

750 Series - 3/3



Compact solenoid multi-valve | 3/3

Function A | Outlet NO - Exhaust NC

Function C | Outlet NC - Exhaust NO

Function D | Outlet NC - Exhaust NC

PNEUMATIC DIVISION

MATRIX
mechatronics

www.matrix.to.it
sales@matrix.to.it

SOLENOID VALVES 750 SERIES • 3/3

750 Series 3/3 presents a small-sized single body with four utilities, assuming, according to the different models, the following configurations:

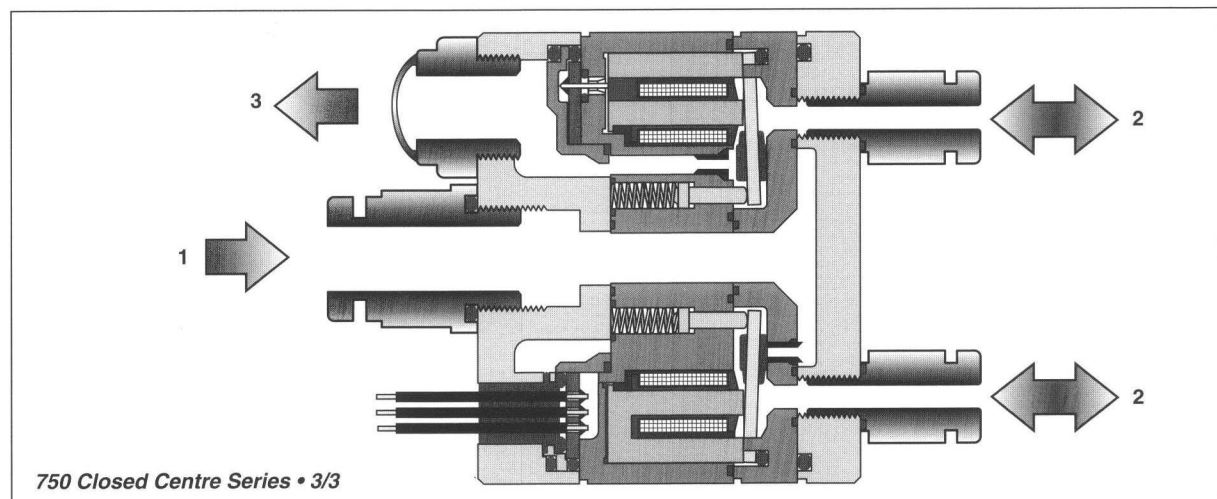
- **NC outlet - NO air drain port (function code 'C' - Exhaust center)**
This configuration allows feeding separately four pneumatic rooms and their corresponding automatic air drain port in absence of electric control.
- **NC outlet - NC air drain port (function code 'D' - Closed center)**
This configuration allows separately feeding four pneumatic rooms and maintaining the pressure level in absence of electric control.
- **Outlet NO - NC air drain port (function code 'A' - Pressure center)**
This configuration allows separately feeding four pneumatic rooms and assures the continuous supply (feeding) in electric control absence.

In the present model, all the innovations offered by Matrix technology, this combines special dynamic performance to the simplicity and reliability of manufacture, are present. Response times are of millisecond range, while operation life is over 500 million cycles.

With a speed-up kind control, dynamic characteristics are even more improved. Standard 24 VDC control solenoid valves have a response time lower than 5 ms in opening and than 2 ms in closing, with a maximum operation frequency 200 Hz. Speed-up control solenoid valves have a response time lower than 2 ms both in opening and in closing, with a maximum operation frequency of 300 Hz.

Besides high-speed characteristics, 750 Series solenoid valves offer flow rate values up to 100 ℓ/minute (ANR) for every single outlet, with feeding pressure from 0 to 4 bar.

For 750 closed centres series, a lot of accessories is available, such as IP 52 or IP 56 connectors, manifolds with different positions and speed-up driver boards.



