

# AM.3.UD... MODULAR DIRECT CHECK VALVES CETOP 3



**AM.3.UD...**

SCREWS AND STUDS

CH. IV PAGE 21

AM.3.UD type modular check valves allow one way free flow, while flow in the opposite direction is prevented by means of a conical seated poppet.

They are available on single A, B, P and T lines, and on double A and B, P and T lines (see hydraulic symbols).

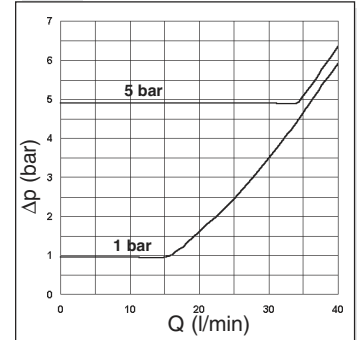
1 bar spring is standard, while a 5 bar rated spring is available on request.

Max. operating pressure	350 bar
Minimum opening pressure spring 1	1 bar
Minimum opening pressure spring 5	5 bar
Max. flow	40 l/min
Hydraulic fluids	Mineral oils DIN 51524
Fluid viscosity	10 ÷ 50 mm <sup>2</sup> /s a 50°
Fluid temperature	-25°C ÷ 75°C
Ambient temperature	-25°C ÷ 60°C
Max. contamination level	class 10 in accordance with NAS 1638 with filter $\beta_{25} \geq 75$
Weight	0,8 Kg

### ORDERING CODE

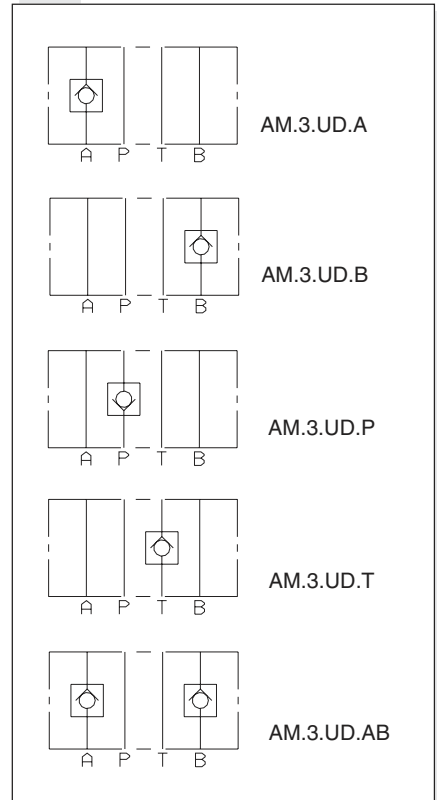
<b>AM</b>	Modular valve
<b>3</b>	CETOP 3/NG6
<b>UD</b>	Direct check valve
<b>**</b>	Control on lines <b>A / B / P / T / AB</b>
<b>*</b>	Minimum opening pressure <b>1 = 1 bar</b> <b>5 = 5 bar</b>
<b>**</b>	<b>00 = No variant</b> <b>V1 = Viton</b>
<b>2</b>	Serial No.

### PRESSURE DROPS

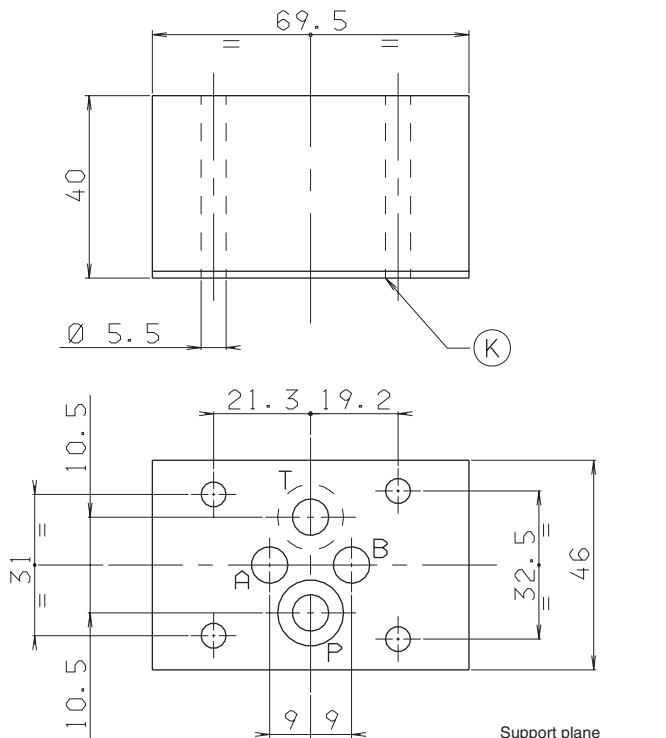


4

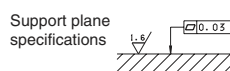
### HYDRAULIC SYMBOLS



### OVERALL DIMENSIONS



K = OR plate





AM.3.UP / AM.3.UP1...

SCREWS AND STUDS

CH. IV PAGE 21

# AM.3.UP... / AM.3.UP1... MODULAR PILOT OPERATED CHECK VALVES CETOP 3



AM.3.UP type modular check valves allow free flow in one direction by raising a conical seated poppet valve, while in the opposite direction the fluid can return by means of a small piston piloted by the other line pressure (piloted side).

They are available on single A or B lines, and double A and B lines (see hydraulic symbols).

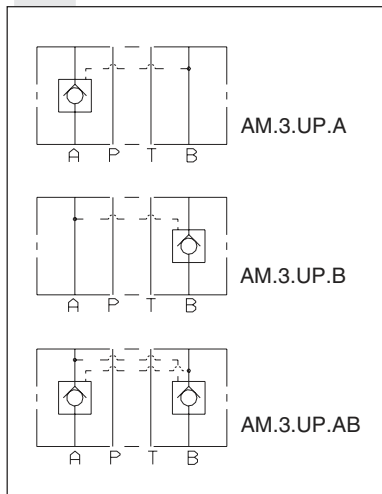
A pre-opening version is also available (AM3UP1..).

Max. operating pressure	350 bar
Minimum opening pressure spring 1	1 bar
Minimum opening pressure spring 5	5 bar
Piloting ratio AM.3.UP	1:4
Piloting ratio AM.3.UP1	1:12,5
Max. flow	40 l/min
Hydraulic fluids	Mineral oils DIN 51524
Fluid viscosity	10 ÷ 500 mm <sup>2</sup> /s
Fluid temperature	-25°C ÷ 75°C
Ambient temperature	-25°C ÷ 60°C
Max. contamination level	class 10 in accordance with NAS 1638 with filter $\beta_{25} \geq 75$
Weight	1 Kg

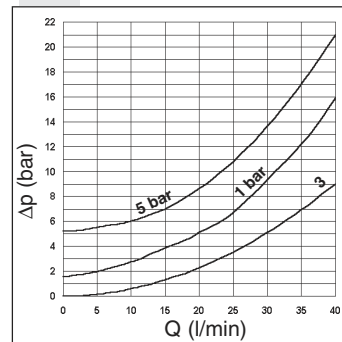
### ORDERING CODE

- AM** Modular valve
- 3** CETOP 3/NG6
- \*\*** **UP** = Piloted check valve  
**UP1** = With pre-opening
- \*\*** Control on lines **A / B / AB**
- \*** Minimum opening pressure  
**1** = 1 bar  
**5** = 5 bar
- \*\*** **00** = No variant  
**V1** = Viton
- 3** Serial No.

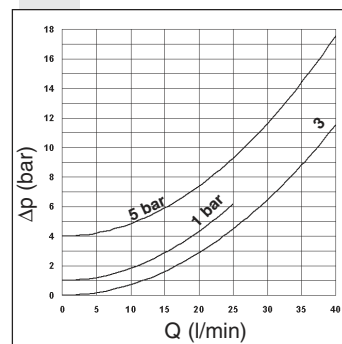
### HYDRAULIC SYMBOLS



### PRESSURE DROPS AM3UP



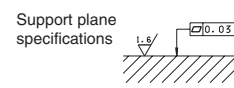
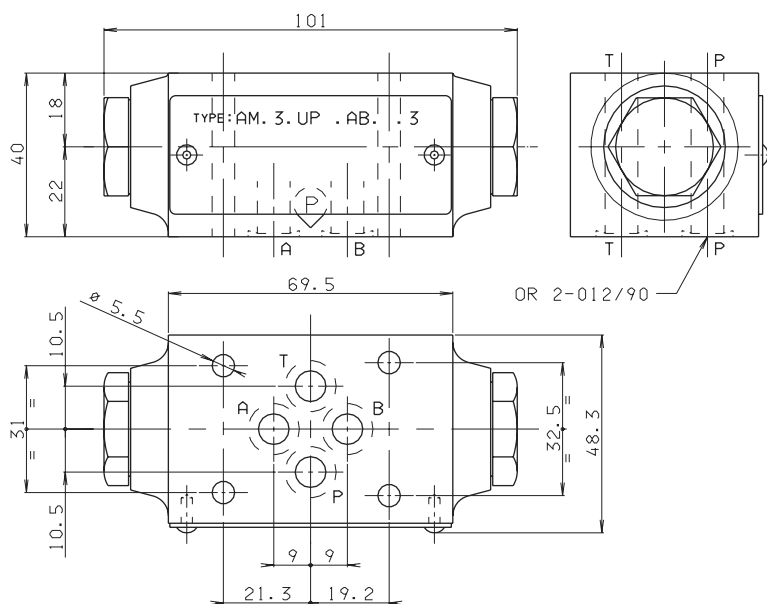
### PRESSURE DROPS AM3UP1



Curve n. 3 = Piloted side flow

The fluid used is a mineral oil with a viscosity of 46 mm<sup>2</sup>/s at 40°C. The tests have been carried out at a fluid temperature of 50°C.

