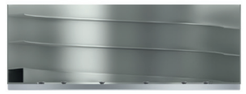
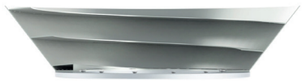
RNA's Vibratory Feeders

This section comprises our complete portfolio of vibratory feeders available from stock. In addition to the bowl drives, this includes the feeder bowls, bowl centres, controllers and extended accessories such as stands, base plates, sound enclosures, and sensors These components are completed through the installation of orienting devices (baffles) to become a functional system.
The present catalogue is intended primarily for customers who will implement these baffles themselves.
Due to their excellent capabilities and the wide range of sizes, RNA drives for vibratory feeding systems are regarded as an industry standard. Our product portfolio in addition includes all other known components of feeding systems, such as linear feeders, step feeders or centrifugal feeders, as well as vibratory platforms and belt feeders.
RNA's vibratory drives are renowned for their very low fault rates. They function smoothly and reliably even in continuous operation.

The use of high-performance magnets enables high, load-independent feed rates and compact dimensions in applications with 50 Hz and 100 Hz vibrating frequency. They are available in the sizes SRC-N 63 through SRC-N 800.
RNA's vibratory drives are regarded as industry standard and are all available from stock. We will also be happy to manufacture vibratory feeders to your special requirements, e.g. with customized spring configuration, increased performance, protective enclosures with special paint finishes or made from stainless steel, customer-specific connectors or EMC power cords (for use with variable frequency controllers).

1.) Select the feeder bowl

Use the selection table below to define the bowl geometry (cylindrical, conical, stepped).

Feeder bowl	Bowl geometry & special suitability
	Cylindrical bowls for uniform feeding of the products and for small parts
	Conical bowls for heavy, sharp-edged parts, larger filling quantities, automatic singulation RG variant: parts for the pharmaceutical and food industries
	Stepped bowls for larger filling quantities and larger parts, see also conical bowls
	Plastic feeder bowls (conical or stepped version) small parts with simple geometries and serial production applications

Bowl shape	Material	Size	Spiral track width (mm)	Bowl height	Feeding direction
C = cylindrical	A = aluminium		X = variable width of spiral track	from mounting surface	r = to right (clock-wise) l = to left (anticlock-wise)
K = conical	S = steel				
T = stepped	K = plastic				

K	S	B	-	ZA	-	250	-	8	(RG)	-	150	R

Method of manufacture	Bowl centre/fastening variants	Spiral shape
B = steel sheet con-struction	N = “nothing” - additional bowl centre required	R = right-angled
D = printed	Z = central attachment with welded or cast bowl centre	G = closed
F = milled	B = welded bowl centre	
G = cast	A = adapter plate	
	2A = additional adapter plate for central fastening	

2.) Determine the size:

Depending on the task at hand, selection of the spiral track width (dimension B) and the filling volume will determine the requisite size of the feeder bowl. A matching drive is associated to the feeder bowl. For easy installation of the unit we recommend the use of a baseplate. The permitted product volume and weight in feeder bowls are specified in the descriptions of the individual bowls. The size indication refers to the diameter of the drives (rounded off).
Please be sure to mention the type designation in your inquiries and purchase orders.

Size	250	400	630	800
Cylindrical bowls Stainless steel sheet	ZSB-N 250-30-110 ZSB-ZA 250-30-125	ZSB-N 400-30-160 ZSB-BA 400-30-175 ZSB-Z2A 400-30-190	ZSB-N 630-50-180 ZSB-BA 630-50-195	ZSB-B 800-80-220
Conical bowls Stainless steel sheet	KSB-N 250-20-90 KSB-ZA 250-20-105 KSB-ZA 250-20-150 KSB-ZA 250-8RG-150	KSB-N 400-50-160 KSB-BA 400-50-175 KSB-BA 400-15RG-220 KSB-Z2A 400-50-190 KSB-Z2A 400-15RG-235	KSB-N 630-50-180 KSB-BA 630-50-190 KSB-BA 630-15RG-250	KSB-B 800-80-170
Stepped bowls Cast aluminium	TAG-N 250-20-105 TAG-N 250-32-130 TAG-N 250-32-145 TAG-ZA 250-32-165 TAG-ZA 250(541)-32-180	TAG-N 400-32-175 TAG-N 400-50-190 TAG-N 400-50-215 TAG-ZA 400-50-240	TAG-N 630-50-220 TAG-N 630-65-230 TAG-ZA 630-50-240 TAG-ZA 630-65-250	
Plastic bowls milled	KKF-ZA 250-X-100 TKF-ZA 250-X-100	on request		
Fixed bowl centre	SRF-N 250(PA) SRF-N 250(AL) SRF-N 250(VA)	SRF-N 400(PA) SRF-N 400(AL) SRF-N 400(VA)	SRF-N 630(PA) SRF-N 630(VA)	
Loose bowl centre	SRL-N 250(PA) SRL-N 250(AL)	SRL-N 400(PA) SRL-N 400(AL)	SRL-N 630(AL)	
Adapter plates	AAG-Z 250	AAG-R 400 AAG-R400(544) SA AAG-Z 400 AAG-Z 400(Z) AAG-Z 400(250)SA	AAG-ZB 630 AAG-R 630 AAG-R 630(666)SA	
Drives	SRC-N 250-2 SRC-B 250-2	SRC-N 400-2 SRC-N 400-1 SRHL 400-2 SRHL 400-1	SRC-N 630-1	SRC-N 800-1
Baseplates	SRG-250 USJ-250	SRG-400 USJ-400	SRG-630 USJ-630	
Mounting plates	UP 250	UP 400	UP 630	

3.) Define the feeding direction:

1) Left-hand version (anticlockwise feeding direction)

2) Right-hand version (clockwise feeding direction)

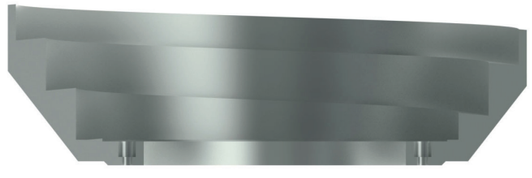


Fig.: Anticlockwise feeding direction

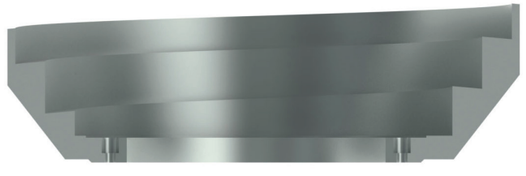
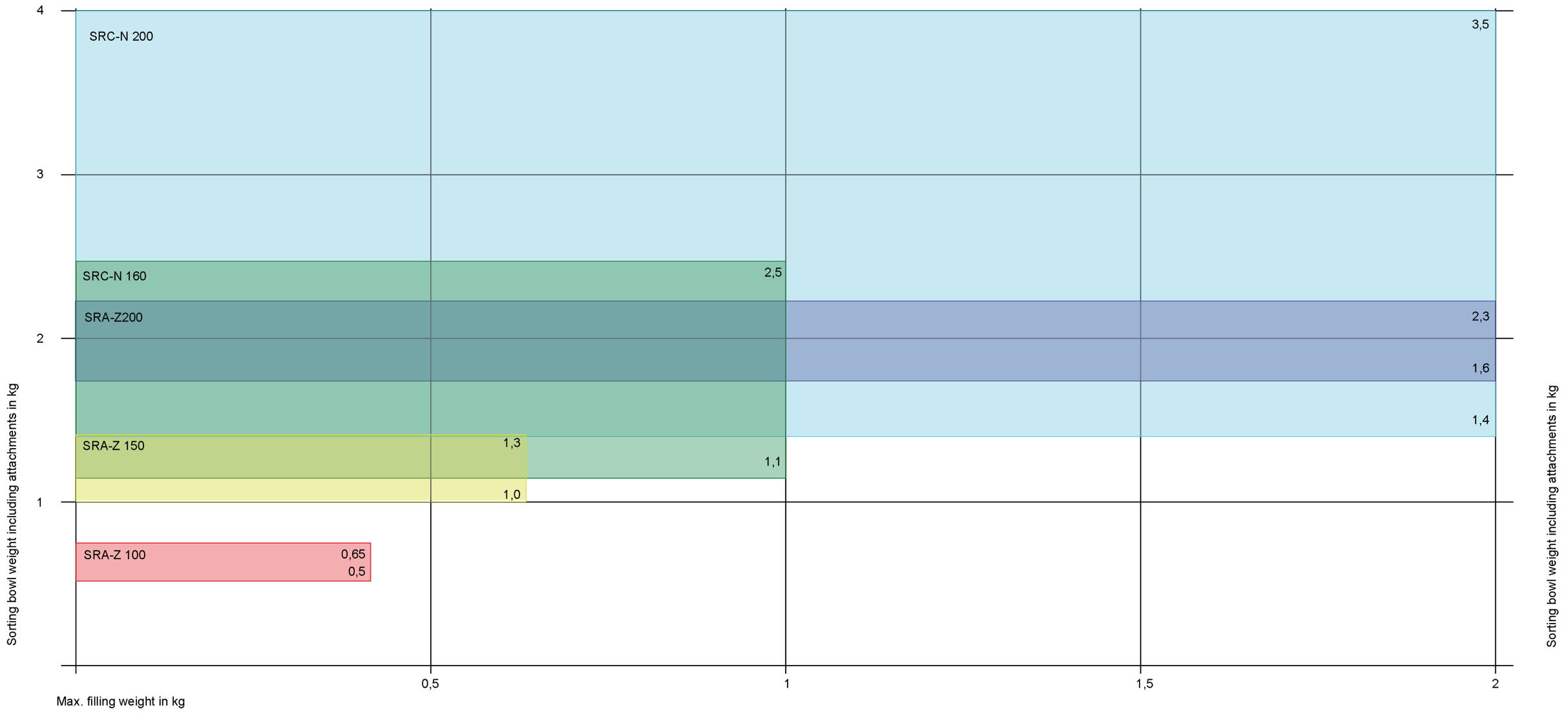


