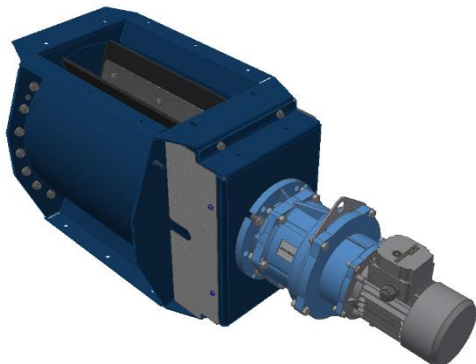
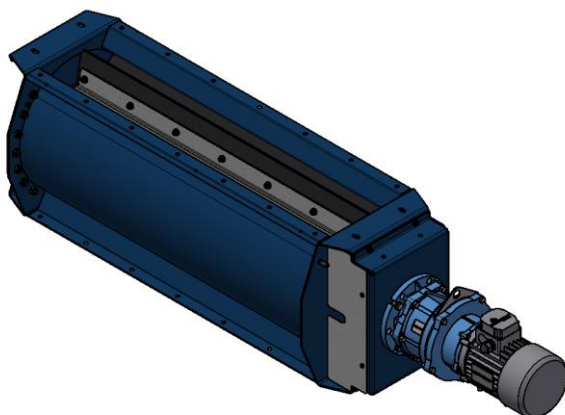


Rotary valve type NRS 4,10,20,30 and NRSZ 4,10,20,30,10-Q with ATEX certificate St1 and St2

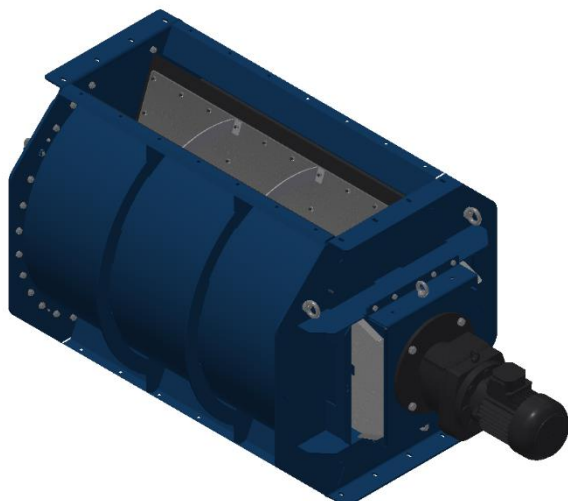
NRS(Z)-4



NRS(Z)-10



NRS(Z)-10Q



The NRS, 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 NRSZ type rotary valve. The rotary valve can be used for most material types, also explosive.

Description

The NRS, NRSZ type rotary valve is modular and robustly constructed in heavy steel plate. The rotor of each module is equipped with an elastic clutch. This reduces the possibility of damage in use and maximizes the life of the unit. The rotor has special rubber seals, which provide an effective air lock between the inlet and the outlet. ATEX version the rotary valve type NRSZ is made explosion pressure resistant. It prevents the transmission of the explosion effects, pressure wave, flame and sparkles until its maximum reduced explosion pressure $P_{ex,max}$ in both directions of the divided space with dangerous atmosphere of the flammable dust (except the metal dust).

Using

The NRS, 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 rotary valve.

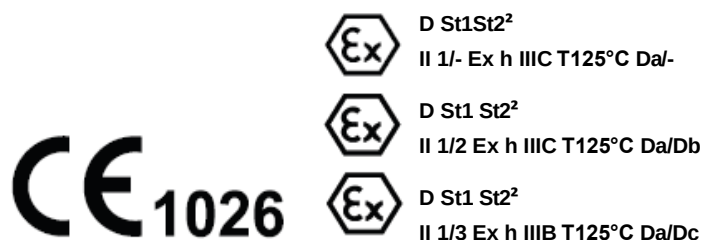
The rotary valve can be used for most material types, also explosive, though the particle size must not exceed 13x13x13mm. The rotary valve should not to work with highly abrasive dust.

Specifications

Max. operating temperature: 70°C

Ambient temperature range: from -20°C to +40°C

Noise level1: < 70 dB(A)



The marking is based on product certification:

FTZU 12 ATEX 0142X by N.B. No. 1026 and Quality System approval by N.B

1) Measurement based on ISO: 3744.

2) Depend of the certificate.

At ordering, please state:

Type of Rotary valve, the voltage and frequency of the power supply, the Dust Kst, the max. inside temperature and installation zone. For zone 21 or 22 also max. surface temperature.