### OVERALL DIMENSIONS



# AM.3.VM... / AM.3.VI... MODULAR MAX. PRESSURE VALVES CETOP 3



## AM.3.VM / AM.3.VI...

CMP.10... CH. V PAGE 19  
SCREWS AND STUDS CH. IV PAGE 21

AM.3.VM type pressure regulating valves are available with a pressure range of 2 ÷ 320 bar.

Adjustment is by means of a grub screw or a plastic knob.

Three basic versions are available:  
- AM3VM on single A or B lines, and on A and B lines, with drainage to T;  
- AM3VMP on single P line, with drainage to T;  
- AM3VI on single A or B lines, and on A and B lines, with crossed drainage on A or B (see hydraulic symbols).  
All versions can accept three types of springs with calibrated ranges as shown in the specifications.

The cartridge, which is the same for all versions, is the direct acting type CMP10.

**For the minimum permissible setting pressure depending on the spring, see minimum pressure setting curve.**

Max. operating pressure	320 bar
Setting ranges:	spring 1 max. 50 bar spring 2 max. 150 bar spring 3 max. 320 bar
Max. flow	40 l/min
Hydraulic fluids	Mineral oils DIN 51524
Fluid viscosity	10 ÷ 500 mm <sup>2</sup> /s
Fluid temperature	-25°C ÷ 75°C
Ambient temperature	-25°C ÷ 60°C
Max. contamination level	class 10 in accordance with NAS 1638 with filter β <sub>25</sub> ≥ 75
Weight AM.3.VM.A/B/P...	1,2 Kg
Weight AM.3.VM.AB...	1,3 Kg
Weight AM.3.VI.A/B...	2 Kg
Weight AM.3.VI.AB...	2,2 Kg

## ORDERING CODE

**AM**

Modular valve

**3**

CETOP 3/NG6

**\*\***

**VM** = Maximum pressure  
**VI** = Maximum pressure crossline

**\*\***

Adjustment on the lines  
AM.3.VM Version = **A / B / P / AB**  
AM.3.VI Version = **A / B / AB**

**\***

Type of adjustment  
**M** = Plastic knob  
**C** = Grub screw

**\***

Setting ranges at port A/B/P  
**1** = max. 50 bar (**white spring**)  
**2** = max. 150 bar (**yellow spring**)  
**3** = max. 320 bar (**green spring**)

**\***

Setting ranges at port B  
(Omit if the setting is same as that at port A)  
**1** = max. 50 bar (**white spring**)  
**2** = max. 150 bar (**yellow spring**)  
**3** = max. 320 bar (**green spring**)

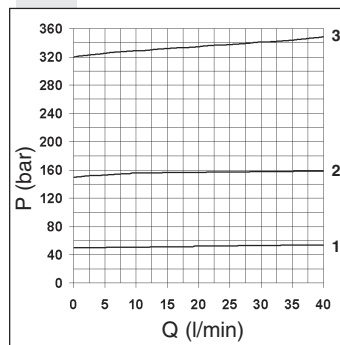
**\*\***

**00** = No variant  
**V1** = Viton

**3**

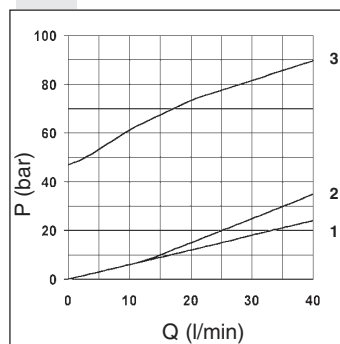
Serial No.

## PRESSURE - FLOW RATE

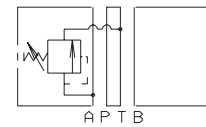


Curves n° 1 - 2 - 3 = setting ranges

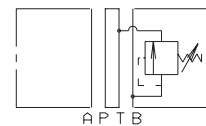
## MINIMUM SETTING PRESSURE



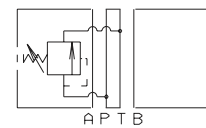
## HYDRAULIC SYMBOLS



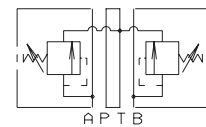
AM.3.VM.A



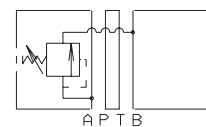
AM.3.VM.B



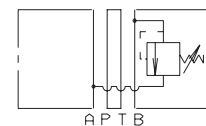
AM.3.VM.P



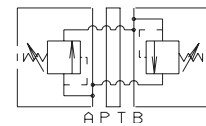
AM.3.VM.AB



AM.3.VI.A



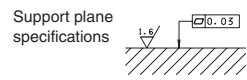
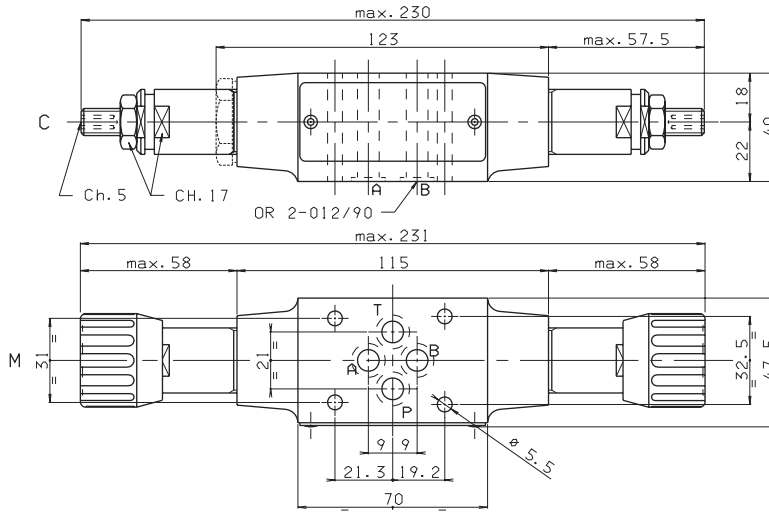
AM.3.VI.B



AM.3.VI.AB

OVERALL DIMENSIONS

AM.3.VM.AB...

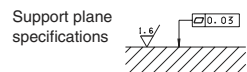
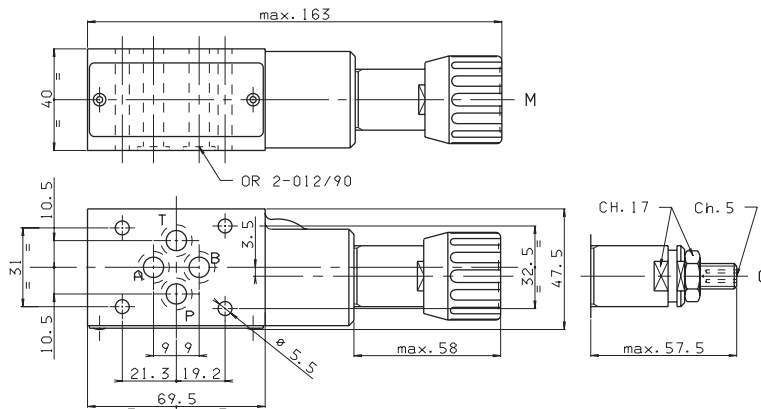


Type of adjustment

- M Plastic knob
- C Grub screw

4

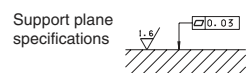
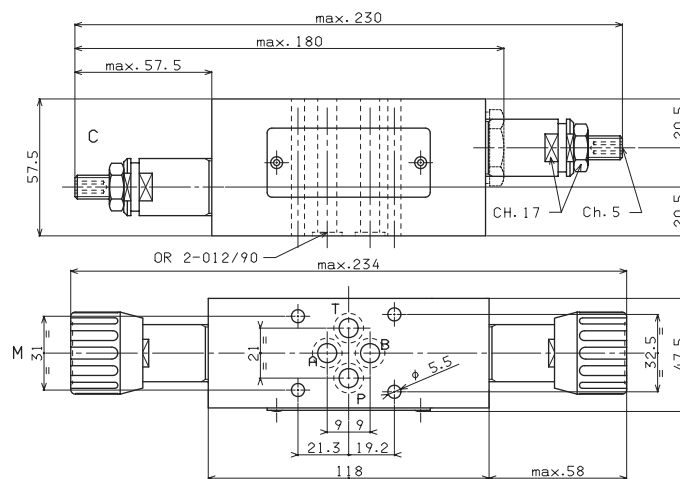
AM.3.VM.P...



Type of adjustment

- M Plastic knob
- C Grub screw

AM.3.VI.AB...



Type of adjustment

- M Plastic knob
- C Grub screw

# AM.3.CP... MODULAR BACK PRESSURE VALVE CETOP 3



<b>AM.3.CP...</b>	
CMP.10...	CH. V PAGE 19
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AM3CP type back pressure valves are damped in-line direct acting pressure relief valves fitted with bypass non-return valves.

Adjustment within the range 2 ÷ 320 bar is by means of a grub screw or a plastic knob, on ports A or B (single) or AB (double).

The cartridge is the direct acting type CMP10.

These valves are especially used on vertically working cylinders with dragging loads.

