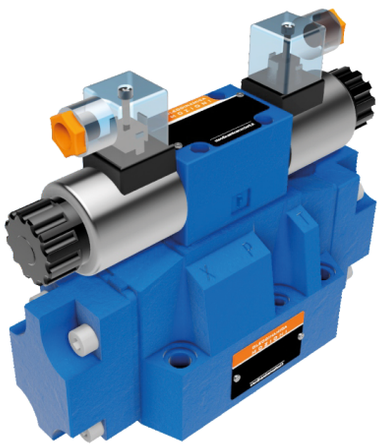
WEH

SOLENOID PILOT OPERATED DIRECTIONAL CONTROL VALVES

WEH SERIES ARE SOLENOID PILOT OPERATED SPOOL TYPE VALVES.
THIS SERIES ARE USED TO CONTROL THE START, STOP AND DIRECTION OF FLOW.



TECHNICAL DATA

SIZE		16	25	32
MAX. FLOW RATE (L/MIN)		300	650	1100
OPERATING PRESSURE (MPA)	A, B, P PORTS	35		
	T PORT	16		
MIN. PILOT PRESSURE (MPA)		0.45 – 1.3	0.45 – 1	0.45 – 1
WEIGHT (KG)		9.5	18	38.5
VALVE BODY (MATERIAL)		CASTING PHOSPHATING SURFACE		

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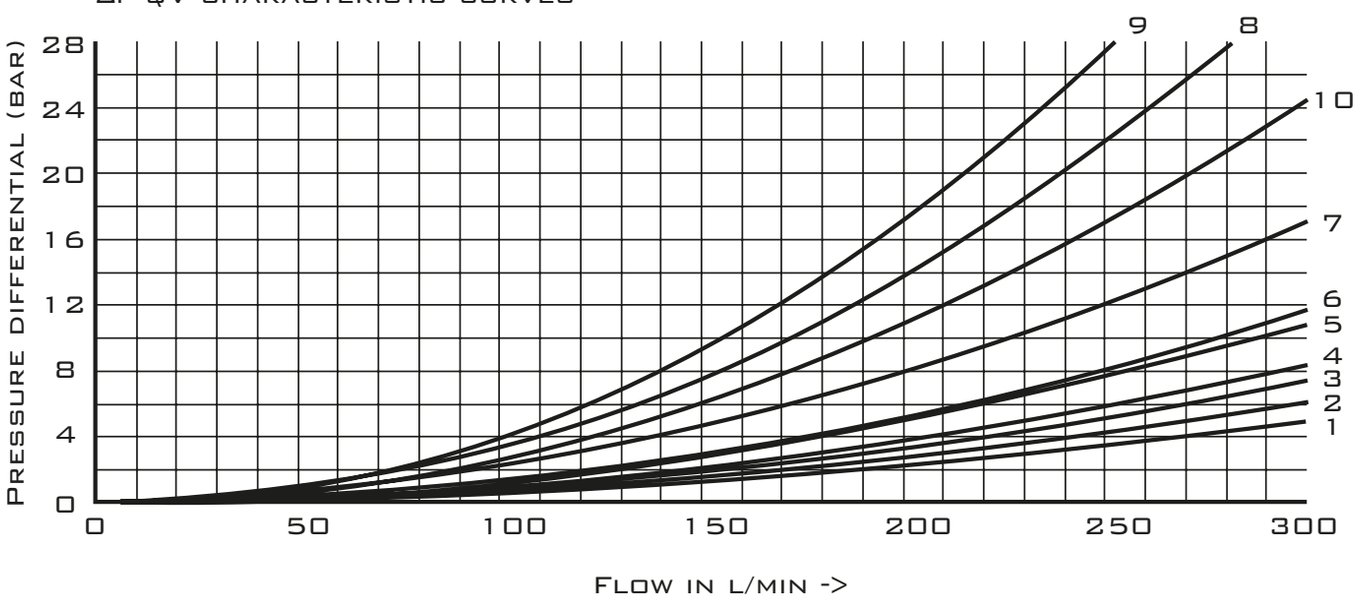
Characteristic curves 4WEH16...

Δp-qV characteristic curves



Symbol	Spool position				Zero position		
	P — A	P — B	A — T	B — T	P — T	A — T	B — T
D, E, Y	1	1	3	3			
F	1	2	5	5	4	3	—
G	4	1	5	5	7	—	—
C, H	1	1	5	6	2	4	4
K, J	2	2	6	6	—	3	—
L	2	2	5	4	—	3	—
M	1	1	3	4			
P	2	1	3	6	5	—	—
Q	1	1	6	6			
R	2	4	7	—			
S	3	3	3	—	9	—	—
T	4	1	5	5	7	—	—
U	2	2	3	4			6
V, Z	1	1	6	6	10	8	8
W	1	1	3	4			

