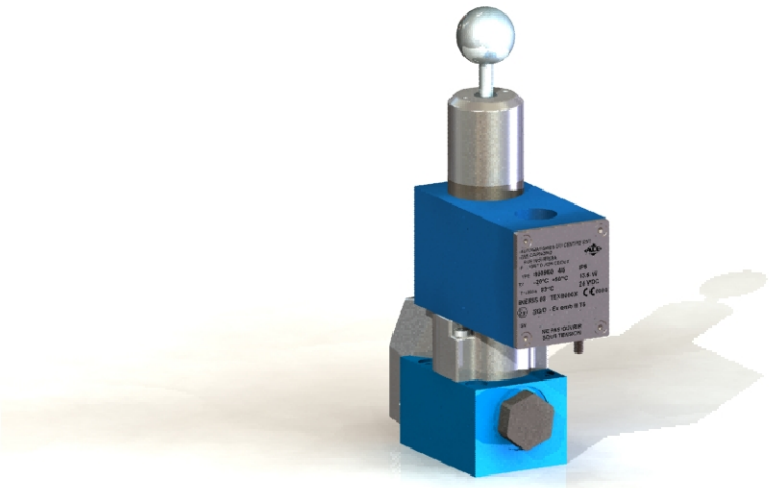
EXPLOSION PROOF DIRECTIONAL CONTROL VALVE TYPE ED6 SERIE 6X DIRECTIVE ATEX ET IECEx

CARACTERISTICS

Hydraulic:
Cetop 3.
Maximum pressure in service : **250 Bar.**
Nominal flow : **5 l/mn.**
Hydraulic symbols : 4/2 et 3/2.
No leakage inside.
With or without pushbutton.

Electric :
Protection index : **IP 66.**
Directive ATEX ou IECEx
Ex dmb or Ex emb Gb, II 2 GD IIC T6,T5 or T4
Connections on terminal box.



M-3 SEW6 C 3X / 420 / EX900 24-DC-T5 P H1e

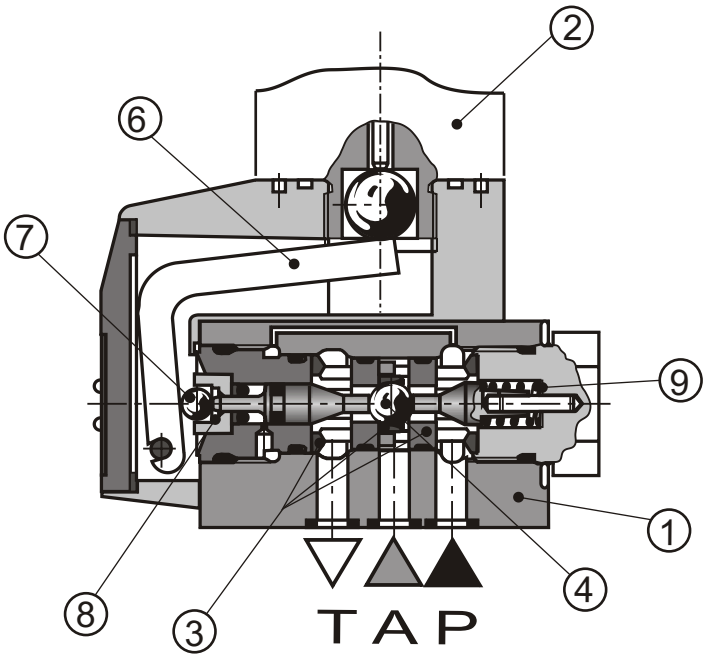
DESCRIPTION OF FUNCTION

Operated check valve type SEW6, are solenoid operated directional ball valves. They control start stop and direction of oil flow.

The valves basically consist of the housing (1), one solenoid (2) seat-valve unit (3), hardened steel ball (4). The force of the solenoid (2) acts via the lever (6) on the check (7) and on the control push (8) .

The filter in alimentation protect the check valve from to much clog.

The spring (9) lock the check on the valve seat in neutral position from the solenoid (2) in work position.



