DUPLOMATIC
HYDRAULICS

KT08

CARTRIDGE SOLENOID VALVE

SERIES 10

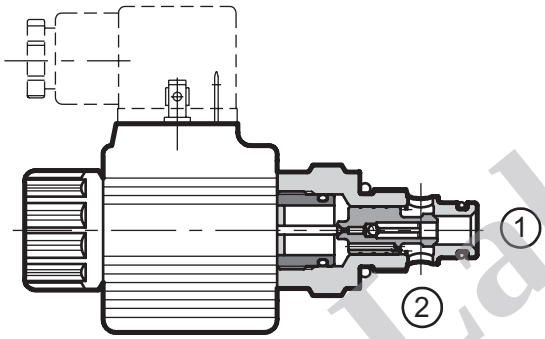
CARTRIDGE TYPE

seat 3/4-16 UNF-2B ISO 725

p max **350** bar

Q nom **50** l/min

OPERATING PRINCIPLE

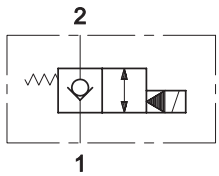


- The KT08 is a 2-ways solenoid valve, poppet type, cartridge execution, available in normally closed version (NC) and normally open version (NO) with nominal flow rate of 50 l/min.
- It ensures a low internal leakage, which decreases while the pressure increases.
- The valve can be ordered with direct current or rectified current solenoids and with four different types of electrical connections, in order to cover many installation requirements (see par. 8).
- For every version, the emergency manual override is an available option (see par. 7).

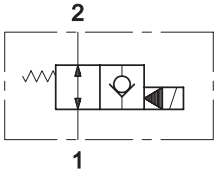
PERFORMANCE RATINGS (working with mineral oil of viscosity of 36 cSt at 50°C)		
Maximum operating pressure	bar	350
Nominal flow rate	l/min	50
Pressure drops Δp-Q	see par. 3	
Electrical characteristics	see par. 5	
Electrical connections	see par. 8	
Ambient temperature range	°C	–20 ÷ +50
Fluid temperature range	°C	–20 ÷ +80
Fluid viscosity range	cSt	10 ÷ 400
Recommended viscosity	cSt	25
Fluid contamination degree	according to NAS 1638 class 10	
Mass	kg	0,32
Surface treatment with white colour zinc	Fe / Zn 8c 1B UNI ISO 2081/4520	

HYDRAULIC SYMBOLS

KT08-2NC



KT08-2NO



1 - IDENTIFICATION CODE

K	T	08	-		/	10		-			/	

Cartridge solenoid valve

Valve type
T = poppet type

Nominal dimension
08 = mounting interface 3/4-16 UNF-2B ISO 725

Spool types:
2NC = 2-way normally closed
2NO = 2-way normally open

Series no.: (the overall and mounting dimensions remain unchanged from10 to 19)

Seals:
N = NBR seals for mineral oil (**standard**)
V = FPM seals for special fluids

See note 2

Coil electrical connection (see par. 8)
K1 = plug for connector type DIN 43650 (**standard**)
K2 = plug for connector type AMP JUNIOR
K3 = plug for connector type KOSTAL
K4 = outgoing cables

Coil type:

D12 = 12 V } direct current
D24 = 24 V } (**standard**)

R110 = 110 V } rectified
R230 = 230 V } current

D00 = valve without coil (see note 1)

NOTA 1: The coil locking ring and the relevant seals are included in the supply.
NOTA 2: The manual override **CM** is available as an option (see par. 7).

1.1 - COIL IDENTIFICATION CODE

C	14	-			/	10

Power supply

D12 = 12 V } direct current
D24 = 24 V } (**standard**)

R110 = 110 V } rectified
R230 = 230 V } current

Electrical connection type (see par. 8)
K1 = plug for connector type DIN 43650 (**standard**)
K2 = plug for connector type AMP JUNIOR
K3 = plug for connector type KOSTAL
K4 = outgoing cables

Series no.: (the overall and mounting dimensions remain unchanged from10 to 19)

2 - HYDRAULIC FLUIDS

Use mineral oil-based hydraulic fluids HL or HLP type, according to ISO 6743/3.
For fluids HFD-R type (phosphate esters) use FPM seals (code V).
For the use of other fluid types such as HFA, HFB, HFC, please consult our technical department.

