

**2/2 and 3/2 Poppet Valves
Electrically Actuated
G $\frac{1}{8}$, G $\frac{1}{4}$, CNOMO and Interface**

- Extensive range of power and orifice size options
- Removable coil
- Manifold rail for 1 to 20 valves
- Reduced installation height
- Exhaust diffuser supplied as standard
- Normally closed and normally open types


Technical Data
Medium:

Compressed air, filtered, lubricated or non-lubricated.

Operation:

Poppet valve, directly actuated with spring return.

Mounting:

Through holes in sub-base, threaded on single station.

Port Size:

G $\frac{1}{8}$, G $\frac{1}{4}$ or 3mm (CNOMO and Interface)

Operating Pressure:

Up to 16 bar. See table overleaf.

Orifice Sizes:

1,0 mm, 1,5 mm, 2,0 mm, 2,5 mm and 3,0 mm.

See table overleaf.

Flow:

See details on page 5.4.042.03

Operating Temperature:

–30°C* to +90°C supply air

–30°C* to +50°C ambient

*Consult our Technical Service for use below +2°C

Response Times:

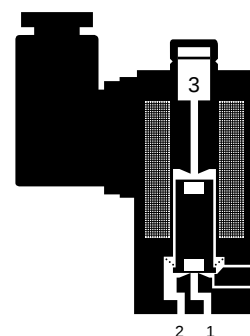
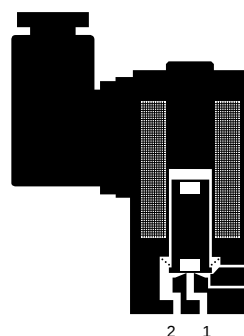
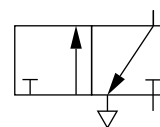
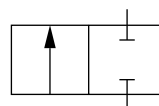
8 – 15 ms

Materials:

Glass reinforced thermoplastic encapsulated coil, stainless iron armature, stainless steel tube and spring, zinc alloy (G $\frac{1}{8}$ and CNOMO) or brass (G $\frac{1}{4}$) or polyester (interface base), nitrile rubber seals.

Ordering Information

To order, quote model number as indicated in the tables overleaf, e.g. V04X486L–B623A for the 3/2 model with an interface base, a 2 mm orifice and a 4,5 W, 24 V d.c. coil without plug. Coils can also be supplied, quote reference from table overleaf inserting the voltage code where marked*.





General Information

V03

Symbol	Model	Type	Base	Orifice (mm)	Maximum Operating Pressure (bar)	Weight (kg)	Coil Assembly without terminal box
	V03X286J-B613A	Normally Closed	Interface	1,0	10	0,20	V03X286A-Q1213
	V03A286J-B613A	Normally Closed	G $\frac{1}{8}$	1,0	10	0,24	V03X286A-Q1213
	V03X486J-B613A	Normally Closed	Interface	1,0	10	0,20	V03X286A-Q1213
	V03X486K-B613A	Normally Closed	Interface	1,5	4	0,20	V03X286A-Q1213
	V03A486J-B613A	Normally Closed	G $\frac{1}{8}$	1,0	10	0,24	V03X286A-Q1213
	V03A486K-B613A	Normally Closed	G $\frac{1}{8}$	1,5	4	0,24	V03X286A-Q1213
	V03Y486J-B613A	Normally Closed	CNOMO	1,0	10	0,30	V03X286A-Q1213
	V03Y486K-B613A	Normally Closed	CNOMO	1,5	4	0,30	V03X286A-Q1213
	V03X386J-B613A	Normally Open	Interface	1,0	10	0,20	V03X286A-Q1213
	V03X386K-B613A	Normally Open	Interface	1,5	4	0,20	V03X286A-Q1213
	V03A386J-B613A	Normally Open	G $\frac{1}{8}$	1,0	10	0,24	V03X286A-Q1213
	V03A386K-B613A	Normally Open	G $\frac{1}{8}$	1,5	4	0,24	V03X286A-Q1213

