S]					
		not applicable at 240							
Standard nominal voltage U _N		12 VDC		[G12]		incl. 240		110 VAC	
		24 VDC		[G24]		incl. 240		115 VAC	
								230 VAC	
								[R110]	
								[R115]	
								[R230]	
Orifice in cover:		0.6 mm		[0.6]					
		1.0 mm		[1.0]		usw.			
Omit if without orifice									
Setting versions S, D, K, A (not applicable at cover240) and press. range from press. valve z.B								[D250]	
Design-Index (Subject to change)									

DIMENSIONS

210, 220, 230, 240

211, 221, 231, 214, 224, 234

212, 222, 232, 213, 223, 233



VALVES

Pilot operated valves:	211, 221, 231	BM4Z40b	Data sheet 1.2-31
	212, 222, 232	BM4Z40a	Data sheet 1.2-31
	213, 223, 233	BS22041a	Data sh. 1.11-2120
	214, 224, 234	BS22040b	Data sh. 1.11-2120
Pressure valves:	210...214	BS.PM22-Z36	Data sh. 2.1-543
	220...224	BY.PM22	Data sh. 2.1-544
	230...234	BX.PM22	Data sh. 2.1-544
	240	BDPPM22	Data sh. 2.3-540
Pressure ranges	210...214	63, 160, 350 [bar]	
from press. valves:	220...224	100, 315 [bar]	
	230...234	100, 315 [bar]	
	240	40, 100, 200, 315 [bar]	

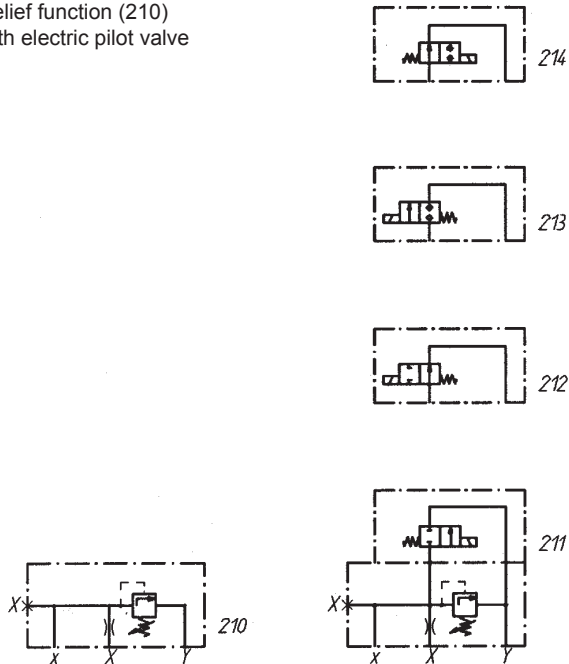
PARTS LIST

Position	Article	Description
10	63.0063 63.0064	Plate to 210, 220, 230, 240 Plate to other types
20	238.2406	Locking screw VSTI G1/4"
30	246.4140	Cyl. screw M8x40 DIN912
40	221.2255	Pin Ø3x10 DIN1481
50	160.2061	O-ring ID 6,02x2,62
60	118.2007	Orifice M5 / 0,6 x 5
	118.2008	Orifice M5 / 0,7 x 5
	118.2010	Orifice M5 / 0,8 x 5
	118.2011	Orifice M5 / 0,9 x 5
	118.2012	Orifice M5 / 1,0 x 5

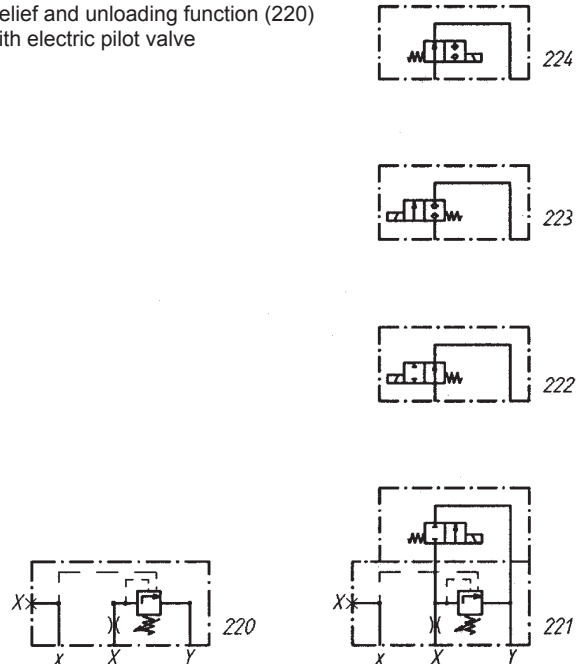
**Control cover
for pressure function**
• $p_{\max} = 350 \text{ bar}$

NG 25
ISO 7368
DIN 24342

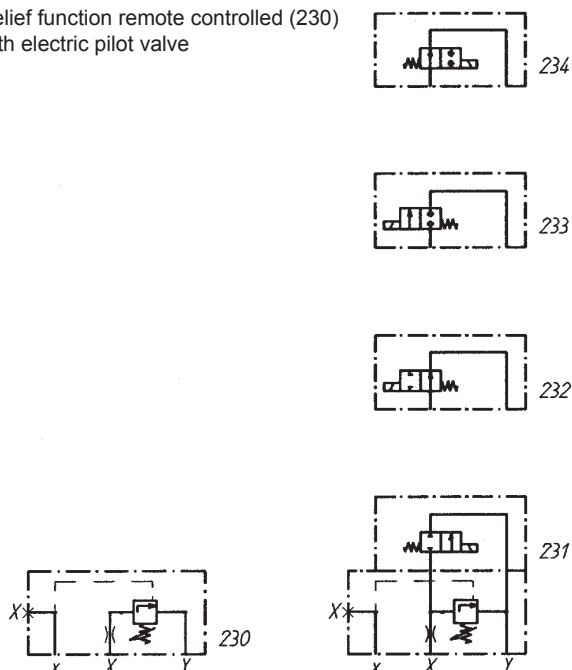
Relief function (210)
with electric pilot valve



Relief and unloading function (220)
with electric pilot valve



Relief function remote controlled (230)
with electric pilot valve



Proportional relief function (240)