Advantages

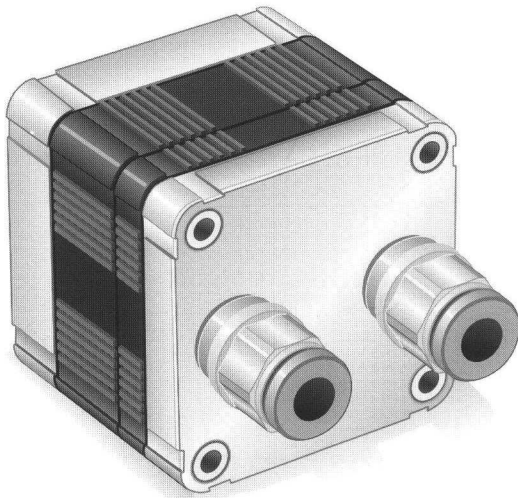
- Compact dimension.
- Short response times.
- Insensitivity both to frequency work and to vibrations.
- Low absorbed power.
- Precision, repetitiveness and flexibility.
- Long operating life.

Applications

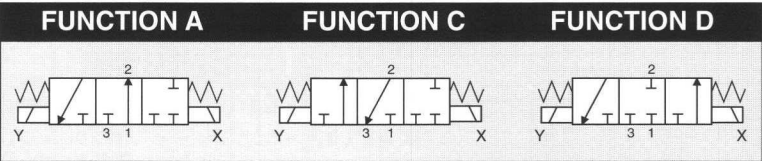
- Process and precision instrumentation.
- Biomedical equipment.
- Pressure-therapy systems.
- Positioning systems.

Materials

- Body in PPS.
- Flanges in Al.
- Seals in NBR (shutters in HNBR if required).



CONTROL: DIRECT PFM PNM PWM



GENERAL CHARACTERISTICS

FLUID	Non-lubricated dry air, neutral gases (-10 + 50°C)		
FILTRATION RATING	Min 40 micron		
TEMPERATURE	- 10 + 50°C (Standard version)		
RESPONSE TIME IN OPENING	12 / 24 < 7 ms	JJ < 5 ms	XX / KK < 2 ms
RESPONSE TIME IN CLOSING	12 / 24 < 3 ms	JJ < 2 ms	XX / KK < 2 ms
MAXIMUM FREQUENCY	100 Hz	200 Hz	300 Hz
WEIGHT	340 g		
PRODUCT LIFE EXPECTANCY	≥ 500 M/s cycles		
IP RATING	IP 52 - IP 62 - IP 65		

IDENTIFICATION CODE

	M	K	7	5	2	4	E	1	A	2	24
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- NUMBER OF POSITIONS**

K	3 Positions
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- OUTLETS**

2	2 Outlets
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- FLOW RATE (at 6 bar)**

H	100 Nl/min
B	160 Nl/min
M	200 Nl/min (control tensiono JJ XX KK)
- VERSION**

	Standard
H	HNBR Shutters
- No. ELECTRICAL CONTROLS**

4	4 Control
C	4 Controls / Integrated diodes with common 0 V
F	4 Controls / Integrated diodes with common 12/24 V
- FUNCTIONS**

A	Outlet NO - Exhaust NC
C	Outlet NC - Exhaust NO
D	Outlet NC - Exhaust NC
- TYPE**

2	2 Pairs 2/2
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- CONTROL TENSION**

