

Individual mounting

sub-base non "plug-in"	sub-base "plug-in"
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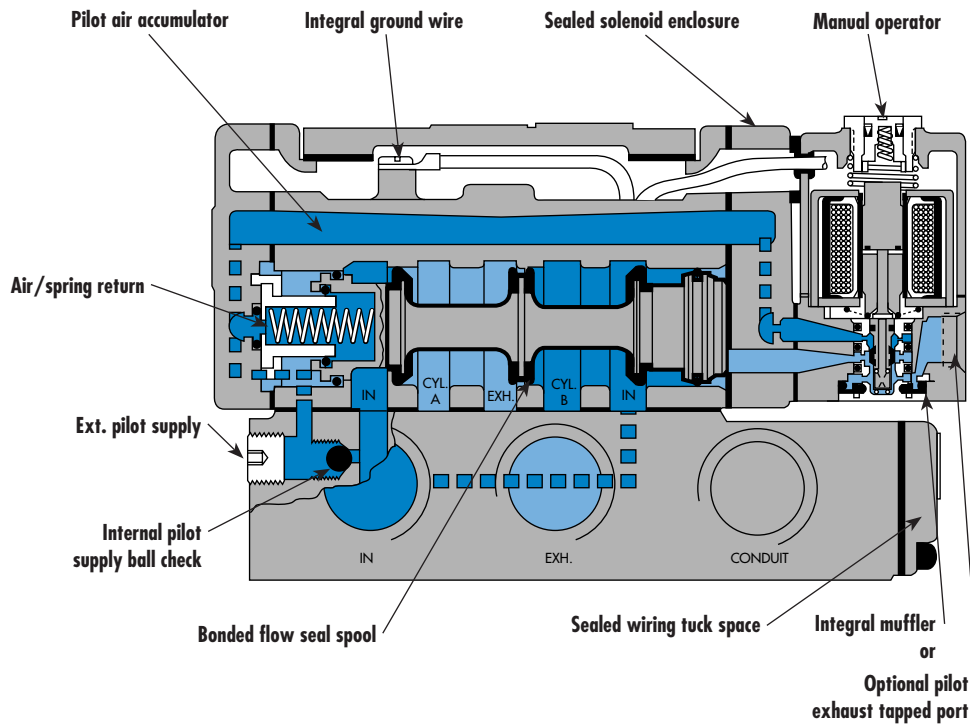
Series

Manifold mounting

sub-base non "plug-in"	sub-base "plug-in"
------------------------	--------------------

35

100



200

55

56

57

58

59

45

700

900

82

SERIES FEATURES

- The patented MACSOLENOID® with its non-burn out feature on AC service.
- A large checked accumulator for consistent shifting on single and double solenoid models.
- A plug-in design that provides for internal or external pilot with or without lights and all electrical and air plumbing in the base — the valve portion is the same.
- Non-lubricated or lubricated service.
- Optional low wattage DC solenoids down to 1 watt.
- Optional indicator lights, and various types of manual operators.
- Non plug-in or external plug-in models are available.

6300

6500

6600

1300

800

ISO 1

ISO 2

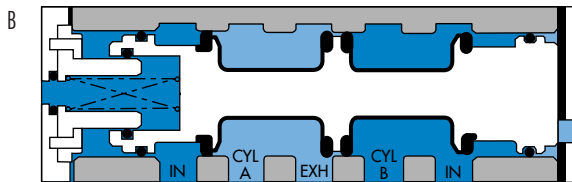
ISO 3

MAC 125A

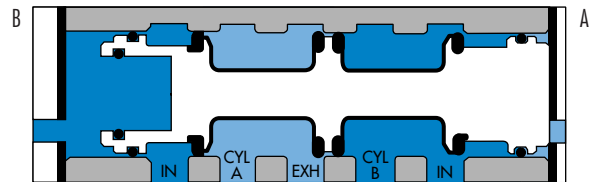
MAC 250A

MAC 500A

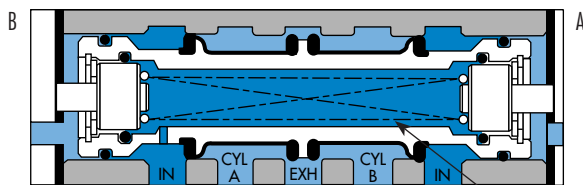
SPOOL CONFIGURATIONS



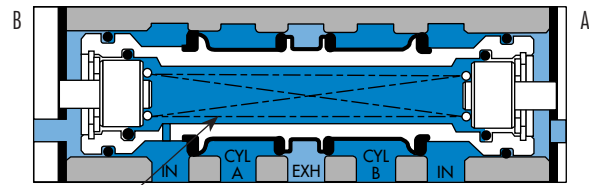
2 POS. SINGLE OPERATOR SPRING RETURN
B ACTUATED SHOWN