GENERAL SPECIFICATIONS

Construction	Control cover for directional function
Mounting position	any
Installation dimension	see dimension to ISO 7368 / DIN 24342 see data sheet 2.13-1022
Ambient temperature	-20...+50 °C
Fastening torque	M _D = 80 Nm (qual. 8.8) for fixing screws

HYDRAULIC SPECIFICATIONS

Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 18/16/13 (Required filtration grade β ₆ ...10≥75) see data sheet no. 1.0-50/2
Viscosity range	12 mm ² /s bis 320 mm ² /s
Fluid temperature	-20...+70 °C
Operation pressure	p _{max} = 350 bar

TYPE CODE

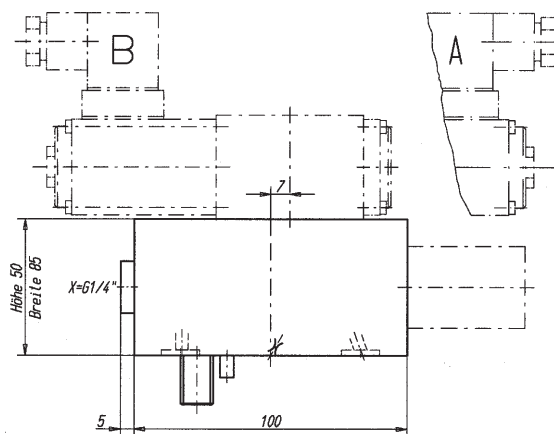
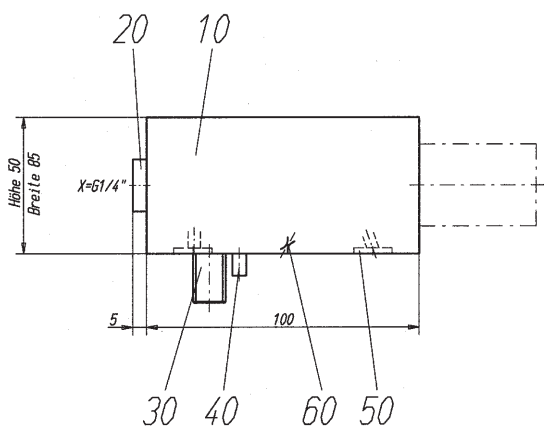
Control cover	D 25		-		/	-	#
Nominal size 25							
Solenoid type for pilot valve							
Solenoid type for pilot valve							
Standard:	211, 212, 221, 222, 231, 232	☐ M					
	213, 214, 223, 224, 233, 234	☐ S					
	not applicable at 240						
Standard nominal voltage U _N	12 VDC	☐ G12	incl. 240	110 VAC	☐ R110		
	24 VDC	☐ G24	incl. 240	115 VAC	☐ R115		
				230 VAC	☐ R230		
Orifice in cover:	0.6 mm	☐ 0.6					
	1.0 mm	☐ 1.0	usw.				
Omit if without orifice							
Setting versions S, D, K, A (not applicable at cover 240) and press. range from press. valve z.B.					☐ D250		
Design-Index (Subject to change)							

DIMENSIONS

210, 220, 230, 240

211, 221, 231, 214, 224, 234

212, 222, 232, 213, 223, 233



VALVES

Pilot operated valves:	211, 221, 231	BM4Z40b	Data sh. 1.2-31
	212, 222, 232	BM4Z40a	Data sh. 1.2-31
	213, 223, 233	BS22041a	Data sh. 1.11-2120
	214, 224, 234	BS22040b	Data sh. 1.11-2120
Pressure valves:	210...214	BS.PM22-Z36	Data sh. 2.1-543
	220...224	BY.PM22	Data sh. 2.1-544
	230...234	BX.PM22	Data sh. 2.1-544
	240	BDPPM22	Data sh. 2.3-540
Pressure ranges	210...214	63, 160, 350 [bar]	
from press. valves:	220...224	100, 315 [bar]	
	230...234	100, 315 [bar]	
	240	40, 100, 200, 315 [bar]	

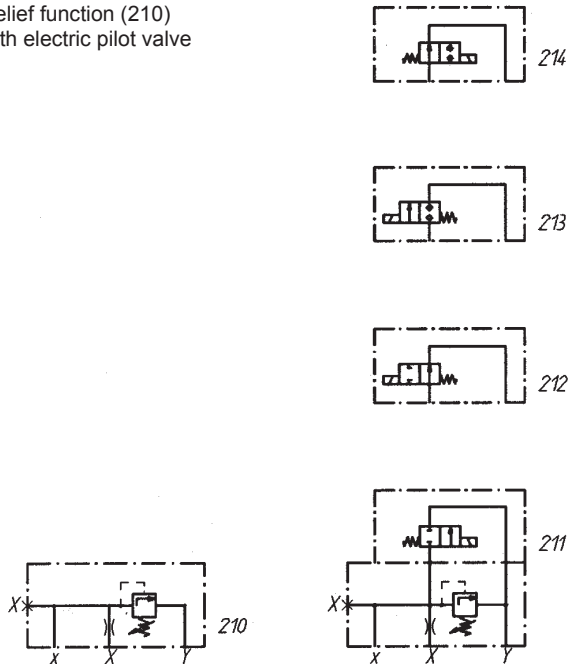
PARTS LIST

Position	Article	Description
10	63.1061 63.1062	Plate to 210, 220, 230, 240 Plates to other types
20	238.2406	Locking screw VST1 G1/4"
30	246.6155	Cyl. screw M12x55 DIN912
40	221.2470	Pin Ø5x16 DIN1481
50	160.2092	O-Ring ID 9,19x2,62
60	118.2007 118.2008 118.2010 118.2011 118.2012	Orifice M5 / 0,6 x 5 Orifice M5 / 0,7 x 5 Orifice M5 / 0,8 x 5 Orifice M5 / 0,9 x 5 Orifice M5 / 1,0 x 5