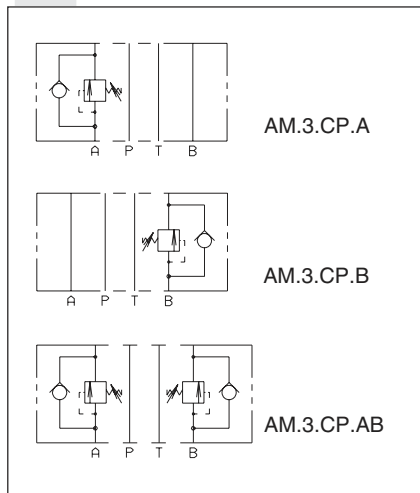
Max. operating pressure	350 bar
Setting ranges:	spring 1 max. 50 bar
	spring 2 max. 150 bar
	spring 3 max. 320 bar
Max. flow	40 l/min
Hydraulic fluids	Mineral oils DIN 51524
Fluid viscosity	10 ÷ 500 mm <sup>2</sup> /s
Fluid temperature	-25°C ÷ 75°C
Ambient temperature	-25°C ÷ 60°C
Max. contamination level	class 10 in accordance with NAS 1638 with filter β <sub>25</sub> ≥ 75
Weight AM.3.CP.A/B...	2 Kg
Weight AM.3.CP.AB...	2,7 Kg

### ORDERING CODE

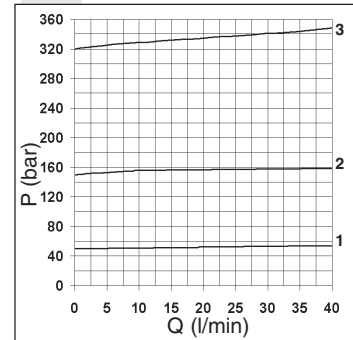
<b>AM</b>	Modular valve
<b>3</b>	CETOP 3/NG6
<b>CP</b>	Back pressure valve
<b>**</b>	Control on lines <b>A / B / AB</b>
<b>*</b>	Type of adjustment <b>M</b> = Plastic knob <b>C</b> = Grub screw
<b>*</b>	Setting ranges <b>1</b> = max. 50 bar ( <b>white spring</b> ) <b>2</b> = max. 150 bar ( <b>yellow spring</b> ) <b>3</b> = max. 320 bar ( <b>green spring</b> )
<b>**</b>	<b>00</b> = No variant <b>V1</b> = Viton
<b>3</b>	Serial No.

For the minimum permissible setting pressure depending on the spring, see minimum pressure setting curve.

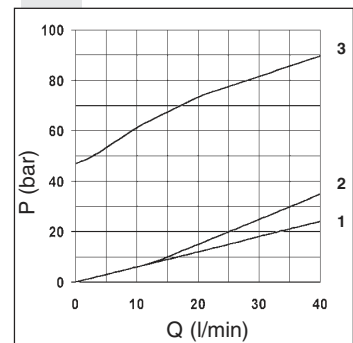
### HYDRAULIC SYMBOLS



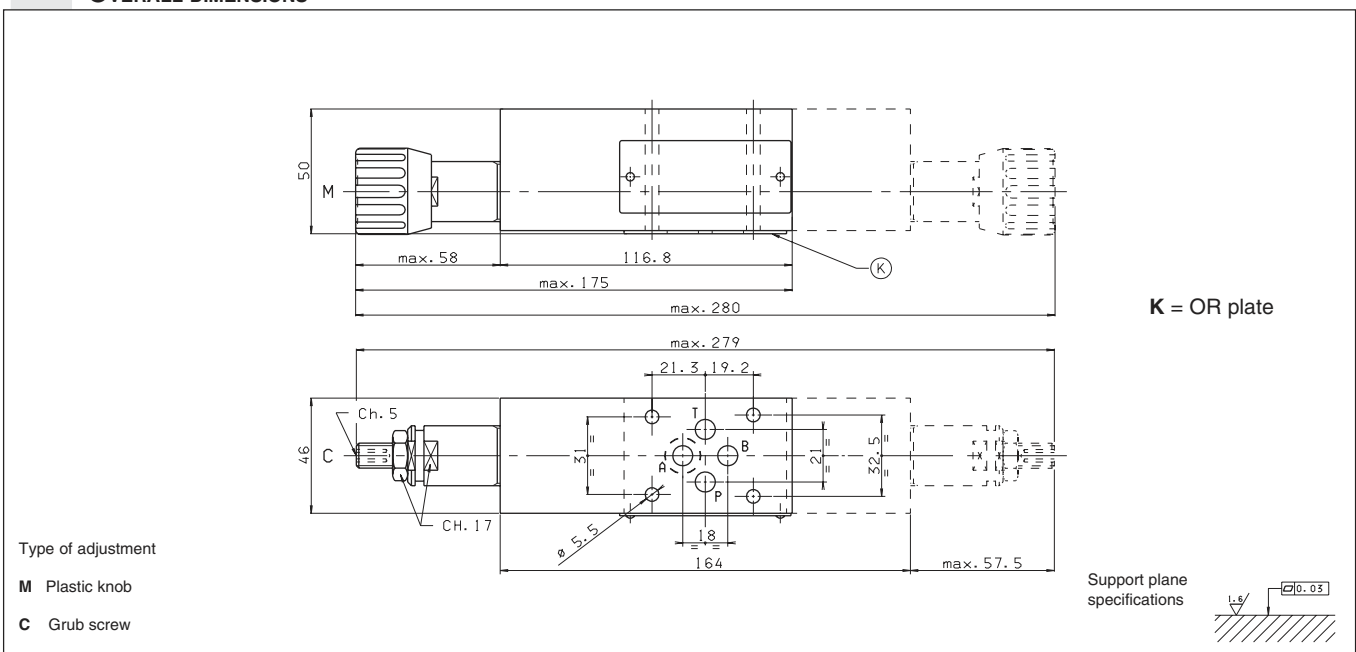
### PRESSURE - FLOW RATE



### MINIMUM SETTING PRESSURE



### OVERALL DIMENSIONS



Type of adjustment  
**M** Plastic knob  
**C** Grub screw



**AM.3.RD / AM.3.SD...**

SCREWS AND STUDS

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**AM.3.RD... /AM.3.SD... MODULAR PRESSURE**

**REDUCING / PRESSURE SEQUENCING VALVES CETOP 3 **

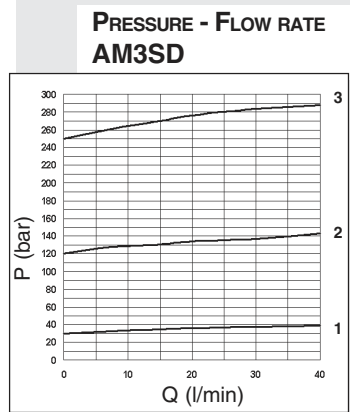
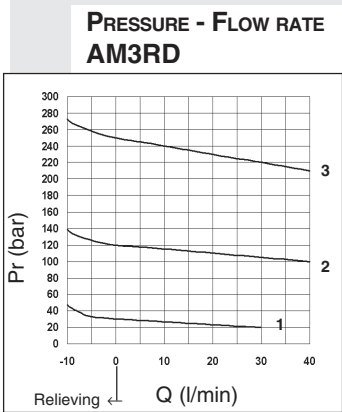
AM3RD and AM3SD valves are direct acting spool type pressure reducing and sequencing units, respectively, with one end pre-loaded by means of a spring at the other end exposed to the hydraulic pressure.

The drainage is drained within the valve to port T. Pressure is adjustable by means of a screw and locknut, or of a handwheel. Three types of springs allow adjustment within the range 2÷250 bar. The pressure reducing valves are available in two versions: with positive overlap (suitable with low flow rate) and with negative overlap to obtain a greater pressure reinstatement speed.

Max. operating pressure: port P	350 bar
Max. pressure adjustable	250 bar
Setting ranges:	
spring 1	2 ÷ 30 bar
spring 2	10 ÷ 120 bar
spring 3	60 ÷ 250 bar
Max. flow	40 l/min
Internal drainage RD:	
Positive overlap version	0,5 l/min
Negative overlap version	2 l/min
Hydraulic fluids	Mineral oils DIN 51524
Fluid viscosity	10 ÷ 500 mm <sup>2</sup> /s
Fluid temperature	-25°C ÷ 75°C
Ambient temperature	-25°C ÷ 60°C
Max. contamination level	class 10 in accordance with NAS 1638 with filter $\beta_{25} \geq 75$
Weight	1,3 Kg

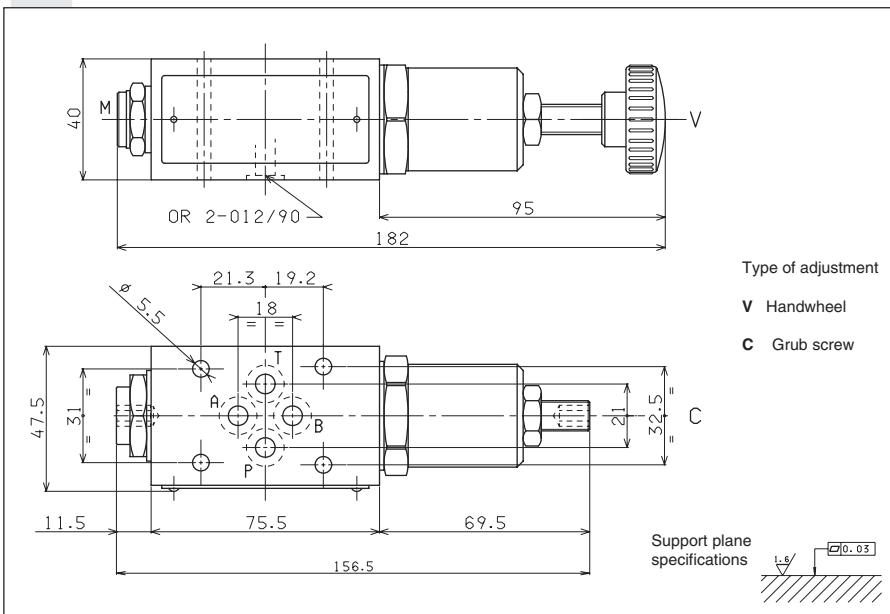
**ORDERING CODE**

- AM** Modular valve
- 3** CETOP 3/NG6
- \*\*** **RD** = Direct pressure reducing valve  
**SD** = Direct pressure sequencing valve
- \*** Control on lines  
AM.3.RD version = **A / P**  
AM.3.SD version = **P**
- \*** **1** = Positive overlap  
**2** = Negative overlap  
Omit for version AM3SD
- \*** Type of adjustment  
**C** = Grub screw  
**V** = Handwheel
- \*** Setting ranges  
**1** = max. 2 ÷ 30 bar (**white spring**)  
**2** = max. 10 ÷ 120 bar (**yellow spring**)  
**3** = max. 60 ÷ 250 bar (**green spring**)
- \*\*** **00** = No variant  
**V1** = Viton
- 4** Serial No.