2 POS. DOUBLE OPERATOR
B ACTUATED SHOWN

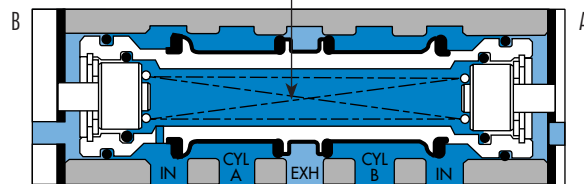


3 POS. OPEN CENTER
CENTER POSITION SHOWN



3 POS. CLOSED CENTER
CENTER POSITION SHOWN

AIR/SPRING
CENTERING



3 POS. PRESSURE CENTER
CENTER POSITION SHOWN

VALVE CONFIGURATIONS AVAILABLE

The versatile 6500 Series provides high flow, extremely fast response, and long life in a compact package and is available in the following configurations:

- 2-Pos., single or double operators (solenoid or remote air).
- 3-Pos., double operator-Closed Center, Open Center or Pressure Center (solenoid or remote air).
- Single pressure or dual pressure.
- Individual base or add-a-unit manifold base.
- Internal pilot or for Vacuum to 25 PSI main valve pressures, external pilot.
- Manual and mechanical operators available.

REMOTE AIR PILOT OPERATED VALVES

- A large checked accumulator for air/spring return on single remote air models.
- All piping connections, including the remote air pilot supply, in the base.
- Non-lubricated or lubricated service.

REMOTE AIR PILOT, PILOT OPERATED VALVES

These special air versions have the same features as the remote air pilot operated models, but additionally feature:

- A manual operator and indicator.
- Ability to use a pilot signal pressure different from the main valve pressure. Pilot signal can be from 20 to 150 PSIG, regardless of main valve pressure.

ALL MODELS AVAILABLE WITH SANDWICH TYPE REGULATORS

Function	Port size	Flow [Max]	Individual mounting	Series
4/2 - 4/3	3/8" - 1/2" - 3/4"	5.1 C_v	sub-base non "plug-in"	

OPERATIONAL BENEFITS

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

HOW TO ORDER

Port size	Pilot air	4/2 Single operator	4/2 Double operator	4/3 Closed center	4/3 Open center	4/3 Pressure center
Valve less base		6512B-000-PM- XXYYZZ	6522B-000-PM- XXYYZZ	6532B-000-PM- XXYYZZ	6542B-000-PM- XXYYZZ	6552B-000-PM- XXYYZZ
sub-base	Internal	6512B-131-PM- XXYYZZ	6522B-131-PM- XXYYZZ	6532B-131-PM- XXYYZZ	6542B-131-PM- XXYYZZ	6552B-131-PM- XXYYZZ
3/8" NPTF	External	6512B-141-PM- XXYYZZ	6522B-141-PM- XXYYZZ	6532B-141-PM- XXYYZZ	6542B-141-PM- XXYYZZ	6552B-141-PM- XXYYZZ
sub-base	Internal	6512B-231-PM- XXYYZZ	6522B-231-PM- XXYYZZ	6532B-231-PM- XXYYZZ	6542B-231-PM- XXYYZZ	6552B-231-PM- XXYYZZ
1/2" NPTF	External	6512B-241-PM- XXYYZZ	6522B-241-PM- XXYYZZ	6532B-241-PM- XXYYZZ	6542B-241-PM- XXYYZZ	6552B-241-PM- XXYYZZ
sub-base	Internal	6512B-331-PM- XXYYZZ	6522B-331-PM- XXYYZZ	6532B-331-PM- XXYYZZ	6542B-331-PM- XXYYZZ	6552B-331-PM- XXYYZZ
3/4" NPTF	External	6512B-341-PM- XXYYZZ	6522B-341-PM- XXYYZZ	6532B-341-PM- XXYYZZ	6542B-341-PM- XXYYZZ	6552B-341-PM- XXYYZZ

Note : Above codes shown are for side ports.