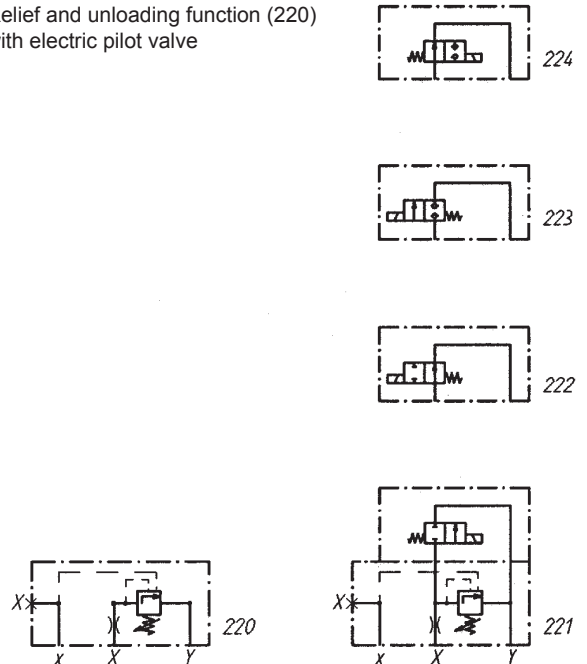
**Control cover
for pressure function**
• $p_{\max} = 350 \text{ bar}$

NG 32
ISO 7368
DIN 24342

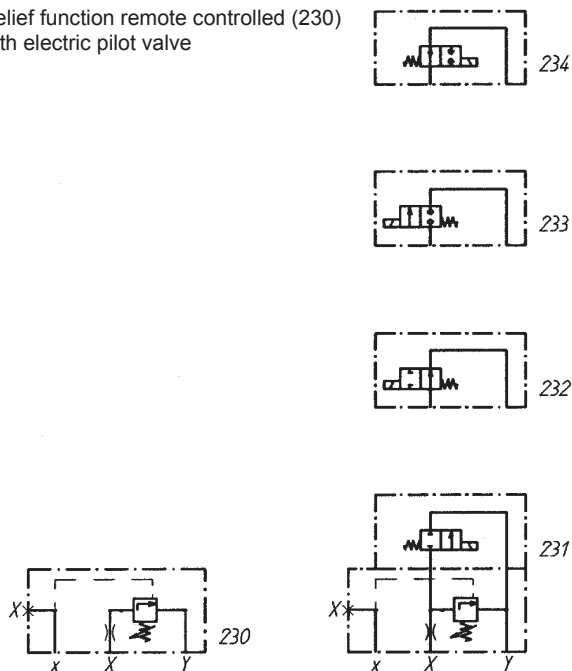
Relief function (210)
with electric pilot valve



Relief and unloading function (220)
with electric pilot valve



Relief function remote controlled (230)
with electric pilot valve



Proportional relief function (240)



GENERAL SPECIFICATIONS

Construction	Control cover for pressure function
Mounting position	any
Installation dimension	see dimension to ISO 7368 / DIN 24342 see data sheet 2.13-1023
Ambient temperature	-20...+50°C
Fastening torque	M _D = 190 Nm (qual. 8.8) for fixing screws

HYDRAULIC SPECIFICATIONS

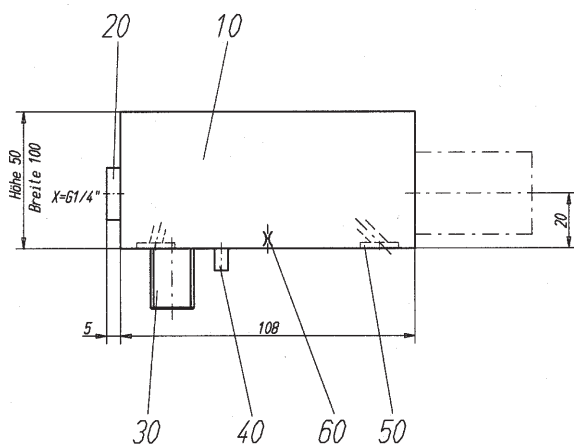
Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 18/16/13 (Required filtration grade β ₆ ...10≥75) see data sheet no. 1.0-50/2
Viscosity range	12 mm²/s bis 320 mm²/s
Fluid temperature	-20...+70°C
Operation pressure	p _{max} = 350 bar

TYPE CODE

Control cover		D 32		-		/		-		#	
Nominal size 32											
Pilot no. 210...240											
Solenoid type for pilot valve											
Standard:		211, 212, 221, 222, 231, 232		[M]							
		213, 214, 223, 224, 233, 234		[S]							
		not applicable to 240									
Standard nominal voltage U _N		12 VDC		[G12]		incl. 240		110 VAC		[R110]	
		24 VDC		[G24]		incl. 240		115 VAC		[R115]	
								230 VAC		[R230]	
Orifice in cover:		0.8 mm		[0.8]							
		1.0 mm		[1.0]		usw.					
Omit if without orifice											
Setting versions S, D, K, A (not applicable to cover 240) and press. range from press. valve z.B. [D250]											
Design-Index (Subject to change)											

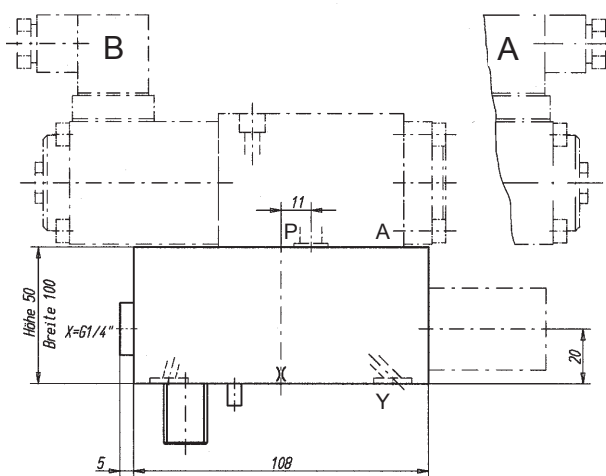
DIMENSIONS

210, 220, 230, 240



211, 221, 231, 214, 224, 234

212, 222, 232, 213, 223, 233



VALVES

Pilot operated valves:	211, 221, 231	WDMFA06-AB2	Data sh. 1.2-51
	212, 222, 232	WDMFA06-AB1	Data sh. 1.2-51
	213, 223, 233	AS22061a	Data sh. 1.11-2140
	214, 224, 234	AS22060b	Data sh. 1.11-2140
Pressure valves:	210...214	BS.PM22-Z36	Data sh. 2.1-543
	220...224	BY.PM22	Data sh. 2.1-544
	230...234	BX.PM22	Data sh. 2.1-544
	240	BDPPM22	Data sh. 2.3-540
Pressure ranges	210...214	63, 160, 350 [bar]	
from pressure	220...224	100, 315 [bar]	
valves:	230...234	100, 315 [bar]	
	240	20, 100, 200, 315, 350 [bar]	

