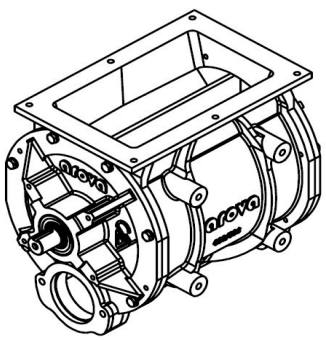
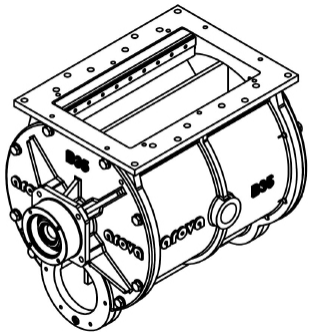
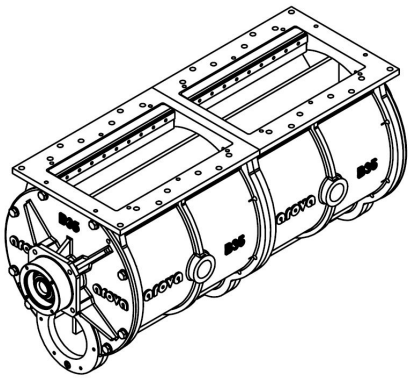
AROVA ROTARY VALVES

Rotary feeders for bulk blowing trailers

2020







WELCOME

at AROVA valves.

I've got the question to tell you something more about AROVA valves. My immediate reaction, how many pages can I write?

AROVA is a story that grew alongside myself. Three generations of knowhow, technical experience and wisdom, given from father to son. AROVA has been designing and manufacturing rotary valves for more than 40 years! And we are still happy to do so! Quality and sustainability are paramount when developing new AROVA valves. The AROVA range combines standard installation dimensions, unique geometry and the best techniques with regard to each system. One product for you, different users to serve!

"For over 40 years we are developing rotary valves with a better return, better sustainability and above all, our AROVA valves are easy to use."

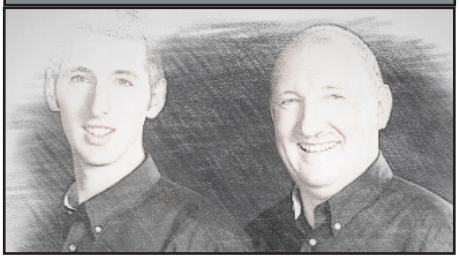
The product range of blow-through valves has been manufactured by AROVA for various dosing applications and pneumatic transport of granular products. We have an own production line, that we designed specifically for the agriculture sector. For animal feed distributors, to be more precise. AROVA builds trailer valves to easily transport granular products from bulk blowing trailers to a silo.

"We help your customers to win time and money using AROVA valves, they deserve the best products!"

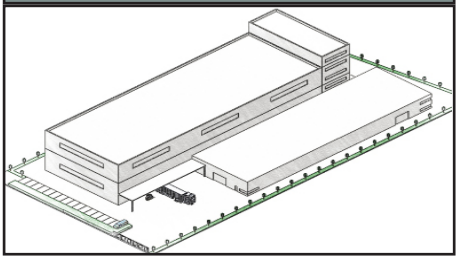
The AROVA valves are available in 3 different types, with capacity varying from 20.5 to 70 liter per rotation. Our valves can withstand all weather conditions. We are happy to be able to announce that our product range is standard foreseen to blow every type of granular product. The AROVA models are suitable for products up to a temperature of 60 degrees and a pressure of 5 bar. Because we are very comitted to corporate social responsibility, AROVA valves are durable and can be revised several times.

DISCOVER AND SEE FOR YOURSELF - Pieter Vandersteene (CEO)

FAMILY
VANDERSTEENE



HQ
IZEGEM, BELGIUM

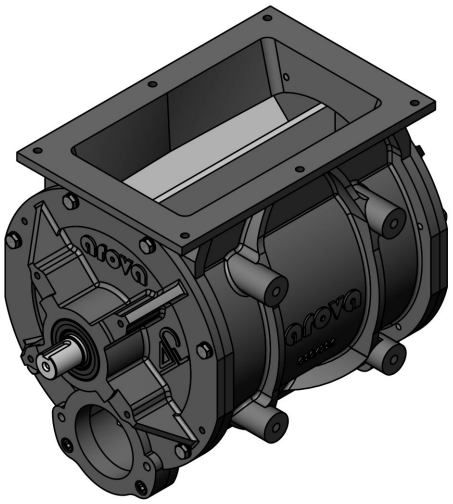


20
HAPPY EMPLOYEES

OWN
PRODUCTION

PRODUCT RANGE

AROVA valves are used for conveying and dosing several products in demanding applications. The valves are suitable for handling powdered and granulated materials in pneumatic transport. **All valves are designed with a cast iron stator, cast iron flanges and a welded steel rotor.**

