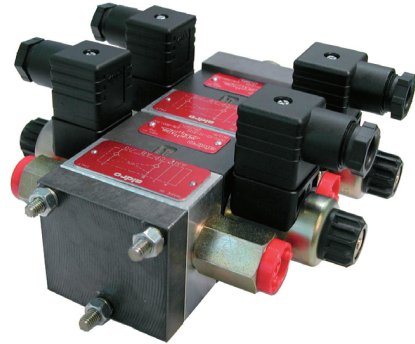


## HYDRAULIC STACKABLE VALVES type **HDF2-ES** DIRECTIONAL CONTROL - SOLENOID OPERATED

- 4-way solenoid operated directional valves
- 31 mm body thickness for a really compact assembly
- Special execution **designed for assembly with double check valve AMF-CP-AB** (29 mm thick — Tab. AD-250)
- A, B ports on side position
- 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	

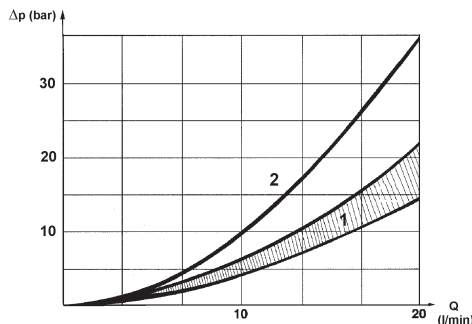
DRIVE ARRANGEMENT	
C	
N	
LL	
ML	

ORDERING CODE	
<b>HDF2 – ES – 3 C – * – 012C/10</b>	
<b>HDF2</b>	4-way directional control valve
<b>ES</b>	Electrically controlled
<b>3</b>	Spool type (see table)
<b>C</b>	Drive arrangement (see table)
<b>*</b>	b: only for versions LL, ML, LM solenoid "b"
	= 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
<b>10</b>	Drawing number
<b>PD1-03/32-5</b>	Inlet closing plate (steel)
<b>PD1-03/32-0</b>	End closing plate (steel)
<b>MAF-KIT-2</b>	Mounting angle kits

<b>AMF-CP-AB</b>		Double check valve (A,B) pilot operated
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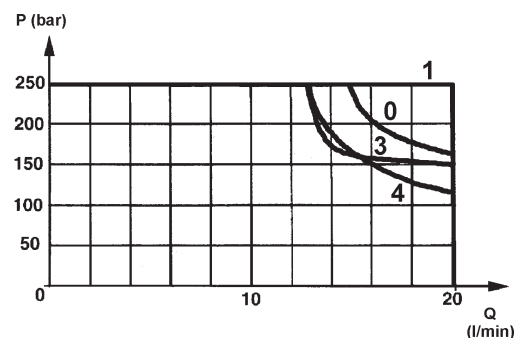
### TYPICAL DIAGRAMS

Typical  $\Delta p$ -Q curves for valves **HDF2-ES + AMF-CP-AB**, with mineral oil at 36cSt and 50°C for flow P→A,B A,B→T and P→T



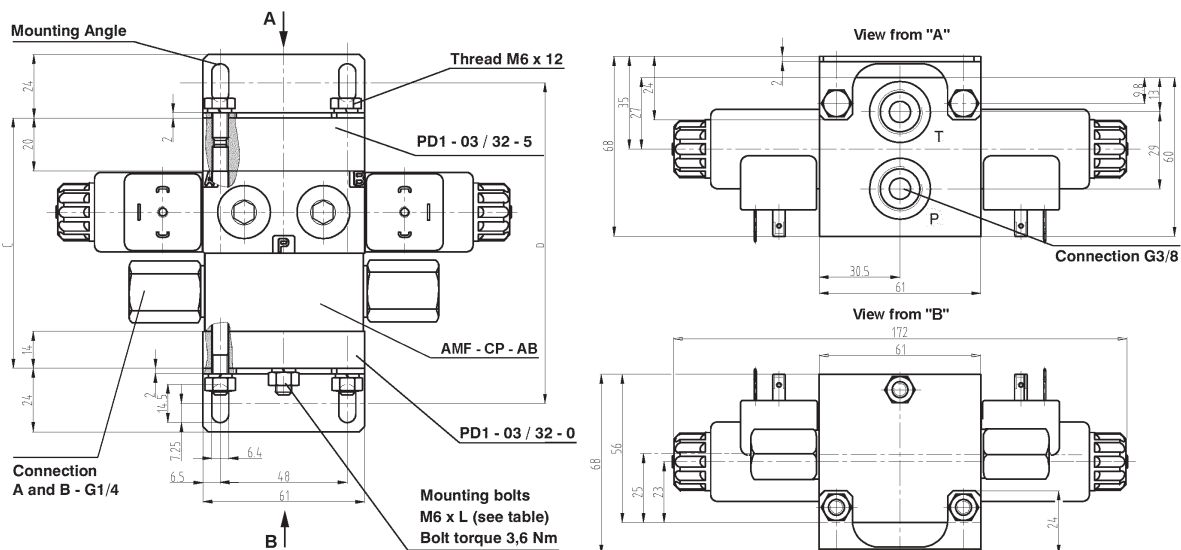
1) All spools P→A,B and A,B→T. Spool 4 P→T. 2) Spool 4 P→A,B

Typical p-Q curves of operating limits for maximum hydraulic power transferred by valves **HDF2-ES**



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

### BLOCK ASSEMBLY



**Module(\*) mass:** 1,35 kg (electrovalve with 1 coil)  
 1,45 kg (electrovalve with 2 coils)  
**Closing plates mass (Inlet + End):** 1 kg (bolts not included)

(\*) 1 module = HDF2-ES-\*\* + AMF-CP-AB

### DIMENSIONS

Number of sections	1	2	3	4	5	6
Dimension C [mm]	94	154	214	274	334	394
Dimension D [mm]	120,5	180,5	240,5	300,5	360,5	420,5
Bolts length L [mm]	100	163	224	287	340	400

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	10	Plug