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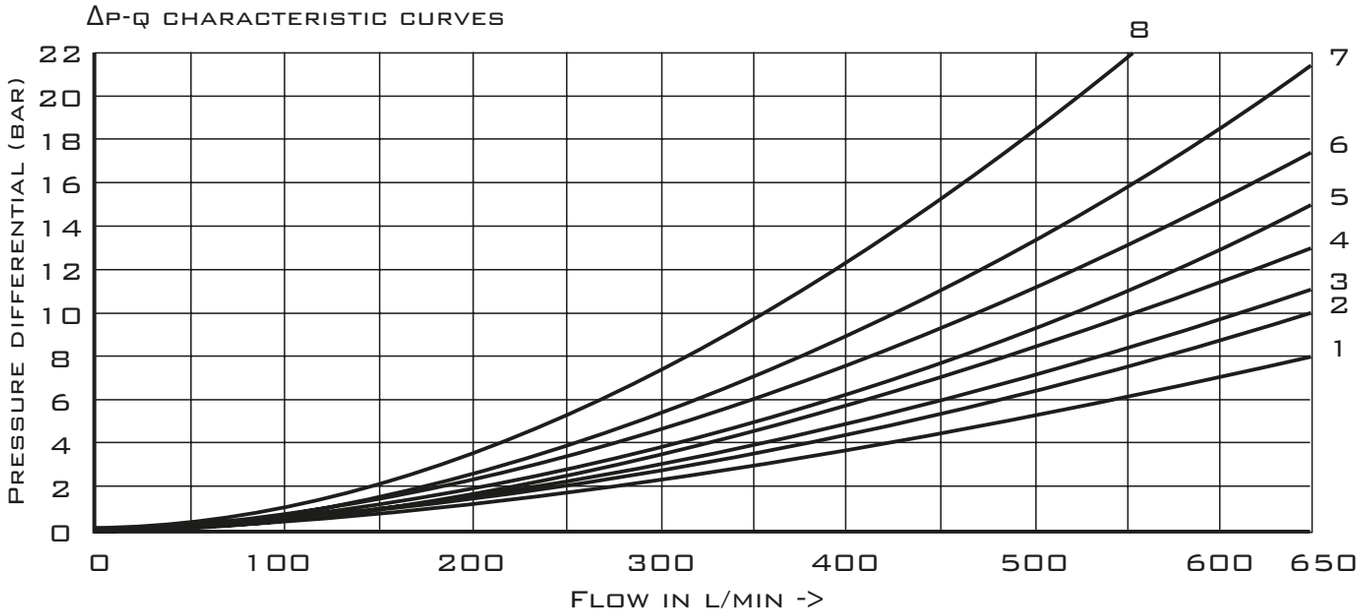
CHARACTERISTIC CURVES 4WEH25...

Δp-q CHARACTERISTIC CURVES



7 CURVE – SPOOL SYMBOL "G" IN CENTRAL POSITION P -> T;
8 CURVE – SPOOL SYMBOL "T" IN CENTRAL POSITION P -> T

SYMBOL	SPOOL POSITION				ZERO POSITION		
	P — A	P — B	A — T	B — T	A — T	B — T	P — T
E, Y, D	1	1	3	4			
F	1	1	2	4	2	—	5
G, T	1	1	2	5	—	—	7
H	1	1	2	5	2	2	4
C	1	1	2	5			
J	1	1	2	5	6	5	—
K	1	1	2	5			
L	1	1	2	4	5	—	—
M	1	1	3	4			
P	1	1	3	5	—	3	5
Q	1	1	2	3			
R	1	1	3	—			
U	1	1	2	5	—	5	—
V	1	1	2	5	8	7	—
Z	1	1	2	5			
W	1	1	3	4			

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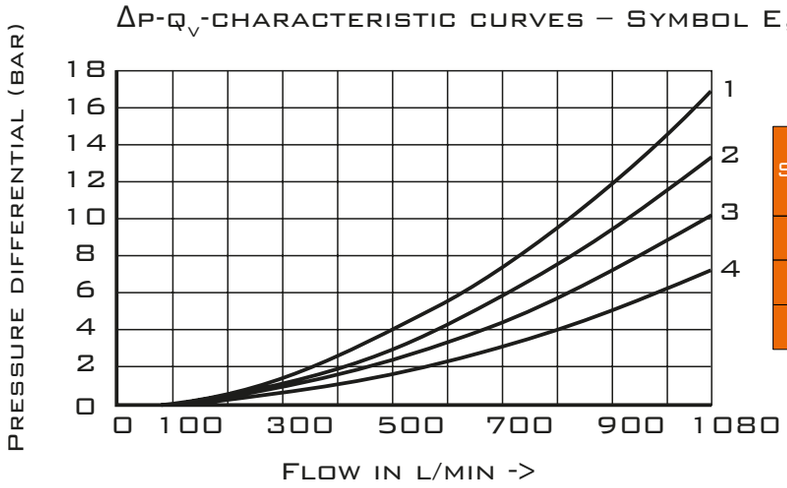
CHARACTERISTIC CURVES 4WEH32...

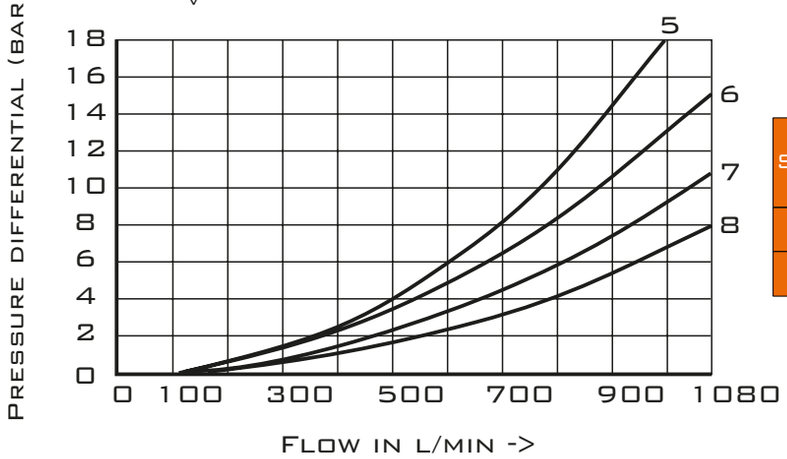
CHARACTERISTIC CURVES: NG32
(MEASURED WITH HLP46, ϑ_{OIL} = 40 ± 5 °C)