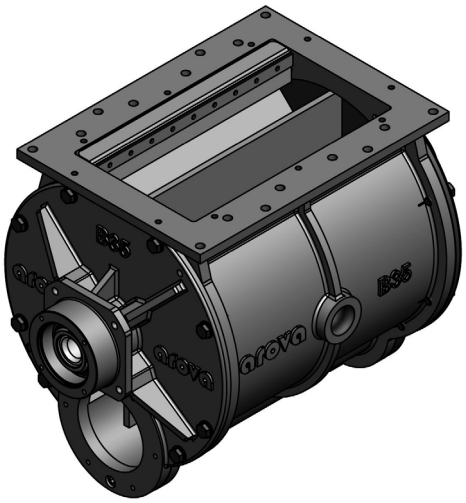


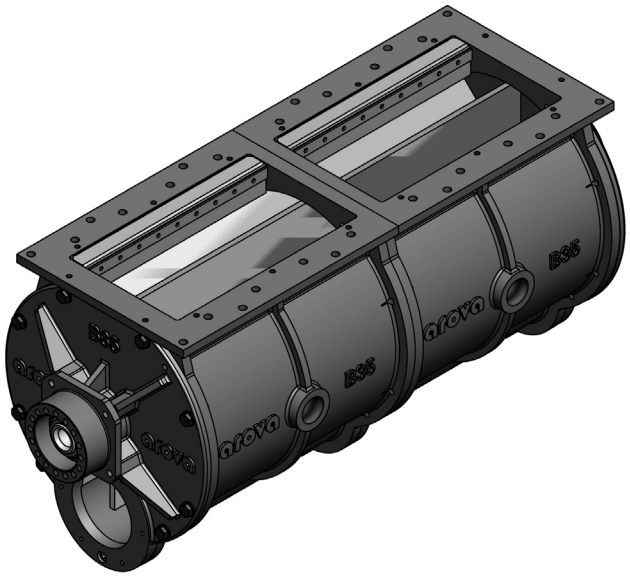
TYPE 30/36

- 22 tons per hour at 30 rpm (capacity compound feed)
- Rotor volume: 20.5 dm³ per rotation
- 5 bar: maximum work pressure
- Inside bearings
- External axis
- Blow-through diameter of Ø 98 mm (4 inch)

TYPE B35

- 38 tons per hour at 30 rpm (capacity compound feed)
- Rotor volume: 35 dm³ per rotation
- 3.8 bar: maximum work pressure
- Outside bearings
- Internal axis
- Blow-through diameter of Ø 125 mm (5 inch)





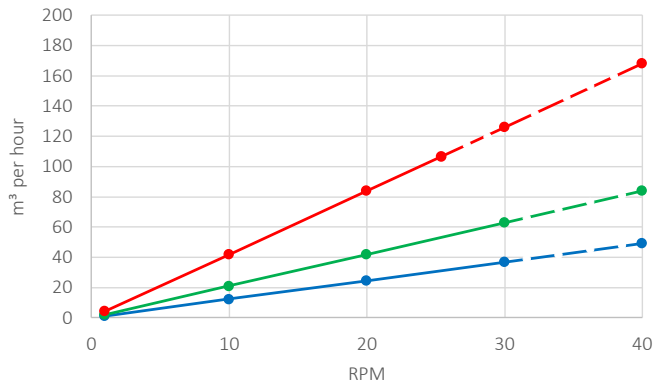
TYPE B70

- 76 tons per hour at 30 rpm (capacity compound feed)
- Rotor volume: 70 dm³ per rotation
- 1.9 bar: maximum work pressure
- Outside bearings
- Internal axis
- Blow-through diameter of Ø 125 mm (5 inch)

CAPACITY CHART

Filling efficiency 100%.