SOLENOID OPERATOR ►

XX Voltage		Y Manual operator	ZZ Electrical connection
11	120/60, 110/50	1 Non-locking	JB Rectangular connector
12	240/60, 220/50	2 Locking	JD Rectangular connector with light
22	24/60, 24/50		JA Square connector
59	24 VDC (2.5 W)		JC Square connector with light
87	24 VDC (17.1 W)		BA Flying leads (18")
61	24 VDC (8.5 W)		

* Other options available, see page 357.

OPTIONS

6512B-XXX-PM-**XXYYZZ**

- For piped pilot exhaust replace M by P.
- For dual pressure valve, replace by 4.

MODIFICATIONS

MOD. N°	DESCRIPTION	MODEL AVAILABILITY
0002	Bottom inlet, exh. & cyl. ports (no side ports)	Available on individual base 3/8" & 1/2" only
0004	Full side porting and additional bottom inlet, exh. & cyl. ports	Available on individual base 3/8" only



35
100
200
55
56
57
58
59

45

700

900

82

6300

6500

Note : Photo shown with JC connector.

6600

1300

800

ISO 1

ISO 2

ISO 3

MAC 125A

MAC 250A

MAC 500A

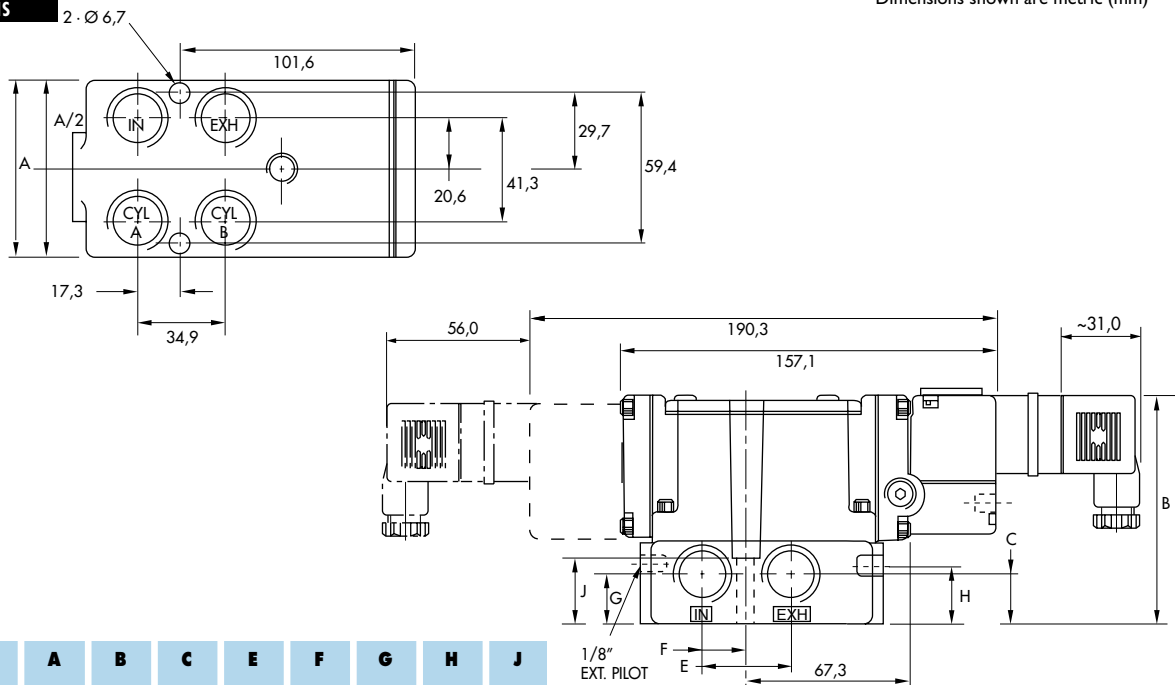
- Note :
- The valve less base is always the same for internal or external pilot. These options are effected in the base.
 - Bottom ports : Refer to modification table.
 - To order bases without the valve, choose the base from the above table, then add 6500B as a prefix. Example 6500B-131.

