

Automatic valves

FIP TRAINING

Automatic valves

FIP range:

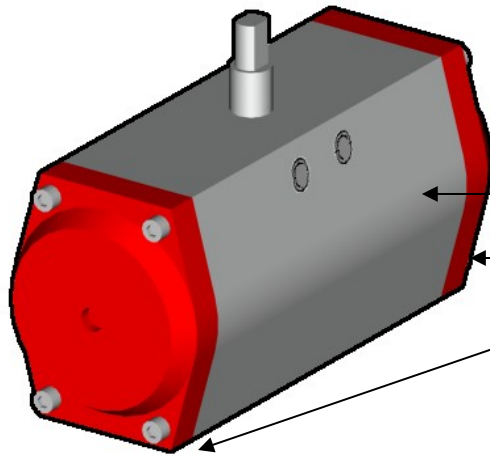
- | | |
|-------------|--------------------------|
| 1)Pneumatic | quarter turn (0-90°) |
| 2)Electric | quarter turn (0-90°....) |
| 3)Pneumatic | linear |
| 4)Electric | linear |



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Automatic valves

1) Pneumatic quarter turn (0-90°)



Pneumatic actuator:

Body: Anodized Alluminium

Caps: Epoxi coated alluminium

Two operating principle:

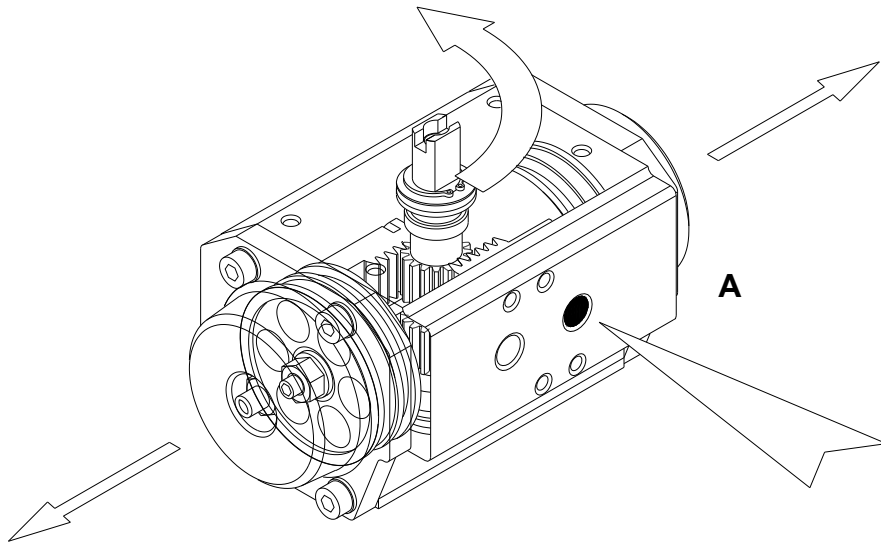
- 1) Double acting
- 2) Single acting



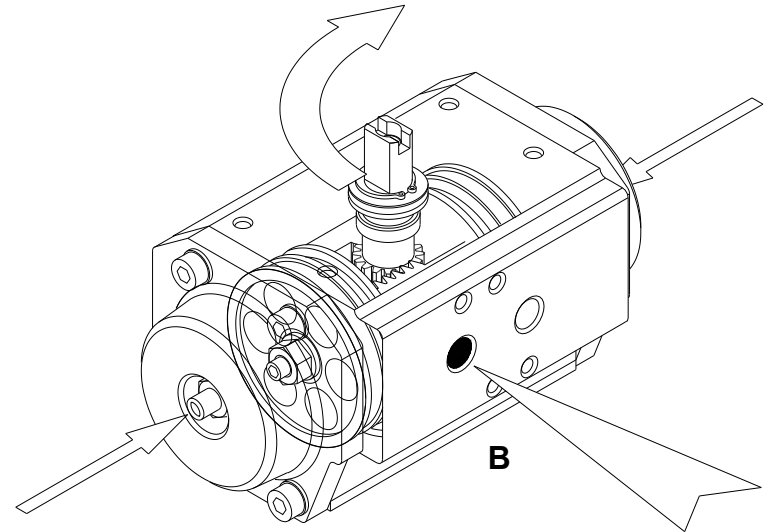
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Automatic valves

Double acting



Air pressure in inlet A :
anti clock-wise rotation



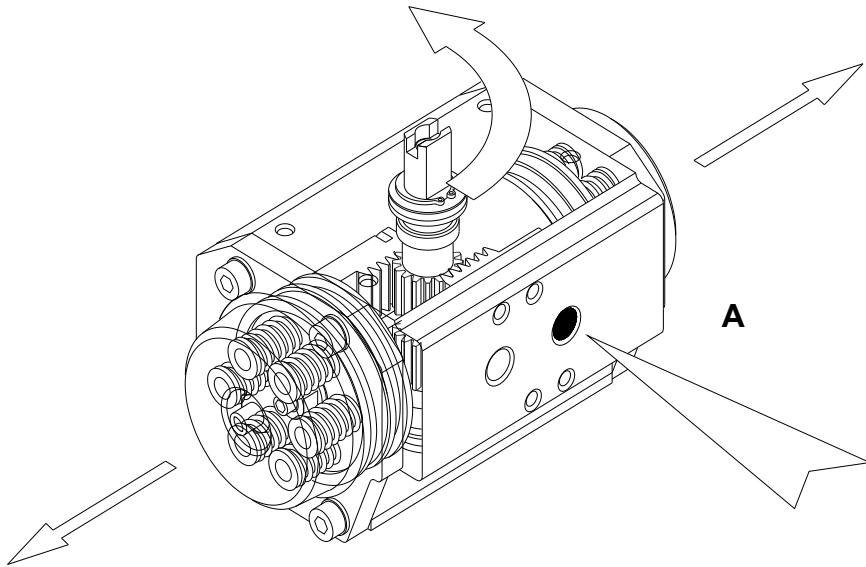
Air pressure in inlet B :
clock-wise rotation