Δp-Q_V-CHARACTERISTIC CURVES – SYMBOL E, R AND W



SYMBOL	SPOOL POSITION				
	P — A	P — B	A — T	B — T	B — A
E	4	4	3	2	—
R	4	4	3	—	1
W	4	4	3	2	—

Δp-Q_V CHARACTERISTIC CURVES – SYMBOL G AND T



SYMBOL	SPOOL POSITION				
	P — A	P — B	A — T	B — T	P — T
G	7	8	7	5	6
T	7	8	7	5	6

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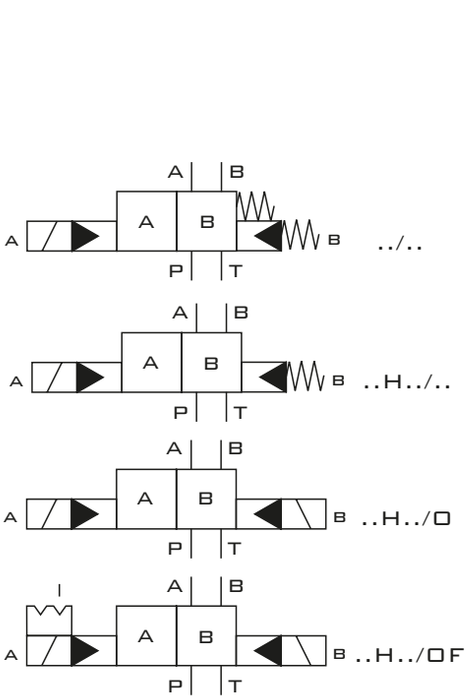
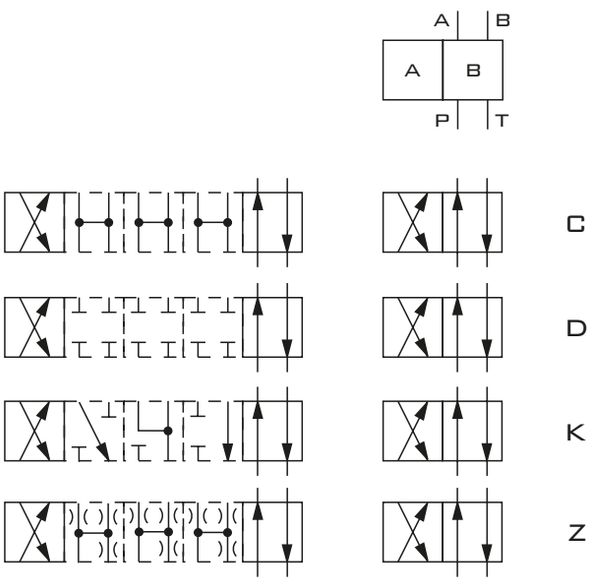
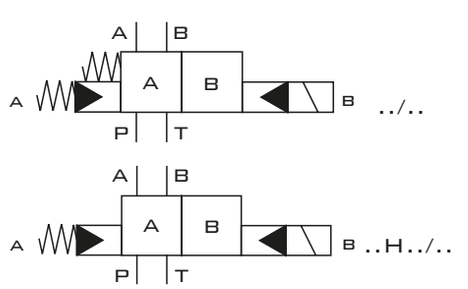
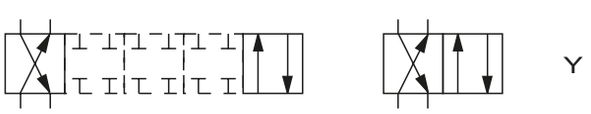
SPOOL SYMBOLS