Accessories

Rotation sensor IP67 (no ATEX): ID 73008689

Tool for settings the rotor: ID 73008777

Special demands for safe use:

At an explosion, the rotary valve must be stopped automatically and instantaneously.

Atex limitations

Rotary valve type	Dust explosive class	P _{ex,max} [kPa]	Rotation speed max. [rpm]
NRSZ 4	ST1	25	32
	ST2	20	20
NRSZ 10	ST1	25	
	ST2	20	
NRSZ 20	ST1	25	
	ST2	20	
NRSZ 30	ST1	25	
	ST2	20	
NRSZ 10-Q	ST1	25	

The combustible dust is described by the parameters:

The limit values of the used class of dust St1: K_{st,max}=200 bar·m·s⁻¹, MIE ≥ 13 mJ, MIT ≥ 430°C

The limit values of the used class of dust St2: K_{st,max}=300 bar·m·s⁻¹, MIE ≥ 2 mJ, MIT ≥ 520°C.

List of types non ATEX

ID	Type-model	Capacity at 100% filling	Motor [kW]	Weight [kg]
73009015	NRS 4-0	2 m ³ /h per RPM	none	48
73009016	NRS 4-7	14 m ³ /h	0,18	63
73009018	NRS 4-32	65 m ³ /h	0,75	70
73009019	NRS 10-0	4,9 m ³ /h per RPM	none	74
73009021	NRS 10-32	157 m ³ /h	0,75	96
73009022	NRS 20-0	9,8 m ³ /h per RPM	none	148
73009024	NRS 20-32	314 m ³ /h	0,75	170
73009025	NRS 30-0	14,7 m ³ /h per RPM	none	291
73009027	NRS 30-32	471 m ³ /h	0,75	313