VALVE 3/2 :
Symbol U valve with 1 check :
- neutral position : flow from P to A, T locked without leakage.
- work position : flow from A to T, P locked without leakage.

Symbol C valve with 2 checks
- neutral position: flow from A to T, P locked without leakage
- work position: flow from P to A, T locked without leakage.

VALVE 4/2 :
Symbol D :
3/2 valve symbol U with 1 check and with 1 plate.

Symbol Y :
3/2 valve symbol C with 2 checks and with 1 plate.

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GENERALITY OF FONCTION

Oil immersed direct curent solenoid (1) impervious to 100 bar maximum pressure, its mechanical impact strength is approved by the CENELEC for explosion proof equipment.

Insulation to IP 66, it can work in tropical climates.

The plunger operate in oil to reduce friction, dissipate head and cushions and drives control spool.

Direct curent solenoid has the advantages of :

- slow movement of the control spool.
- energized maintenance of the control valve in intermediary position, is not detrimental to the solenoid.

ELECTICAL CONNEXION

Junction in box

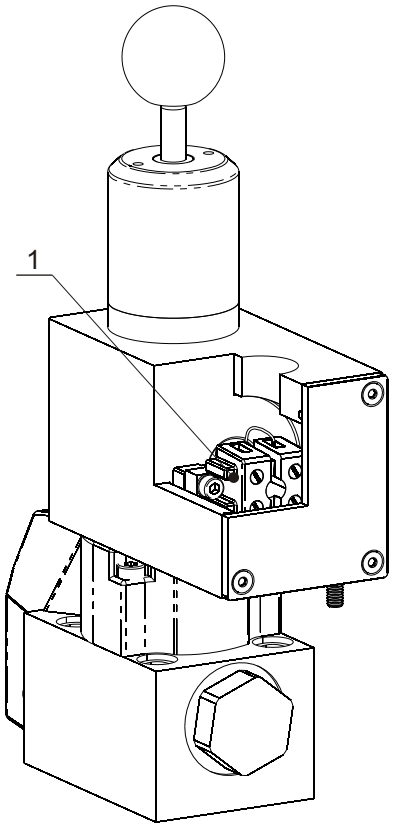
The electrical connector on the outlet terminal box (6) can be arranged horizontally (on terminal box 3)suitable for cable gland.

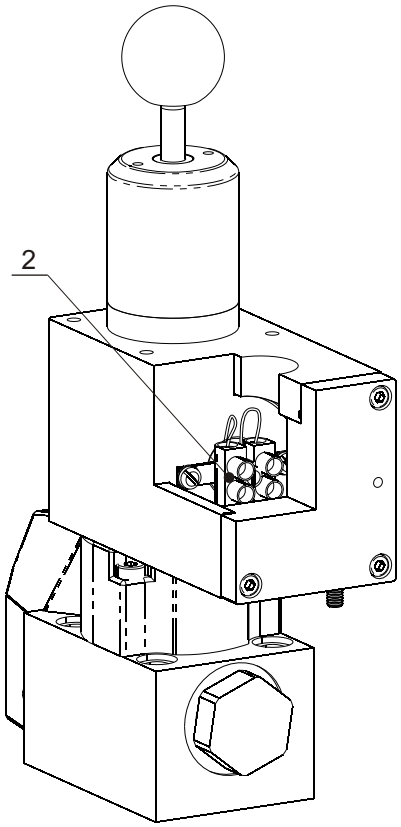
One earth connection (5) is available inside or outside the terminal box .

2 differents protection modes.

1) Protection Ex "d"
On terminal strip inside the explosion proof terminal box suitable for 0.5 to 2 mm^2 with cable gland Ex "d".

2) Protection Ex "e"
On terminal strip inside the increased safety terminal box suitable for 0.5 to 2 mm^2 with cable gland Ex "e".





