



PAM

PRODUCT BROCHURE

ROTARY VALVE

WWW.PAM.DK

SPECIALISTS TRANSPORT AND HANDLING OF BULK GOODS

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UL-series:

- Rotary valves of the UL type are used, among other equipment, in pneumatic conveying systems. The UL rotary valve is PAM's highest standard for rotary valves and is ideal for use as an Air-lock.
- The valve is supplied with the highest achievable tolerances (within 1/100 mm), and they are all machined according to a pre-agreed differential temperature, which then provides the clearance in the valve. This always ensures the tightest valve.
- The UL series is available with the following certifications: **ATEX 0/20 & 1/21 & 2/22**, and **flameproof** according to EN 15089.
- UL rotary valves are manufactured in a broad variety of steels, including stainless steel, acid-resistant stainless steel, carbon steel, and cast iron.
- If the valve is made of stainless steel, it can be made to fulfill the **food grade standard (EC) 1935/2004 and FDA**.
- Differential Temperature: Up to 450°C.
- The internal parts of the valve can be protected against wear, for example, by hardening, using wear-resistant steel, or ceramic coatings.
- Rotors are available with fixed or adjustable blades, and comes in wide range of designs, including wear-resistant material, grinded blades, cam blades, "concave" blades, or rubber blades.
- The rotary valve is driven by a hollow shaft gear or by a clutch arrangement or a chain drive.
- The UL series is suitable for critical applications where tightness and/or robustness is a requirement.
- This brochure shows the standard configurations. Upon request, they can also be offered with other configurations.

The naming of the rotary valves has the following reference:

Litres/rotation Rotor diameter [mm]

UL 15/300

UL-series:

Available models:

5/220

9/270

15/300

28/360

48/420

100/500

200/620

300/650

500/820

UL SERIES

Material options:

Carbon steel/Cast iron

Stainless steel



Stainless versions are suitable for food handling in accordance with FDA and food contact materials (EC) 1935/2004

Inlet- and outlet options

Squared inlet and outlet

Round inlet and outlet

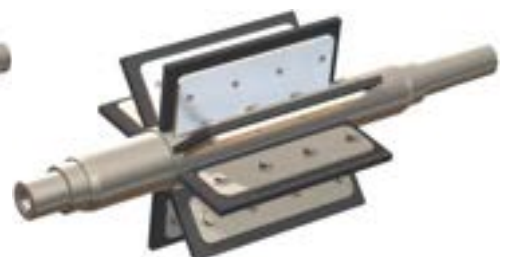


Rotor options

Closed

Open

Rubber

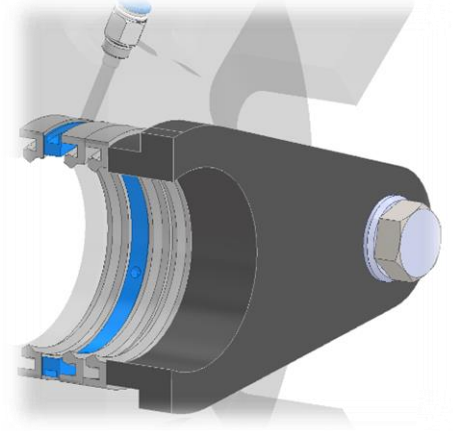
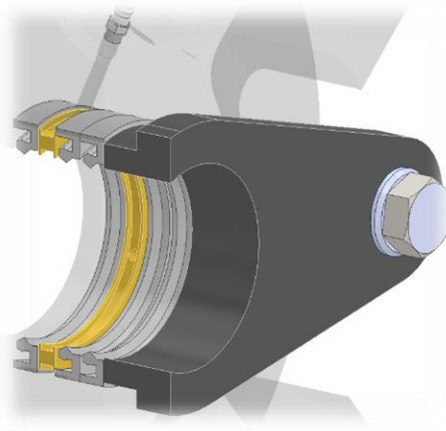
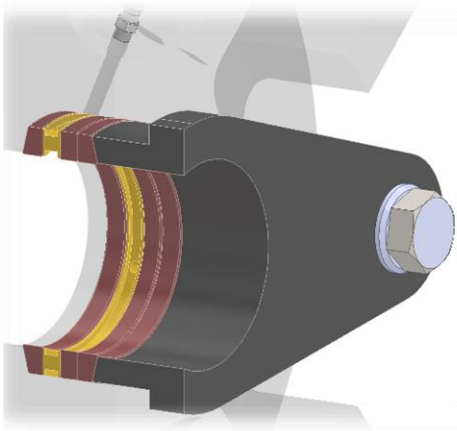


UL SERIES

Options for shaft sealings

Packing cord with grease lubrication Radial shaft seal with grease lubrication

Air



Options for gear motors

Hollow shaft drive

Direct drive, foot mounted

Chain drive



Accessories

Speed sensor

Blow pipe for pneumatic transport



Certificates

ATEX, Flame Proof & FDA



ATEX
DUST 20/22
GAS 0/2

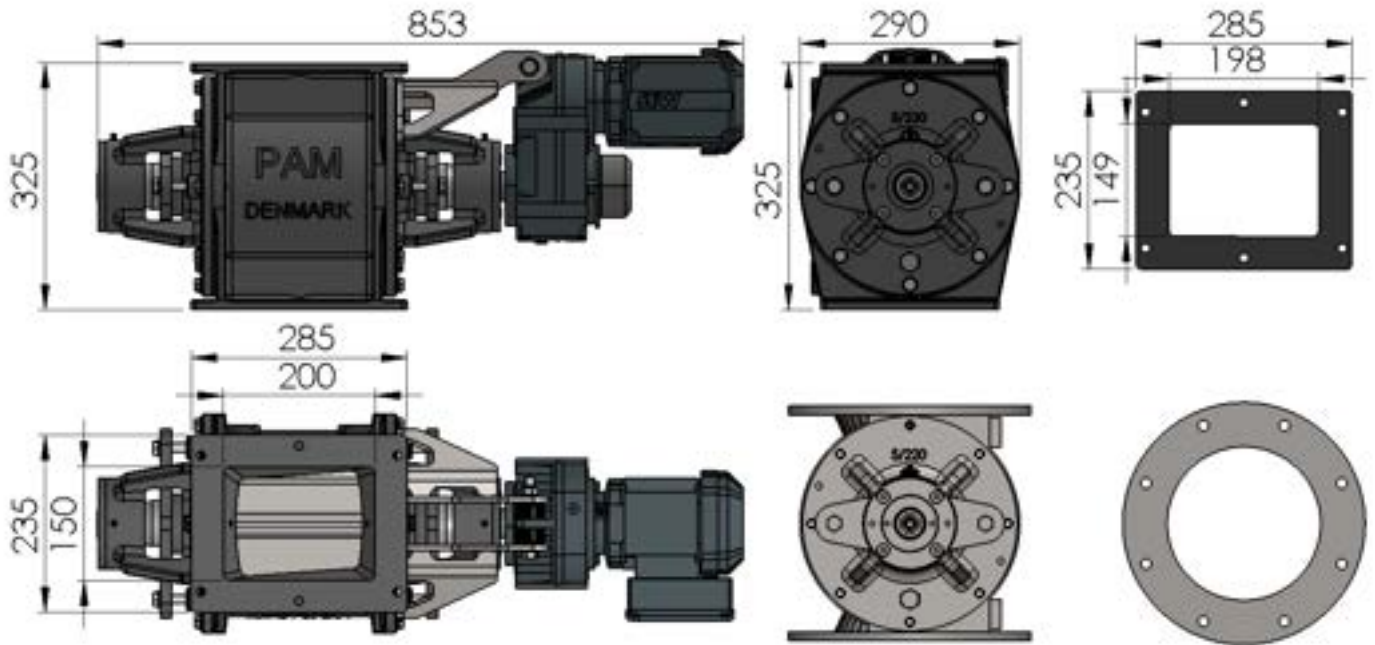


FLAME PROOF
EXPLOSION PROOF
EN15089



UL 5/220

Dimensions

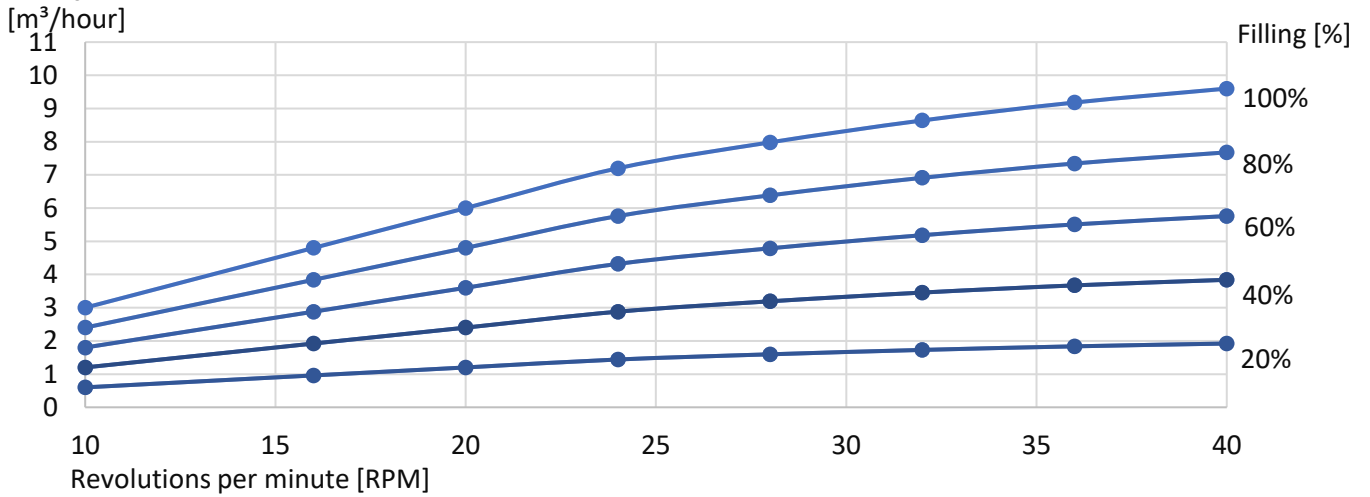


Performance

Capacity vs. RPM at various filling degrees

Weight: 70 kg

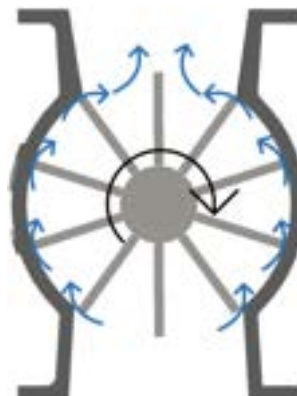
UL 5/220



Leakage rate

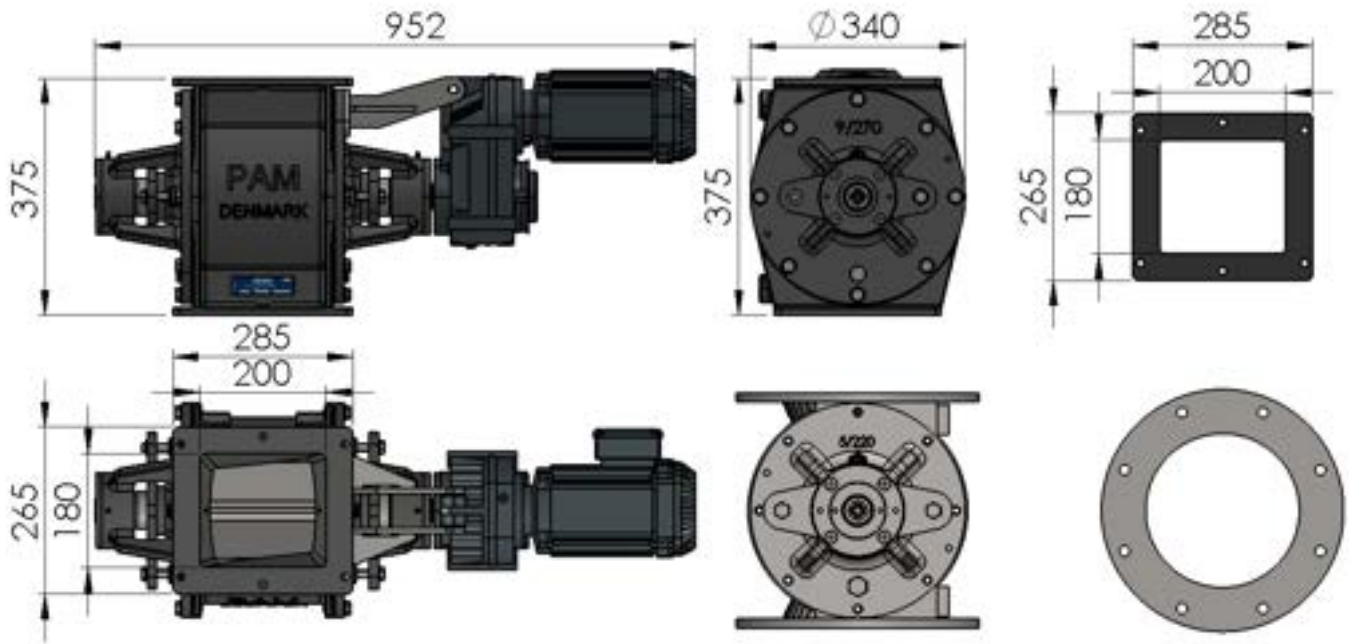
Estimated leakage at various pressure differentials (Subject to typographical errors)

ΔP [mbar]	Leakage [L/min]
200	447
400	841
600	1072



UL 9/270

Dimensions

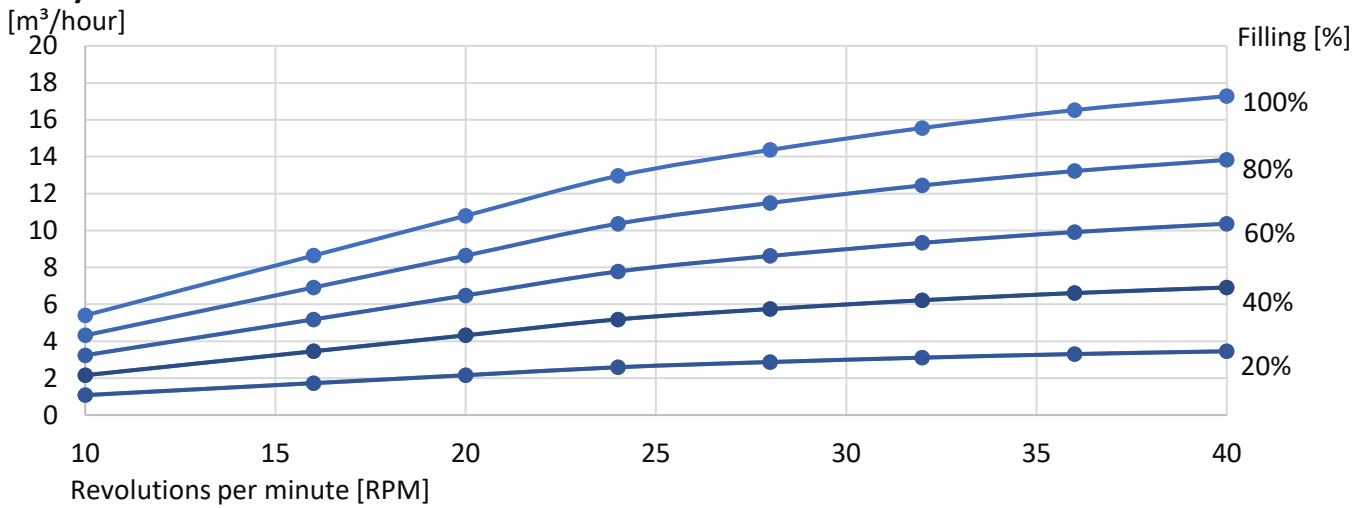


Performance

Capacity vs. RPM at various filling degrees

Weight: 95 kg

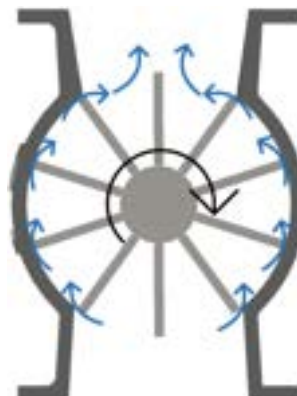
UL 9/270



Leakage rate

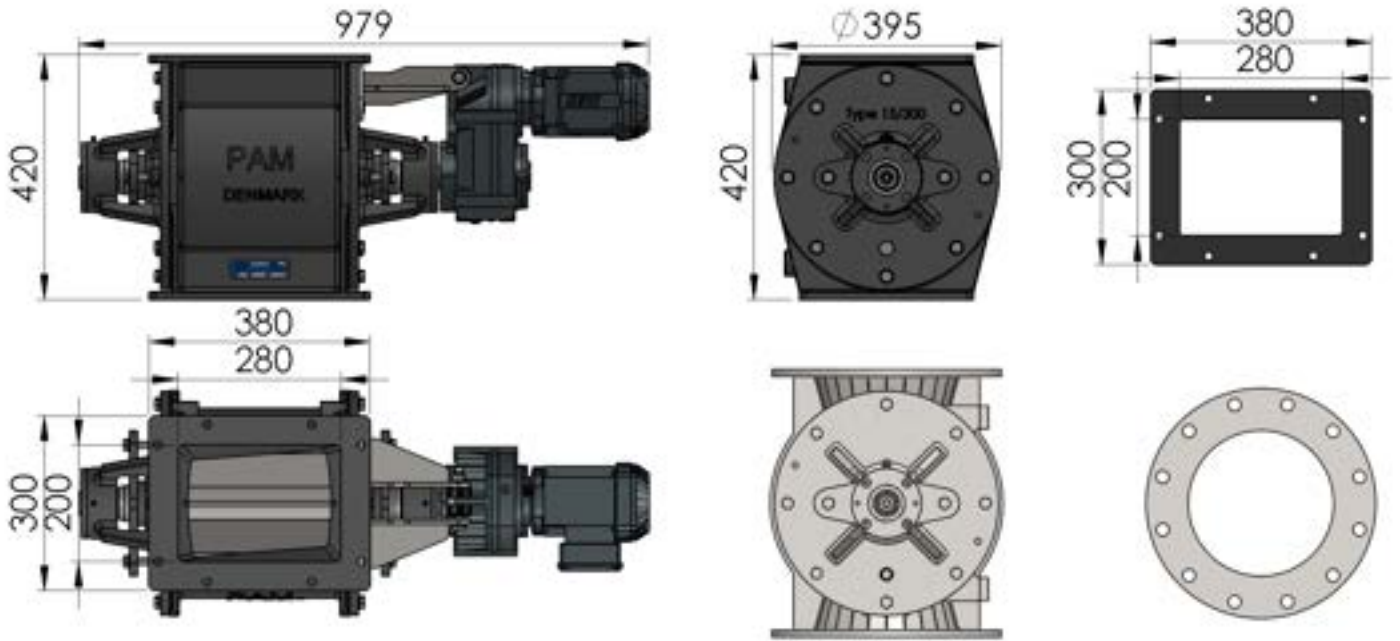
Estimated leakage at various pressure differentials (Subject to typographical errors)

ΔP [mbar]	Leakage [L/min]
200	565
400	922
600	1130



UL 15/300

Dimensions



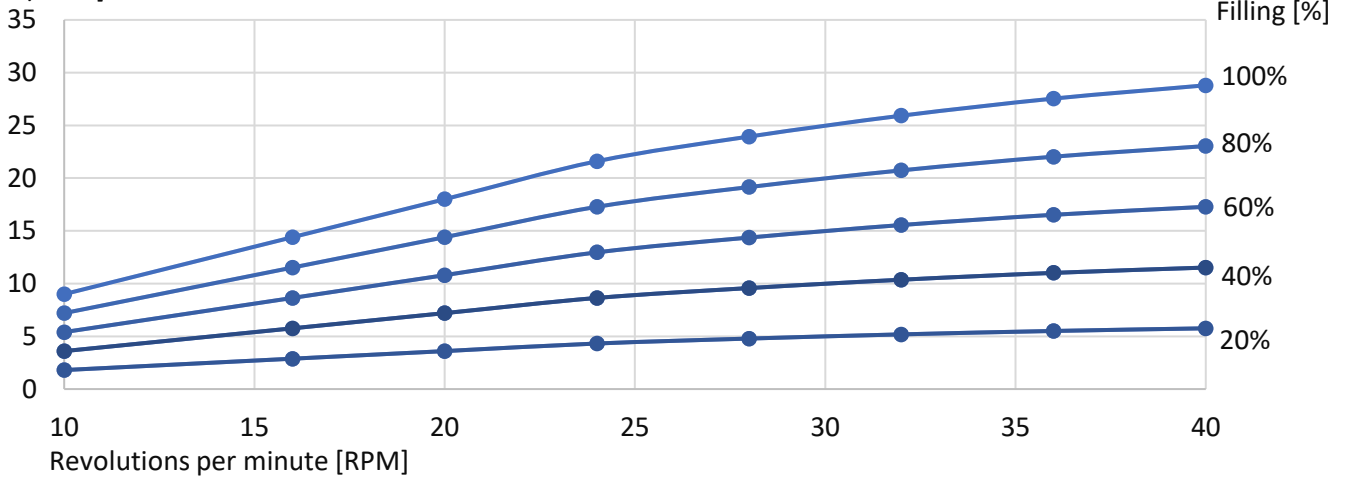
Performance

Capacity vs. RPM at various filling degrees

Weight 125 kg

UL 15/300

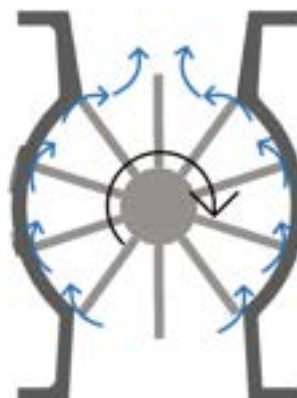
[m³/hour]