V04

Symbol	Model	Type	Base	Orifice (mm)	Maximum Operating Pressure (bar)	Weight (kg)	Coil Assembly without terminal box
	V04X286K-B62*A	Normally Closed	Interface	1,5	16	0,20	V04X286A-Q122*
	V04X286L-B62*A	Normally Closed	Interface	2,0	16	0,20	V04X286A-Q122*
	V04X286M-B62*A	Normally Closed	Interface	2,5	14	0,20	V04X286A-Q122*
	V04A286K-B62*A	Normally Closed	G $\frac{1}{8}$	1,5	16	0,24	V04X286A-Q122*
	V04A286L-B62*A	Normally Closed	G $\frac{1}{8}$	2,0	16	0,24	V04X286A-Q122*
	V04A286M-B62*A	Normally Closed	G $\frac{1}{8}$	2,5	14	0,24	V04X286A-Q122*
	V04B286L-B42*A	Normally Closed	G $\frac{1}{4}$	2,0	16	0,32	V04X286A-Q122*
	V04B286M-B42*A	Normally Closed	G $\frac{1}{4}$	2,5	14	0,32	V04X286A-Q122*
	V04B286N-B42*A	Normally Closed	G $\frac{1}{4}$	3,0	7	0,32	V04X286A-Q122*
	V04X486J-B62*A	Normally Closed	Interface	1,0	16	0,20	V04X286A-Q122*
	V04X486K-B62*A	Normally Closed	Interface	1,5	13	0,20	V04X286A-Q122*
	V04X486L-B62*A	Normally Closed	Interface	2,0	10	0,20	V04X286A-Q122*
	V04X486M-B62*A	Normally Closed	Interface	2,5	4	0,20	V04X286A-Q122*
	V04A486J-B62*A	Normally Closed	G $\frac{1}{8}$	1,0	16	0,24	V04X286A-Q122*
	V04A486K-B62*A	Normally Closed	G $\frac{1}{8}$	1,5	16	0,24	V04X286A-Q122*
	V04A486L-B62*A	Normally Closed	G $\frac{1}{8}$	2,0	13	0,24	V04X286A-Q122*
	V04A486M-B62*A	Normally Closed	G $\frac{1}{8}$	2,5	4	0,24	V04X286A-Q122*
	V04Y486K-B62*A	Normally Closed	CNOMO	1,5	13	0,30	V04X286A-Q122*
	V04Y486L-B62*A	Normally Closed	CNOMO	2,0	10	0,30	V04X286A-Q122*
	V04Y486M-B62*A	Normally Closed	CNOMO	2,5	4	0,30	V04X286A-Q122*
	V04Y486N-B62*A	Normally Closed	CNOMO	3,0	7	0,32	V04X286A-Q122*
	V04X386J-B62*A	Normally Open	Interface	1,0	16	0,20	V04X286A-Q122*
	V04X386K-B62*A	Normally Open	Interface	1,5	13	0,20	V04X286A-Q122*
	V04X386L-B62*A	Normally Open	Interface	2,0	10	0,20	V04X286A-Q122*
	V04X386M-B62*A	Normally Open	Interface	2,5	4	0,20	V04X286A-Q122*
	V04A386J-B62*A	Normally Open	G $\frac{1}{8}$	1,0	16	0,24	V04X286A-Q122*
	V04A386K-B62*A	Normally Open	G $\frac{1}{8}$	1,5	13	0,24	V04X286A-Q122*
	V04A386L-B62*A	Normally Open	G $\frac{1}{8}$	2,0	10	0,24	V04X286A-Q122*
	V04A386M-B62*A	Normally Open	G $\frac{1}{8}$	2,5	4	0,24	V04X286A-Q122*

*Insert voltage code from Voltage Codes table page 5.4.042.03.

All models are available without manual override. Change 10th digit to **1** e.g. V03X486J-B11*A.

CNOMO versions are available with a push to operate spring return manual override. Change 10th digit to **3** e.g. V03X486J-B31*A.

Warning

These products are intended for use in industrial compressed air systems only. Do not use these products where *pressures* and *temperatures* can exceed those listed under 'Technical Data'.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems, or other applications not within published specifications, consult Norgren.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes. The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.