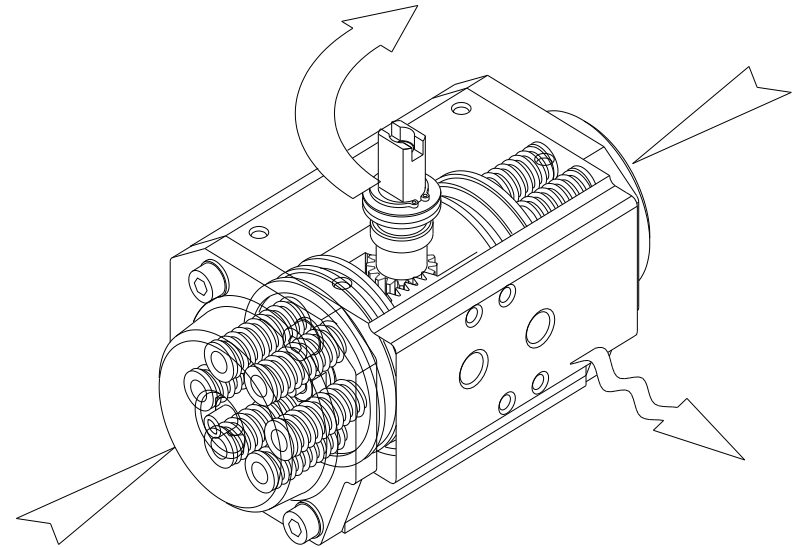
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Single acting



Air pressure in inlet A :
anti clock-wise rotation



No air pressure : clock-
wise rotation (spring
return)



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Automatic valves



NAME FK/CP	VK/CP	VKD/CP	TK/CP	FE/CP	
SIZE 16-315mm	16-63 mm	75-110mm	16-63 mm	50-225mm	50-
FUNCTION NC/NO/DA	NC/NO/DA	NC/NO/DA	SA/DA	NC/NO/DA	



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Automatic valves

PNEUMATIC VALVE ACCESSORIES



1



2



3



4

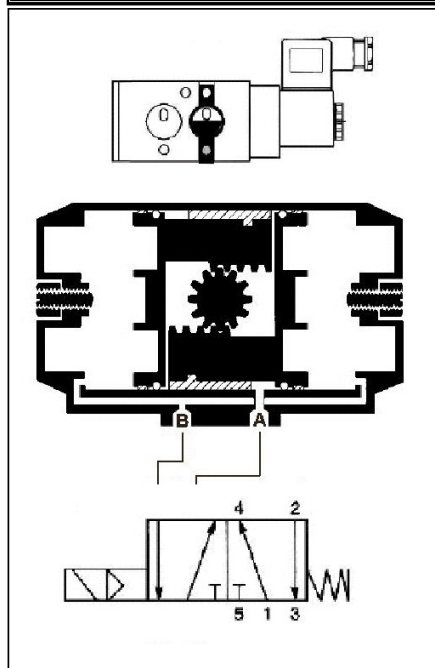
-
- **1 Optical position indicator**
 - **2 Pilot valve 3-5/2 ways for single acting and double acting actuators**
 - **3 Microswitch box mechanical or inductive**
 - **4 Positioner 4-20 mA**

Automatic valves

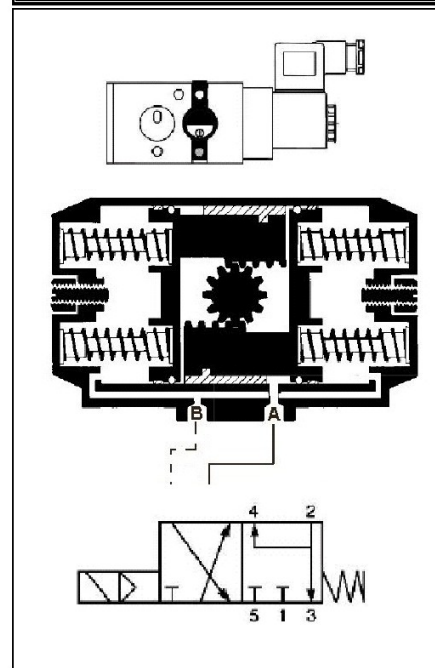
Pilot valve 3-5/2 ways for single acting and double acting actuators



5/2 WAYS – 5/2 VIE (fig.A)

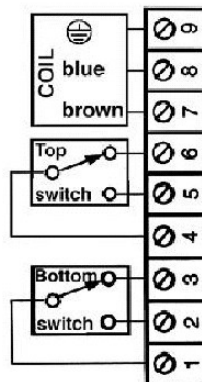


3/2 WAYS – 3/2 VIE (fig.B)

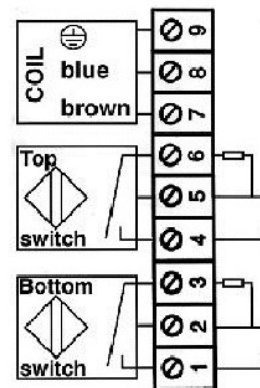


Automatic valves

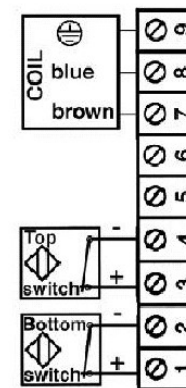
Microswitch box mechanical or inductive



Electro mechanical
wiring



Inductive wiring
or 3 wires



Automatic valves

2) Electric quarter turn (0-90°....)



