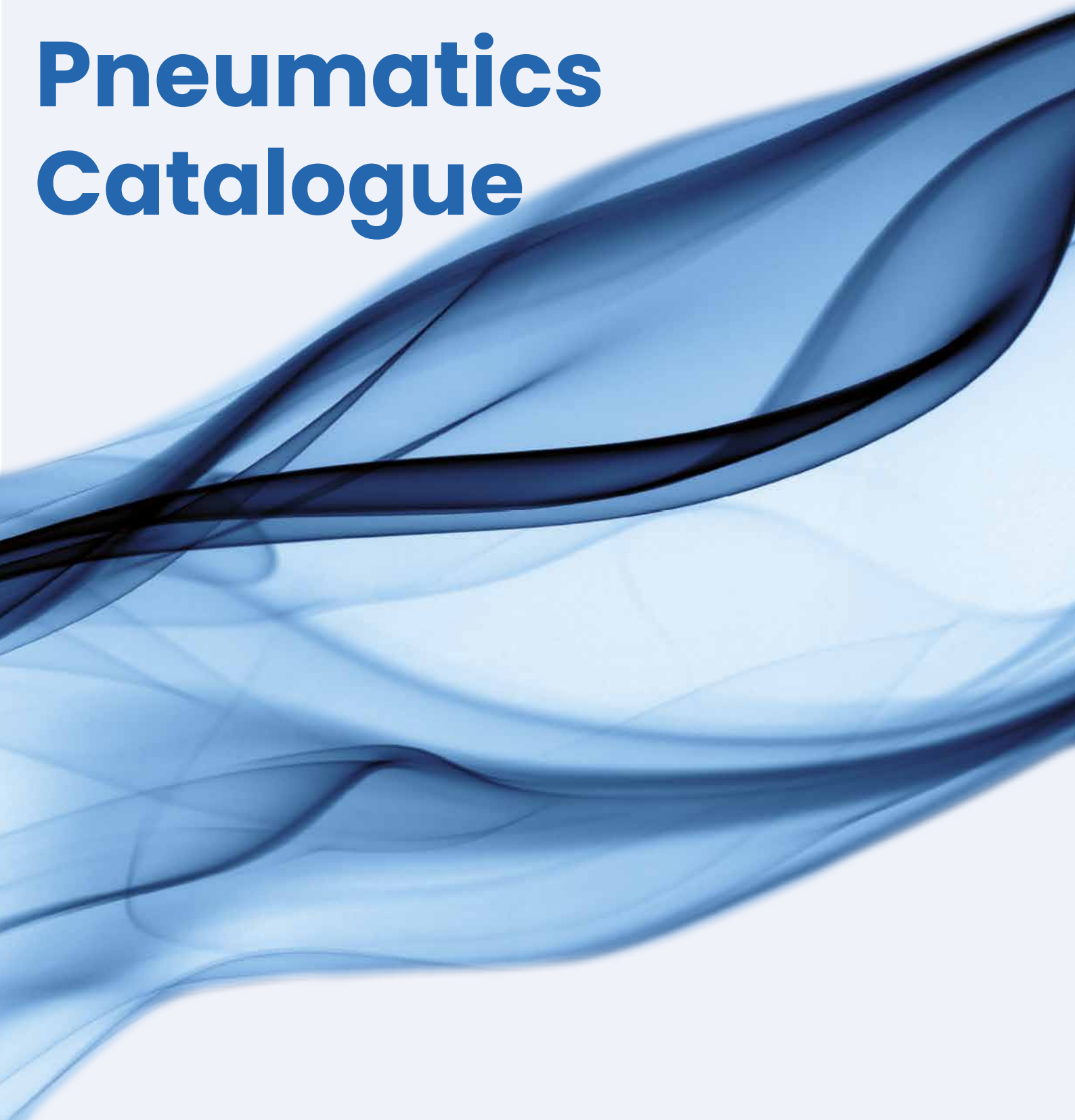
PIONEEKA

Engineering & Manufacturing Group

Pneumatics Catalogue



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About Us

In the dynamic world of industrial equipments, Pioneeka stands at the forefront, shaping the landscape with its diverse range of pneumatic products. From robust cylinders that conquer demanding tasks to agile airmotors that deliver stable motion, pneumatics have become the lifeblood of countless industries.

But what exactly makes pneumatics so indispensable? The answer lies in their inherent simplicity, reliability, and adaptability. Compressed air, a readily available and clean energy source, powers these solutions, eliminating the complexities of electrical systems and minimizing the risk of sparks or contamination. This makes them ideal for harsh environments, from dusty factories to volatile chemical plants.

Beyond their inherent advantages, Pioneeka›s pneumatic products are meticulously crafted to deliver exceptional performance and efficiency. Our cylinders boast precision engineering for smooth operation and extended lifespans, while our airmotors offer unmatched flexibility and power for even the most intricate applications. And for seamless orchestration, our valves provide the perfect balance between precision and flow, ensuring optimal system performance.

From the fiery crucible of aluminum production to the colossal dance of steel mills, Pioneeka›s pneumatic solutions empower you to push the boundaries of possibility. With their inherent advantages and our unwavering commitment to quality, Pioneka pneumatics are the reliable partners you can trust to drive your production.

AIR MOTOR

Pneumatic Motion

Air motors use compressed air to generate mechanical power. One widely used type is the vane motor, commonly found in industry. The rotor in this type is positioned eccentrically with the stator, and it has radially installed vanes. When compressed air is introduced, it enters the motor and hits the blades, resulting in rotation of the motor.

Airmotors have numerous advantages that make them ideal for specific applications.

- Smaller and lighter compare to electric motor with the same output
- Not damaged by numerous and consecutive start and stops
- Never overheats
- Overloading or stall doesn't cause damage to airmotors.
- Easy, Fast, Cheap Overhaul procedure

Type A
Air Motor

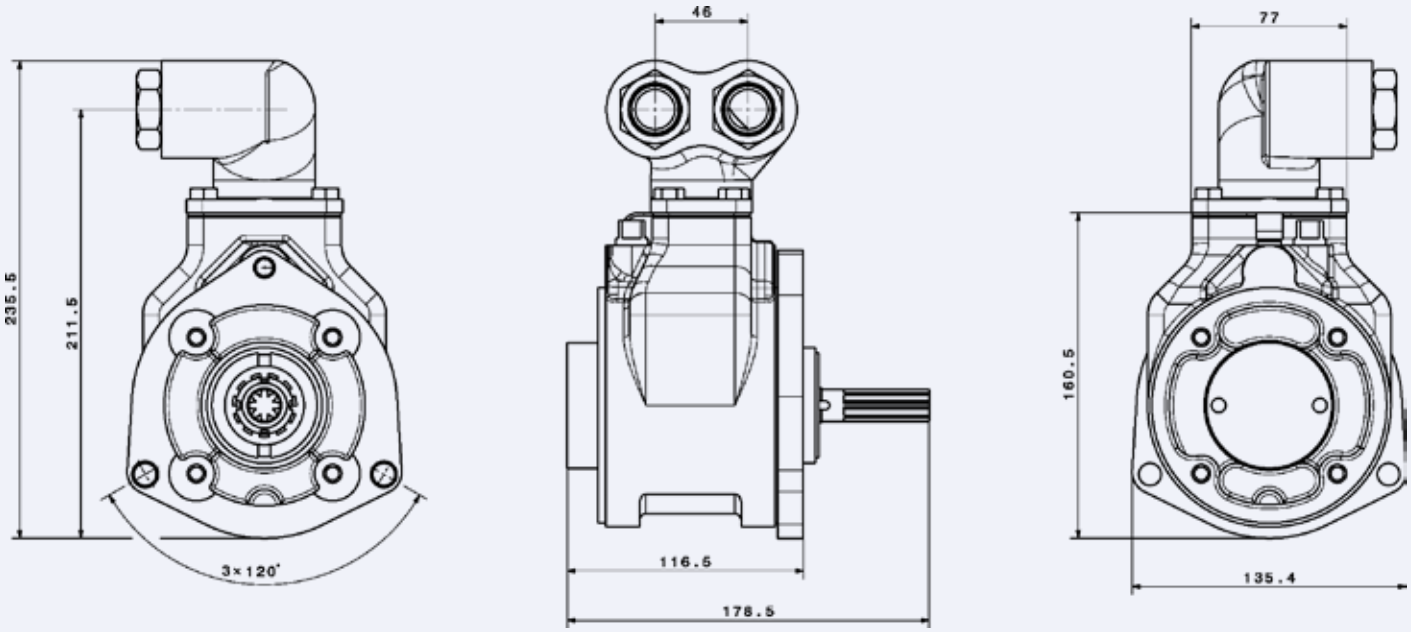
Type A Air Motor

This airmotor has some very interesting features: Direct lubrication port, Easy Repair and adjustment thanks to the use of Specific Material and Design. And Air jet ejection mechanism for blades, which allows the motor to have good starting torque.

