



# SERVO-CONTROLLED 3-WAY VACUUM SOLENOID VALVES WITH BISTABLE IMPULSE SOLENOID PILOT VALVE AND WITH LOW ABSORPTION ELECTRIC COIL

3D drawings are available on [vuototecnica.net](http://vuototecnica.net)

These solenoid valves have the same function and the same structure as the previously described three-way valves.

Even their structure is the same; what differentiates them are the bistable impulse solenoid pilot valve powered by a low absorption fitted electrical coil which, with a simple electrical impulse, exchanges the shutter positions and keeps them there even in absence of electricity, until it receives a new impulse of opposite polarity. For this reason, they can only be supplied with direct current electric coils.

Their use is especially recommended in all those cases requiring maximum connection security at the vacuum source, even in the absence of electrical power supply.

The electric coils of the solenoid pilot valve are fully plastic-coated in synthetic resin, watertight, insulation class F (up to 155°C) as per standard EN 60664, with 3 mm two-terminal electrical connections for connectors in compliance with EN 175301-803 - C. Protection degree IP 54; IP 65 with connector inserted. Available for voltages 12-24VDC.

Tolerance permitted on the nominal voltage value:  $\pm 10\%$ .

Maximum electric power: 1 W.

The connector can be rotated 180° on the coil and can be supplied, upon request, with LED lights, anti-interference circuit and/or with protection devices against overvoltage and polarity reversal.

The push-button device for their manual activation cannot be installed on these solenoid valves.

### Technical features

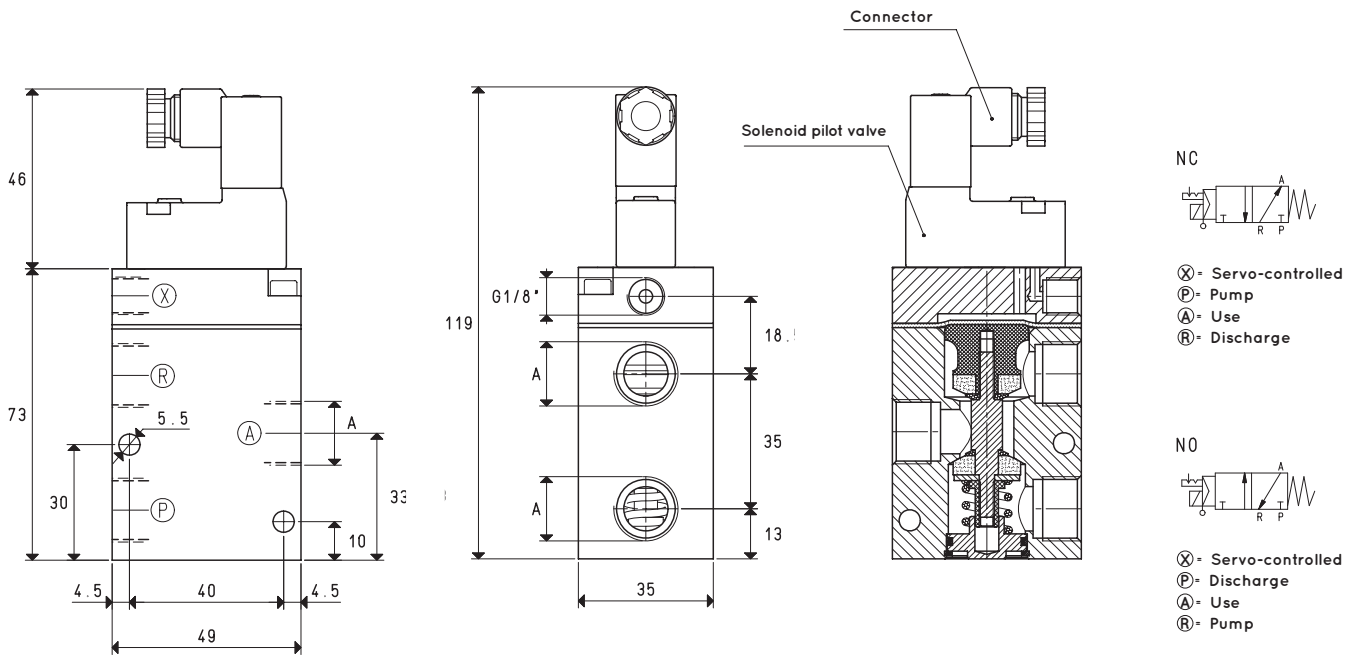
Operating pressure: from 0.5 to 3000 absolute mbar