Plastic cover

Standard:

Manual override

Optical indication

2 auxiliary limit switches

Available voltages: 12-24 VDC // 12-24-115-230VAC

Duty cycle: 30% or 50%

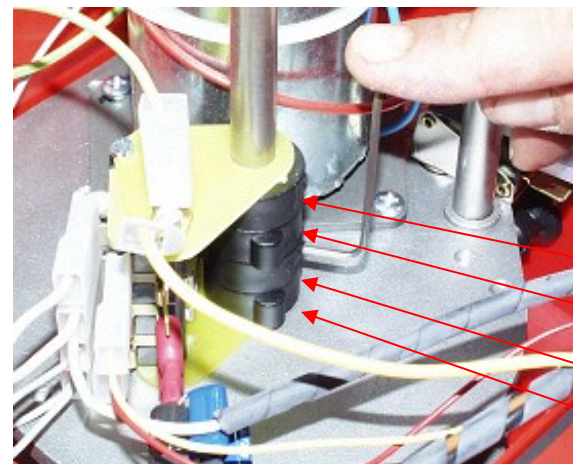
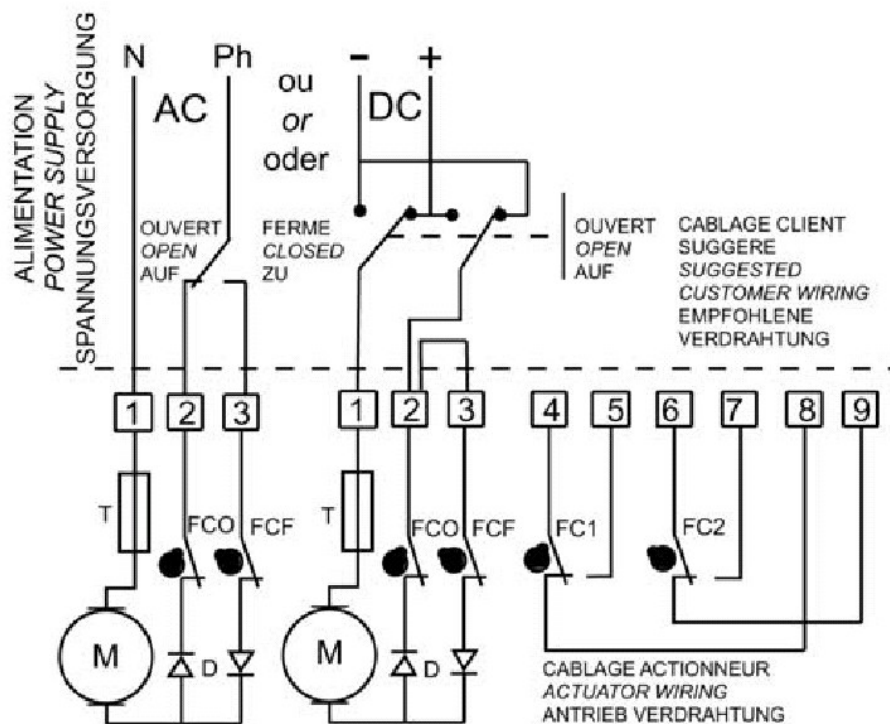
Working time: from 4 to 65 seconds (more on request)

Enclosure: IP 65 (IP67)



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FC1
Auxiliary cam which gives the opening signal

FC2
Auxiliary cam which gives the closing signal

FCO
Cam which gives the opening impulse

FCF
Cam which gives the closing impulse



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Automatic valves



NAME	VK/CE	VKD/CE	TK/CE	FE/CE	FK/CE
SIZE	16-63 mm	75-110mm	16-63 mm	50-225mm	50-315mm
FUNCTION	ON/OFF	ON/OFF	ON/OFF	ON/OFF	ON/OFF



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ELECTRIC VALVE ACCESSORIES



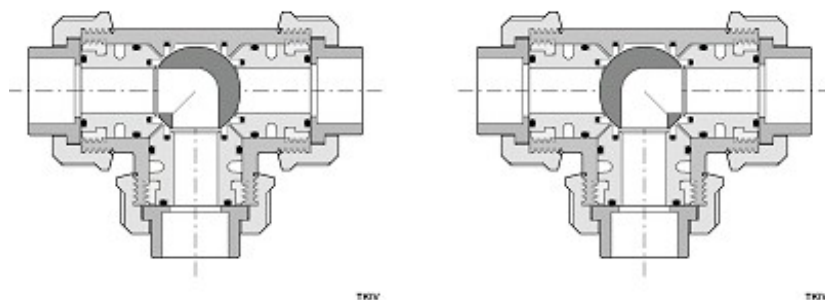
IP67-Ex II d BT6



Automatic valves

CONFIGURATION TK / CP-CE L BORE

Configuration 1 (STANDARD)

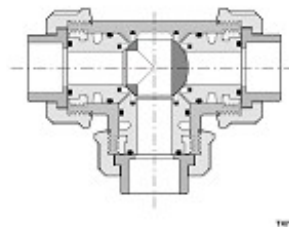
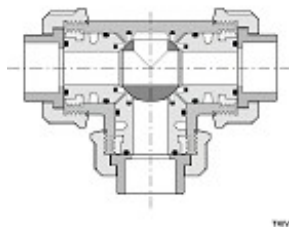