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CARACTERISTICS

GENERALITY

Mounthing position		Optional - Horizontal prefered
Weight	(Kg)	1.8
	(Kg)	2.2
Painting		RAL on demand

HYDRAULIC

Max. operating pressure	Ports A, B, P .	bar	250
	Port T .	bar	100
With spool type A and B, port T must be used as a drain port, if the operating pressure lies above 100 Bar.			
Pressure drop			see operating curves of pressure drop
Hydraulic fluid			Mineral oils
Fluid temperature range		°C	-20 à +70°C
Viscosity range		mm^2/s	2.8 à 350
Degree of pollution			Class 9 under NAS 1638

Standard symbol

ELECTRICAL

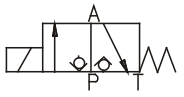
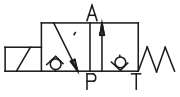
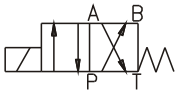
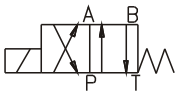
Continous voltages available	V/DC	24	
Temperature range with ambiente 40°C		T6	85°C
Temperature range with ambiente 50°C		T5	100°C
Temperature range with ambiente 60°C		T5	100°C
Power requirement	VA	11.5	
Protection index		IP66	
Duty cycle		100%	
Mini Temperature range		-25°C	
Outlet connection on terminal box		1/2"NPT-PG11-PG13.5-PG16-M16x1.5-M20x1.5-M22x1.5	

CERTIFICATE OF CONFORMITY

European classification code	Ⓔx II2GD ou Ⓔx IM2 c Ex d mb I Mb ou c Ex d mb IIC Tx Gb ou c Ex e mb IIC Tx Gb c Ex tb IIIC Txx Db IP66	INERIS 11ATEX0018X INERIS 03 ATEXQ718
Internatinal classification code	Ex d mb I Mb ou Ex d mb IIC Tx Gb ou Ex e mb IIC Tx Gb Ex tb IIIC Txx Db IP66	IECEx INE 11.0011X

REFERENCES

- SEW6 3X / 420

Mineral Oil	**M**
3/2 switching position symbol C & U 4/2 switching position symbol D & Y	**3** **4**
 	**C** **U**
 	**Y** **D**
Serie number 30 to 39	**3X**
Hydraulic Housing serie	**420**

For use when the flow is greater than the valve capacity, fitted in P line.

Throttle Ø 1.2 MM :	**B12**
Throttle Ø 1.5 MM :	**B15**
Throttle Ø 1.8 MM :	**B18**
Throttle Ø 2.0 MM :	**B20**
Throttle Ø 2.2 MM :	**B22**