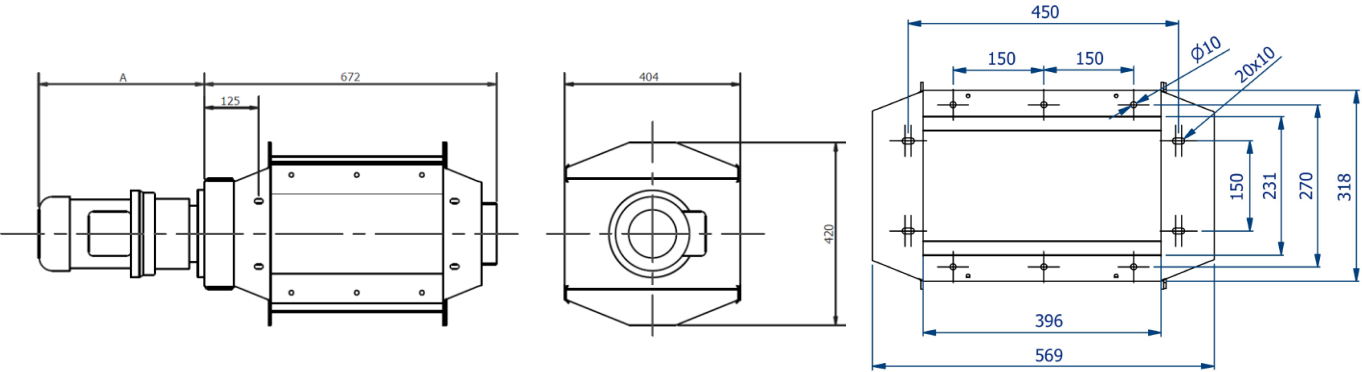
List of types with ATEX

ID	Type-model	NRSZ Marking	Installation zone internal/exterior of NRSZ	Capacity at 100% filling	Motor [kW]	Weight [kg]
73008867	NRSZ 4-0	-	Depends on motor	1,5 m3/h per RPM	none	58
73008868	NRSZ 4-7	II 1/- Ex h IIIC T125°C Da/-	Zone 20 / Non-zone	10 m3/h	0,18	73
73008869	NRSZ 4-32	II 1/- Ex h IIIC T125°C Da/-		47 m3/h	0,75	80
73008874	NRSZ 10-0	-	Depends on motor	3,5 m3/h per RPM	none	99
73008875	NRSZ 10-7	II 1/- Ex h IIIC T125°C Da/-	Zone 20 / Non-zone	24 m3/h	0,18	114
73008876	NRSZ 10-20	II 1/- Ex h IIIC T125°C Da/-		67 m3/h	0,75	122
73008881	NRSZ 20-0	-	Depends on motor	7 m3/h per RPM	none	198
73008882	NRSZ 20-20	II 1/- Ex h IIIC T125°C Da/-	Zone 20 / Non-zone	134 m3/h	0,75	221
73008884	NRSZ 30-0	-	Depends on motor	10,5 m3/h per RPM	none	297
73008885	NRSZ 30-20	II 1/- Ex h IIIC T125°C Da/-	Zone 20 / Non-zone	201 m3/h	0,75	320
73008940	NRSZ 10-Q-0	-	Depends on motor	23 m3/h per RPM	none	322
73008941	NRSZ 10-Q-20	II 1/- Ex h IIIC T125°C Da/-	Non-zone	426 m3/h	1,5	380
73008870	NRSZ 4-7	II 1/2 Ex h IIIC T125°C Da/Db	Zone 20 / Zone 21	10 m3/h	0,18	75
73008871	NRSZ 4-7	II 1/3 Ex h IIIB T125°C Da/Dc	Zone 20 / Zone 22			76
73008872	NRSZ 4-32	II 1/2 Ex h IIIC T125°C Da/Db	Zone 20 / Zone 21	45 m3/h	0,75	81
73008873	NRSZ 4-32	II 1/3 Ex h IIIB T125°C Da/Dc	Zone 20 / Zone 22			81
73008877	NRSZ 10-7	II 1/2 Ex h IIIC T125°C Da/Db	Zone 20 / Zone 21	24 m3/h	0,18	116
73008878	NRSZ 10-7	II 1/3 Ex h IIIB T125°C Da/Dc	Zone 20 / Zone 22			117
73008879	NRSZ 10-20	II 1/2 Ex h IIIC T125°C Da/Db	Zone 20 / Zone 21	67 m3/h	0,75	130
73008880	NRSZ 10-20	II 1/3 Ex h IIIB T125°C Da/Dc	Zone 20 / Zone 22			128
73008883	NRSZ 20-20	II 1/2 Ex h IIIC T125°C Da/Db	Zone 20 / Zone 21	134 m3/h	0,75	229
73009037	NRSZ 20-20	II 1/3 Ex h IIIB T125°C Da/Dc	Zone 20 / Zone 22			227
73009038	NRSZ 30-20	II 1/2 Ex h IIIC T125°C Da/Db	Zone 20 / Zone 21	201 m3/h	0,75	328
73009039	NRSZ 30-20	II 1/3 Ex h IIIB T125°C Da/Dc	Zone 20 / Zone 22			326
73008942	NRSZ 10-Q-20	II 1/3 Ex h IIIB T125°C Da/Dc	Zone 20 / Zone 22	458,9 m3/h	1,5	371

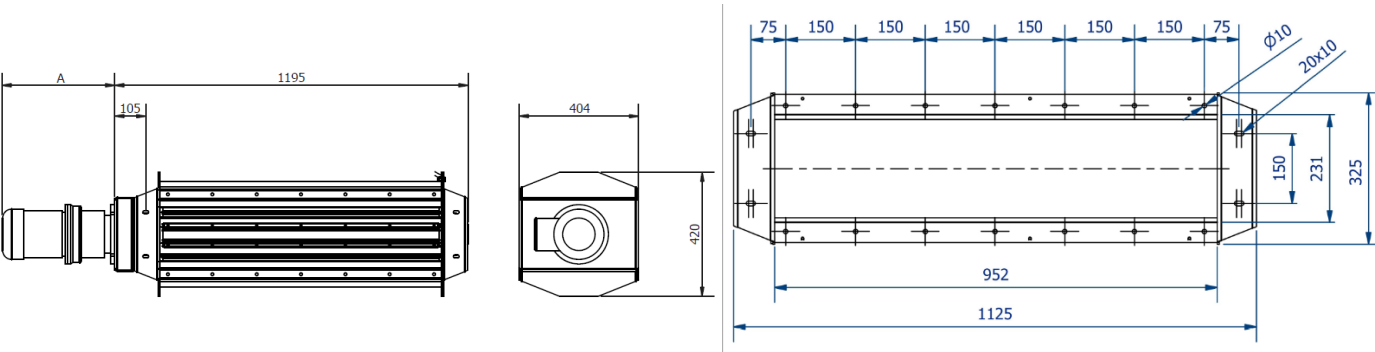
The rotary valve should not work with capacity more than 60% of max.

