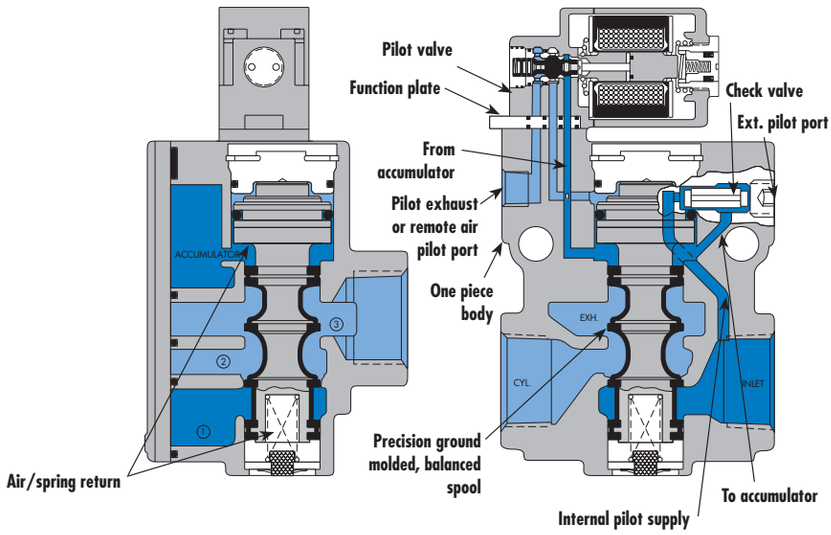
Series 56

Individual mounting

inline



SERIES FEATURES

- The patented MACSOLENOID with its non-burn out feature on AC service.
- Seven valve functions in one valve.
- Balanced spool unaffected by back pressure in the exhaust or by inlet restrictions. May be plugged for 2-way operation.
- A large checked accumulator which supplies the pilot and air/spring return for consistent shifting.
- Use on lube or non-lube service.
- Various types of manual operators and solenoid enclosures.
- Optional low wattage DC solenoids down to 1 watt.

Check the warranty page 277

Series **56**

100% OF PRODUCTION TESTED 100%

WARRANTY 18 MONTHS

VALVE CONFIGURATIONS AVAILABLE

- 3-Way Normally Open or Normally Closed (solenoid or remote air).
- 2-Way (by plugging a port) Normally Open or Normally Closed (solenoid or remote air).
- Internal pilot or External pilot for vacuum to 1.7 bar main valve pressures on solenoid or remote air models.
- Manual and mechanical operators available.

SERIES FEATURES-REMOTE AIR PILOT OPERATED VALVES

These remote air versions feature:

- A large checked accumulator for air/spring return.
- Balanced spool unaffected by back pressure in the exhaust or by inlet restrictions. May be plugged for 2-way operation.
- Use on lube or non-lube service.
- Optional remote air pilot, pilot operated models available when application requires a pilot signal below the main valve pressure.

APPLICATION CONVERSION PROCEDURE

The balanced spool design and the unique N.C. and N.O. pilot valve function plate on solenoid models facilitate using the same valve for 7 different functions.

The 7 functions are as follows:

- 3-way Normally Closed-All 3 main valve ports utilized and function plate placed with "3N.C." (3-way N.C.) visible.
- 3-way Normally Open-All 3 main valve ports utilized and function plate placed with "3N.O." (3-way N.O.) visible.
- 2-way Normally Closed-Same as 3-way N.C. but also plug port #3.
- 2-way Normally Open-Same as 3-way N.O. but also plug port #3.
- Selector-Pipe higher pressure to port #1 and lower pressure port #3.
- Internal Pilot-Utilized for main valve pressures of 1.7-10 bar. Includes a check rod in the body and a 1/8'' pipe plug installed in the External Pilot port.
- External Pilot-An External Pilot supply is required when main valve pressures are lower than 1.7 bar. If converting from an Internal Pilot model, remove the 1/8" pipe plug and check rod from the External Pilot port and install a 1/16" pipe plug in the check rod hole and pipe an external supply greater than 1.7 bar to the External Pilot port. For vacuum service, make the vacuum connection to the port #3 and leave port #1 open to atmosphere or pressure port #1 for vacuum/pressure selector applications.

N.C.-N.O. OPERATIONS:

SOLENOID MODELS:

With the pilot valve available either N.C. or N.O., simply by inverting the function plate, maximum flexibility is available in solenoid pilot operated models by using the N.C. main spool and installing the function plate for either N.C. or N.O. operation. Where an N.C. pilot function is desired with a N.O. main valve operation, a N.O. main spool option is available.

REMOTE AIR MODELS:

On remote air pilot operated models, N.C. and N.O. main spools are both available so that a N.C. pilot signal can always be used.