M³ PER HOUR

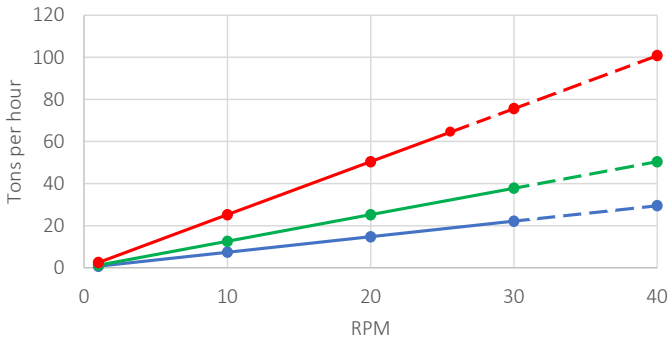


30/36

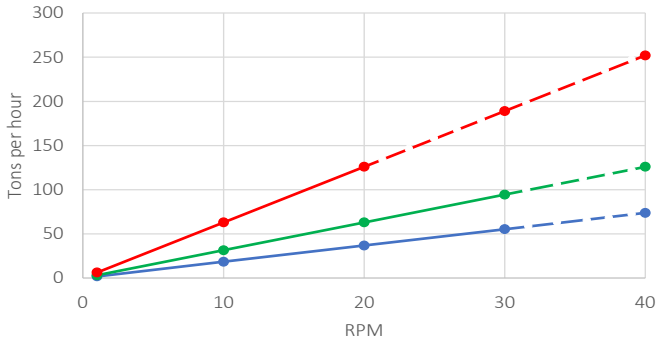
B35

B70

MAIZE: TONS PER HOUR



SAND: TONS PER HOUR



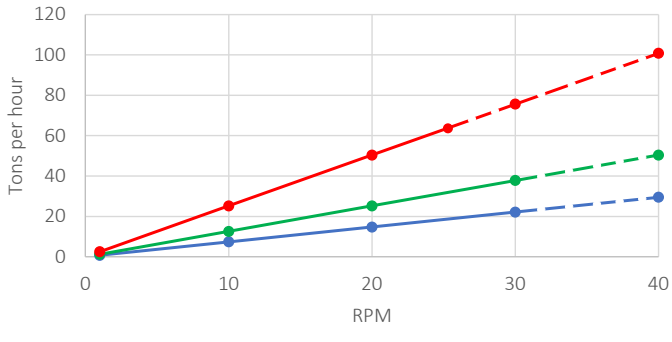
MAIZE

Bulk density: 600 kg/m³

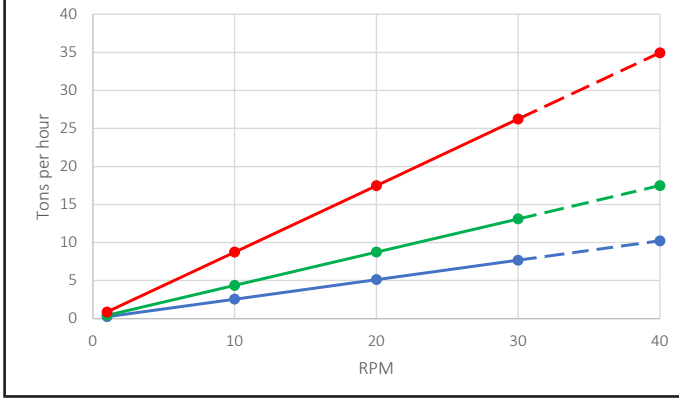
SAND

Bulk density: 1.500 kg/m³

COMPOUND FEED: TONS PER HOUR



CORN BRAN: TONS PER HOUR



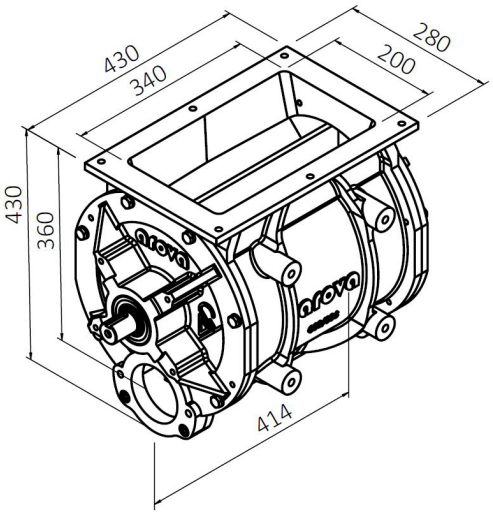
COMPOUND FEED

Bulk density: 600 kg/m³

CORN BRAN

Bulk density: 208 kg/m³

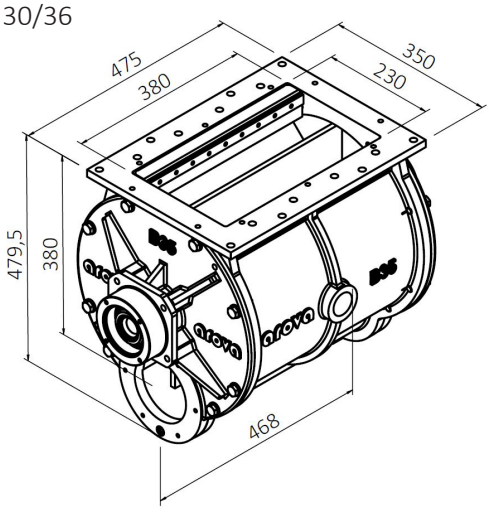
TYPE 30/36



- **Compact build-in dimensions**
- **Water- and winterproof**
  - Protection against high pressure cleaning
  - Protection against road dirt/salt
  - Usable from -15°C to +60°C
- **Robust**
  - High quality cast iron GG25
  - Solid wall thickness
  - Inside bearings
- **Sustainable**
  - Revisable
  - Complete AROVA seal package, specially designed for a longer durability of the valve
- **Smooth flow by intelligent geometry**
  - Half-underlying blow gutter. The gutter is slightly lower placed, providing a constant, uninterrupted airflow
  - V-shaped entry opening. The sloping cutting edge makes the product smoothly drag off

TYPE B35

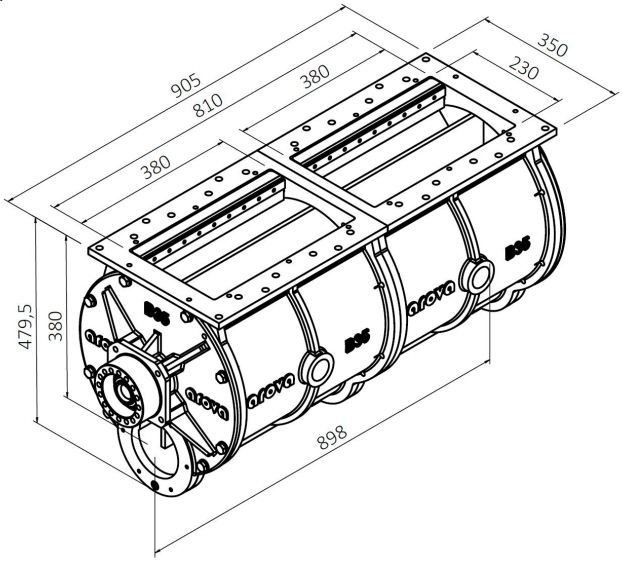
Optimization on 30/36



- **Compact drive solution by slide-in hydro engine**
- **Durability**
  - Chemical treatment on all cast iron part
    - Anti-rust inside and outside
    - Anti-wear for a double lifecycle
  - Outside bearing for a longer lifecycle
- **All-round solution**
  - Stripper prevents breaking the granular product
  - Scraper blade prevents the build-up of the product by its sharp edges