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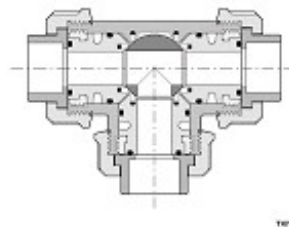
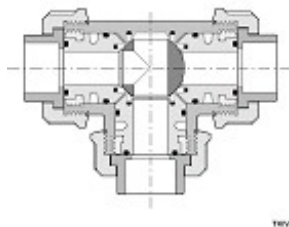
Automatic valves

CONFIGURATION TK / CP-CE T BORE

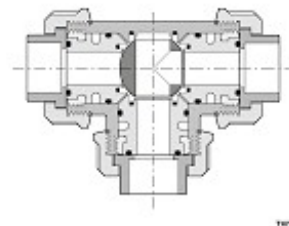
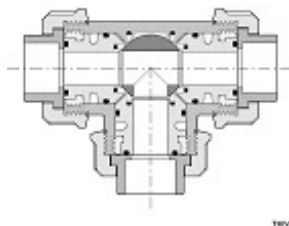
Configuration 1
(STANDARD)



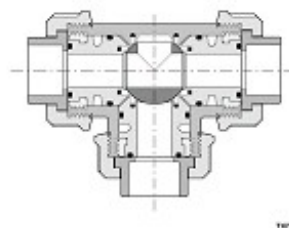
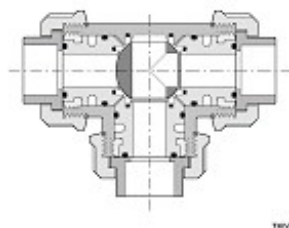
Configuration 2



Configuration 3



Configuration 4



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TK ACTUATION COMPONENTS



- For direct actuation:
Stainless steel coupling

- Adaptation kit for
actuators F05 to be mounted
on valves TK D40-50-63



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Automatic valves

3)Pneumatic linear



NAME
VV/CP

VM/CP

CM/CP

DM/CP

PM/CP

SIZE

20-110 mm

16-20 mm

20-63mm

20-63mm

20-63mm

FUNCTION

NC/NO/DA

NC/NO/DA

NO

NC

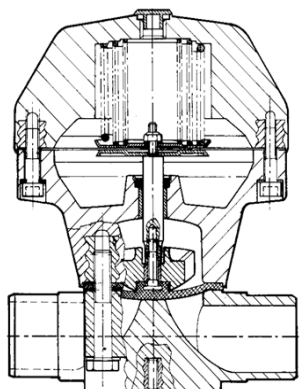
NC/NO/DA



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Automatic valves

VM/NC COMPONENTS/CHARACTERISTICS



Characteristics

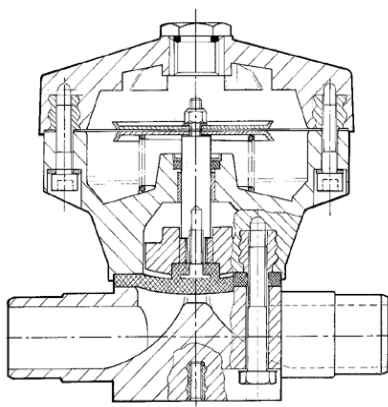
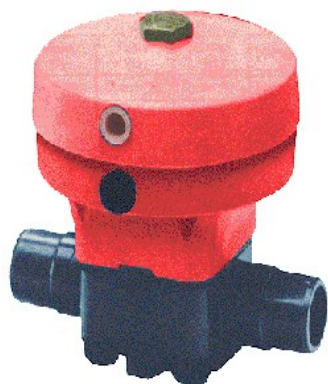
- **High KV factor**
- **Possible Mounting of Accessories on the Valve already Installed**
- **Easy Replacement of the Valve Diaphragm**
- **Metallic Reinforcements Included in the Top of the Actuator**
- **All Bodies DN 15÷50 Aligned at the Same Pipe-Center-Line by Means of Only one Plate**



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Automatic valves

VM/NO COMPONENTS/CHARACTERISTICS



Characteristics

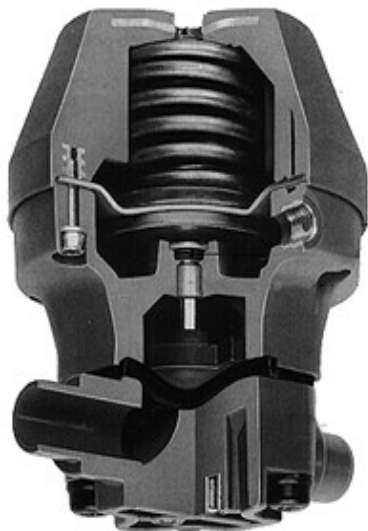
- High KV
- Possible Mounting of Accessories on the Valve already Installed
- Easy Replacement of the Valve Diaphragm
- Metallic Reinforcements Included in the Top of the Actuator
- The Version N.O. Can Also Operate As **Double Acting Valve**