2-POSITION VALVES









SEE ALSO:
WE6, WE10

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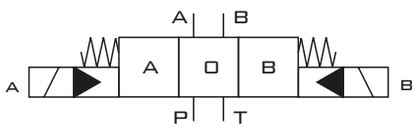
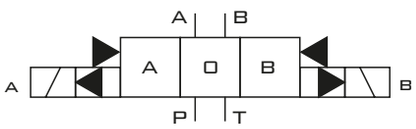
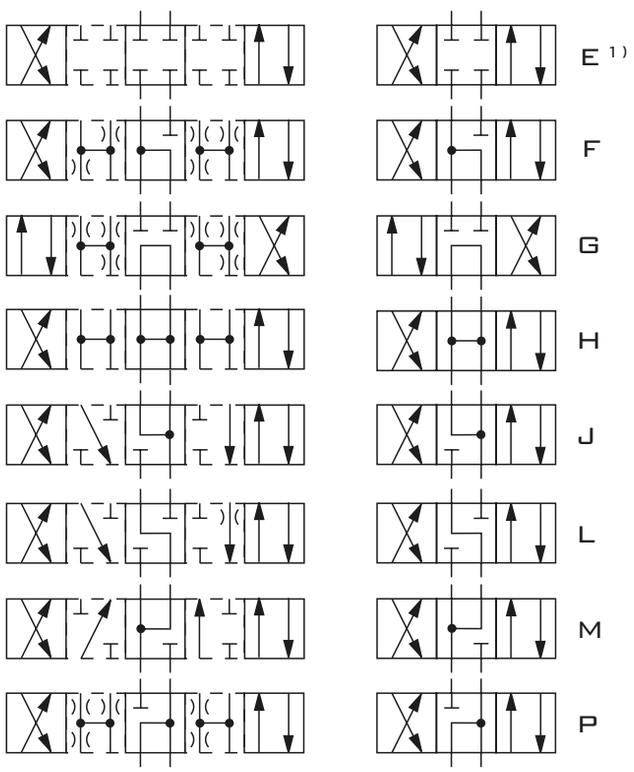
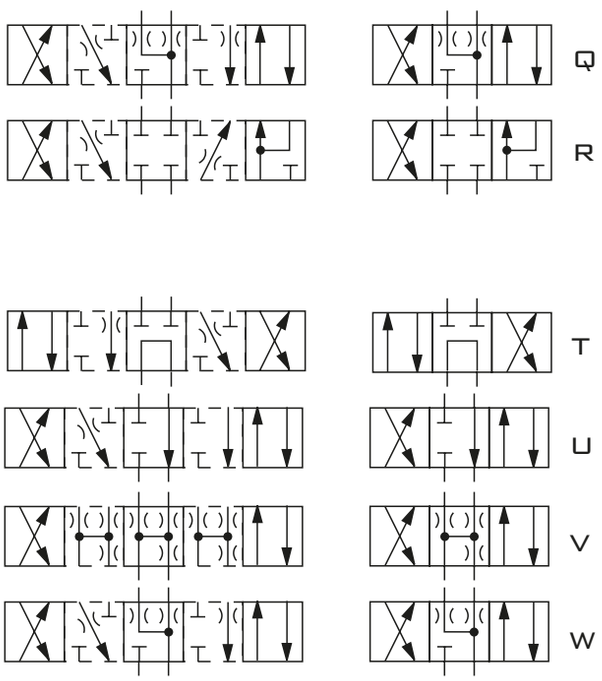
Spool symbols

3-position valves









1) Example: Symbol E with actuating side "a" = ordering code ..EA..

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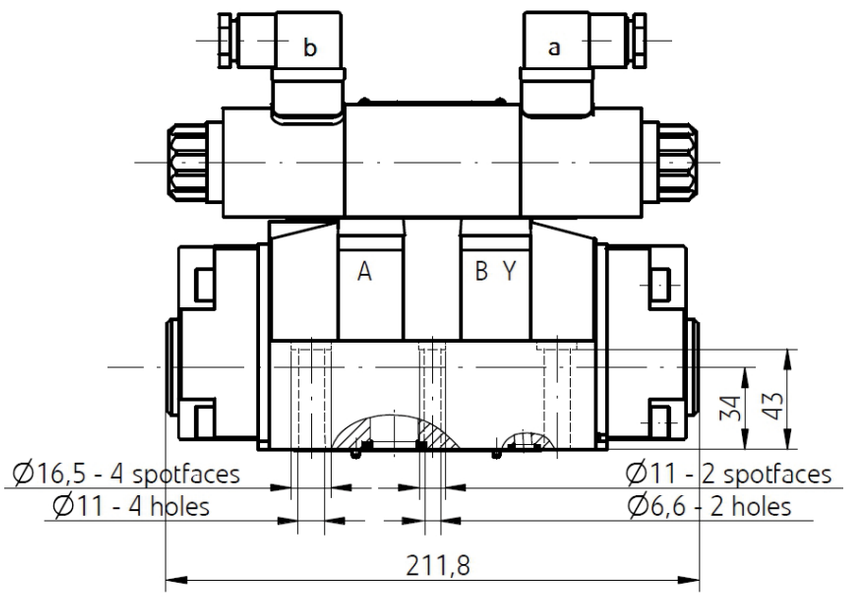
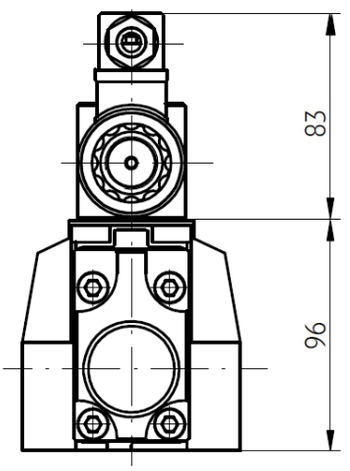
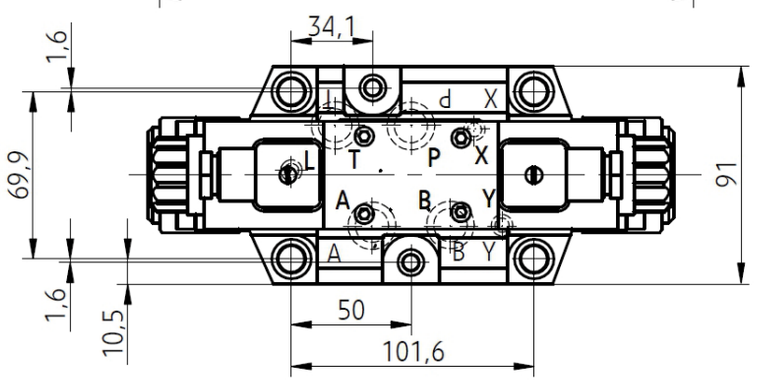
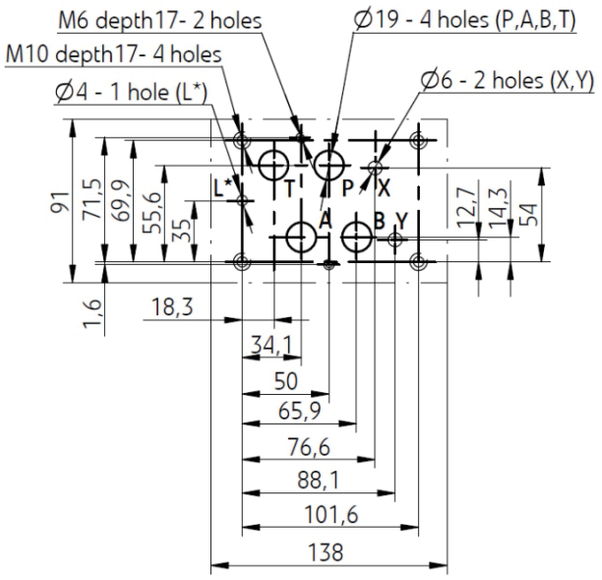
SUBPLATE INSTALLATION DIMENSIONS 4WEH16...









