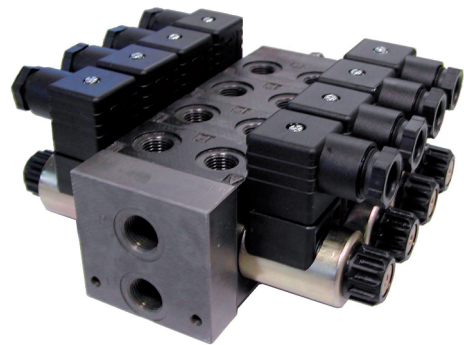


HYDRAULIC STACKABLE VALVES type HDF-ES DIRECTIONAL CONTROL - SOLENOID OPERATED

- 4-way solenoid operated directional valves
- **Standard stackable feature up to 8 bodies**
- 31 mm body thickness for a really compact assembly
- Oil immersed solenoids for AC and DC current
- 100% duty cycle
- Manual override
- Maximum operating pressure (port P-A-B): 250 bar
- Maximum operating pressure (port T): 210 bar
- Maximum flow rate: 20 l/min
- Suitable for mineral oil according to ISO 18/16/14 filtration class or better.



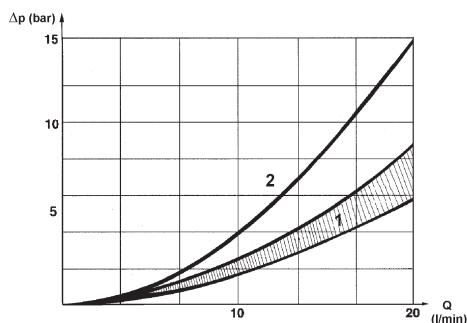
SPOOL TYPE **	
0	
1	
3	
4	

DRIVE ARRANGEMENT	
C	
N	
LL	
ML	

ORDERING CODE	
HDF - ES - 1 C - * - 024C/10	
HDF	4-way directional control valve
ES	Electrically controlled
1	Spool type (see table)
C	Drive arrangement (see table)
*	b: only for versions LL, ML, LM solenoid "b"
024C	= Coil voltage = (admissible variation: ±10%) 0000: No coils 012C: 12V DC - 2,8A 024C: 24V DC - 1,4A 110R: rectified 115V AC - 50/60Hz 0,35A 220R: rectified 230V AC - 50/60Hz 0,17A
10	Drawing number
PD1-03/32-5	Inlet closing plate (steel)
PD1-03/32-0	End closing plate (steel)
MAF-KIT-2	Mounting angle kits

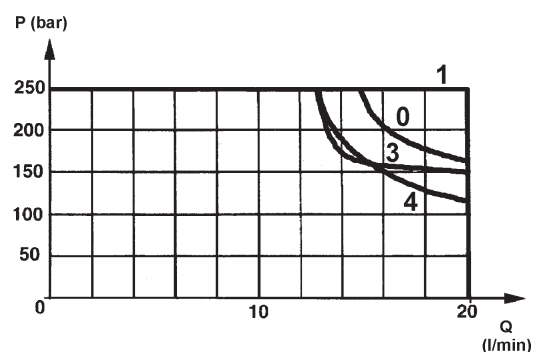
TYPICAL DIAGRAMS

Typical Δp -Q curves for valves HDF-ES in standard configuration, with mineral oil at 36cSt and 50°C for flow P→A,B A,B→T and P→T



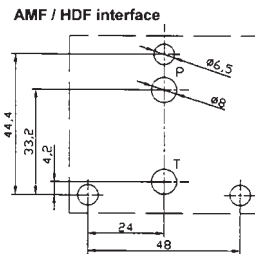
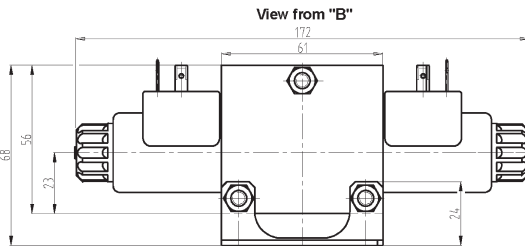
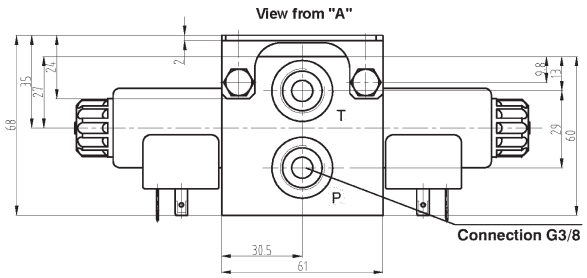
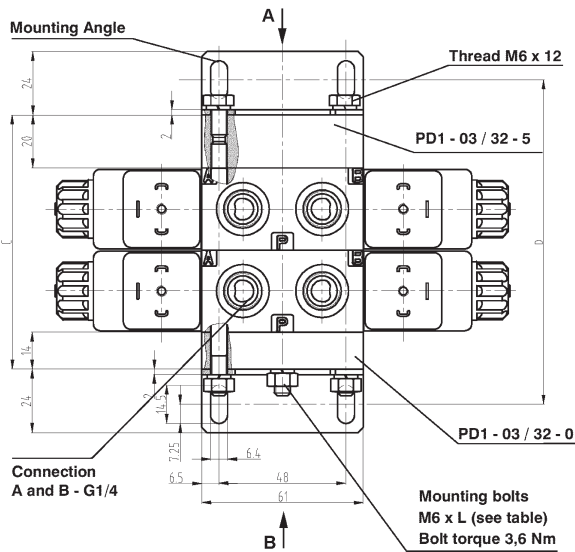
1) All spools P→A,B and A,B→T. Spool 4 P→A,B 2) Spool 4 P→A,B

Typical p-Q curves of operating limits for maximum hydraulic power transferred by valves HDF-ES



0) Spool type 0 1) Spool type 1 3) Spool type 3 4) Spool type 4

BLOCK ASSEMBLY



Valve mass: 0,95 kg (with 1 coil)
 1,05 kg (with 2 coils)
 Closing plates mass (Inlet+End): 1 kg (bolts not included)

DIMENSIONS

Number of sections	1	2	3	4	5	6	7	8
Dimension C [mm]	65	96	127	158	189	220	251	282
Dimension D [mm]	91,5	122,5	153,5	184,5	215,5	264,5	277,5	308,5
Bolts length L [mm]	55	100	133	163	194	224	256	287

Subject to technical and dimensional changes without notice

TYPICAL SECTION

1	Body	6-7	Electrical connector
2-3	Solenoid	8	Retaining nut
4	Spring	9	Emergency pin
5	Spool		