Without check valve With check valve	**P**

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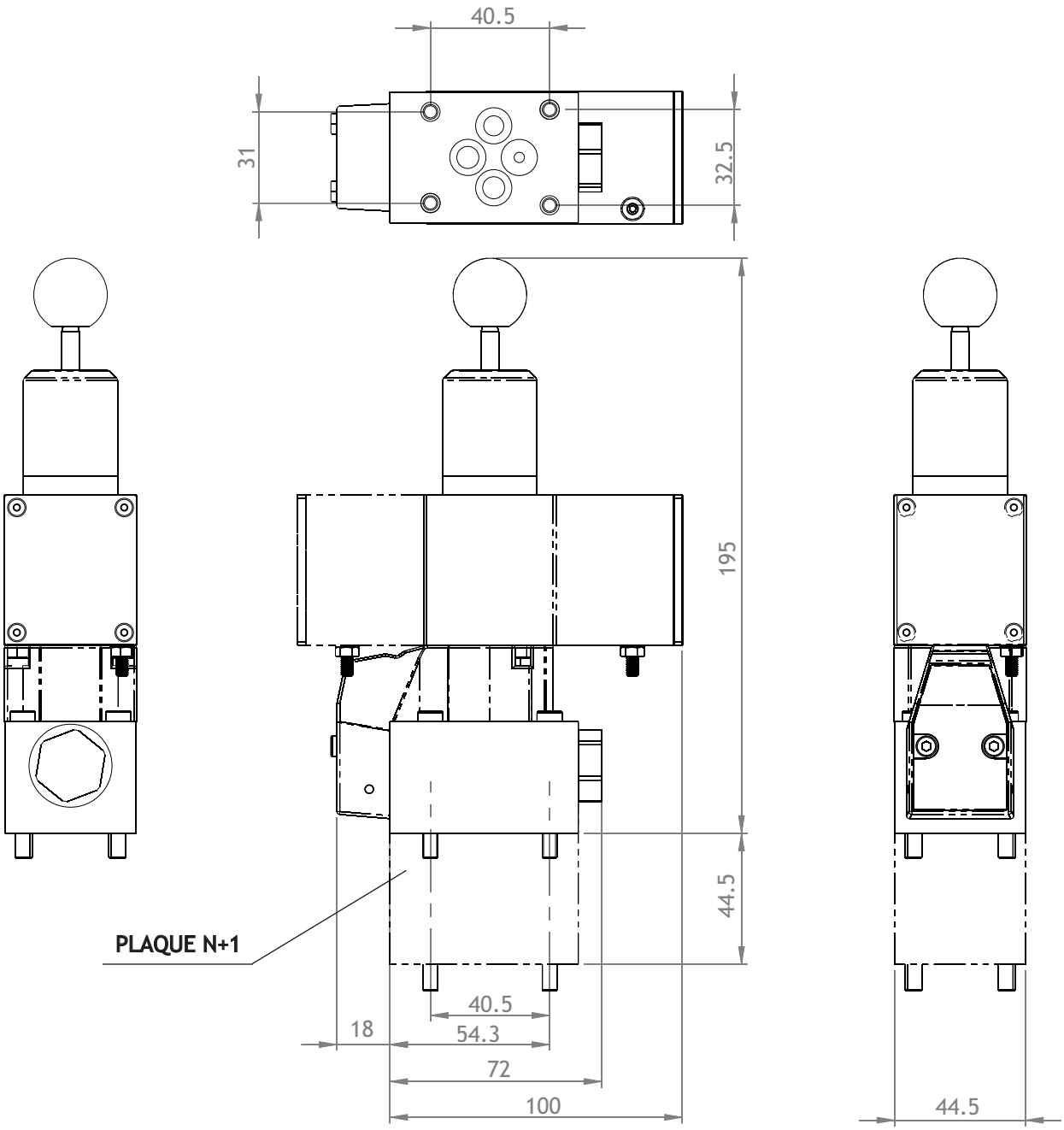
ELECTRIC CODE

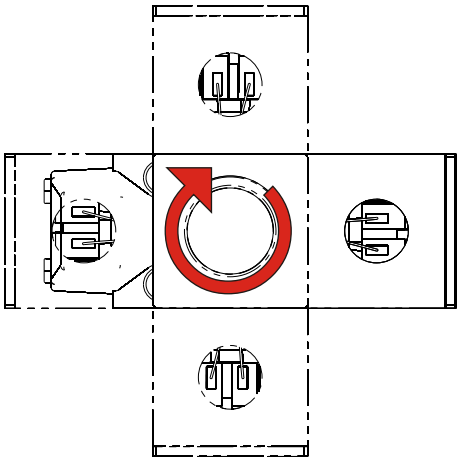
900 - 24 DC

T	For indentification tag (only Ex em) Without: standard plate
e **d**	For protection Ex emb. For protection Ex dmb. For miningEx dmb.
1 **2** **3** **4** **5** **6** **7**	: 1/2" NPT : PG 11 (Only EX me) : PG 13.5 (Only EX me) : PG 16 (Only EX me) : M 16 x 1.50 : M 20 x 1.50 : M 22 x 1.50
H **V**	Horizontal connection on the box. Vertical connexion (only Ex md)
PB **CB** **SB**	Control pushbutton **Side B of Valve.** Punch operating with locking position Screw Control No code : Without control pushbutton
PA **CA** **SA**	Control pushbutton **Side A of Valve.** Punch operating with locking position Screw Control No code : Without control pushbutton
T...	
DC	Solenoid energized in direct current.
24	Solenoid power supply in Volt. 24VDC. See table on page 6 for correspondance with the temperature range T4,T5,T6.
900	Serie 800900
EX	Solenoid european standard (DIRECTIVES ATEX).
IEC	Solenoid international standard. (IECEx)