V05

Symbol	Model	Type	Base	Orifice (mm)	Maximum Operating Pressure (bar)	Weight (kg)	Coil Assembly without plug
	V05X286M-B63*A	Normally Closed	Interface	2,5	16	0,20	V05X286A-Q123*
	V05A286M-B63*A	Normally Closed	G½	2,5	16	0,24	V05X286A-Q123*
	V05B286M-B43*A	Normally Closed	G¾	2,5	16	0,32	V05X286A-Q123*
	V05B286M-B43*A	Normally Closed	G¾	3,0	13	0,32	V05X286A-Q123*
	V05X486K-B63*A	Normally Closed	Interface	1,5	16	0,20	V05X286A-Q123*
	V05A486L-B63*A	Normally Closed	Interface	2,0	13	0,20	V05X286A-Q123*
	V05X486M-B63*A	Normally Closed	Interface	2,5	10	0,20	V05X286A-Q123*
	V05A486K-B63*A	Normally Closed	G½	1,5	16	0,24	V05X286A-Q123*
	V05A486L-B63*A	Normally Closed	G½	2,0	13	0,24	V05X286A-Q123*
	V05A486M-B63*A	Normally Closed	G½	2,5	10	0,24	V05X286A-Q123*
	V05B486L-B43*A	Normally Closed	G¾	2,0	13	0,24	V05X286A-Q123*
	V05B486M-B43*A	Normally Closed	G¾	2,5	10	0,24	V05X286A-Q123*
	V05Y486K-B63*A	Normally Closed	CNOMO	1,5	16	0,30	V05X286A-Q123*
	V05Y486L-B63*A	Normally Closed	CNOMO	2,0	13	0,30	V05X286A-Q123*
	V05X386K-B63*A	Normally Open	Interface	1,5	16	0,20	V05X286A-Q123*
	V05X386L-B63*A	Normally Open	Interface	2,0	13	0,20	V05X286A-Q123*
	V05X386M-B63*A	Normally Open	Interface	2,5	10	0,20	V05X286A-Q123*
	V05A386K-B63*A	Normally Open	G½	1,5	16	0,24	V05X286A-Q123*
	V05A386L-B63*A	Normally Open	G½	2,0	13	0,24	V05X286A-Q123*
	V05A386M-B63*A	Normally Open	G½	2,5	10	0,24	V05X286A-Q123*

*Insert voltage code from Voltage Codes table page 5.4.042.03.

All models are available without manual override. Change 10th digit to 1 e.g. V03X486J-B11*A.

CNOMO versions are available with a push to operate spring return manual override. Change 10th digit to 3 e.g. V03X486J-B31*A.

Valve and Base Options

Family	7mm Interface Mounted Valve	G½ Valve	G¾ Valve	CNOMO Mounted Valve	Fixed Length Manifold	Manifold/Valve Assemblies
V03	V03X	V03A	V03B	V03Y	M/P35598/†	V03XΔ86Δ-H613A#
V04	V04X	V04A	V04B	V04Y	M/P35598/†	V04XΔ86Δ-H62*A#
V05	V05X	V05A	V05B	V05Y	M/P35598/†	V05XΔ86Δ-H63*A#

*Insert Voltage Code from table below †Insert number of stations

*Voltage Codes

Voltage	Codes
6 V d.c.	1
12 V d.c.	2
24 V d.c.	3
48 V d.c.	5
110 V d.c.	7
24 V 50/60 Hz	4
48 V 50/60 Hz	6
110 – 120 V 50/60 Hz	8
220 – 240 V 50/60 Hz	9

Technical Details

Voltage Tolerance:	±10%
Inrush/Hold	V03 d.c. 1,0 W V04 d.c. 4,5 W a.c. 14/10 VA V05 d.c. 9,0 W a.c. 27/20 VA 100% E.D.
Plug:	A variety of plugs are available, see Section 7.7.001
Manual Override	Screwdriver operated, memory type, standard
Protection Class:	IP 65 (DIN 40 050) with terminal box fitted

Note: The V03 models are only available with the 24 V d.c. coil.

Flow Characteristics

Inlet Orifice Δmm	C	b	l/min	A	Cv	Kv
1	0,15	0,61	39,4	0,95	0,04	0,03
1,5	0,30	0,36	68,95	1,26	0,07	0,06
2	0,57	0,30	137,9	2,36	0,14	0,12
2,5	0,77	0,30	187,15	3,05	0,19	0,16
3,0	1,16	0,49	275,8	6,25	0,28	0,24

The above figures are based on valves mounted on a G½ base. They are typical of all base styles as the orifice diameter is the limiting factor.