Check the warranty page 277

MAC

Series **56**

Direct solenoid and solenoid pilot operated valves

Function	Port size	Flow (Max)	Individual mounting
3/2 NO-NC, 2/2 NO-NC	**G3/8" - G1/2" - G3/4"**	**5700 Nl/min**	inline

OPERATIONAL BENEFITS

1. Balanced spool, immune to variations of pressure.
2. Short stroke with high flow.
3. Large spool area provides maximum shifting forces.
4. Checked accumulator guarantees maximum pilot pressure.
5. Powerful return force thanks to the combination of mechanical and air springs.
6. Bonded spool with minimum friction, shifting in a glass-like finished bore.
7. Wiping effect eliminates sticking.
8. Pilot valve with balanced poppet, high flow, short and consistent response times.

HOW TO ORDER

Port size	Pilot air	NC only valve NC pilot - NC spool	NO only valve NO pilot - NC spool	NO only valve NC pilot - NO spool
				
G3/8"	Internal	56C-15-***XXYZZ***	56C-25-***XXYZZ***	56C-65-***XXYZZ***
G1/2"		56C-16-***XXYZZ***	56C-26-***XXYZZ***	56C-66-***XXYZZ***
G3/4"		56C-18-***XXYZZ***	56C-28-***XXYZZ***	56C-68-***XXYZZ***
G3/8"	External	56C-35-***XXYZZ***	56C-45-***XXYZZ***	56C-75-***XXYZZ***
G1/2"		56C-36-***XXYZZ***	56C-46-***XXYZZ***	56C-76-***XXYZZ***
G3/4"		56C-38-***XXYZZ***	56C-48-***XXYZZ***	56C-78-***XXYZZ***

SOLENOID OPERATOR ➤ ***XX Y ZZ*** *

XX	**Voltage**
11	110V~/50Hz
12	220V~/50Hz
22	24V~/50Hz
59	24V=/2,5W
87	24V=/17,1W
61	24V=/8,5W

Y	**Manual operator**
1	Non-locking
2	Locking

ZZ	**Electrical connection**
JB	Rectangular connector
JD	Rectangular connector with light
JA	Square connector
JC	Square connector with light
BA	Flying leads (45 cm)

* Other options available, see page 305.
Note : Exhaust port is G3/4"

Check the warranty page 277

MAC

Series **56**

100% OF PRODUCTION TESTED 100%

WARRANTY 18 MONTHS

TECHNICAL DATA

Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	Internal pilot : 1.7 to 10 bar External pilot : vacuum to 10 bar		
Pilot pressure :	1.7 to 10 bar		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 80°C and 100°C)		
Filtration :	40 µ		
Temperature range :	-18°C to 50°C (0°F to 120°F)		
Flow (at 6 bar, ΔP=1bar) :	Norm. Closed : G3/8" : 4400 Nl/min, G1/2" : 5000 Nl/min, G3/4" : 5400 Nl/min, Norm. Open : G3/8" : 4600 Nl/min, G1/2" : 5100 Nl/min, G3/4" : 5700 Nl/min		
Coil :	General purpose class A, continuous duty, encapsulated		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	Consult factory		
Power :	~ Inrush : 14.8 VA	Holding : 10.9 VA	
	= 1 to 17 W		
Response times :	24 V=/8.5 W	Energize : 11 ms	De-energize : 10,8ms
	50 Hz/6 W	Energize : 7-12 ms	De-energize : 9-14 ms

Spare parts :

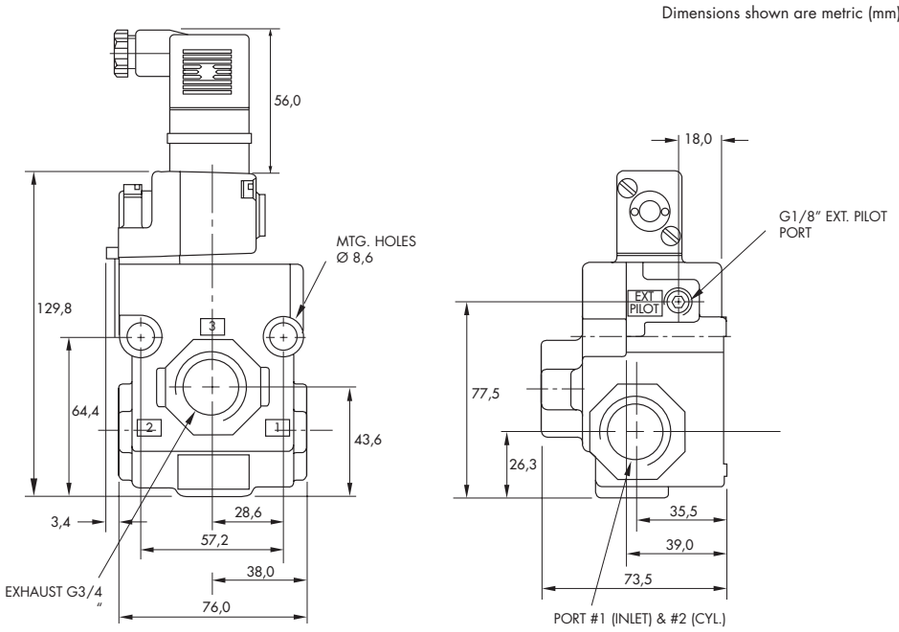
- Solenoid operator (power ≥ 4 W) : D1-XXAA, cover mounting screws 32184 and seal 16234.
- Pilot valve : 130B-XXYZZ, including function plate A2-7009. • Pilot mounting screws kit : N-56002.
- Check valve : 70063.

