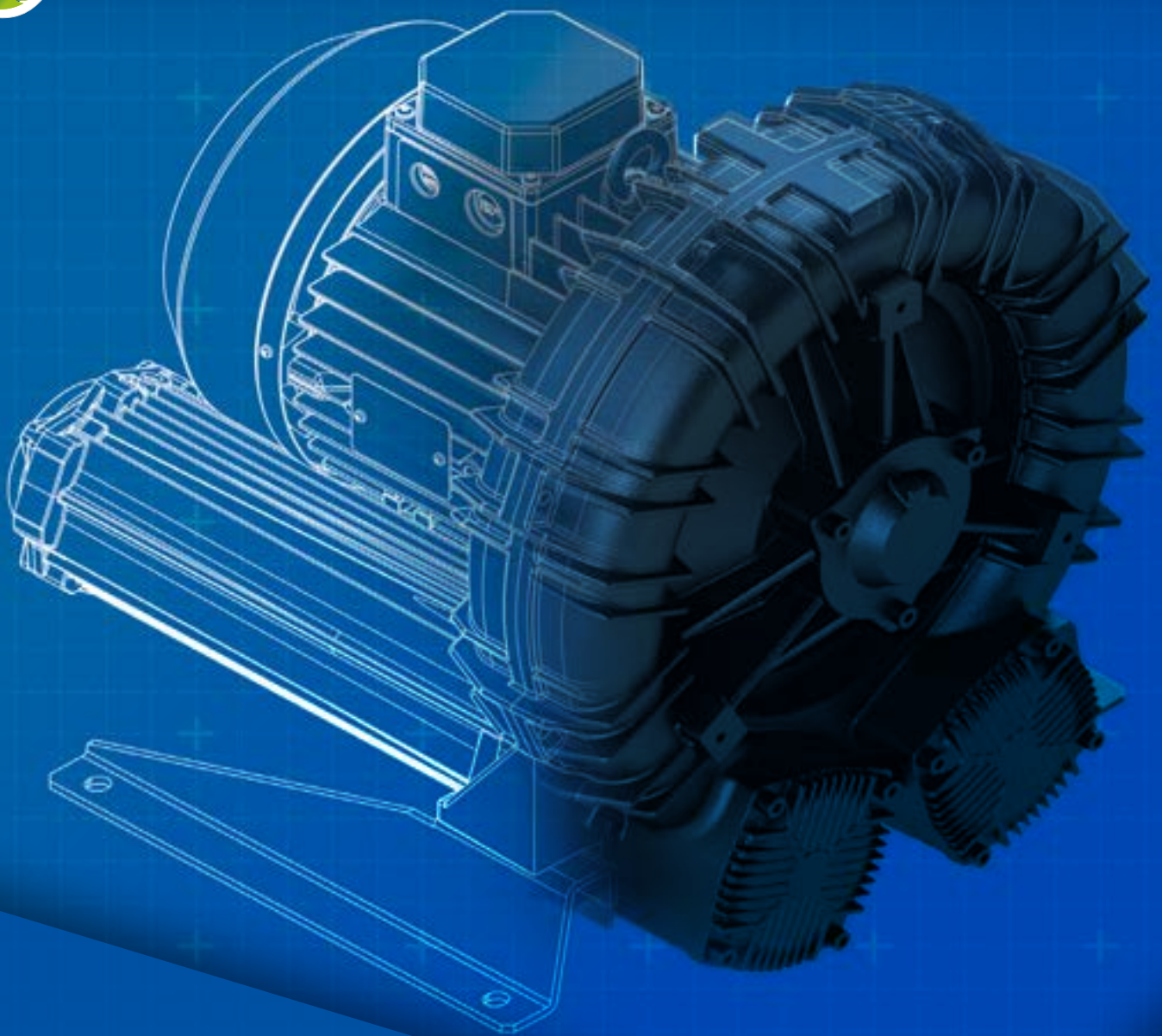
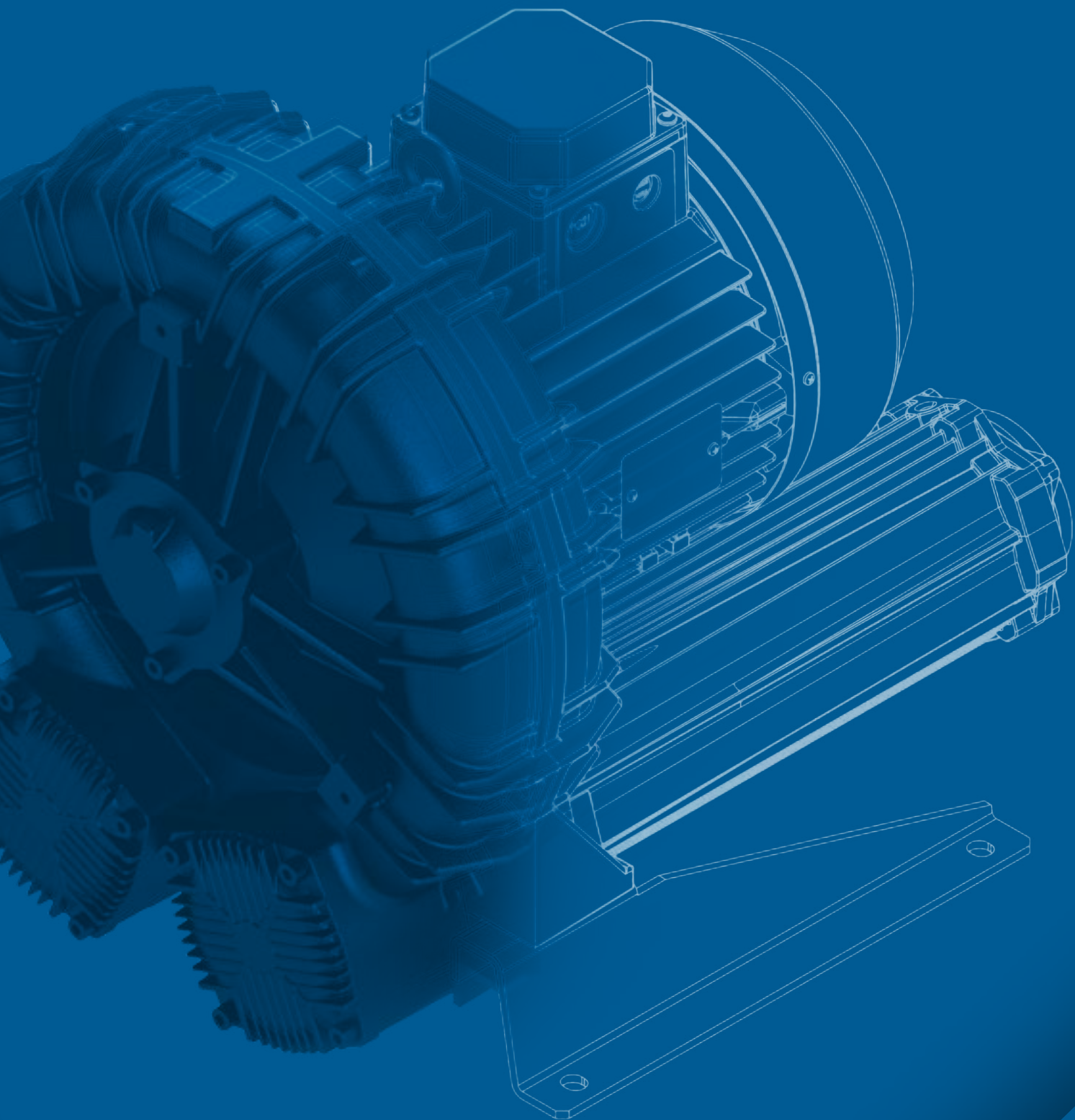


