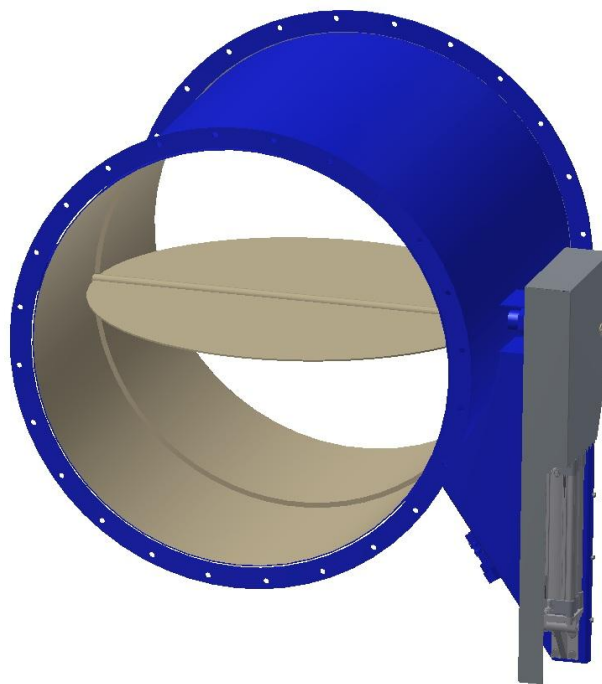


Valves for Industrial plants



Manufacturer

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1 Application area

Valves can be used in a wide variety of piping systems in dust collection and ventilation systems.

The valves can be divided into the following groups according to the function:

- Butterfly valves
- Throttle valves
- Control valves.

All valves are used to control air flows or to release or shut off pipe sections or downstream components such as air handling units.

The standard version of the valves can be used in the following areas:

- Design temperature -10 to 120°C (14°F to 248°F)
- Design pressure 0 to 5.000 Pa (50mbar = 72,5 psi)

For special designs, temperatures between -40 and 800 °C (-40°F and 1472°F), or higher design pressures are possible.

2 Safety instructions

The valves are developed, designed and built according to the recognised rules of technology.

Nevertheless, their operation may cause hazards for the operator or third parties or damage to the system or other material assets.

Safety instructions serve the purpose of occupational safety and accident prevention and must be observed and complied with without fail.

Valves can be equipped with cylinders, rotary actuators or motorised actuators.

Moving parts can endanger people (e.g. crushing). Tampering with valve parts during operation is not permitted.

Before working on the valves, disconnect the compressed air and/or power supply.

The compressed air connections on the pneumatic valves must be connected correctly during commissioning and must not be interchanged.

Motor-driven valves operate with electrical energy.

Maintenance or repair work on the electrical equipment may only be carried out by a qualified electrician or by instructed person under the direction and supervision of a qualified electrician in accordance with the electrotechnical regulations.

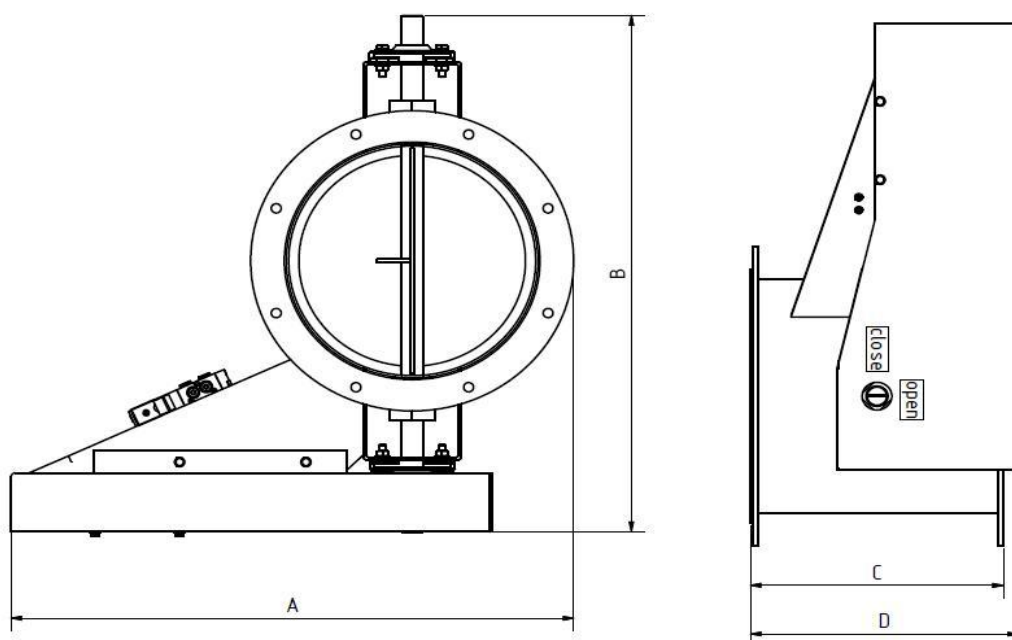
3 Dimensions

The following nominal diameters are available as standard:

DN 100	DN 355
DN 150	DN 400
DN 160	DN 450
DN 180	DN 500
DN 200	DN 560
DN 224	DN 630
DN 250	DN 710
DN 280	DN 800
DN 300	DN 900
DN 315	DN 1000

Other nominal diameters are possible on request.

Sketch:



Nominal width	A	B	C	D
150	473	479	150	235
160	450	514	160	239
180	489	529	180	249
200	500	550	200	259
224	512	567	224	271
250	589	583	250	310
280	611	626	280	321
300	668	659	300	318
315	676	674	316	325
355	696	713	356	345
400	771	759	402	355
450	796	813	452	421
500	850	863	502	447
560	896	928	562	471
630	985	988	632	532
710	1072	1083	712	591
800	1118	1170	802	635
900	1287	1281	902	715
1000	1338	1373	1002	765

4 Material

As standard, the flaps are supplied in the following materials:

- S235JRG2 acc. to DIN EN 10025
- 1.4301 acc. to DIN EN 10028-7
- 1.4571 acc. to DIN EN 10028-7

The design in other materials is possible on request.

Flaps in carbon steel design are painted on the outside as standard. The coating thickness is 80 µm. The RAL tone is freely selectable.

5 Types

The valves can be equipped with different drive systems. They are operated manually by hand, pneumatically or electrically.

The connecting flanges are manufactured according to DIN 24154 part 2 series 2. Other valve designs and dimensions are available on request. The connecting means, such as screws, nuts and gaskets, are not included in the standard scope of delivery.

- **Manually operated valves**

Manually operated valves are equipped with a hand lever. The position of the damper blade can be fixed by locking the hand lever with a set screw.

- **Pneumatic valves**

Pneumatic valves are actuated by pneumatic cylinders or rotary actuators. The cylinders are controlled by a solenoid valve whose coil can be controlled either with 220V AC or with 24 DC.

To protect the cylinder and the operator, pneumatic valves can be equipped with a safety plate if required.

Depending on the intended use of the valves, a choice can be made between de-energised open and de-energised closed. This is to ensure that the piston rod is retracted in the cylinder in the prevailing operating state of the valve.

Pneumatic cylinders from METAL WORK and rotary actuators from END are used as standard. Other suppliers of pneumatic actuators are possible on request.