Fig.: Clockwise feeding direction

Vibratory Feeders

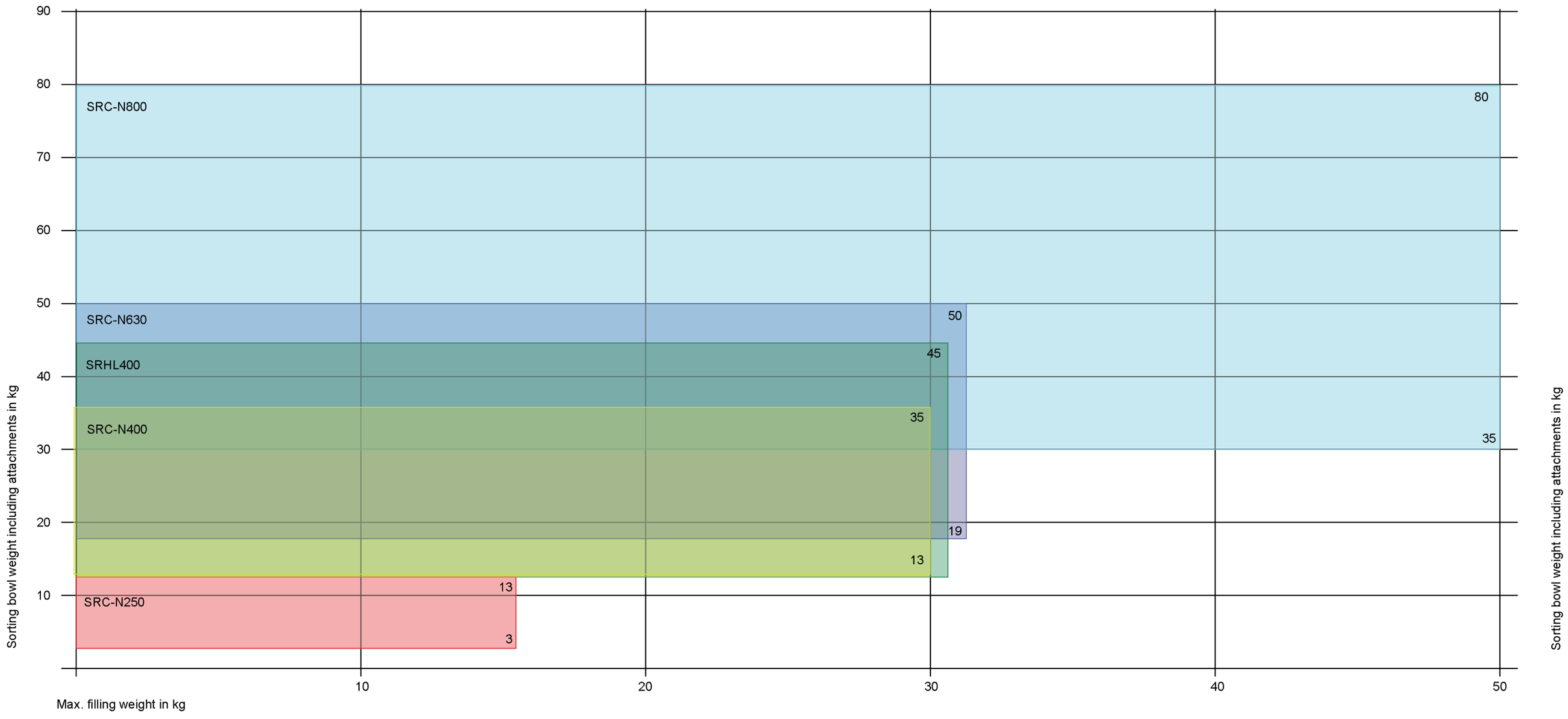
Selection matrix for bowl feeders

Drive size 100 - 200



Selection matrix for bowl feeders

Drive size 250 - 800



Bowl drive series SRA-Z

Infos

- **Drives of the SRA-Z series do not require a protective enclosure.**
- **Customized spring configurations**

Description

SRA-Z bowl drives are our smallest drives. They are appreciated for their low fault rates and compact design. They provide a high degree of reliability and operational safety in continuous operation. The use of high-performance magnets enables high, feed rates independent of loading, and compact dimensions. The vibrating frequency of 100 Hz ensures a very fine part running behaviour in the devices. This is particularly helpful for handling parts with minor discernible orientation characteristics. It also helps implement critical interface transitions.

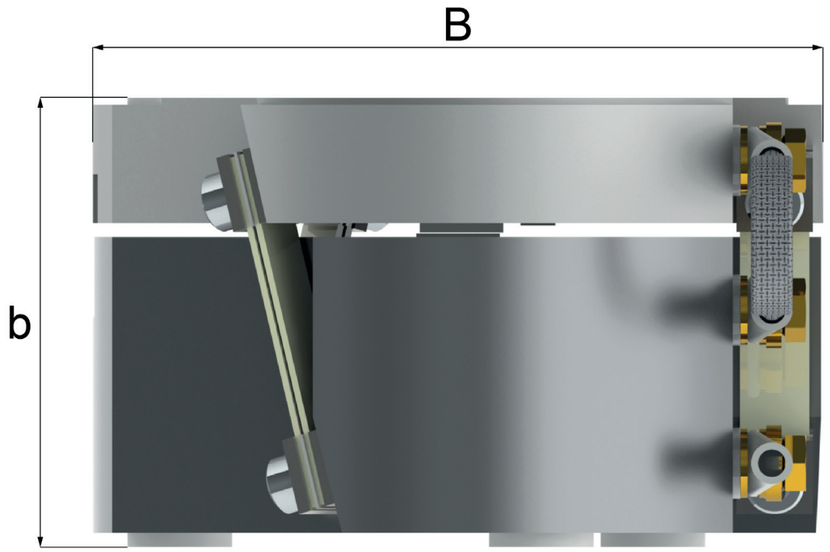


Fig.: SRA-Z 150

Typical application: SRA-Z150 and SRA-Z100 with RNA standard 3D feeder bowl for metal pins

Type	SRA-Z 100-2	SRA-Z 150-2	SRA-Z 200-2
B = outside drive Ø (mm)	105	148	195
Vibration isolator hole circle Ø (mm)	82	120	175
Isolator pitch (degrees°)	120	120	120
Isolator fastening thread (metric)	M4	M4	M6
Central fastening of feeder bowl (metric)	M6	M8	M8
b = height of drive (mm)	64.5	61.5	130
Weight of drive (kg)	2.2	3.6	10.5
Max. weight of feeder bowl [kg]	0.65	1.3	2.3
Max. filling weight (kg)	0.4	0.6	2
Current input (A)	0.12	0.36	1.42
Vibrating frequency (Hz / min-1)	100 / 6000	100 / 6000	100 / 6000
Connecting cable length (m)	1.5	1.5	1.5
Nominal voltage: Magnet voltage / frequency (V/Hz)	200 / 50	200 / 50	200 / 50
Implemented standard(s)	CE	CE	CE

Bowl drive series SRC-N 160 to 200

Infos

We will be happy to build drives in the configuration of your choice:

- **Customized spring configurations**
- **Extended or shielded connecting cables**
- **Protective enclosures in stainless steel or painted the colour of your choice**
- **Specific connectors**
- **Available for different voltages and frequencies**

Description

Drives SRC-N 160-2 and SRC-N 200-2 are the smallest drives in our renowned SRC family. A centrally arranged high-performance magnet in combination with three freely configurable leaf spring packs ensures smooth and powerful transmission of vibrations. The drives are fitted with steel leaf springs for safe and reliable operation. These steel springs also ensure constant feed rates even in continuous operation and in the presence of temperature fluctuations. The drives are designed for a vibrating frequency of 100 Hz so that parts with particularly small discernible orientation characteristics can be oriented in the feeder bowl. The feeder bowl is held in place by a central fastening screw. We will be happy to build the drive in accordance with your specifications.