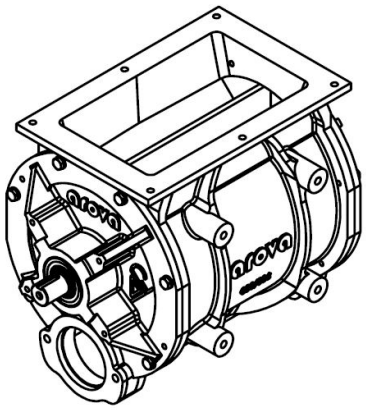
TYPE B70

Optimization on B35



- Double volume by assembling 2 times B35 side to side
- Quick release of light products with a larger volume and a low bulk density

PRODUCT SHEET
30/36



BUILT TO LAST

Bearing

- Maintenance-free with a service life of 12 years (0.5 bar, 40 degrees, 30 RPM)
- Working temperature from -15°C to +60°C
- Inner bearings: deflection of the rotor is prevented by placing the bearings as close to the center as possible

Seals

- X-ring: made for high pressure
- Oil seal: made to hold up the grease
- Grease: made to build up a natural barrier
- Hardened ring: made to protect the axle X-ring

Geometry

- The shape of every part is experience-based, rebuilding rotary valves gives a constant knowledge input
- Thickness is variable according to wearable zones and maximum rebuild possibilities

Big central axle in high quality steel

- Minimum deflection by high upper loading
- Minimum deflection by high pressure blowing
- Solid base for welded rotor blades
- Maximum natural pressure sealing between chambers

BUILT TO PERFORM

V-shaped entry opening

- Large fall-through opening in the middle
- Maximum strength in the corners
- Cutting effect for semi-hard products
- Product smoothly drags off

Half-underlying blow gutter

- Ensures constant carrying air
- Less chance of clogging in the event of overloading
- Preventing gag transport
- Smooth operation

Big central axle for maximum natural pressure sealing between chambers

MADE TO BUILD IN

Upper flange with dual function

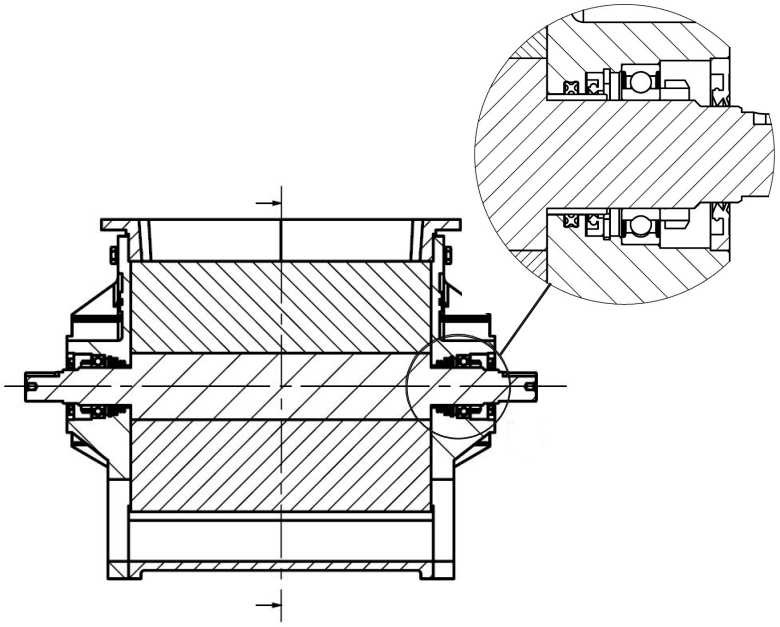
- Entry hole
- Mounting flange, not necessary for extra support

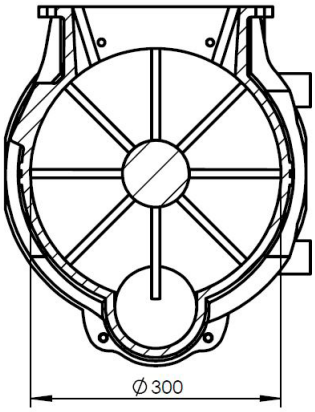
Different drive options

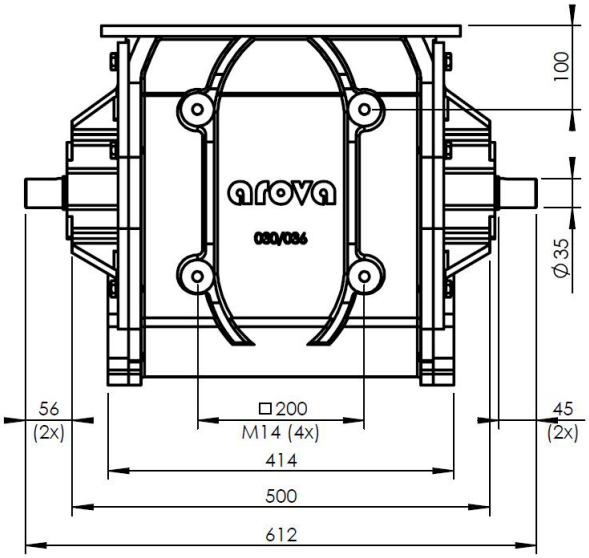
- External motor with chain (sprocket transmission, provided with 4 holes M14)
- Drive in line with coupling (provided with a centering collar Ø 144 mm and 4 mounting holes M10)