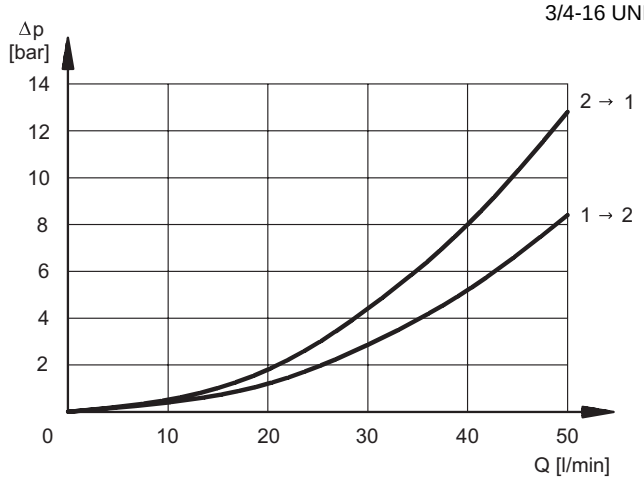
Using fluids at temperatures higher than 70°C causes a faster degradation of the fluid and of the seals characteristics.
The fluid must be preserved in its physical and chemical characteristics.

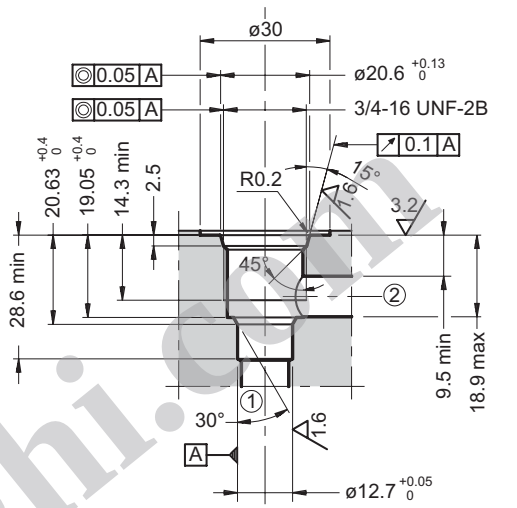
3 - PRESSURE DROPS Δp-Q (obtained with viscosity of 36 cSt at 50 °C)

The values in graphs refer to both NC and NO valves and they differ for the mounting interface used.

standard mounting interface dimensions
3/4-16 UNF-2B ISO 725

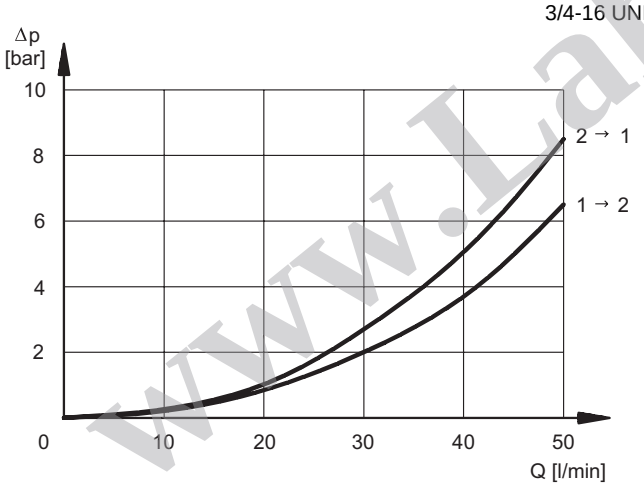
dimensions in mm

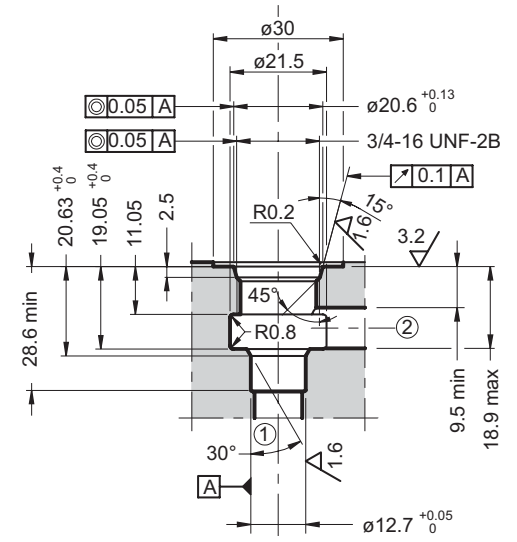




oversize mounting interface dimensions
3/4-16 UNF-2B ISO 725

dimensions in mm





4 - SWITCHING TIMES

The values indicated refer to a valve tested with Q=25 l/min, p=350 bar, working with mineral oil at a temperature of 50°C and a viscosity of 36 cSt.