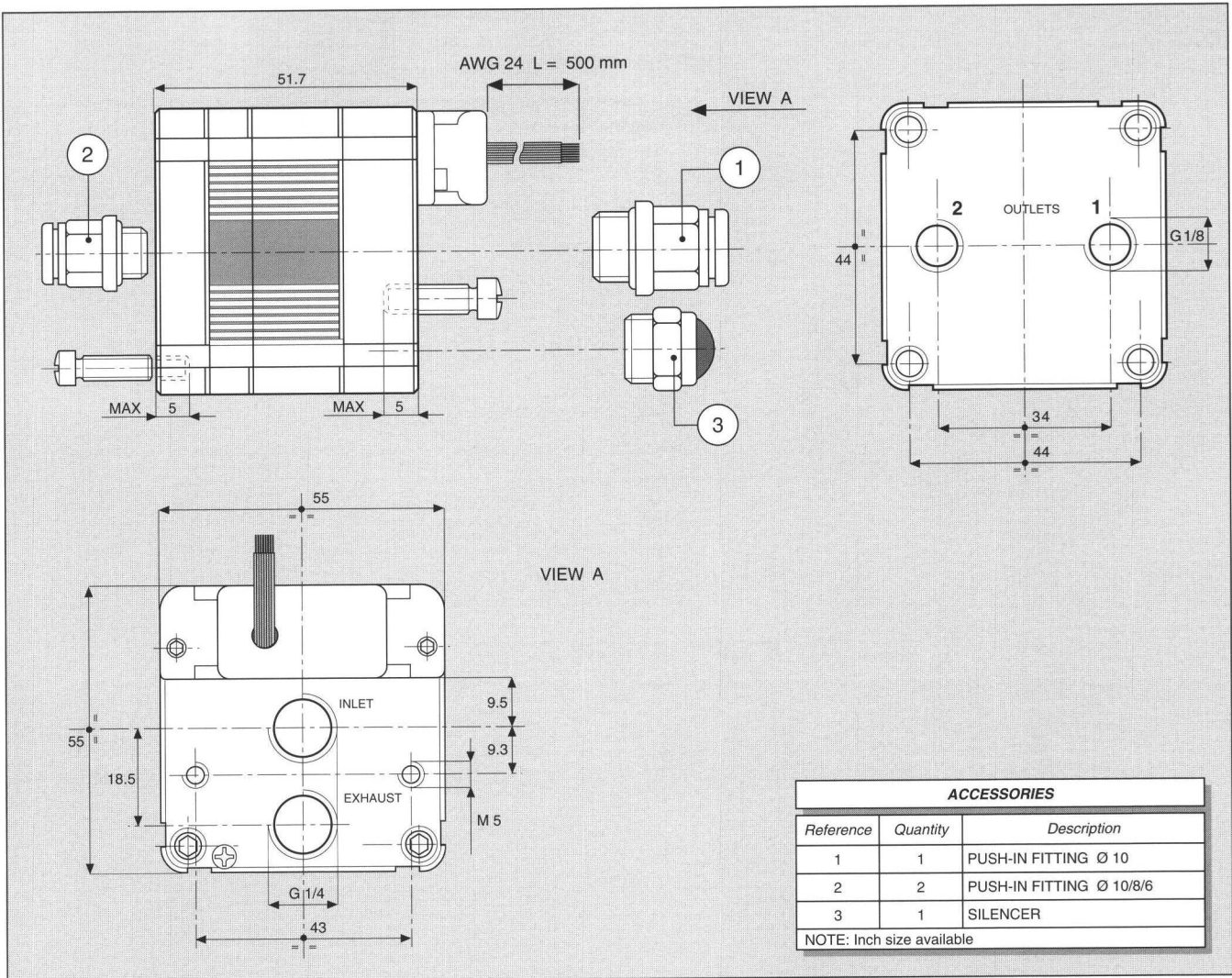
12	12 VDC ± 10 %	ED 100 %	2.9 W
24	24 VDC ± 10 %	ED 100 %	2.5 W
JJ	24 VDC ± 10 %	ED 100 % ⁽¹⁾	3.8 W
XX	Speed-up in current	ED 100 % ⁽¹⁾	—
KK	Speed-up in tension	ED 100 % ⁽¹⁾	—