Your partner in Blower Technology

Data sheet





The Company

FPZ is an Italian multinational company that manufactures **Side Channel Blowers** to move air, technical gases, methane and biogas in compression and aspiration systems.

The company operates on the international market with 8 subsidiaries around the world and a global network of agents and distributors in more than 70 countries. FPZ's mission is to offer a wide range of blowers and accessories that can be used in several industrial sectors and to ensure excellent standards of reliability and on-time deliveries.

The two key concepts at FPZ are customer service and customisation of products. The company combines a before and after-sales service that is customer-centred and a flexible manufacturing process that meets the needs of the different markets. The goal of FPZ is to develop and guarantee technically advanced machines by applying the lean manufacturing method, which ensures defect-free, top-quality products and punctual services.



Flow REVERSING VALVE

VI-6

Technical data

Characteristics

- Aluminium alloy construction
- Rotating manifold controlled by stepper motor
- Featuring three different manifold positions



TECHNICAL INFORMATION

The flow reversing valve VI is used as an accessory for side channel blowers to switch the flow from pressure to negative pressure and vice versa.

The flow reversing valve is:

- Designed and constructed in accordance with Machinery Directive 2006/42/EC
- Made of aluminium alloy.
- Suitable for conveying air and non-explosive, non-flammable, non-aggressive gases in a nonexplosive atmosphere, in continuous service.
- It can be installed on SCL K04-MS / MS-K05 / K06-MS **only in vertical execution**.

The flow reversing valve (A):

- Can be fitted on the blower, only in vertical execution, by means of adapter for K04 (B) – K05 K06 (C).
- The connection to the main line is via flange with GAS thread, NPT or by hose union.
- Made entirely of aluminium alloy, it has a pair of bearings for the alignment and support of the manifold, which is free to rotate without any contact with the containing body.
- The valve is controlled by an Nema 23 stepper motor (protection class IP55) powered by 24VDC via a 3m long cable supplied. The motor connection has IP67 protection.
- The electric motor is set in such a way that the manifold curve assumes only the positions - 67.5°, 0°, +67.5°. The overall angle of rotation of the manifold curve is 135°. The motor pre-setting allows the manifold curve to rotate in the three positions described below.