Model Codes

V 0 ★ ★ ★ 8 6 ★ - B ★ ★ ★ ★

Family	Substitute
V03	3
V04	4
V05	5

Base Type	Substitute
Interface	X
CNOMO	Y
G ¹ / ₈	A
G ¹ / ₄	B

Function	Substitute
2/2 Normally closed	2
3/2 Normally open	3
3/2 Normally closed	4

Solenoid operator	Substitute
All Valves	8

Spring return	Substitute
All Valves	6

Inlet Orifice	Substitute
1,0 mm (Interface, CNOMO)	J
1,5 mm (Interface, CNOMO, G ¹ / ₈)	K
2,0 mm (Interface, CNOMO, G ¹ / ₈ , G ¹ / ₄)	L
2,5 mm (Interface, CNOMO, G ¹ / ₈ , G ¹ / ₄)	M
3,0 mm (G ¹ / ₄)	N

Plug	Substitute
None	A
Standard, with Pg9 cable gland	B
Indicator, with Pg9 cable gland	G

Voltage code	Substitute
See Voltage Code table on page 3	

Power	Substitute
1W (V03 models only)	1
4,5W (V04 models only)	2
9W (V05 models only)	3

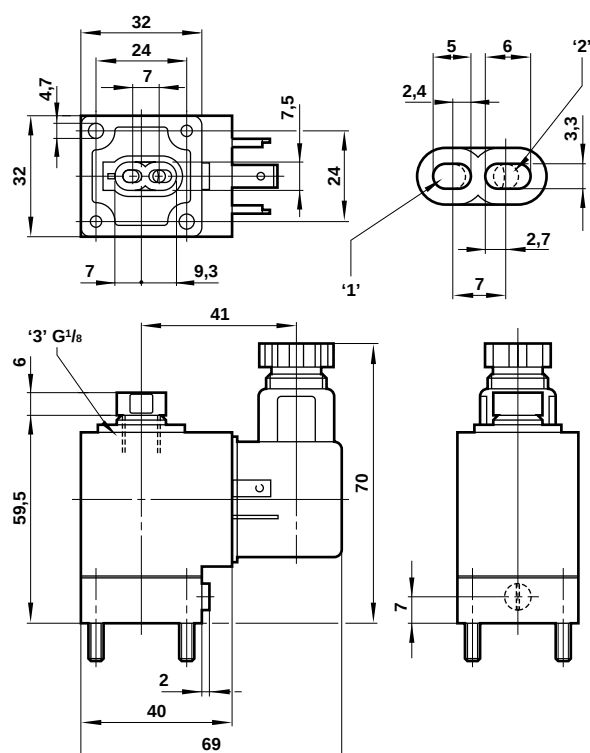
Manual Operator	Substitute
None	1
Push to operate spring return	3*
Lever, memory type	4
Screwdriver, memory type	6*

Integral design	Substitute
All Valves	B

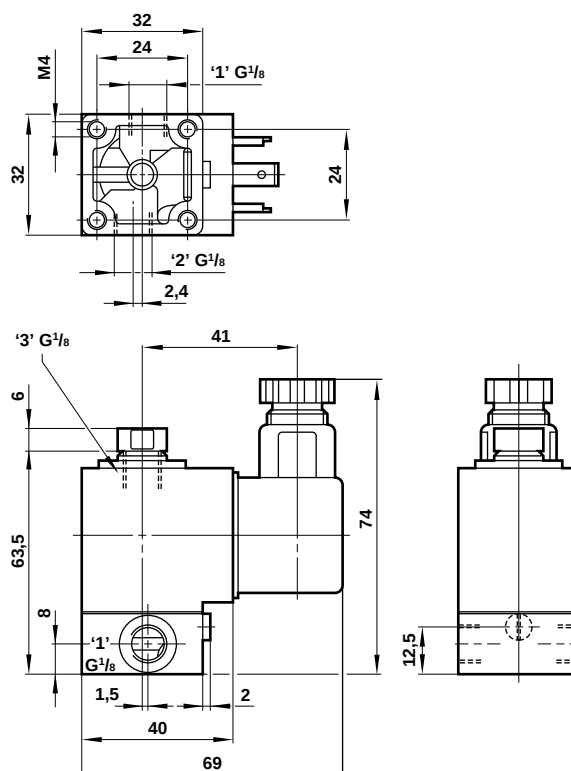
* Not available on G¹/₄

Note: This table should be used for identification purposes only and not to build up model variants.