Leakage rate

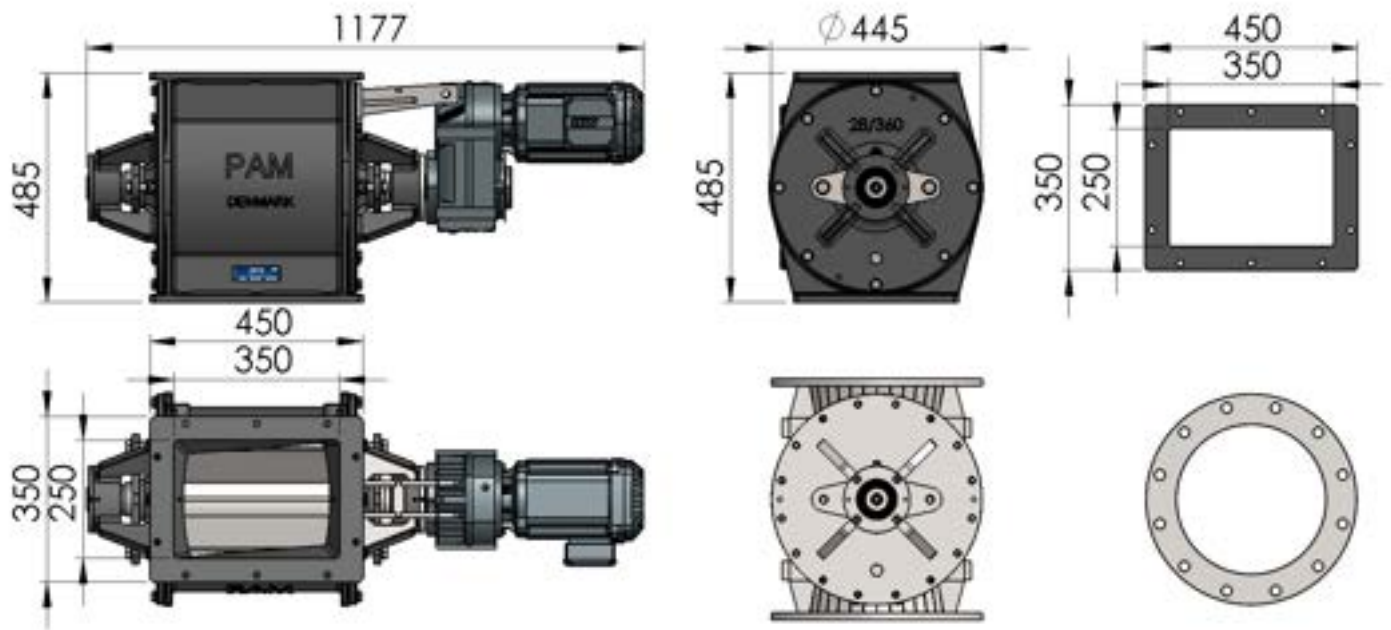
Estimated leakage at various pressure differentials (Subject to typographical errors)

ΔP [mbar]	Leakage [L/min]
200	853
400	1257
600	1493



UL 28/360

Dimensions

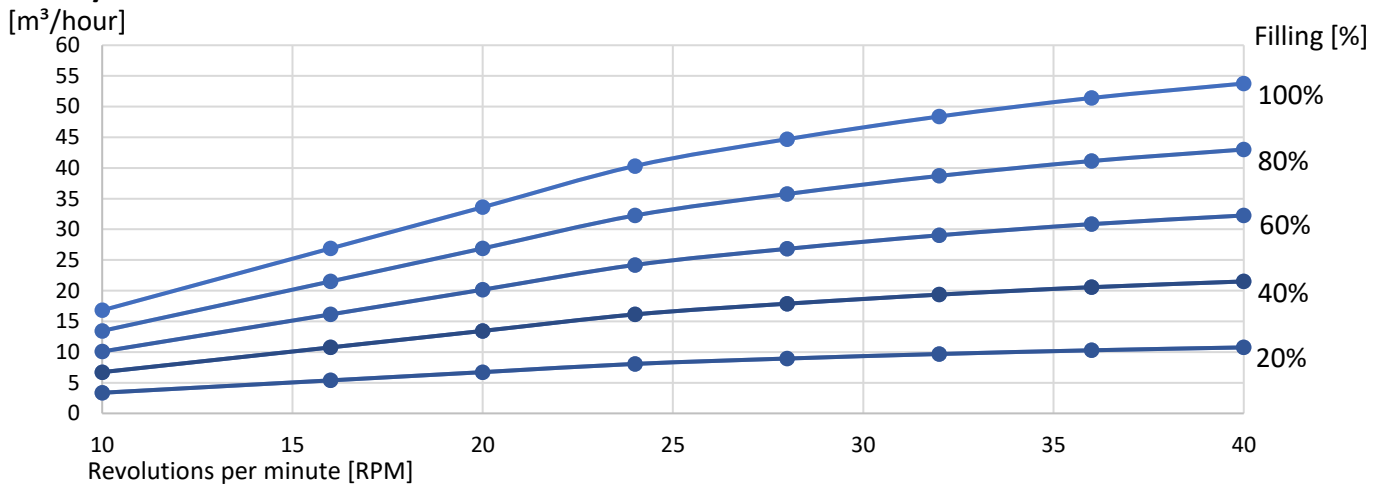


Performance

Capacity vs. RPM at various filling degrees

Weight: 230 kg

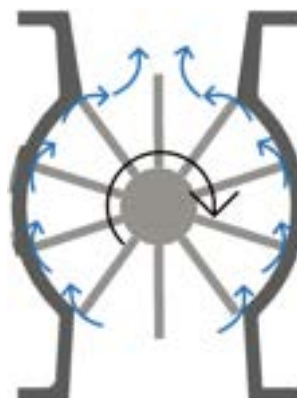
UL 28/360



Leakage rate

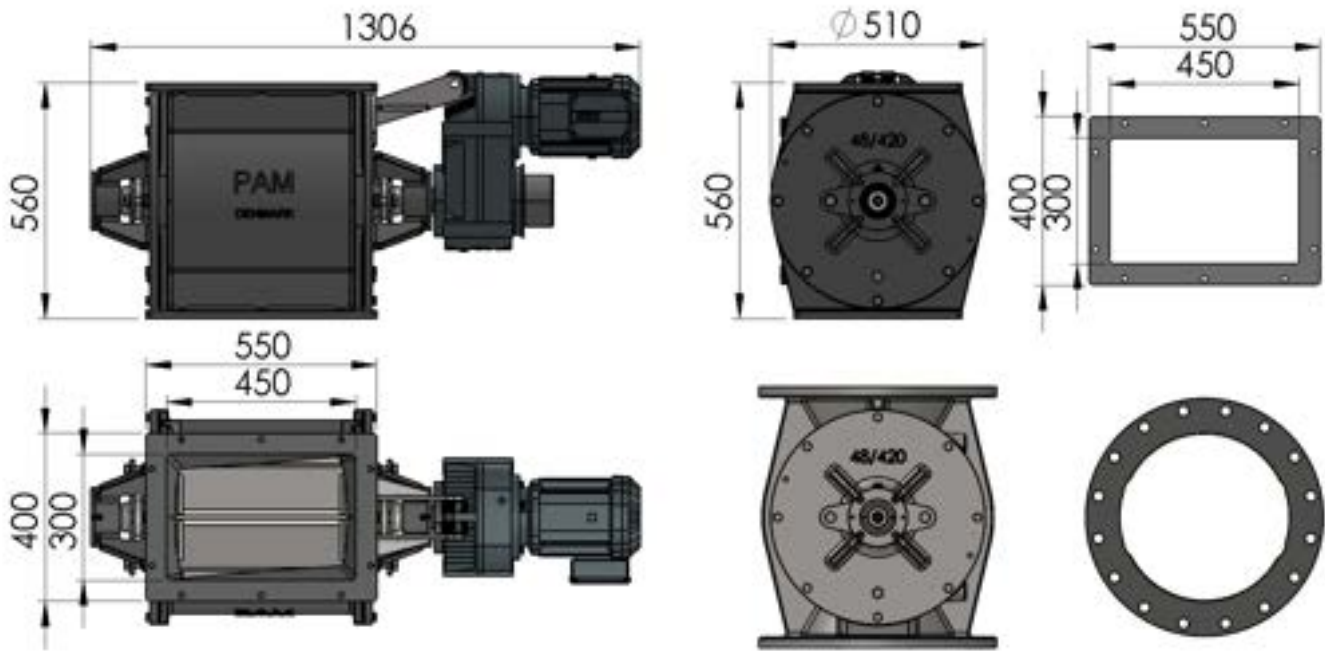
Estimated leakage at various pressure differentials (Subject to typographical errors)

ΔP [mbar]	Leakage [L/min]
200	910
400	1457
600	1777



UL 48/420

Dimensions

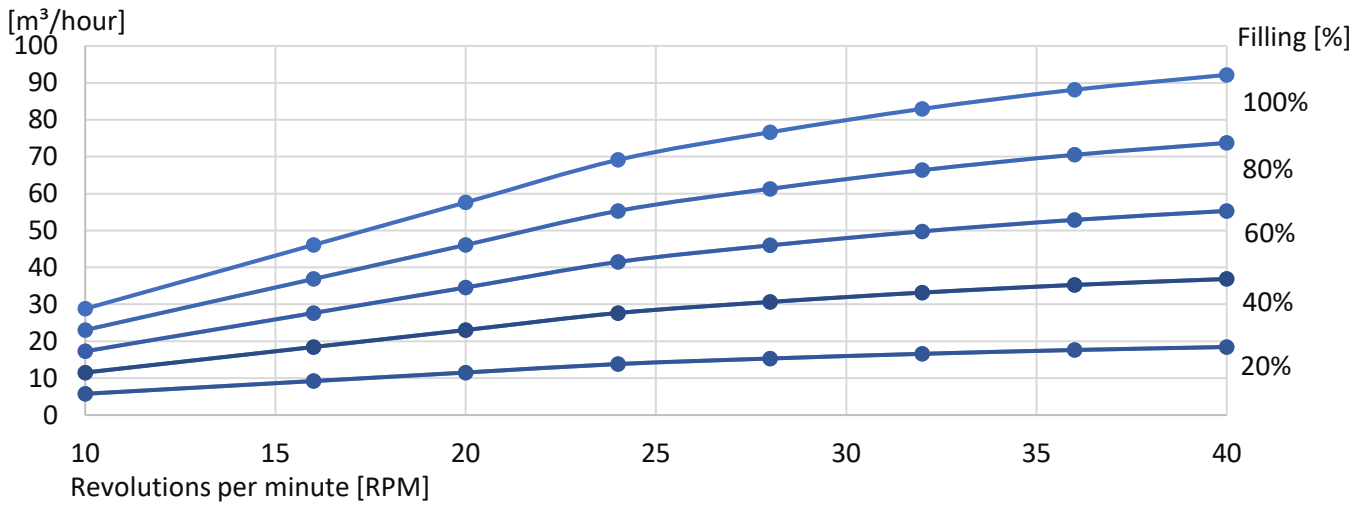


Performance

Capacity vs. RPM at various filling degrees

Weight: 295 kg

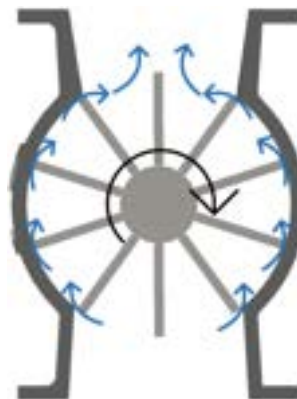
UL 48/420



Leakage rate

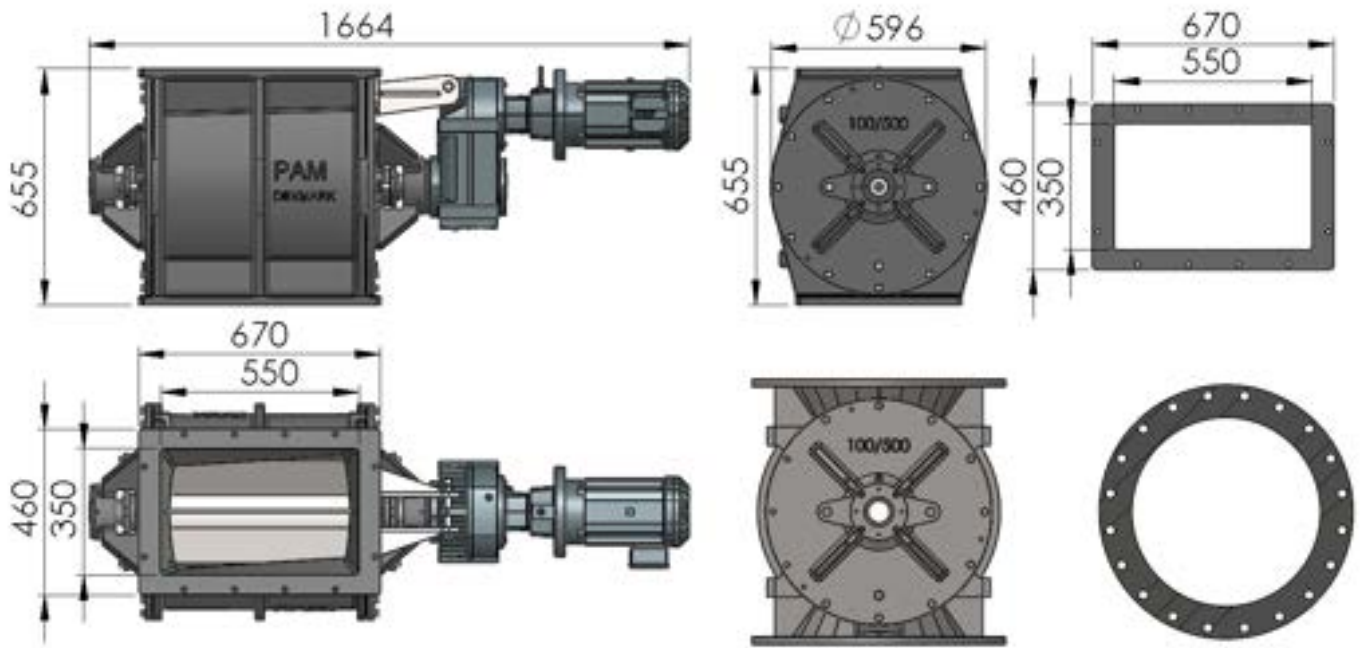
Estimated leakage at various pressure differentials (Subject to typographical errors)

ΔP [mbar]	Leakage [L/min]
200	1183
400	1929
600	2365



UL 100/500

Dimensions

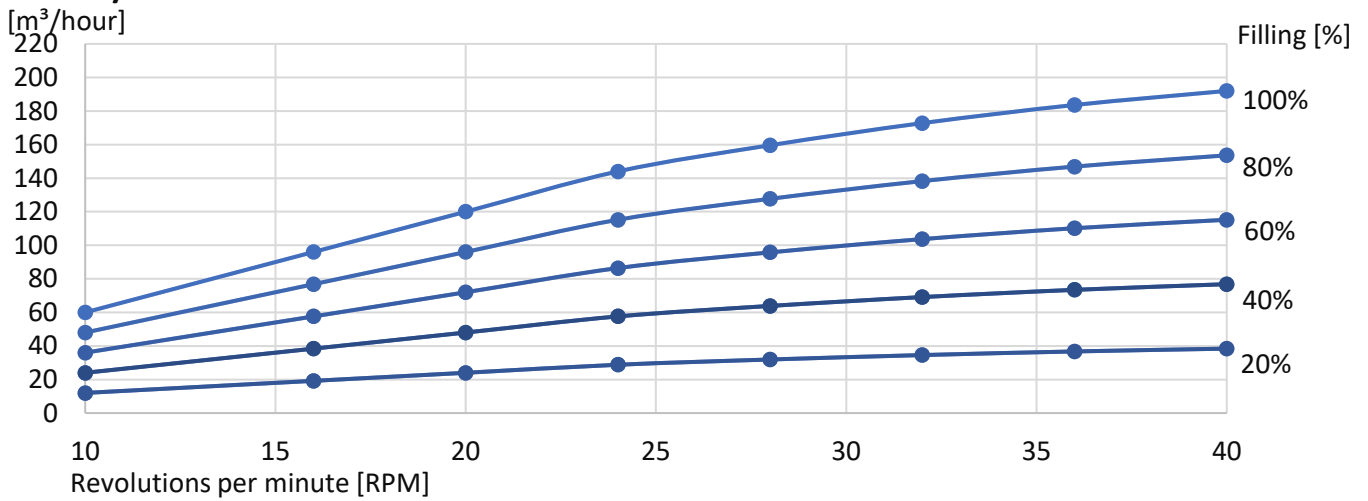


Performance

Capacity vs. RPM at various filling degrees

Weight: 450 kg

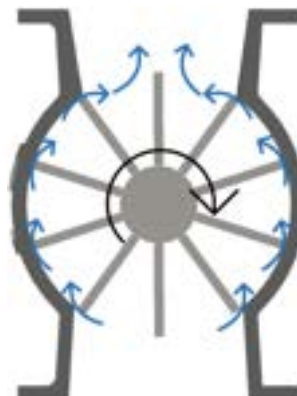
UL 100/500



Leakage rate

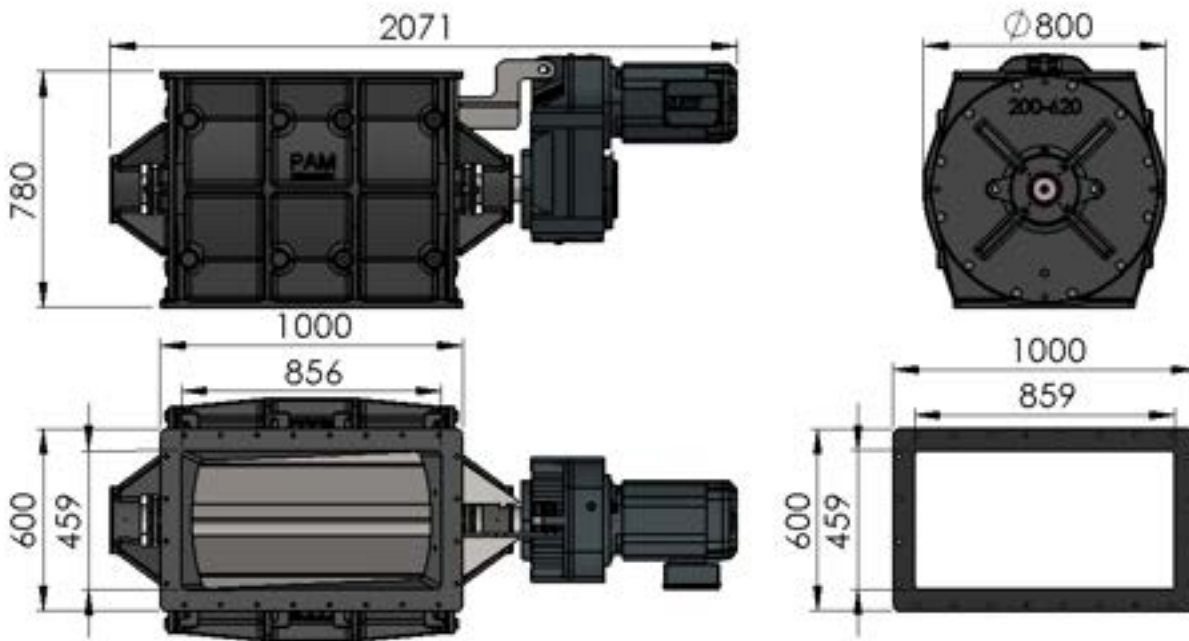
Estimated leakage at various pressure differentials (Subject to typographical errors)