A



B

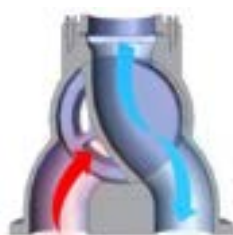


C



SIDE VIEW OF ELECTRIC MOTOR

System in suction
Pos. -67.5°



Neutral phase
Pos. 0°



System in pressure
Pos. +67.5°



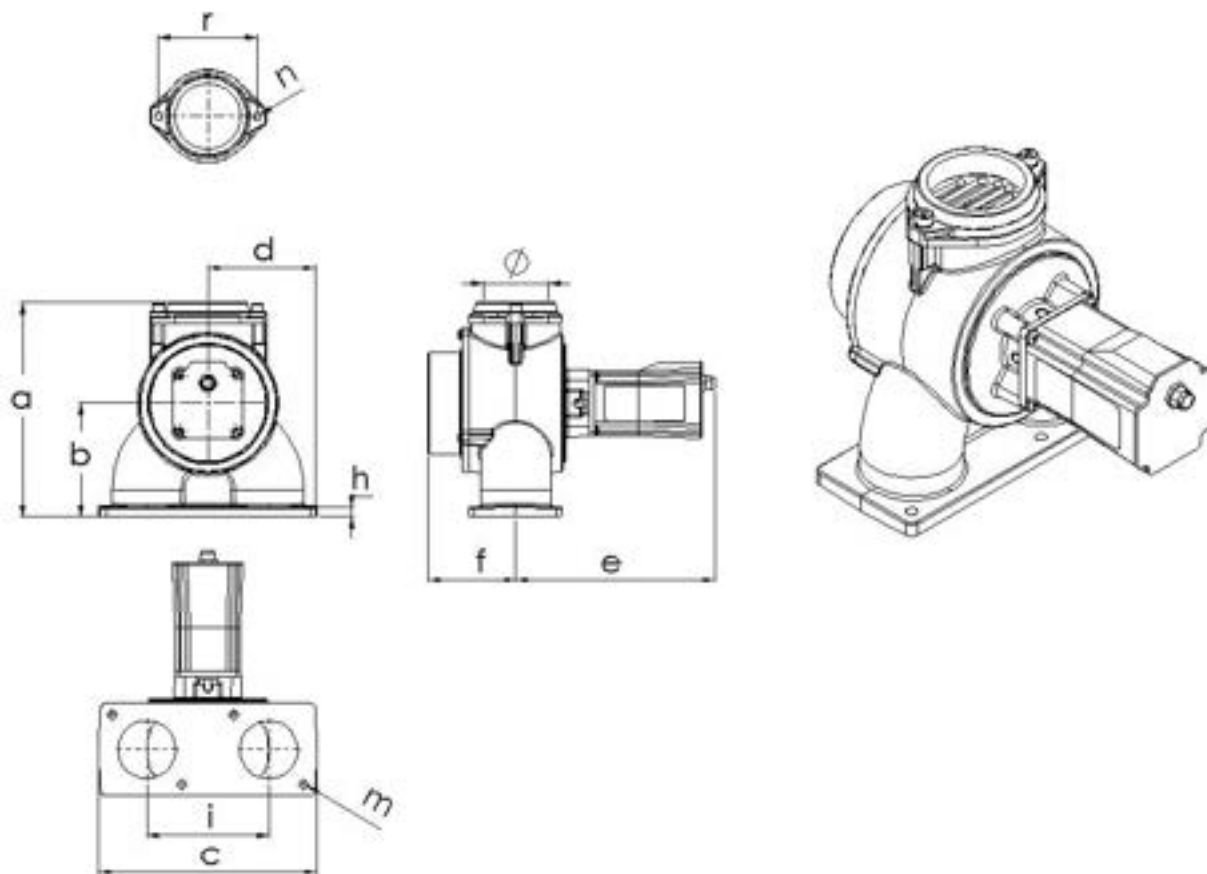
Flow reversing valve specifications

Maximum cycle time from -67.5° to +67.5°	0.35 Sec.
Maximum cycle time from 0° to +67.5°	0.2 Sec.
Maximum cycle time from -67.5° to 0°	0.2 Sec.
Temperature of sucked fluid (air)	-15°C / +40°C
Reference density of fluid	1.20 kg/m ³
Ambient temperature range	-15°C / +40°C

Electric motor specifications

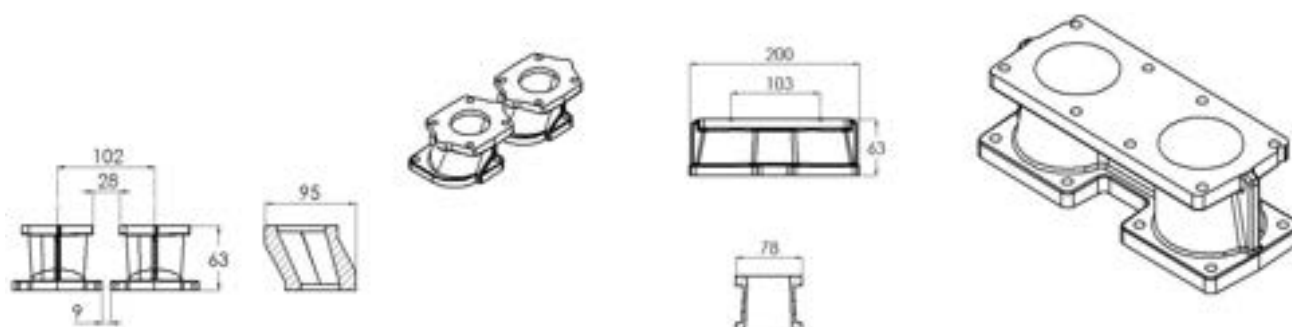
Holding torque	1.2 Nm
Resolution	1600 counts per rev.
Supply voltage	24VDC
no. rev.	0-600 RPM
rated power	74W
rotor inertia	0.3 kg cm
weight	0.9 kg
Protection class	IP55