Dimensions

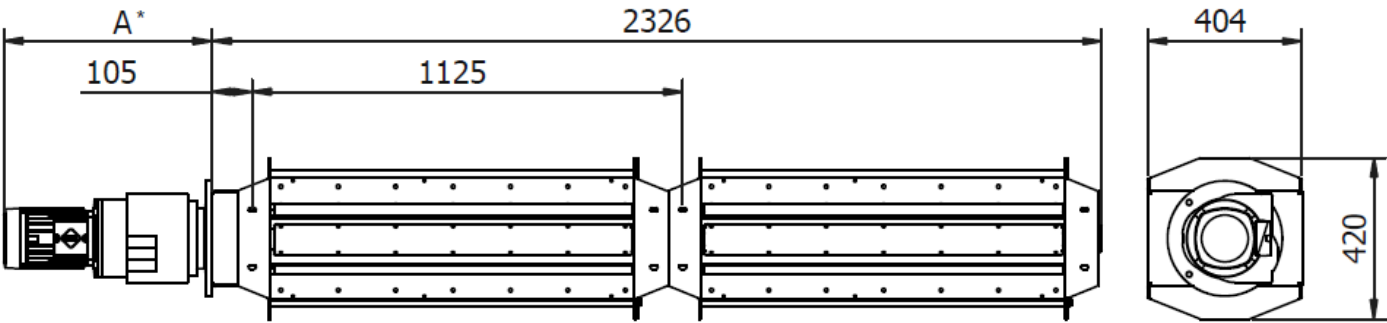
NRS(Z) 4



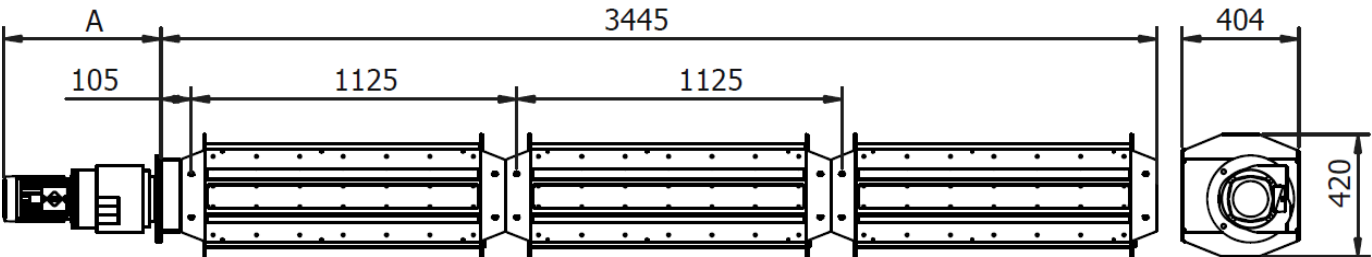
NRS(Z) 10



NRS(Z) 20

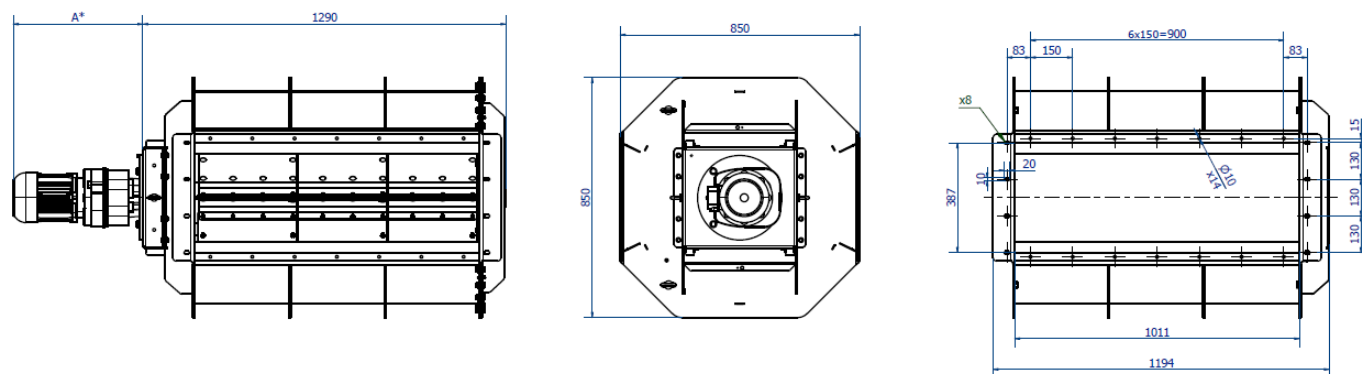


NRS(Z) 30



NRS 4,10,20,30 NRSZ 4,10,20,30,10-Q

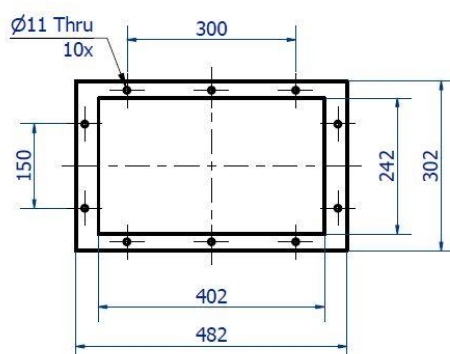
NRS(Z) 10-Q