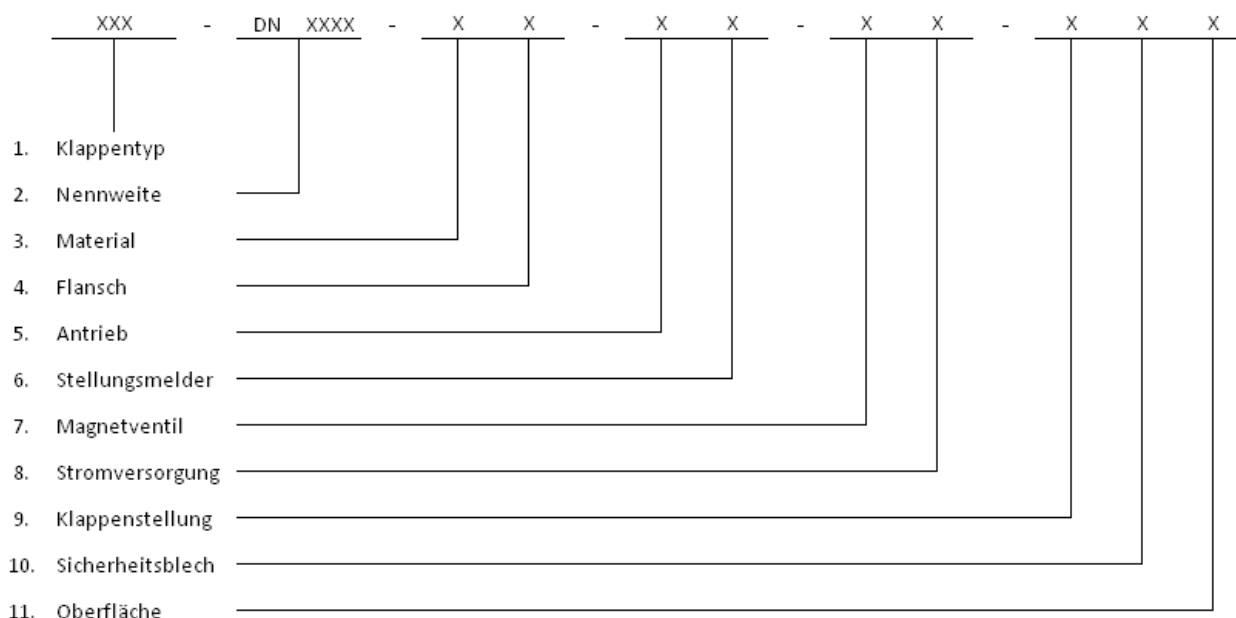
- **Electric motorised valves**

Electric motorised valves are designed with 90° quarter-turn actuators. BERNARD CONTROLS DEUFRA actuators with 230V, 50 Hz are used as standard. Other actuator suppliers are available on request.

According to the safety circuit of the valves, it is possible to choose between de-energised open and de-energised closed.

6 Ordering details

When ordering the valves, please state the required versions according to the following order code.



1. Valve type

- HKL - Hand valve
- PKL - Pneumatic valve
- EKL - Electric motorised valve

2. Nominal width

- see section 3 Dimensions
- S - Special version = Please specify dimensions separately

3. Material

- 1 - S235 JRG2 acc. to DIN EN 10025-2
- 2 - 1.4301 acc. to DIN EN 10028-7
- 3 - 1.4571 acc. to DIN EN 10028-7
- S - Special version = Please specify material separately

4. Flange

- 1 - Flange acc. to DIN 24154/R2
- S - Special version = Please state dimensions of flanges separately

5. Drive

- 0 - without
- 1 - Pneumatic cylinder - Metal - Work
- 2 - Pneumatic swivel drive - End
- 2 - Electric motor - Bernard Controls Deufra GmbH
- S - Special version = Please specify supplier separately

6. Position indicator

- 0 - without
- 1 - Pneumatic cylinder Reed – Contact
- 2 - Pneumatic swivel drive di-soric proximity switch
- 3 - Electric motor swivel drive TAM position indicator
- S - Special version = Please specify type and supplier for position transmitter separately.

7. Magnetic valve

- 0 - without
- 1 - Pneumatic cylinder 5/2 way valve
- 2 - Pneumatic swivel drive 3/2 Ways valve

8. Power supply

- 0 - without
- 1 - 24V DC (Direct current)
- 2 - 220V AC (AC power)

9. Valve position

- 1 - without power or compressed air – valve open
- 2 - without power or compressed air – valve closed

10. Safety plate

- 0 - without
- 1 - with

11. Surface treatment

- 0 - without
- 1 - Material carbon steel,
outside lacquered 80 µm; please specify RAL colour when ordering
- 2 - Stainless steel
Stained and passivated on all sides
- 3 - Stainless steel
Stained and passivated on all sides
outside glass bead blasted

6.1 Order example

1. Valve type	Pneumatic valve
2. Nominal width	NW500
3. Material	1.4301
4. Flange	DIN 28154 Part 2 / Series 2
5. Drive	Pneumatic cylinder - Metal - Work
6. Position indicator	Pneumatic cylinder - Reed - Contact
7. Magnetic valve	5/2 way valve
8. Power supply	24V DC
9. Valve position	Closed without compressed air
10. Safety plate	yes
11. Surface treatment	Stained and passivated

PKL – DN0500 – 2 1 – 1 1 – 1 1 – 2 1 2

7 Documentation

The following documents are supplied as standard:

- Data sheet valve
- Data sheet drive
- Material certificates
- Declaration of compliance
- Instruction manual

Other documents are available on request.

8 Spare parts

When replacing damaged or worn parts, we recommend using only original spare parts.

Any liability and warranty on the part of LTC - Lufttechnik Crimmitschau GmbH for damage caused by the use of non-original spare parts is excluded.

When ordering spare parts, please state the following data:

Order number (LTC - Lufttechnik Crimmitschau GmbH):

Order code valve:

Designation:

Quantity:

Address for ordering spare parts:

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We will send you an updated spare parts offer on request.