ΔP [mbar]	Leakage [L/min]
200	1580
400	2328
600	2765



UL 200/620

Dimensions

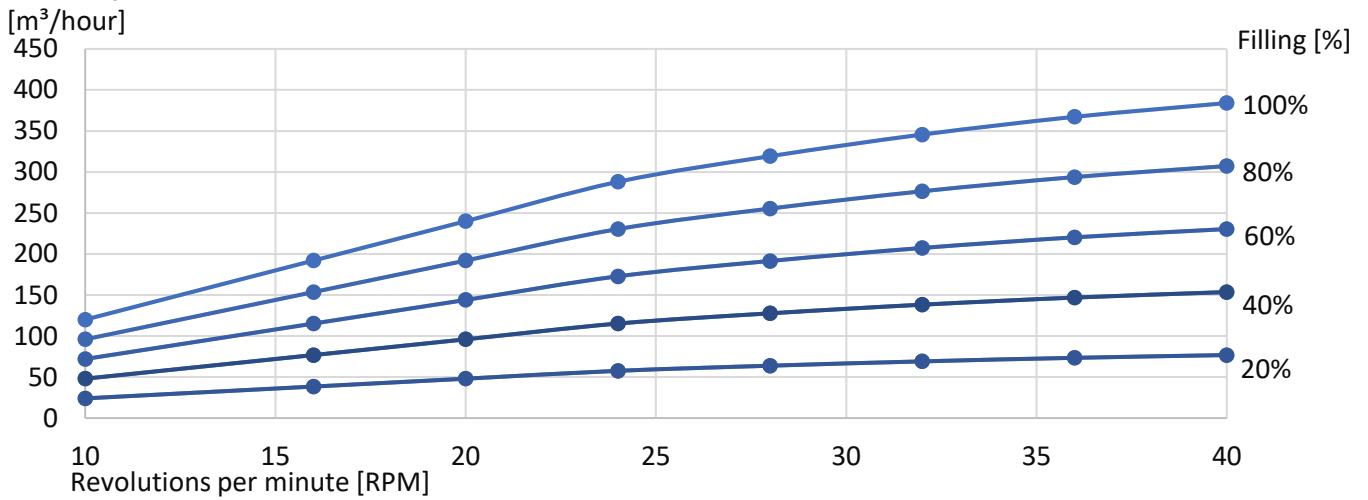


Performance

Capacity vs. RPM at various filling degrees

Weight: 1125 kg

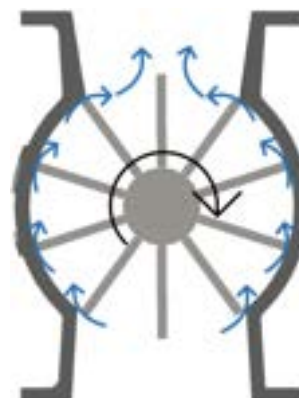
UL 200/620



Leakage rate

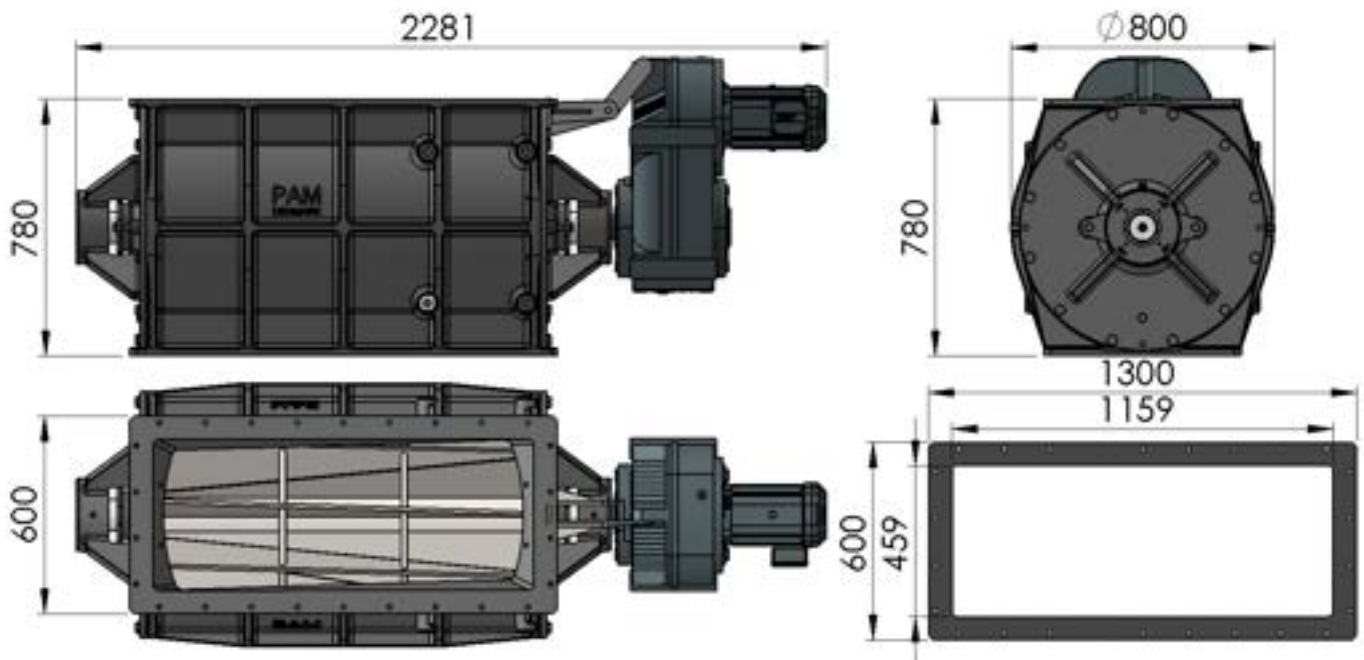
Estimated leakage at various pressure differentials (Subject to typographical errors)

ΔP [mbar]	Leakage [L/min]
200	1960
400	2887
600	3429



UL 300/650

Dimensions

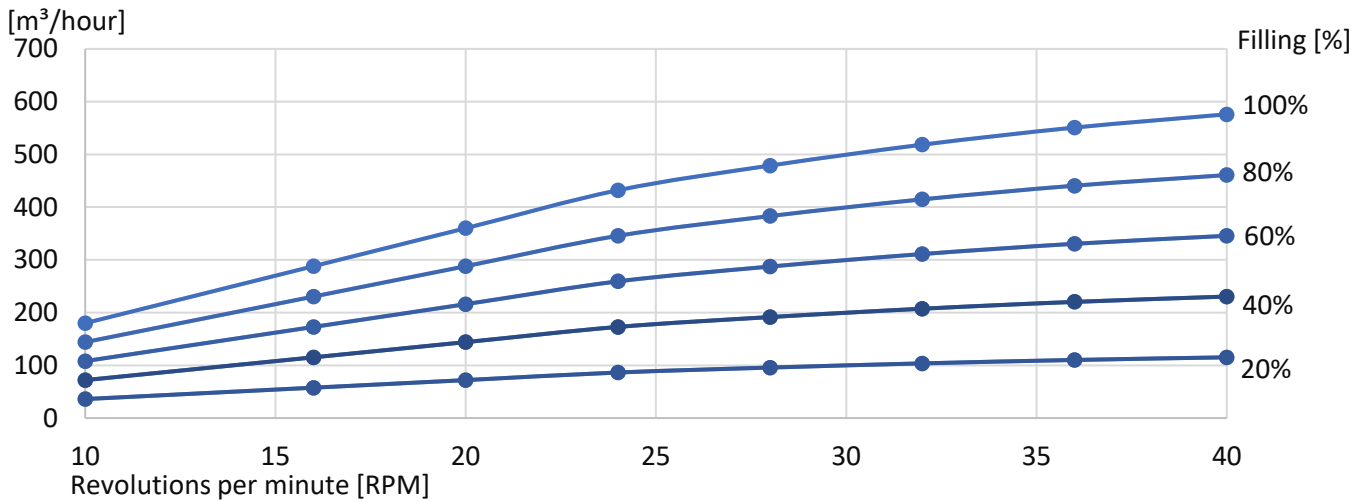


Performance

Capacity vs. RPM at various filling degrees

Weight: 1380 kg

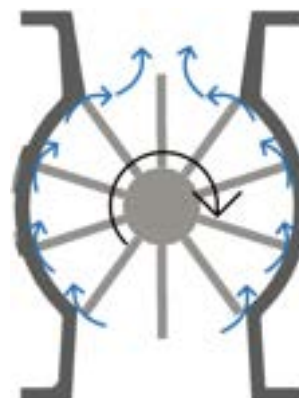
UL 300/650



Leakage rate

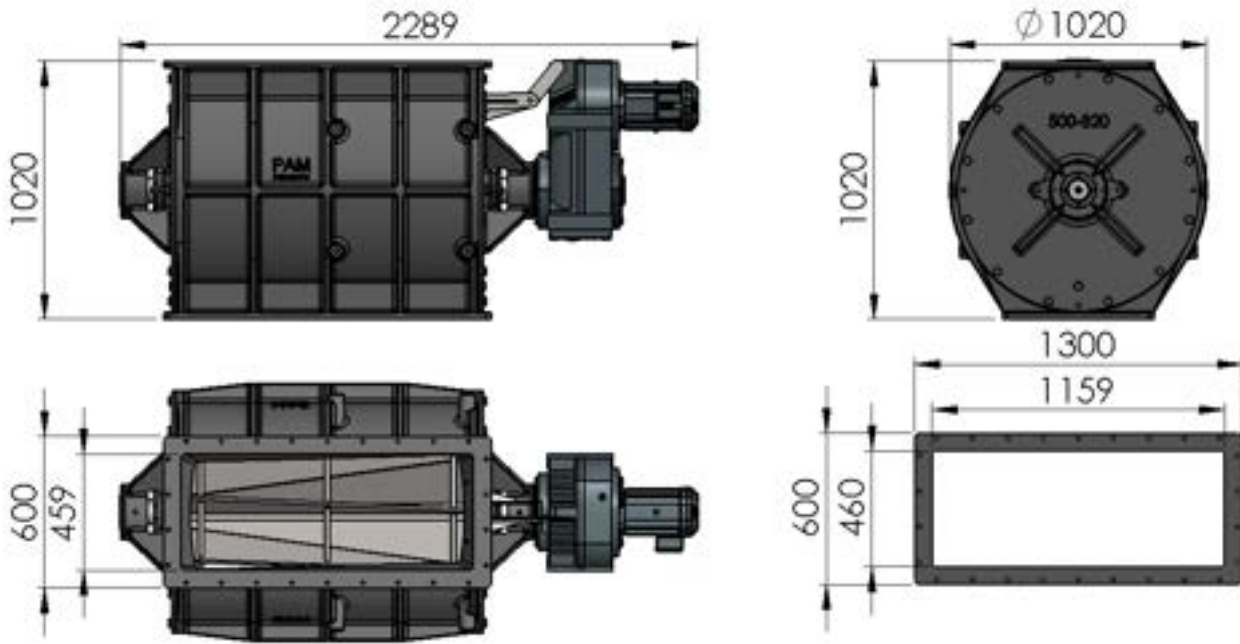
Estimated leakage at various pressure differentials (Subject to typographical errors)

ΔP [mbar]	Leakage [L/min]
200	2055
400	3026
600	3595



UL 500/820

Dimensions

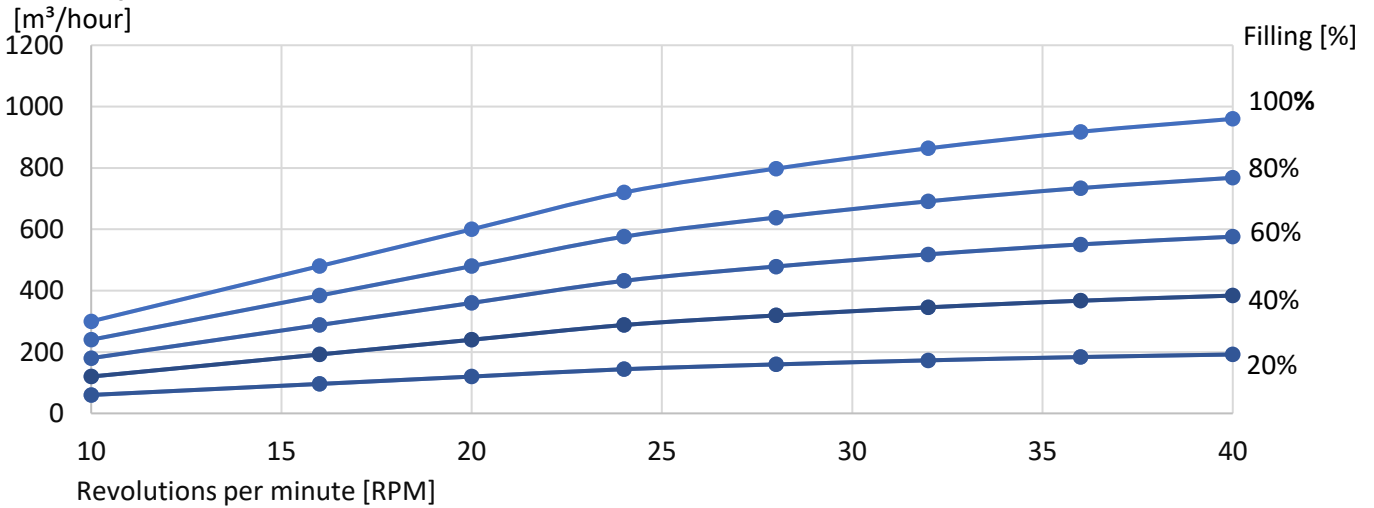


Performance

Capacity vs. RPM at various filling degrees

Weight: 2000 kg

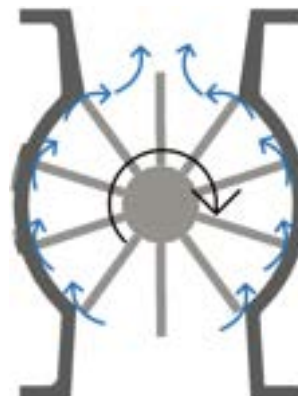
UL 500/820



Leakage rate

Estimated leakage at various pressure differentials (Subject to typographical errors)

ΔP [mbar]	Leakage [L/min]
200	2592
400	3818
600	4535



SCUL-series:

- This self-cleaning rotary valve is designed with a rotating scraper at the bottom. As it rotates synchronously with the upper rotor, all sticky material is continuously scraped away from the upper rotor. This maintains the functionality of the valve, even when working with sticky media.
- The self-cleaning rotary valve is developed by PAM.
- Click here to see how it works: https://pam.dk/wp-content/uploads/2023/01/SCUL_VIDEO_1.mp4
- The valve is delivered with the highest achievable tolerances (within 1/100 mm), and all parts are calibrated to a predetermined temperature difference, which then provides correct clearance in the valve. This ensures that the tightest seal is always achieved.
- SCUL valves are manufactured in stainless steel, stainless acid-resistant steel, and carbon steel. When it's made in stainless steel, the valve can be supplied in accordance with **food grade standards (EC) 1935/2004 and FDA regulations**.
- Temperature difference: Up to 450°C. The SCUL series is suitable for critical applications where tightness and/or robustness are required.
- Read more at <https://pam.dk/en/products/rotary-valves/drop-through-selfcleaning/>

The naming of the rotary valves has the following reference:

SCUL 15/300

Litres/rotation Rotor diameter [mm]

SCUL-series:

Models:

SCUL 4/220

SCUL 7/270

SCUL 11/300

SCUL 20/360

SCUL 35/420

SCUL 73/500

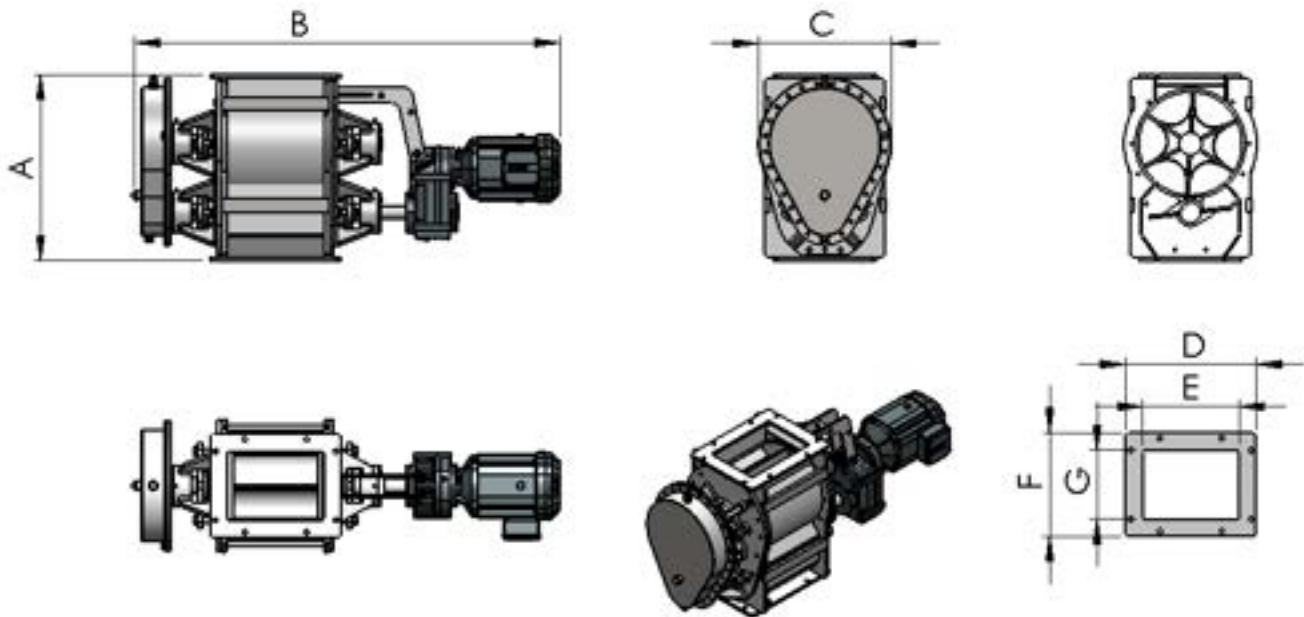
SCUL 165/620

SCUL 224/650

SCUL 373/820

SCUL-series Self-cleaning rotary valves

Sizes and dimensions



SCUL version	A	B	C	D	E	F	G
SCUL 4/220	391	828	296	286	200	246	175
SCUL 7/270	452	952	340	285	200	265	180
SCUL 11/300	506	1235	385	380	280	300	200
SCUL 20/360	584	1177	445	450	350	350	250
SCUL 35/420	674	1306	510	550	450	400	300
SCUL 73/500	789	1664	596	670	550	460	350
SCUL 165/620	939	1593	880	900	644	760	554
SCUL 224/650	939	2281	800	1300	1159	600	459
SCUL 373/820	1228	2289	1020	1300	1159	600	460

(Subject to typographical errors)

Performance

Capacity vs. RPM at various filling degrees follows the provided data for the corresponding UL-version as indicated in the below table:

SCUL version:	Corresponding UL version:
SCUL 4/220	UL 5/220
SCUL 7/270	UL 9/270
SCUL 11/300	UL 15/300
SCUL 20/360	UL 28/360
SCUL 35/420	UL 48/420
SCUL 73/500	UL 100/500
SCUL 165/620	UL 200/620
SCUL 224/650	UL 300/650
SCUL 373/820	UL 500/820

Leakage-rate

Leakage at various pressure differentials follows the provided data for the corresponding UL-version as indicated in the above table.

EasyClean-series

- Pass-through rotary valve designed for easy inspection and cleaning.
- Using 4 screws, you can quickly remove one end cover and pull the rotor out of the housing. This gives you easy access to cleaning/inspecting the rotor and housing, with minimal efforts.
- Developed by PAM
- The EasyClean version is a rotary valve constructed in stainless steel which is suitable for food, as it can be easily opened by sliding the rotor out of the housing for cleaning purposes. It is also suitable for other industries where frequent inspection and cleaning is a priority.
- The rotary valve is made with the highest achievable tolerances (within 1/100 mm) and it is machined to a pre-agreed differential temperature which then gives the clearance in the rotary valve. As a result, the rotary valve becomes as tight as possible.
- The EasyClean rotary valve is made of stainless steel and is supplied in accordance with food standard (EC) 1935/2004 and FDA.
- Difference temperature: Up to 400°C
- This brochure shows the standard configurations only. By contacting PAM, they can also be offered to specific customer needs.
- The naming of the rotary valves has the following reference:

Easy Clean series

Models:

5/220

9/270

15/300

28/360

48/420

100/500

200/620

300/650

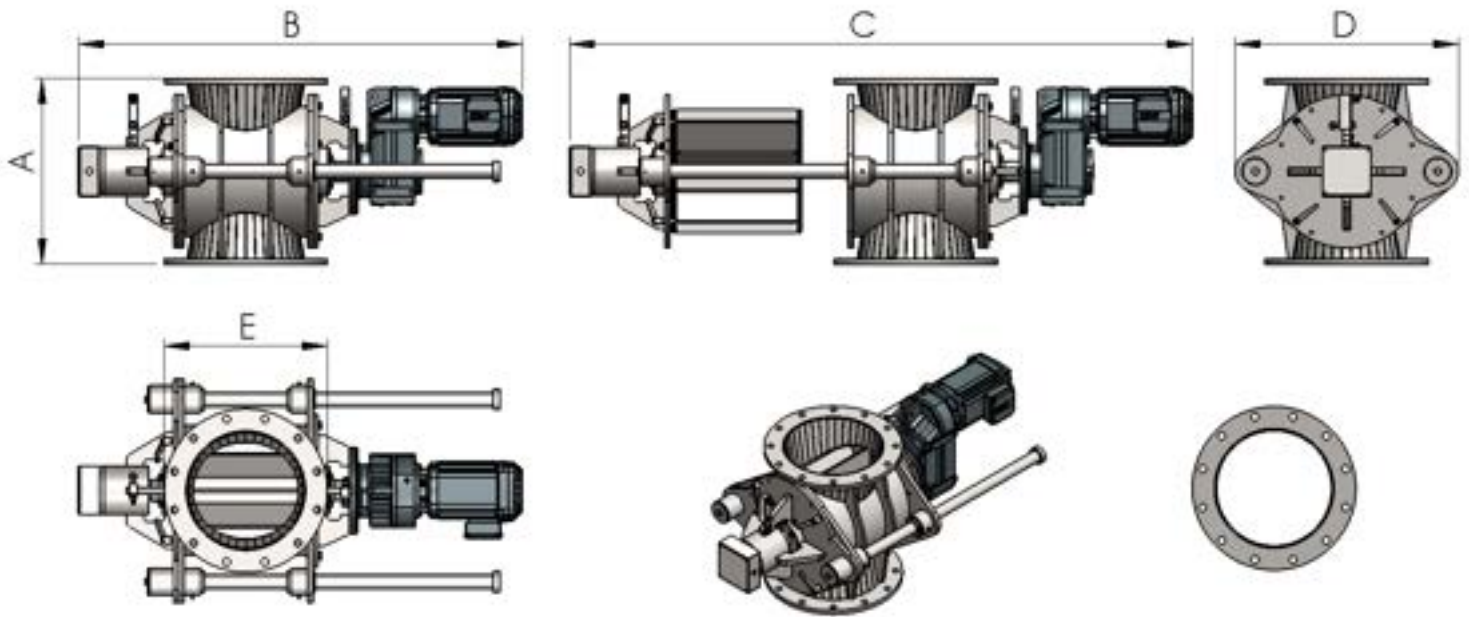
500/820

EasyClean UL 28/360

Litres/rotation Rotor Diameter [mm]

EasyClean-series

Sizes and dimensions



Easy Clean version:

	A	B	C	D	E
UL 5/220	330	788	1106	397	290
UL 9/270	405	968	1358	488	350
UL 15/300	450	1075	1508	542	400
UL 28/360	540	1290	1810	650	475
UL 48/420	630	1505	2112	758	550
UL 100/500	750	1792	2514	903	675
UL 165/620	930	2222	3117	1119	825
UL 300/650	975	2329	3268	1174	850
UL 500/820	1230	1230	1230	1230	1250

(Subject to typographical errors)

Performance

Capacity vs. RPM at various filling degrees follows the provided data for the corresponding UL-version as indicated in the below table:

Capacity and performance is identical to the UL-rotary valves with the corresponding numbering.

Leakage-rate

The leakage rate through these rotary valves are identical to the UL-rotary valves with the corresponding model numbering.