TECHNICAL DATA	
Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Internal pilot : single operator and 3 positions : 25-150 PSI double operator : 10-150 PSI External pilot : vacuum to 150 PSI
Pilot pressure :	Single operator and 3 positions : 25-150 PSI Double operator : 10-150 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)
Filtration :	40 µ
Temperature range :	0°F to 120°F (-18°C to 50°C)
Flow (at 6 bar, ΔP=1bar) :	3/8" : (4.5 C _v), 1/2" : (5.0 C _v), 3/4" : (5.1 C _v)
Coil :	Epoxy encapsulated - class A wires - Continuous duty
Voltage range :	-15% to +10% of nominal voltage
Protection :	Consult factory
Power :	~ Inrush : 14.8 VA Holding : 10.9 VA = 1 to 17.1 W
Response times :	24 VDC (8.5 W) Energize : 12 ms De-energize : 12 ms 120/60 Energize : 9-14 ms De-energize : 11-18 ms

Spare parts : Solenoid operator (power ≥ 4 W) : D1-XXAA, cover mounting screws 35206 and seal 16234.
 • Pilot valve : PME-XXYZZ, including seal 16337. • Pressure seal between valve and base : 16246.
 • Mounting screw valve to base (x4) : 32201.

Options : • BSPP threads.

DIMENSIONS Dimensions shown are metric (mm)



Port size	A	B	C	E	F	G	H	J
3/8" - 1/2"	69.6	97.4	18.3	36.0	17.9	19.0	23.6	25.4
3/4"	94.5	109.3	17.3	40.1	19.2	20.8	35.9	36.6

Function	Port size	Flow [Max]	Individual mounting	Series
4/2 - 4/3	3/8" - 1/2" - 3/4"	5.1 C_v	sub-base "plug-in"	

OPERATIONAL BENEFITS

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



35
100
200
55
56
57
58
59

HOW TO ORDER

Port size	Pilot air	4/2 Single operator	4/2 Double operator	4/3 Closed center	4/3 Open center	4/3 Pressure center
Valve less base		6511B-000-PM- XXY DA	6521B-000-PM- XXY DA	6531B-000-PM- XXY DA	6541B-000-PM- XXY DA	6551B-000-PM- XXY DA
sub-base	Internal	6511B-111-PM- XXY DA	6521B-111-PM- XXY DA	6531B-111-PM- XXY DA	6541B-111-PM- XXY DA	6551B-111-PM- XXY DA
3/8" NPTF	External	6511B-121-PM- XXY DA	6521B-121-PM- XXY DA	6531B-121-PM- XXY DA	6541B-121-PM- XXY DA	6551B-121-PM- XXY DA
sub-base	Internal	6511B-211-PM- XXY DA	6521B-211-PM- XXY DA	6531B-211-PM- XXY DA	6541B-211-PM- XXY DA	6551B-211-PM- XXY DA
1/2" NPTF	External	6511B-221-PM- XXY DA	6521B-221-PM- XXY DA	6531B-221-PM- XXY DA	6541B-221-PM- XXY DA	6551B-221-PM- XXY DA
sub-base	Internal	6511B-311-PM- XXY DA	6521B-311-PM- XXY DA	6531B-311-PM- XXY DA	6541B-311-PM- XXY DA	6551B-311-PM- XXY DA
3/4" NPTF	External	6511B-321-PM- XXY DA	6521B-321-PM- XXY DA	6531B-321-PM- XXY DA	6541B-321-PM- XXY DA	6551B-321-PM- XXY DA

Note : Above codes shown are for side ports without lights.

SOLENOID OPERATOR ➤

XX Y DA*

XX Voltage	Y Manual operator
11 120/60, 110/50	1 Non-locking
12 240/60, 220/50	2 Locking
22 24/60, 24/50	
59 24 VDC (2.5 W)	
87 24 VDC (17.1 W)	
61 24 VDC (8.5 W)	

* Other options available, see page 357.

OPTIONS

6511B-XXX-PM- XXY DA
- For piped pilot exhaust replace M by P.
- For dual pressure valve replace by 4 (no light), by 5 (sgl. light), by 6 (dbl. light).
- For lights on base, replace by 2 (sgl. light), by 3 (dbl. light).
- For lights on valve body, replace by 3.