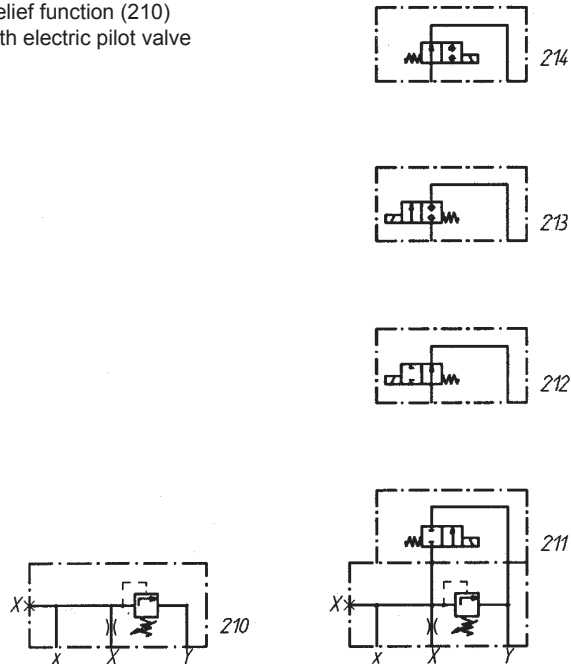
PARTS LIST

Position	Article	Description
10	63.2036 63.2037	Plate to 210, 220, 230, 240 Plate to other types
20	238.2406	Plug VSTI G1/4"
30	246.7155	Cyl. screw M16x55 DIN912
40	221.2470	Pin Ø5x16 DIN1481
50	160.2092	O-Ring ID 9,19x2,62
60	118.2010 118.2011 118.2012 118.2020 118.2021	Orifice M5 / 0,8 x 5 Orifice M5 / 0,9 x 5 Orifice M5 / 1,0 x 5 Orifice M5 / 1,2 x 5 Orifice M5 / 1,5 x 5

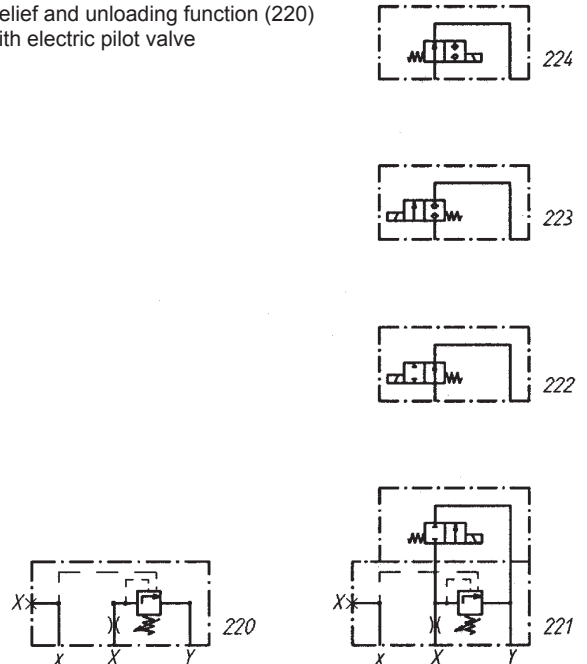
**Control cover
for pressure function**
• $p_{\max} = 350 \text{ bar}$

NG 40
ISO 7368
DIN 24342

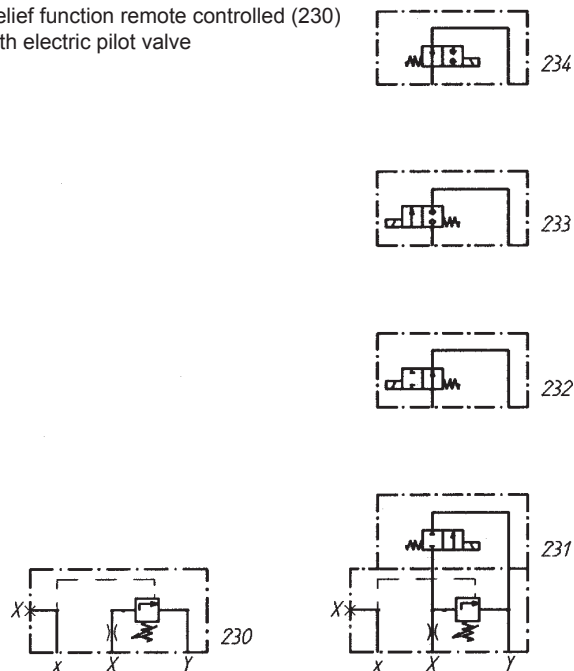
Relief function (210)
with electric pilot valve



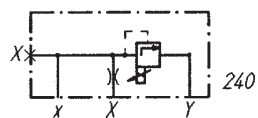
Relief and unloading function (220)
with electric pilot valve



Relief function remote controlled (230)
with electric pilot valve



Proportional relief function (240)



GENERAL SPECIFICATIONS

Construction	Control cover for pressure function
Mounting position	any
Installation dimension	see dimension to ISO 7368 / DIN 24342 see data sheet 2.13-1024
Ambient temperature	-20...+50°C
Fastening torque	M _D = 370 Nm (qual. 8.8) for fixing screws

HYDRAULIC SPECIFICATIONS

Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 18/16/13 (Required filtration grade β ₆ ...10≥75) see data sheet no. 1.0-50/2
Viscosity range	12 mm ² /s bis 320 mm ² /s
Fluid temperature	-20...+70°C
Operation pressure	p _{max} = 350 bar

TYPE CODE

Control cover

Nominal size 40

Pilot no. 210...240

Solenoid type for pilot valve

Standard: 211, 212, 221, 222, 231, 232 ☐ M
213, 214, 223, 224, 233, 234 ☐ S
not applicable to 240

Standard nominal voltage U_N 12 VDC ☐ G12 incl. 240 110 VAC ☐ R110
24 VDC ☐ G24 incl. 240 115 VAC ☐ R115
230 VAC ☐ R230

Orifice in cover: 0.8 mm ☐ 0.8
1.0 mm ☐ 1.0 usw.