DIMENSIONS



ORIENTATION



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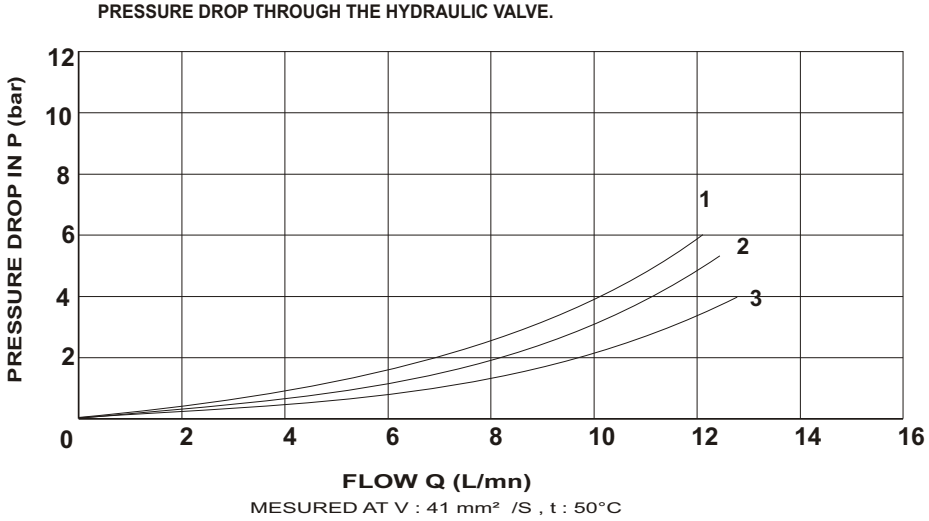
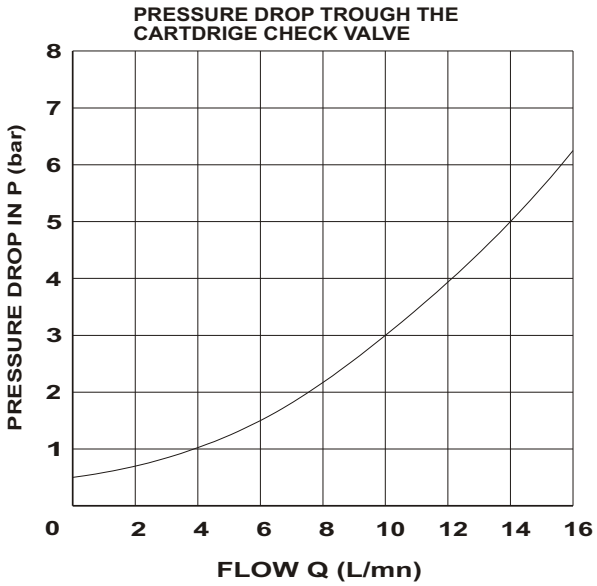
CURVES OF PRESSURE DROP

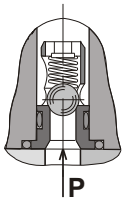
VALVES 3 And 4 PORTS - 2 POSITIONS

1 : M-3SEW6 U or C , A to T
2 : M-3SEW6 U , P to A
3 : M-3SEW6 C , P to A



CARTDRIGE CHECK VALVE





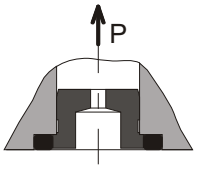
CARTDRIGE CHECK VALVE

For the valves 3/2 the cartridge is inserted in port P of the check valve.

For the valves 4/2 the cartridge is inserted in port P of the plate N+1.