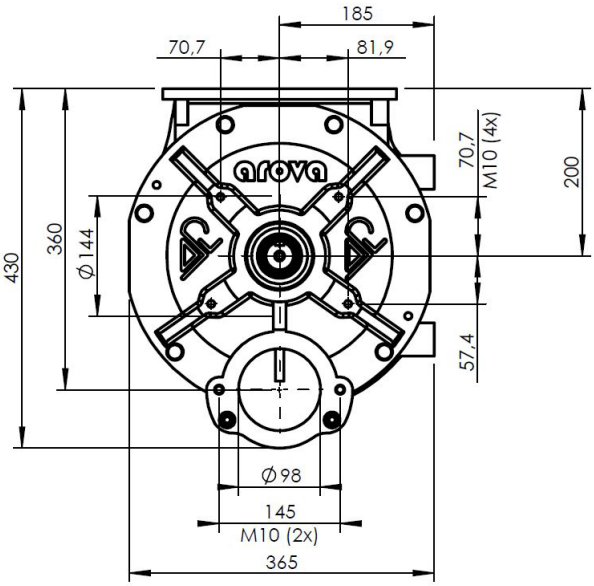
Compact with large volume

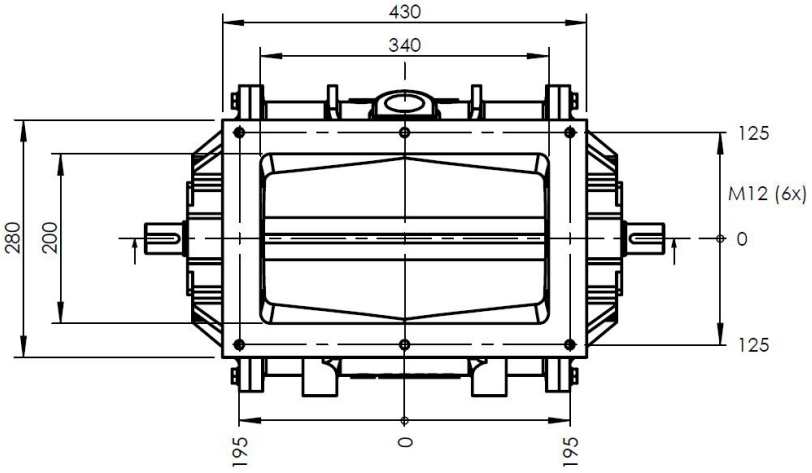
- Low installation dimensions due to a short drop-in hole
    - Axis line has a high position relative to the upper flange
    - Total installation height is low in relation to the rotor volume
- Narrow installation size
    - The compact arrangement of bearings and seals ensures a minimum installation length in relation to the rotor volume
    - Limited width of the rotary valve ensures a minimum installation width relative to the rotor volume




Ø 300

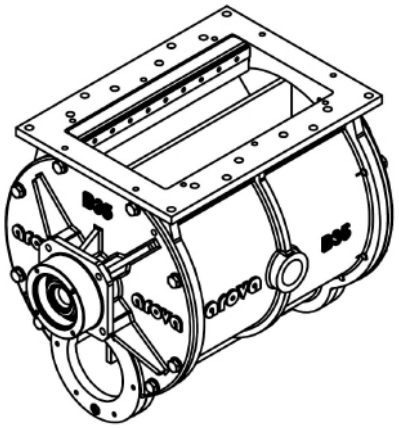

100
Ø 35
56
(2x)
□200
M14 (4x)
45
(2x)
414
500
612


185
70,7
81,9
70,7
M10 (4x)
200
430
360
Ø 144
57,4
Ø 98
145
M10 (2x)
365


430
340
125
M12 (6x)
0
125
280
200
195
0
195

PRODUCT SHEET

B35 SPECIFICATIONS 30/36 + EXTRAS



BUILT TO LAST

Outside bearings

- A gap in free environment provides extra protection
- Two extra seals go one step further in the protection of the bearings

Surface treatment Niblox on cast iron

- Longer service life. The AROVA lab tests show a doubled life cycle with abrasive products
- Anti-rust outside and especially inside. Certainty of no internal rust on cast iron

BUILT TO PERFORM

Scraper blade on rotor

- Hygroscopic products cannot build up on the wall
- Every turn, sharp teeth ensure a constant breaking action
- No possibility of jamming the rotor

Stripper on stator

- Prevents 100% filling of the rotor chamber
- Hard materials (such as pellets) cannot clamp between the rotor and the stator
- The obstruction of the rotor is prevented

Vent hole

- Decompression of the rising pressure in the chamber of the rotor
- Maximum filling capacity of light products

Softer effect due to large outlet opening Ø 125 mm

- Pressure drop due to a transition in the pipe from 100 mm to 125 mmm
- Pressure drop due to a larger rotor chamber
- Air/product volume ratio is kept under control by locally increasing the volume of the air chamber

MADE TO BUILD IN

Retract hydromotor

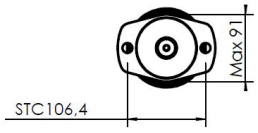
- Extremely compact assembly
- Safe, no additional shielding required
- Cheaper assembly, fewer parts, less work

