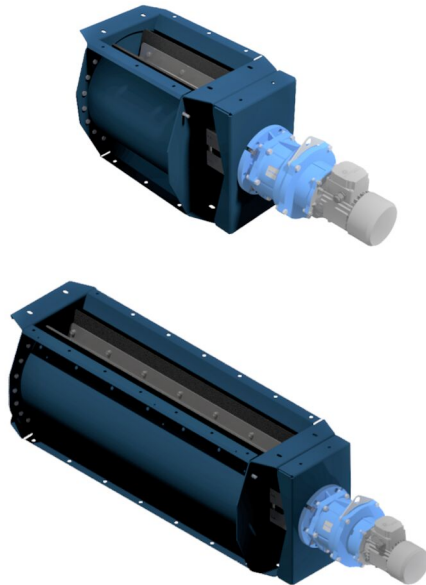


## NRSZ rotary valves, type 4,10,20 and 30

Continuously empty combustible dust from your dust collector



The NRSZ type rotary valve is used to transfer material between two separate systems. In pneumatic conveying systems discharge is usually required from the filter or cyclone to the silo, at atmospheric pressure. This is an ideal application for the NRS type rotary valve.

The rotary valve can be used for most material types, though the particle size must not exceed 13 x 13 x 13 mm (.5 x .5 x .5 in). The rotary valve should not work with highly abrasive dust.

The NRSZ type rotary valve is modular and robustly constructed in heavy steel plate. The rotor of each module is equipped with a clutch. This reduces the possibility of damage in use and maximises the life of the unit. The rotor has special rubber seals, which provide an effective air lock between the inlet and the outlet. The rotary valve should not work with capacity more than 60% of max.

This type of rotary valve is a certified version for explosive dusts type St1 and St2. The NRSZ is a protective system according to ATEX definition.

Explosive dusts type St1 may have Kst up to 200 bar m/s.

Explosive dusts type St2 may have Kst up to 300 bar m/s.

|   |   |
|---|---|
| Nom du produit                            | NRSZ rotary valves, type 4,10,20 and 30 |
| Niveau sonore (dB(A))                     | < 70                                    |
| Installation                              | Extérieur, Intérieur                    |
| Matériel                                  | Heavy steel plate                       |
| Convient pour les poussières combustibles | True                                    |
| Application                               | Poussière                               |
| Operating Temperature                     | Max. 70 °C.                             |



Poussière

## NRSZ rotary valves, type 4,10,20 and 30

| Poids (kg) | Puissance (kW) | [model]       |
|------------|----------------|---------------|
| 50         |                | 73008867*     |
| 75         | 0,18           | 73008868**    |
| 75         | 0,18           | 73008870**    |
| 75         | 0,18           | 73008871**    |
| 130        | 0,18           | 73008875***   |
| 130        | 0,18           | 73008877***   |
| 130        | 0,18           | 73008878***   |
| 95         |                | 73008874****  |
| 135        | 0,75           | 73008876****  |
| 135        |                | 73008879****  |
| 135        |                | 73008880****  |
| 221        |                | 73008881***** |
| 243        | 0,75           | 73008882***** |
| 243        |                | 73008883***** |
|            |                | 73009037      |
| 312        |                | 73008884***** |
| 338        | 0,75           | 73008885***** |
|            |                | 73009038      |
|            |                | 73009039      |

\*Without motor. Capacity at 100% filling - 1,50m<sup>3</sup>/h per RPM

\*\*Capacity at 100% filling - 10 m<sup>3</sup>/h

\*\*\*Capacity at 100% filling - 24 m<sup>3</sup>/h

\*\*\*\*Without motor. Capacity at 100% filling - 3,5 m<sup>3</sup>/h per RPM

\*\*\*\*\*Capacity at 100% filling - 67 m<sup>3</sup>/h

\*\*\*\*\*Without motor. Capacity at 100% filling - 7 m<sup>3</sup>/h per RPM

\*\*\*\*\*Capacity at 100% filling - 134 m<sup>3</sup>/h

\*\*\*\*\*Capacity at 100% filling - 134 m<sup>3</sup>/h

\*\*\*\*\*Without motor. Capacity at 100% filling - 10,5 m<sup>3</sup>/h per RPM

\*\*\*\*\*Capacity at 100% filling - 201 m<sup>3</sup>/h

# NRSZ rotary valves, type 4,10,20 and 30

|  | [accessory]  | [partno] |
|--|--|----------|
|  | Capteur de rotation pour NRS avec kit d'assemblage | 73008689 |
|  | Tool for setting the rotor in NRSZ4/10             | 73008777 |

## NRSZ rotary valves, type 4,10,20 and 30

ATEX limitations NRSZ 4, 10, 20, 30:

### Atex limitations

| Rotary valve type | P <sub>red,max</sub> [kPa]           |                                      | Rotation speed max. [rpm] |
|-------------------|--------------------------------------|--------------------------------------|---------------------------|
|                   | St1 K <sub>st,max</sub> *=20 MPa·m/s | St2 K <sub>st,max</sub> *=30 MPa·m/s |                           |
| NRSZ 4            | 25                                   | 20                                   | 20                        |
| NRSZ 10           | 25                                   | 20                                   | 20                        |
| NRSZ 20           | 25                                   | 20                                   | 20                        |
| NRSZ 30           | 25                                   | 20                                   | 20                        |

\*K<sub>st</sub> for organic dust.