Dimensions - flow reversing valve VI6



Mod	a	b	c	d	e	f
VI-6	184	98	188	94	175	78

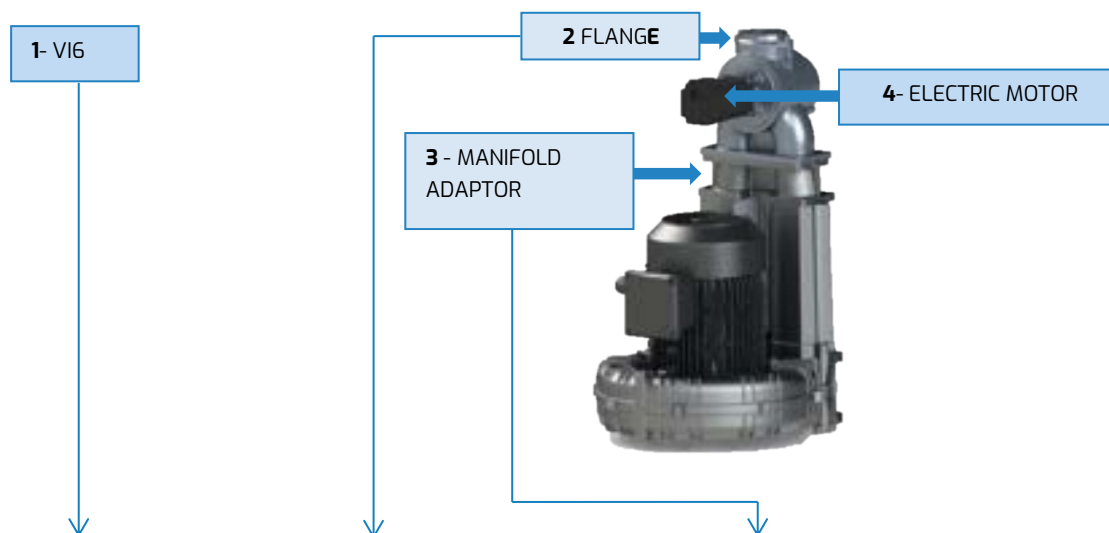
Mod	h	i	m	n	r	Ø
VI-6	10	105	7	10	85	2" - 1½"



Adapter for SCL K04

Adapter for SCL K05 – K06

Key for article codes



	SIZE	FLANGE CONNECTION	ADAPTER CONNECTION	EXECUTION
SCL K04-MS	DN 1 1/2"	WITHOUT FLANGE	n° 2 1035K0470001	A
		n° 1 FLANGE GAS 1 1/2"	n° 2 1035K0470001	B
		n° 1 FLANGE NPT 1 1/2"	n° 2 1035K0470001	C
		n° 1 HOSE UNION 1 1/2"	n° 2 1035K0470001	D
SCL K05-MS K06-MS	DN 2"	WITHOUT FLANGE	n°1 151306201001	E
		n° 1 FLANGE GAS 2"	n°1 151306201001	F
		n°1 FLANGE NPT 2"	n°1 151306201001	G
		n° 1 HOSE UNION 2"	n°1 151306201001	H

Example of choice, code flow reversing valve VI6 for SCL K04, flange GAS 1 1/2" electric motor 24VDC

VI6B50+0001

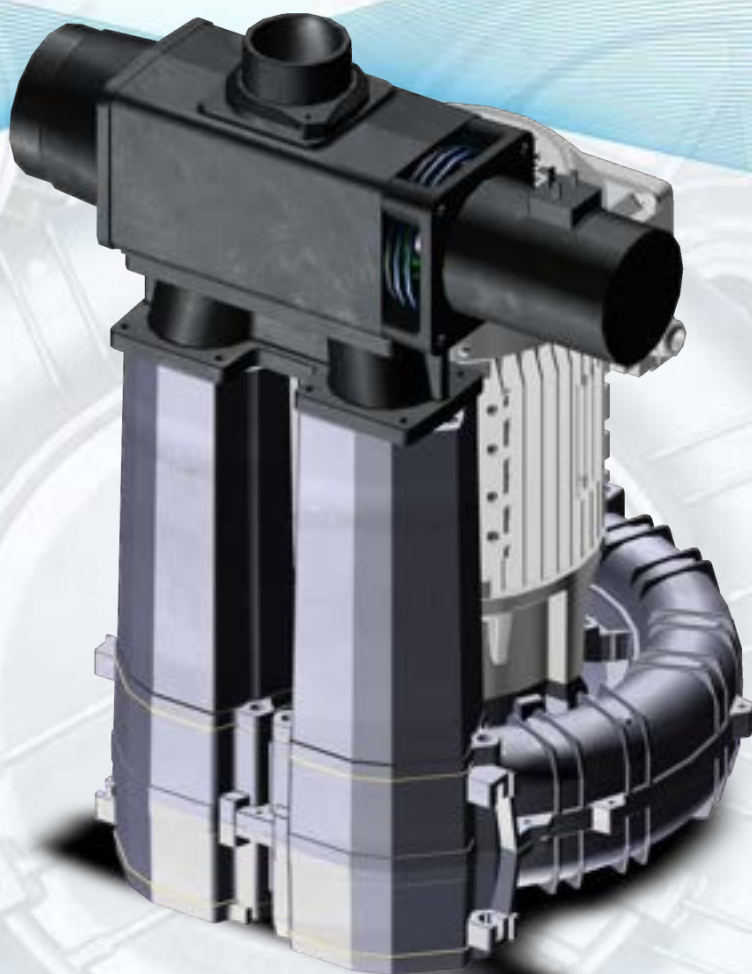
VI6	B	50 ¹	+	0001
VALVE	EXECUTION	LEVEL OF FINISH		PROGRESSIVE NUMBER