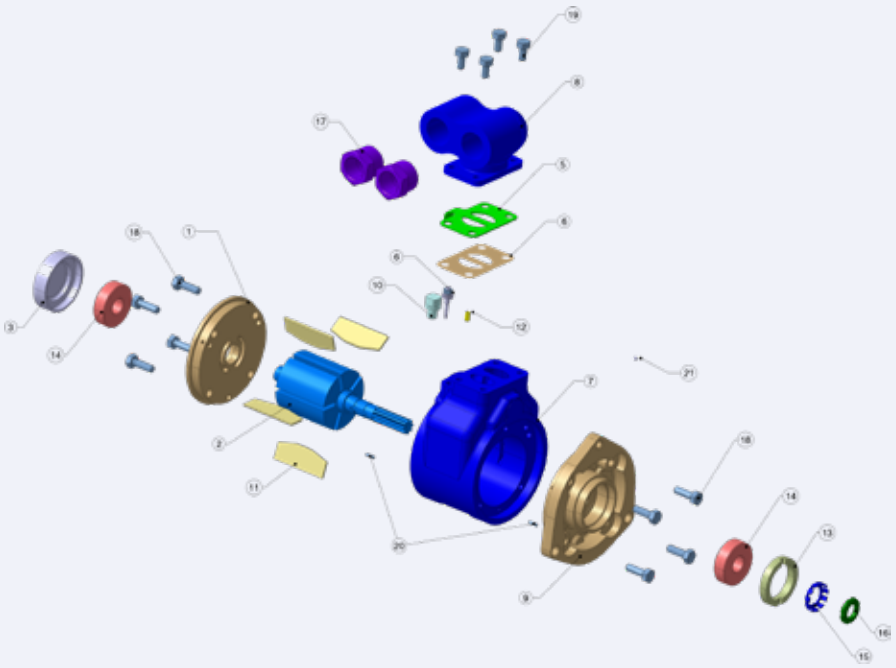
Technical Specifications

- Maximum Speed(Rpm): **4000**
- Maximum Start Torque (Nm): **8**
- Air Flow Rate (L/S): **50**
- Maximum Power (Kw): **2.2**
- Operating Torque at 7 Bar Pressure and Maximum Speed (Nm): **5**

Main Dimensions

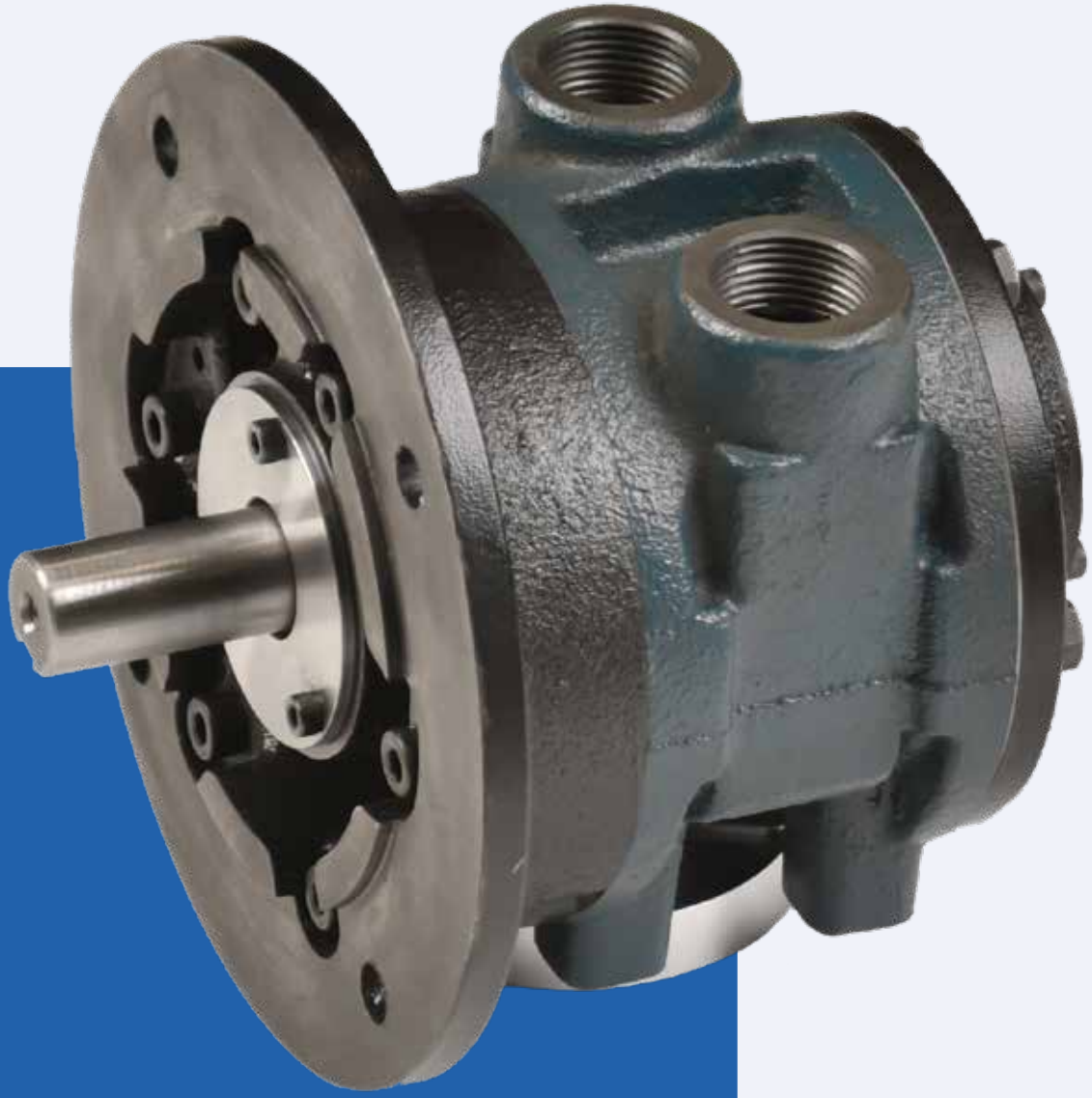


Exploded View With Spare Parts List



Item No.	Definition	Quantity	Material
1	Upper End Plate	1	G-CuSn10Zn(Din 1705)
2	Rotor	1	18 CrNi8
3	Bearing Clamp Nut	1	St 37
4	Needle Valve	1	Mo 40
5	R.Plate	1	St 37
6	✱ Gasket	1	Gasket Material
7	Liner Hosing	1	GGG 40
8	R.C. Plug1	1	GGG 40
9	Mounting Flange	1	G-CuSn10Zn(Din 1705)
10	Oil Plug	1	St 37
11	✱ Blade	5	Firbered Risen
12	Screw M5x10	1	Standard
13	Bearing Locknut	1	Mo 40
14	Bearing 63032	2	Standard
15	Locker	1	St 37
16	Locker Nut	1	Standard
17	Conversion	2	St 37
18	1Bolt M8x25	8	Standard
19	Bolt M8x15	4	Standard
20	PIN D3x10	2	Standard
21	Ball Ø4	4	Standard