TIMES (±10%)		
	ENERGIZING	**DE-ENERGIZING**
KT08-2NC	60 ms	85 ms
KT08-2NO	85 ms	60 ms

5 - ELECTRICAL FEATURES

VOLTAGE SUPPLY FLUCTUATION	± 10% Vnom
MAX SWITCH ON FREQUENCY	10.000 ins/hr
DUTY CYCLE	100%
ELECTROMAGNETIC COMPATIBILITY (EMC) **EMISSIONS** EN 50081-1 **IMMUNITY** EN 50082-2	in compliance with 89/336 CEE
LOW VOLTAGE	in compliance with 73/23/CEE 96/68/CEE
Class of protection according to IEC 144 Atmospheric agents Coil insulation Impregnation	IP 65 class H class H

5.1 Solenoids

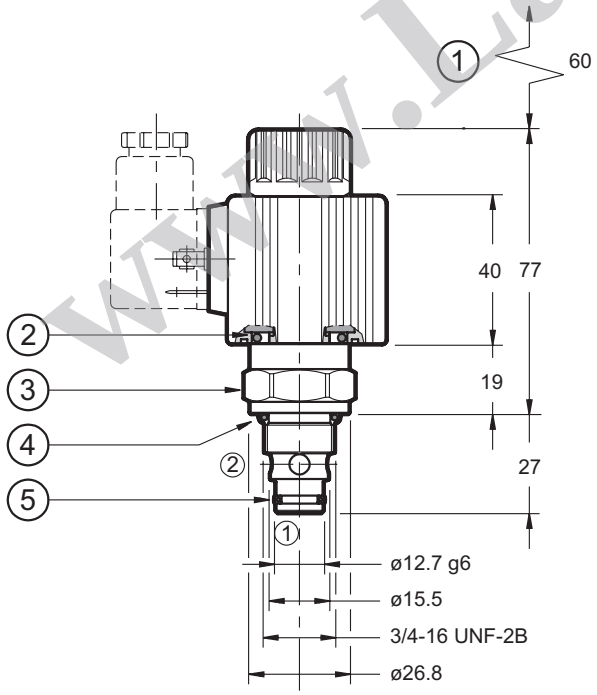
These are essentially made up of two parts: tube and coil. The tube is threaded onto the valve body and includes the armature that moves immersed in oil, without wear. The inner part, in contact with the oil in the return line, ensures heat dissipation.
The coil is fastened to the tube by a threaded nut, and can be rotated according to the available space.
The interchangeability of coils of different voltages both D or R type is possible without removing the tube.

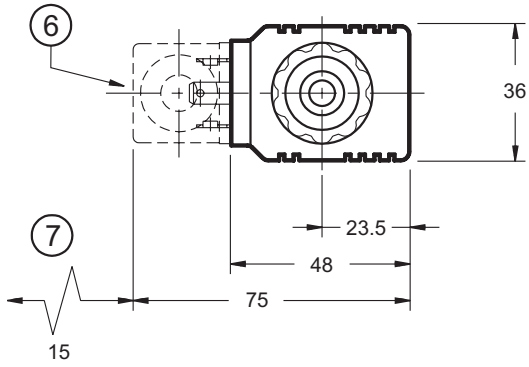
5.2 Current and absorbed power

In the table are shown current and power consumption values relevant to the different coil types. “R” coil must be used when the valve is fed with AC power supply subsequently rectified by means of rectifier bridge, externally or incorporated in the “D” type connector (see cat. 49 000).