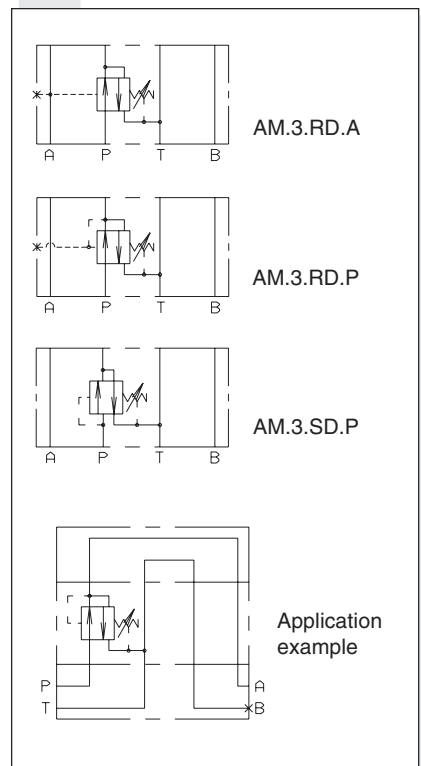


The fluid used is a mineral based oil with a viscosity of 46 mm<sup>2</sup>/sec at 40 degrees C. The tests have been carried out at with a fluid temperature of 40 degrees C.

**OVERALL DIMENSIONS**



**HYDRAULIC SYMBOLS**



# AM.3.VR... MODULAR REDUCING VALVES WITH RELIEVING - PILOT OPERATED CETOP 3



<b>AM.3.VR...</b>	
CVR.20...	CH. V PAGE 23
SCREWS AND STUDS	CH. IV PAGE 21

These pressure reducing valves ensure a minimum pressure variation on the P or A port with changing flow rate up to 90 l/min.

Three spring types allow adjustment within the range 7 ÷ 250 bar. Manual adjustment is available by a grub screw or plastic knob.

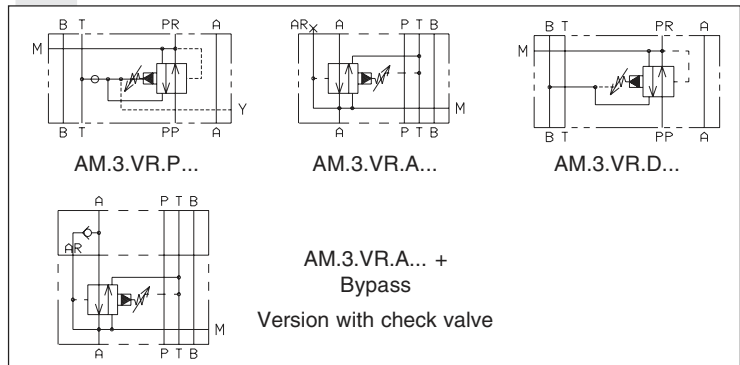
The RELIEVING SYSTEM inside the valve AM3VR allows the passage from the setting pressure line to T line of the flow through the valve to avoid the increasing of pressure in the reduced-pressure line by diverting exceeding flow to reservoir. A bypass module with check valve for free flow from A to AR port (see hydraulic symbol) is available..

Max. operating pressure	350 bar
Setting ranges:	spring 1 max. 60 bar
	spring 2 max. 120 bar
	spring 3 max. 250 bar
<b>Maximum allowed <math>\Delta p</math> pressure between the inlet an outlet pressure</b>	<b>150 bar</b>
Max. flow	40 l/min
Draining on port T	0,5 ÷ 0,7 l/min
Hydraulic fluids	Mineral oils DIN 51524
Fluid viscosity	10 ÷ 500 mm <sup>2</sup> /s
Fluid temperature	-25°C ÷ 75°C
Ambient temperature	-25°C ÷ 60°C
Max. contamination level	class 10 in accordance with NAS 1638 with filter $\beta_{25} \geq 75$
Weight	1,36 Kg
Weight bypass version	2 Kg

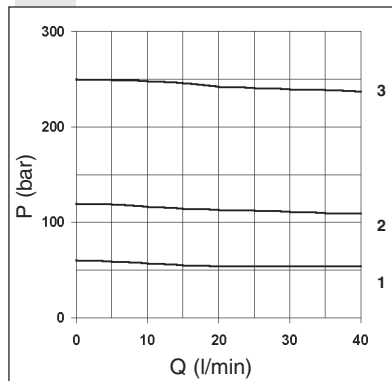
### ORDERING CODE

<b>AM</b>	Modular valve
<b>3</b>	CETOP 3/NG6
<b>VR</b>	Pilot operated pressure reducing valve with relieving
<b>*</b>	Control on lines <b>P</b> = Drain on T <b>A</b> = Drain on T <b>D</b> = Drain on B reduct pressure on A
<b>*</b>	Drain connection <b>E</b> = External (only for control on the P line) <b>I</b> = Internal (Standard)
<b>B</b>	Version with bypass on line A only <b>Omit if not required</b>
<b>*</b>	Type of adjustment <b>M</b> = Plastic knob <b>C</b> = Grub screw
<b>*</b>	Setting ranges <b>1</b> = max. 60 bar ( <b>white spring</b> ) <b>2</b> = max. 120 bar ( <b>yellow spring</b> ) <b>3</b> = max. 250 bar ( <b>green spring</b> )
<b>**</b>	<b>00</b> = No variant <b>V1</b> = Viton
<b>1</b>	Serial No

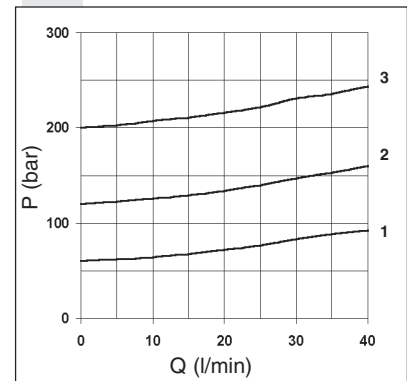
### HYDRAULIC SYMBOLS



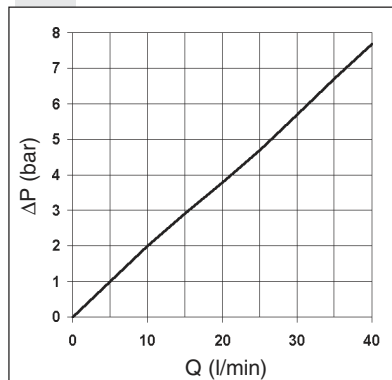
### PRESSURE-FLOW RATE



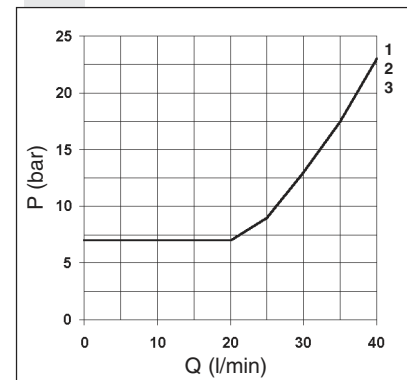
### PRESSURE-FLOW OF RELIEVING



### $\Delta P$ AM.3.VR... + BYPASS



### MINIMUM SETTING PRESSURE



Curves n° 1 - 2 - 3 = setting ranges

The fluid used is a mineral oil with a viscosity of 46 mm<sup>2</sup>/s at 40°C. The tests have been carried out a fluid temperature of 50°C.

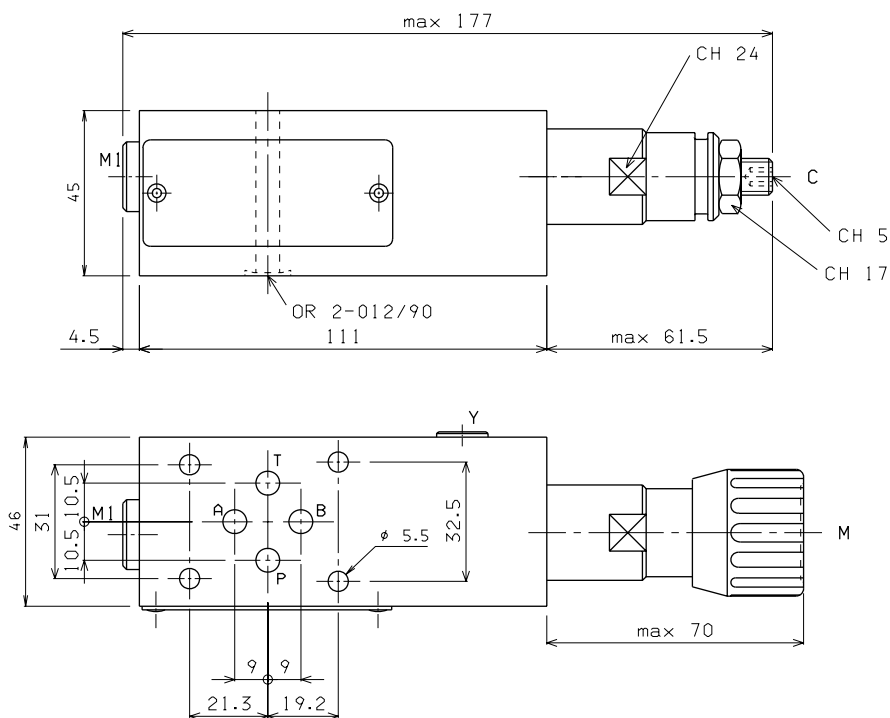
To changes valves AM.3.VR.P... from internal to external drainage it is necessary:

- screw out the plug on the "Y" port
- screw out the plug T.C.E.I. M8x1 from the body
- screw in a screw S.T.E.I. M6
- rescrew the T.C.E.I. M8x1 plug on the body

**NOTE:** the external draining can be used as a piloting line (please, contact our Technical Service for other informations)