* – ONLY FOR 3-POSITION VERSION WITH O (NEUTRAL) POSITION OF THE SPOOL HYDRAULICALLY CENTERED

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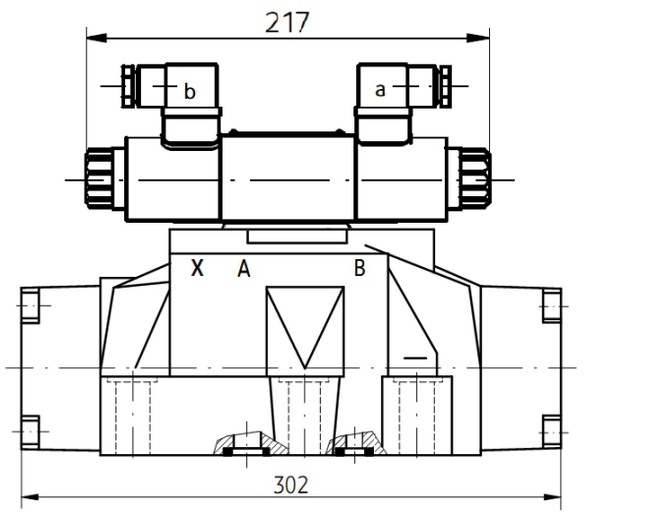
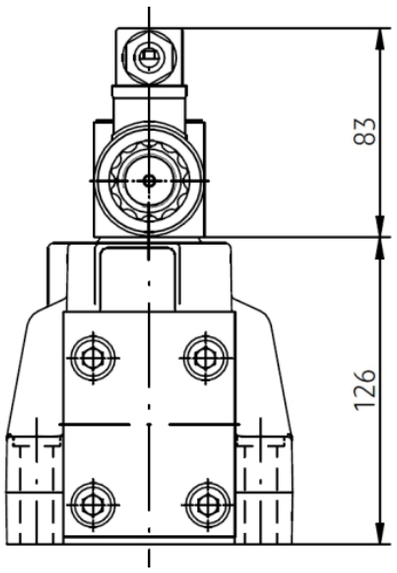
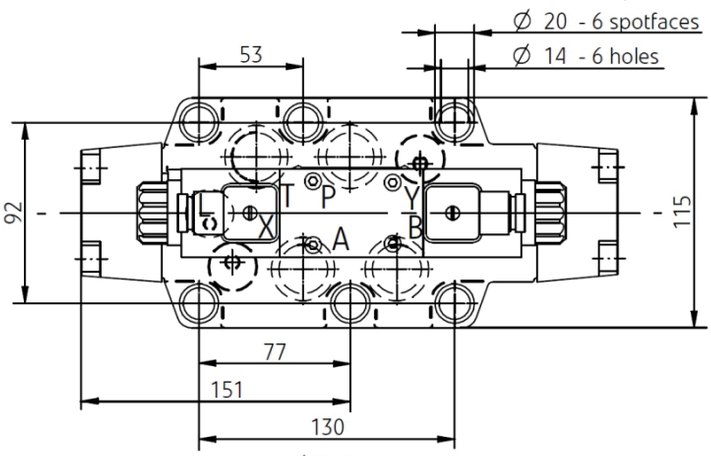
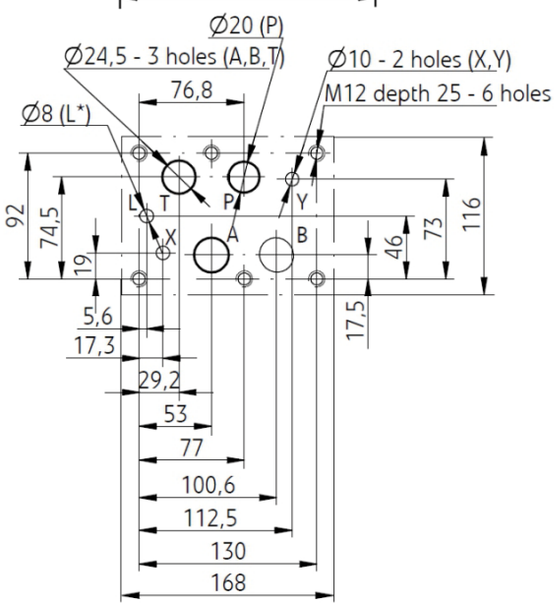
SUBPLATE INSTALLATION DIMENSIONS 4WEH25...