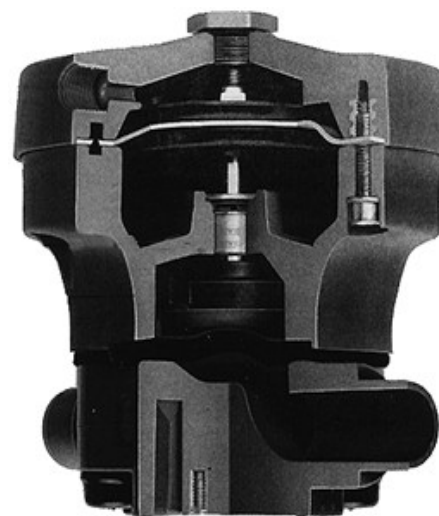
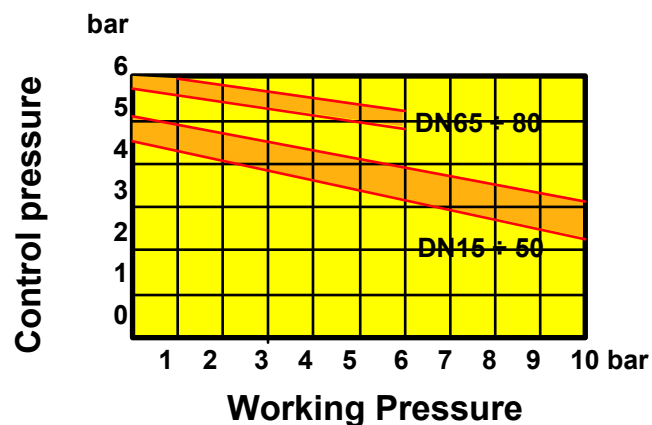
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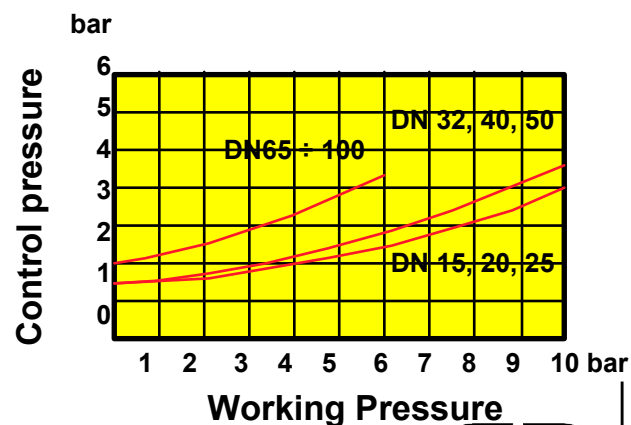
CONTROL/WORKING PRESSURE



FIP VM/NC



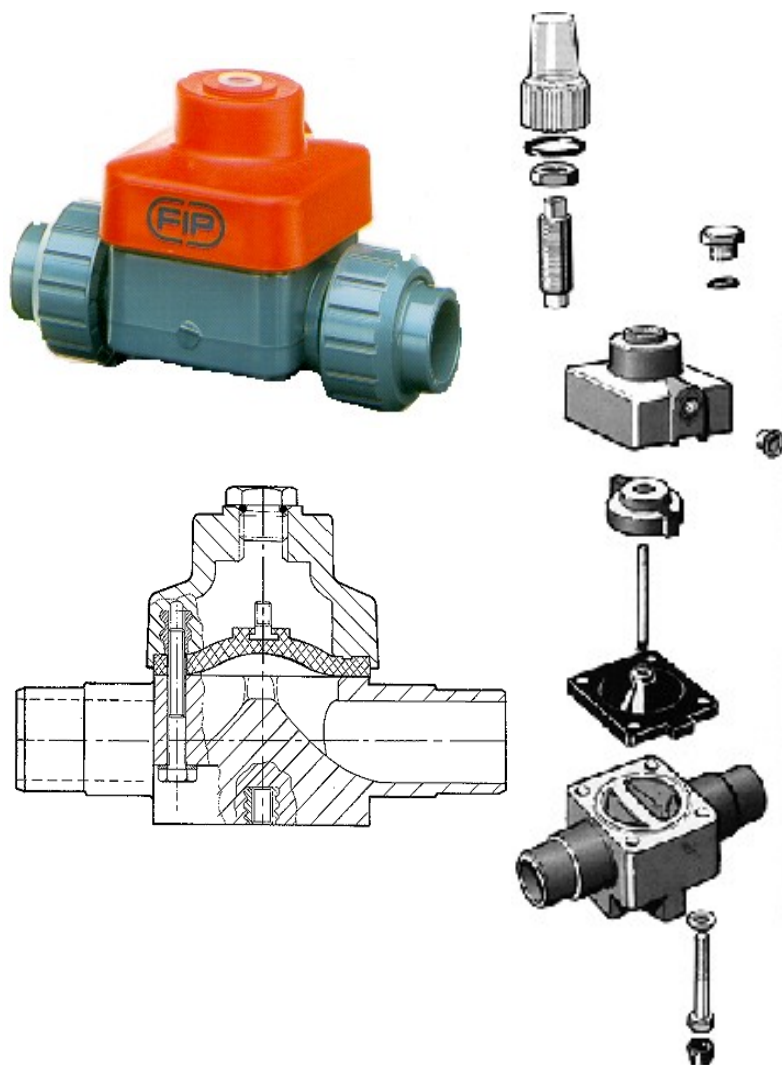
FIP VM/NO



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Automatic valves

DM/NO COMPONENTS/CHARACTERISTICS



Characteristics

- **Simple and Reliable Technology at a Low Price**
- **Standard Provided with Epdm Reinforced Diaphragm**