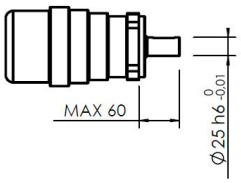
Compact geometry

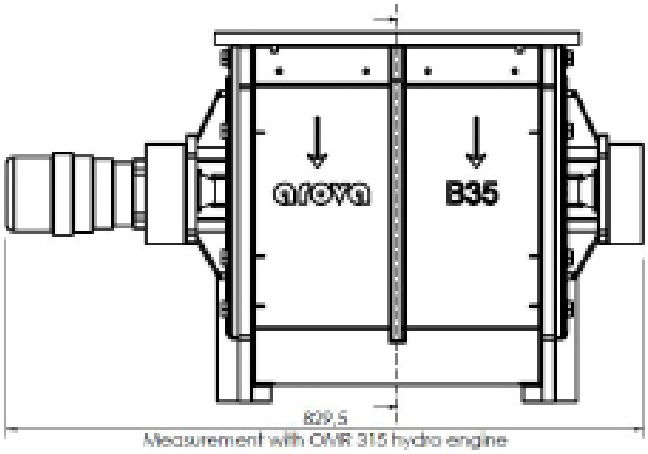
- Due to refined engineering, the ratio between installation dimensions and rotor volume is even tighter than with model 30/36
- Extremely short due to assembly of the drive
- Assembly surfaces and ribs are narrower and stronger

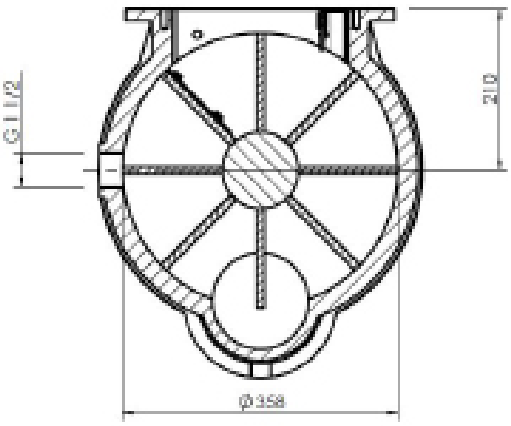
B35

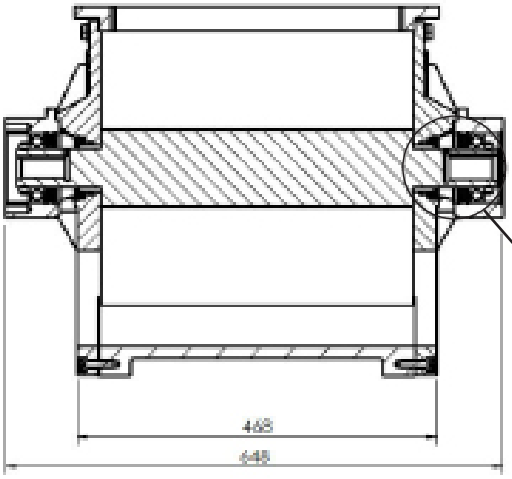
Example: Danfoss OMR 315 hydro engine with A2 flange