V03X, V04X and V05X Models Interface Mounted Valves

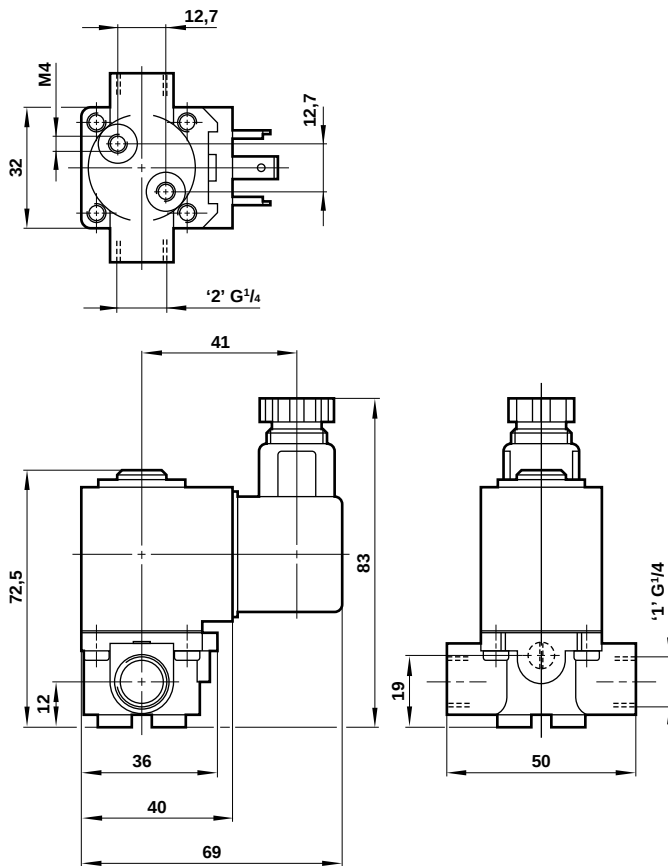


V03A, V04A and V05A Models G¹/₈ Valves

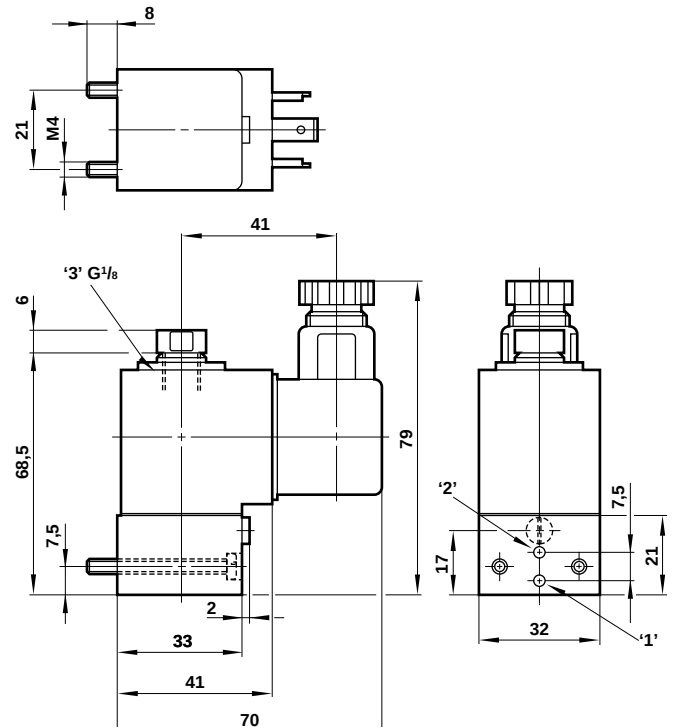




V03B, V04B and V05B Models G $\frac{1}{4}$ Valves



V03Y, V04Y and V05Y Models CNOMO Mounted Valves



Fixed Length Manifold

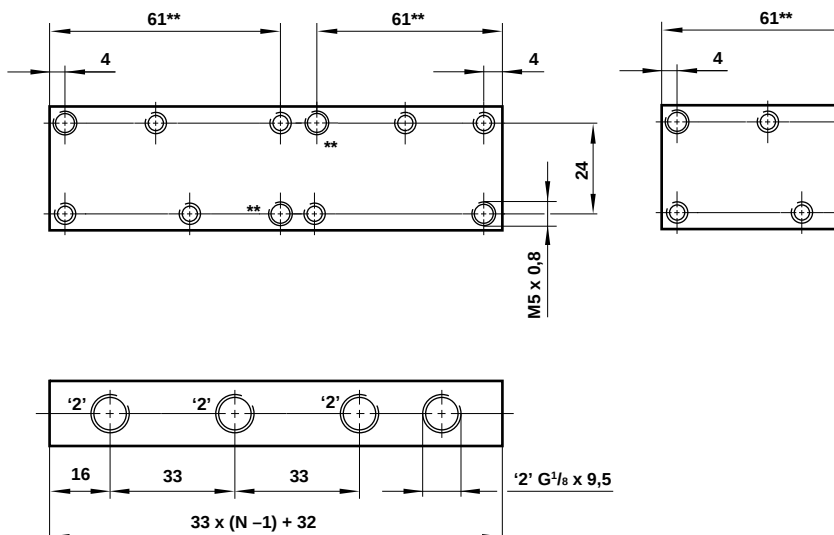
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Weight = $N \times 0,041 \text{ Kg}$