The combustible dust is described by the parameters:

The limit values of the used class of dust St1: K<sub>st,max</sub>=20 MPa·m/s, MIE ≥13 mJ, MIT ≥430°C (of a dust cloud).

The limit values of the used class of dust St2: K<sub>st,max</sub>=30 MPa·m/s, MIE ≥2 mJ, MIT ≥520°C (of a dust cloud).

### List of Types:

| ID       | Type model - rpm | Installation zone exterior of NRSZ | Capacity at 100% filling      | Motor [kW] | Motor ATEX Marking | Weight [kg] |
|----------|------------------|------------------------------------|-------------------------------|------------|--------------------|-------------|
| 73008867 | NRSZ 4-0         | Depends on motor                   | 1,5 m <sup>3</sup> /h per RPM | none       | -                  | 50          |
| 73008868 | NRSZ 4-7         | Non-zone                           | 10 m <sup>3</sup> /h          | 0,18       | -                  | 75          |
| 73009028 | NRSZ 4-20        |                                    | 28 m <sup>3</sup> /h          | 0,75       | -                  | 69          |
| 73008874 | NRSZ 10-0        | Depends on motor                   | 3,5 m <sup>3</sup> /h per RPM | none       | -                  | 95          |
| 73008875 | NRSZ 10-7        | Non-zone                           | 24 m <sup>3</sup> /h          | 0,18       | -                  | 130         |

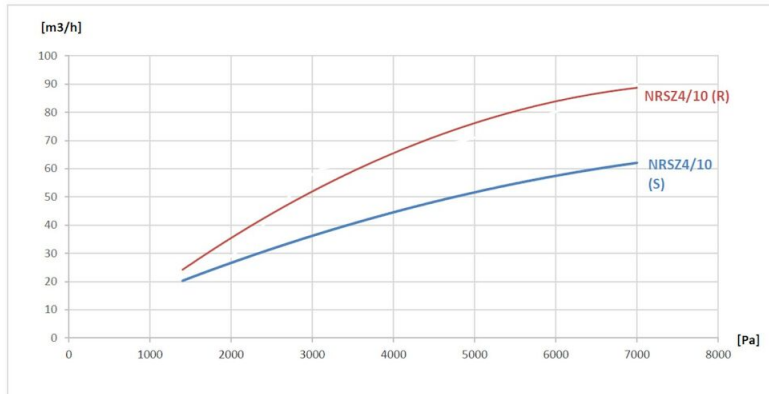
### List of Types:

| ID       | Type model - rpm | Installation zone exterior of NRSZ | Capacity at 100% filling       | Motor [kW] | Motor ATEX Marking         | Weight [kg] |
|----------|------------------|------------------------------------|--------------------------------|------------|----------------------------|-------------|
| 73008876 | NRSZ 10-20       |                                    | 67 m <sup>3</sup> /h           | 0,75       | -                          | 135         |
| 73008881 | NRSZ 20-0        | Depends on motor                   | 7 m <sup>3</sup> /h per RPM    | none       | -                          | 221         |
| 73008882 | NRSZ 20-20       | Non-zone                           | 134 m <sup>3</sup> /h          | 0,75       | -                          | 243         |
| 73008884 | NRSZ 30-0        | Depends on motor                   | 10,5 m <sup>3</sup> /h per RPM | none       | -                          | 312         |
| 73008885 | NRSZ 30-20       | Non-zone                           | 201 m <sup>3</sup> /h          | 0,75       | -                          | 338         |
| 73008870 | NRSZ 4-7 Cat 2   | Zone 21                            | 10 m <sup>3</sup> /h           | 0,18       | II 2D Ex tb IIIC T135°C Db | 75          |
| 73008871 | NRSZ 4-7 Cat 3   | Zone 22                            |                                |            | II 3D Ex tc IIIB T125°C Dc | 75          |
| 73009029 | NRSZ 4-20 Cat 2  | Zone 21                            | 28 m <sup>3</sup> /h           | 0,75       | II 2D Ex tb IIIC T135°C Db | 69          |
| 73009030 | NRSZ 4-20 Cat 3  | Zone 22                            |                                |            | II 3D Ex tc IIIB T125°C Dc | 69          |
| 73008877 | NRSZ 10-7 Cat 2  | Zone 21                            | 24 m <sup>3</sup> /h           | 0,18       | II 2D Ex tb IIIC T135°C Db | 130         |
| 73008878 | NRSZ 10-7 Cat 3  | Zone 22                            |                                |            | II 3D Ex tc IIIB T125°C Dc | 130         |
| 73008879 | NRSZ 10-20 Cat 2 | Zone 21                            | 67 m <sup>3</sup> /h           |            | II 2D Ex tb IIIC T135°C Db | 135         |
| 73008880 | NRSZ 10-20 Cat 3 | Zone 22                            |                                |            | II 3D Ex tc IIIB T125°C Dc | 135         |
| 73008883 | NRSZ 20-20 Cat 2 | Zone 21                            | 134 m <sup>3</sup> /h          |            | II 2D Ex tb IIIC T135°C Db | 243         |