Omit if without orifice

Setting versions S, D, K, A (not applicable to cover240) and press. range from press. valve z.B. ☐ D250

Design-Index (Subject to change)

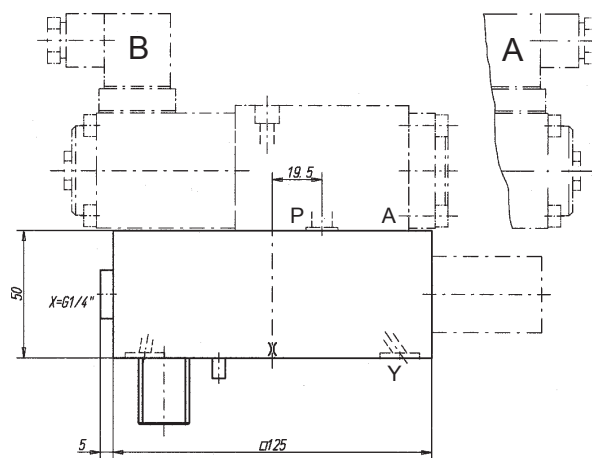
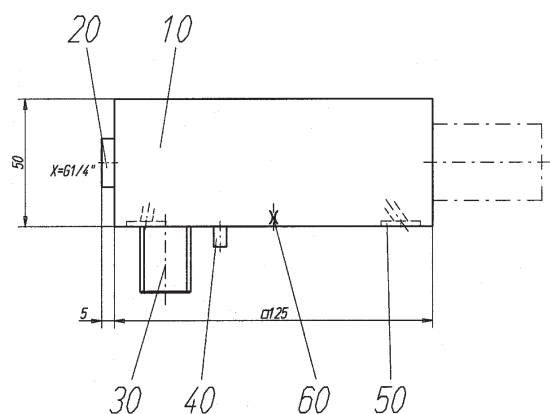
D 40 ☐ - ☐ ☐ / ☐ - ☐ # ☐

DIMENSIONS

210, 220, 230, 240

211, 221, 231, 214, 224, 234

212, 222, 232, 213, 223, 233



VALVES

Pilot operated valves:	211, 221, 231	WDMFA06-AB2	Data sh. 1.2-51
	212, 222, 232	WDMFA06-AB1	Data sh. 1.2-51
	213, 223, 233	AS22061a	Data sh. 1.11-2140
	214, 224, 234	AS22060b	Data sh. 1.11-2140
Pressure valves:	210...214	BS.PM22-Z36	Data sh. 2.1-543
	220...224	BY.PM22	Data sh. 2.1-544
	230...234	BX.PM22	Data sh. 2.1-544
	240	BDPPM22	Data sh. 2.3-540
Pressure ranges for pressure valves:	210...214	63, 160, 350 [bar]	
	220...224	100, 315 [bar]	
	230...234	100, 315 [bar]	
	240	40, 100, 200, 315 [bar]	

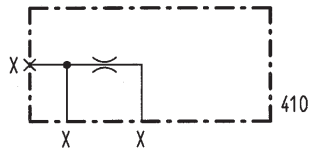
PARTS LIST

Position	Article	Description
10	63.3021 63.3022	Plate to 210, 220, 230, 240 Plate to other types
20	238.2406	Plug VSTI G1/4"
30	246.8160	Cyl. screw M20x60 DIN912
40	221.2470	Pin Ø5x16 DIN1481
50	160.2107	O-Ring ID 10,77x2,62
60	118.2010 118.2011 118.2012 118.2020 118.2021	Orifice M5 / 0,8 x 5 Orifice M5 / 0,9 x 5 Orifice M5 / 1,0 x 5 Orifice M5 / 1,2 x 5 Orifice M5 / 1,5 x 5

**Control cover
for check function**
• $p_{\max} = 350 \text{ bar}$

NG 16
ISO 7368
DIN 24342

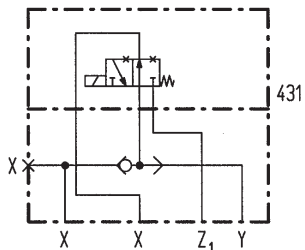
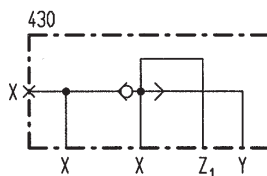
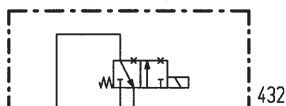
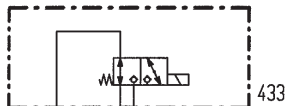
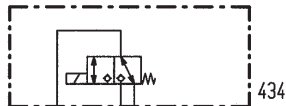
Control cover for check
function (410)



Blind cover for check
function in combination with
CS16-10/...-C7 (420)



Control cover with integrated
shuttle valve (430) and electric
pilot valve (431... 434)



GENERAL SPECIFICATIONS

Construction	Control cover for check function
Mounting position	any
Installation dimension	see dimension to ISO 7368 / DIN 24342 see data sheet 2.13-1021
Ambient temperature	-20...+50 °C
Fastening torque	M _D = 25 Nm (qual. 8.8) for fixing screws