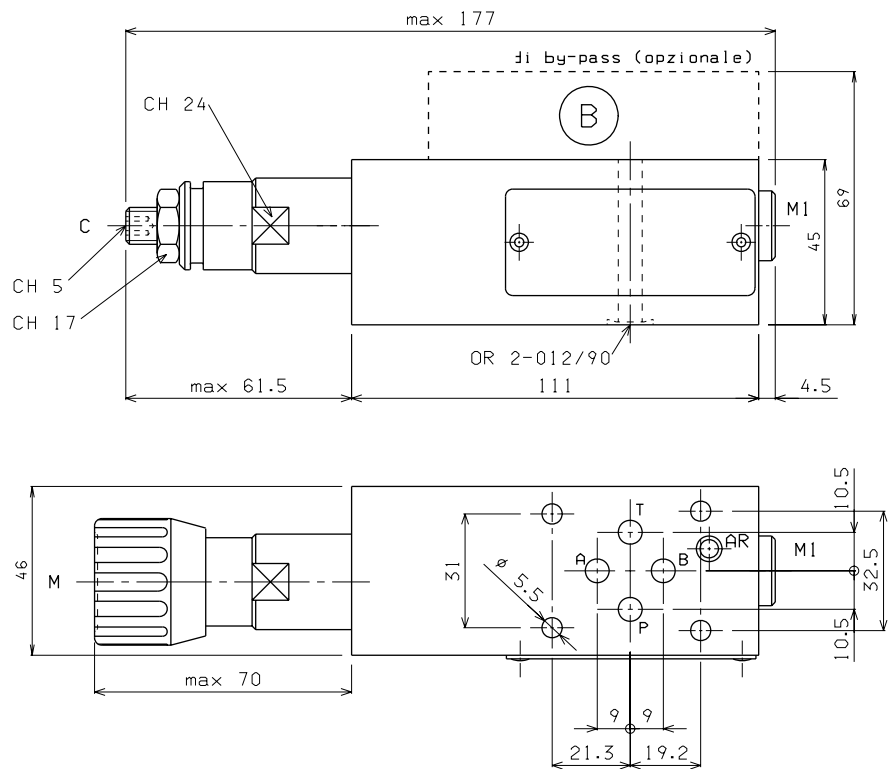
OVERALL DIMENSIONS

AM.3.VR.P... / AM.3.VR.D...



AM.3.VR.A... + BYPASS

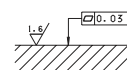
**(B)** Bypass (optional)  
Ordering code:  
V89.45.000  
(if ordered separately)



Type of adjustment

- M** Plastic knob
- C** Grub screw

Support plane specifications





# AM.3.VS... MODULAR SEQUENCING VALVES CETOP 3



## AM.3.VS...

CVS.20... CH. V PAGE 24

SCREWS AND STUDS CH. IV PAGE 21

The sequence valve are used to assure that a secondary circuit is pressurized when the setting pressure is reached.

These valves grant a minimum variation of the setting pressure with a changing flow up to 40 l/min (see diagram).

Three spring types allow adjustment within the range 7 ÷ 250 bar. Manual adjustment is available by a grub screw or plastic knob.

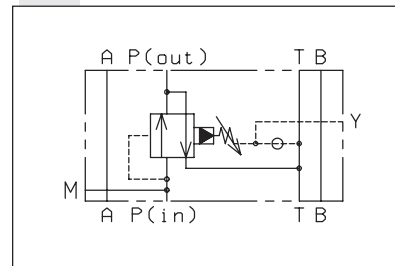
The cartridge used is the "CVS" type.

Max. operating pressure	350 bar
Setting ranges:	Spring 1 max. 60 bar
	Spring 2 max. 120 bar
	Spring 3 max. 250 bar
Max. flow	40 l/min
Draining on port T	0,5 ÷ 0,7 l/min
Hydraulic fluids	Mineral oils DIN 51524
Fluid viscosity	10 ÷ 500 mm <sup>2</sup> /s
Fluid temperature	-25°C ÷ 75°C
Ambient temperature	-25°C ÷ 60°C
Max. contamination level	class 10 in accordance with NAS 1638 with filter $\beta_{25} \geq 75$
Weight	1,36 Kg

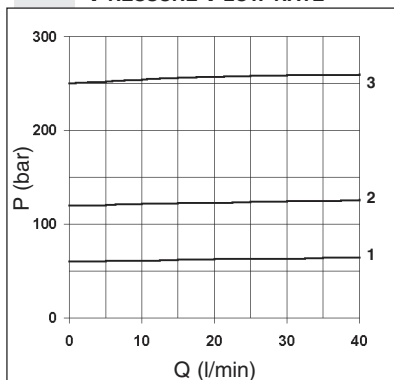
### ORDERING CODE

<b>AM</b>	Modular valve
<b>3</b>	CETOP 3/NG6
<b>VS</b>	Sequencing valve
*	Drain connection E = External I = Internal (Standard)
*	Type of adjustment M = Plastic knob C = Grub screw
*	Setting ranges 1 = max. 60 bar (white spring) 2 = max. 120 bar (yellow spring) 3 = max. 250 bar (green spring)
**	00 = No variant V1 = Viton
<b>1</b>	Serial No

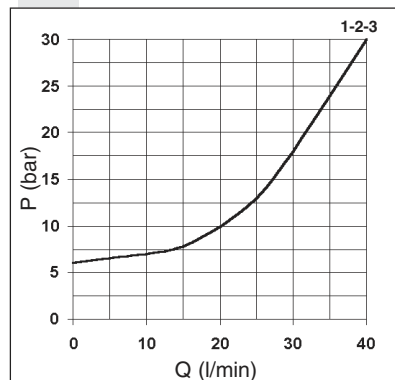
### HYDRAULIC SYMBOL



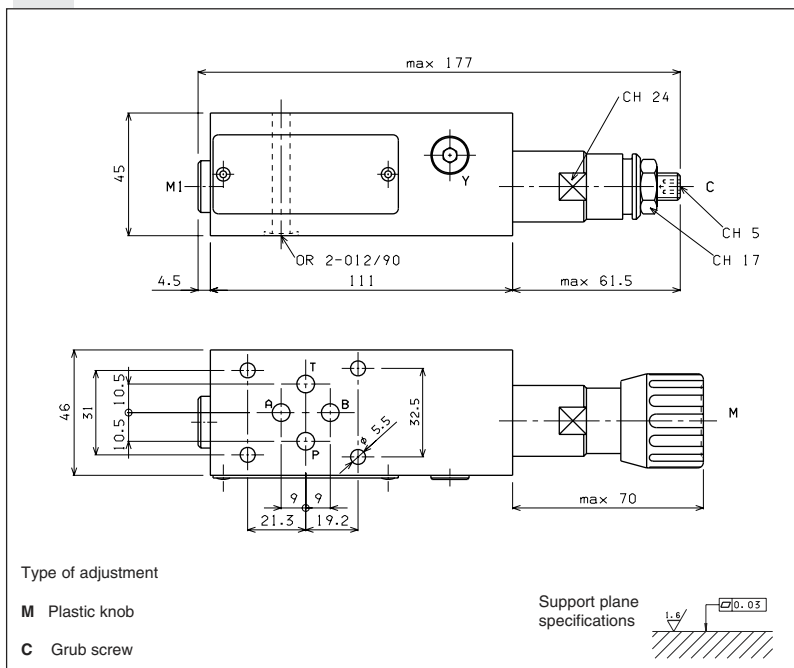
### PRESSURE-FLOW RATE



### MINIMUM SETTING PRESSURE



### OVERALL DIMENSIONS



Curves n° 1 - 2 - 3 = setting ranges

The fluid used is a mineral oil with a viscosity of 46 mm<sup>2</sup>/s at 40°C. The tests have been carried out at a fluid temperature of 50°C.

To changes valves AM.3.VS... from internal to external drainage it is necessary:

- screw out the plug on the Y port
- screw out the plug T.C.E.I. M8x1 from the body
- screw in a screw S.T.E.I. M6
- rescrew the T.C.E.I. M8x1 plug on the body

**NOTE:** the external draining can be used as a piloting line (please, contact our Technical Service for other informations)

## AM.3.SH... MODULAR SHUTTLE VALVES CETOP 3



### AM.3.SH...

SH.03... CH. V PAGE 16

SCREWS AND STUDS CH. IV PAGE 21

Modular valves type AM.3.SH are actuator load pressure selecting units, as they are fitted with an integral shuttle valve cartridge which allows taking of the highest pressure signal to the external port via displacement of a ball. They are usually employed to signal the actuator load to the pressure compensator of load sensing pump, or for the command of fail-safe brakes.

For seat overall dimensions see cartridge shuttle SH.03 type.

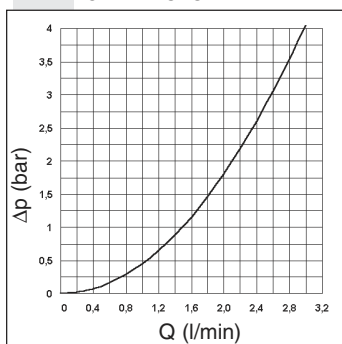
Max. operating pressure	350 bar
Max. flow at the cartridge	3 l/min
Max. flow at ports A/B/P/T	40 l/min
Hydraulic fluids	Mineral oils DIN 51524
Fluid viscosity	10 ÷ 500 mm <sup>2</sup> /s
Fluid temperature	-25°C ÷ 75°C
Ambient temperature	-25°C ÷ 60°C
Max. contamination level	class 10 in accordance with NAS 1638 with filter $\beta_{25} \geq 75$
Weight	1 Kg
Cartridge tightening torque	20÷30 Nm/2÷3 Kgm

# 4

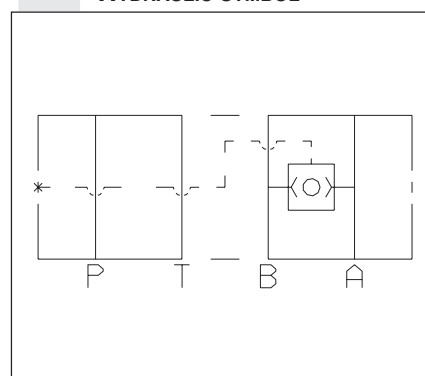
### ORDERING CODE

<b>AM</b>	Modular valve
<b>3</b>	CETOP 3/NG6
<b>SH</b>	Cartridge shuttle
<b>**</b>	<b>00</b> = No variant <b>V1</b> = Viton
<b>1</b>	Serial No.

