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KUNKLE BAILEY 616D SAFETY VALVE

A spring operated high capacity safety valve for low-pressure air applications

FEATURES

- Designed to deliver precise relieving and re-seating pressures.
- Protected open discharge gives downward flow.
- Non-stick seating surfaces give positive shut-off and freedom from sticking.
- Mixture of aluminum and gunmetal creates a light but very robust construction.

GENERAL APPLICATION

Typically used on blowers or bulk transfer road/rail transport vehicles, the 616D is specially designed to give overpressure protection of positive displacement air blowers and associated tanks or pressure vessels.

TECHNICAL DATA

Material:	Aluminum
Sizes:	1½" to 2" (DN 40 to 50)
Connections	
Inlet:	Threaded
Outlet:	Open discharge
Pressure range:	2.9 to 36.3 psig (0.2 to 2.5 barg)
Temperature range:	-22°F to 392°F (-30°C to 200°C)

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KUNKLE BAILEY 616D SAFETY VALVE
SPECIFICATIONS

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Materials
Body - Aluminum from -22°F to 392°F (-30°C to 200°C)
Trim - PTFE/bronze

SIZE RANGE

Size, in (DN)	Orifice, mm²	Min pressure, barg	Max pressure, barg
1½ (40)	1140	0.2	2.5
2 (50)	2027	0.2	2.5

Kd (coefficient of discharge)
Air Variable

Construction
Top guided

Connections
Screwed in x open discharge

Cap options
Dome

Approvals
BS6759 Pt 2
PED certified category IV

INSTALLATION

Mount the valve in a vertical position whenever possible (although it may be mounted at any angle up to 45° without detriment). Ensure that the valve discharge is unobstructed and does not create a hazard to personnel or property.

The branch leading to the valve must be the same nominal bore as the valve (or larger) and bushed down at the valve entry. The length must be kept as short as possible.

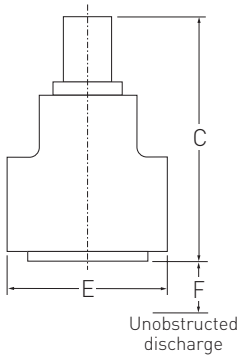
Due to the adverse effect of pressure pulsations from the usual Rootes-type blowers, the valve should not be mounted within 1.25 m of the blower outlet. However, no valve or other obstruction must intervene between the blower and the safety valve.

DIMENSIONS

Valve size DN	Inlet (NPS)	C mm	E mm	F mm	Weight (kg)
40	1½	194	102	10	1.8
50	2	205	127	13	2.0

All dimensions in mm.

Male x Female



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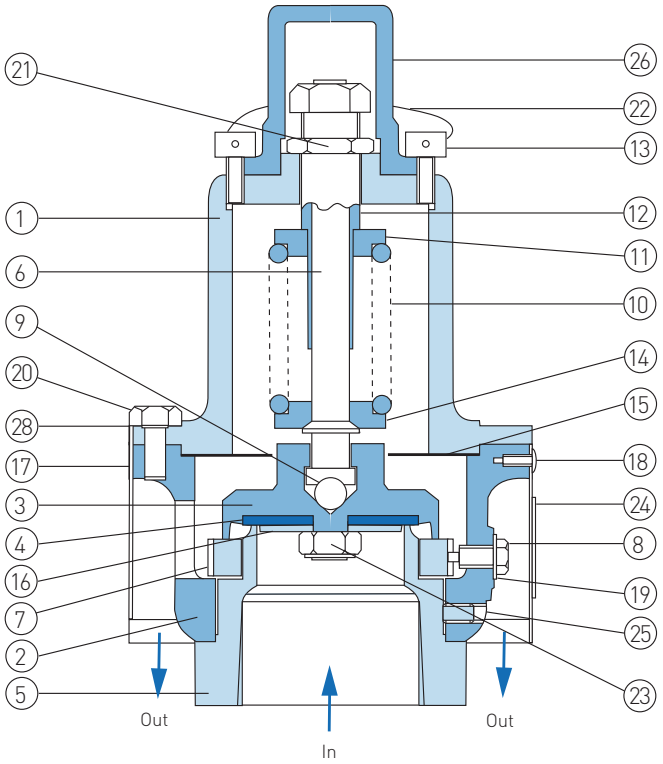
PARTS AND MATERIALS/SPRING SELECTION

MATERIALS

Item	Part	Material
1	Cover	Aluminum
2	Body	Aluminum
3	Disc holder	Aluminum
4	Disc	PTFE
5	Seat	Bronze
6	Spindle	St. St.
7	Blow down ring	Bronze
8	Setting screw	Ni. Pl. Steel
9	Spindle ball	St. St.
10	Spring	St. St.
11	Upper spring cap	Mild steel
12	Adjusting screw	Brass
13	Cap screw	St. St.
14	Bottom spring cap	Mild steel
15	Dust shield	Aluminum
16	Disc support	Zi. Pl. Steel
17	Cowl	Zi. Pl. Steel
18	Self tapping screw	Zi. Pl. Steel
19	Shakeproof washer	St. St.
20	Set screw	St. St.
21	Locknut	Brass
22	Wire and lead seal	Lead and St. St.
23	Self locking nut	Brass
24	Nameplate	Aluminum
25	Grub screw	Steel
26	Locking dome	Nylon
28	Starwasher	St. St.



SPRING SELECTION

The valves are fitted with a suitable spring. Every valve is tested thoroughly for efficient operation before leaving the factory. Ensure the set pressure is within the range of the existing spring. If not, select and fit the correct spring from the table below. All our springs are low stressed and painted to minimize corrosion.

SPRING RANGE AND SELECTION

Barg	Psig	Color code
0.21 - 0.38	3.1 - 5.5	Red
0.38 - 0.67	5.5 - 9.8	Yellow
0.67 - 0.99	9.8 - 14.4	Blue
0.99 - 1.30	14.4 - 18.9	Orange
1.30 - 2.5	18.9 - 36.3	Purple (DN 40)
1.30 - 2.07	18.9 - 30.0	Purple (DN 50)
2.07 - 2.20	30.0 - 31.9	C2901 (DN 50)
2.20 - 2.50	31.9 - 36.3	C2902 (DN 50)

NOTE

Springs listed above comply with the requirements of BS6759: Part 1.

AIR CAPACITY (l/s) at 0.07* barg or 10% overpressure and 15°C

	Valve size	
Set pressure (barg)	**DN 40**	**DN 50**
0.2*	64.2	115
0.35*	75.7	132
0.5*	87.9	150
0.65*	101.0	169
0.8	116.0	191
1.0	137.0	222
1.2	160.0	252
1.4	186.0	286
1.6	212.0	322
1.8	241.0	359
2.0	271.0	398
2.5	340.0	490

* Minimum overpressure = 0.07 barg at set pressure less than 0.7 barg.

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