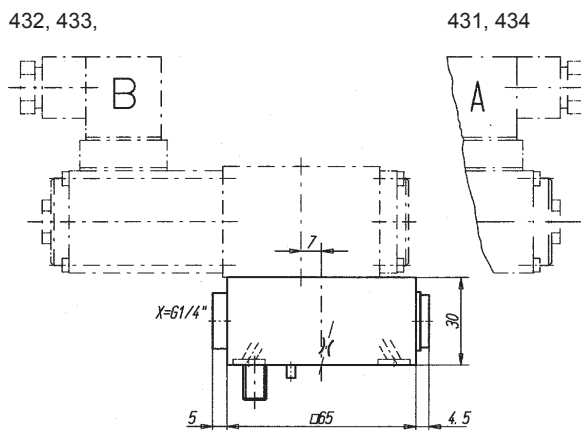
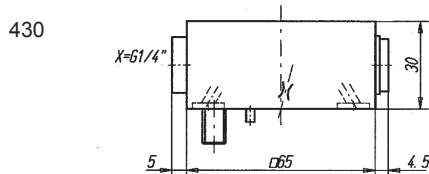
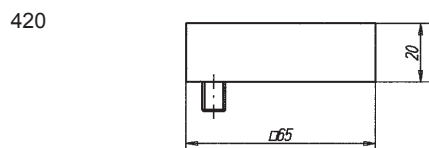
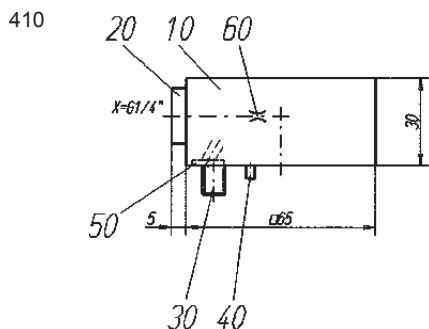
HYDRAULIC SPECIFICATIONS

Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 18/16/13 (Required filtration grade $\beta_{6...10} \geq 75$) see data sheet no. 1.0-50/2
Viscosity range	12 mm ² /s bis 320 mm ² /s
Fluid temperature	-20...+70 °C
Operation pressure	p _{max} = 350 bar

TYPE CODE

Control cover		D		16		-		/		#	
Nominal size 16											
Pilot no. 410...434											
Solenoid type for pilot valve											
Standard:	431, 432	M									
	433, 434	S									
Standard nominal voltage U_N		12 VDC	G12	110 VAC	R110						
	24 VDC	G24		115 VAC	R115						
				230 VAC	R230						
Orifice in cover:	0.6 mm	0.6									
	1.0 mm	1.0	usw.								
Omit if without orifice											
Design-Index (Subject to change)											

DIMENSIONS



PARTS LIST

Position	Article	Description
10	63.0016 63.0005 63.0024 63.0030	Plate to 410 Plate to 420 Plate to 430 Plate to 431, 432, 433, 434
20	238.2406	Locking screw VSTI G1/4"
30	246.4120 246.4130	Cyl. screw M8x20 DIN912 Cyl. screw M8x30 DIN912
40	221.2255	Pin $\varnothing$ 3x10 DIN1481
50	160.2061	O-ring ID 6,02x2,62
60	118.2007 118.2008 118.2010 118.2011 118.2012	Orifice M5 / 0,6 x 5 Orifice M5 / 0,7 x 5 Orifice M5 / 0,8 x 5 Orifice M5 / 0,9 x 5 Orifice M5 / 1,0 x 5

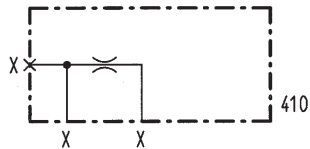
PILOT OPERATED VALVES

Pilot operated valves: 431	BM4Z40a	Data sh. 1.2-31
432	BM4Z40b	Data sh. 1.2-31
433	BS32040b	Data sh. 1.11-2120
434	BS32041a	Data sh. 1.11-2120

**Control cover
for check function**
• $p_{\max} = 350 \text{ bar}$

NG 25
ISO 7368
DIN 24342

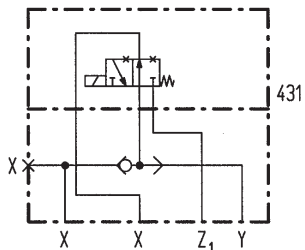
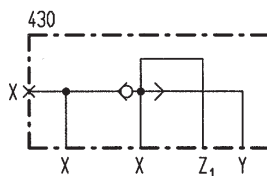
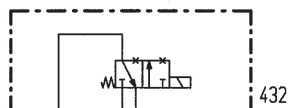
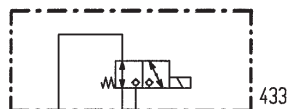
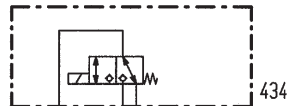
Control cover for check
function (410)



Blind cover for check
function in combination with
CS25-10/...-C7 (420)



Control cover with integrated
shuttle valve (430) and
electric pilot valve (431... 434)



HYDRAULIC SPECIFICATIONS

Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 18/16/13 (Required filtration grade $\beta_{6...10} \geq 75$) see data sheet no. 1.0-50/2
Viscosity range	12 mm ² /s bis 320 mm ² /s
Fluid temperature	-20...+70 °C
Operation pressure	p _{max} = 350 bar

Control cover		D	25		-		/		#
Nominal size 25									
Pilot no. 410...434									
Solenoid type for pilot valve									
Standard:	431, 432	M							
	433, 434	S							
Standard nominal voltage U _N									
	12 VDC	G12		110 VAC	R110				
	24 VDC	G24		115 VAC	R115				
				230 VAC	R230				
Orifice in cover:	0.6 mm	0.6							
	1.0 mm	1.0	usw.						
Omit if without orifice									
Design-Index (Subject to change)									

410

20 10 60

$X=61/4''$

30 40

50 5 Ø65 30

420

50 5 Ø65 30

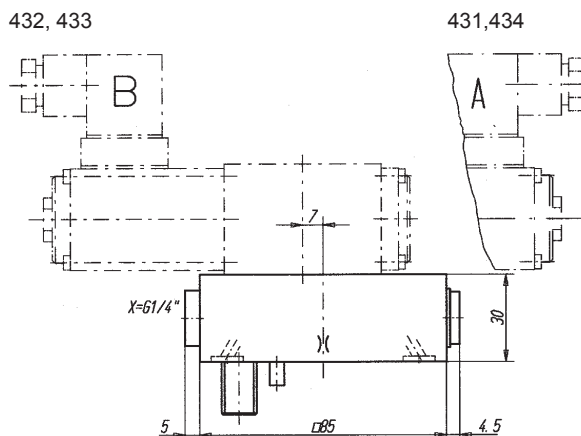
430

$X=61/4''$

$Y=61/4''$

50 5 Ø65 30

Pilot operated valves: 431	BM4Z40a	Data sh. 1.2-31
432	BM4Z40b	Data sh. 1.2-31
433	BS32040b	Data sh. 1.11-2120
434	BS32041a	Data sh. 1.11-2120