GB-series:

- Blow-through rotary valve suitable for dosing into pneumatic transport systems. The rotary valve is made of cast iron or stainless material.
- Developed by PAM.
- It is ideal for direct dosing into pneumatic conveying systems.
- The rotary valve is supplied with the highest achievable tolerances (within 1/100 mm) and they are all machined to a pre-agreed differential temperature which then gives the clearance in the rotary valve. As a result, the tightest possible clearance in the rotary valve is achieved.
- The GB series is available with the following certificates: ATEX 0/20 & 1/21 & 2/22.
- The GB series are manufactured in stainless steel, in stainless acid-resistant steel and in cast iron. If the rotary valve is made of stainless steel, it can be delivered in accordance with food standard (EC) 1935/2004 and FDA.
- Differential temperature: Up to 400 °C.
- The internal parts of the lock can be protected against wear, e.g. via hardening, use of wear-resistant steel or ceramic coatings.
- Rotors are supplied in wear-resistant material, with ground blades, cam blades, "concave" blades or rubber blades.
- The rotary valve is operated with a hollow shaft gear or via a chain drive.
- Read more at <https://pam.dk/>
- The naming of the locks must be understood as the following example:

GB 19/300

Liter/omdrejning

Rotor Diameter [mm]

GB-series:

Models:

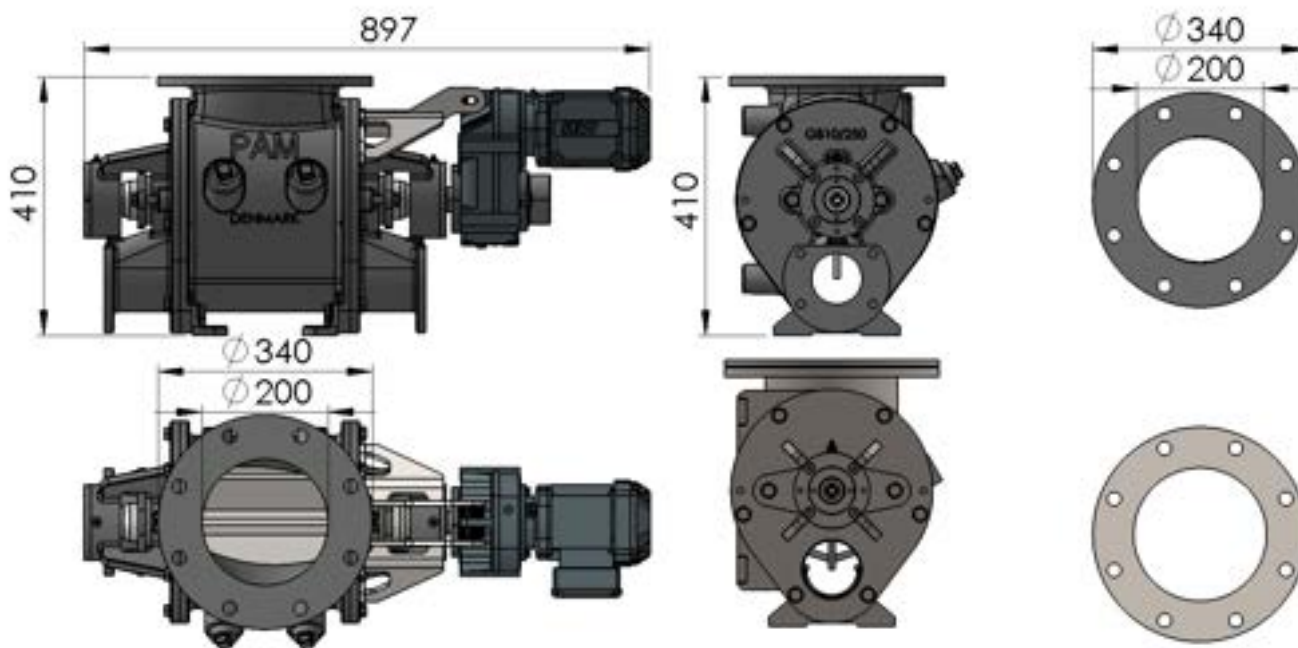
GB10/250

GB19/300

GB34/350

GB 10/250

Dimensions

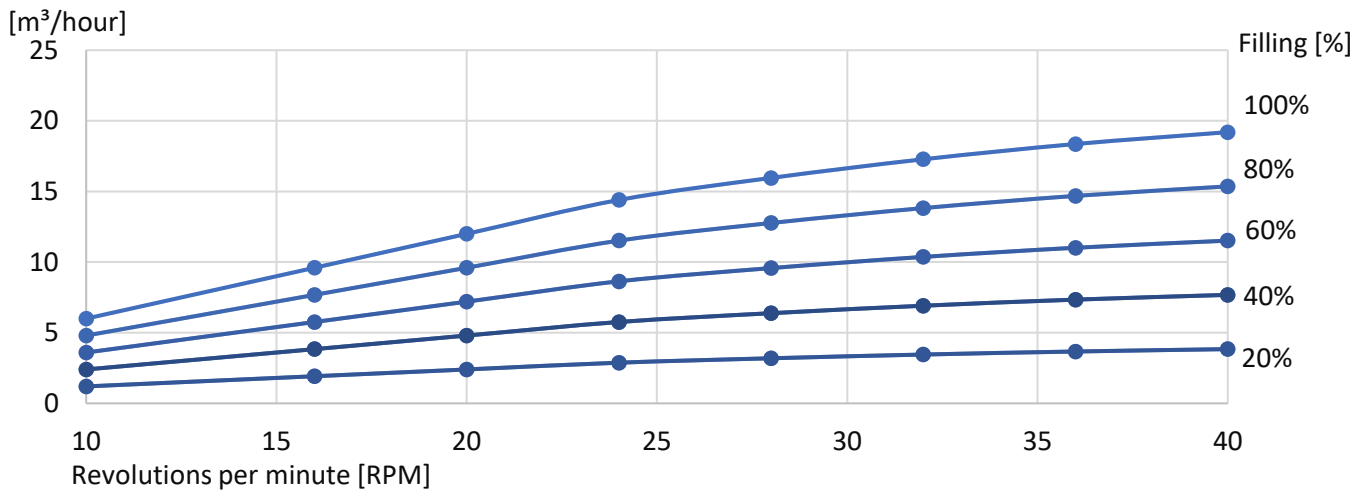


Performance

Capacity vs. RPM at various filling degrees

Weight: 120 kg

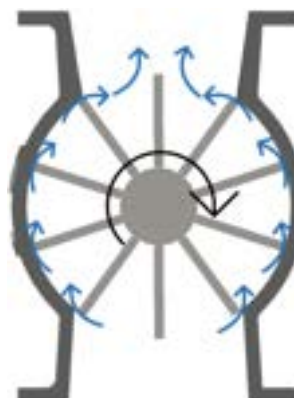
GB 10/250



Leakage-rate

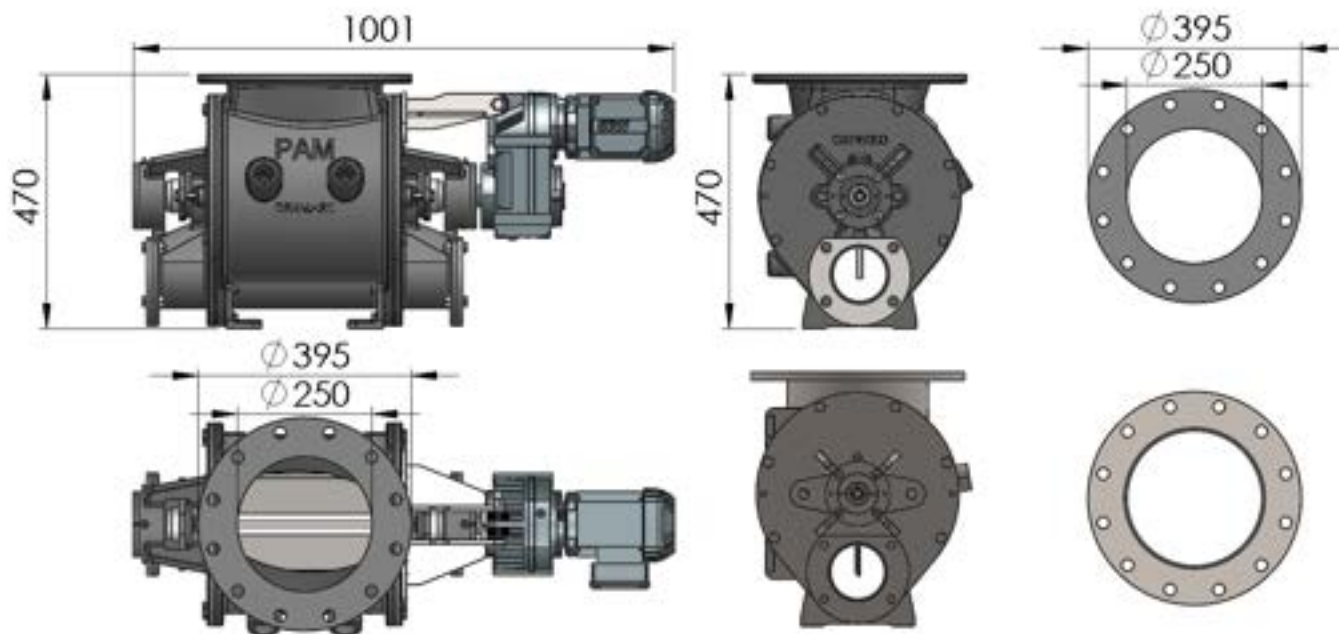
Estimated leakage-rates at various pressure differentials (subject to typographical errors)

ΔP [mbar]	Leakage [L/min]
200	711
400	1048
600	1244



GB 19/300

Dimensions

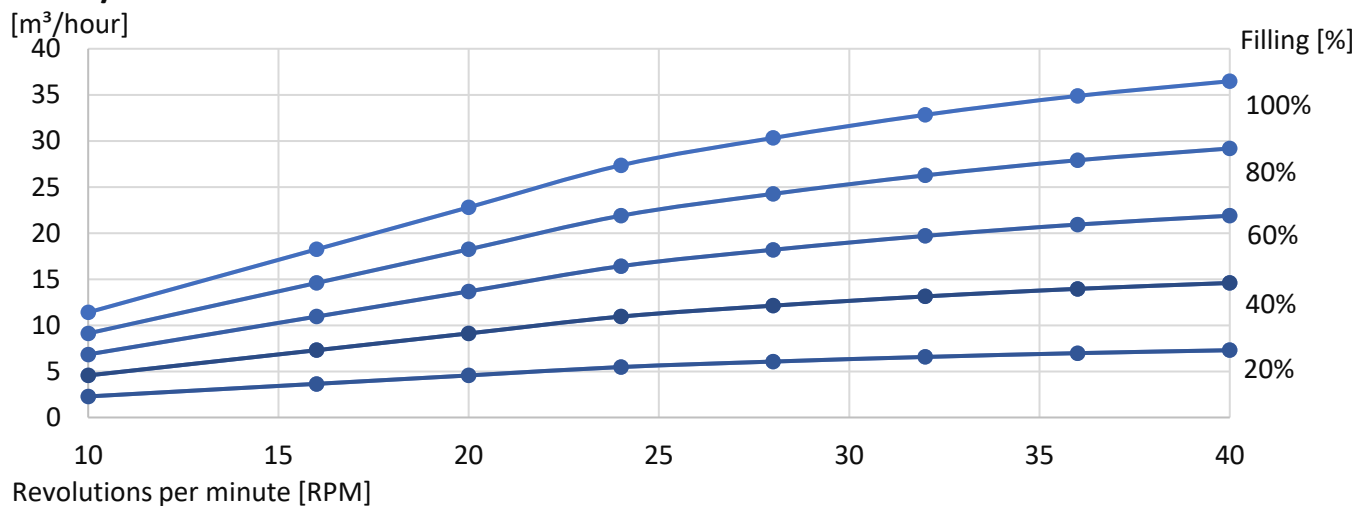


Performance

Capacity vs. RPM at various filling degrees

Weight: 160 kg

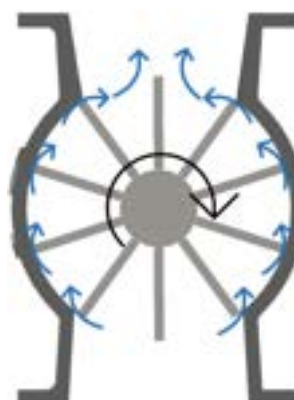
GB 19/300



Leakage-rate

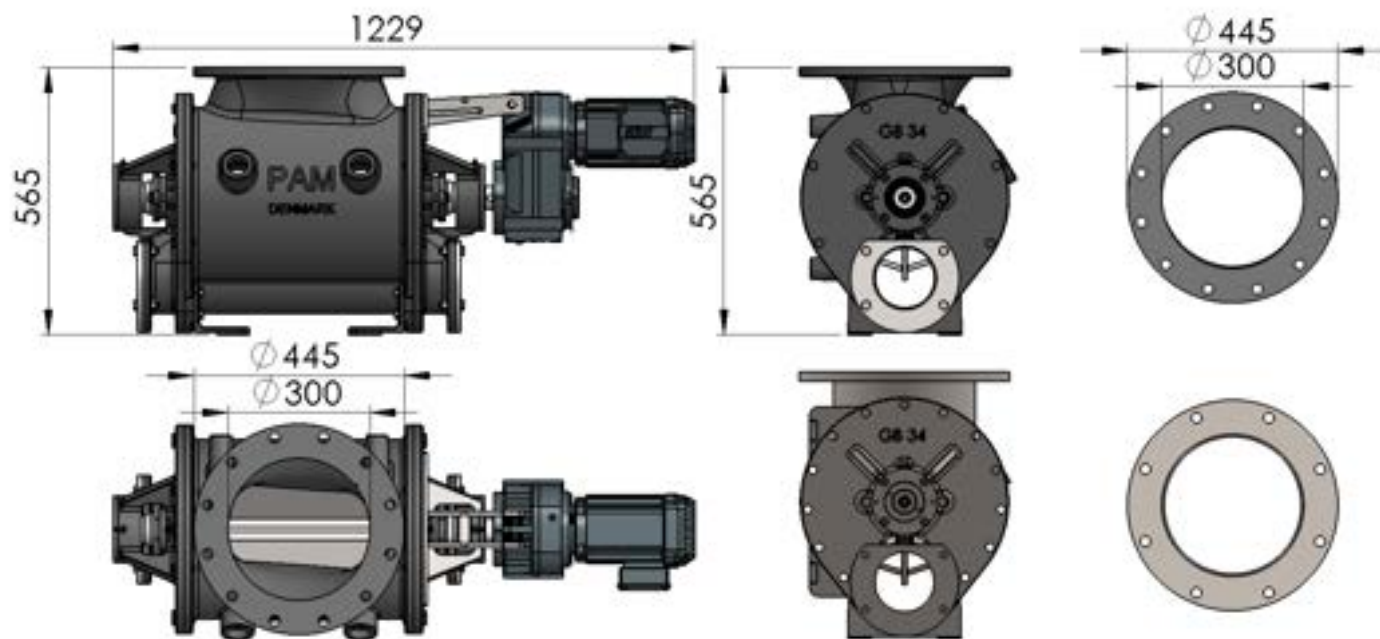
Estimated leakage-rates at various pressure differentials (subject to typographical errors)

ΔP [mbar]	Leakage [L/min]
200	853
400	1257
600	1493



GB 34/350

Dimensions

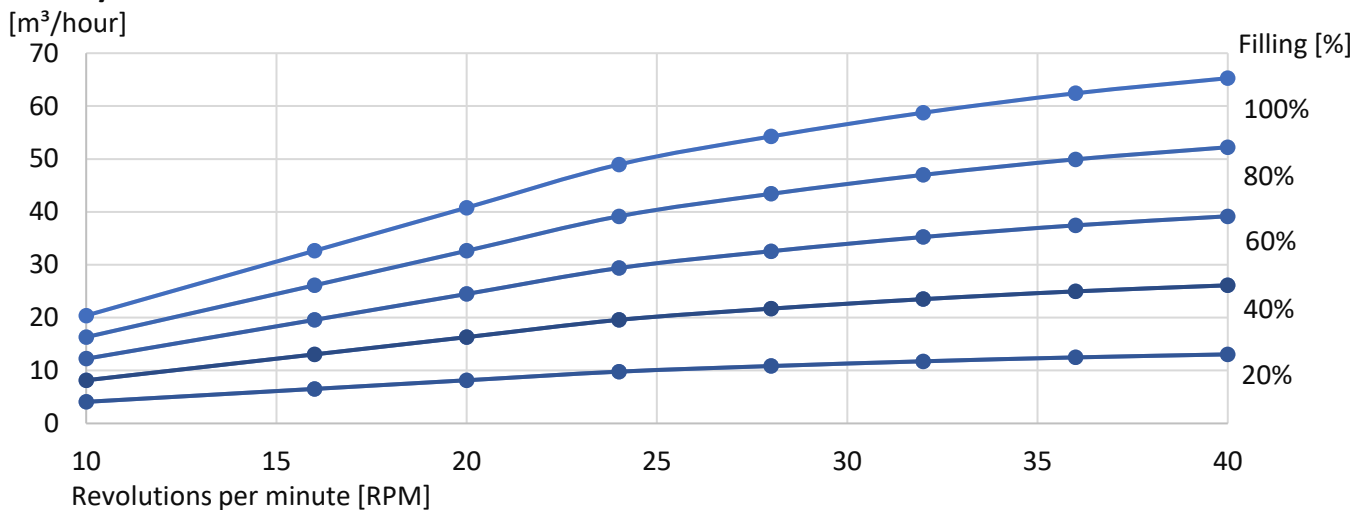


Performance

Capacity vs. RPM at various filling degrees

Weight: 260 kg

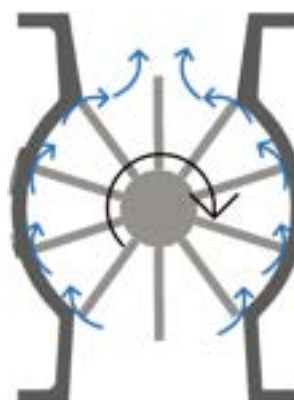
GB 34/350



Leakage-rate

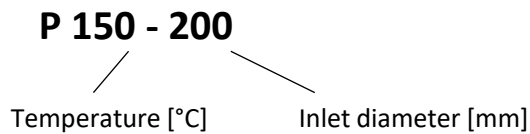
Estimated leakage-rates at various pressure differentials (subject to typographical errors)

ΔP [mbar]	Leakage [L/min]
200	885
400	1416
600	1727



P-series:

- Drop-through rotary valve ("Heavy Duty") suitable for extraction from filters and dosing of e.g. cement products.
- The P-series is a rotary valve made of cast iron with a rotor made of S235. This rotary valve is only available in these materials.
- The P-series is only made in predetermined configurations and cannot be customized.
- Differential temperature: Available for 3 differential temperatures: 73°C, 150°C and 450°C.
- The P-series has no ATEX or flameproof approval.
- The P-series is built less robust than the UL-series, but is still a robust and very price competitive rotary valve commonly used in the heavy process industry.
- The P-series is typically used where price is a very important parameter, and certifications and tightness are less important.
- The P-series is good for extraction and dosing.
- The naming of rotary valve must be understood as the following example:



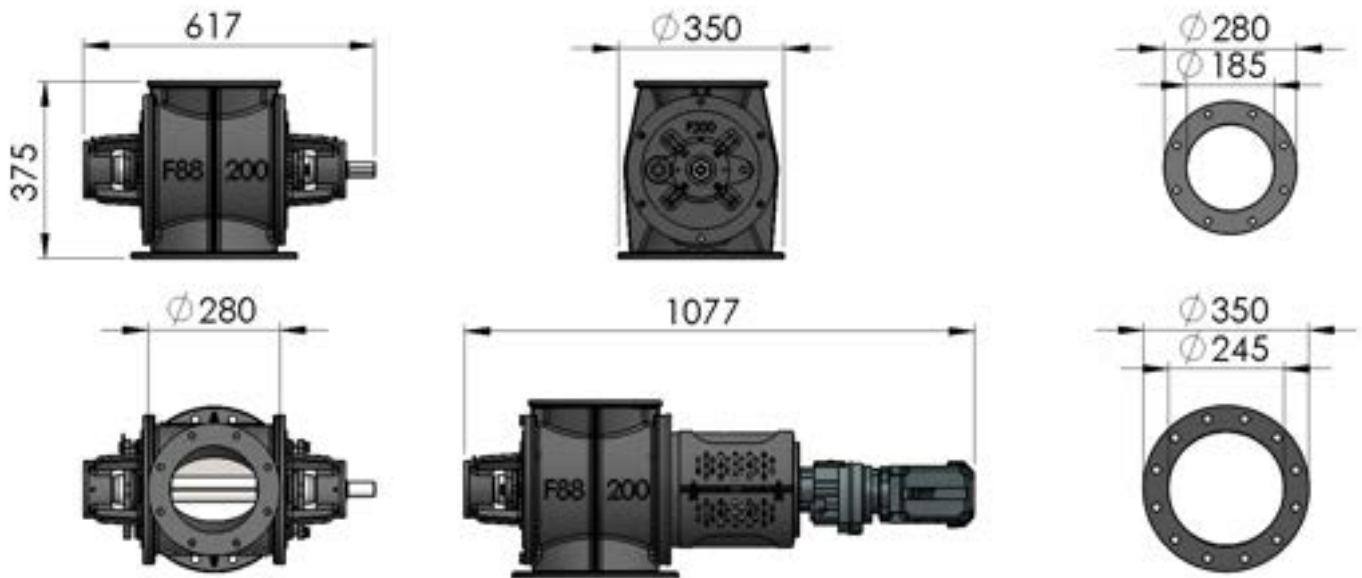
P-series:

Models:

F88-200
F88-210
F200
F210
P150-200
P150-250
P150-315
P150-355
P150-355x355
P150-400
P150-630x400
P150-450
P150-500
P150-560
P150-630
P150-710
P150-900
P150-1000