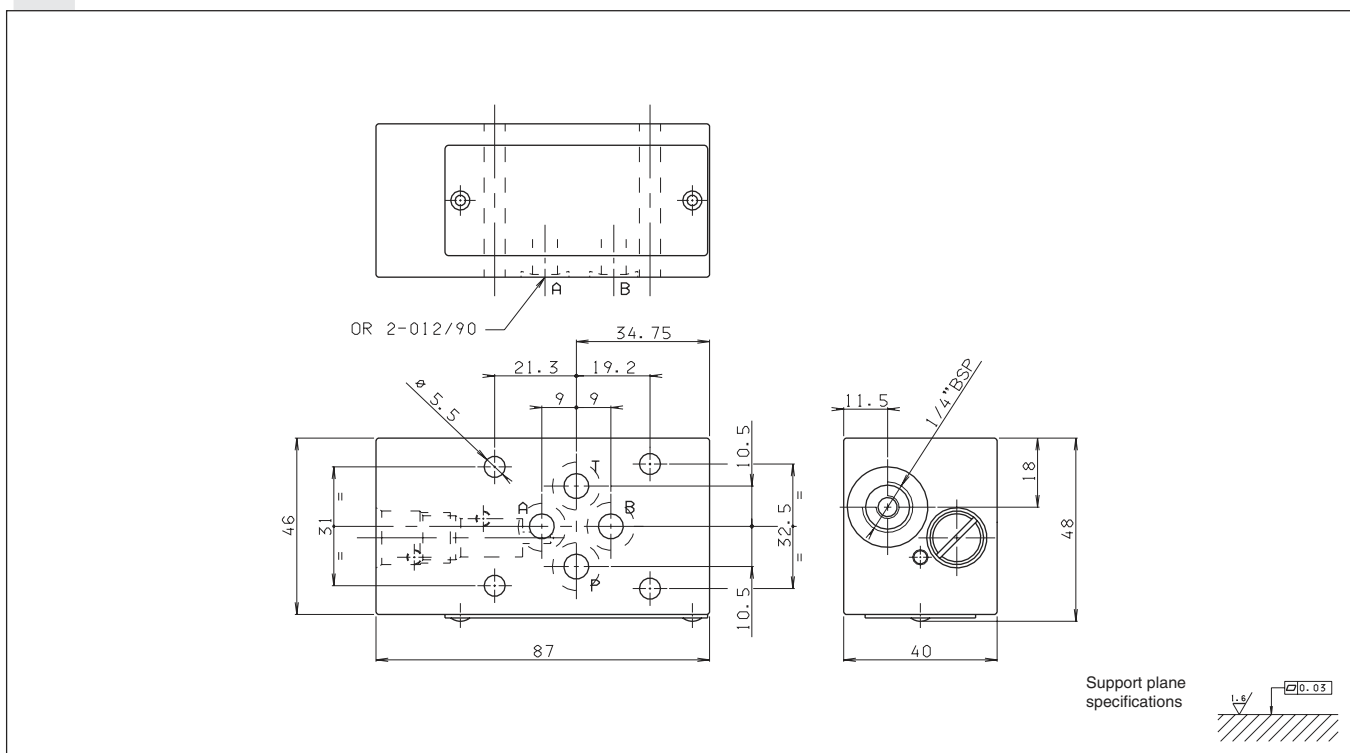
### PRESSURE DROPS ON THE SHUTTLE VALVE



### HYDRAULIC SYMBOL



### OVERALL DIMENSIONS



# AM.3.QF... MODULAR FLOW REGULATOR CETOP 3



**AM.3.QF...**

SCREWS AND STUDS

CH. IV PAGE 21

AM.3.QF type one way non-compensated throttle valve are fitted with an O-Ring mounting plate which allows its assembly for either input or output regulation. Adjustment is obtained by means of a grub screw or a plastic knob. They are available in the four regulating configurations shown in the hydraulic diagrams.

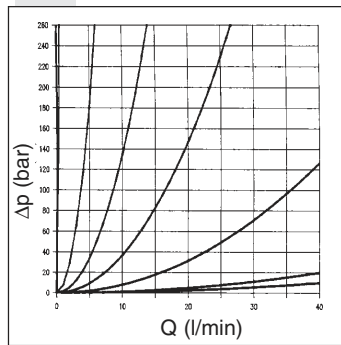
The standard valve configuration allows "meter in" regulation, while it is possible to obtain "meter out" regulation by turning the valve by 180° along its longitudinal axis.

Max. operating pressure	350 bar
Max. pressure adjustable	250 bar
Flow rate regulation	on 8 screw turns
Max. flow	40 l/min
Hydraulic fluids	Mineral oils DIN 51524
Fluid viscosity	10 ÷ 500 mm <sup>2</sup> /s
Fluid temperature	-25°C ÷ 75°C
Ambient temperature	-25°C ÷ 60°C
Max. contamination level	class 10 in accordance with NAS 1638 with filter $\beta_{25} \geq 75$
Weight	1,5 Kg

### ORDERING CODE

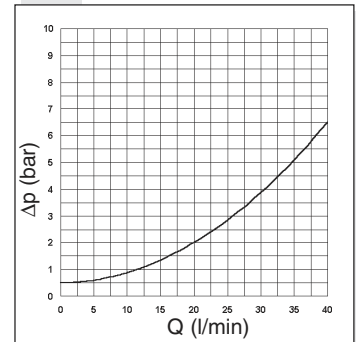
- AM** Modular valve
- 3** CETOP 3/NG6
- QF** Non compensated throttle valve
- \*\*** Control on lines  
**A / B / P / AB**
- \*** Type of adjustment  
**M** = Plastic knob  
**C** = Grub screw
- \*\*** **00** = No variant  
**V1** = Viton
- 4** Serial No.

### FLOW REGULATION

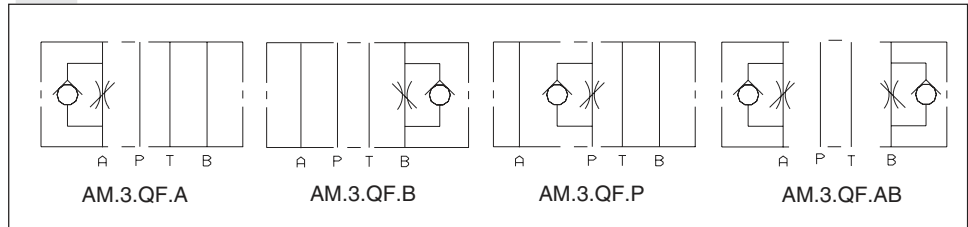


### FREE FLOW

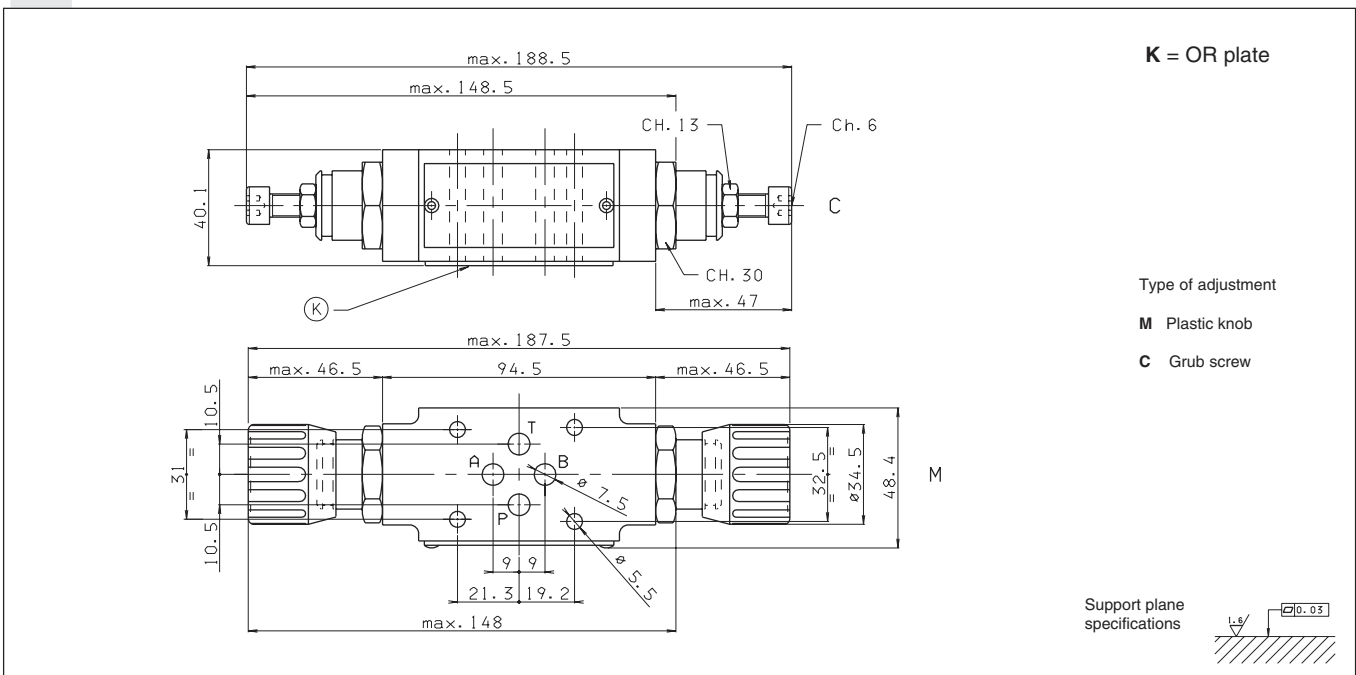
#### TOWARDS CHECK VALVE



### HYDRAULIC SYMBOLS



### OVERALL DIMENSIONS





## AM.66... MODULAR COMPENSATED FLOW CONTROL ASSEMBLY CETOP 3



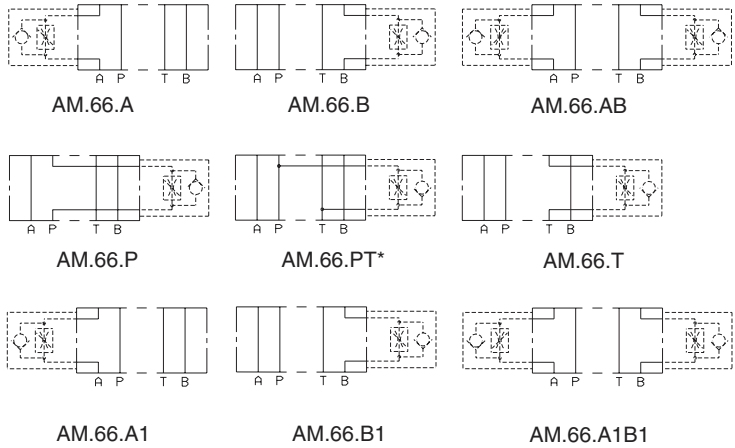
This is an intermediate block (AM.66) for modular mounting of one or two flow rate regulators type QC.3...