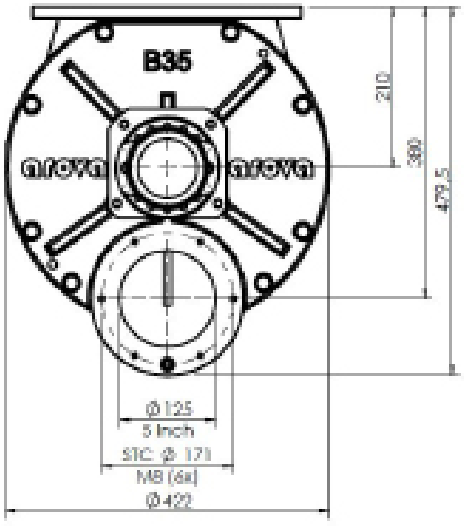


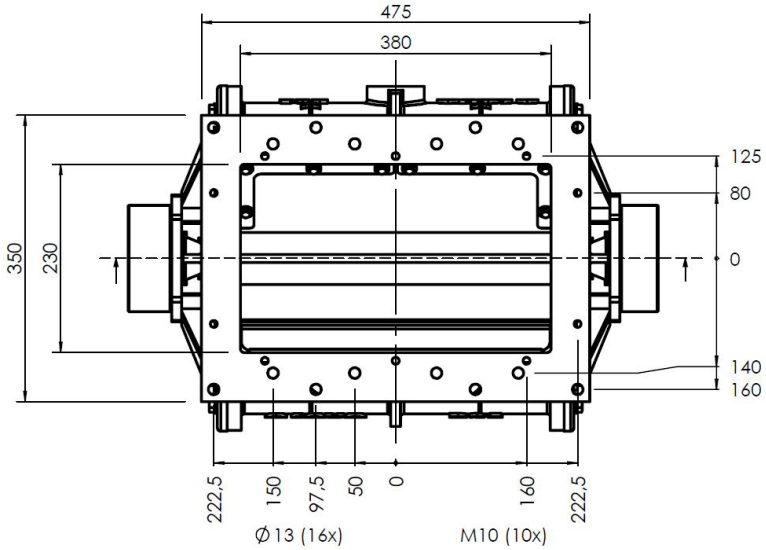


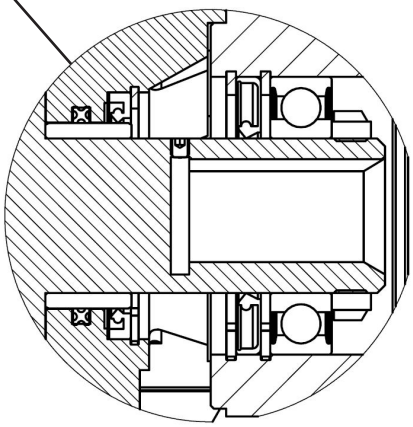






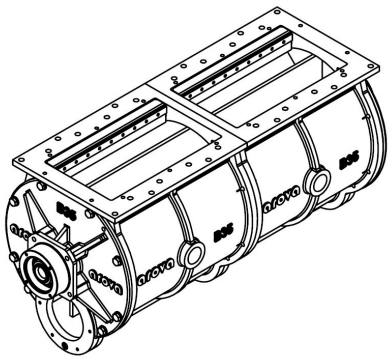






PRODUCT SHEET

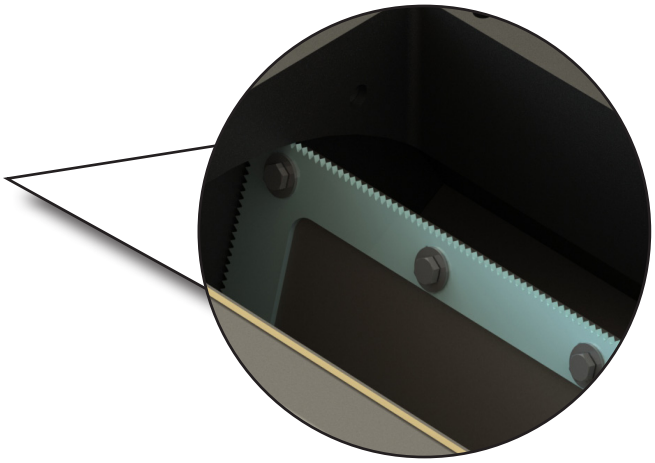
B70 SPECIFICATIONS B35 + EXTRAS



= Two times B35 mounted together
= Two times maximum advantages

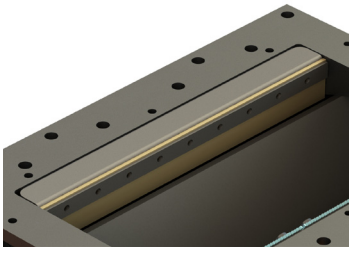
- Two vent holes
- Double product volume with identical blowing connection
- Wide access hole, larger part of the trailer is covered
- Compact with two hydraulic engines in line

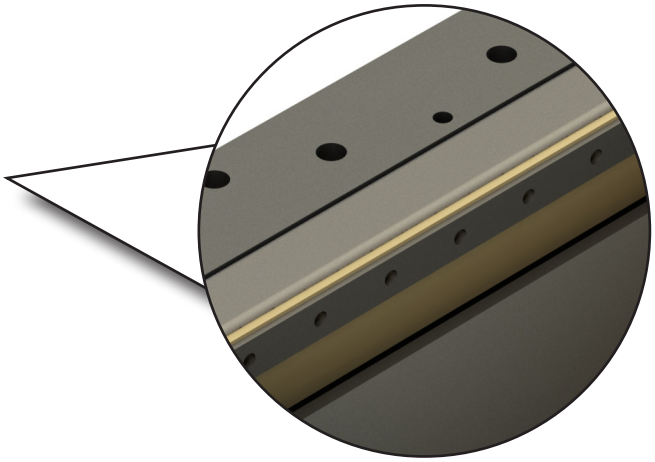
FEATURES B35 AND B70



Scraper blade

- Installed on rotor blade
- Hygroscopic products cannot build up on the wall
- At each turn of the rotor, the sharp teeths of the scraper ensure a constant breaking action
- No possibility of jamming the rotor