Coil type	Resistance at 20°C [Ω] ± 1%	Absorbed current A (± 5%)	Power (± 5%) W	VA
C14-D12*	5,4	2,2	26,5	
C14-D24*	20,7	1,16	27,8	
C14-R110*	363	0,25		27,2
C14-R230*	1640	0,11		26,4

6 - OVERALL AND MOUNTING DIMENSIONS



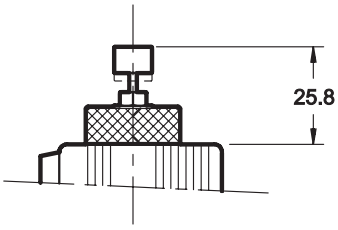


dimensions in mm

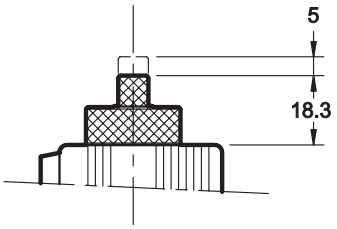
1	Coil removal space
2	O-Ring type 4081
3	Hexagonal: spanner 22 tightening torque 50 Nm
4	O-Ring type 3.908
5	O-Ring type 2037
6	Electric connector DIN 43650 (drawing relevant to standard connection K1 - for other types of connection see par. 8)
7	Connector removal space

7 - MANUAL OVERRIDE

CM for NO version (pushing type)

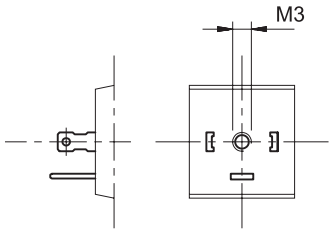


CM for NC version (screw type)

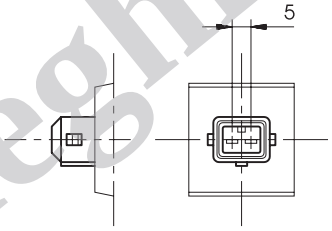


8 - ELECTRIC CONNECTIONS

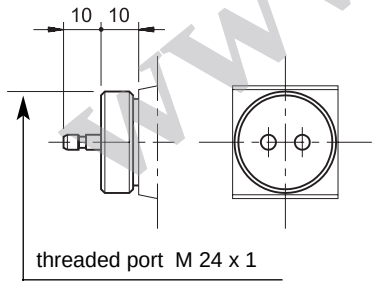
connection for DIN 43650 connector
code **K1** (**standard**)



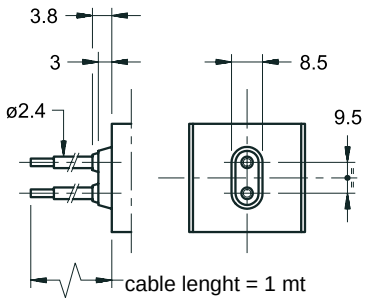
connection for AMP JUNIOR connector
code **K2**