Options :

- NPTF threads.

DIMENSIONS

Dimensions shown are metric (mm)



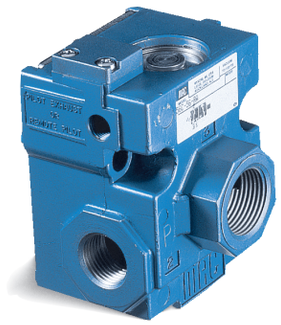
Check the warranty page 277

MAC
Series 56

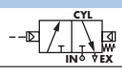
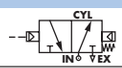
Function	Port size	Flow (Max)	Individual mounting
3/2 NO-NC, 2/2 NO-NC	**G3/8" - G1/2" - G3/4"**	**6200 Nl/min**	Inline

OPERATIONAL BENEFITS

1. Balanced spool, immune to variations of pressure.
2. Short stroke with high flow.
3. The piston (booster) provides maximum shifting forces.
4. Powerful return thanks to the combination of mechanical and air springs.
5. Bonded spool with minimum friction, shifting in a glass-like finished bore.
6. Wiping effect eliminates sticking.
7. Low leakage rate.



HOW TO ORDER

Port size	Air spring	NC valve	NO valve
			
G3/8"	Internal	56C-55-RA	56C-85-RA
G1/2"		56C-56-RA	56C-86-RA
G3/4"		56C-58-RA	56C-88-RA
G3/8"	External	56C-55-RE	56C-85-RE
G1/2"		56C-56-RE	56C-86-RE
G3/4"		56C-58-RE	56C-88-RE

Air pilot port : G1/8".

Note: Designation "RE" required on remote air pilot models with main valve pressures of vacuum to 1.7 bar. "RE" provides an external pilot port and should have a pressure range of 1.7 to 6.7 bar. Since the external pilot supplies the air spring, it must not exceed the remote air pilot signal pressure.

Check the warranty page 277

MAC

Series **56**

100% OF PRODUCTION TESTED 100%

WARRANTY 18 MONTHS

TECHNICAL DATA

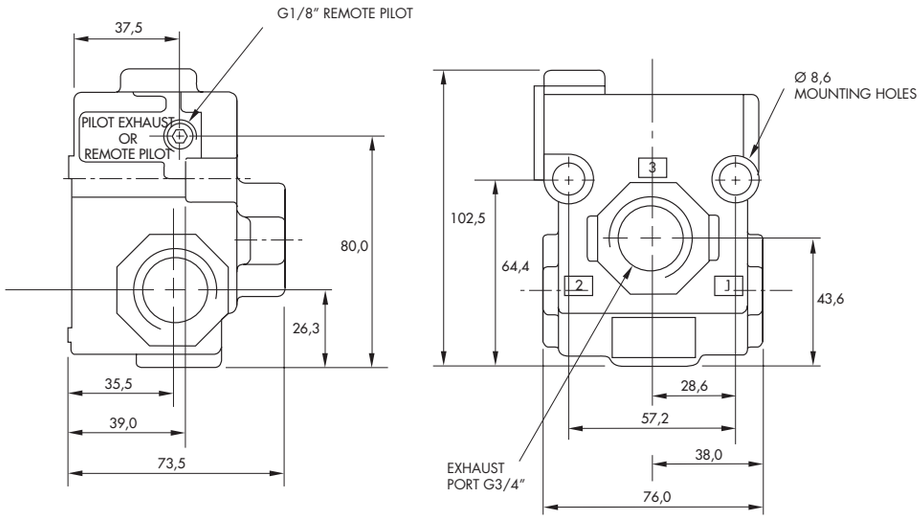
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 10 bar
Air signal pressure :	1.7 to 10 bar ≥ main valve pressure
Lubrication :	Not required, if used select a medium aniline point lubricant (between 80°C to 100°C)
Filtration :	40 µ
Temperature range :	-18°C to 50°C (0°F to 120°F)
Flow (at 6 bar, ΔP=1bar) :	G3/8" : 6000 Nl/min, G1/2" : 6100 Nl/min, G3/4" : 6200 Nl/min

Spare parts : • Remote air operator : R-56001. • Check valve : 70063.

Options : • NPTF threads.

DIMENSIONS

Dimensions shown are metric (mm)



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