Accessories

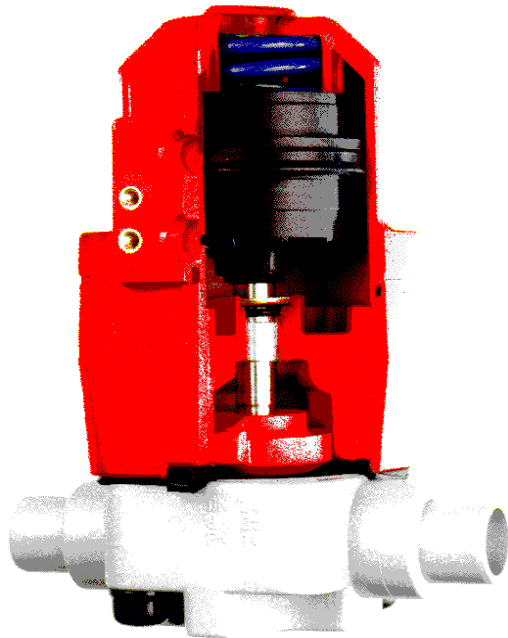
- **Stroke Limiter Plus Optical Position Indicator**
- **Pilot Valve**



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Automatic valves

PM/NC COMPONENTS/CHARACTERISTICS



Characteristics

- **Piston actuators**
More compact
PN8 DN15-25
PN6 DN32-40
PN4 DN50
- **Standard Provided with EPDM or FPM Reinforced Diaphragm**
- **Lower price (endurance)**



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Automatic valves

PNEUMATICALLY ACTUATED ANGLE-SEAT VALVE



- **FIP MOULDED ACTUATOR**

- Normally Closed
- Normally Open
- Double Acting

**No External
Metal Part**

- **INTERNAL HYDRAULIC
CIRCUIT**

**The Best on
Performances**

- **CONTROL PRESSURE**

4-6 bar

- **MAXIMUM WORKING
PRESSURE**

**10 bar for All the
Range DN 10-50**

- **POSITION INDICATOR
AS STANDARD**

- **APPLICATION FIELDS:**
See Solenoid Valves and Diaphragm Valves, In fact
They Are Often Used Together with Solenoid Valves in
Dosing Plants and Instead of Diaphragm Valves When
the **Fluid is Clean and not Viscous**



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Automatic valves

ACCESSORIES



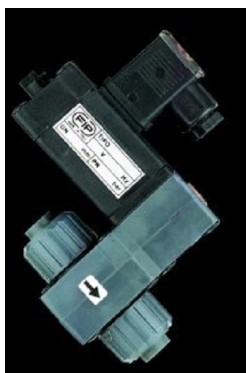
- **1 Stroke Limiter**
- **2 Stroke Limiter with Optical Position Indicator**
- **3 Stroke Limiter with Position Indicator and Emergency Manual Override**
- **4 Optical Position Indicator**
- **5 Electromechanical Position Indicator (1 Microswitch)**
- **6 Electromechanical Position Indicator (2 Microswitches) for VM**
- **7 Electromechanical Position Indicator (2 Microswitches) for CM**
- **6-7 alternative: Inductive Position Indicator**
- **8 Pneumatic or Electropneumatic Positioner**
- **9 Direct or Battery Mounted Pilot Valve**



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Automatic valves

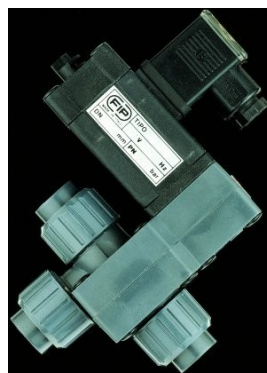
4)Electric linear



NAME S.11-S.21

SIZE 16-20 mm

FUNCTION NC



S.13-S.23

16-20 mm

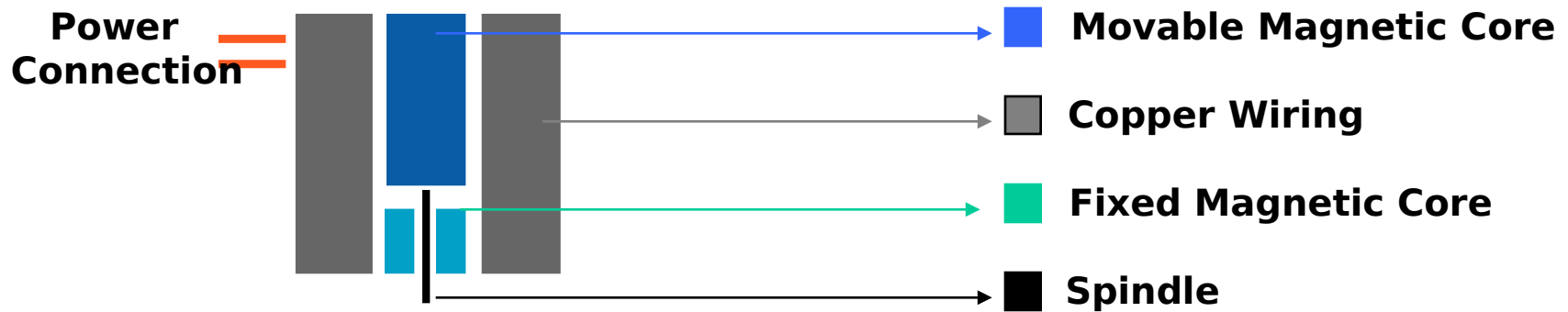
NC/NO/MX/DT



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Automatic valves

THE SOLENOID: OPERATING PRINCIPLE



- **VOLTAGES AVAILABLE**

A.C.: 24 - 48 - 110 - 220 - 240 - 250 at 50/60 Hz

D.C.: 12 - 24 - 48 - 110

NOTE: When Changing the Voltage of a Valve, Always Change Both the Solenoid and the Connector.