Servo-control pressure (X): see table

Temperature of suctioned fluid: from -5 to +60°C



4



Item	A Ø	Max flow rate m³/h	Level of vacuum		Reaction time		Mouth Ø	Cross-section of passage mm²	Pressure at servo-controlled (X) bar	Weight Kg
			abs. mbar min	max	msec energ.	de-energ.				
<b>07 01 53</b>	G1/4"	6	1000	0.5	16	27	8.5	56.8	4 ÷ 7	0.44
<b>07 02 53</b>	G3/8"	10	1000	0.5	16	27	11.5	103.8	4 ÷ 7	0.43
<b>Spare parts</b>							<b>07 01 53</b>		<b>07 02 53</b>	
<b>Solenoid valve sealing kit with pilot membranes</b>					item		00 07 275		00 07 275	
<b>Pilot membranes for solenoid valves</b>					item		00 07 229		00 07 229	

Note: Specify the voltage of the electric coil when ordering. (Example: 07 01 53 V24-CC)

The connector is not integral parts of the solenoid valve and, therefore, must be ordered separately (See accessories for solenoid valves).

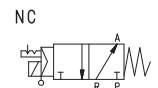
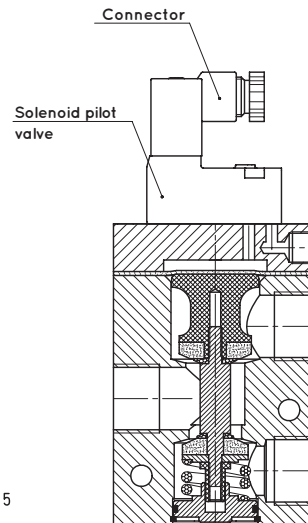
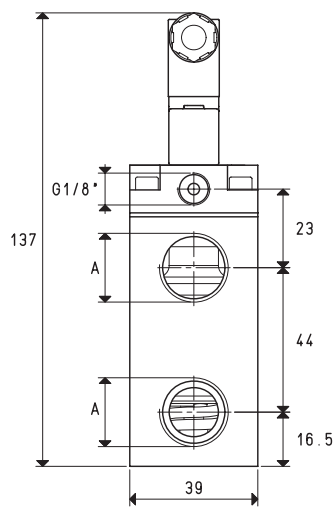
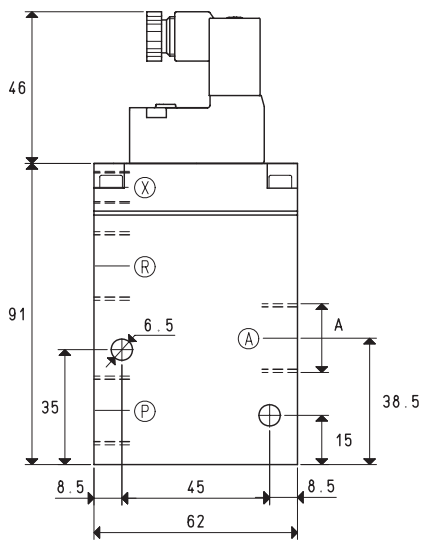
Solenoid valve servo-controlled power must be supplied with non-lubricated compressed air, 5 micron filtration, according to standard ISO 8573-1 class 4.

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

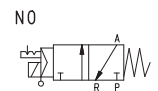
inch =  $\frac{\text{mm}}{25.4}$ ; pounds =  $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

Adapters for GAS - NPT threading available on page 1.134

# SERVO-CONTROLLED 3-WAY VACUUM SOLENOID VALVES WITH BISTABLE IMPULSE SOLENOID PILOT VALVE AND WITH LOW ABSORPTION ELECTRIC COIL



- ⊗ - Servo-controlled
- Ⓟ - Pump
- Ⓐ - Use
- Ⓡ - Discharge



- ⊗ - Servo-controlled
- Ⓟ - Discharge
- Ⓐ - Use
- Ⓡ - Pump

Item	A Ø	Max flow rate m³/h	Level of vacuum		Reaction time		Mouth Ø	Cross-section of passage mm²	Pressure at servo-controlled (X) *bar	Weight Kg
			abs. mbar min	max	msec energ.	de-energ.				
<b>07 03 53</b>	G1/2"	20	1000	0.5	16	40	15.0	176	6 ÷ 7	0.52
<b>Spare parts</b>					<b>07 03 53</b>					
<b>Solenoid valve sealing kit with pilot membranes</b>					item	00 07 276				
<b>Pilot membranes for solenoid valves</b>					item	00 07 230				

\* Add the letters LP to the item for servo-controlled pressures 4 - 6 bar.

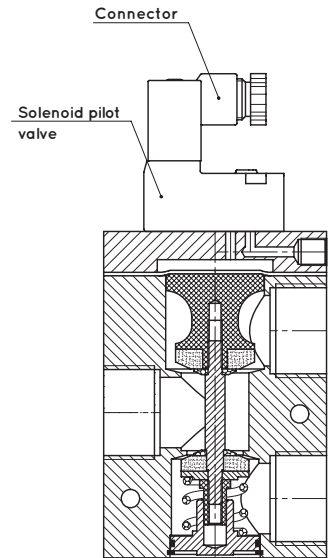
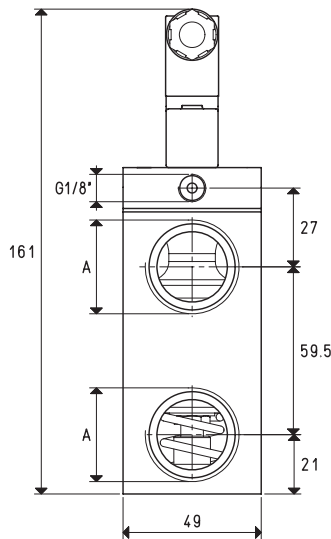
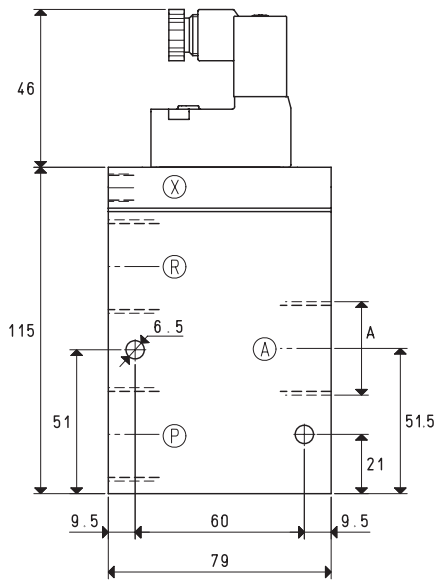
Note: Specify the voltage of the electric coil when ordering. (Example: 07 03 53 V24-CC)

The connector is not integral parts of the solenoid valve and, therefore, must be ordered separately (See accessories for solenoid valves).

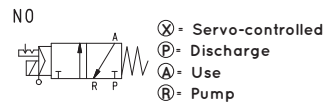
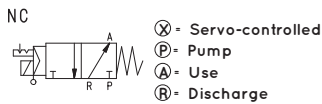


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4



Item	A Ø	Max flow rate m <sup>3</sup> /h	Level of vacuum abs. mbar		Reaction time msec		Mouth Ø	Cross-section of passage mm <sup>2</sup>	Pressure at servo-controlled (X) *bar	Weight Kg
			min	max	energ.	de-energ.				
<b>07 04 53</b>	G3/4"	40	1000	0.5	16	40	20	314	6 ÷ 7	1.00
<b>07 05 53</b>	G1"	90	1000	0.5	18	42	25	490	6 ÷ 7	0.94
<b>Spare parts</b>								<b>07 04 53</b>	<b>07 05 53</b>	
<b>Solenoid valve sealing kit with pilot membranes</b>					item	00 07 277			00 07 277	
<b>Pilot membranes for solenoid valves</b>					item	00 07 231			00 07 231	

\* Add the letters LP to the item for servo-controlled pressures 4 - 6 bar.

Note: Specify the voltage of the electric coil when ordering. (Example: 07 04 53 V24-CC)

The connector is not integral parts of the solenoid valve and, therefore, must be ordered separately (See accessories for solenoid valves).

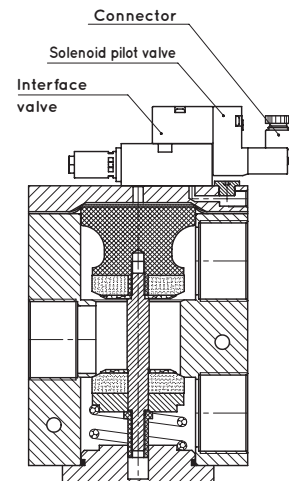
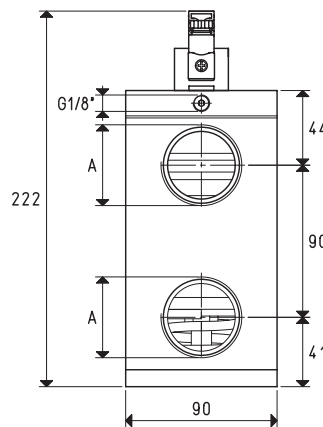
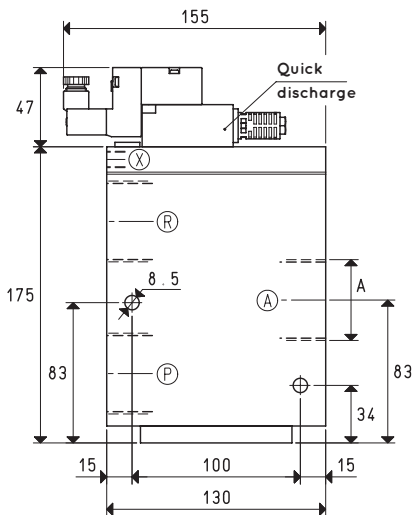
Solenoid valve servo-controlled power must be supplied with non-lubricated compressed air, 5 micron filtration, according to standard ISO 8573-1 class 4.

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

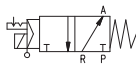
inch =  $\frac{\text{mm}}{25.4}$  ; pounds =  $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

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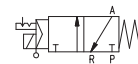


NC



- ⊗ - Servo-controlled
- Ⓟ - Pump
- Ⓐ - Use
- Ⓡ - Discharge

NO



- ⊗ - Servo-controlled
- Ⓟ - Discharge
- Ⓐ - Use
- Ⓡ - Pump

Item	A Ø	Max flow rate m <sup>3</sup> /h	Level of vacuum abs. mbar		Reaction time msec		Mouth Ø	Cross-section of passage mm <sup>2</sup>	Pressure at servo-controlled (X) *bar	Weight Kg
			min	max	energ.	de-energ.				
<b>07 06 53</b>	G1"1/2	230	1000	0.5	60	38	40	1256	6 ÷ 8	4.50
<b>Spare parts</b>					<b>07 06 53</b>					
<b>Solenoid valve sealing kit with pilot membranes</b>					item	00 07 278				
<b>Pilot membranes for solenoid valves</b>					item	00 07 232				

\* Add the letters LP to the item for servo-controlled pressures 4 - 6 bar.

Note: Specify the voltage of the electric coil when ordering. (Example: 07 06 53 V24-CC)

The connector is not integral parts of the solenoid valve and, therefore, must be ordered separately (See accessories for solenoid valves).

Solenoid valve servo-controlled power must be supplied with non-lubricated compressed air, 5 micron filtration, according to standard ISO 8573-1 class 4.



# SERVO-CONTROLLED 3-WAY VACUUM SOLENOID VALVES WITH BISTABLE IMPULSE SOLENOID PILOT VALVE AND WITH LOW ABSORPTION ELECTRIC COIL FOR LARGE CAPACITIES

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The innovative construction technology of these solenoid valves and their conformation are the same as those previously described. What differentiates them are the bistable impulse pilot valve powered by a low absorption fitted electrical coil which, with a simple electrical impulse, exchanges the shutter positions and keeps them there even in absence of electricity, until it receives a new impulse of opposite polarity. For this reason, they can only be supplied with direct current electric coils. This is the reason why their use is recommended in all those cases requiring maximum connection security at the vacuum source, even in the absence of an electrical power supply.

The electric coil of the pilot valve is fully plastic-coated in synthetic resin, watertight, insulation class F (up to 155°C) as per standard EN 60664, with 3 mm two-terminal electrical connections for micro connectors in compliance with EN 175301-803 – C.

Degree of protection IP 54; IP 65 with connector inserted.

Available for voltages 12 – 24VDC.

Tolerance permitted on the nominal voltage value: ± 10%.

Maximum electric power: 1W.

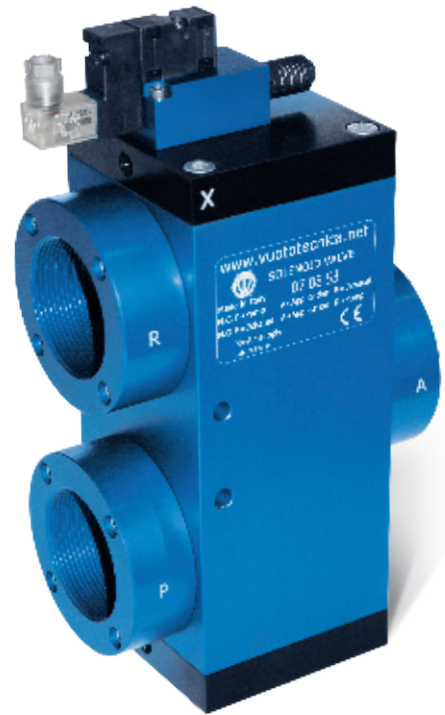
The connector can be rotated 180° on the coil and can be supplied upon request with LED lights, with anti-interference circuit and/or with protection devices against overvoltage. The push-button device for their manual activation cannot be installed on these solenoid valves.

### Technical features

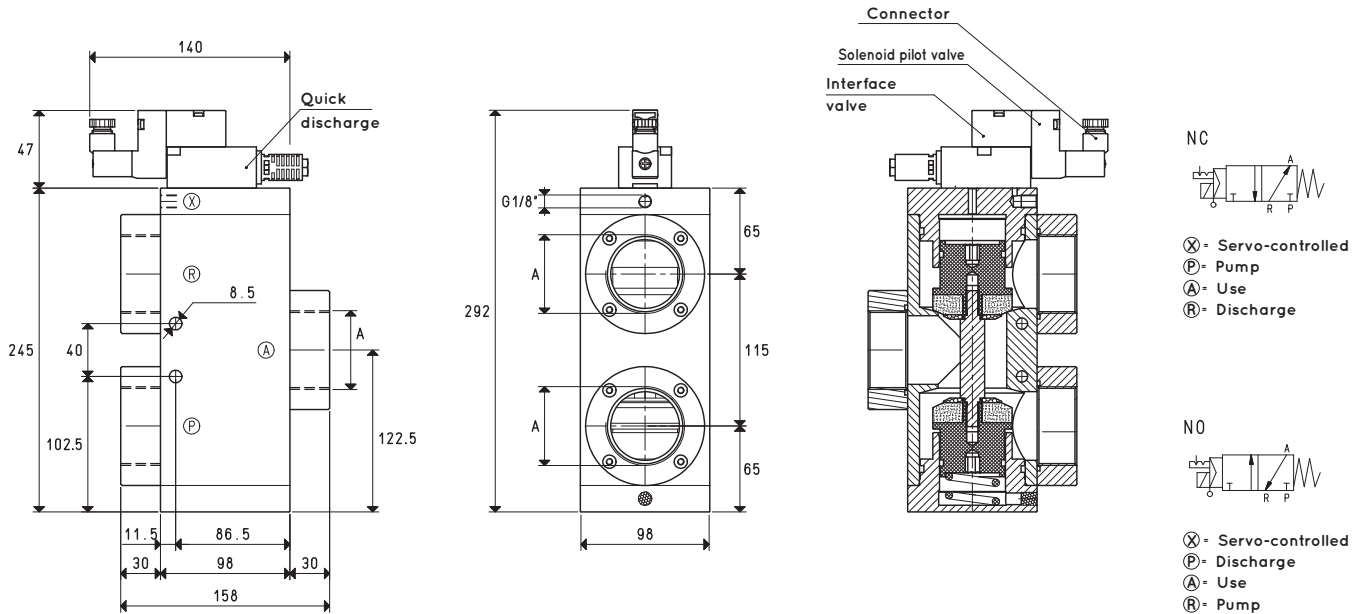
Operating pressure: from 0.5 to 1000 absolute mbar