¹ Reference to VI-6 valve not painted

FLOW REVERSING VALVE

CHARACTERISTICS

- Manufactured in aluminum alloy
- Sliding switch
- Magnetic or pneumatic operation



FLOW REVERSING VALVE VS

The VS Flow Reversing Valve is used as an accessory for lateral channel blowers to change the flow over from pressure to vacuum and vice versa or change the channel from/to which the flow is directed.

The device operates by means of a sliding switch.

It has two different switch positions which make the device particularly versatile for various uses such as:

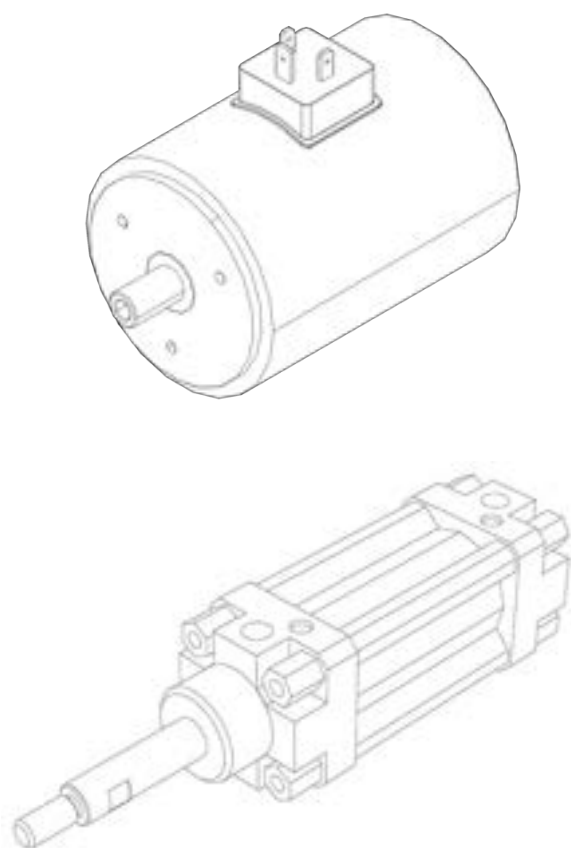
- Reversing flow from pressure to vacuum mode
- Channel changeover

TECHNICAL INFORMATION

The VS Flow Reversing valve is available with electrical control, or pneumatic control.

Entirely manufactured in aluminium alloy, it is not subject to contact and/or interference between the switch and the valve body

The "VS" valve comes in five versions with the option of a flanged GAS/NPT/hose fitting connection. (Refer to the page of codes to choose the versions and flange models).



ACTUATOR		
Electrical Actuator		
Thruster electromagnet		
ED insertion ratio	60% of the cycle time	
Maximum cycle time	5 min.	
Power	54W	56W
Standard power voltage	24Vcc	110-220 Vca
Operating temperature	-5°C - +40°C	
Pneumatic actuator		
Pneumatic thruster piston	Double effect	
Maximum pressure	10 Bar	
Air consumption	0.02 liter / cycle	
Operating temperature	-5°C - +70°C	

The drive system is dimensioned for continuous service and operates at : Switch movement 0.10 sec.

Conformity

The Flow Reversing valve conforms to:

- the Machinery Directive for which it is considered as a partly completed machine

FLOW REVERSING VALVE VS

ITEM CODIFICATION

VS

*

*

*

1 2 3 4 5

**

VALVE SIZE

6	DN 1 1/2" - 2"
8	DN 3

CONNECTIONS 1 - 4 - 5

NONE		
D	/	/
GAS THREADED FLANGE		
A	G 1 1/2"	1019402300004
B	G 2"	1019502000004
C	G 3"	1020702000004
NPT THREADED FLANGE		
T	NPT 1 1/2"	1019405300004
U	NPT 2"	1019505000004
V	NPT 3"	1020705000004
HOSE		
F	1 1/2"	1021402300004
H	2"	1021502000004
K	3"	1022702000001

SPECIAL VERSION

	STANDARD
A	WITHOUT SEAL RING

CONNECTIONS 2-3

VS6	VS8	SCL	MANIFOLD/ADAPTOR	Q.TY
ZI	-	K04-M5/TS	1035K0470001	2
ZL	-	K05-M5	151306201001	1
	-	K06-M5		
	-	K05-66		
ZE	-	K/e 07-M5	1513K0750001	1
ZJ	-	K/e 07R-MD	1513K0760001	1
	-	K/e 08R-MD		
-	ZM	K05-TS	1513K0710001	1
-	ZD	K06-TS	1513K0701001	1
		K/e 07-M5		
		K/e 08-M5		
-	ZC	K06-TS	1513K0900001	1
		K/e 08-TS		
		K09-M5/MD		
		K10-M5/MD		
-	ZG	K/e 11-M5/MD	1513K1100001	1
		K12-M5/MD		