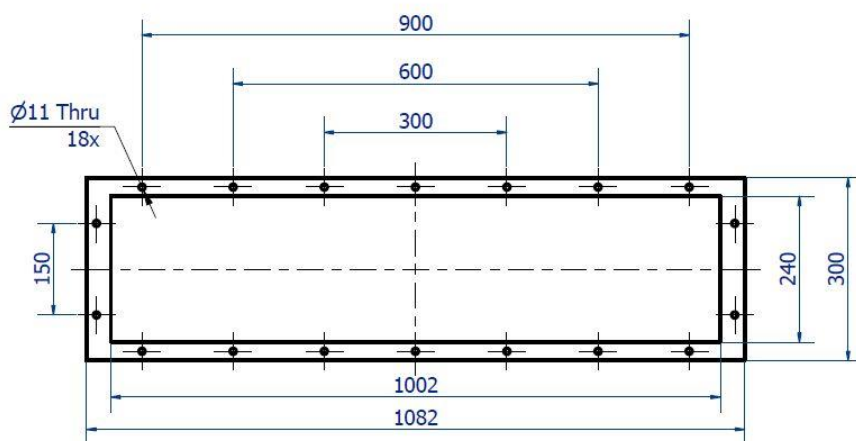
* Depends on the motor used

Flange connection

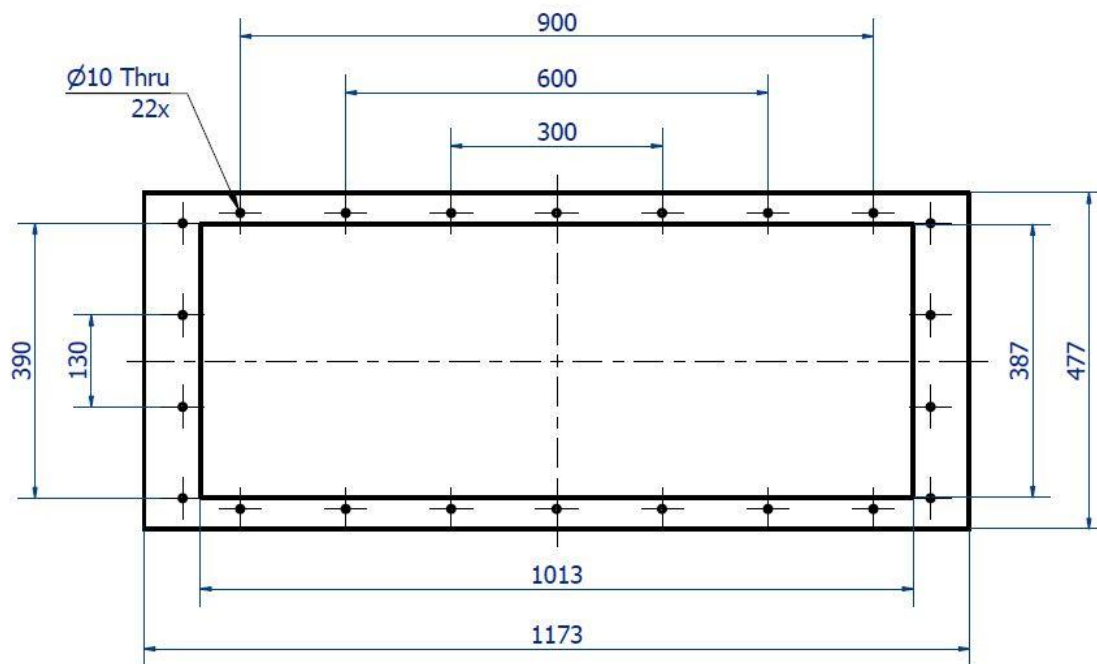
Connection flange for NRS(Z)4



Connection flange for NRS(Z)10



Connection flange for NRSZ10-Q



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:

