# SERIES 651/652/653

 $\sum_{\mathbf{2}}$ 

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# **SLOW-START/QUICK EXHAUST VALVE**

- High exhaust capacity for quick depletion of downstream pressure
- Slow Starts provide gradual increase of downstream pressure and full flow once 70% of inlet pressure is reached
- This product allows for machines and installations to conform to the **European Directives**
- Optional low profile integrated gauge, round gauge, digital gauge or digital pressure switch
- Constructions includes: 3/2 Quick Exhaust, 3/2 Slow-Start/Quick-Exhaust, and 2/2 Slow Start
- Electrical connections: Coil with DIN terminals; DIN Plug, DIN Plug with LED, and coil with built-in M12 3 Pin male connection (24 VDC)

Performance Data											
Series	6	51	652		653						
Port sizes	1/8, 1/4		1/4, 3/8, 1/2		3/4, 1						
Thread type			G (NPTF	in option)							
			l/min	(ANR)							
		1→2	2->3	1→2	2->3	1→2	2->3				
	1/8	780	1040	-	-	-	-				
Nominal flow - ISO 6358	1/4	1000	1120	1500	2100	-	-				
P1 = 6.3 bar	3/8	-	-	3750	4300	-	-				
ΔP = I Ddi	1/2	-	-	4650	5000	-	-				
	3/4	-	-	-	-	7280	8890				
	1	-	-	-	-	8230	8960				
Minimum operating pressure (bar)	Minimum operating pressure (bar)				3.8 *						
Maximum operating pressure (bar)	10 16**										
Ambient temperature range (°C)	-10 to +50										
Fluid temperature range (°C)	-10 to +50										
Fluid		air or inert gas									
Weight (kg)	0.387 0.438 1.592					592					

\*If P(1) supply flow is restricted on valves with internal pilot supply, momentary exhaust leakage can occur. \*\* Pressure rating is 10 bar when equipped with a digital gauge or digital pressure switch.

#### Materials in Contact with Fluid

Body	Aluminium
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Seals	NBR/FKM
Springs	Stainless steel

#### System Pressurization and Depressurization Curves

(with Automatic Soft Start Device)

Pressure Depressurization of System P (bar) P2: 80% P1 (651) 60..70% P1 (652/653) \_\_\_\_\_t3 t (s) , t1 \_ t2

Thing and venting times (seconds)										
	Series 651	Series 652	Series 653							
t1 (with screw loosened by 6 (651)/7 (652)/8 (653) turns)	8.0	3.2	2.8							
t2 (with screw loosened by 1 turn)	112.0	23.0	18.5							
t3 (venting time)	4.8	1.0	0.5							

Operating Data									
	24/DC	115/50	230/50	24/50					
Power	—	9 VA	9 VA	9 VA					
Holding	3.0 Watts	4 VA (3.0 Watts)							

The adjustment range for the pressurization time lies between curves (1) and (2).

The transition to full flow takes place automatically as soon as the downstream pressure reaches 80% (651)/60% to 70% (652/653) of the upstream pressure.

> These times correspond to a supply pressure (P1) of 6.3 bar, a transition pressure (P2) of 80% (651)/60% to 70% (652/653) P1 (not adjustable) and a downstream capacity of 10 liters.



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# series 651/652/653

**EMERSON** 

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## How to Order - Slow Start/Quick Exhaust Valve



# 651/652/653

# Dimensions : mm - Series 651/652/653 Slow-Start/Quick Exhaust Valve

**Cross Section -**

#### Configurator - CAD Files



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#### **External Air Pilot**

	А	В	С	D	E	F	G	н	J	К	L
651	113	59	50	25	58	29	31.5	60.5	34.5	G1/4	97
652	136	70	66	33	69	34.5	37	71.5	57	G1/2	120
653	158	81	90	45	93.1	46.5	48.4	95	81.2	G1	142
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### Solenoid Pilot

	А	В	С	D	E	F	G	н	J	К	L
651	170	116	50	25	58	29	72	101	34.5	G1/4	97
652	193	127	66	33	69	34.5	72	106.5	57	G1/2	120
653	214	137	90	45	93.1	46.5	94	140.5	81.2	G1	142

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