F88-200

Dimensions

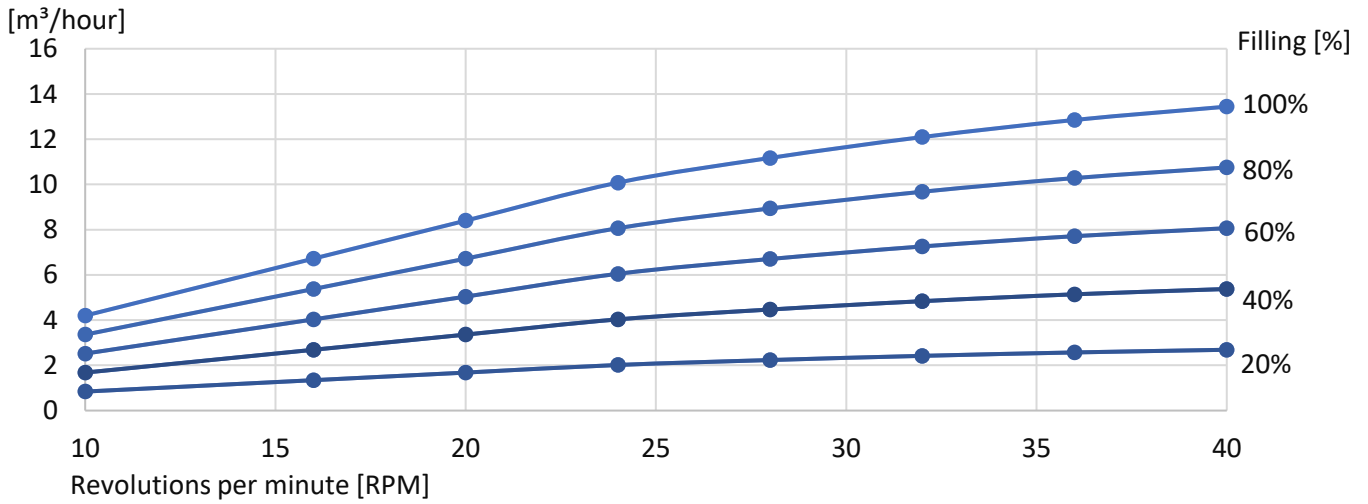


Performance

Capacity vs. RPM at various filling degrees

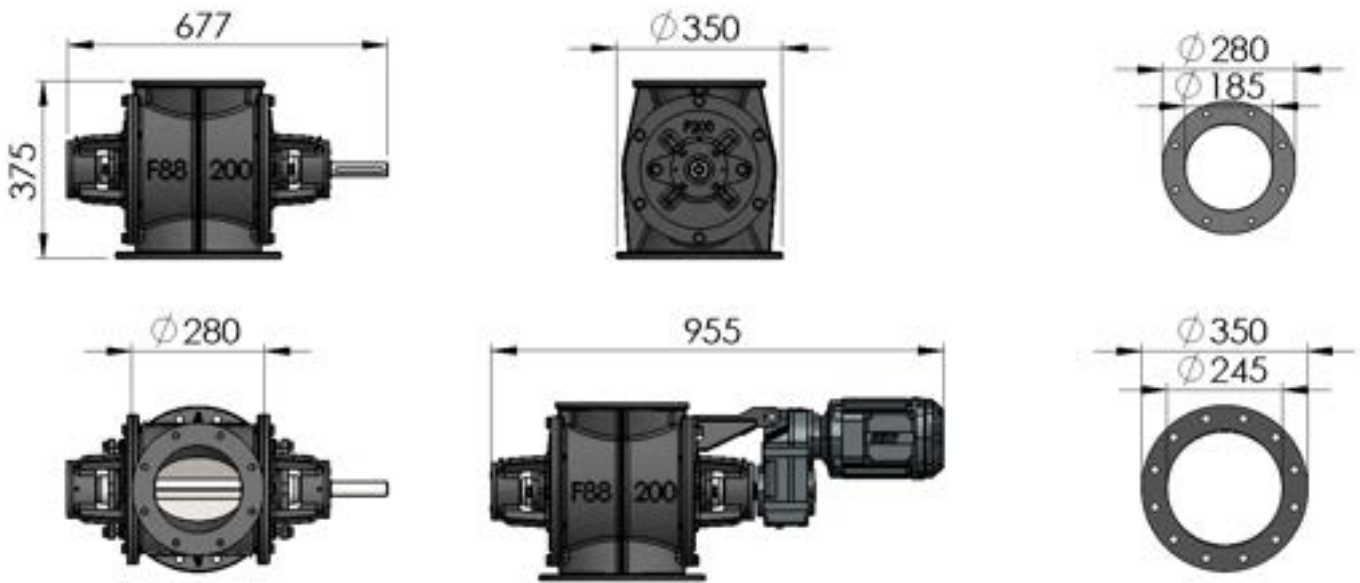
Weight: 120 kg

F88-200 / F88-210 / F200 / F210



F88-210

Dimensions

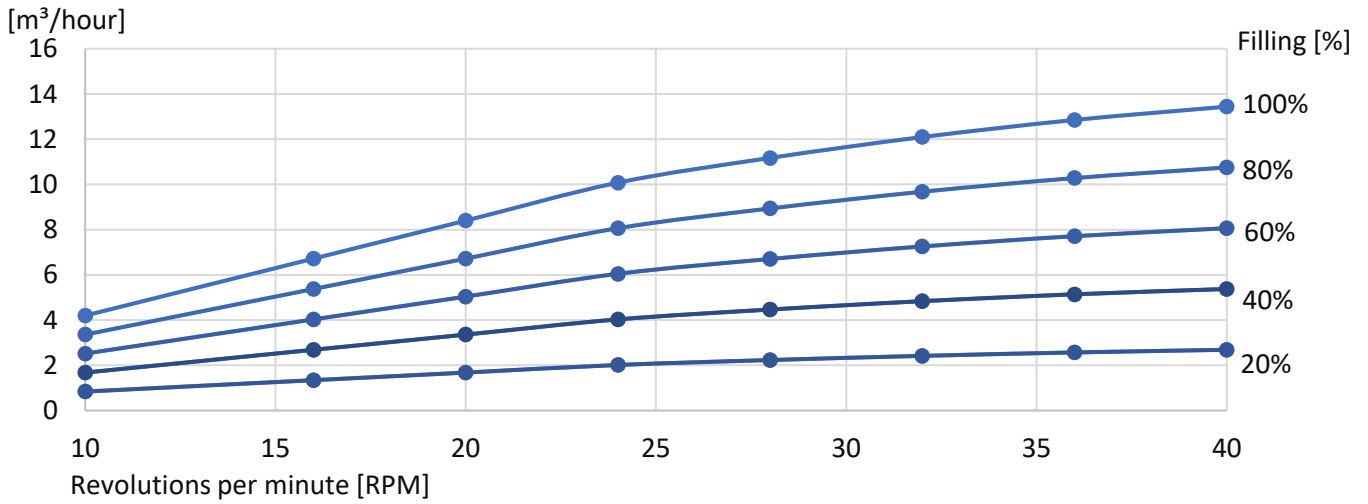


Performance

Capacity vs. RPM at various filling degrees

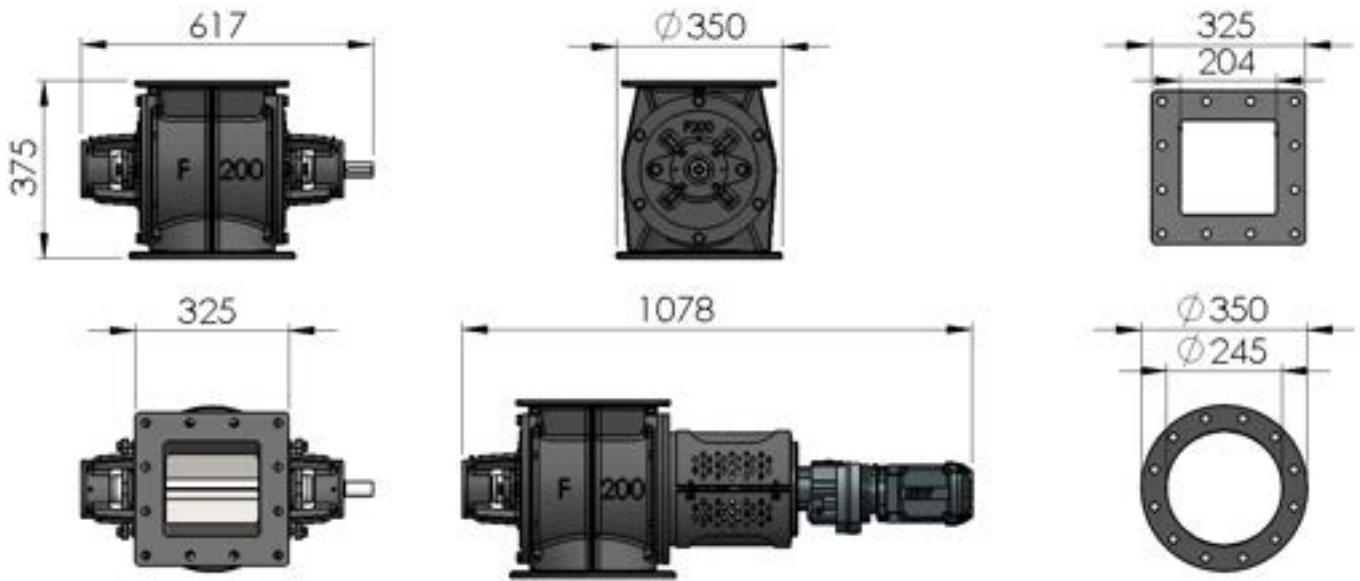
Weight: 120 kg

F88-200 / F88-210 / F200 / F210



F200

Dimensions

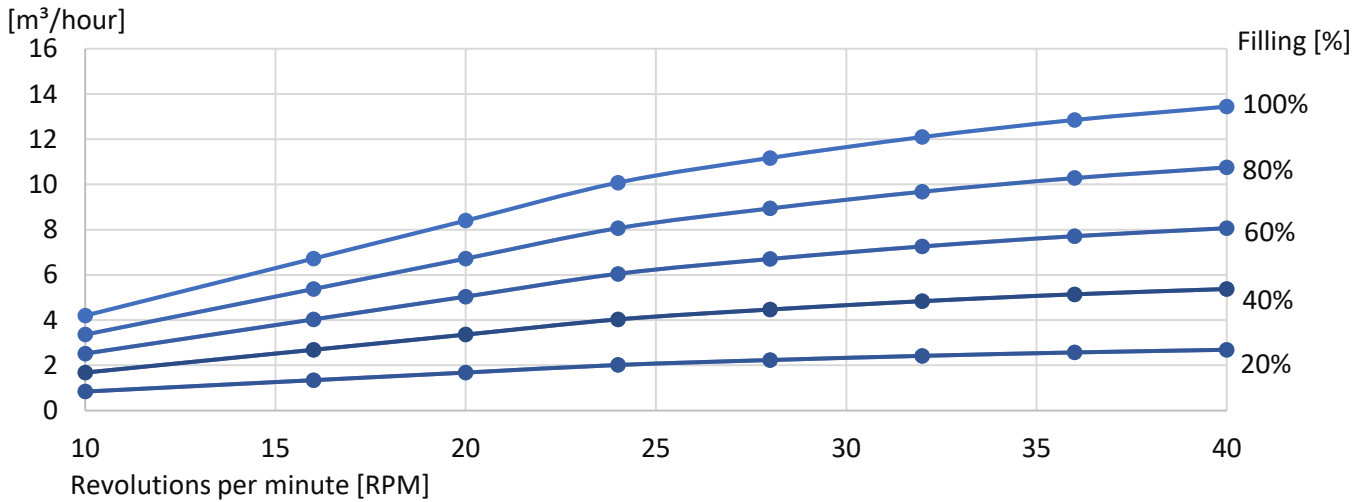


Performance

Capacity vs. RPM at various filling degrees

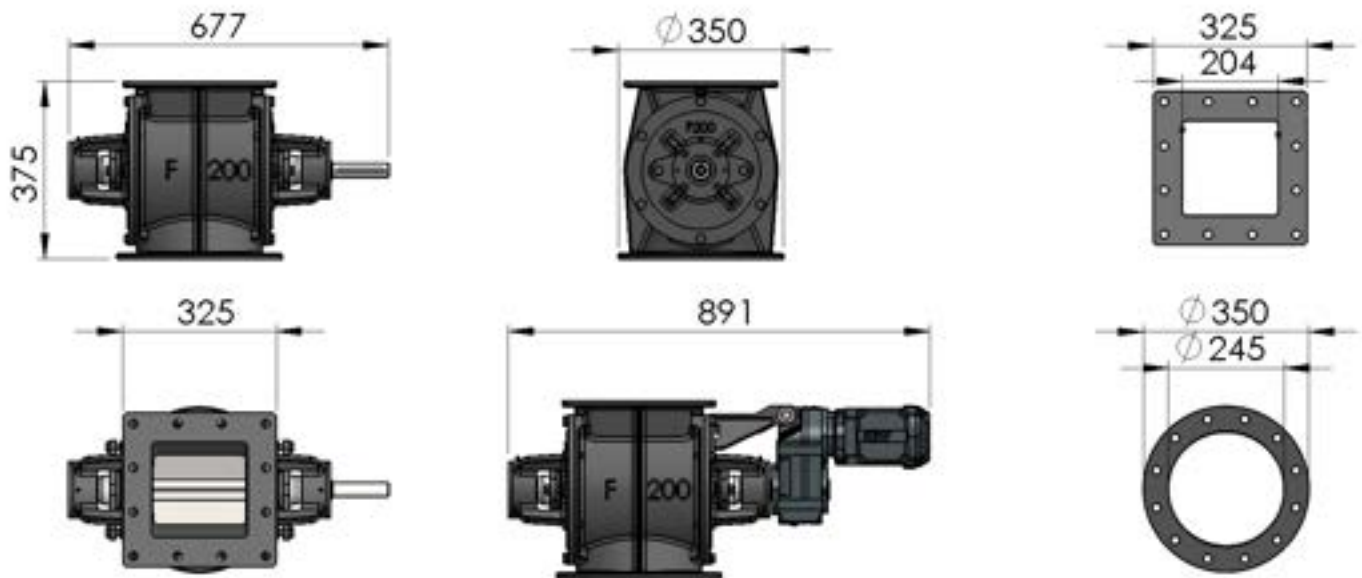
Weight: 120 kg

F88-200 / F88-210 / F200 / F210



F210

Dimensions

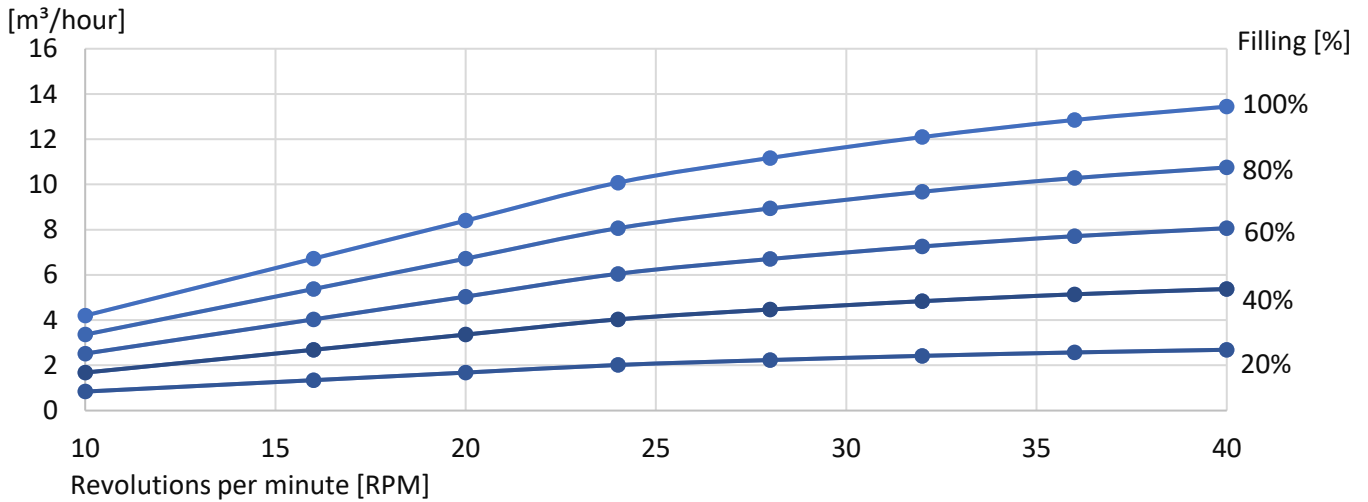


Performance

Capacity vs. RPM at various filling degrees

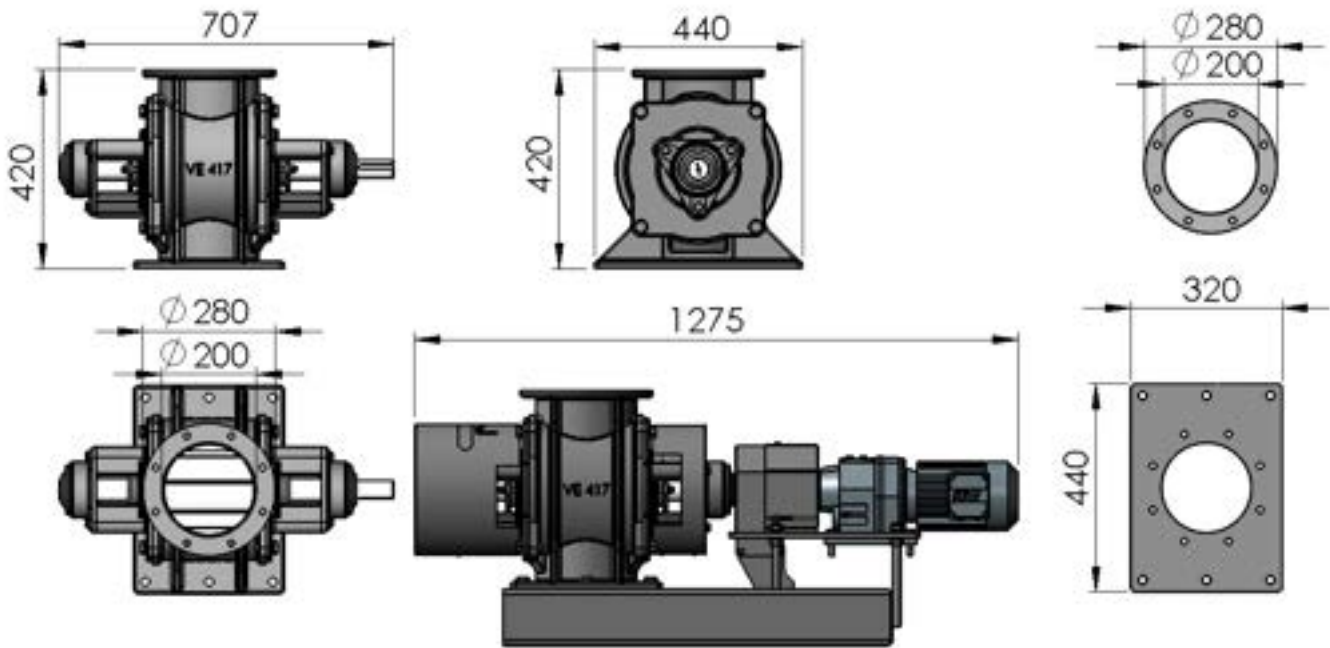
Weight: 120 kg

F88-200 / F88-210 / F200 / F210



P-200

Dimensions



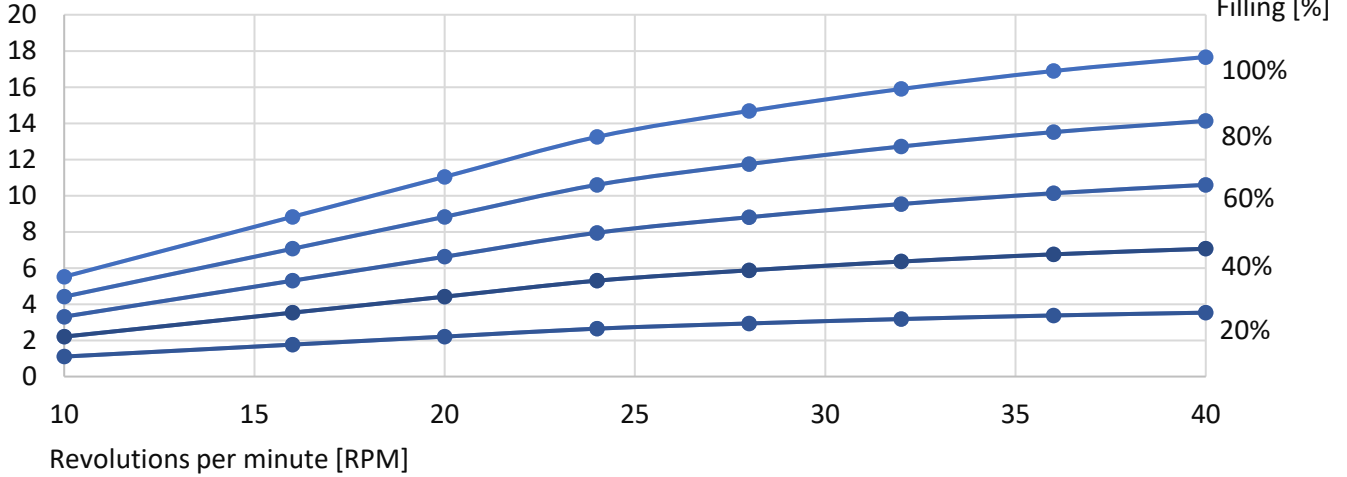
Performance

Capacity vs. RPM at various filling degrees

Weight: 120 kg

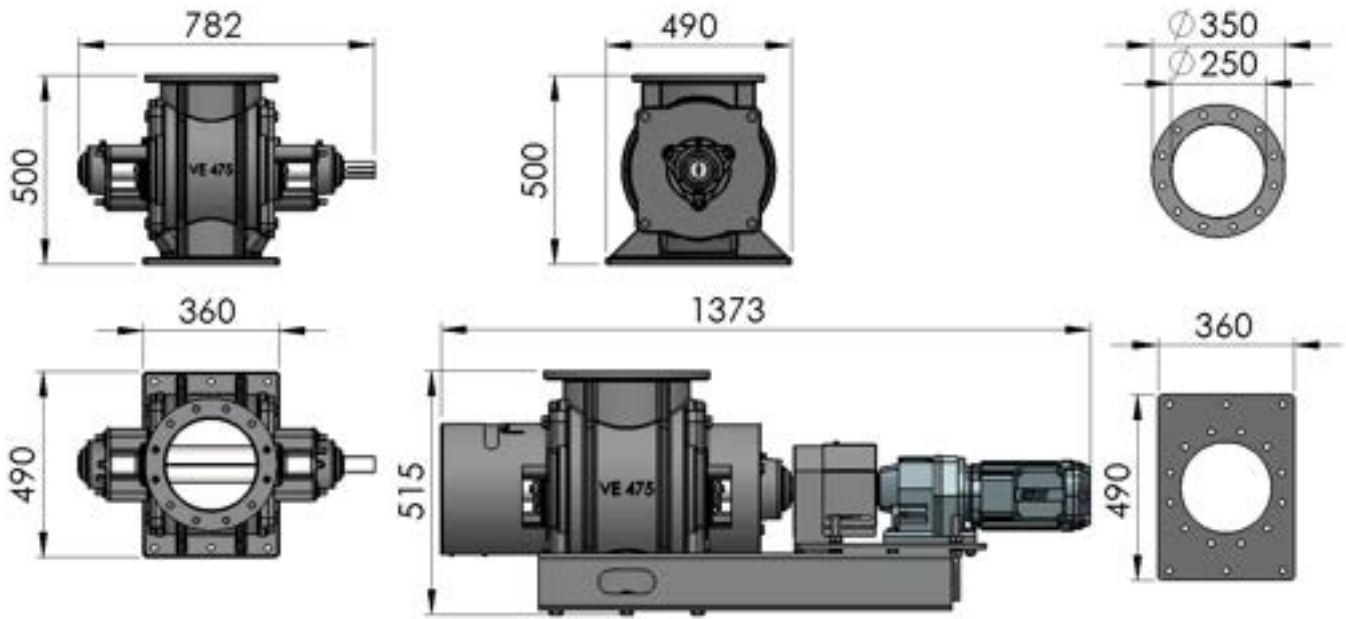
P-200

[m³/hour]