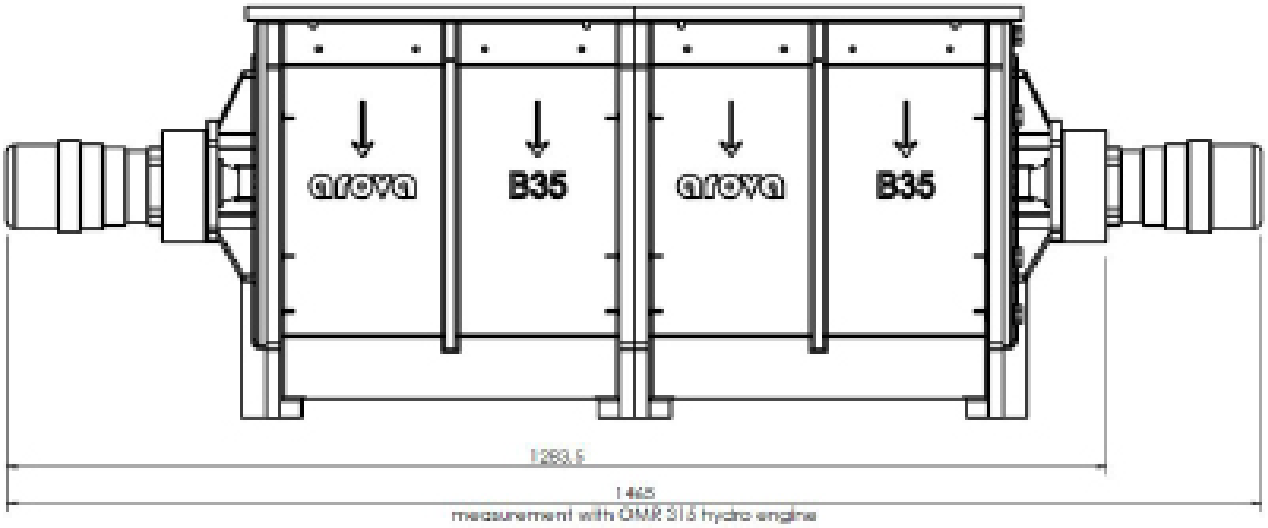


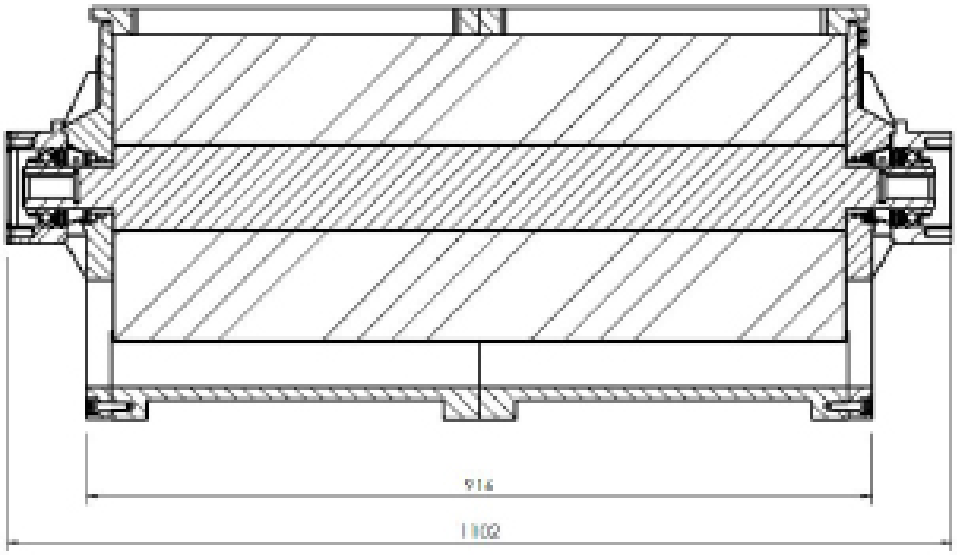


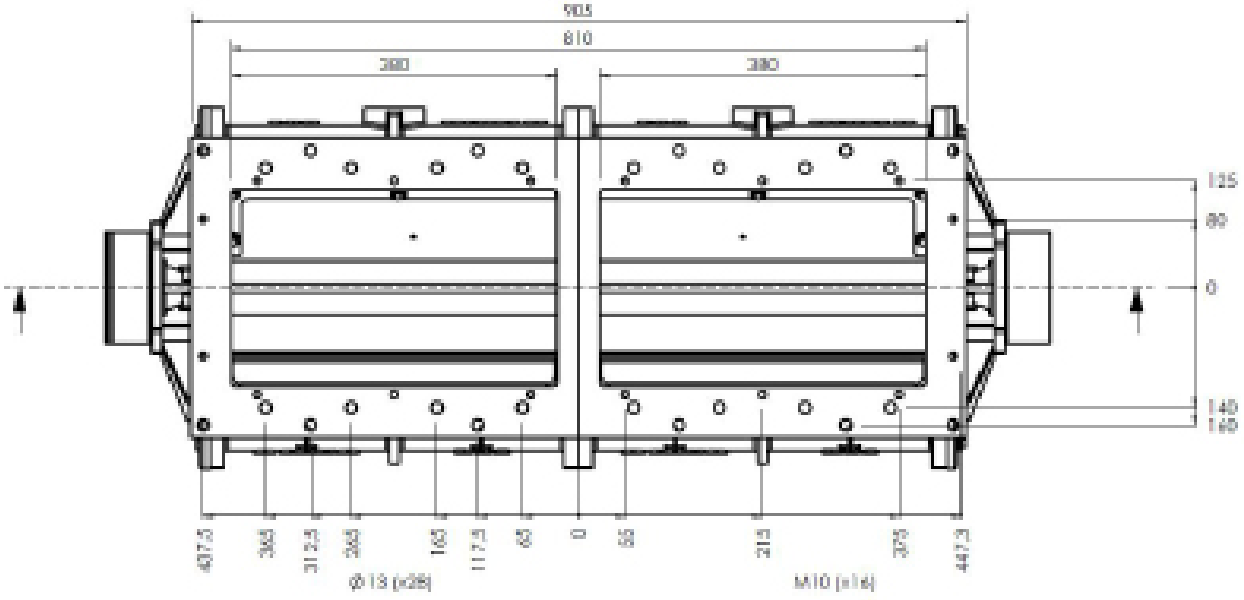
Stripper

- Installed on the stator
- Prevents 100% filling of the rotor chamber
- Hard materials (such as pellets) cannot clamp between the rotor and the stator
- The obstruction of the rotor is prevented

B70


arova
B35
arova
B35
1283.5
1465
measurement with OMR 315 hydro engine


916
1102


905
810
380
380
135
80
0
140
169
407.5
365
312.5
260
165
117.5
65
0
65
215
370
447.5
Ø13 (x28)
M10 (x16)

all rotary valves

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