MODIFICATIONS		
MOD. N°	DESCRIPTION	MODEL AVAILABILITY
0002	Bottom inlet, exh. & cyl. ports (no side ports)	Available on individual base 3/8" & 1/2" only
0004	Full side porting and additional bottom inlet, exh. & cyl. ports	Available on individual base 3/8" only

- Note :
- The valve less base is always the same for internal or external pilot. These options are effected in the base.
 - Bottom ports : Refer to modification table.
 - To order bases without the valve, choose the base from the above table, then add 6500B as a prefix. Example 6500B-111.

45
700
900
82
6300
6500
6600
1300
800
ISO 1
ISO 2
ISO 3
MAC 125A
MAC 250A
MAC 500A

TECHNICAL DATA

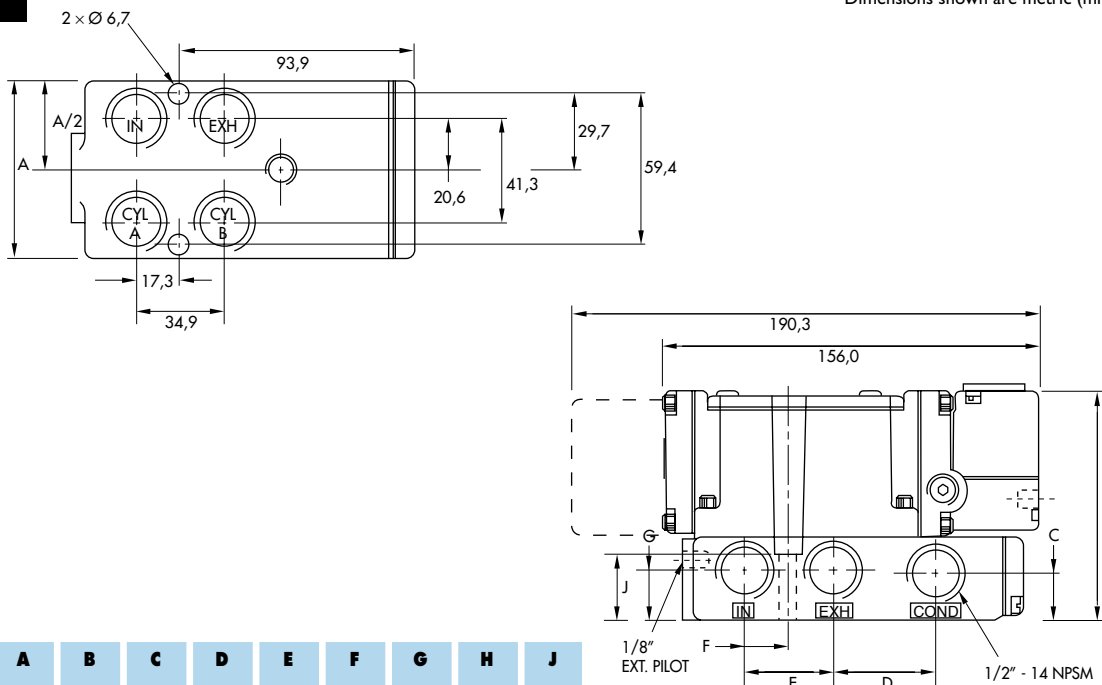
Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	Internal pilot : single operator and 3 positions : 25-150 PSI	double operator : 10-150 PSI	
	External pilot : vacuum to 150 PSI		
Pilot pressure :	Single operator and 3 positions : 25-150 PSI Double operator : 10-150 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to 50°C)		
Flow (at 6 bar, ΔP=1bar) :	3/8" : (4.5 C _v), 1/2" : (5.0 C _v), 3/4" : (5.1 C _v)		
Coil :	Epoxy encapsulated - class A wires - Continuous duty		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	Consult factory		
Power :	~ Inrush : 14.8 VA	Holding : 10.9 VA	
	= 1 to 17.1 W		
Response times :	24 VDC (8.5 W)	Energize : 12 ms	De-energize : 12 ms
	120/60	Energize : 9-14 ms	De-energize : 11-18 ms

- Spare parts :
- Solenoid operator (power ≥ 4 W) : D1-XXBE, cover mounting screws 35206 and seal 16234.
 - Pilot valve : PME-XXYDA-BE, including seal 16337. • Pressure seal between valve and base : 16246.
 - Mounting screw valve to base (x4) : 32201.