connection for KOSTAL connector
code **K3**



outgoing cables connection
codice **K4**

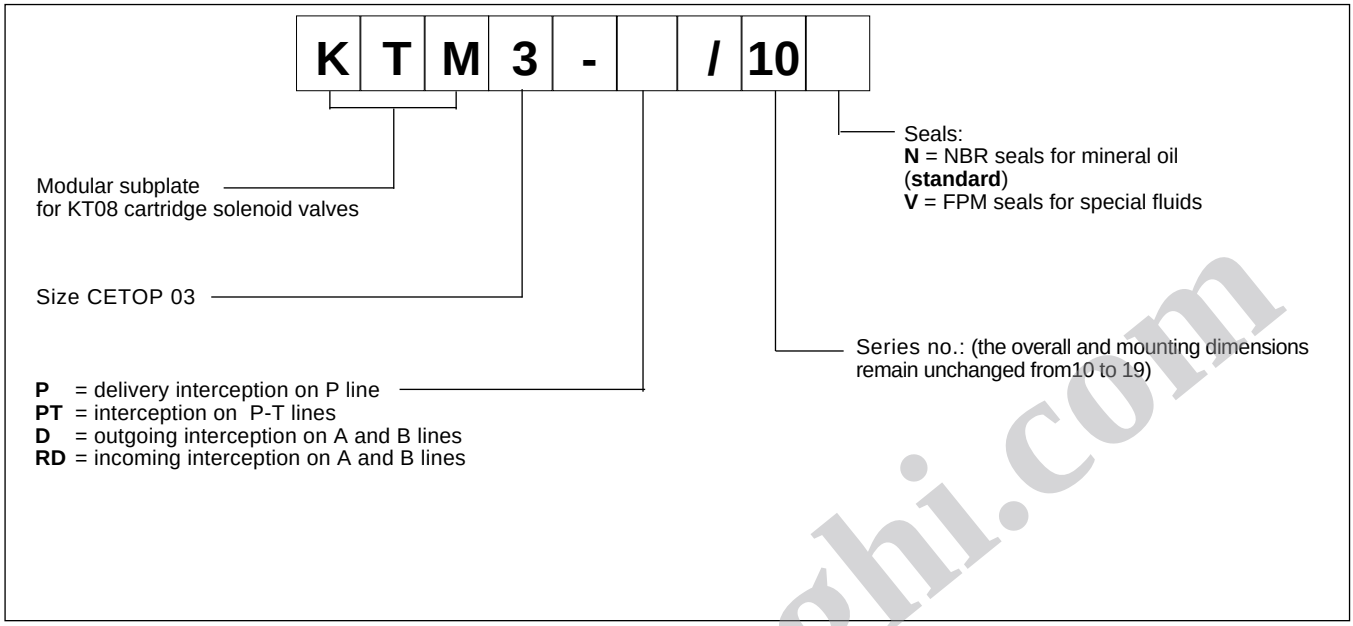


9 - ELECTRIC CONNECTORS

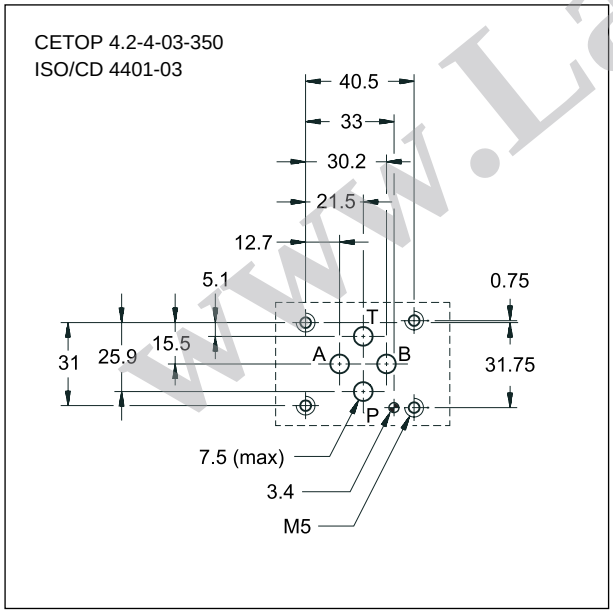
The solenoid valves are supplied without connectors.
For coils with standard electrical connections K1 type (DIN 43650) the connectors can be ordered separately.
For the identification of the connector type to be ordered please see cat. 49 000.
For K2 and K3 connection type the relative connectors are not available.