⁽¹⁾ Only with Electronic Driver Boards PRB or UDB
- PORT CONNECTION**

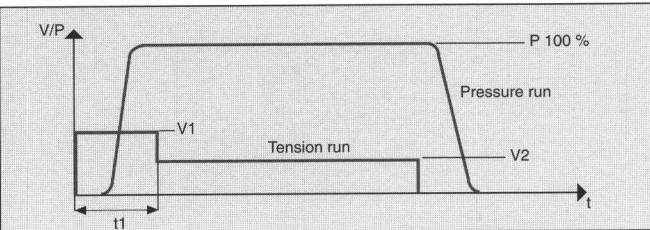
0	Integrated cables IP 62 L = 500 mm
E	Presetting for Easy connection IP 52 - IP 65
- SPECIAL PROTECTIONS**

	Only with EASY IP 65 port connection
M	Stainless steel (INOX) flanges
N	EPOX BLACK varnished flanges
- OPERATING PRESSURE**

	RANGE	MODELS
1	0 - 4 bar	All



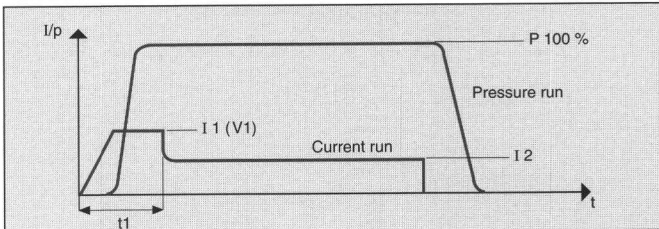
CHARACTERISTICS OF THE ELECTRICAL CONTROL - MODELS KK



N.B. KK MODELS ARE CONTROLLED IN TENSION

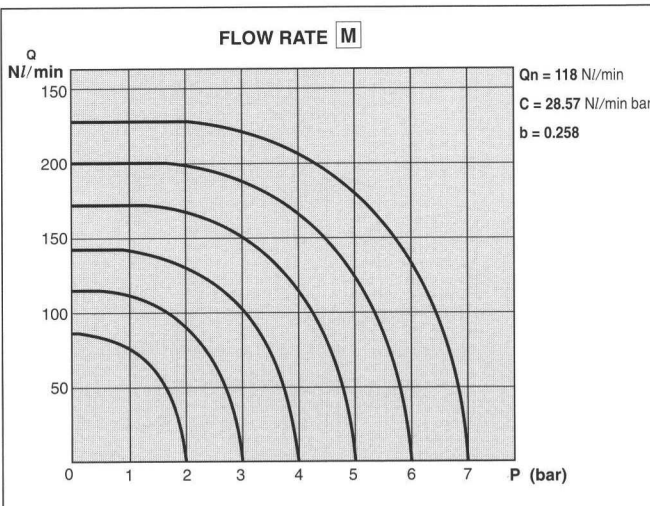
V1 = 24 VDC t1 = 2 ms V2 = 5 VDC

CHARACTERISTICS OF THE ELECTRICAL CONTROL - MODELS XX



N.B. XX MODELS ARE CONTROLLED IN CURRENT

I1 = 0.7 A t1 = 2 ms I2 = 0.3 A

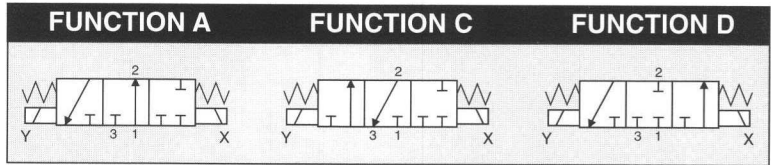


ELECTRICAL PORT CONNECTION

COLOUR	8 CONTROLS (OUTLET)
BLACK	COMMON
BROWN	1 (1)
RED	2 (1)
ORANGE	3 (1)
YELLOW	4 (1)
GREEN	5 (2)
BLUE	6 (2)
VIOLET	7 (2)
GREY	8 (2)