- **DUTY: 100% ED Continuous Working**
- **ENVIRONMENT PROTECTION: IP 65 (NEMA 4X)
Totally Protected Against Dust and Water Jet**
- **MANUAL OVERRIDE AS STANDARD**



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Automatic valves

S.1.	ND 2 - 4 - 6 - 8	lower overall dimensions
S.2.	ND 8 - 10 - 15	larger overall dimensions

Body material: PVC
On request C-PVC

Seals: EPDM or FPM

Connections:

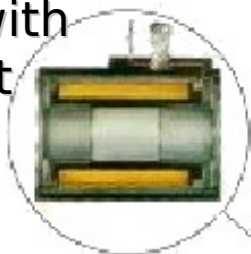
Type	DN		d		R	
	mm	ISO	BS	ASTM	BSP	NPT
		10	1/4"	1/4"	1/4"	1/4"
S.1.	2-4-6-8	12	3/8"	3/8"	3/8"	3/8"
		16				
		16	3/8"	3/8"	3/8"	3/8"
S.2.	8-10-15	20	1/2"	1/2"	1/2"	1/2"



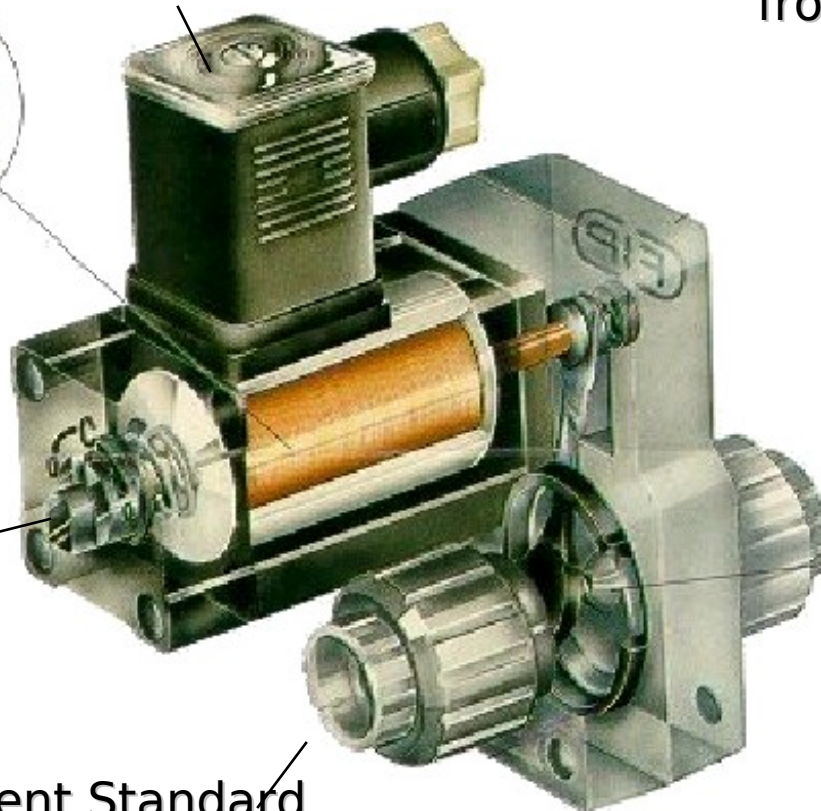
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Automatic valves