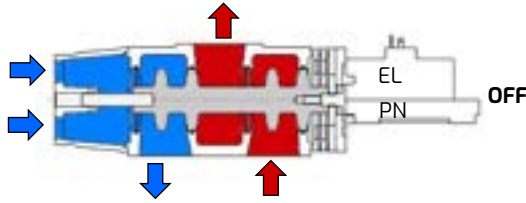
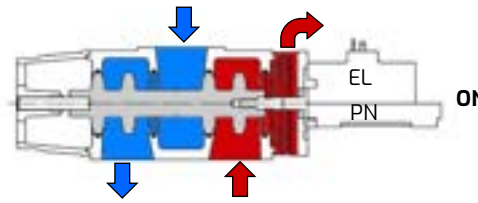
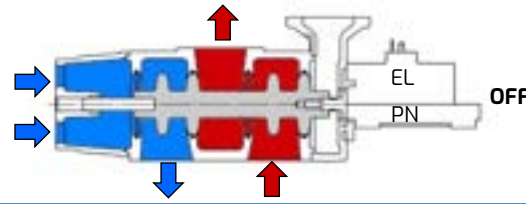
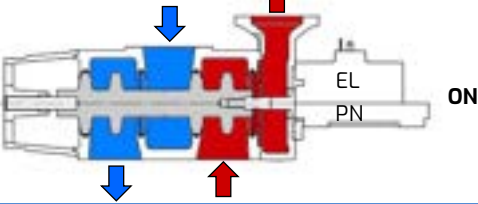
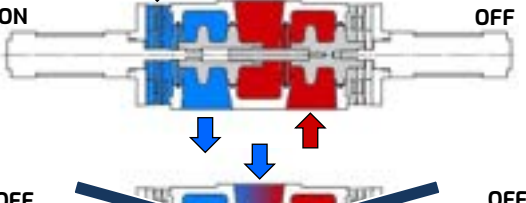
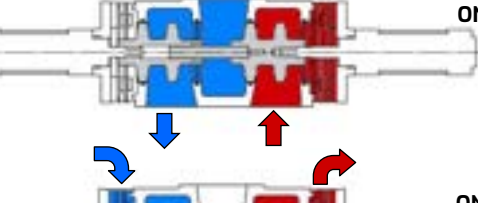
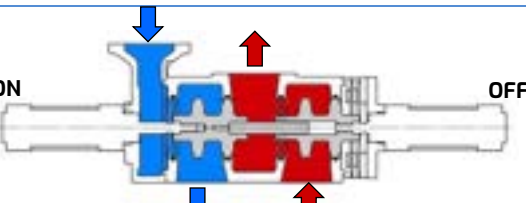
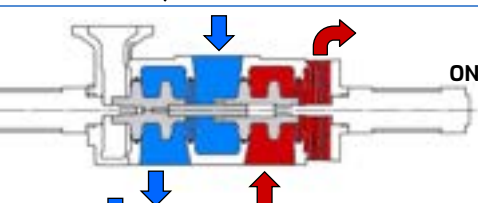
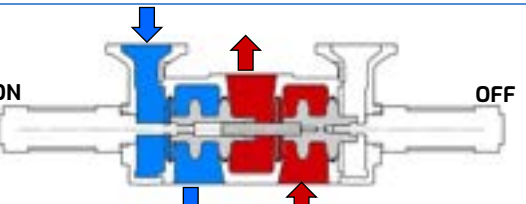
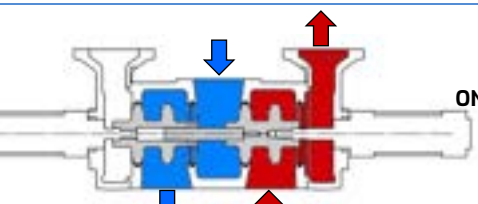
DRIVE

ELECTRICAL	
EA	24 CC
ED	110 CA
EF	220 CA
PNEUMATIC	
P2	Double effect

EXECUTION

SEE TABLE BELOW

FLOW REVERSING VALVE VS

EXECUTION	
	EXECUTION O
	ON
	EXECUTION P
	ON
	EXECUTION Y
	
	EXECUTION H
	
	EXECUTION K
	

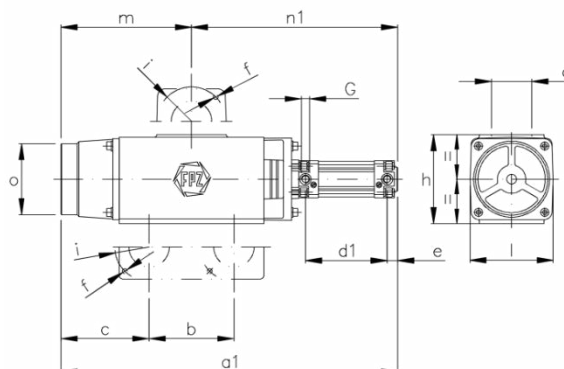
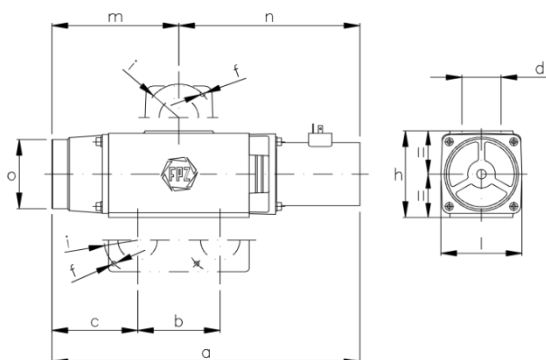
FLOW REVERSING VALVE VS