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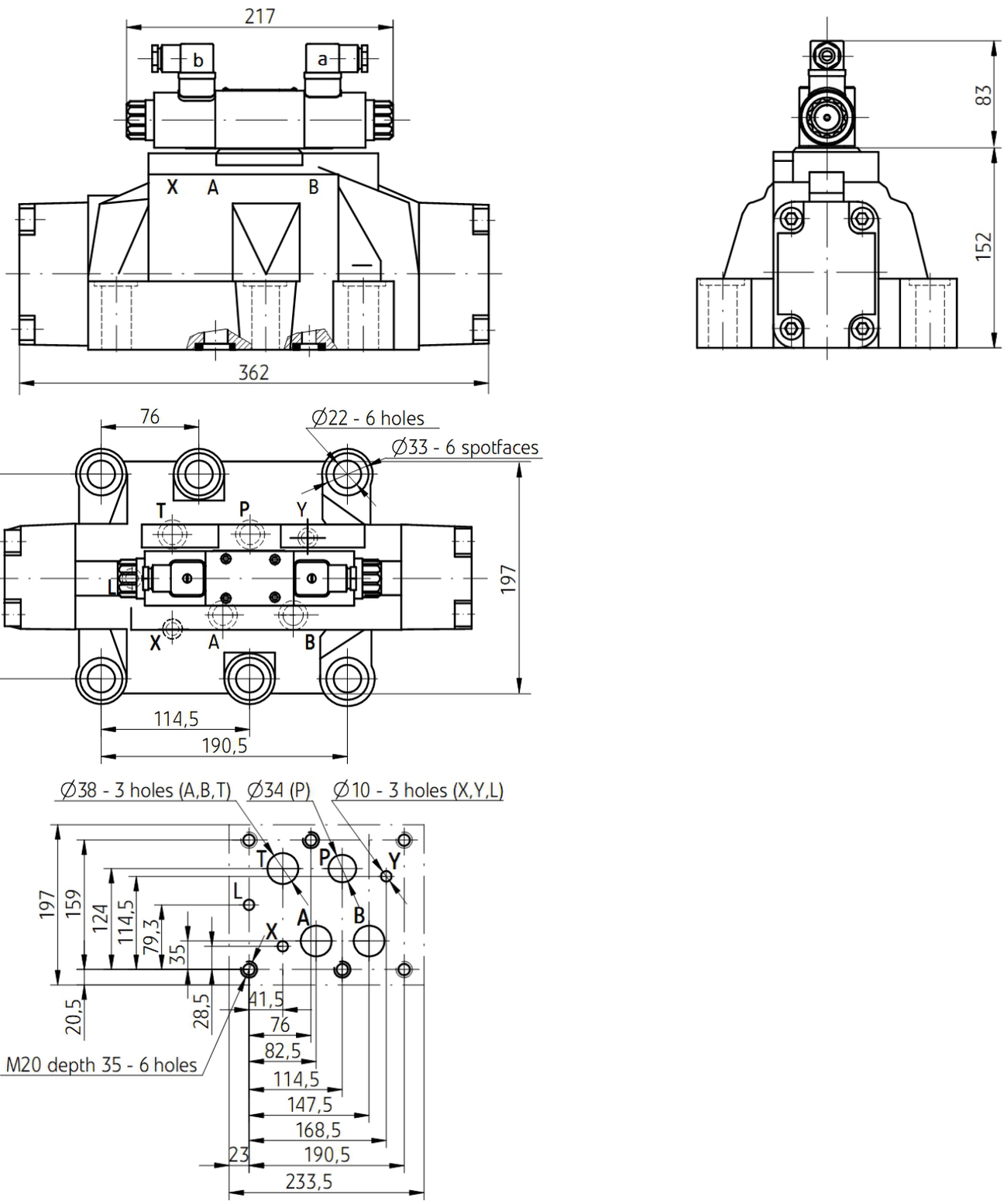
SUBPLATE INSTALLATION DIMENSIONS 4WEH32...



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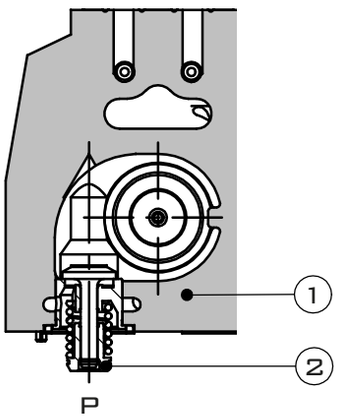
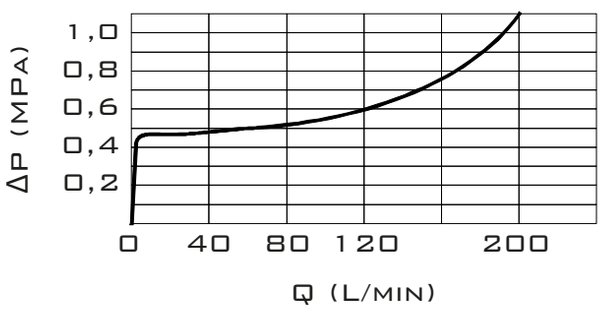
ACCESSORIES FOR STANDART VERSION OF THE DIRECTIONAL VALVE WEH16