Typical application: SRC-N 200 with RNA standard 3D feeder bowl for screws, balls and O-rings

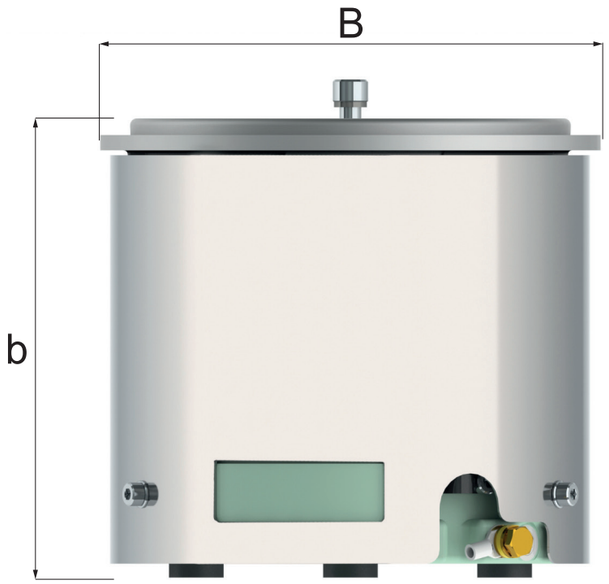
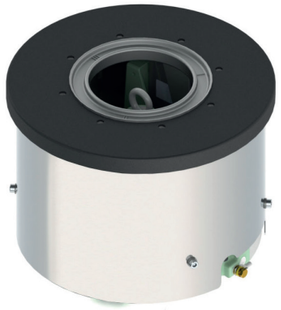


Fig.: SRC-N

Type	SRC-N 160-2	SRC-N 200-2	SRC-B 200-2
B = outside drive Ø (mm)	157	180	180
Feeder bowl spigot Ø (mm)	150	161	161
Vibration isolator hole circle Ø (mm)	120	130	130
Isolator pitch (degrees°)	120	120	120
Isolator fastening thread (metric)	M4	M4	M6
Central fastening of feeder bowl (metric)	M8	M8	M8
b = height of drive (mm)	132	165	165
Weight of drive (kg)	7	11	11
Max. weight of feeder bowl [kg]	2.5	4	4
Max. filling weight (kg)	1.0	2.0	2.0
Current input (A)	0.55	1.2	1.2
Vibrating frequency (Hz / min-1)	100 / 6000	100 / 6000	100 / 6000
Connecting cable length (m)	1.4	1.4	1.4
Nominal voltage: Magnet voltage / frequency* (V/Hz)	200 / 50	200 / 50	200 / 50
Implemented standard(s)	CE, CSA/UL	CE, CSA/UL	CE, CSA/UL

*Other voltages and frequencies available: 220V, 200V, 110V, each with 50Hz or 60Hz

Bowl drive series SRC-N 250 to 630



Infos

We will be happy to build drives in the configuration of your choice:

- **Customized spring configurations**
- **Extended or shielded connecting cables**
- **Protective enclosures with special paint jobs**
- **Specific connectors**
- **Available for different voltages and frequencies**

Description

Bowl drives of the SRC-N 250 to 630 series are among the most used vibratory feeders worldwide. They are powerful tools and distinguish themselves by their high operational safety and reliability in continuous operation. The combination of high-performance magnets with specially made leaf springs provides users with quasi load-independent, high feeding capacities and speeds. Their compact and uncomplicated design makes them easy to tune and work on.

Our drives have IP54 protection rating.

In their standard version, they come with painted (RAL 7035) or stainless steel protective enclosures.

Typical application: SRC-N 250-2L with RNA standard 3D feeder bowl, multi-lane version for plastic parts

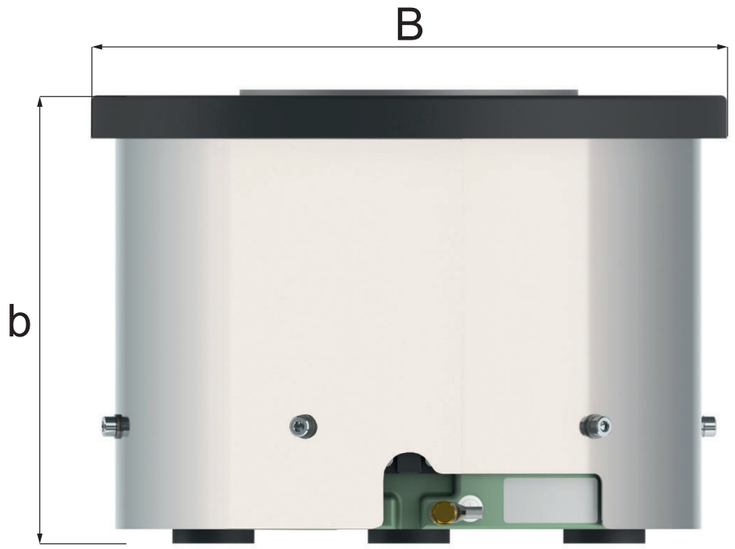
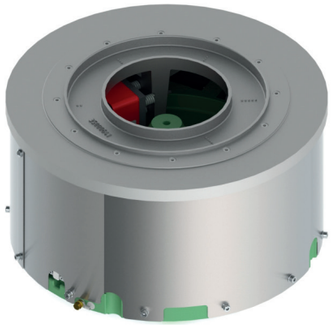


Fig.: SRC-N 250-2

Type	SRC-N 250-2	SRC-B 250-2	SRC-N 400-2	SRC-N 400-1	SRC-N 630-1
B = outside drive Ø (mm)	290	290	440	440	660
Feeder bowl spigot Ø (mm)	165	165	300	300	500
Feeder bowl bolt hole circle Ø (mm)	186	186	320	320	525
Vibration isolator hole circle Ø (mm)	220	220	350	350	560
Isolator pitch (degrees°)	120°	120°	120°	120°	120°
Isolator fastening thread (metric)	M8	M8	M10	M10	M10
Central fastening of feeder bowl (metric)	M6 / 45°	M6 / 45°	M6 / 30°	M6 / 30°	M6 / 30°
b = height of drive (mm)	218	218	228	228	227
Weight of drive (kg)	40	40	103	103	168
Max. weight of feeder bowl [kg]	13	13	20	35	50
Max. filling weight (kg)	15	15	30	30	30
Current input (A)	2.6	2.6	4.05	3.75	5
Vibrating frequency (Hz / min-1)	100 / 6000	100 / 6000	100 / 6000	50 / 3000	50 / 3000
Connecting cable length (m)	2.5	2.5	2.5	2.5	2.5
Nominal voltage: Magnet voltage / frequency* (V/Hz)	200 / 50	200 / 50	200 / 50	200 / 50	200 / 50
Implemented standard(s)	CE, CSA/UL	CE, CSA/UL	CE, CSA/UL	CE, CSA/UL	CE, CSA/UL

*Other voltages and frequencies available: 220V, 200V, 110V, each with 50Hz or 60Hz

Bowl drive series SRHL



Infos

We will be happy to build drives in the configuration of your choice:

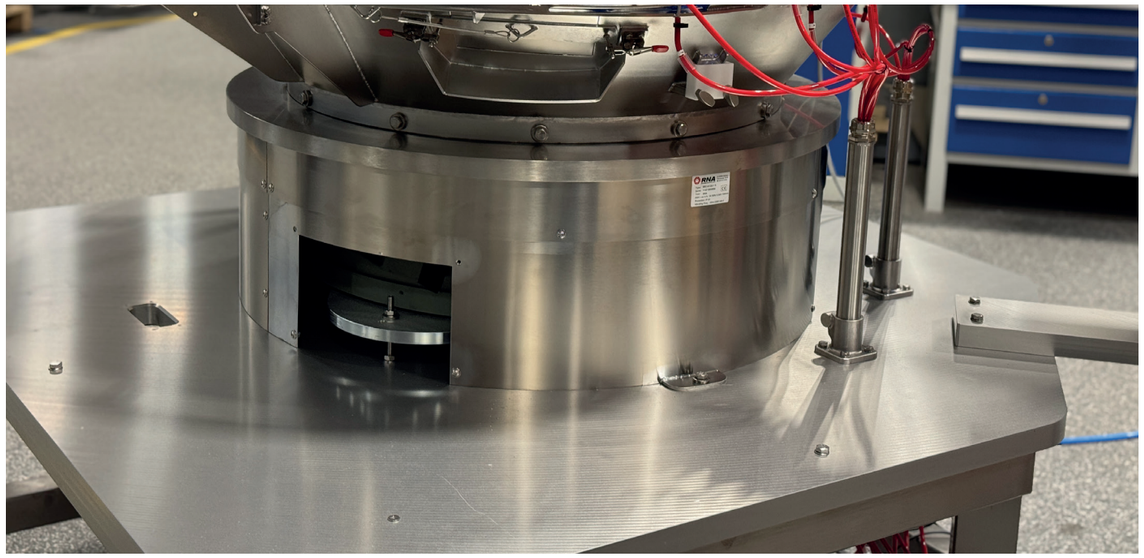
- **Customized spring configurations**
- **Extended or shielded connecting cables**
- **Protective enclosures with special paint jobs**
- **Specific connectors**
- **Available for different voltages and frequencies**

Description

Bowl drives of the SRHL series are high-performance drives that are used whenever high loads and high feeding rates are required.