DIMENSIONS (O/P)

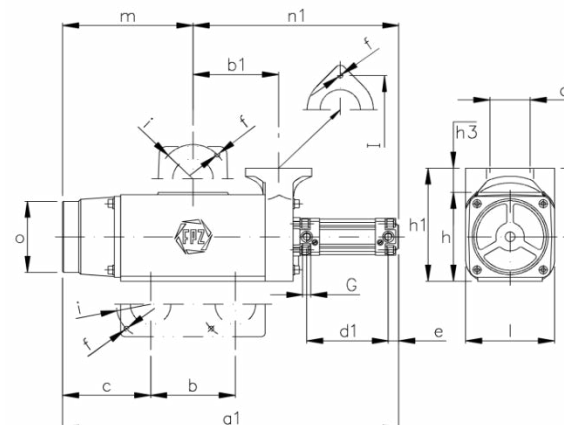
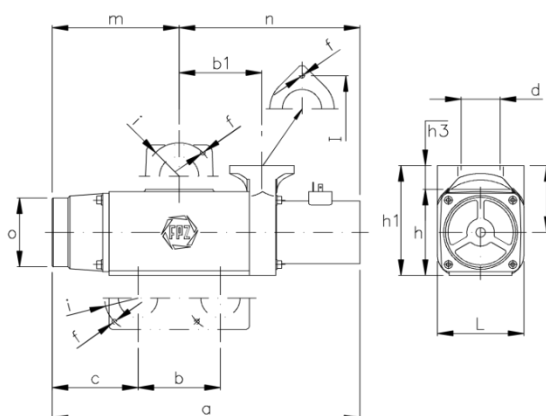
Overall dimensions with electric actuator

Overall dimensions with pneumatic drive

VERSION O



VERSION P

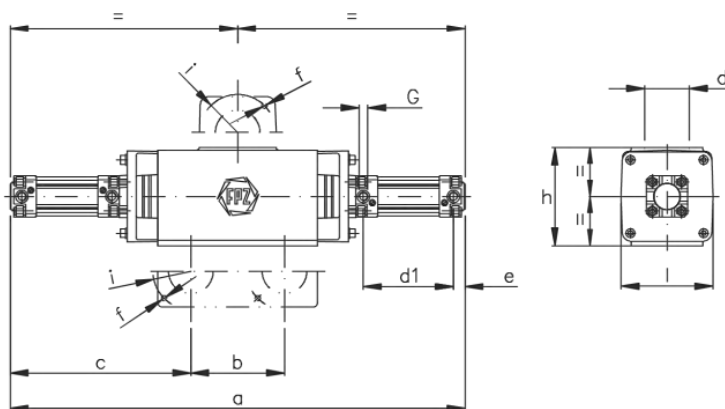


Mo d	a	a1	b	b1	c	d	d1	e	f	G	H	h1	h2	h3	i	l	m	n	n1	o
VS-6	392	417	105	106	109	101	50	13	2xM6	1/8"	110	140	85	30	85	110	162	230	255	88
VS-8	485	510	152	165	134	101	80	13	4xM6	1/8"	160	225	145	65	120	150	210	275	300	110

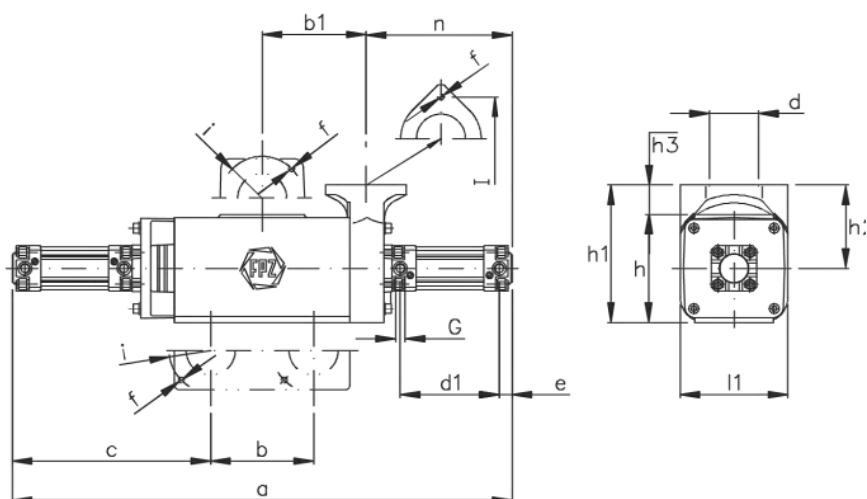
DIMENSIONS (Y/H/K)