✱ Included In The Repair Kit



Type B
Air Motor

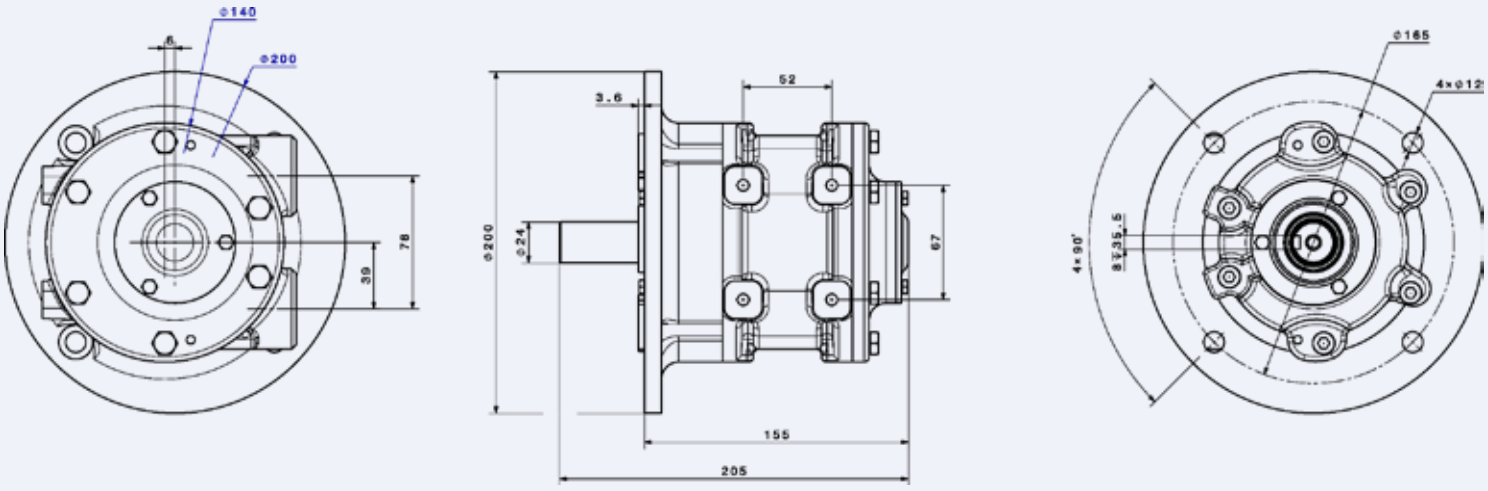
Type B Air Motor

Special Designg makes this motor have high starting torque and not stall easily. It has the highest power among the air motors produced by Pioneeka. This motor can be installed in two positions: from the bottom and from the front flange which gives a lot of flexibility.

Technical Specifications

- Maximum Speed(Rpm): **3000**
- Maximum Start Torque (Nm): **32**
- Air Flow Rate (L/S): **120**
- Maximum Power (Kw): **5.5**
- Operating Torque at 7 Bar Pressure and Maximum Speed (Nm): **17**

Main Dimensions



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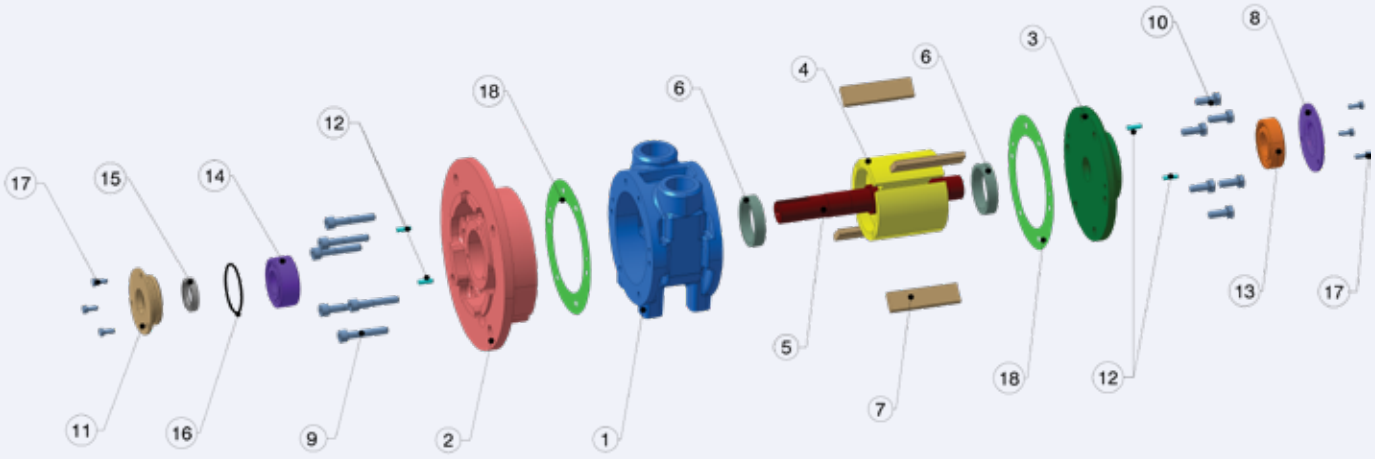


Item No.	Definition	Quantity	Material
1	Body	1	GG 25
2	Front Plate	1	GG 25
3	End Plate	1	GG 25
4	Rotor	1	GG 25
5	Shaft	1	1.0764
6	Ejection Ring	2	1.0715
7	✱ Blade	4	Fiber glass
8	Cover Plate	1	St 37
9	Cap Screw M8x45	6	Standard
10	Head Screw M8x20	6	Standard
11	Seal Housing	1	1.0718
12	Dowel Pin	4	Standard
13	✱ Bearing 6205	1	Standard
14	✱ Bearing 3205	1	Standard
15	✱ Seal	1	Standard
16	✱ O Ring	1	Standard
17	Head Screw M5x12	6	Standard
19	Plastic shim	2	Polyester

✱ Included In The Repair Kit

Type C
Air Motor

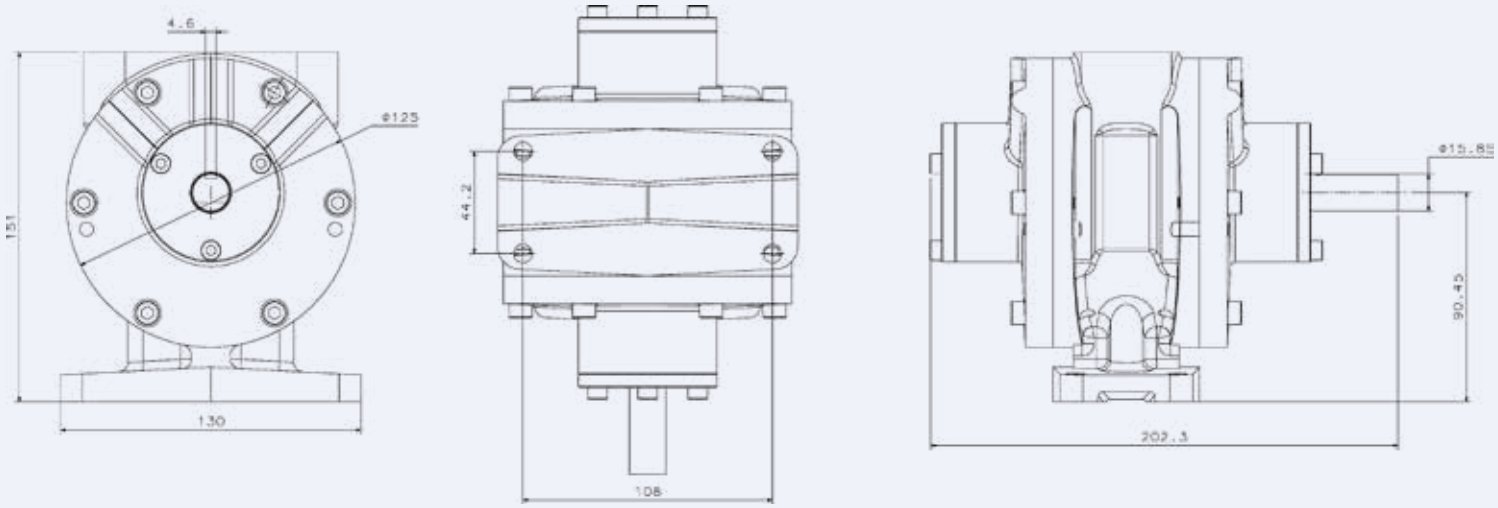
Type C Air Motor

Its compact and robust design embodies exceptional durability, allowing for long-lasting operation even in challenging environments. Minimalistic components translate to effortless maintenance and repairs, minimizing downtime and keeping costs low.