P-250

Dimensions



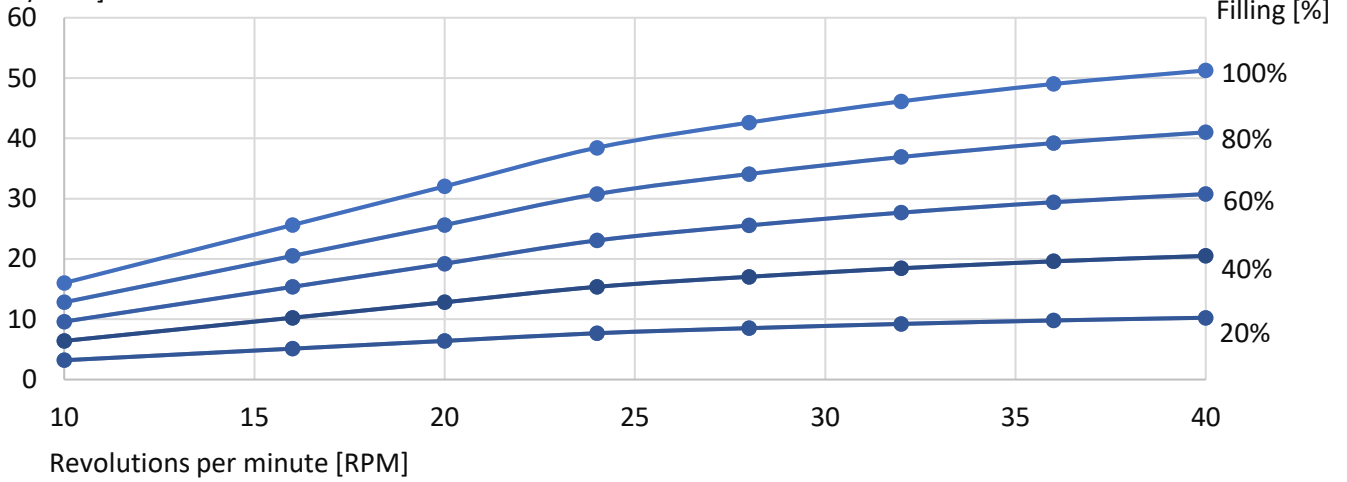
Performance

Capacity vs. RPM at various filling degrees

Weight: 175 kg

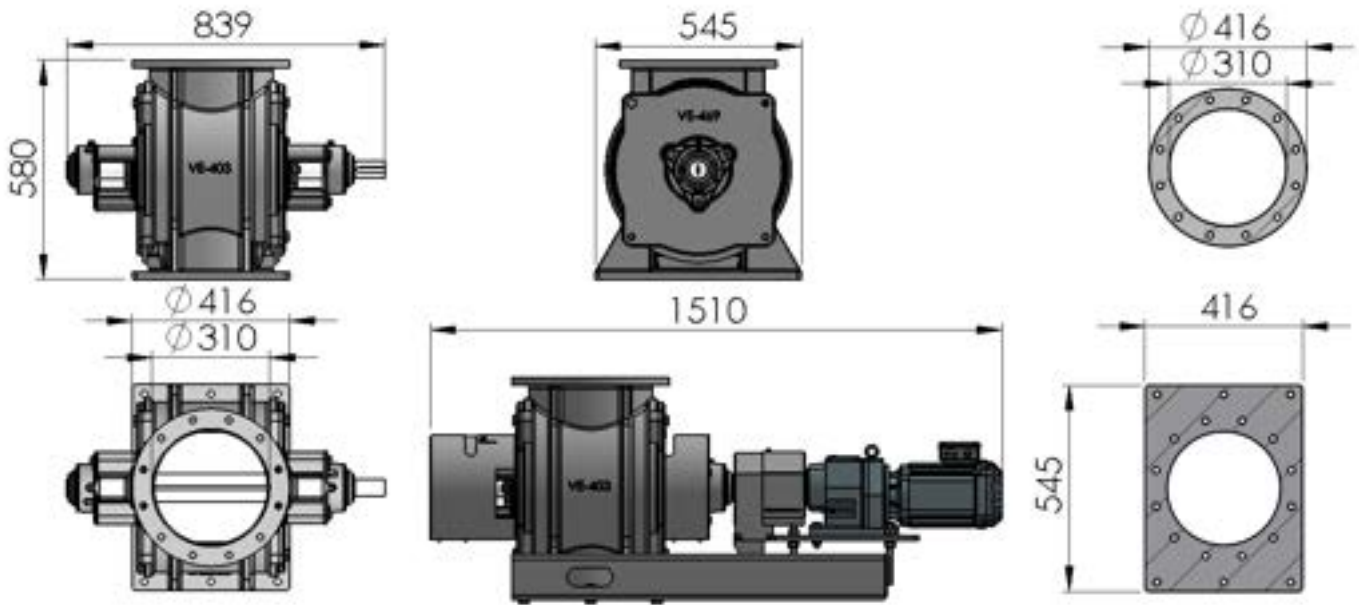
P-250

[m³/hour]



P-315

Dimensions



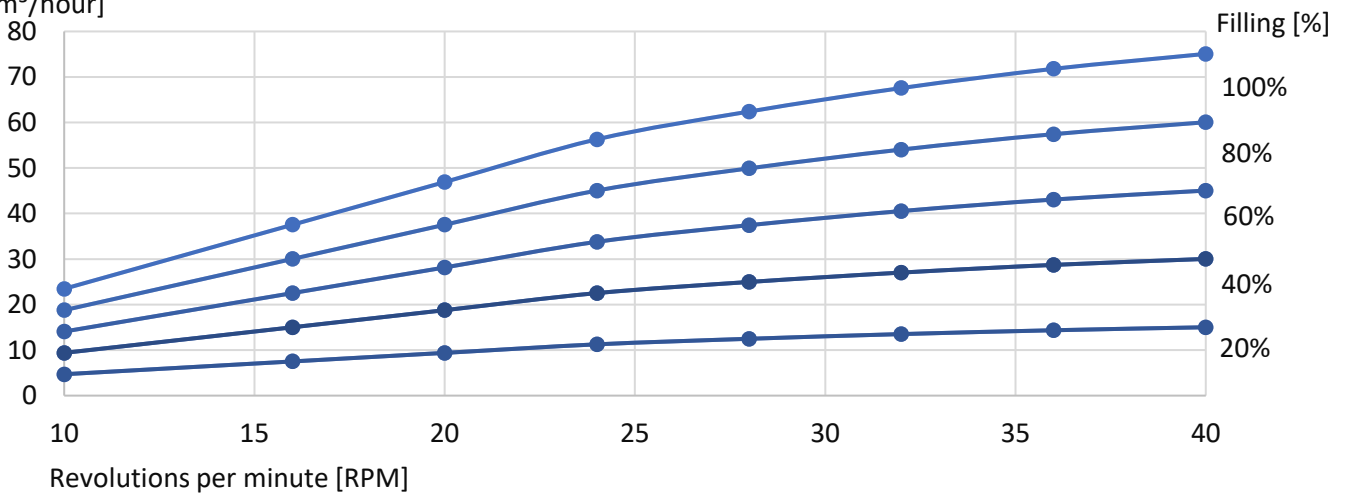
Performance

Capacity vs. RPM at various filling degrees

Weight: 220 kg

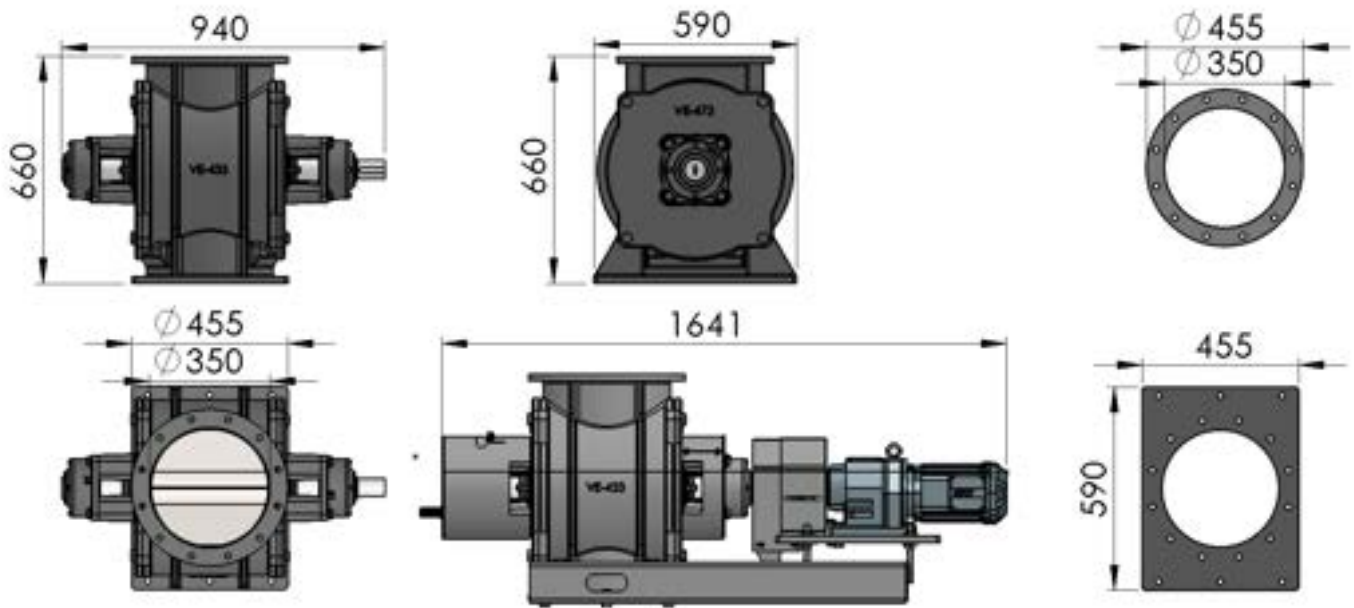
P-315

[m³/hour]



P-355

Dimensions



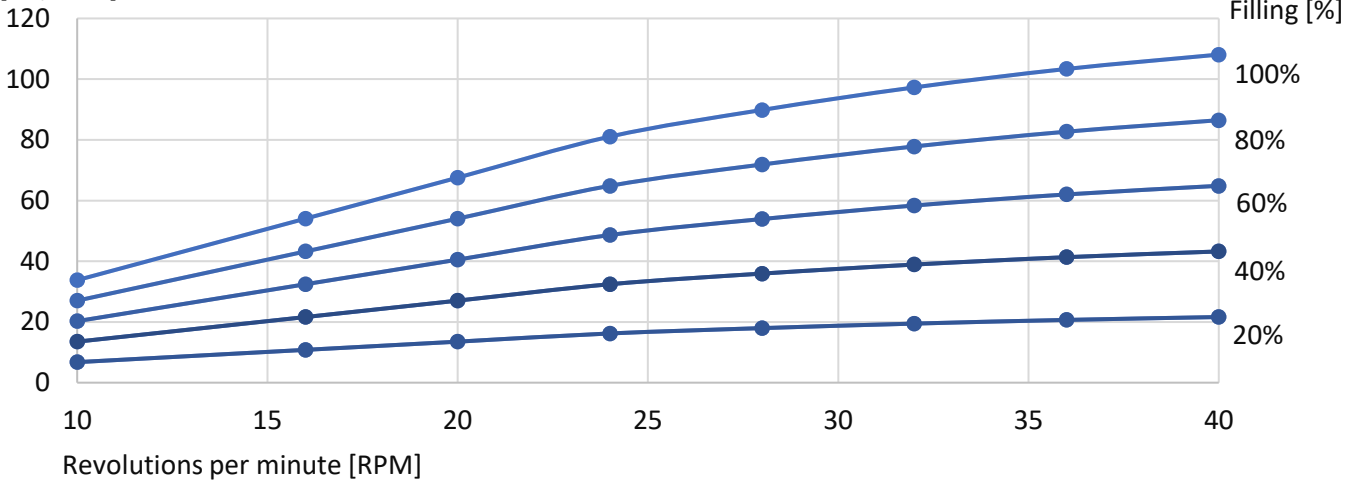
Performance

Capacity vs. RPM at various filling degrees

Weight: 330 kg

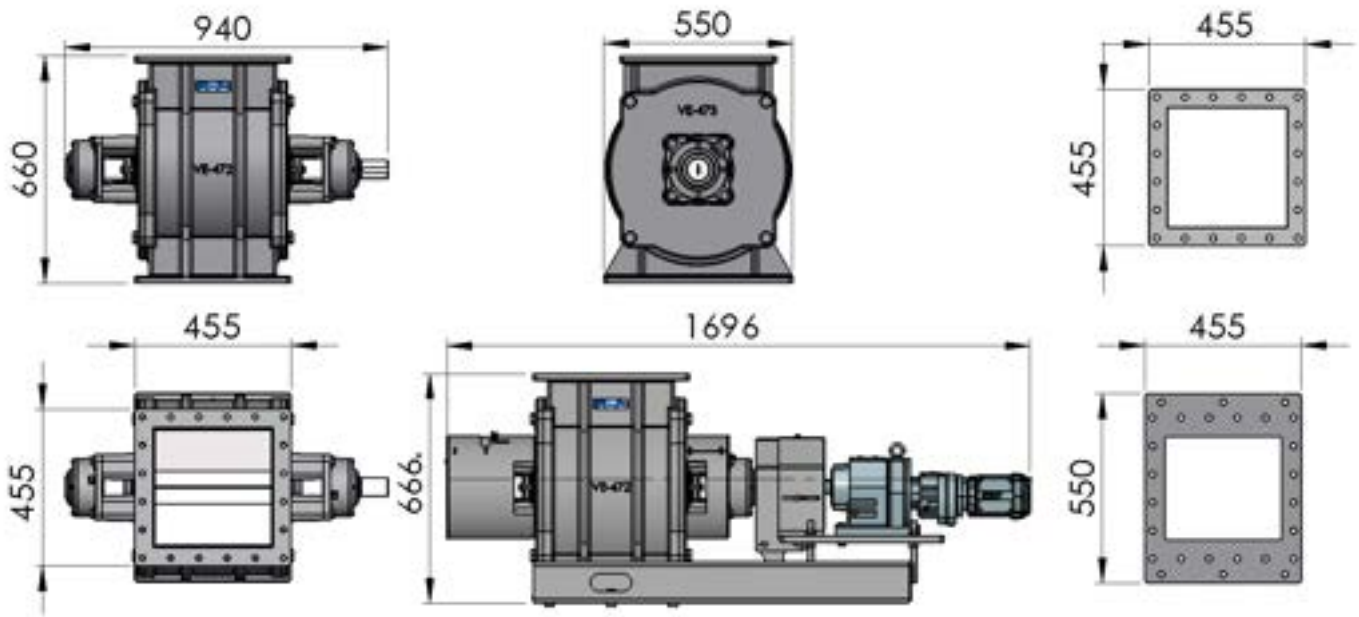
P-355

[m³/hour]



P-355x355

Dimensions



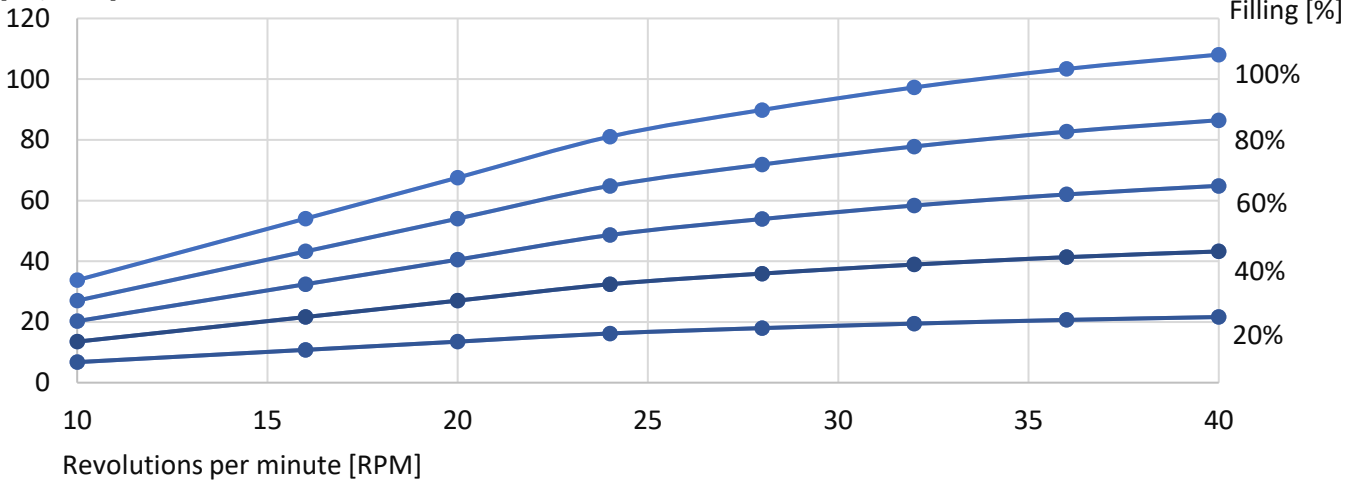
Performance

Capacity vs. RPM at various filling degrees

Weight: 330 kg

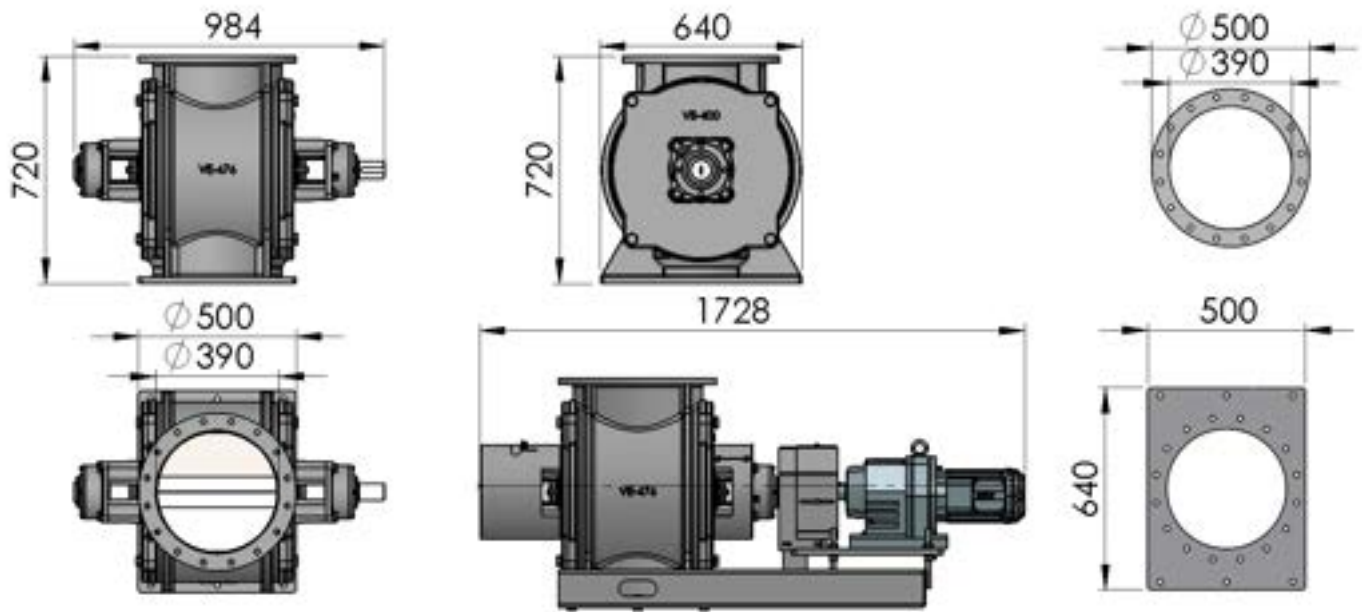
P-355

[m³/hour]