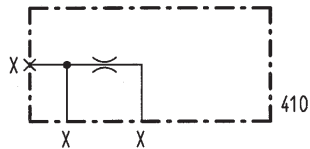


Position	Article	Description
10	63.1016 63.1006 63.1038 63.1010	Plate to 410 Plate to 420 Plate to 430 Plate to 431, 432, 433, 434
20	238.2406	Locking screw VSTI G1/4"
30	246.6135	Cyl. screw M12x35 DIN912
40	221.2470	Pin Ø5x16 DIN1481
50	160.2092	O-Ring ID 9,19x2,62
60	118.2007 118.2008 118.2010 118.2011 118.2012	Orifice M5 / 0,6 x 5 Orifice M5 / 0,7 x 5 Orifice M5 / 0,8 x 5 Orifice M5 / 0,9 x 5 Orifice M5 / 1,0 x 5

**Control cover
for check function**
• $p_{\max} = 350 \text{ bar}$

NG 32
ISO 7368
DIN 24342

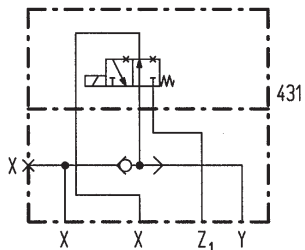
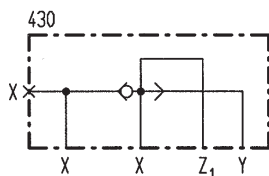
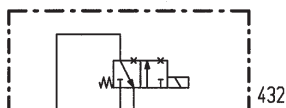
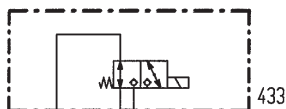
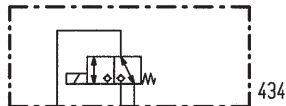
Control cover for check
function (410)



Blind cover for check
function in combination with
CS32-10/...-C7 (420)



Control cover with integrated
shuttle valve (430) and electric
pilot valve (431... 434)



GENERAL SPECIFICATIONS

Construction	Control cover for check function
Mounting position	any
Installation dimension	see dimension to ISO 7368 / DIN 24342 see data sheet 2.13-1023
Ambient temperature	-20...+50 °C
Fastening torque	M _D = 190 Nm (qual. 8.8) for fixing screws

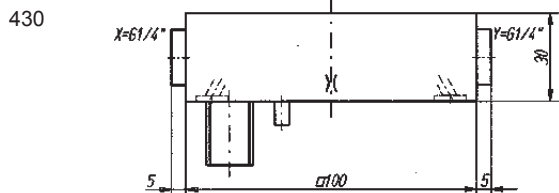
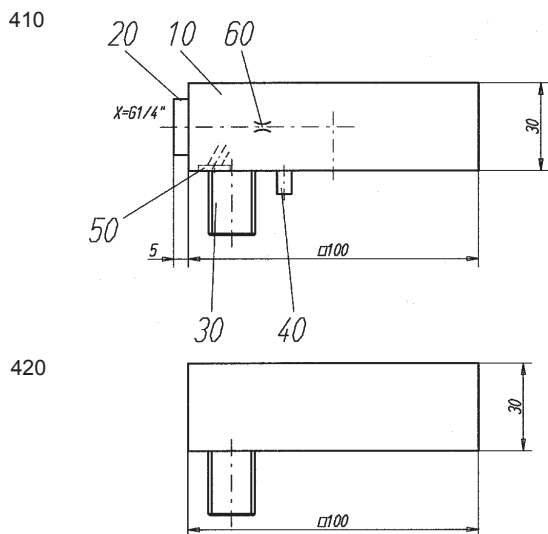
HYDRAULIC SPECIFICATIONS

Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 18/16/13 (Required filtration grade β ₆ ...10 ≥ 75) see data sheet no. 1.0-50/2
Viscosity range	12 mm ² /s bis 320 mm ² /s
Fluid temperature	-20...+70 °C
Operation pressure	p _{max} = 350 bar

TYPE CODE

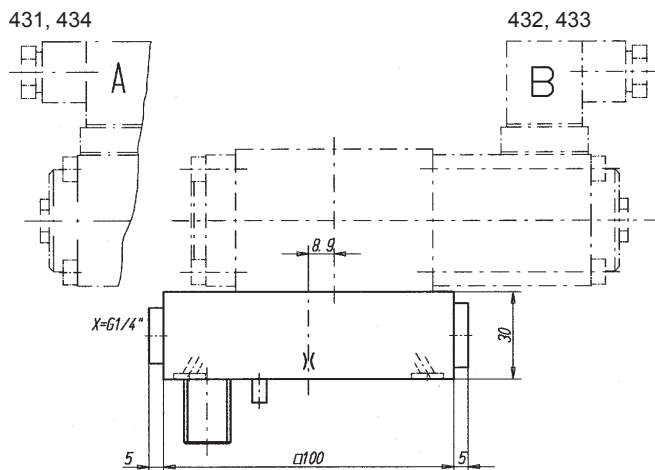
Control cover		D 32		-		/		#	
Nominal size 32									
Pilot no. 410...434									
Solenoid type for pilot valve									
Standard: 431, 432		M							
433, 434		S							
Standard nominal voltage U _N		12 VDC		G12		110 VAC		R110	
		24 VDC		G24		115 VAC		R115	
						230 VAC		R230	
Orifice in cover:		0.8 mm		0.8					
		1.0 mm		1.0		usw.			
Omit if without orifice									
Design-Index (Subject to change)									

DIMENSIONS



VALVES

Pilot operated valves:	431	WDMFA06-AB1	Data sh. 1.2-55
	432	WDMFA06-AB2	Data sh. 1.2-55
	433	AS32060b	Data sh. 1.11-2140
	434	AS32061a	Data sh. 1.11-2140