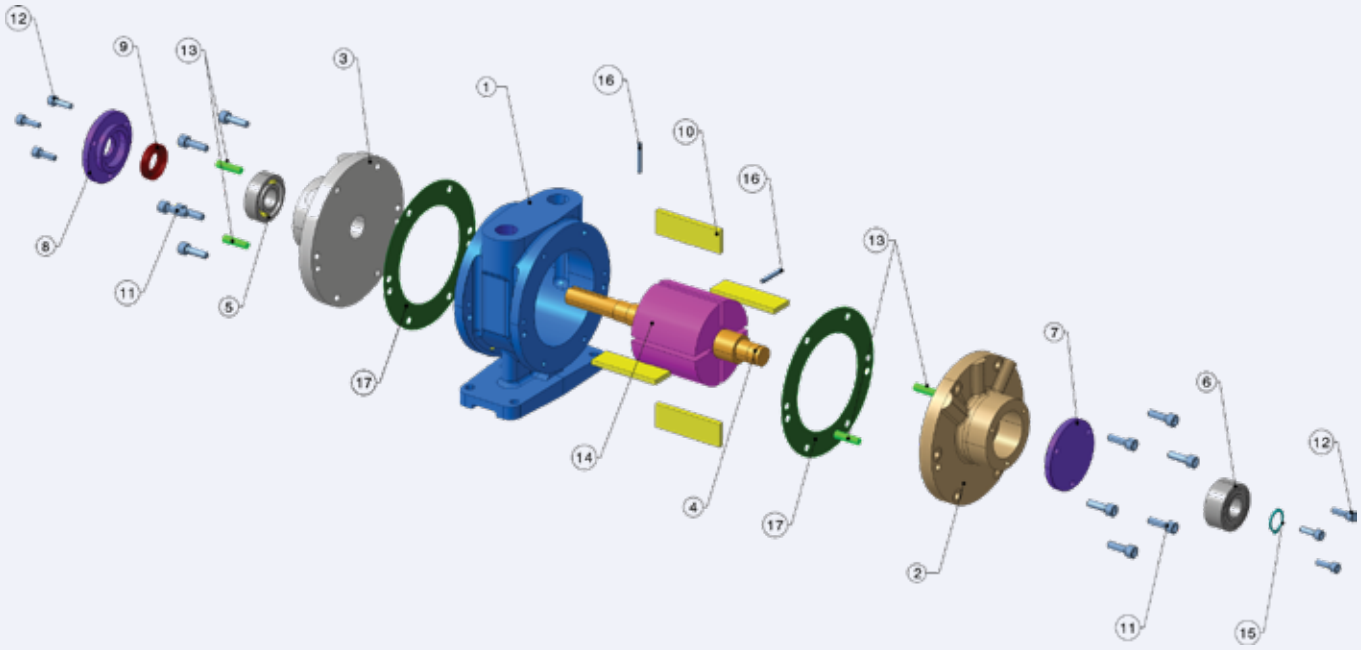
Technical Specifications

- Maximum Speed(Rpm): **3000**
- Maximum Start Torque (Nm): **8**
- Air Flow Rate (L/S): **60**
- Maximum Power (Kw): **3**
- Operating Torque at 7 Bar Pressure and Maximum Speed (Nm): **10**

Main Dimensions



Exploded View With Spare Parts List



Item No.	Definition	Quantity	Material
1	Body	1	ASTM A-48CL35
2	Cap 1	1	ASTM A-48CL35
3	Cap 2	1	ASTM A-48CL35
4	Rotor Shaft	1	ASTM A-48CL35
5	✱ Bearing 6203	1	Standard
6	✱ Bearing 3203	1	Standard
7	Bearing Cover	1	ASTM A-48CL35
8	Seal Housing	1	ASTM A-48CL35
9	Seal	1	Standard
10	✱ Blade	4	Fiberglass
11	Bolt M20×6	12	Standard
12	Bolt M16×5	6	Standard
13	Pin Ø25×6	4	Standard
14	Rotor	1	ASTM A-48CL35
15	Retaining Ring For Shaft	1	Standard
16	Spring pin	2	Standard
17	✱ Plastic Shim	2	Polyester

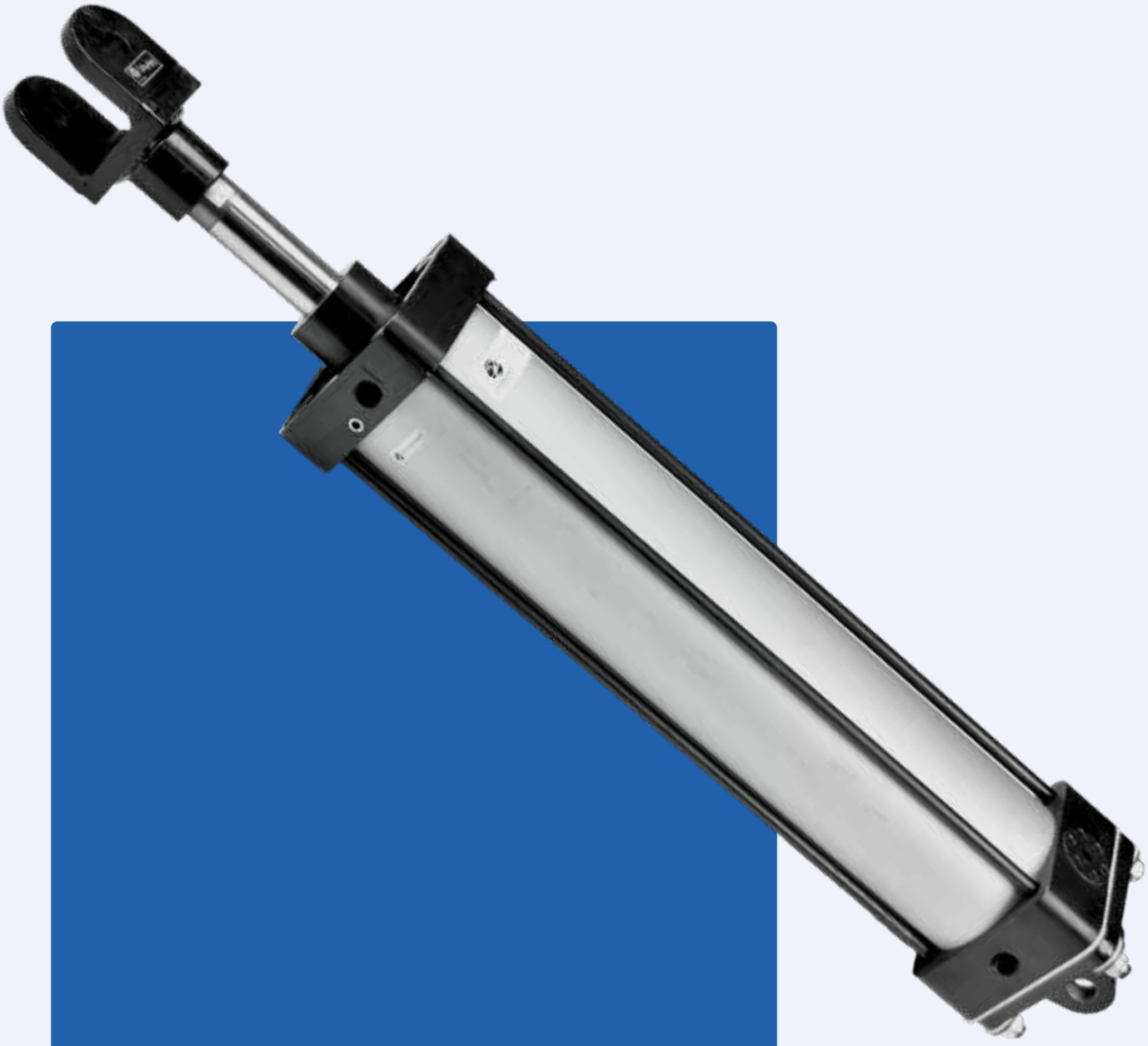
✱ Included In The Repair Kit

CYLINDERS

Pneumatic Force

Built for specific applications, Pioneeka pneumatic cylinders offer exceptional capabilities. They feature a built-in locking and cushioning mechanism for precise control and reliable operation. Moreover, they thrive in challenging environments, performing flawlessly in dust, humidity, and even strong magnetic fields.

This feature urges to consider special materials and manufacturing procedures for each component. One of the important processes is the roller-burnishing process. That is done to achieve a high-quality surface finish on the cylinder internal surface. It is essential for the correct operation in the mentioned conditions and for achieving a long service life.