The use of two powerful magnets in combination with six freely configurable leaf spring packs provides sufficient forward movement and permits safe operation even with high amplitudes. Depending on the sorting task at hand, you can order the SRHL drives with full-wave or half-wave frequency.

Typical application: SRHL 400-2L with standardised, electropolished V2A feeder bowl for O-rings, feeding rate 800 parts/minute



Vibratory Feeders

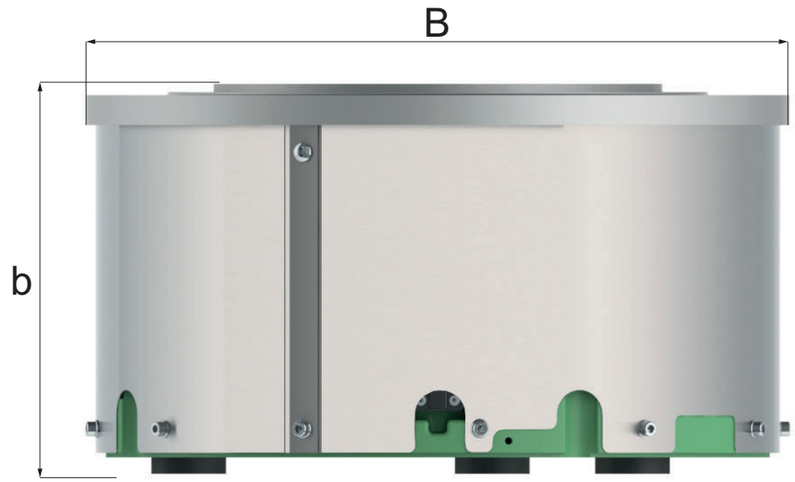
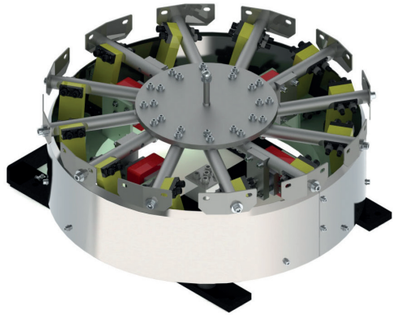


Fig.: SRHL 400-2

Type	SRHL 400-2	SRHL 400-1
B = outside drive Ø (mm)	470	470
Feeder bowl spigot Ø (mm)	300	300
Feeder bowl bolt hole circle Ø (mm)	320	320
Vibration isolator hole circle Ø (mm)	350	350
Isolator pitch (degrees°)	120°	120°
Isolator fastening thread (metric)	M10	M10
Central fastening of feeder bowl (metric)	M6 / 30°	M6 / 30°
b = height of drive (mm)	255	255
Weight of drive (kg)	140	140
Max. weight of feeder bowl [kg]	45	45
Max. filling weight (kg)	30	30
Current input (A)	2.6	2.6
Vibration frequency (Hz / min-1)	100 / 6000	100 / 6000
Connecting cable length (m)	2.5	2.5
Nominal voltage: Magnet voltage / frequency* (V/Hz)	200 / 50	200 / 50
Implemented standard(s)	CE, CSA/UL	CE, CSA/UL

*Other voltages and frequencies available: 220V, 200V, 110V, each with 50Hz or 60Hz

Bowl drive series SRC-N 800



Infos

We will be happy to build drives in the configuration of your choice:

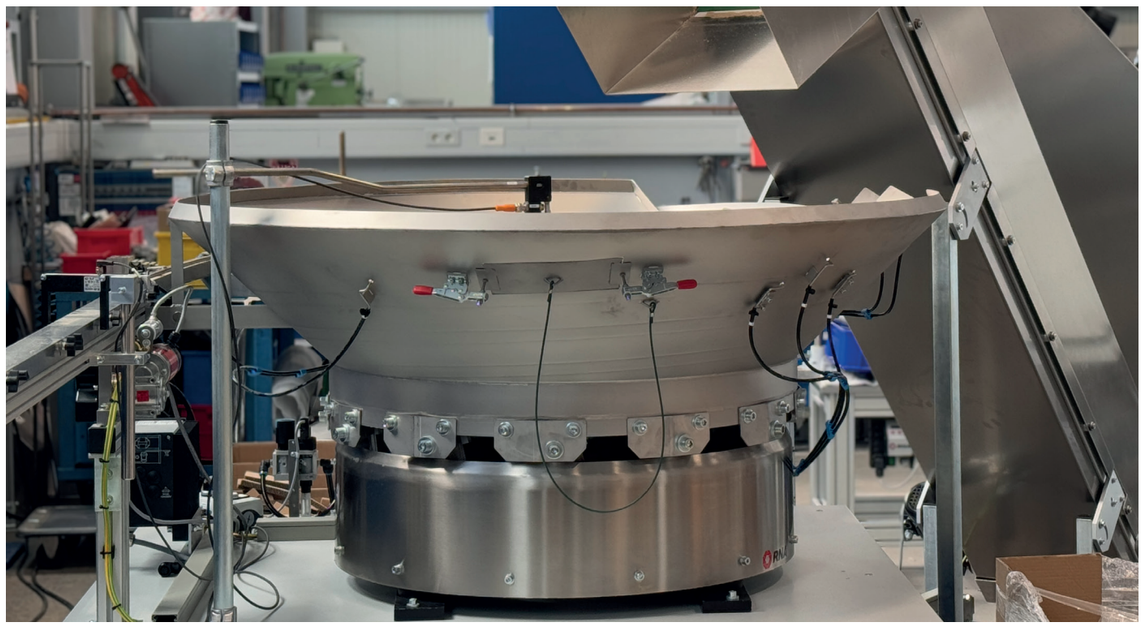
- **Customized spring configurations**
- **Extended or shielded connecting cables**
- **Protective enclosures with special paint jobs**
- **Specific connectors**
- **Available for different voltages and frequencies**

Description

The SRC-N 800 is the largest bowl drive in RNA's product portfolio. It is designed for particularly large and heavy bowls. With its four high-powered magnets combined with twelve freely configurable leaf spring packs, it offers a feeding capacity that is nearly independent of loading, and allows users to realize high amplitudes with excellent process reliability. Feeder bowls are radially fastened from outside at 12 fastening points. Our drives have IP54 protection rating.

In their standard version, they come with painted (RAL 7035) or stainless steel protective enclosures.

Typical application: KSB-B 800 in combination with SRC-N 800 for properly oriented feeding of rectangular parts



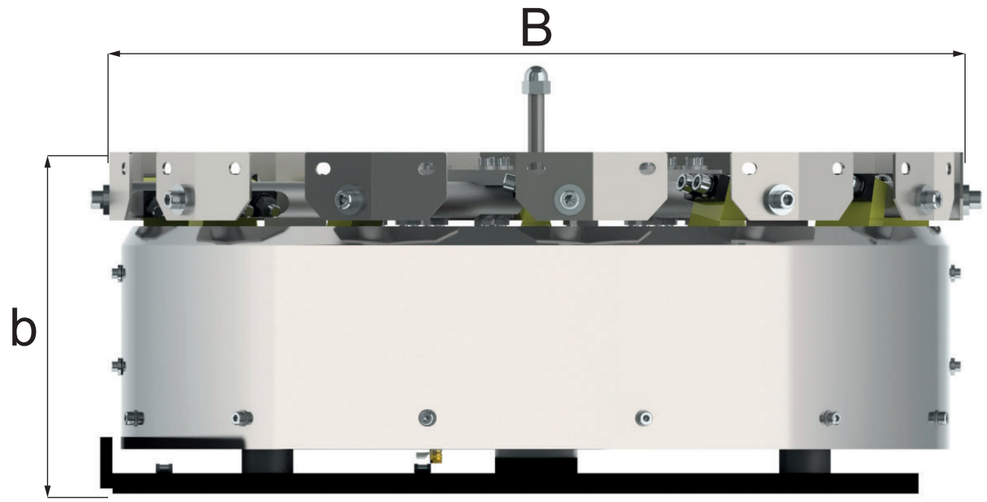
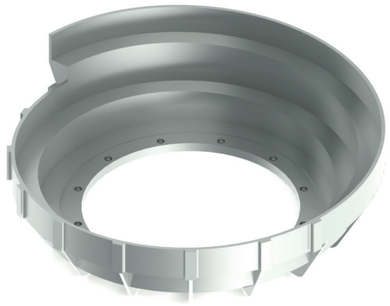