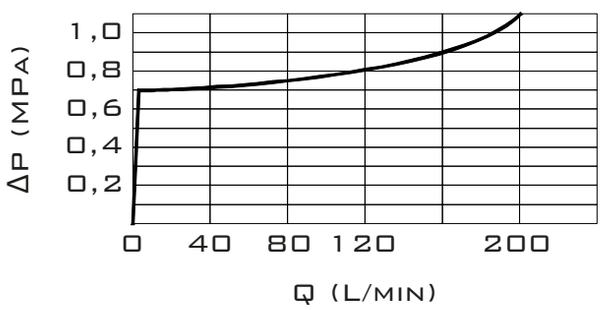
PRE-LOAD VALVE
VERSIONS: ...4WEH16.../...P4,5...
...4WEH16.../...P7...
DIRECTIONAL VALVE TYPE...4WEH16... WITH INTERNAL PILOT OIL SUPPLY (X) - VERSIONS: ...E...; ...ET... WITH SPOOLS C, Z, F,G, H,S, T, V (DIAGRAMS ACCORDING TO PAGE 8) WITH PRESSURELESS CIRCULATION OF HYDRAULIC FLUID (SUPPLY AND DRAIN CONNECTED AT WORKING OR INDIRECT POSITIONS) MUST BE EQUIPPED WITH THE PRE-LOAD VALVE (2) FIXED IN PORT P OF THE MAIN VALVE (1).
CRACKING PRESSURE FOR PRE-LOAD VALVES:
VERSION P 4.5 - 0,45 MPA
VERSION P 7 - 0,7 MPA
FOR DIRECTIONAL VALVES WITH FIXED PRESSURE RATIO VALVE VERSIONS H4 - 4WEH16.../...D1... THE PRE-LOAD VALVE P7 MUST BE APPLIED.



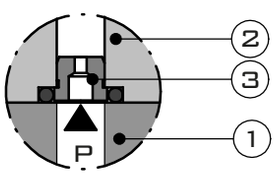
1 - MAIN VALVE BODY
2 - PRE-LOAD VALVE

PERFORM PERFORMANCE CURVES FOR PRE- OR PRE- OR PRE-LOAD VALVES (MEASURED AT VISCOSITY V = 41 MM²/S AND TEMPERATURE T =50°C)





THROTTLE INSERT
VERSION ...4WEH16.../...B...
DIRECTIONAL VALVES TYPE ...4WEH16... MAY BE EQUIPPED WITH THROTTLE INSERT (3) IN PORT P IN PILOT VALVE (2) WHICH ALLOWS TO DELAY SWITCHING TIME OF THE MAIN VALVE.



1 - MAIN VALVE
2 - PILOT VALVE
3 - THROTTLE INSERT

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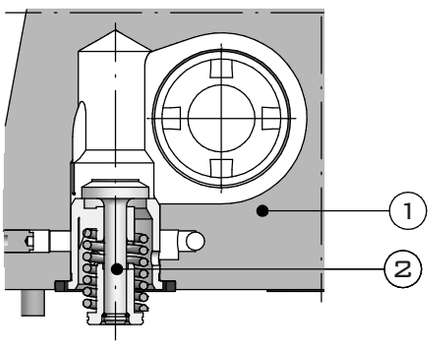
ACCESSORIES FOR STANDART VERSION OF THE DIRECTIONAL VALVE WEH25 AND WEH32

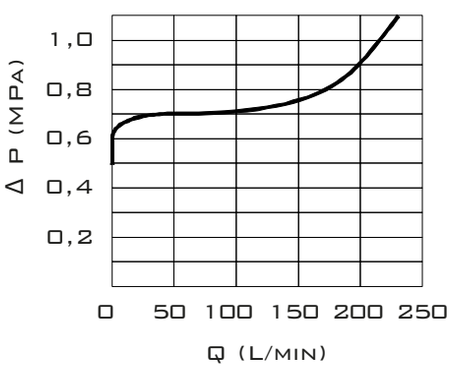
PRE-LOAD VALVE
VERSIONS: ...4WEH25.../...P4,5...
...4WEH25.../...P7...
DIRECTIONAL VALVE TYPE...WEH25... WITH INTERNAL PILOT OIL SUPPLY (X) - VERSIONS:
... 4WEH25.../...E...
...4WEH25.../...ET...
WITH SPOOLS WITH PRESSURELESS CIRCULATION OF HYDRAULIC FLUID MUST BE EQUIPPED WITH THE PRE-LOAD VALVE (2) FIXED IN PORT P OF THE MAIN VALVE (1).
CRACKING PRESSURE FOR PRE-LOAD VALVES:
VALVE VERSION P 4.5 - 0,45 MPA
VALVE VERSION P 7 - 0,7 MPA
FOR DIRECTIONAL VALVES WITH FIXED PRESSURE RATIO VALVE - VERSIONS ...4WEH25.../...D1... THE PRE-LOAD VALVE P7 MUST BE APPLIED.

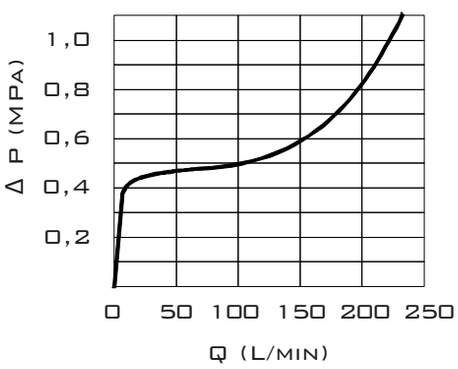
...4WEH25.../...P...