PC 160-665

Pneumatic Cylinder

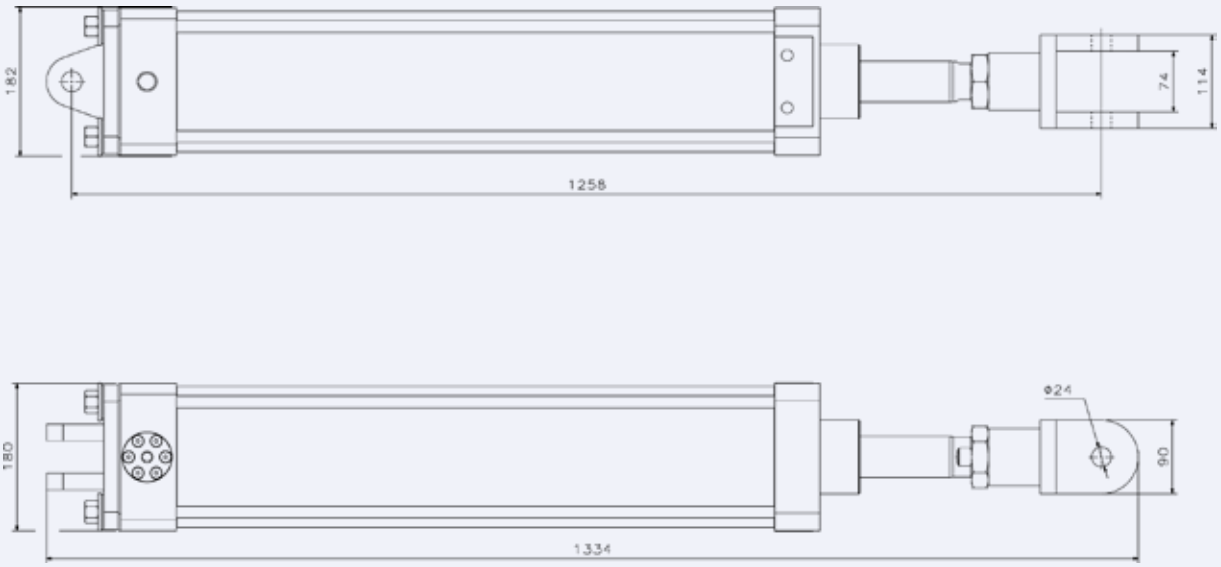
Pc 160-665 Pneumatic Cylinder

It is installed near an aluminum furnace to break the crust on the furnace. This pneumatic cylinder has special embedded insulating plates that protect the rod from the passage of electrical current and make damage. This increases the service life.

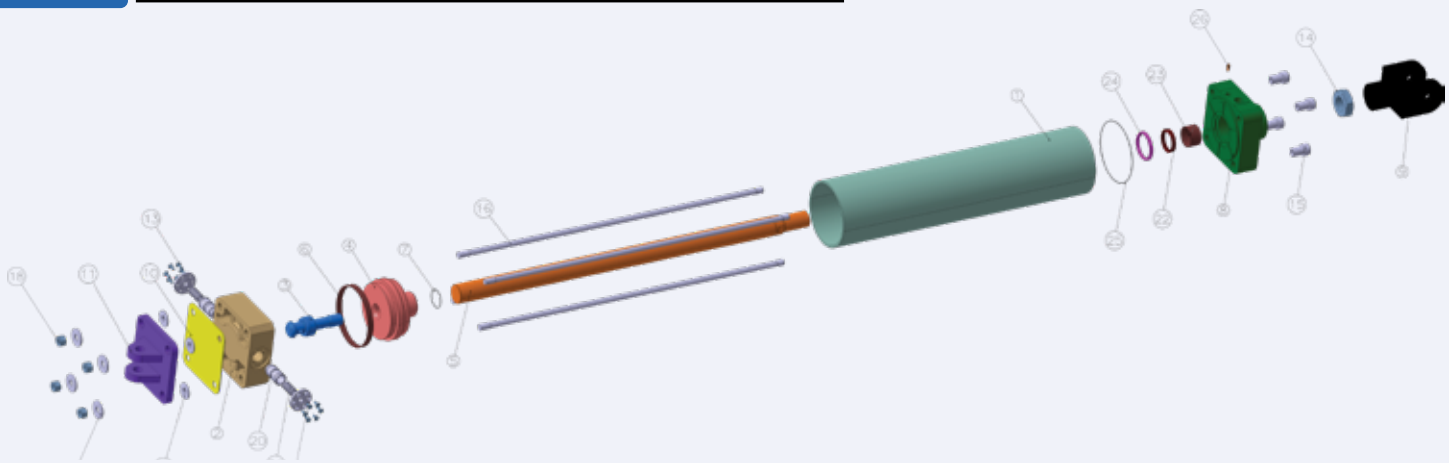
Technical Specifications

- Operating Temperature (°C): **Up to 200**
- Operating Pressure (bar): **Max 10**
- Stroke (mm): **665**
- Cylinder Bore (mm): **160**

Main Dimensions



Exploded View With Spare Parts List



Item No.	Definition	Quantity	Material
1	Cylinder	1	Al 6082 T6
2	Cylinder Bottom Cap	1	Al
3	Shaft	1	VCN 150
4	Piston	1	Al
5	Rod	1	1.7225
6	Bearing Strip	1	PTFE+CARBON
7	O-Ring	1	Viton
8	Cylinder Head Cap	1	Al
9	Cleivs	1	St 37
10	Buffer Sheet	1	Ertalon
11	Clevis Bracket	1	St 37
12	Cover	2	St 37
13	Screw	12	Standard
14	Nut	1	Standard
15	Special Nut	4	Standard
16	Stude Bolt	4	Cv 40
17	Washer	4	St 37
18	Nut	4	Standard
19	Washer	4	St 37
20	Locker Shaft	2	C40
21	Spring	2	55 Si7
22	Wiper	2	PTEE
23	Bearing	1	PTFE+BRONZE
24	Cushion Ring	1	PTFE
25	O-Ring	2	Viton
26	Cushioning Screw	1	C22
27	U-Ring	2	Viton

PC 125-550
Pneumatic Cylinder

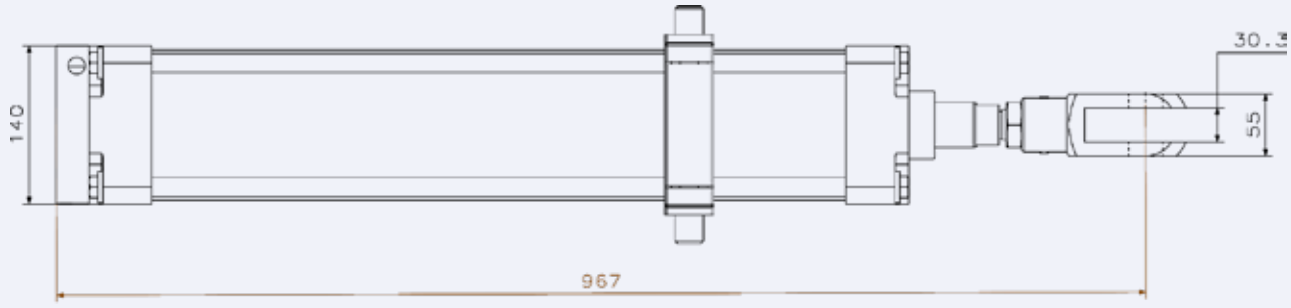
Pc 125-550 Pneumatic Cylinder

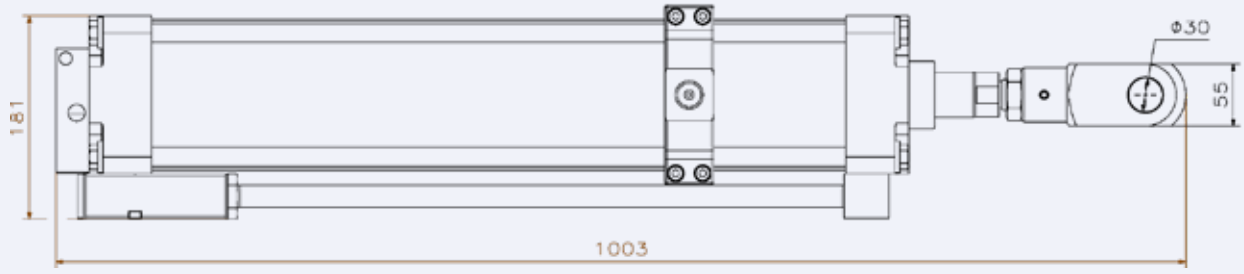
The second cylinder has a different Design. It is connected to its supporting structure with a belt-like piece. This jack has internal air control valves to adjust the piston movement.