PARTS LIST

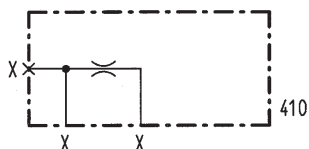
Position	Article	Description
10	63.2008	Plate to 410
	63.2000	Plate to 420
	63.2029	Plate to 430
	63.2032	Plate to 431, 432, 433, 434
20	238.2406	Locking screw VSTI G1/4"
	238.3402	Locking screw VSTI G3/8"
30	246.7135	Cyl. screw M16x35 DIN912
40	221.2470	Pin Ø5x16 DIN1481
50	160.2092	O-Ring ID 9,19x2,62
60	118.2010	Orifice M5 / 0,8 x 5
	118.2011	Orifice M5 / 0,9 x 5
	118.2012	Orifice M5 / 1,0 x 5
	118.2020	Orifice M5 / 1,2 x 5
	118.2021	Orifice M5 / 1,5 x 5

**Control cover
for check function**

• $p_{\max} = 350 \text{ bar}$

NG 40
ISO 7368
DIN 24342

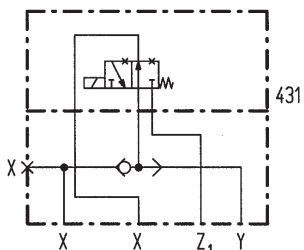
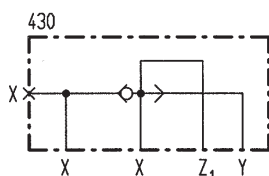
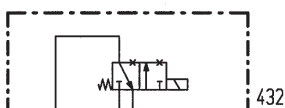
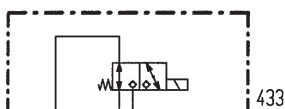
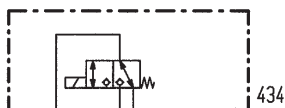
Control cover for check
function (410)



Blind cover for check
function in combination with
CS40-10/...-C7 (420)



Control cover with integrated
shuttle valve (430) and electric
pilot valve (431... 434)



GENERAL SPECIFICATIONS

Construction	Control cover for check function
Mounting position	any
Installation dimension	see dimension to ISO 7368 / DIN 24342 see data sheet 2.13-1024
Ambient temperature	-20...+50 °C
Fastening torque	M _D = 370 Nm (qual. 8.8) for fixing screws

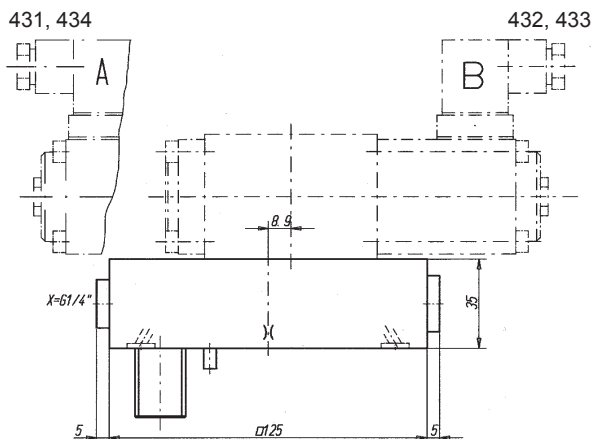
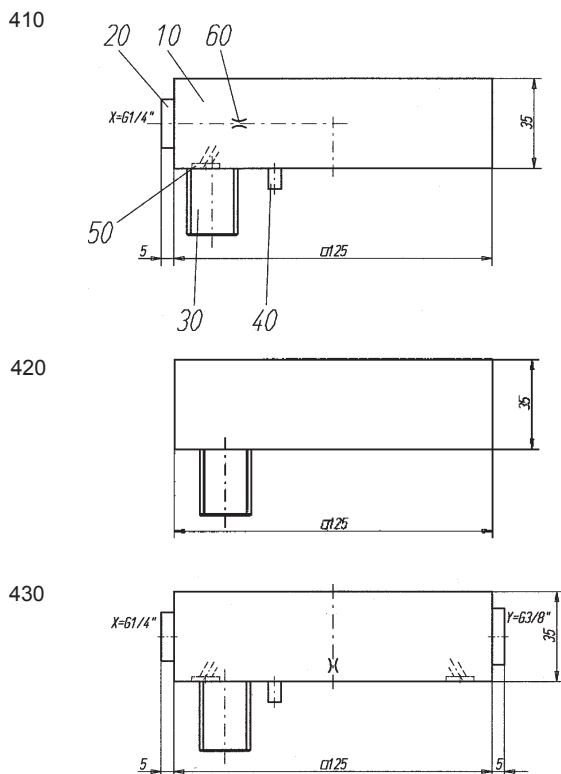
HYDRAULIC SPECIFICATIONS

Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 18/16/13 (Required filtration grade β ₆ ...10≥75) see data sheet no. 1.0-50/2
Viscosity range	12 mm ² /s bis 320 mm ² /s
Fluid temperature	-20...+70 °C
Operation pressure	p _{max} = 350 bar

TYPE CODE

Control cover		D 40		-		/		#	
Nominal size 40									
Pilot no. 410...434									
Solenoid type for pilot valve									
Standard: 431, 432		M							
433, 434		S							
Standard nominal voltage U _N		12 VDC		G12		110 VAC		R110	
		24 VDC		G24		115 VAC		R115	
						230 VAC		R230	
Orifice in cover:		0.8 mm		0.8					
		1.0 mm		1.0		usw.			
Omit if without orifice									
Design-Index (Subject to change)									

DIMENSIONS



PARTS LIST

Position	Article	Description
10	63.3001 63.3005 63.3010 63.3017	Plate to 410 Plate to 420 Plate to 430 Plate to 431, 432, 433, 434
20	238.2406 238.3402	Locking screw VSTI G1/4" Locking screw VSTI G3/8"
30	246.8140	Cyl. screw M20x40 DIN912
40	221.2470	Pin Ø5x16 DIN1481
50	160.2107	O-Ring ID 10,77x2,62
60	118.2010 118.2011 118.2012 118.2020 118.2021	Orifice M5 / 0,8 x 5 Orifice M5 / 0,9 x 5 Orifice M5 / 1,0 x 5 Orifice M5 / 1,2 x 5 Orifice M5 / 1,5 x 5

VALVES

Pilot operated valves:	431	WDMFA06-AB1	Data sh. 1.2-51
	432	WDMFA06-AB2	Data sh. 1.2-51
	433	AS32060b	Data sh. 1.11-2140
	434	AS32061a	Data sh. 1.11-2140