The flow regulator type QC.3.2... must be ordered separately.

Max. operating pressure	320 bar
Hydraulic fluids	Mineral oils DIN 51524
Fluid viscosity	10 ÷ 500 mm <sup>2</sup> /s
Fluid temperature	-25°C ÷ 75°C
Ambient temperature	-25°C ÷ 60°C
Max. contamination level	class 10 in accordance with NAS 1638 with filter β <sub>25</sub> ≥ 75
Weight	1,3 Kg

AM.66...	CH. III PAGE 2
QC.3.2...	CH. IV PAGE 21
SCREWS AND STUDS	

### HYDRAULIC SYMBOLS



**PT \*** = From line towards exhaust (**P**→**T** drain)

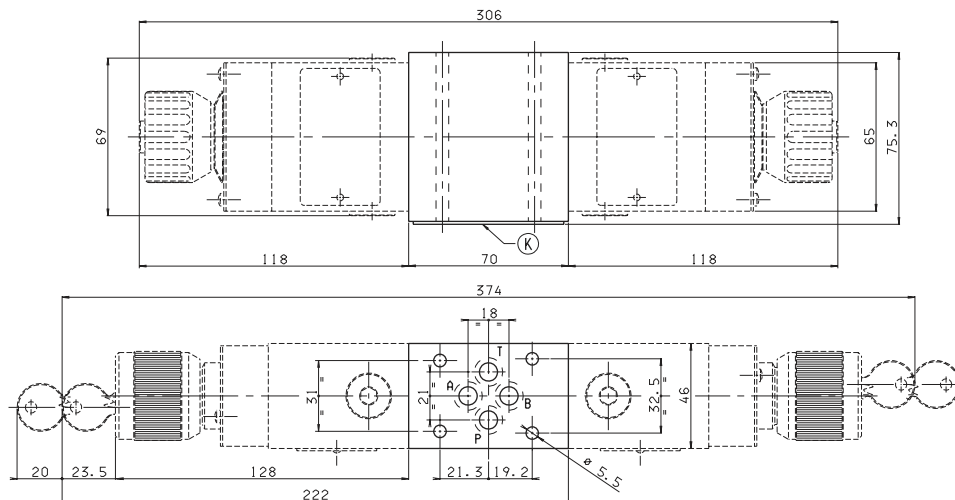
• In order to obtain versions with regulation on **T**, the AM.66.P regulator carrying block should be turned by 180°.

• In order to obtain versions **A1**, **B1** and **A1B1** the AM.66.B, AM.66.A or AM.66.AB regulators carrying block should be turned by 180°.

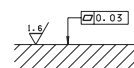
### ORDERING CODE

<b>AM</b>	Modular valve
<b>66</b>	Size
<b>**</b>	Control on lines <b>A / B / P / PT* / AB</b> For T / A1 / B1 / A1B1 versions see table "Hydraulic symbols"
<b>**</b>	<b>00</b> = No variant <b>V1</b> = Viton
<b>3</b>	Serial No.

### OVERALL DIMENSIONS



Support plane specifications





## A.66... MODULAR FLOW CONTROL VALVES FAST / SLOW ASSEMBLY CETOP 3



This is modular assembly ON/OFF solenoid valve which, by fitting suitable 2 way regulator, allows two speed operation in the same system via an electrical changeover command.

Max. operating pressure	320 bar
Hydraulic fluids	Mineral oils DIN 51524
Fluid viscosity	10 ÷ 500 mm <sup>2</sup> /s
Fluid temperature	-25°C ÷ 75°C
Ambient temperature	-25°C ÷ 60°C
Max. contamination level	class 10 in accordance with NAS 1638 with filter $\beta_{25} \geq 75$
Weight with an AC solenoid	2,2 Kg
Weight with a DC solenoid	2,4 Kg

**The flow rate regulator type QC.3.2... must be ordered separately. The operational limit curves have been obtained with the regulator fully closed, and those same limits improve gradually with the opening of the regulator**  
**• Solenoids used are standard type D15 for DC voltage and K12 for AC voltage.**

The test have been carried out at operating temperature, with a voltage 10% lower than rated voltage and with a fluid temperature of 50 degrees C. The fluid used was a mineral based oil with a viscosity of 46 mm<sup>2</sup>/s at 40 degrees C.

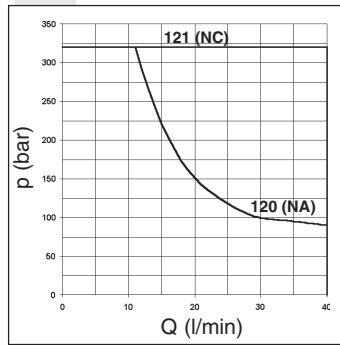
### A.66...

"D15" DC COILS	CH. I PAGE 67
"K12" AC COILS	CH. I PAGE 18
STANDARD CONNECTORS	CH. I PAGE 19
QC.3.2...	CH. III PAGE 2
SCREWS AND STUDS	CH. IV PAGE 21

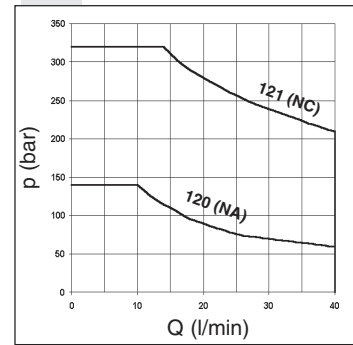
### ORDERING CODE

<b>A</b>	Speed control valve
<b>66</b>	Size
<b>E</b>	Electrical operator
<b>***</b>	<b>120</b> = Normally open <b>121</b> = Normally closed See table hydraulic symbols
<b>*</b>	Control on lines <b>A/B/P/T</b> (see symbols) The interface holder "H" must be turned by 180° in order to obtain the <b>A1</b> and <b>B1</b> versions.
<b>*</b>	Voltage: see tab.1
<b>**</b>	Variants: see tab.2
<b>*</b>	<b>3</b> = Serial No. for AC voltage <b>4</b> = Serial No. for DC voltage

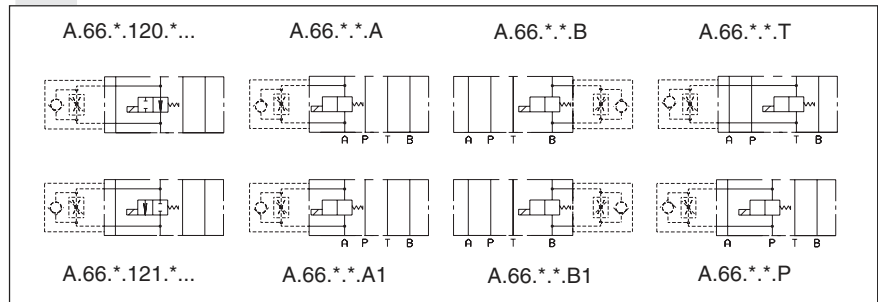
### LIMITS OF USE DC SOLENOID



### LIMITS OF USE AC SOLENOID



### HYDRAULIC SYMBOLS



### TAB.1 "E" OPERATOR TYPE

AC VOLTAGE	
<b>A</b>	24V/50Hz
<b>B</b>	48V/50Hz*
<b>J</b>	115V/50Hz - 120V/60Hz
<b>Y</b>	230V/50Hz - 240V/60Hz
<b>E</b>	240V/50Hz*
<b>F</b>	24V/60Hz*
<b>K</b>	AC without coils

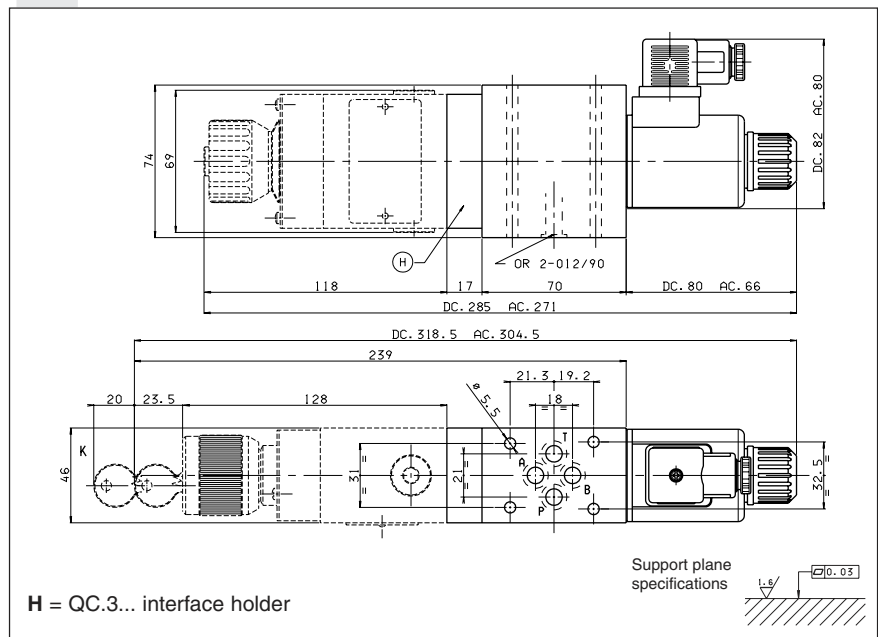
DC VOLTAGE	
<b>L</b>	12V
<b>M</b>	24V
<b>V</b>	28V*
<b>N</b>	48V*
<b>Z</b>	102V*
<b>P</b>	110V*
<b>X</b>	205V*
<b>W</b>	DC without coils

Voltage codes are not stamped on the plate, they are readable on the coils.  
 (\*) Special voltage

### TAB.2 - VARIANTS

No variant	00
(connectors as in the drawing)	
Viton	V1
Indicator light	X1
Rectifier	R1
Cable gland "PG11"	C1
Valve without connector (coil)	S1
Indicator light + rectifier	XR

### OVERALL DIMENSIONS



## AM.3.RGT... MODULAR VALVES FOR REGENERATIVE CIRCUIT CETOP 3



AM.3.RGT...