Fig.: SRC-N 800-1

Type	SRC-N 800-1
B = outside drive Ø (mm)	850
Feeder bowl spigot Ø (mm)	820
Feeder bowl bolt hole circle Ø (mm)	M10 / 15°
Vibration isolator hole circle Ø (mm)	M12 / 30°
Isolator pitch (degrees°)	735
Isolator fastening thread (metric)	90°
Central fastening of feeder bowl (metric)	M10
b = height of drive (mm)	315
Weight of drive (kg)	253
Max. weight of feeder bowl [kg]	80
Max. filling weight (kg)	50
Current input (A)	8.5
Vibrating frequency (Hz / min-1)	50 / 3000
Connecting cable length (m)	2.5
Nominal voltage: Magnet voltage / frequency* (V/Hz)	200 / 50
Implemented standard(s)	CE, CSA/UL

*Other voltages and frequencies available: 220V, 200V, 110V, each with 50Hz or 60Hz

Feeder bowl series TAG-N



Infos

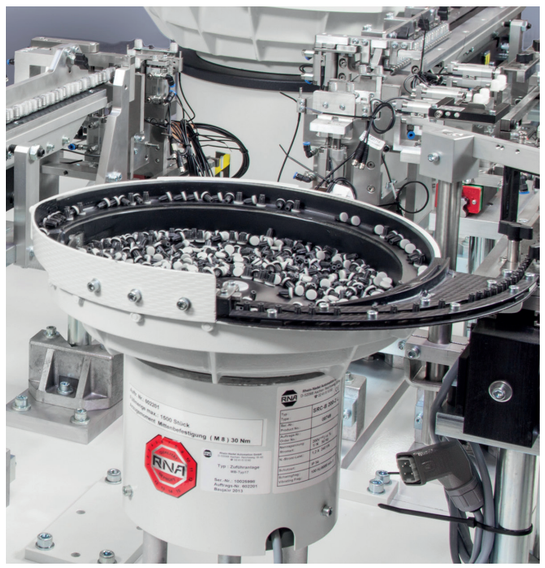
We will be happy to manufacture customer-specific feeder bowls:

- **Reproducible design**
- **Low noise level**
- **Stable mounting points for orienting tooling**
- **Special paint jobs**
- **Different coatings**
- **Choice of bowl centres**

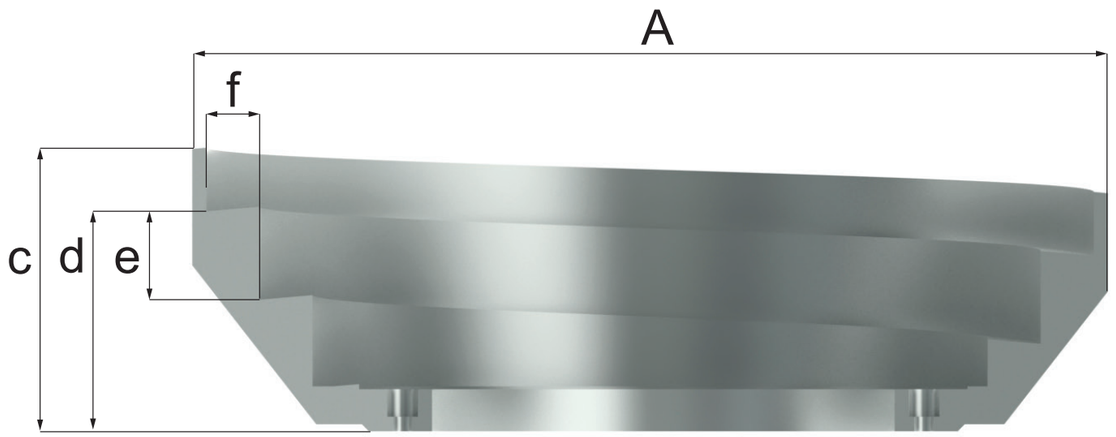
Description

The stepped feeder bowl TAG-N is made from aluminium. It offers a very high stiffness, which ensures uniform feeding of the parts. Feeder bowls from this series offer a very large filling volume, but without parts getting stuck under the spiral track.
Feeder bowls of the TAG-N series can be combined with different bowl centres. The bowl is radially fastened from top directly to the vibrating unit of the SRC-N bowl drive.
In combination with a bowl coating, the unit generates very little noise during operation.

Typical application: SRC-N 200 with TAG-Z 200



Vibratory Feeders



Type	TAG-N 250-20-105	TAG-N 250-32-130	TAG-N 250-32-145	TAG-N 400-32-165	TAG-N 400-50-190	TAG-N 400-50-215	TAG-N 630-50-230	TAG-N 630-65-230
A = outside bowl Ø (mm)	330	400	400	545	645	645	830	830
c = bowl height (mm)	102	122	140	165	190	215	222	230
d = discharge height of feeder bowl (mm)	77	90	107	124	138	162	157	157
e = spiral track pitch (mm)	34	42	42+15***	50+15***	68	68+23***	76	95
F = spiral track width (mm)	20	32	32	32	50	50	50	65
Weight of feeder bowl (kg)	1.65	2.9	3.4	5	9	11.7	18	18
Max. weight of feeder bowl incl. add-ons (kg)	13	13	13	20* / 35**	20* / 35**	20* / 35**	50	50
Max. filling quantity (kg / l)	15 / 2	15 / 2	15 / 2	30 / 0	30 / 10	30 / 10	30 / 20	30 / 20

*Max. bowl weight for SRC-N 400-2 drive
**Max. bowl weight for SRC-N 400-1 drive
***Additional spiral track gradient over at the last 180°

Feeder bowl series TAG-Z

Infos

We will be happy to manufacture customer-specific feeder bowls:

- **Reproducible design**
- **Low noise level**
- **Cast-in bowl centre**
- **Stable mounting points for orienting tooling**
- **Special paint jobs**
- **Different coatings**

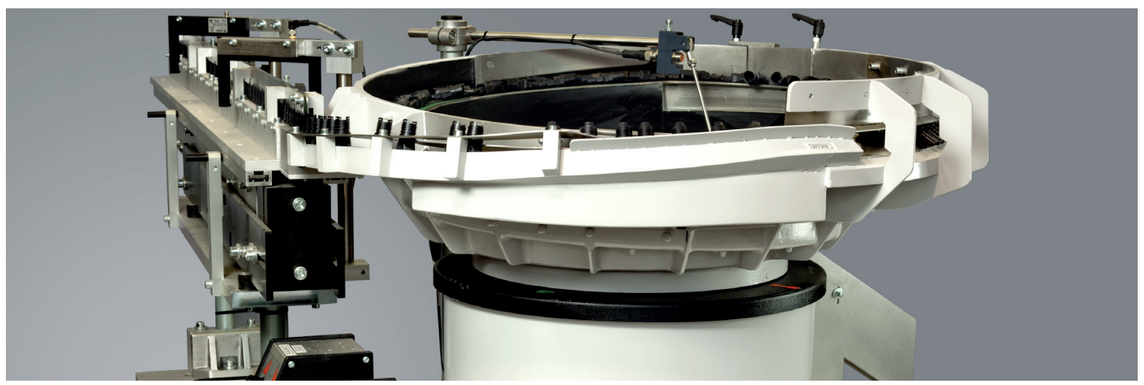
Description

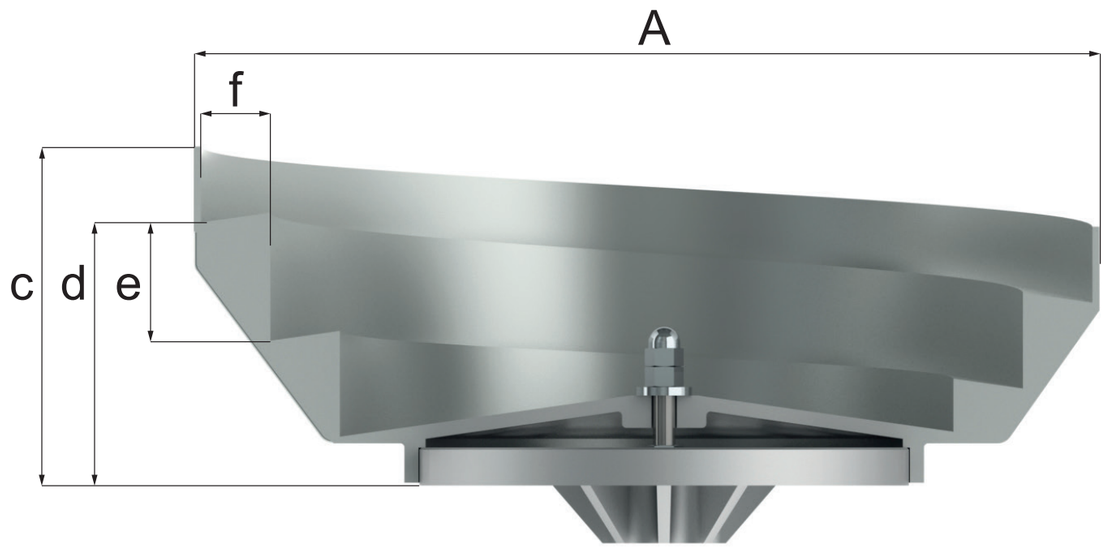
Stepped feeder bowls of the TAG-Z series are made from aluminium. Their design offers very high strength, ensuring even and quiet feeding of the parts. Thanks to their design they also have a large filling volume, without the parts getting stuck under the spiral track.