Overall dimensions with pneumatic drive

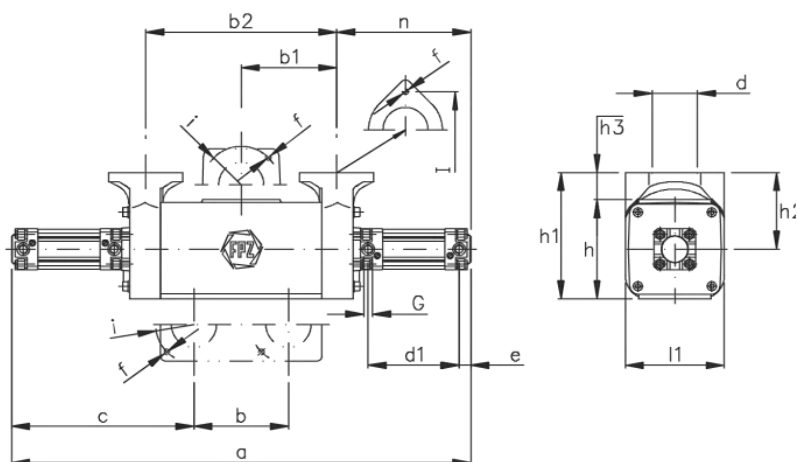
VERSION Y



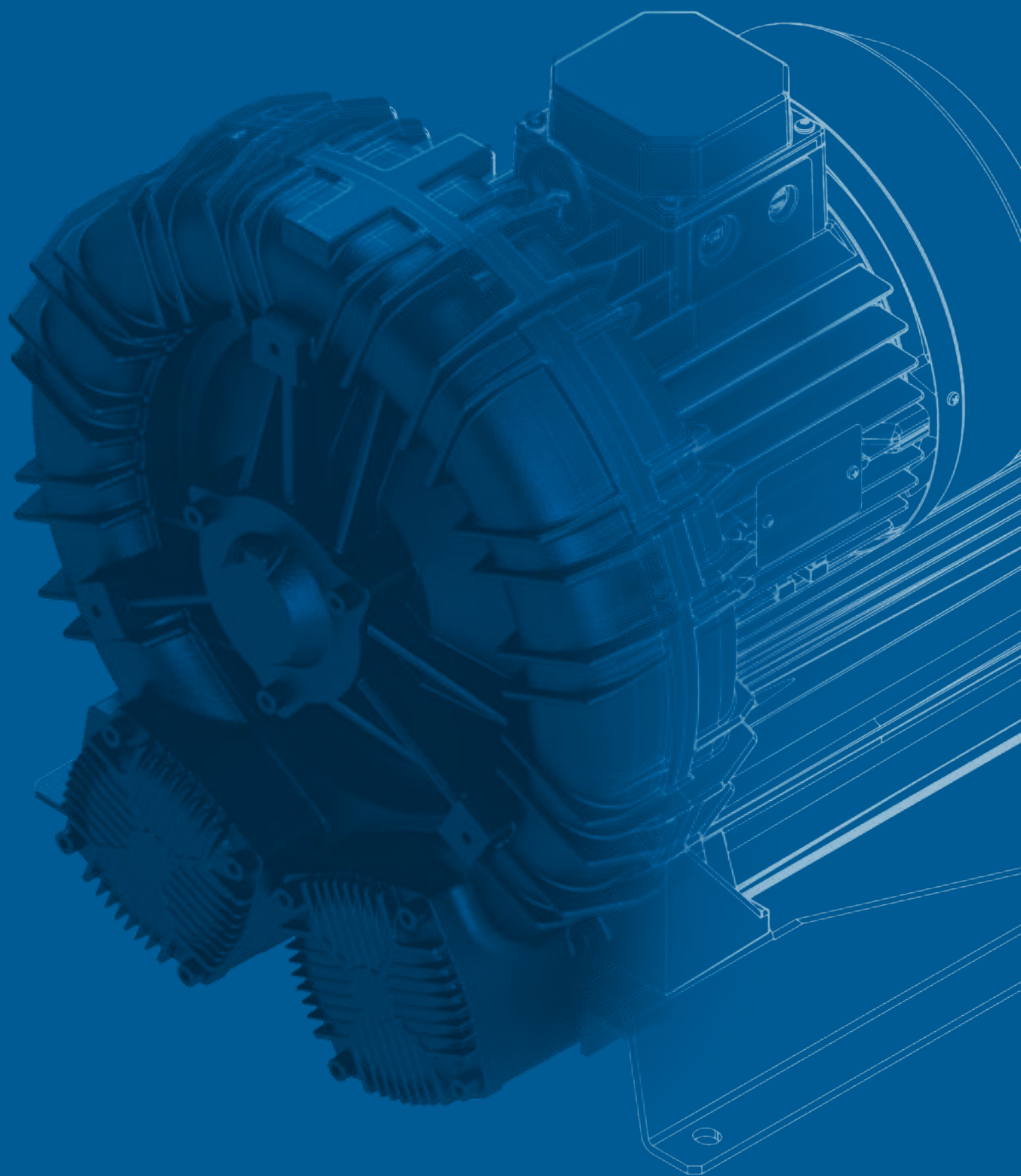
VERSION H



VERSION K



Mod	CONTROL	a	b	b1	B2	c	d	d1	e	f	G	h	h1	h2	h3	i	l	L1	n
V5-6	PNEUMATIC	510	10 5	106	212	203	50	101	13	2xM6	1/8"	110	140	85	30	85	100	110	149
V5-8	PNEUMATIC	600	152	165	330	224	80	101	13	4xM6	1/8"	160	225	145	65	120	150	150	135



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