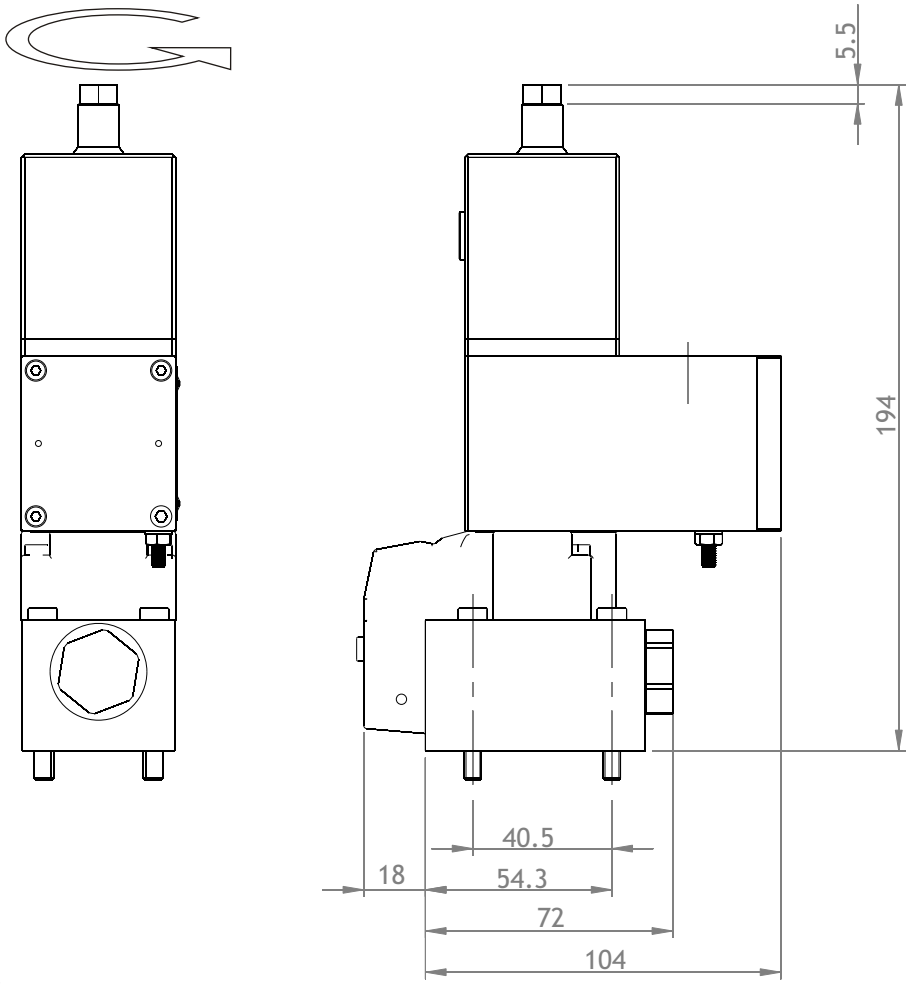
CARTRIDGE THROTTLE

CARTRIDGE THROTTLE :
For use when the flow is greater than the valve capacity, fitted in P line.
For the valves 3/2 the cartridge is inserted in port P of the check valve.
For the valves 4/2 the cartridge is inserted in port P of the plate N+1.

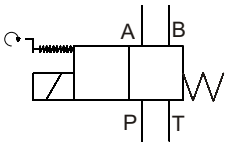


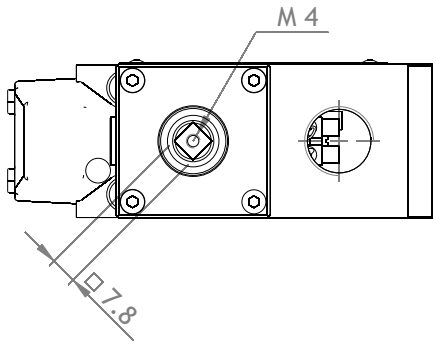
ENCOMBREMENTS

SCRW CONTROL TYPE V



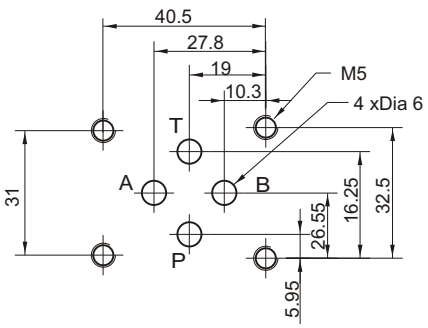
SYMBOLIC





HYDRAULIC VALVE CONNECTION

HYDRAULIC VALVE CONNECTION CETOP3



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