- Options :
- BSPP threads.

DIMENSIONS

Dimensions shown are metric (mm)

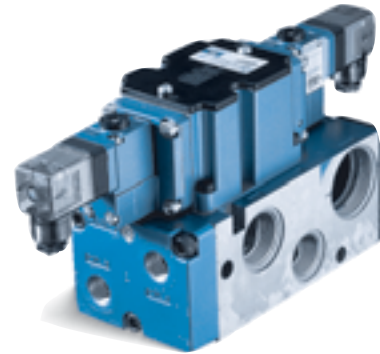


Port size	A	B	C	D	E	F	G	H	J
3/8" - 1/2"	69.6	97.4	18.3	40.6	36.0	17.9	19.0	23.6	25.4
3/4"	94.5	109.3	17.3	46.7	40.1	19.2	20.8	35.9	36.6

Function	Port size	Flow (Max)	Manifold mounting	Series
4/2 - 4/3	3/8" - 1/2" - 3/4"	5.1 C_v	sub-base non "plug-in"	

OPERATIONAL BENEFITS

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



35
100
200
55
56
57
58
59

HOW TO ORDER

Port size	Pilot air	4/2 Single operator	4/2 Double operator	4/3 Closed center	4/3 Open center	4/3 Pressure center
Valve less base		6512B-000-PM- XXYZZ	6522B-000-PM- XXYZZ	6532B-000-PM- XXYZZ	6542B-000-PM- XXYZZ	6552B-000-PM- XXYZZ
sub-base	Internal	6512B-431-PM- XXYZZ	6522B-431-PM- XXYZZ	6532B-431-PM- XXYZZ	6542B-431-PM- XXYZZ	6552B-431-PM- XXYZZ
3/8" NPTF	External	6512B-441-PM- XXYZZ	6522B-441-PM- XXYZZ	6532B-441-PM- XXYZZ	6542B-441-PM- XXYZZ	6552B-441-PM- XXYZZ
sub-base	Internal	6512B-531-PM- XXYZZ	6522B-531-PM- XXYZZ	6532B-531-PM- XXYZZ	6542B-531-PM- XXYZZ	6552B-531-PM- XXYZZ
1/2" NPTF	External	6512B-541-PM- XXYZZ	6522B-541-PM- XXYZZ	6532B-541-PM- XXYZZ	6542B-541-PM- XXYZZ	6552B-541-PM- XXYZZ
sub-base	Internal	6512B-631-PM- XXYZZ	6522B-631-PM- XXYZZ	6532B-631-PM- XXYZZ	6542B-631-PM- XXYZZ	6552B-631-PM- XXYZZ
3/4" NPTF	External	6512B-641-PM- XXYZZ	6522B-641-PM- XXYZZ	6532B-641-PM- XXYZZ	6542B-641-PM- XXYZZ	6552B-641-PM- XXYZZ

Note : Above codes shown are for side cylinder ports.

SOLENOID OPERATOR ►

XX Y ZZ*

XX Voltage	Y Manual operator	ZZ Electrical connection
11 120/60, 110/50	1 Non-locking	JB Rectangular connector
12 240/60, 220/50	2 Locking	JD Rectangular connector with light
22 24/60, 24/50		JA Square connector
59 24 VDC (2.5 W)		JC Square connector with light
87 24 VDC (17.1 W)		BA Flying leads (18")
61 24 VDC (8.5 W)		

Note : Photo shown with JC connector.

* Other options available, see page 357.

OPTIONS

6512B-XXX-PM-**XXYZZ**

- For piped pilot exhaust replace M by P.
- For dual pressure valve, replace by 4.

MODIFICATIONS		
MOD. N°	DESCRIPTION	MODEL AVAILABILITY
0112	Side inlet & exhaust with bottom cyl. ports (No end cyl. ports)	Available on all manifold models
0210	Porting as ordered in model number plus an additional bottom inlet	Available on all manifold models
0364	Sgl. pressure — side inlet & exh. and additional bottom inlet with bottom cyl. ports (No end cyl. ports) DUAL PRESSURE — Same as sgl. pressure except with two bottom inlets.	Available on all manifold models

- Note :
- The valve less base is always the same for internal or external pilot. These options are effected in the manifold.
 - Bottom ports : Refer to modification table.
 - To order manifolds without the valve, choose the manifold from the above table, then add 6500B as a prefix. Example 6500B-431.