TAG-Z stepped feeder bowls are made with cast-in bowl centres. The bowl centre is designed so that the feeder bowl is connected to the bowl drive by a central fastening screw.

In combination with a bowl coating, the unit generates very little noise during operation.

Typical application: SRC-N 400-1 with TAG-ZA 400 and bolted-on orienting device

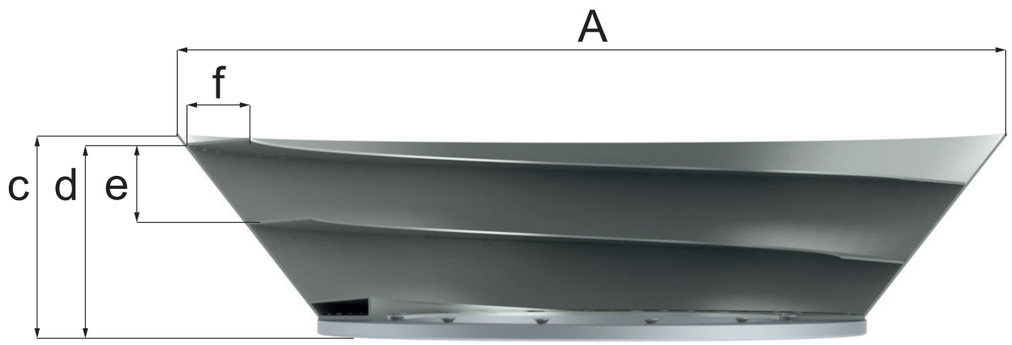




Type	TAG-Z 200-10-80	TAG-Z 200(324)-20-105	TAG-ZA 250-32-165	TAG-ZA 250(541)-32-180	TAG-ZA 400-50-240	TAG-ZAB 630-50-240	TAG-ZAB 630-65-240
A = outside bowl Ø (mm)	228	330	400	545	650	830	830
c = bowl height (mm)	81	95	160	177	241	242	250
d = discharge height of feeder bowl (mm)	66	71	126	135	188	197	197
e = spiral track pitch (mm)	20	32	42+15***	50+15***	68+23***	76	95
F = spiral track width (mm)	10	20	32	32	50	50	65
Weight of feeder bowl (kg)	0.8	2.6	6.9	8.2	14.7	27	27
Max. weight of feeder bowl incl. add-ons (kg)	3.5	3.5	13	13	20* / 35**	50	50
Max. filling quantity (kg / l)	2 / 0.5	2 / 1.0	15 / 2	15 / 7	30 / 10	30 / 20	30 / 20

*Max. bowl weight for SRC-N 400-2 drive
**Max. bowl weight for SRC-N 400-1 drive
***Additional spiral track gradient over at the last 180°

Feeder bowl series KSB-N



Infos

We will be happy to manufacture customer-specific feeder bowls:

- **Special paint jobs**
- **Different coatings**
- **Standard and specially designed bowl centres**

Description

KSB-N series feeder bowls have a conical shape and are made from stainless steel (1.4301). The spiral track with transition from the bowl centre is already welded into the bowl.

Due to the conical shape in feeding direction, the parts will already be spaced out as they advance. For optimal transmission of the vibrations, an aluminium ring is glued to the bowl centre. The bowl is fixed radially from top directly to the vibrating unit of the drive.

As with all N-series bowls, various bowl centres can be installed.

Typical application: SRC-N 250-2 with KSB-N 250 and closed spiral track for feeding of caps

Type	KSB-N 250-20-90	KSB-N 400-50-160	KSB-N 630-50-180
A = outside bowl Ø (mm)	403	670	898
c = bowl height (mm)	89	161	180
d = discharge height of feeder bowl (mm)	77	153	172
e = spiral track pitch (mm)	32	68	70
F = spiral track width (mm)	20	50	50
Weight of feeder bowl (kg)	3.85	12.9	19
Max. weight of feeder bowl incl. add-ons (kg)	13	20* / 35**	50
Max. filling quantity (kg / l)	15 / 2	30 / 10	30 / 20

*Max. bowl weight for SRC-N 400-2 drive
**Max. bowl weight for SRC-N 400-1 drive

Feeder bowl series KSB-Z and KSB-B

Infos

We will be happy to manufacture customer-specific feeder bowls:

- **Special paint jobs**
- **Different coatings**
- **Standard and specially designed bowl centres**

Description

KSB-Z and KSB-B series feeder bowls have a conical shape and are made from stainless steel (1.4301). The spiral track with transition from the bowl centre is already welded into the bowl. Due to the conical shape in feeding direction, the parts will already be spaced out as they advance.

These feeder bowls come with a pre-installed welded bowl centre. The feeder bowls can be mounted on the bowl drive either in central (KSB-Z) or in radial manner from the outside (-BA) in combination with an adapter plate.

We have taken special care to provide for optimal transmission of the vibrations.

Typical application: SRC-N 250 with KSB-ZA 250 feeder bowl of grade 1.4301 material

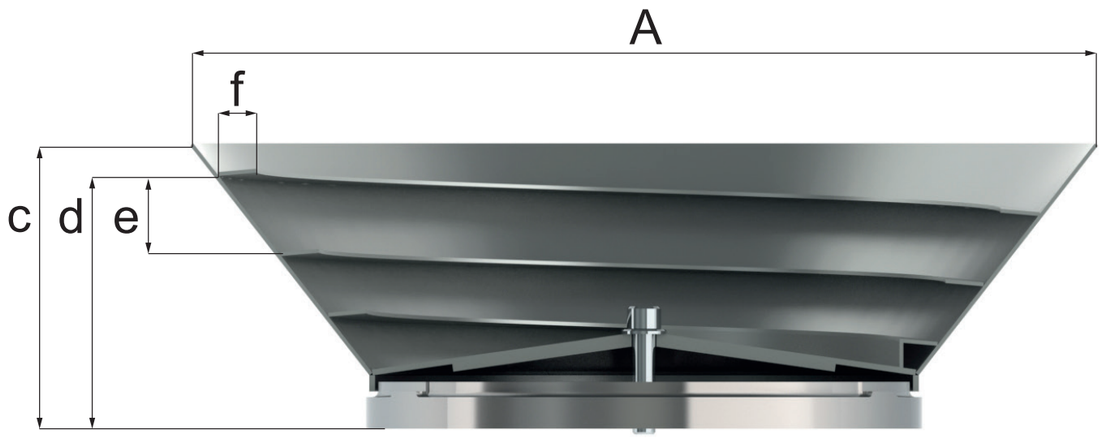


Fig.: KSB-Z

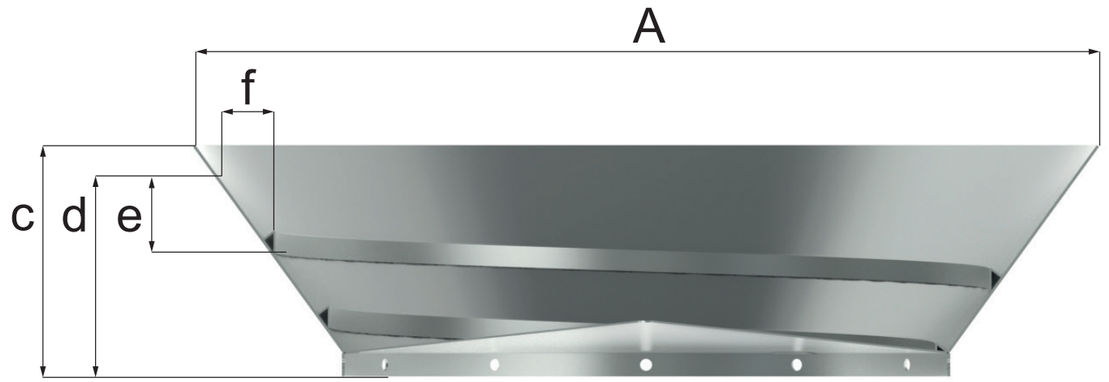
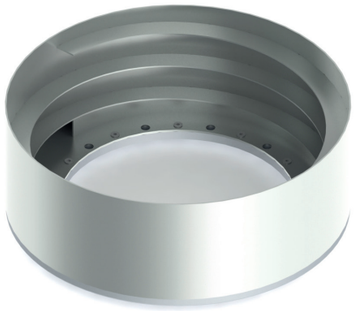