Technical Specifications

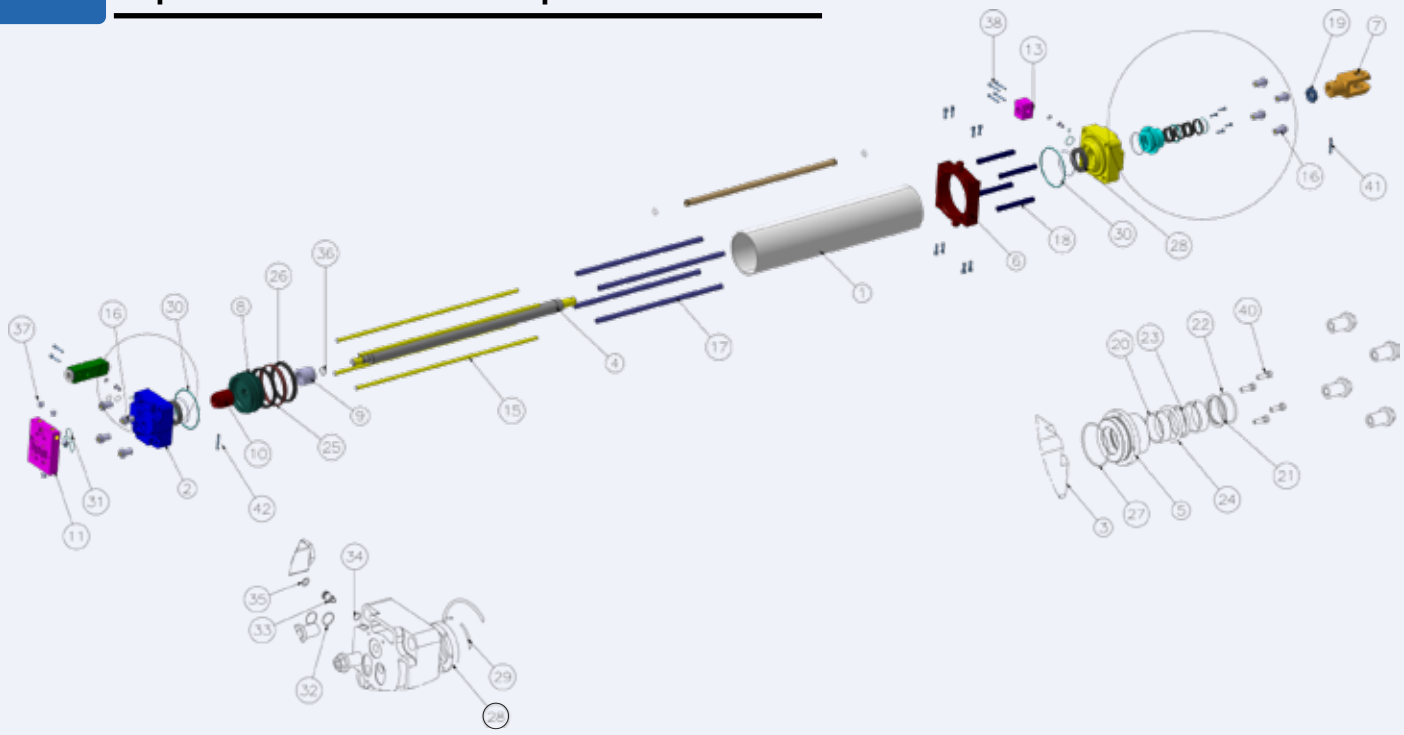
- Operating Temperature (°C): **Up to 200**
- Operating Pressure (Bar): **Max 10**
- Stroke (mm): **550**
- Cylinder Bore (mm): **125**

Main Dimensions





Exploded View With Spare Parts List



Item No.	Definition	Quantity	Material
1	Cylinder barrel	1	Al
2	end caps	1	Al 6061
3	end caps	1	Al 6061
4	Piston rod	1	CK45
5	Gland	1	Al 6061
6	Mounting	1	Mo40
7	Rod clevis	1	St 37
8	Piston	1	Al 6061
9	Piston bush	1	Al 6061
10	Piston Nut	1	Iron
11	Connection Valve	1	Al -2024T4
12	Contorl Valve-ASSY	1	Compostite
13	Fitting	1	Al 2024
14	Connecting pipe	1	St 37
15	Connecting cap screw	4	St 37
16	Connecting cap nut	8	St 37
17	Cover Pipe 1	4	St 37
18	Cover Pipe 2	4	St 37
19	Nut clevis	1	Iron
20	Guide Seal	2	Teflon Carbon

Item No.	Definition	Quantity	Material
21	O Ring Guide	1	Plastic
22	O Ring	1	Viton
23	Oring Guide	1	Plastic
24	O Ring	1	Viton
25	Piston Seal	2	Rubber
26	Graphite Seal	1	Bronze Carbon
27	O Ring	1	Viton
28	Piston Guide	2	Teflon Carbon
29	Locker	2	Iron
30	O Ring	2	Viton
31	O Ring	4	Viton
32	O Ring	4	Viton
33	Safety valve	2	Al 7075
34	O Ring-Ø1.5	2	Viton
35	Toothed Lock Washer	2	Iron
36	Seal Rod	1	Rubber
37	Plug	4	Al 7075
38	Screw M6x45	4	Iron
39	Screw M6x40	2	Iron
40	Screw M5x35	4	Iron
41	Spring PIN 8x50	1	Iron
42	Spring PIN 6x50	1	Iron
43	Screw M8x25	8	Iron

VALVES

Pneumatic Force

Pneumatic valves are one of the critical components in pneumatic systems that are responsible for precise control of air flow. These valves are used in a wide range of applications, including industrial automation, robotics, instrumentation, and medical equipment.

Within the Pioneeka suite of pneumatic product offerings, their pneumatic valves serve a Key role in managing airflow. Engineered to ensure seamless compatibility with all other Pioneeka pneumatic components, these valves demonstrate exceptional resilience in demanding environmental conditions.

5/2 control valve

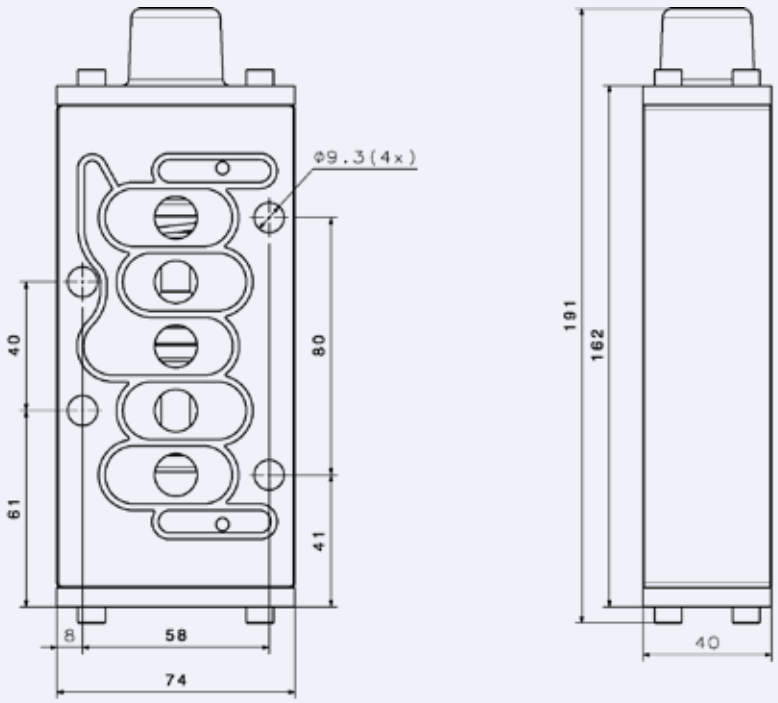
5/2 control valve

The 2/5 valve is a control valve that is specifically designed to be compatible with Pioneeka pneumatic cylinders and can accompany it in various Applications and environments. This valve is pneumatically actuated and allows the cylinder to be operated in two directions.