10 - SUBPLATES FOR MODULAR MOUNTING

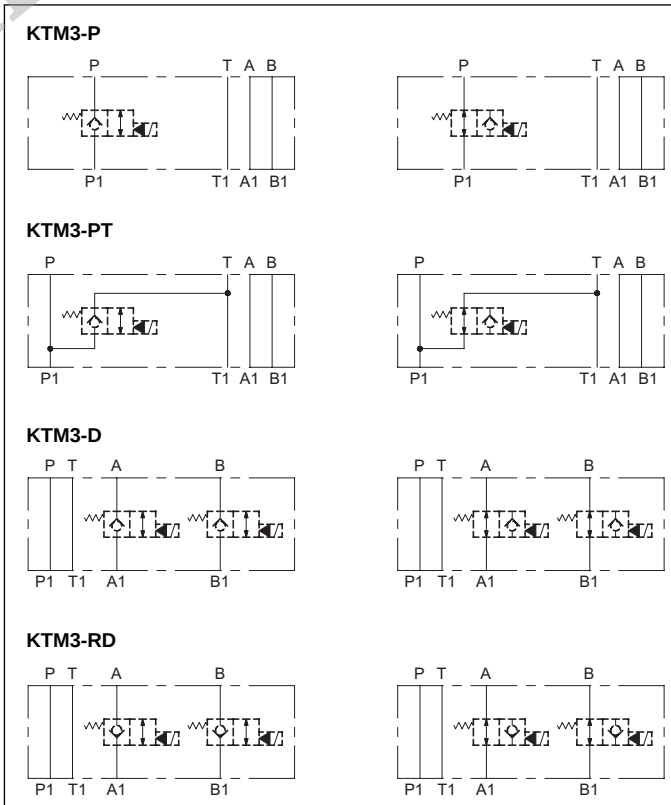
10.1 - Identification code



MOUNTING INTERFACE

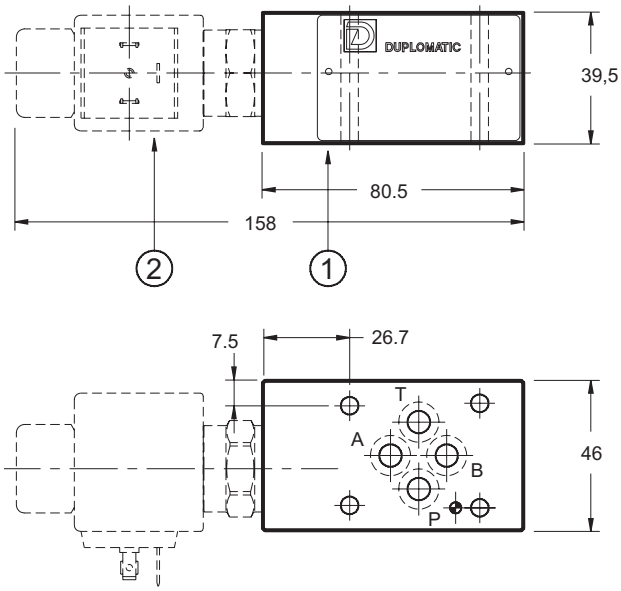


HYDRAULIC SYMBOLS

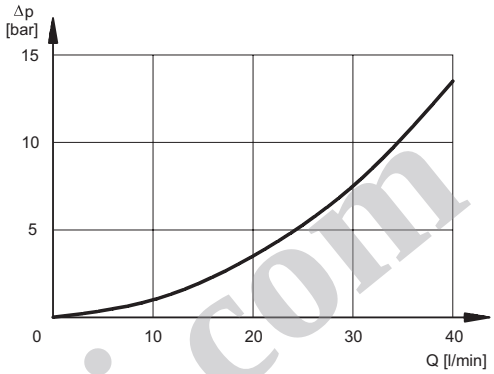


10.2 - OVERALL AND MOUNTING DIMENSIONS KTM3-P

dimensions in mm



PRESSURE DROPS Δp - Q

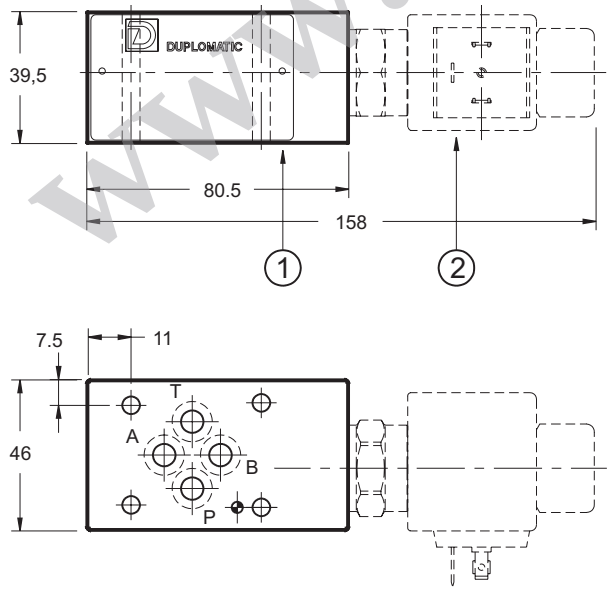


pressure drops relevant to the subplate and the valve mounted with flow rate 2 - 1