Silent
solenoid with
DC current



Connector
with light
indicator



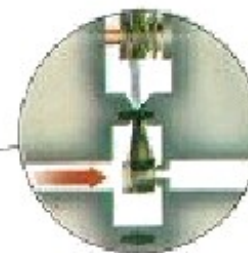
Manual
override

Different Standard
true-union
connection

Metal parts
insulated
from fluid



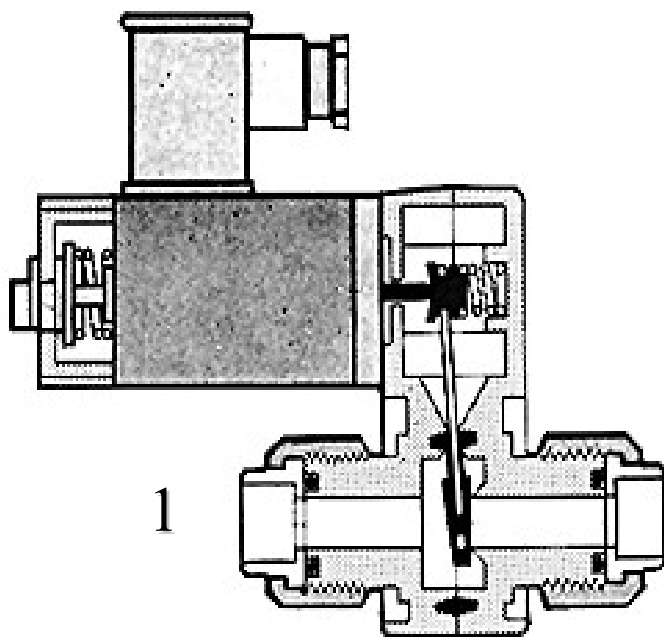
Lever type



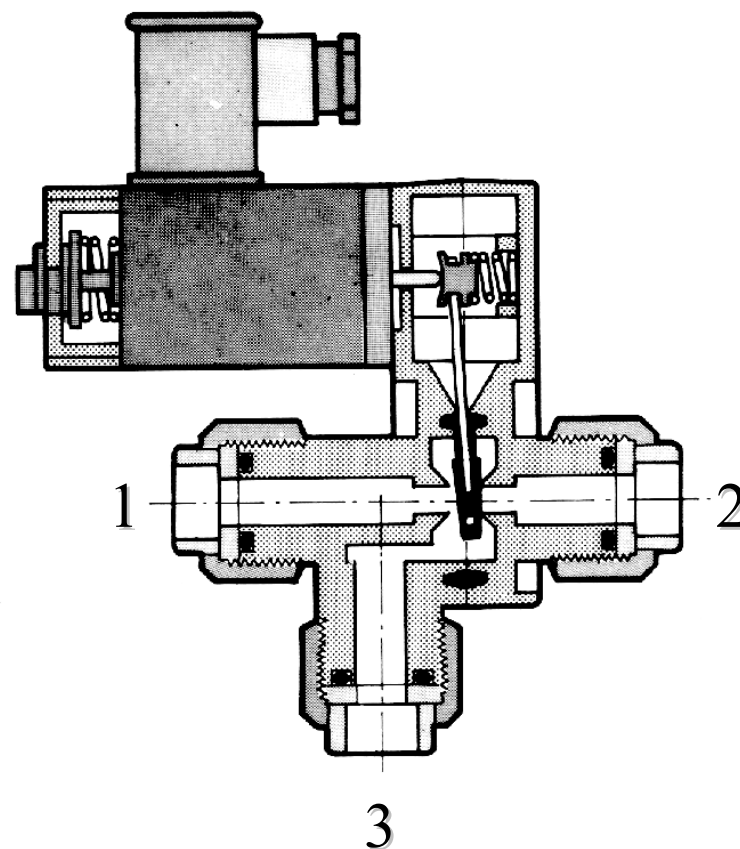
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2/2 AND 3/2 WAYS SOLENOID VALVE



2



3

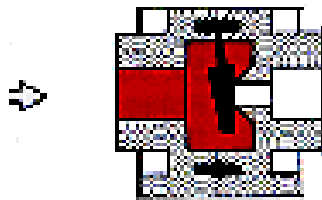


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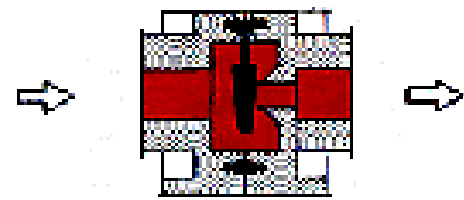
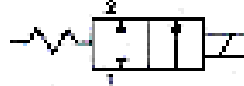
Automatic valves

CONTROL FUNCTIONS (2/2 WAYS)

2/2 Normally Closed



De-Energised Solenoid

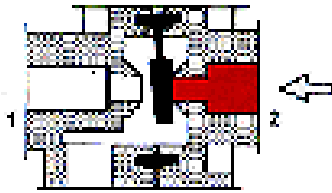


Energised Solenoid

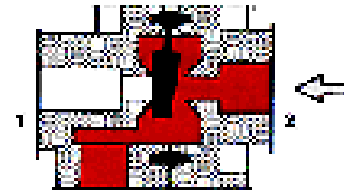
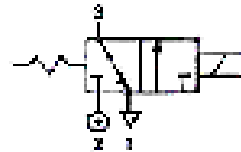
Automatic valves

CONTROL FUNCTIONS (3/2 WAY)

3/2 Normally Closed

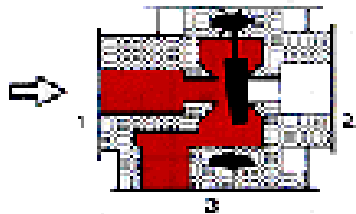


De-Energised Solenoid

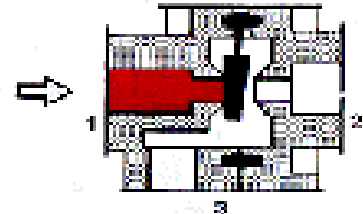
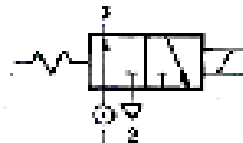


Energised Solenoid

3/2 Normally Open



De-Energised Solenoid



Energised Solenoid

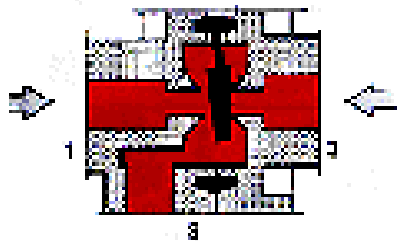


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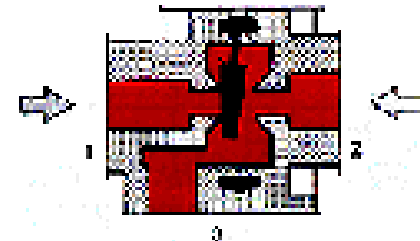
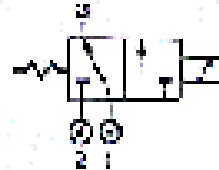
Automatic valves

CONTROL FUNCTIONS (3/2 WAYS)

3/2 Mixer

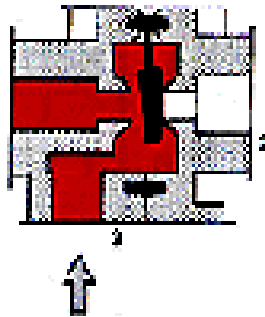


De-Energised Solenoid

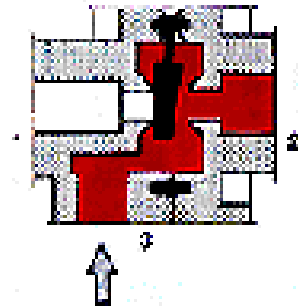
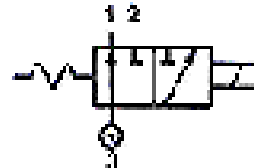


Energised Solenoid

3/2 Diverter



De-Energised Solenoid



Energised Solenoid



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THE S1/S2 NAMES