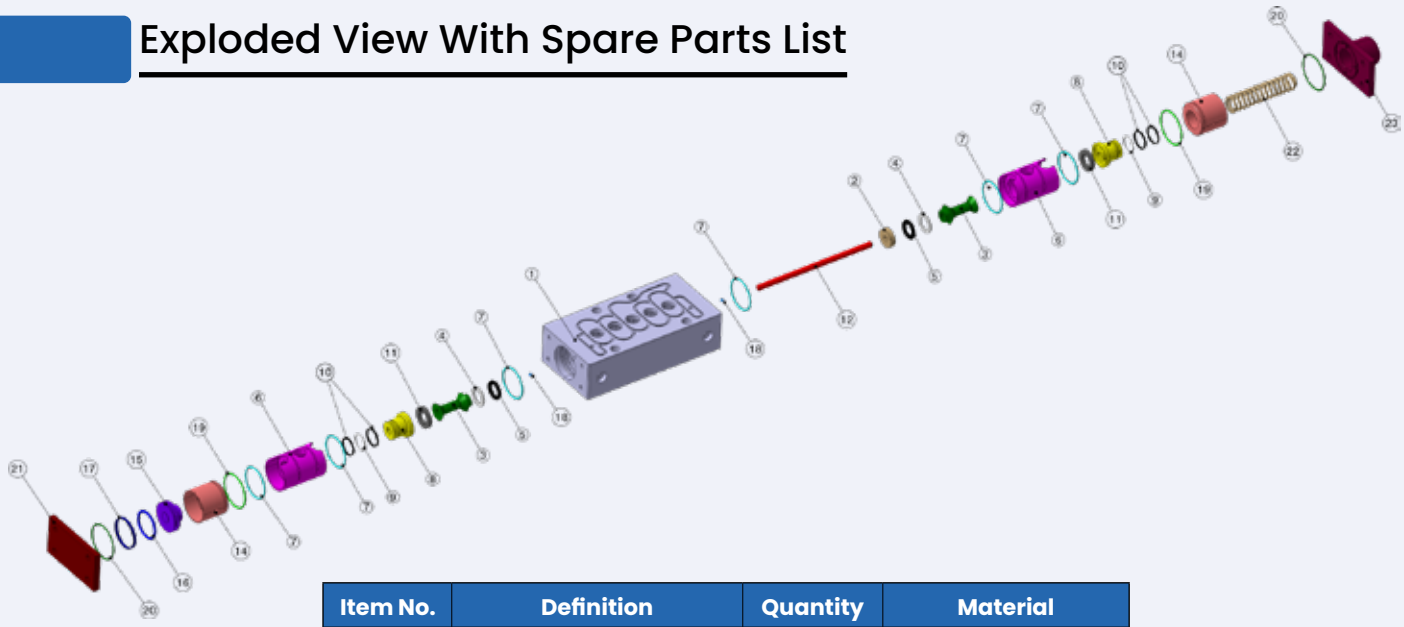
Technical Specifications

- Signal Pressure (Bar): **3.5**
- Working Pressure (Bar): **10**
- Working Temperature (°C): **Up To 160**
- Flow Capacity -Typical (Lit/min): **3000**

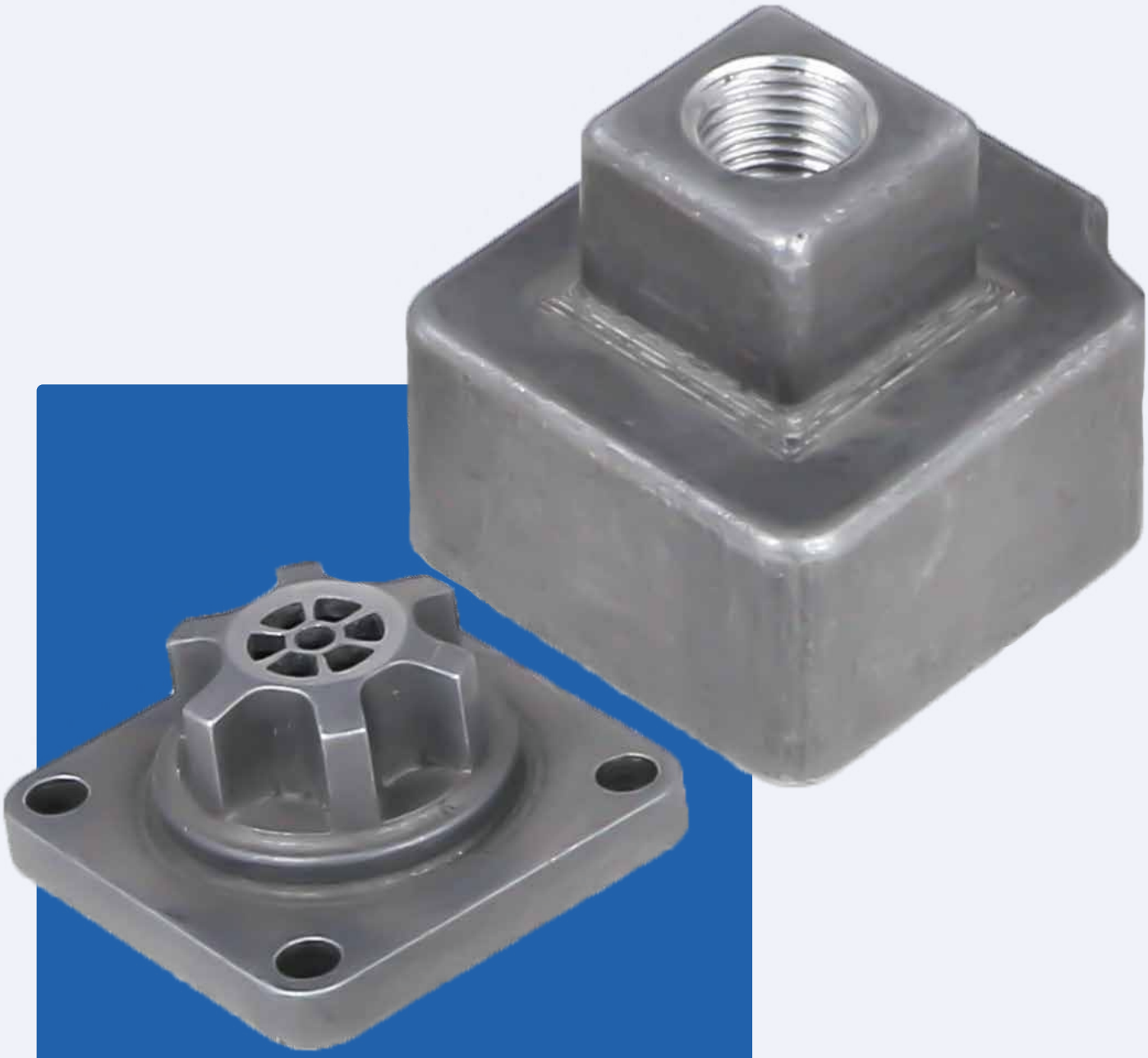
Main Dimensions



Exploded View With Spare Parts List



Item No.	Definition	Quantity	Material
1	Valve Body	1	AA 7075
2	Spacer	1	AA 7075
3	Stem	2	AA 7075
4	Stem Washer	2	Viton
5	Stem O-ring	2	Viton
6	Stem Sleeve	2	AA 7075
7	Stem Guide O-ring	6	Viton
8	Stem Seat	2	AA 7075
9	O-ring Ø1.8xØ13.5	2	Viton
10	Washer	4	Viton
11	Washer	2	Standard
12	Shaft	1	AISI 303
13	Nut	2	Standard
14	Liner	2	AA 7075
15	Blinder	1	AA 7075
16	O-ring	1	Standard
17	Washer	1	Standard
18	Ball Ø3	2	Steel
19	O-ring	2	Viton
20	Left Cap	1	AA 7075
21	Spring	1	Ck60
22	Right Cap	1	AA 7075
23	Screw M5x16	8	Standard
24	O-ring	2	Viton
25	Stem O-ring	2	Viton



Shuttle valve

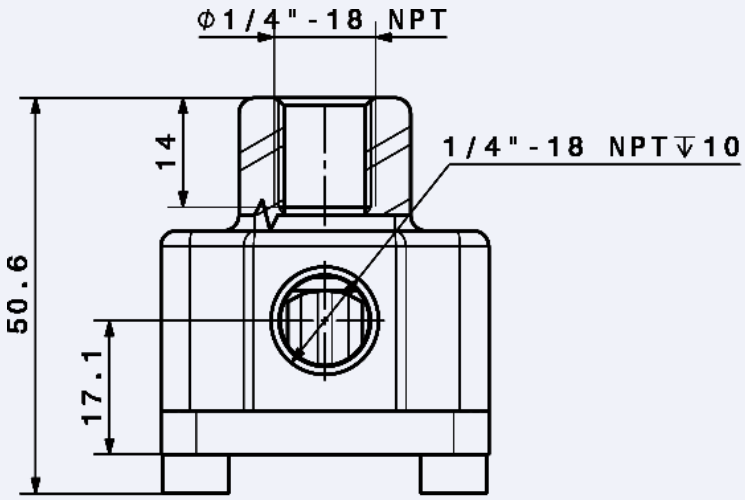
Shuttle valve

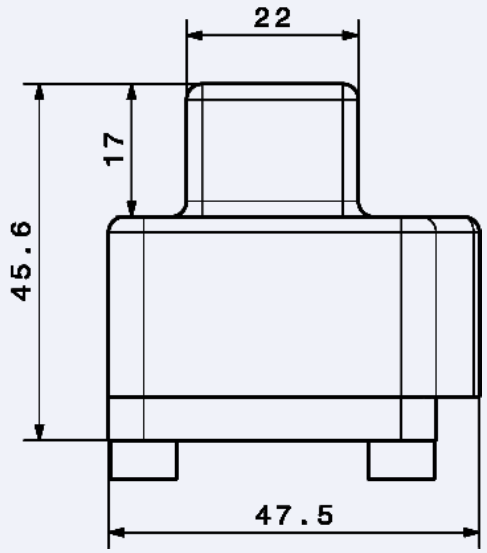
Shuttle valves are -2position, directional control valves in pneumatic systems. They automatically select flow from one of two inlets to a single outlet based on the higher pressure, acting like a pressure-controlled switch. This simple, reliable design makes them ideal for controlling actuators.