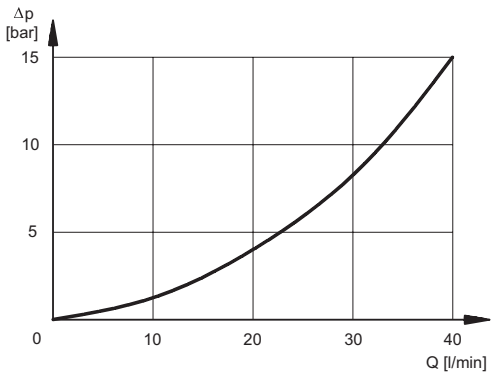
1	Mounting surface with sealing rings 4 OR type 2037
2	Cartridge solenoid valve KT08 (to be ordered separately)

10.3 - OVERALL AND MOUNTING DIMENSIONS KTM3-PT

dimensions in mm



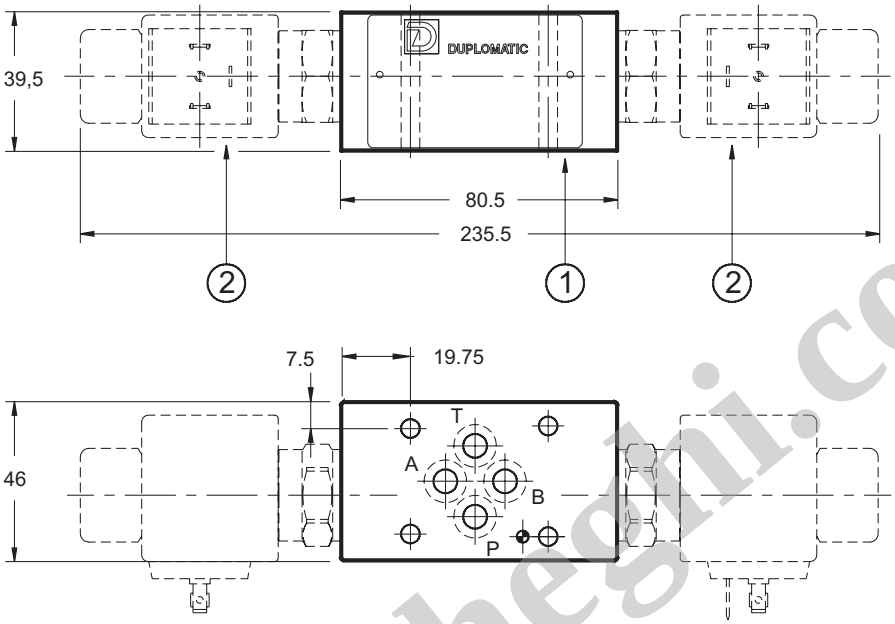
PRESSURE DROPS Δp - Q



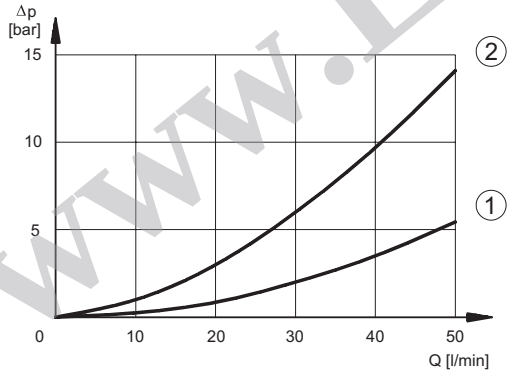
pressure drops relevant to the subplate and the valve mounted with flow rate 2 - 1

1	Mounting surface with sealing rings 4 OR type 2037
2	Cartridge solenoid valve KT08 (to be ordered separately)

10.4 - OVERALL AND MOUNTING DIMENSIONS KTM3-D and KTM3-RD



PRESSURE DROPS Δp - Q



① subplate pressure drops

② pressure drops relevant to the subplate and the valve mounted with flow rate 2 - 1

dimensions in mm

1	Mounting surface with sealing rings: 4 OR type 2037
2	Cartridge solenoid valve KT08 (to be ordered separately)

Note: in orer to use a single port, a plug must be ordered separately, code 0266683 (for standard NBR seals) or 0266684 (for viton seals).

DUPLOMATIC HYDRAULICS

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