P-400

Dimensions

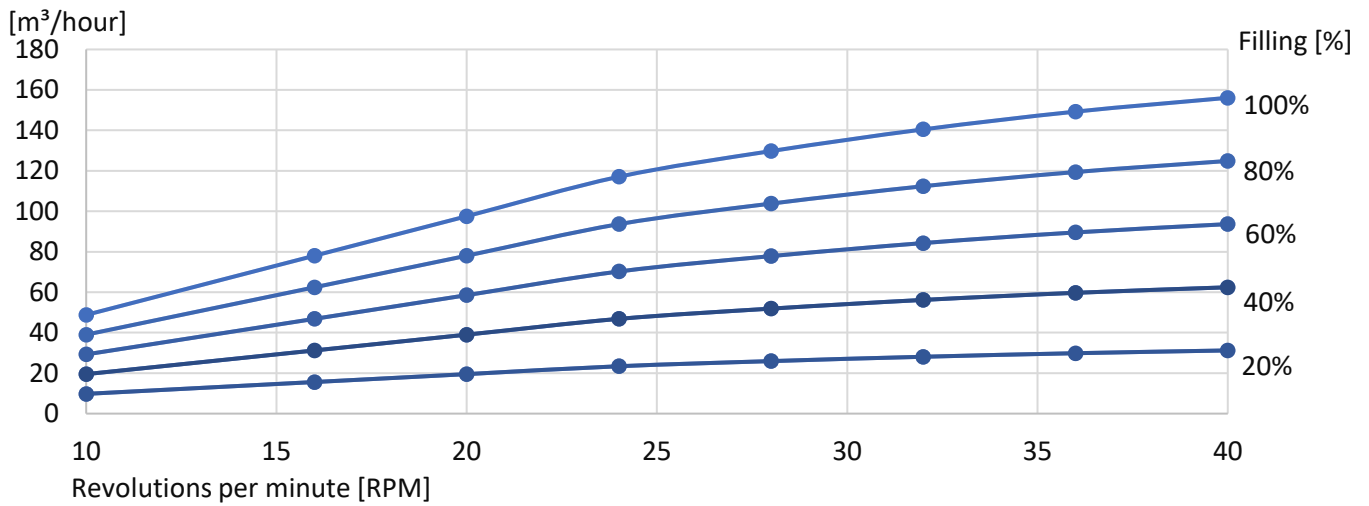


Performance

Capacity vs. RPM at various filling degrees

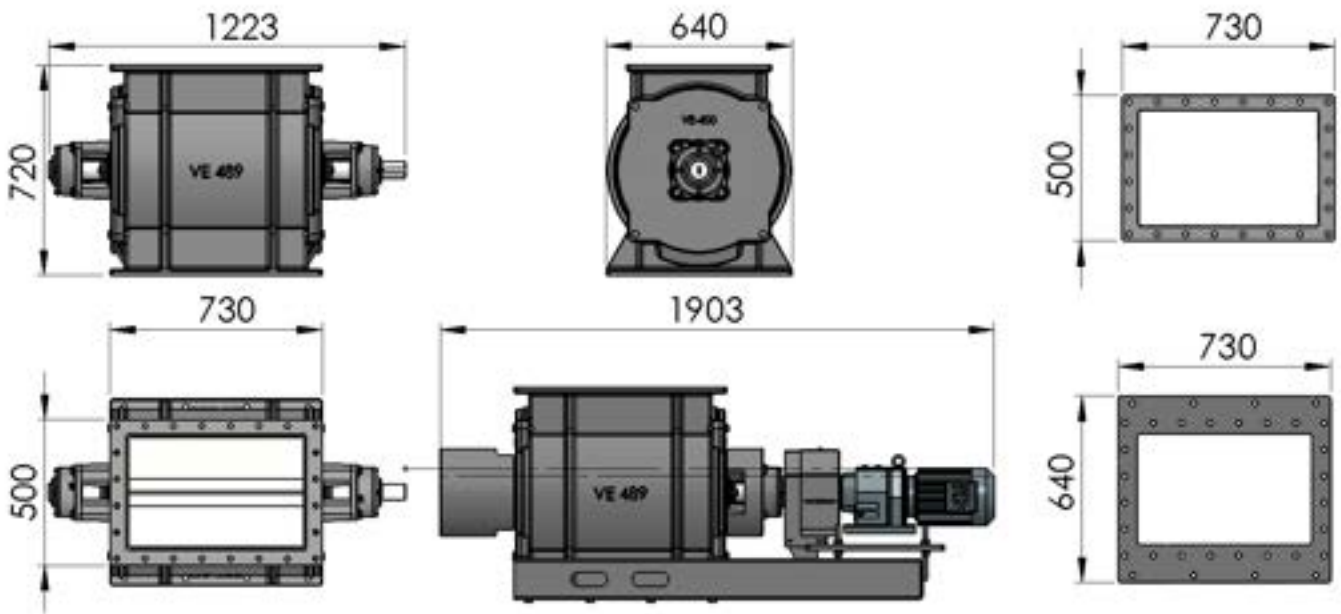
Weight: 390 kg

P-400



P-630x400

Dimensions



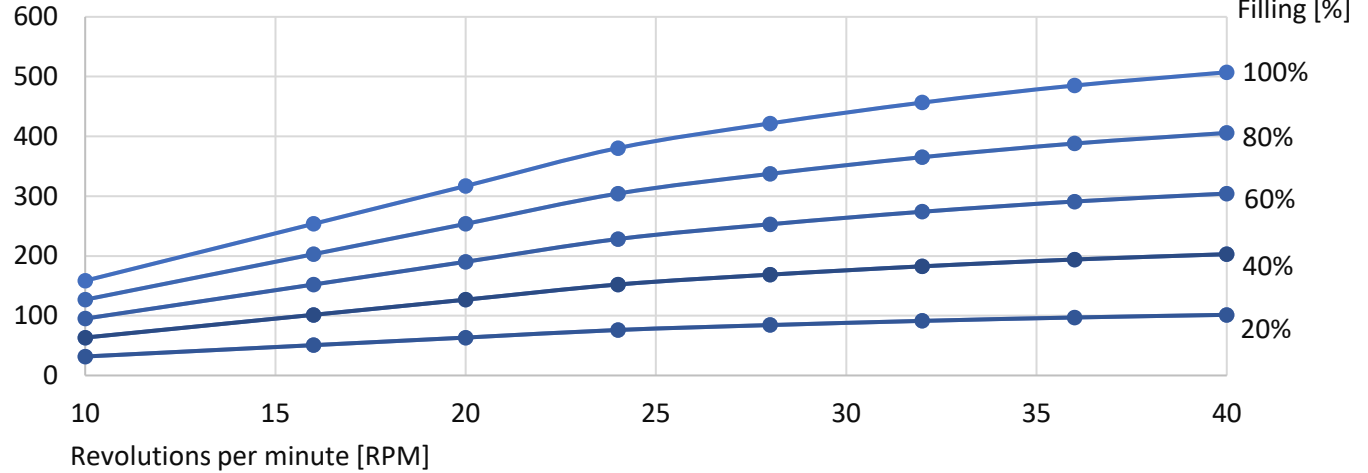
Performance

Capacity vs. RPM at various filling degrees

Weight: 460 kg

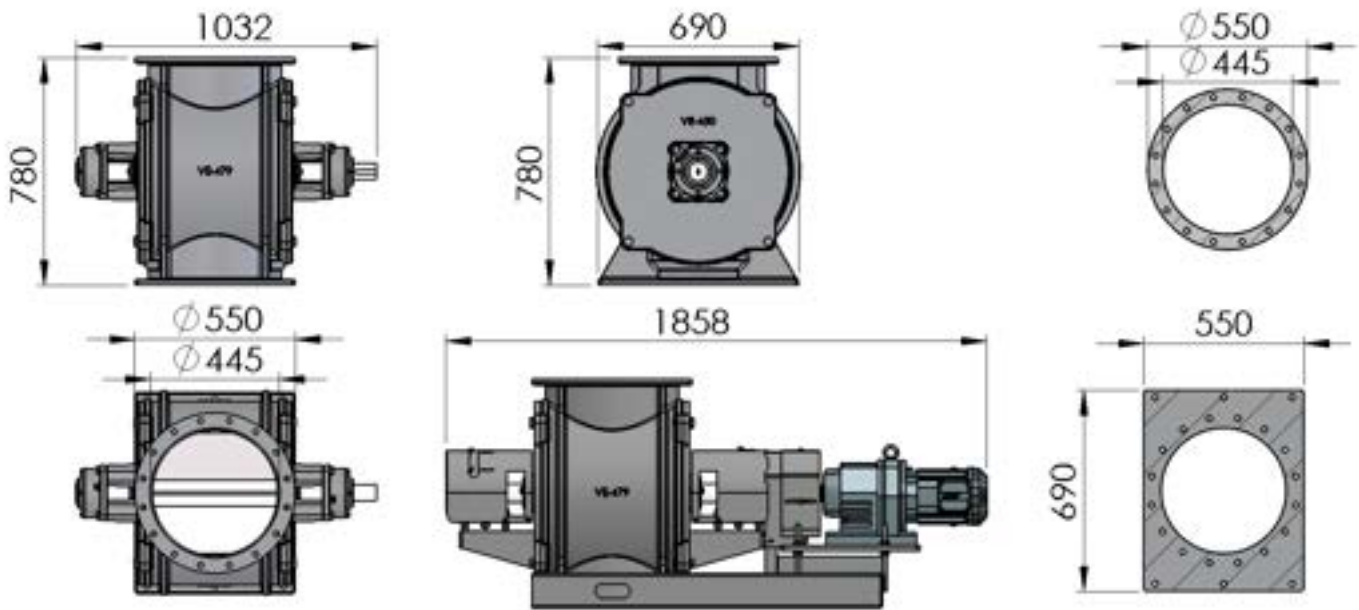
P-630

[m³/hour]



P-450

Dimensions



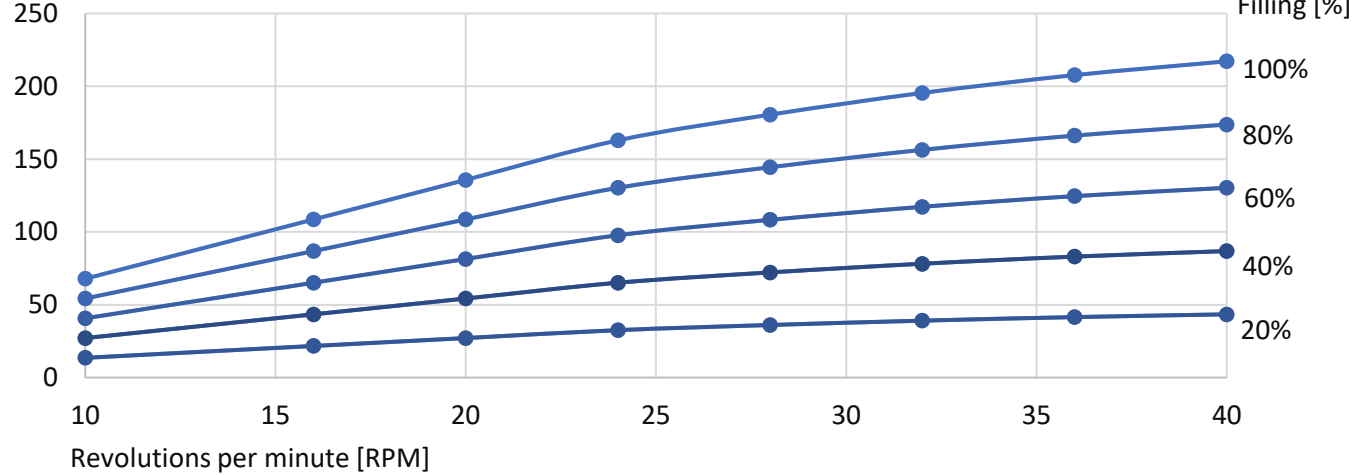
Performance

Capacity vs. RPM at various filling degrees

Weight: 450 kg

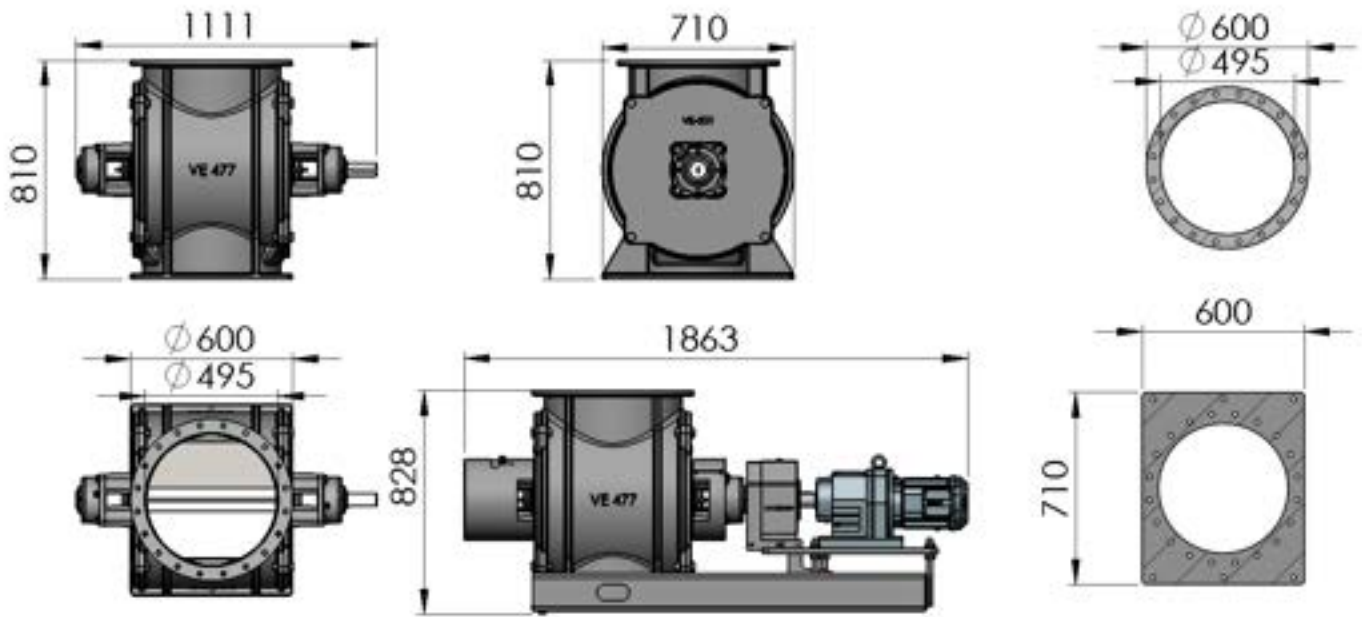
P-450

[m³/hour]



P-500

Dimensions

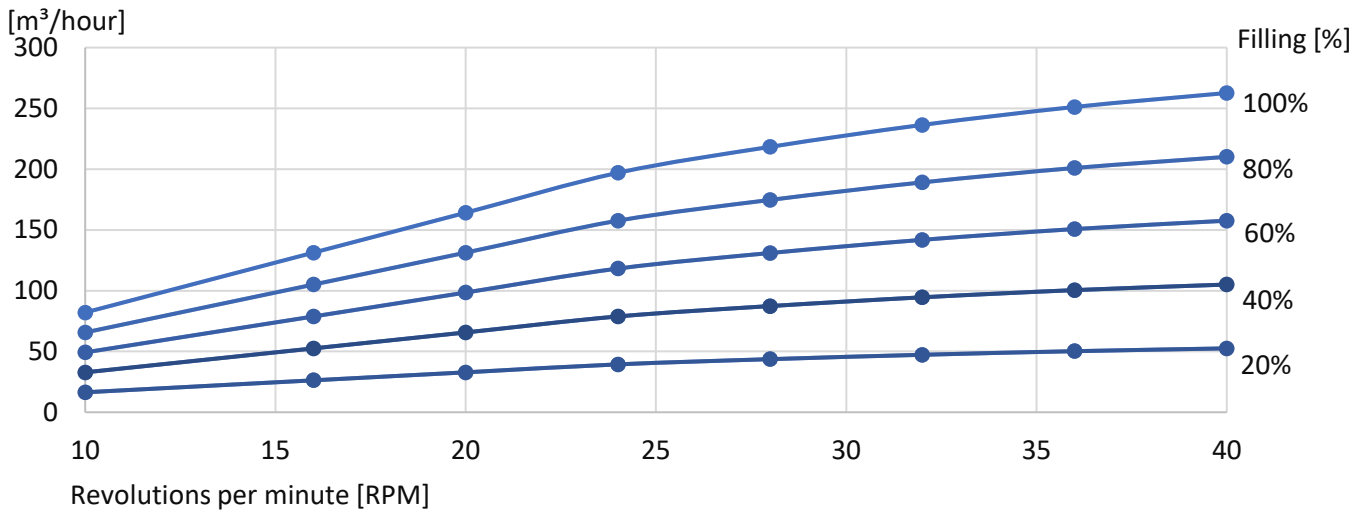


Performance

Capacity vs. RPM at various filling degrees

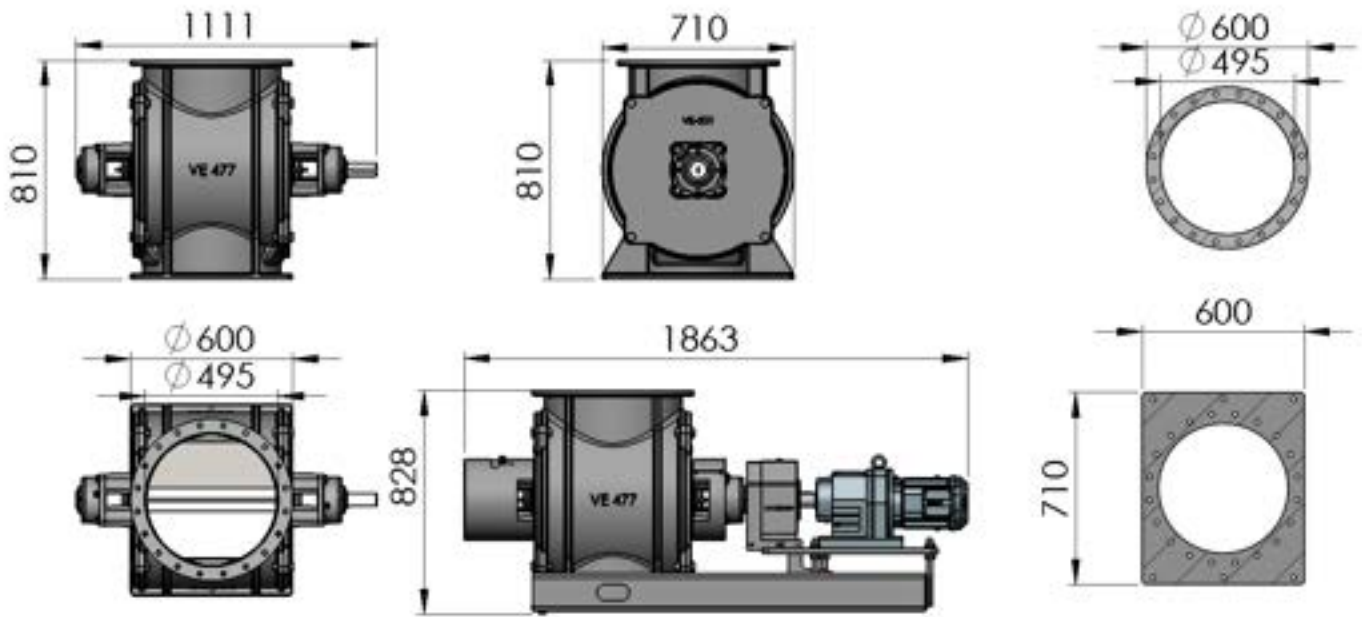
Weight: 470 kg

P-500



P-560

Dimensions



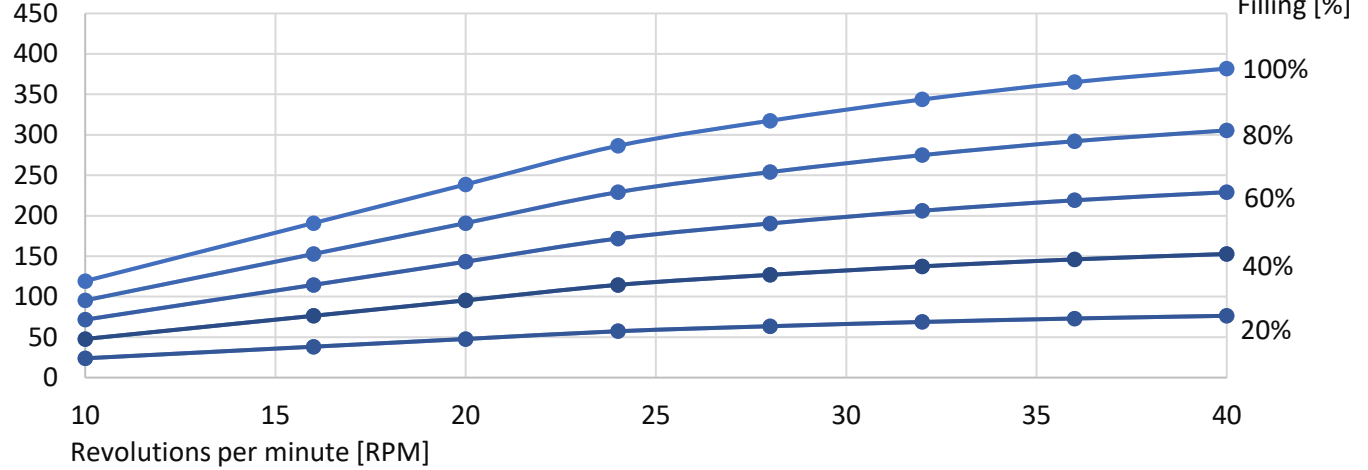
Performance

Capacity vs. RPM at various filling degrees

Weight: 570 kg

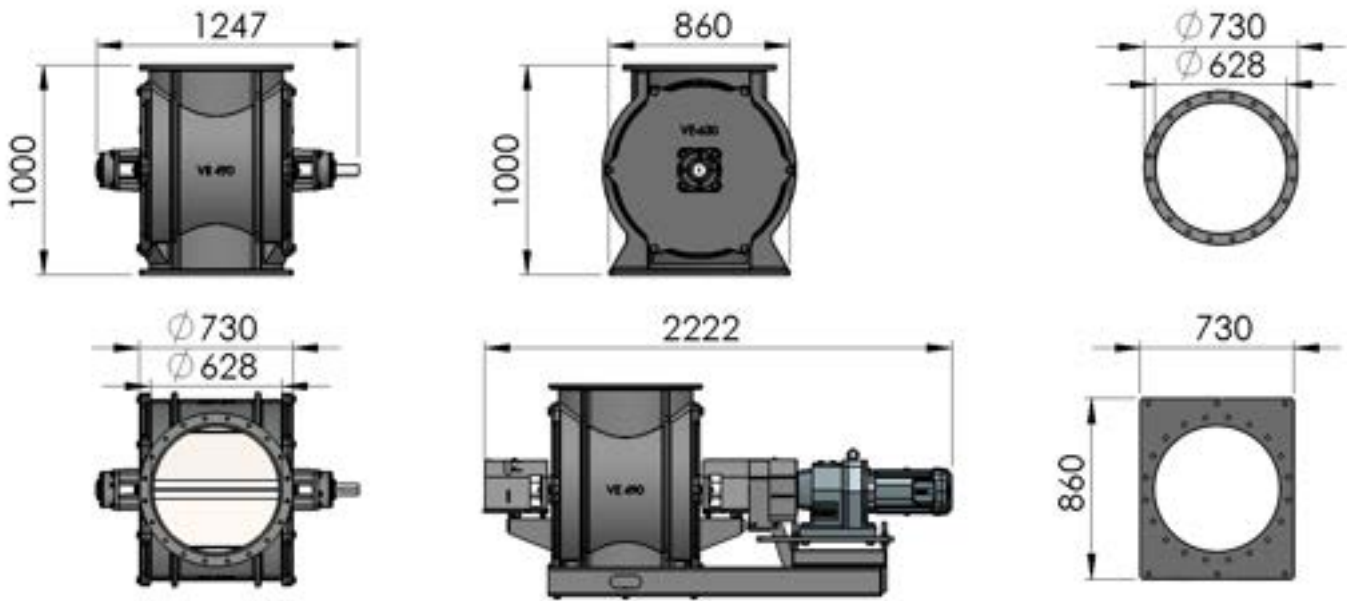
P-560

[m³/hour]