CONTROL: **DIRECT** **PFM** **PNM** **PWM**



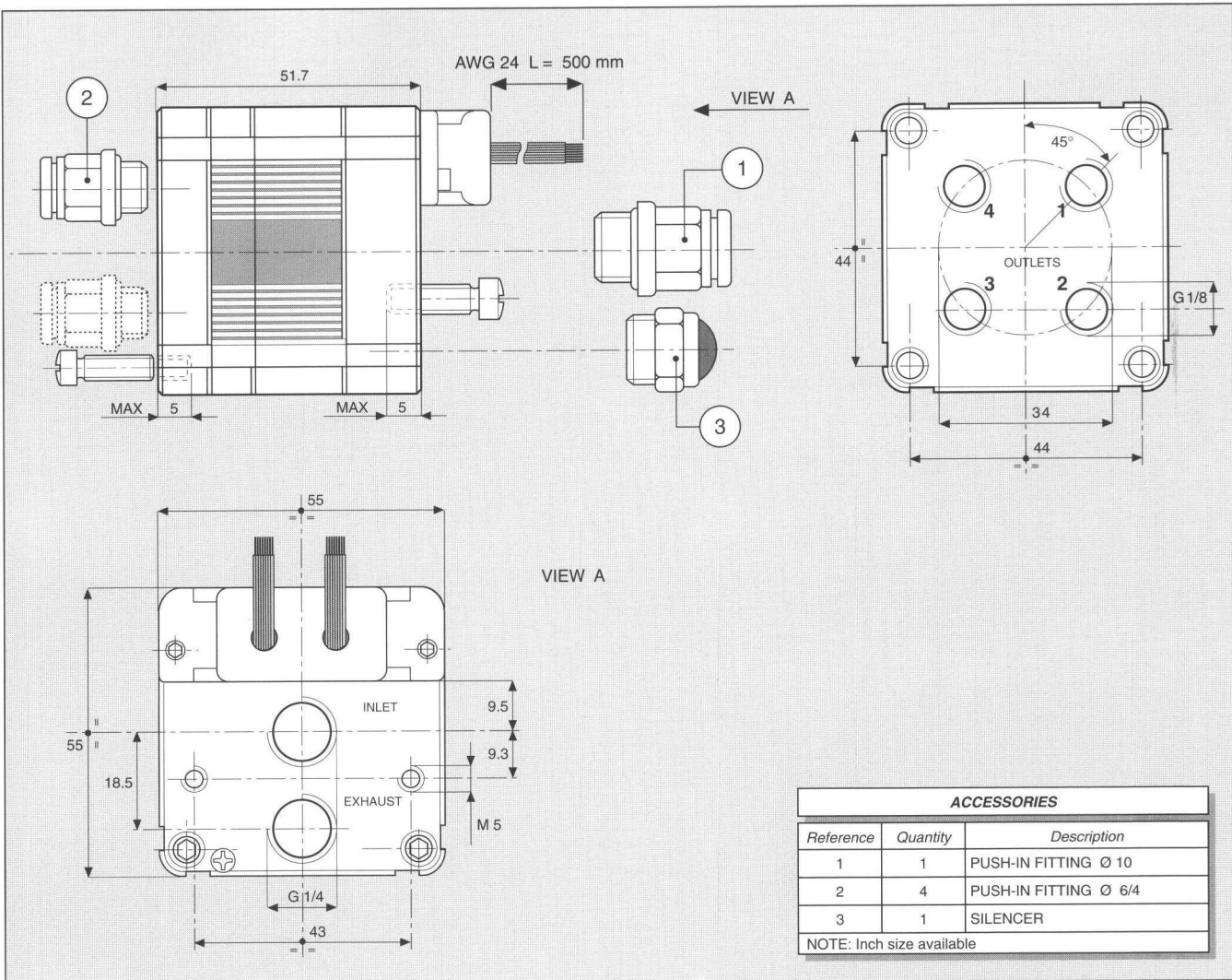
GENERAL CHARACTERISTICS

FLUID	Non-lubricated dry air, neutral gases (-10 + 50°C)		
FILTRATION RATING	Min 40 micron		
TEMPERATURE	- 10 + 50°C (Standard version)		
RESPONSE TIME IN OPENING	12 / 24 < 7 ms	JJ < 5 ms	XX / KK < 2 ms
RESPONSE TIME IN CLOSING	12 / 24 < 3 ms	JJ < 2 ms	XX / KK < 2 ms
MAXIMUM FREQUENCY	100 Hz	200 Hz	300 Hz
WEIGHT	340 g		
PRODUCT LIFE EXPECTANCY	≥ 500 M/s cycles		
IP RATING	IP 52 - IP 62 - IP 65		

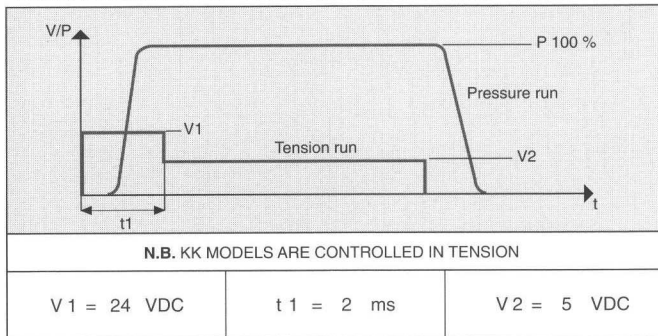