1 - MAIN VALVE BODY
2 - PRE-LOAD VALVE

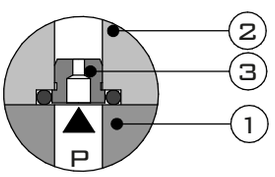
PERFORM PERFORMANCE CURVES FOR PRE- OR PRE- OR PRE-LOAD VALVES (MEASURED AT VISCOSITY V = 41 MM²/S AND TEMPERATURE T = 50°C)





THROTTLE INSERT
VERSION ...4WEH25.../...B...
DIRECTIONAL VALVES TYPE...WEH22... MAY BE EQUIPPED WITH THROTTLE INSERT (3) IN PORT P IN PILOT VALVE (2) WHICH ALLOWS TO DELAY SWITCHING TIME OF THE MAIN VALVE.

...4WEH22.../...B...



1 - MAIN VALVE
2 - PILOT VALVE
3 - THROTTLE INSERT

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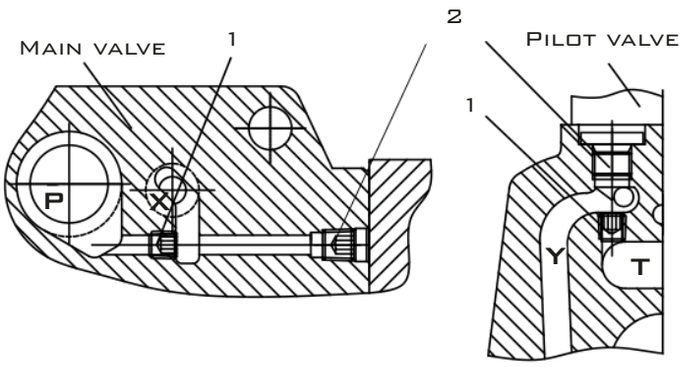
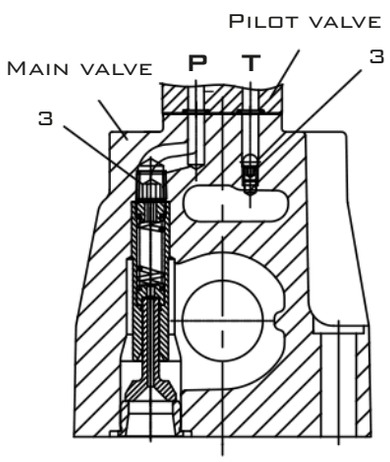
Pilot fluid supply



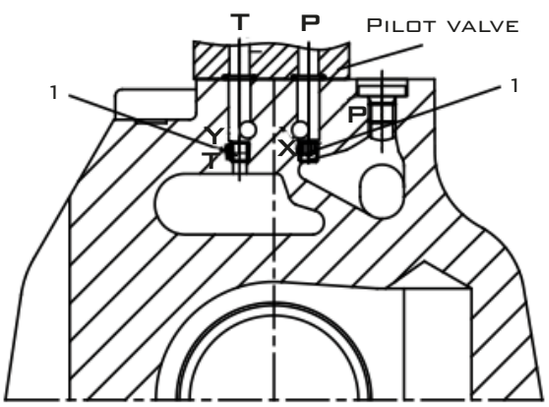
4WEH16

1. Conversion between internal supply and external supply:
Dismounting plug screw (2) form P channel on the sidesurface of main valves and installing M6 bolt (1) is internal supply. Dismounting M6 plug bolt (1) is internal supply.
2. Conversion between internal drain and external drain:
Dismounting plug screw (2) form T hole on the top of main valves and installing M6 plug bolt (1) is internal drain.
Dismounting M6 bolt (1) is external drain.



4WEH25

1. Conversion between internal supply and external supply:
P channel on the top of main valve bodies with M6 bolt (3) is external supply and with M6 bolt (3) dismounted is internal supply.
2. Conversion between internal drain and external drain:
Dismounting plug bolt (3) form T hole on the top of main valves and installing M6 plug bolt (1) is internal drain.
Dismounting M6 bolt (1) is external drain.



4WEH32

1. Conversion between internal supply and external supply:
Dismounting plug screw (1) form P hole on the undersurface of main valves and installing M6 bolt (1) is internal supply. Dismounting M6 plug bolt (1) is internal supply.
2. Conversion between internal drain and external drain:
Dismounting plug screw (1) form T hole on the top of main valves and installing M6 plug bolt (1) is internal drain.
Dismounting M6 bolt (1) is external drain.

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Order code

H | 4 | WEH | | | | | | | | | | | | | | |

H=Working ressure 35 MPa

4=4-way

16=16 size
25=25 size
32=32 size

H=Hydraulic return
No code=Spring return

Spool type

60=60 series

No code=With spring return
O=Without spring return
OF=Without spring return with detent

C, E=Standard solenoid

G12=DC12V
G24=DC24V
W110R=AC110V
W220R=AC220V

N9=With concealed hand emergency

No code=External pilot, external drain
E=Internal pilot, external drain
ET=Internal pilot, internal drain
T=External pilot, internal drain

No code=Mineral substance hydraulic oil
V=Phosphate eater hydraulic oil

No code=Without pressure reducing valve
D3=With pressure reducing valve

No code=Without pre-load valve
P0.45=With 0.45 MPa pre-load valve
P0.6=With 0.6 MPa pre-load valve

No code=Without throttle insert
B0.8=Throttle 0.8 mm
B1.0=Throttle 1.0 mm
B1.2=Throttle 1.2 mm

Z5L=Squre plug with lamp

No code=Without shifting time adjustment
S=With shifting time adjustment: inlet flow control
S2=With shifting time adjustment: outlet flow control

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