45
700
900
82
6300
6500
6600
1300
800
ISO 1
ISO 2
ISO 3
MAC 125A
MAC 250A
MAC 500A

TECHNICAL DATA

Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	Internal pilot : single operator and 3 positions : 25-150 PSI	double operator : 10-150 PSI	
	External pilot : vacuum to 150 PSI		
Pilot pressure :	Single operator and 3 positions : 25-150 PSI Double operator : 10-150 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to 50°C)		
Flow (at 6 bar, ΔP=1bar) :	3/8" : (4.5 C _v), 1/2" : (5.0 C _v), 3/4" : (5.1 C _v)		
Coil :	Epoxy encapsulated - class A wires - Continuous duty		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	Consult factory		
Power :	~ Inrush : 14.8 VA	Holding : 10.9 VA	
	= 1 to 17.1 W		
Response times :	24 VDC (8.5 W)	Energize : 12 ms	De-energize : 12 ms
	120/60	Energize : 9-14 ms	De-energize : 11-18 ms

Spare parts :

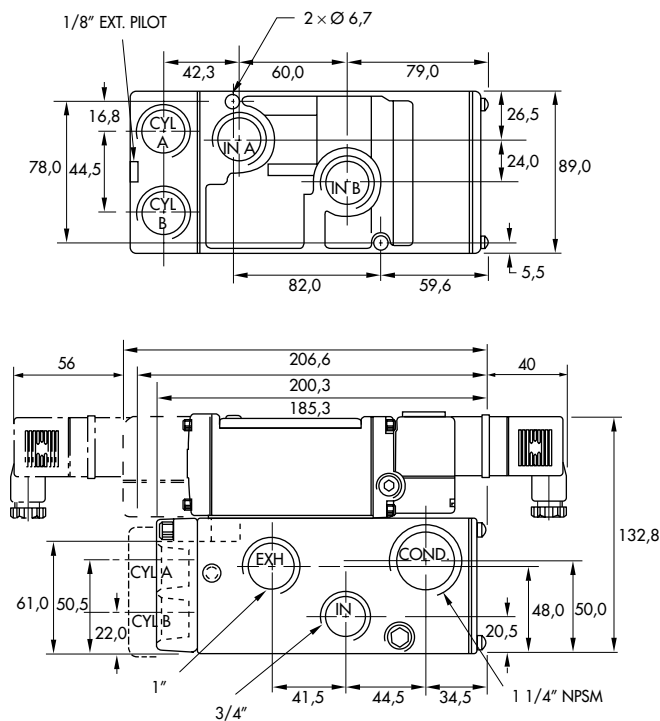
- Solenoid operator (power ≥ 4 W) : D1-XXAA, cover mounting screws 35206 and seal 16234.
- Pilot valve : PME-XXYZZ, including seal 16337. • Pressure seal between valve and base : 16246.
- Mounting screw valve to base (x4) : 32201. • Tie-rod (x2) : 19540. • Fastening kit : N-65002-01
- Inlet isolator : 28309. • Exhaust isolator : 28310. • Blank station cover plate : N-65009.

Options :

- BSPP threads.

DIMENSIONS

Dimensions shown are metric (mm)



Function	Port size	Flow [Max]	Manifold mounting	Series
4/2 - 4/3	3/8" - 1/2" - 3/4"	5.1 C_v	sub-base "plug-in"	