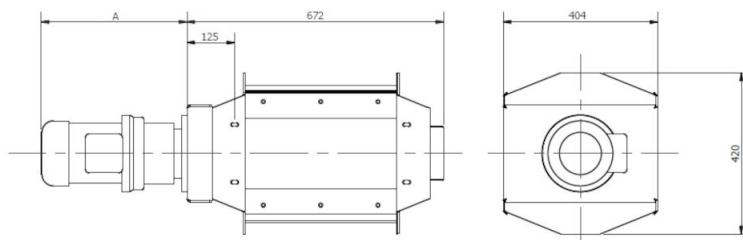
## NRSZ rotary valves, type 4,10,20 and 30

### Leakage

The leakage of the rotary valve during shutdown (S) and during operation (R) depends on the pressure drop over the rotor. See the chart:

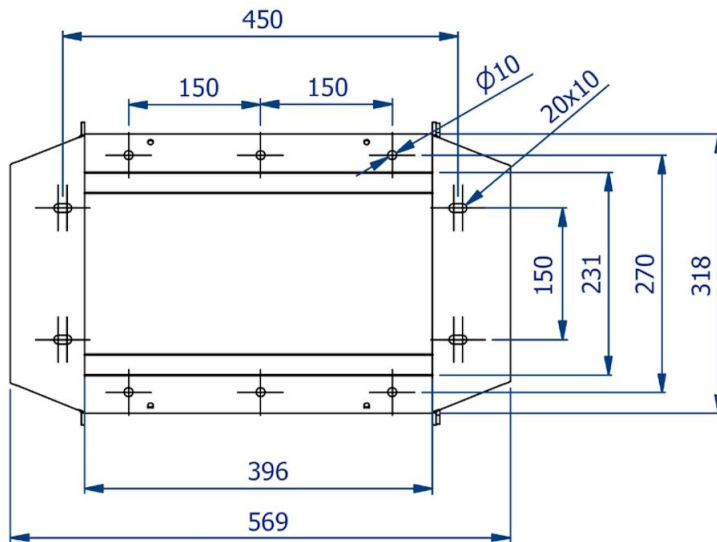


### Dimensions NRS 4 / NRSZ 4

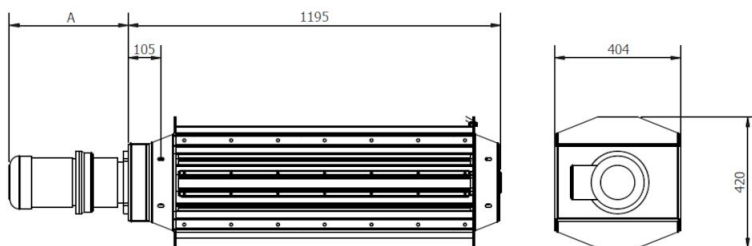


# NRSZ rotary valves, type 4,10,20 and 30

Dimensions inlet NRS 4 / NRSZ 4

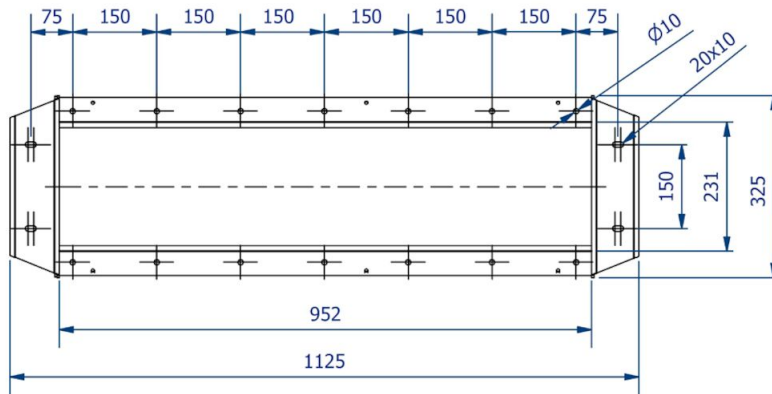


Dimensions NRS 10 / NRSZ 10

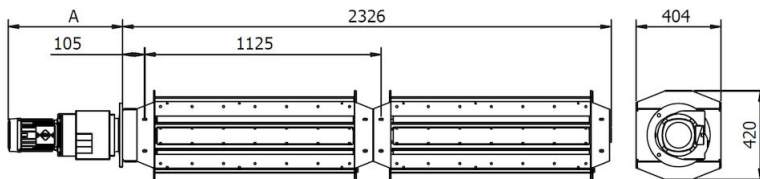


## NRSZ rotary valves, type 4,10,20 and 30

Dimensions inlet NRS 10 / NRSZ 10



Dimensions NRS 20 / NRSZ 20



Dimensions NRS 30 / NRSZ 30