Servo-control pressure (X): from 4 to 8 bar

Temperature of suctioned fluid: from – 5 to + 60°C



4



Item	A	Max flow rate	Level of vacuum	Reaction time	Mouth	Cross-section of passage	Pressure at servo-controlled (X)	Weight
	∅	m <sup>3</sup> /h	abs. mbar min max	msec energ. de-energ.	∅	mm <sup>2</sup>	bar	Kg
<b>07 08 53</b>	G2"	390	1000 0.5	78 50	52	2123	4 ÷ 8	5.87
<b>Spare parts</b>			<b>07 08 53</b>					
<b>Solenoid valve sealing kit</b>	item		00 07 379					

Note: Specify the voltage of the electric coil when ordering. (Example: 07 08 53 V24-CC)

The connector is not integral parts of the solenoid valve and, therefore, must be ordered separately (See accessories for solenoid valves).

Solenoid valve servo-controlled power must be supplied with non-lubricated compressed air, 5 micron filtration, according to standard ISO 8573-1 class 4.

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

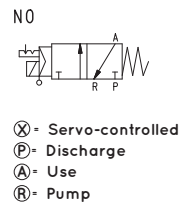
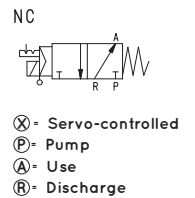
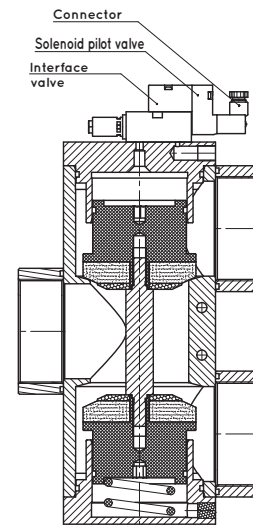
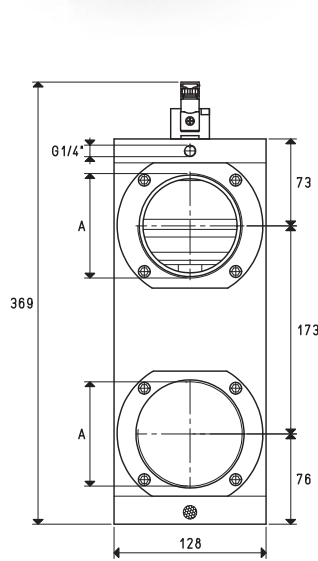
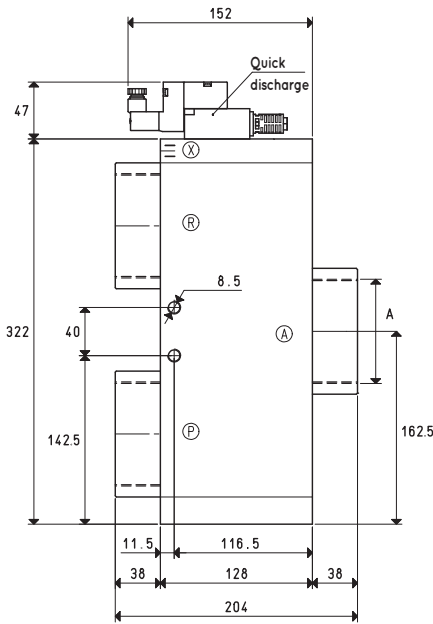
inch =  $\frac{\text{mm}}{25.4}$ ; pounds =  $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

Adapters for GAS - NPT threading available on page 1.134



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Item	A	Max flow rate	Level of vacuum		Reaction time		Mouth	Cross-section of passage	Pressure at servo-controlled (X)	Weight
	∅	m <sup>3</sup> /h	min	max	msec	energ.	de-energ.	mm <sup>2</sup>	bar	Kg
<b>07 09 53</b>	G3"	750	1000	0.5	132	84	80	5024	4 ÷ 8	11.80
<b>Spare parts</b>										<b>07 09 53</b>
<b>Solenoid valve sealing kit</b>			item		00 07 383					

Note: Specify the voltage of the electric coil when ordering. (Example: 07 09 53 V24-CC)

The connector is not integral parts of the solenoid valve and, therefore, must be ordered separately (See accessories for solenoid valves).

Solenoid valve servo-controlled power must be supplied with non-lubricated compressed air, 5 micron filtration, according to standard ISO 8573-1 class 4.

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

inch =  $\frac{\text{mm}}{25.4}$ ; pounds =  $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

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