P-630

Dimensions



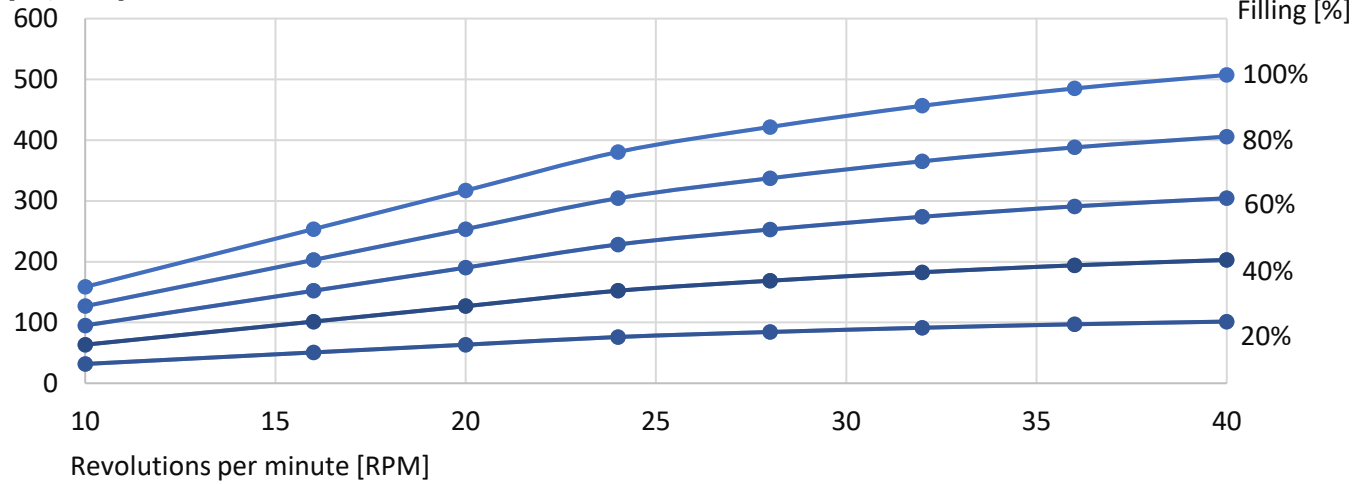
Performance

Capacity vs. RPM at various filling degrees

Weight: 810 kg

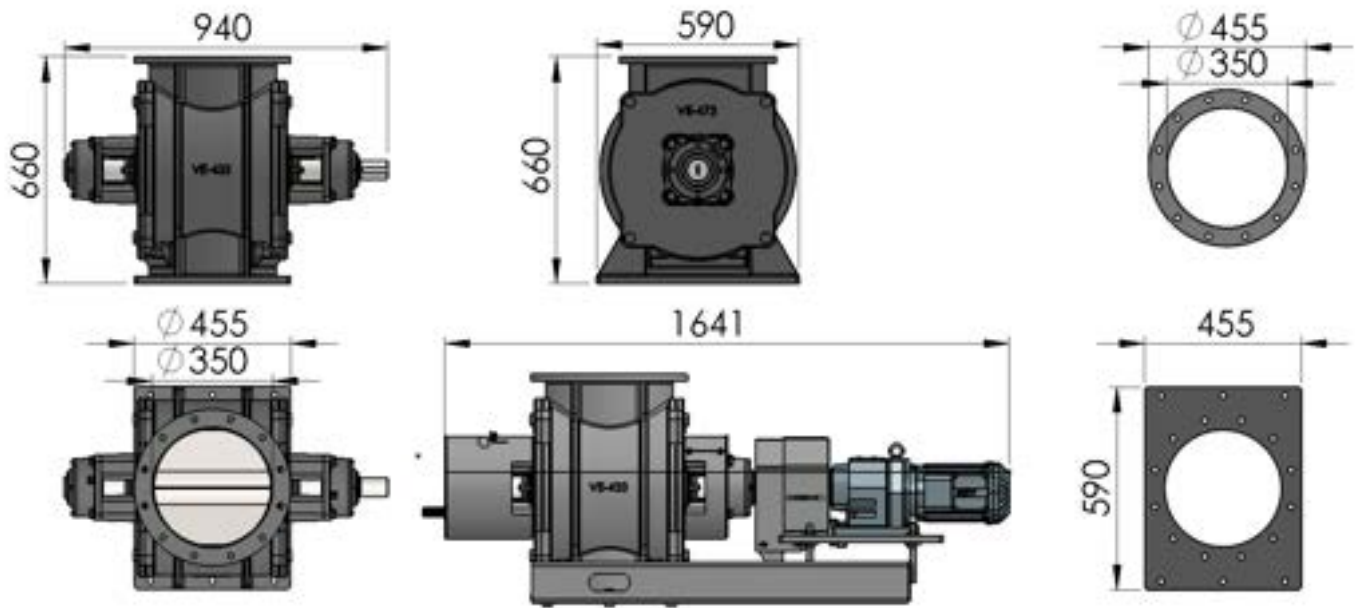
P-630

[m³/hour]



P-710

Dimensions



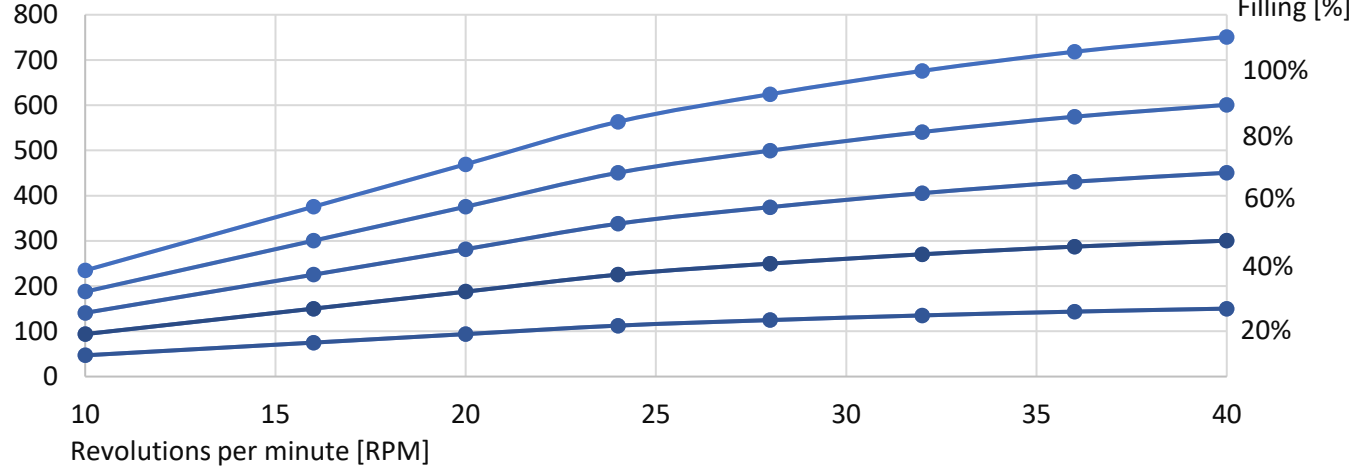
Performance

Capacity vs. RPM at various filling degrees

Weight: 980 kg

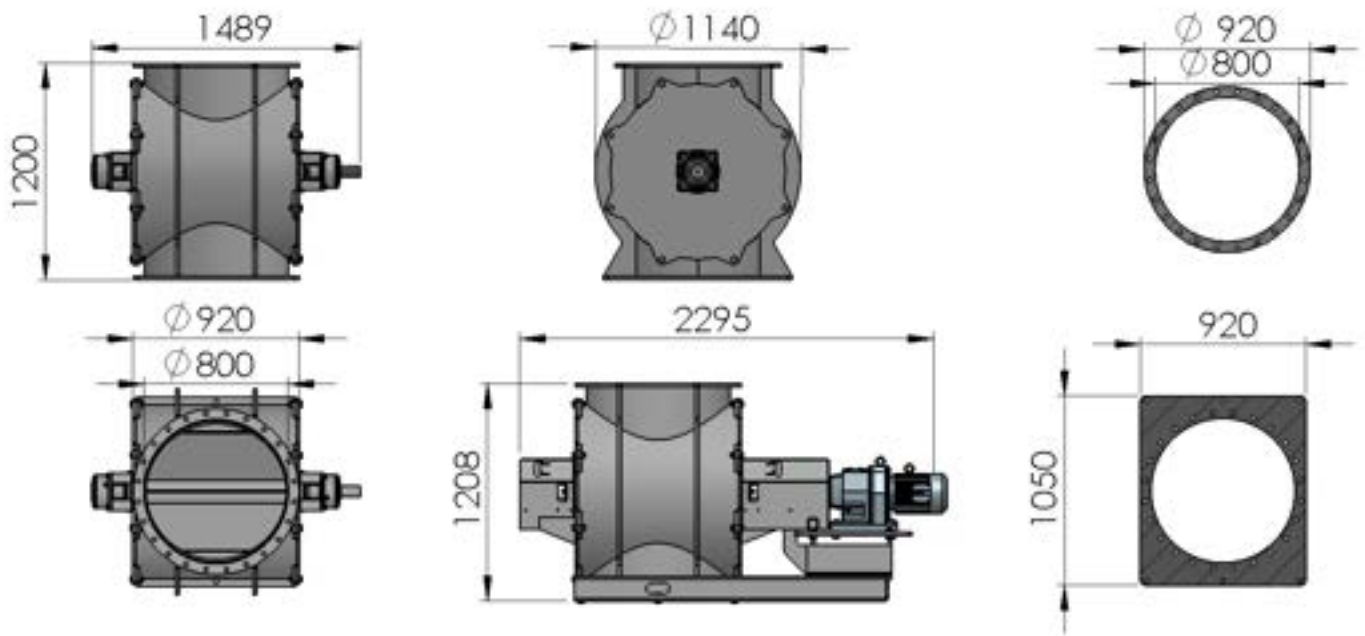
P-710

[m³/hour]



P-800

Dimensions

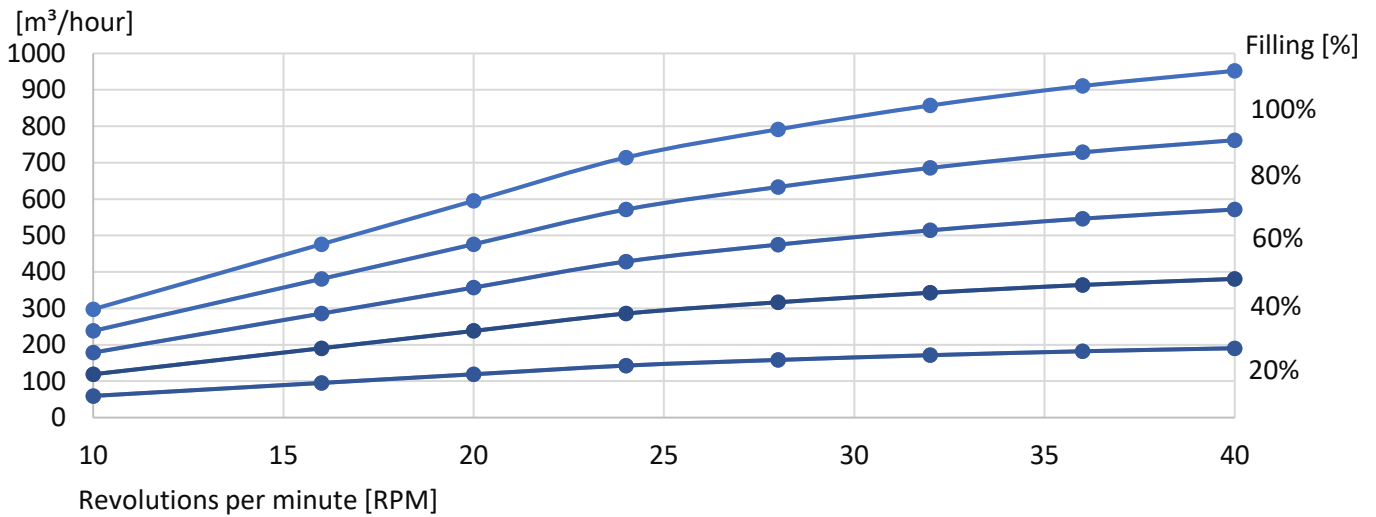


Performance

Capacity vs. RPM at various filling degrees

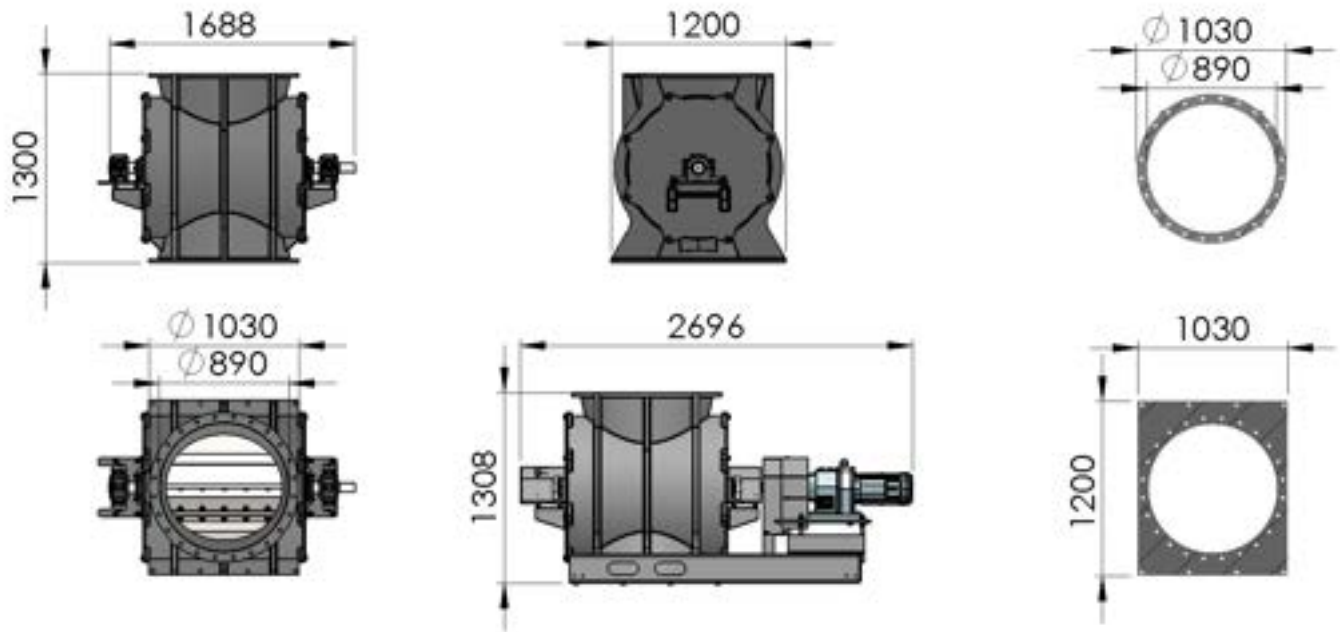
Weight: 1275 kg

P-800



P-900

Dimensions



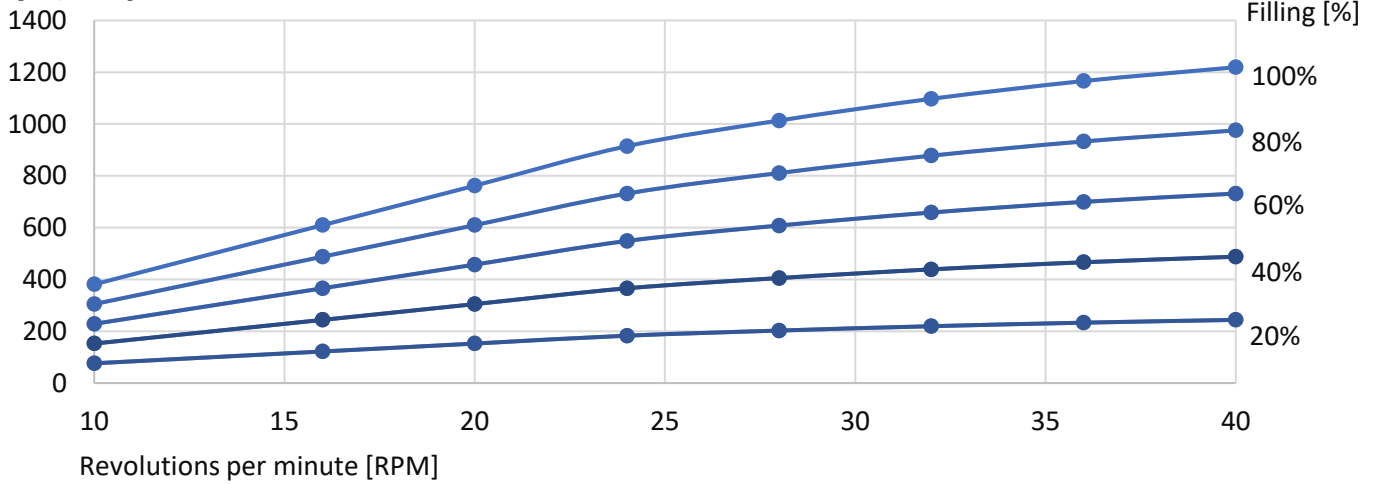
Performance

Capacity vs. RPM at various filling degrees

Weight: 1635 kg

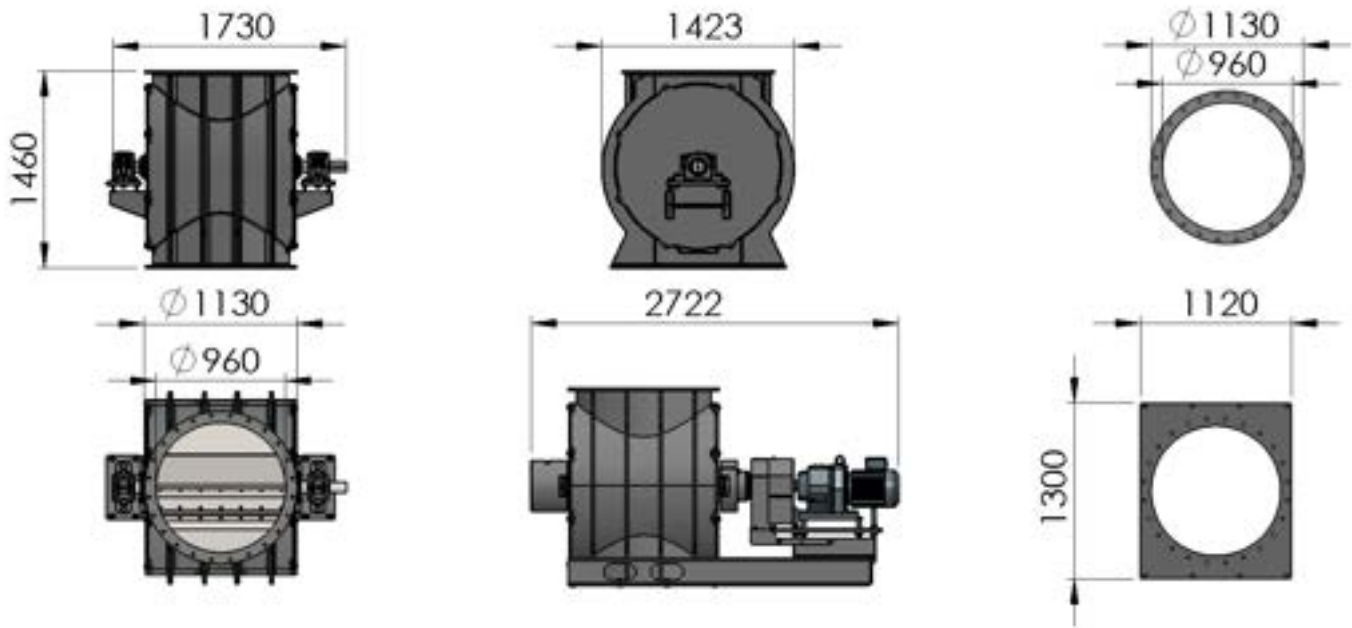
P-900

[m³/hour]



P-1000

Dimensions



Performance

Capacity vs. RPM at various filling degrees

Weight: 2025 kg

P-1000

[m³/hour]