SCREWS AND STUDS

CH. IV PAGE 21

This modular valve produces a regenerative system to increase the actuator (differential cylinder) exit speed as shown in the diagram.

In particular, if a cylinder is used with a 2:1 ratio for the operating surfaces, the exit and re-entry speeds are the same.

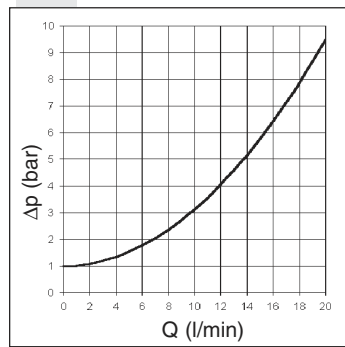
Max. operating pressure	350 bar
Max. flow at port A/B/P/T	20 l/min
Hydraulic fluids	Mineral oils DIN 51524
Fluid viscosity	10 ÷ 500 mm <sup>2</sup> /s
Fluid temperature	-25°C ÷ 75°C
Ambient temperature	-25°C ÷ 60°C
Max. contamination level	class 10 in accordance with NAS 1638 with filter $\beta_{25} \geq 75$
Weight	1,7 Kg

4

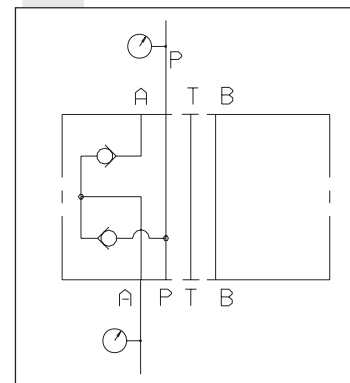
### ORDERING CODE

<b>AM</b>	Modular valve
<b>3</b>	CETOP 3/NG6
<b>RGT</b>	For regenerative circuit
<b>A</b>	Size of check valves 3/8"BSP
<b>1</b>	Opening pressure 1 bar
<b>**</b>	<b>00</b> = No variant <b>V1</b> = Viton
<b>1</b>	Serial No.

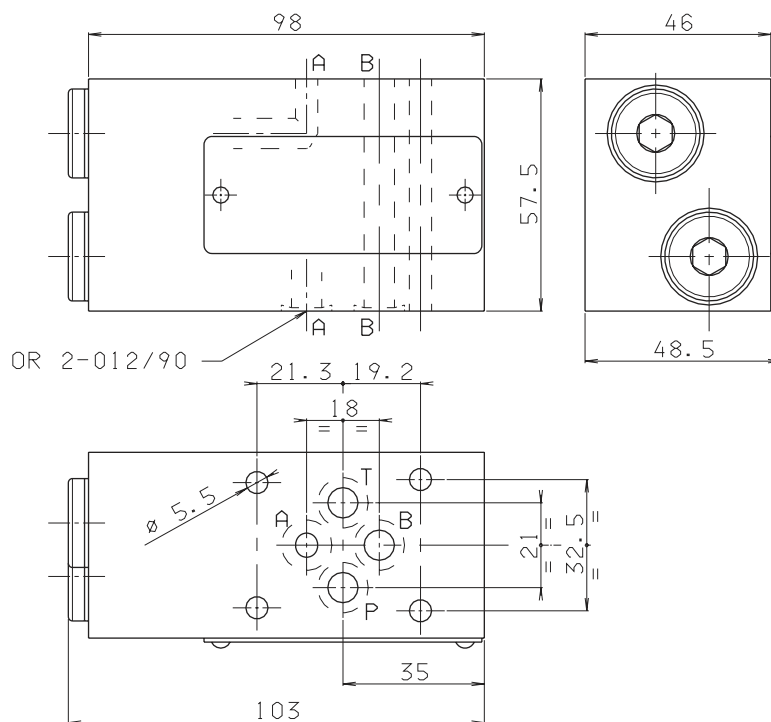
### PRESSURE DROPS A-P



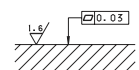
### HYDRAULIC SYMBOL



### OVERALL DIMENSIONS

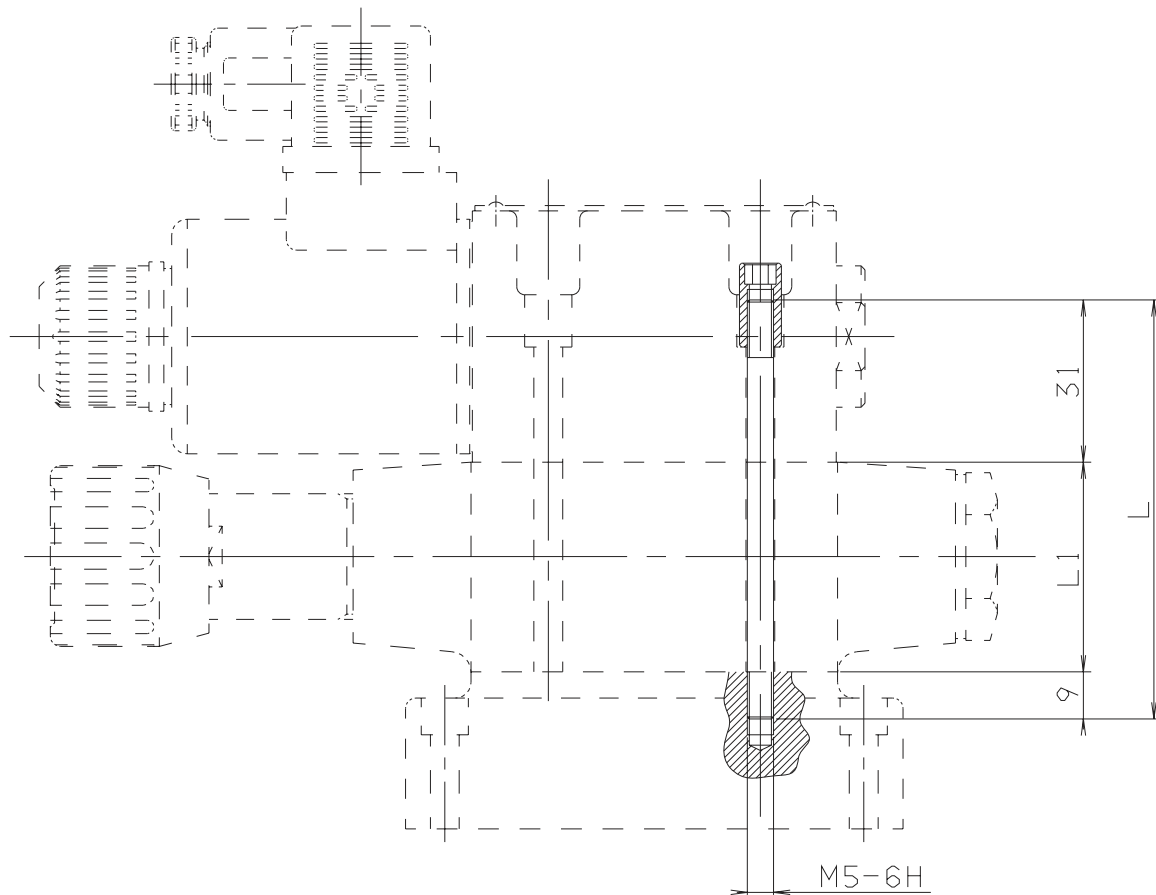


Support plane specifications



OVERALL DIMENSIONS

Tighten M27.05.0001 to a torque of 5 Nm / 0.5 Kgm max.



4

SCREWS CODE T.C.E.I	L	L1	COMPOSITION	Qty.	
Q26.07.4068	30		AD3...	4	
Q26.07.4075	70	40	AD3... + 1 AM3... (ISO)	4	
Q26.07.4076	75	45	AD3... + AM3VR	4	
STUDS CODE	L	L1	COMPOSITION	SPECIAL NUTS CODE	Qty.
M80.10.0015	97	57,5	AD3... + AM3VI...	M27.05.0001	4
M80.10.0007	115	74	AD3... + A66 o AM66...	M27.05.0001	4
M80.10.0003	120	80	AD3... + 2 AM3... (ISO)	M27.05.0001	4
M80.10.0013	125	85	AD3... + AM3VR... + AM3... (ISO)	M27.05.0001	4
M80.10.0011	155	114	AD3... + A66... + AM3... (ISO)	M27.05.0001	4
M80.10.0005	160	119	AD3... + A66... + AM3VR	M27.05.0001	4
M80.10.0005	160	120	AD3... + 3 AM3... (ISO)	M27.05.0001	4
M80.10.0020	165	125	AD3 + AM3VR + 2 AM3... (ISO)	M27.05.0001	4
M80.10.0017	170	130	AD3 + AM3CP + 2 AM3... (ISO)	M27.05.0001	4
M80.10.0023	195	154	A66... + 2 AM3... (ISO)	M27.05.0001	4