G $\frac{1}{8}$

N = Number of stations

* indicates the number of stations (1 – 20)

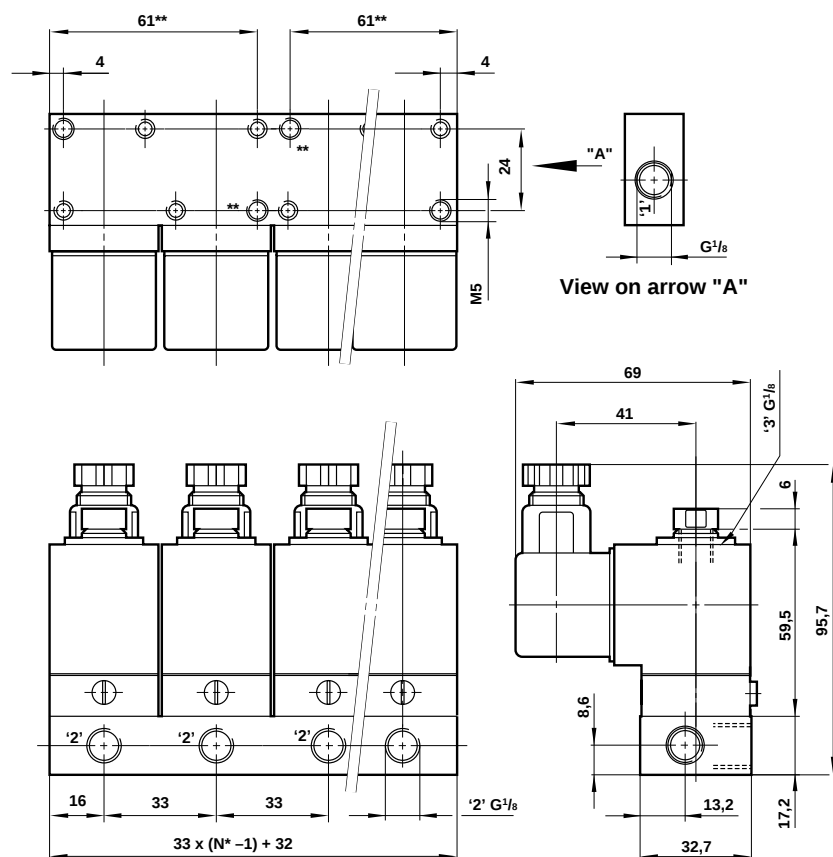


N = Number of stations

**Two additional holes with five or more stations



Manifold/Valve Assemblies



Interface mounted valves can be supplied pre-assembled on manifolds.

Select the basic valve required and quote the associated manifold/valve assembly model using the table below.

	Basic Valve Model	Manifold/Valve Assembly Model
V03	V03X286J-B613A	V03X286J-H613A#
	V03X486J-B613A	V03X486J-H613A#
	V03X486K-B613A	V03X486K-H613A#
V04	V04X286K-B62*A	V04X286K-H62*A#
	V04X286L-B62*A	V04X286L-H62*A#
	V04X286M-B62*A	V04X286M-H62*A#
	V04X486J-B62*A	V04X486J-H62*A#
	V04X486K-B62*A	V04X486K-H62*A#
	V04X486L-B62*A	V04X486L-H62*A#
V05	V05X286M-B61*A	V05X286M-H63*A#
	V05X486K-B61*A	V05X486K-H63*A#
	V05X486L-B61*A	V05X486L-H63*A#

Insert number of stations (1 - 20 stations)

1 = 1 station

2 = 2 station

A = 10 station

B = 11 station

K = 19 Station

L = 20 station

* Insert Voltage Code from page 5.4.042.03

Options and Accessories

Light Emitting Gaskets

Voltage Range	Model Number	Power consumption
12 – 24 V a.c./d.c.	M/P40861	0,25 W
110 – 120 V a.c./d.c.	M/P40880	0,25 W
220 – 240 V a.c./d.c.	M/P40862	0,25 W