OPERATIONAL BENEFITS

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

HOW TO ORDER

Port size	Pilot air	4/2 Single operator	4/2 Double operator	4/3 Closed center	4/3 Open center	4/3 Pressure center
Valve less base		6511B-000-PM- XXY DA	6521B-000-PM- XXY DA	6531B-000-PM- XXY DA	6541B-000-PM- XXY DA	6551B-000-PM- XXY DA
sub-base	Internal	6511B-411-PM- XXY DA	6521B-411-PM- XXY DA	6531B-411-PM- XXY DA	6541B-411-PM- XXY DA	6551B-411-PM- XXY DA
3/8" NPTF	External	6511B-421-PM- XXY DA	6521B-421-PM- XXY DA	6531B-421-PM- XXY DA	6541B-421-PM- XXY DA	6551B-421-PM- XXY DA
sub-base	Internal	6511B-511-PM- XXY DA	6521B-511-PM- XXY DA	6531B-511-PM- XXY DA	6541B-511-PM- XXY DA	6551B-511-PM- XXY DA
1/2" NPTF	External	6511B-521-PM- XXY DA	6521B-521-PM- XXY DA	6531B-521-PM- XXY DA	6541B-521-PM- XXY DA	6551B-521-PM- XXY DA
sub-base	Internal	6511B-611-PM- XXY DA	6521B-611-PM- XXY DA	6531B-611-PM- XXY DA	6541B-611-PM- XXY DA	6551B-611-PM- XXY DA
3/4" NPTF	External	6511B-621-PM- XXY DA	6521B-621-PM- XXY DA	6531B-621-PM- XXY DA	6541B-621-PM- XXY DA	6551B-621-PM- XXY DA

Note : Above codes shown are for side cylinder ports without lights.

SOLENOID OPERATOR ▶

XX Voltage	Y Manual operator
11 120/60, 110/50	1 Non-locking
12 240/60, 220/50	2 Locking
22 24/60, 24/50	
59 24 VDC (2.5 W)	
87 24 VDC (17.1 W)	
61 24 VDC (8.5 W)	

* Other options available, see page 357.

OPTIONS

6511B-XXX-PM- XXY DA	- For piped pilot exhaust replace M by P.	- For dual pressure valve replace by 4 (no light), by 5 (sgl. light), by 6 (dbl. light).
	- For lights on valve body, replace by 3.	- For lights on manifold, replace by 2 (sgl. light), by 3 (dbl. light).

MOD. N°	DESCRIPTION	MODEL AVAILABILITY
0112	Side inlet & exhaust with bottom cyl. ports (No end cyl. ports)	Available on all manifold models
0210	Porting as ordered in model number plus an additional bottom inlet	Available on all manifold models
0364	Sgl. pressure — side inlet & exh. and additional bottom inlet with bottom cyl. ports (No end cyl. ports) DUAL PRESSURE — Same as sgl. pressure except with two bottom inlets.	Available on all manifold models

Note : 1. The valve less base is always the same for internal or external pilot. These options are effected in the manifold.
2. Bottom ports : Refer to modification table.
3. To order manifolds without the valve, choose the manifold from the above table, then add 6500B as a prefix. Example 6500B-411.



35
100
200
55
56
57
58
59
45
700
900
82
6300
6500
6600
1300
800
ISO 1
ISO 2
ISO 3
MAC 125A
MAC 250A
MAC 500A

TECHNICAL DATA

Fluid :	Compressed air, vacuum, inert gases		
Pressure range :	Internal pilot : single operator and 3 positions : 25-150 PSI	double operator : 10-150 PSI	
	External pilot : vacuum to 150 PSI		
Pilot pressure :	Single operator and 3 positions : 25-150 PSI Double operator : 10-150 PSI		
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F to 210°F)		
Filtration :	40 µ		
Temperature range :	0°F to 120°F (-18°C to 50°C)		
Flow (at 6 bar, ΔP=1bar) :	3/8" : (4.5 C _v), 1/2" : (5.0 C _v), 3/4" : (5.1 C _v)		
Coil :	Epoxy encapsulated - class A wires - Continuous duty		
Voltage range :	-15% to +10% of nominal voltage		
Protection :	Consult factory		
Power :	~ Inrush : 14.8 VA	Holding : 10.9 VA	
	= 1 to 17.1 W		
Response times :	24 VDC (8.5 W)	Energize : 12 ms	De-energize : 12 ms
	120/60	Energize : 9-14 ms	De-energize : 11-18 ms

Spare parts :

- Solenoid operator (power ≥ 4 W) : D1-XXBE, cover mounting screws 35206 and seal 16234.
- Pilot valve : PME-XXYDA-BE, including seal 16337. • Pressure seal between valve and base : 16246.
- Mounting screw valve to base (x4) : 32201. • Tie-rod (x2) : 19540. • Fastening kit : N-65002-01
- Inlet isolator : 28309. • Exhaust isolator : 28310. • Blank station cover plate : N-65009.

Options :

- BSPP threads.

DIMENSIONS

Dimensions shown are metric (mm)