IDENTIFICATION CODE

	M	K	7	5	4	8	E	1	A	2	24
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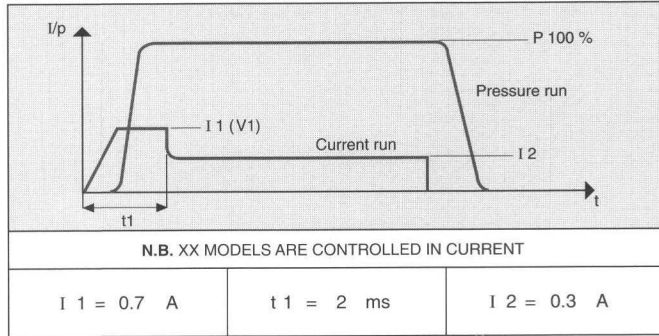
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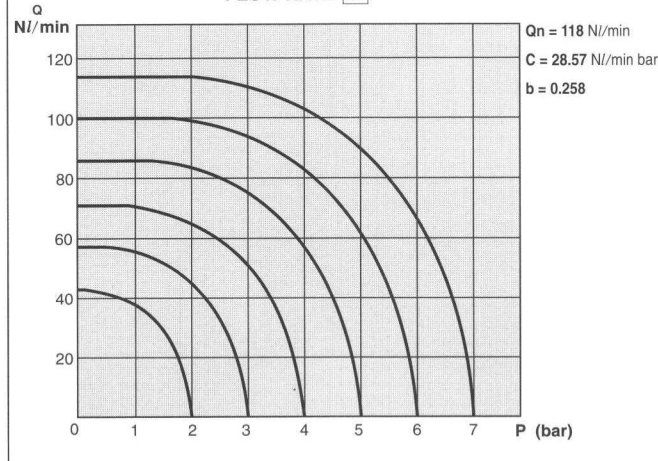
CHARACTERISTICS OF THE ELECTRICAL CONTROL - MODELS KK



CHARACTERISTICS OF THE ELECTRICAL CONTROL - MODELS XX



FLOW RATE \dot{Q}



ELECTRICAL PORT CONNECTION

COLOUR	8 CONTROLS (OUTLET)
BLACK	COMMON
BROWN	1 (1)
RED	2 (1)
ORANGE	3 (2)
YELLOW	4 (2)
GREEN	5 (3)
BLUE	6 (3)
VIOLET	7 (4)
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