Technical Specifications

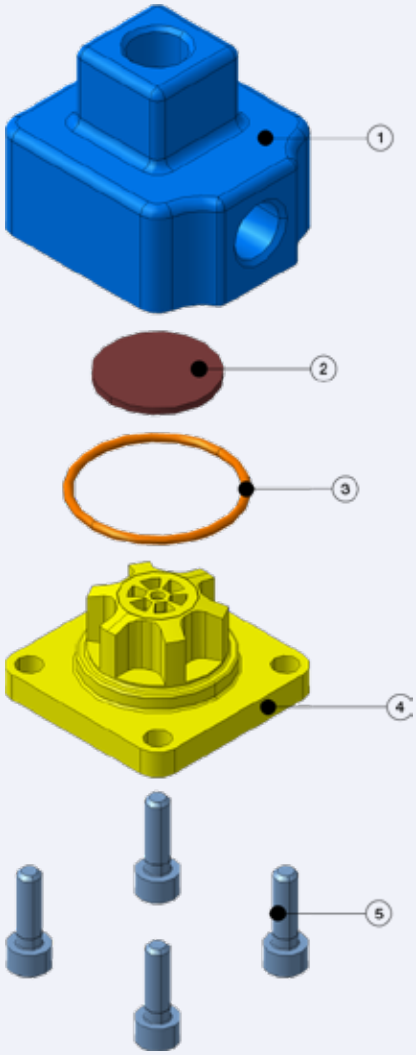
- Operating Temperature (°C): **-18 to 71**
- Operating Pressure (Bar): **10**
- Port Size (in): **1/4**

Main Dimensions





Exploded View With Spare Parts List



Item No.	Definition	Quantity	Material
1	Valve Body	1	AA 7075
2	Diaphragm	1	Rubber
3	O-Ring	1	Standard
4	Cap	1	AA 7075
5	Screw M5x16	4	Standard

3/2 Pneumatic Push Button

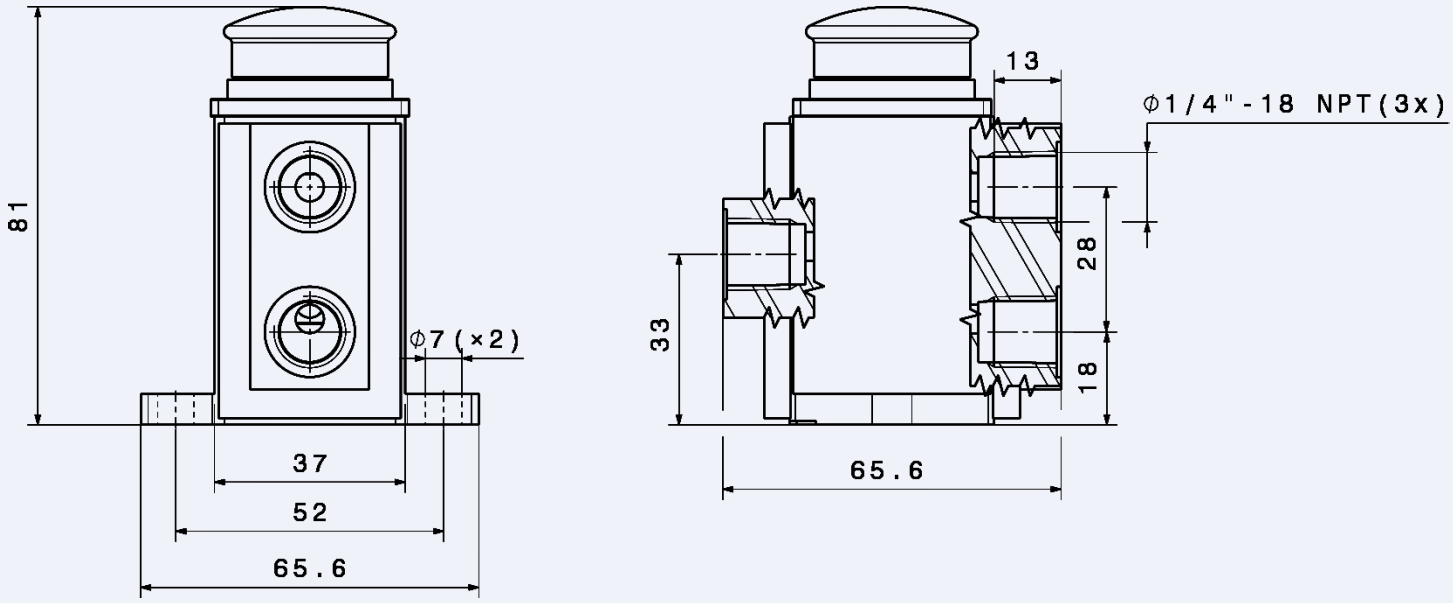
Push Button

Push button valves are general-purpose valves that can be used for manual actuation of various pneumatic systems. They can be used, for example, for manual actuation of a single-acting cylinder. They can be used as normally closed or normally open, and as a -2Way.

Technical Specifications

- Operating Temperature (°C): **-18 to 71**
- Operating Pressure (Bar): **10**
- Port Size (in): **1/4**

Main Dimensions



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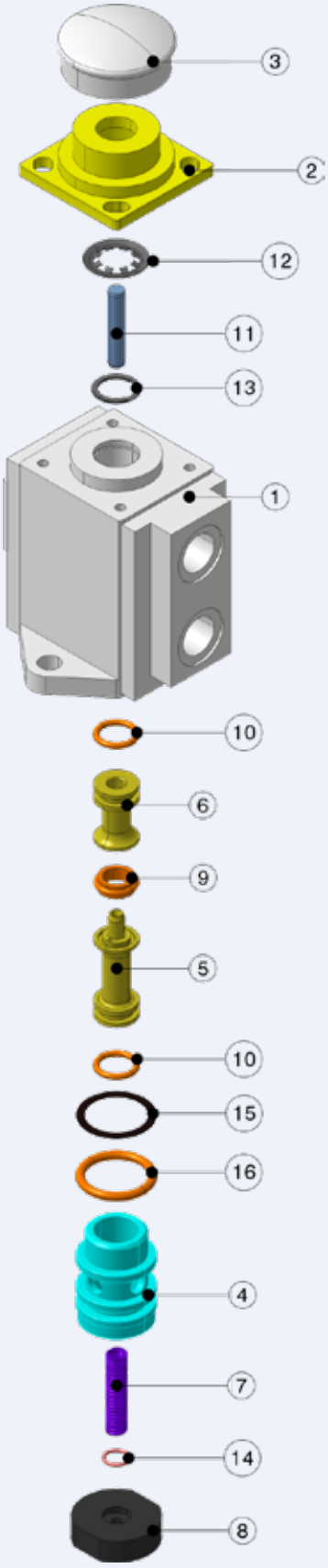

Item No.	Definition	Quantity	Material
1	Main Body	1	Al
2	Junction	1	Steel
3	Fungal operator	1	Al
4	Pistun	1	Al
5	Pistun1	1	Brass
6	Pistun2	1	Brass
7	Spiring	1	Iron
8	End Plug	1	Plastic
9	O Ring	1	Standard
10	O Ring	1	Standard
11	Pin Rod	2	Iron
12	Lock Washer	1	Iron
13	Snap Ring	1	Iron
14	O Ring	1	Standard
15	Stem Guide Gasket	1	Plastic
16	O Ring	1	Standard

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