Fig.: KSB-B

Type	KSB-Z 200-5RG-60	KSB-Z 200-18-55	KSB-ZA 250-20-105	KSB-ZA 250-20-150	KSB-ZA 250-8RG-150	KSB-Z2A 400-50-190	KSB-BA 400-50-175	KSB-BA 400-15RG-220	KSB-BA 630-50-190	KSB-BA 630-15RG-250	KSB-B 800-80-170
A = outside bowl Ø (mm)	277	265	415	476	478	670	670	745	898	980	1200
c = bowl height (mm)	58	55	113	151	151	189	173	220	192	250	168
d = discharge height of feeder bowl (mm)	50	47	110	136	138	180	164	169	167	149	148
e = spiral track pitch (mm)	28	25	32	32	40	68	68	71	70	81	64
F = spiral track width (mm)	5	18	20	20	8	50	50	15	50	15	80
Weight of feeder bowl (kg)	1.7	1.46	8.2	9.2	10.8	19.4	13.6	16	21.5	27	35
Max. weight of feeder bowl incl. add-ons (kg)	3.5	3.5	13	13	13	20* / 35**	20* / 35**	20* / 35**	50	50	80
Max. filling quantity (kg / l)	2 / 0.5	2 / 0.5	15 / 2	15 / 2	15 / 2	30 / 10	30 / 10	30 / 10	30 / 20	30 / 20	50 / 30

*Max. bowl weight for SRC-N 400-2 drive
**Max. bowl weight for SRC-N 400-1 drive

Feeder bowl series ZSB-N



Infos

We will be happy to manufacture customer-specific feeder bowls:

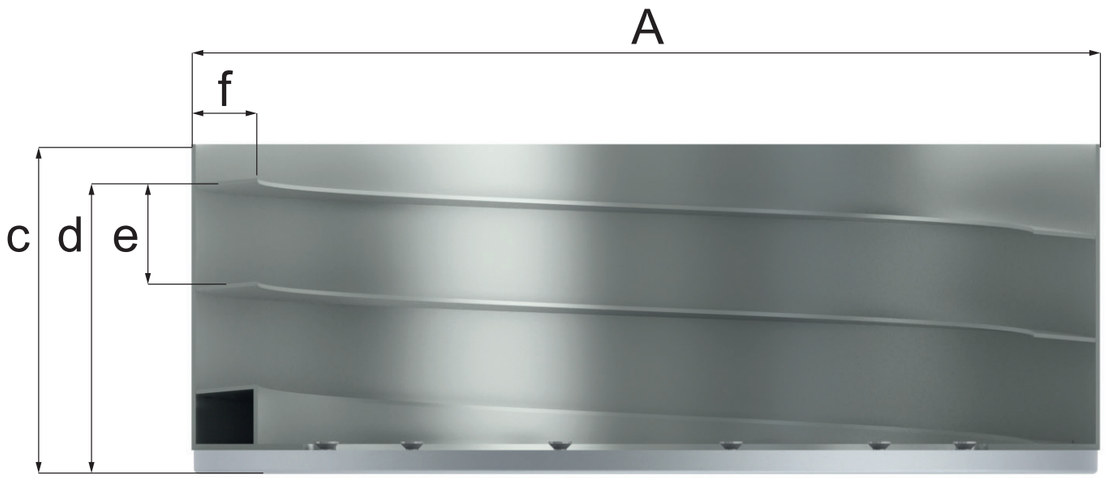
- **Special paint jobs**
- **Different coatings**
- **Standard and specially designed bowl centres**

Description

The ZSB-N series feeder bowls have a cylindrical shape and are made from stainless steel (1.4301). The spiral track with transition from the bowl centre is already welded into the bowl. Bowls of this design take up very little space and offer a very even part feeding behaviour. Due to the vertical outer walls, add-on components and braces can be welded on very easily. For optimal transmission of the vibrations, an aluminium ring is glued to the bowl centre. The bowl is fixed radially from top directly to the vibrating unit of the drive.

As with all bowls of the N series, different bowl centres can be installed.

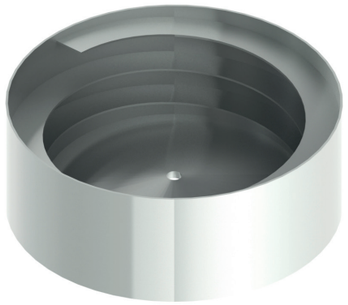
Typical application: SRC-N 250-2 with ZSB-Z 250 for feeding of cases



Type	ZSB-N 250-30-110	ZSB-N 400-30-160	ZSB-N 630-50-180
A = outside bowl Ø (mm)	288	440	670
c = bowl height (mm)	110	160	180
d = discharge height of feeder bowl (mm)	100	140	156
e = spiral track pitch (mm)	35	50	70
F = spiral track width (mm)	30	30	50
Weight of feeder bowl (kg)	4.2	8.4	16.2
Max. weight of feeder bowl incl. add-ons (kg)	13	20* / 35**	50
Max. filling quantity (kg / l)	15 / 1.6	30 / 7	30 / 20

*Max. bowl weight for SRC-N 400-2 drive
**Max. bowl weight for SRC-N 400-1 drive

Feeder bowl series ZSB-Z and ZSB-B



Infos

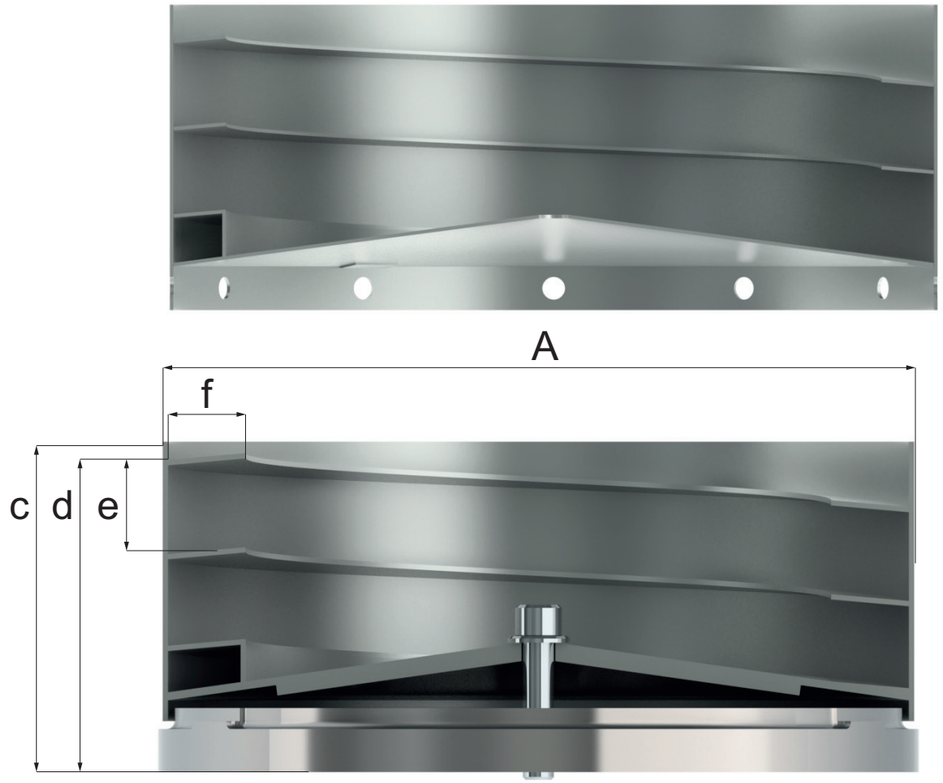
We will be happy to manufacture customer-specific feeder bowls:

- **Special paint jobs**
- **Different coatings**
- **Standard and specially designed bowl centres**

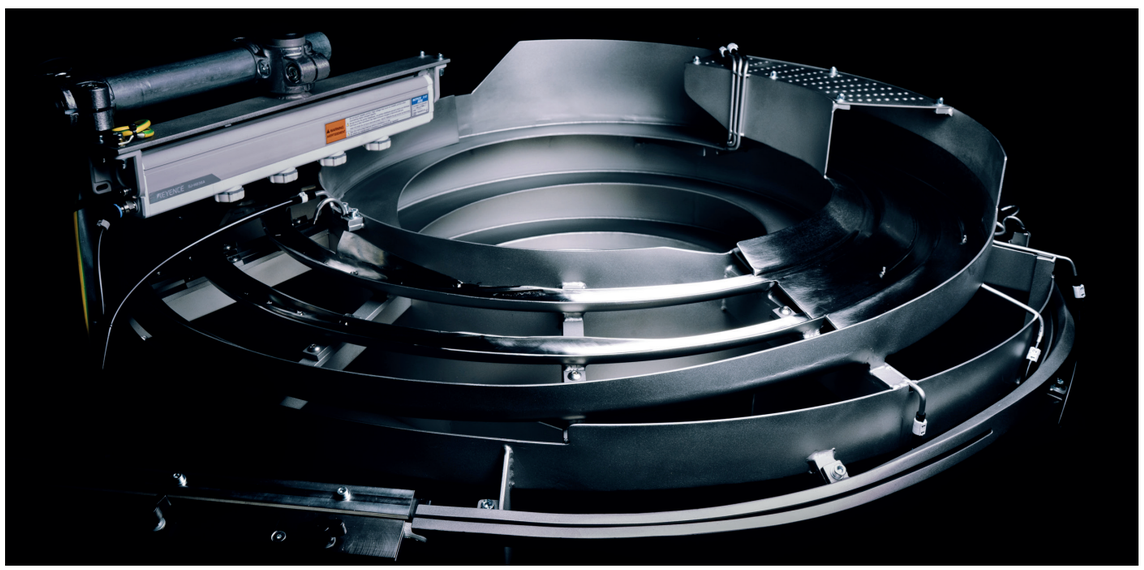
Description

The KSB-Z and KSB-B series feeder bowls have a cylindrical shape and are made from stainless steel (1.4301). The spiral track with transition from the bowl centre is already welded into the bowl.

Bowls of this design take up very little space and offer a very even part feeding behaviour. Due to the vertical outer walls, add-on components and braces can be welded on very easily. We have taken special care to provide for optimal transmission of the vibrations.



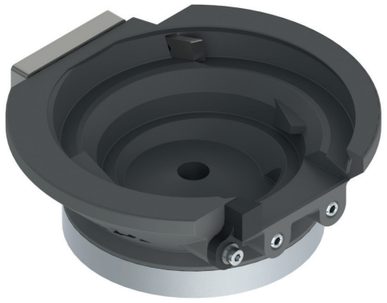
Typical application: SRHL 400-1 with ZSB-BA 400 for multi-lane feeding of plastic parts



Type	ZSB-Z 160-12-70	ZSB-Z 200-12-80	ZSB-ZA 250-30-125	ZSB-BA 400-30-175	ZSB-BA 630-50-195	ZSB-B 800-80-220
A = outside bowl Ø (mm)	168	181	288	440	670	820
c = bowl height (mm)	70	80	127	175	195	220
d = discharge height of feeder bowl (mm)	64	65	120	155	167	195
e = spiral track pitch (mm)	22	22	33***	50	70	70
F = spiral track width (mm)	12	12	30	30	50	80
Weight of feeder bowl (kg)	1.1	1.35	6.4	10.6	18.7	36.8
Max. weight of feeder bowl incl. add-ons (kg)	2.5	3.5	13	20* / 35**	50	80
Max. filling quantity (kg / l)	1 / 0.3	2 / 0.5	15 / 2	30 / 10	30 / 20	50 / 20

*Max. bowl weight for SRC-N 400-2 drive
**Max. bowl weight for SRC-N 400-1 drive

Printed feeder bowl series KKD-Z



Infos

- **for SRA-Z drives**
- **specially conceived for very small parts**
- **Due to the dimensional accuracy of these bowls it is possible to design orienting tools subsequently and fasten them via the existing threaded holes.**

Description

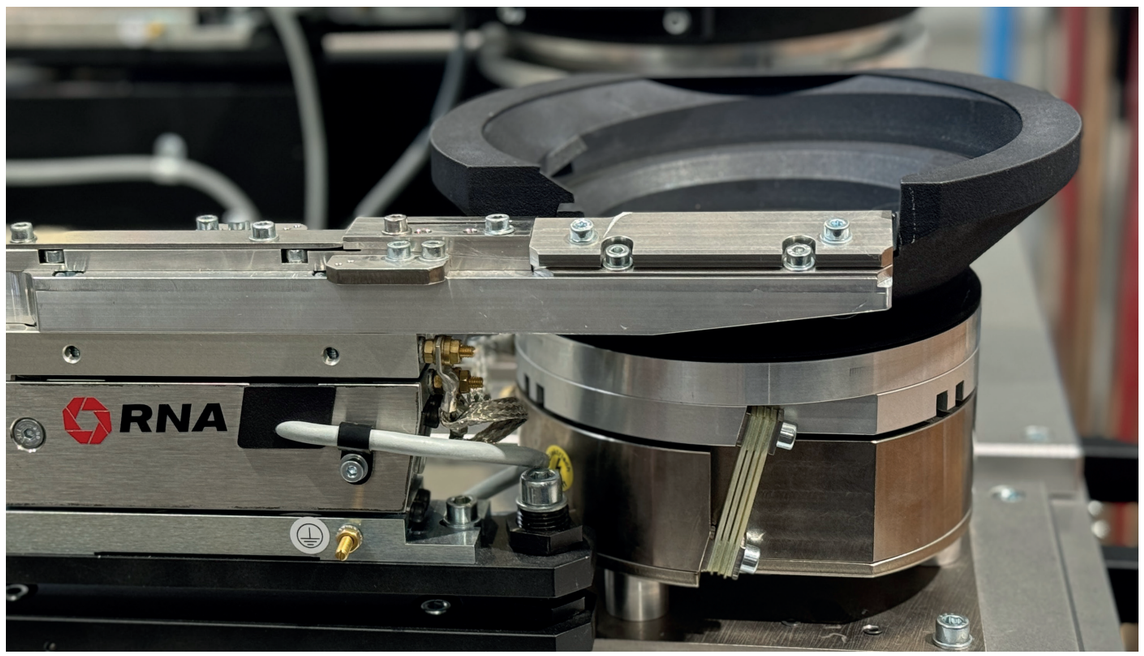
The conical KKD-Z feeder bowl is printed from plastic material and is extremely resistant to wear. The bowl is fixed in place so that the vibrations from the drive unit are transmitted to the bowl and the parts to be fed.

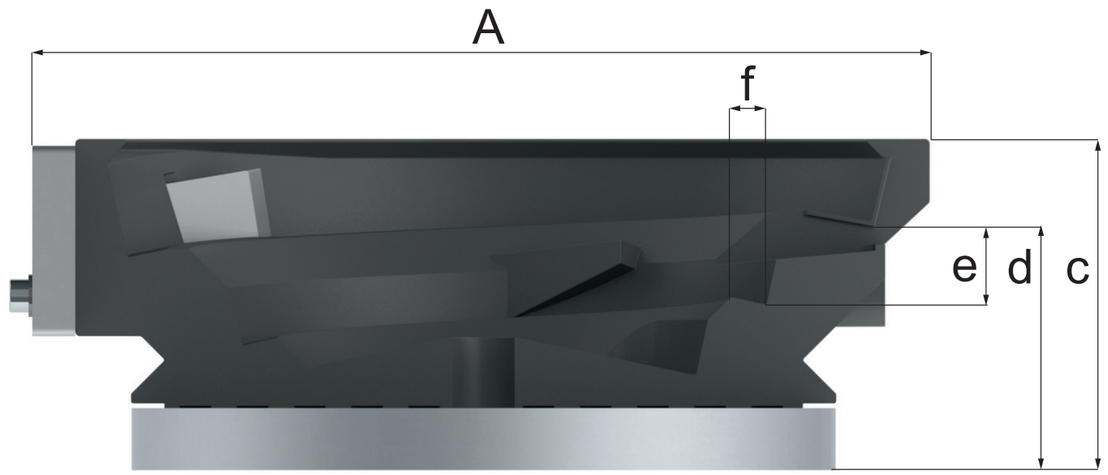
The bowls of this type are designed for reproducibility. Ex-factory, they already comprise a section for the sorting and returning of improperly oriented parts.

The additional sorting and discharge section can be fastened via the existing threaded holes.

These bowls need no coating.

Typical application: SRC-Z 150 with KKD-Z 150 for feeding of washers





Type	KKD-Z 100	KKD-Z 150	KKD-Z 200
A = outside bowl Ø (mm)	135	180	205
c = bowl height (mm)	55	70	85
d = discharge height of feeder bowl (mm)	43	52	62
e = spiral track pitch (mm)	13	17	20
F = spiral track width (mm)	5	7	7.5
Weight of feeder bowl (kg)	0.44	1.0	1.6
Max. weight of feeder bowl incl. add-ons (kg)	0.65	1.3	2.3
Max. filling quantity (kg / l)	0.4 / 0.05	0.6 / 0.2	2 / 0.3

Milled feeder bowl series KKF-Z and TKF-Z

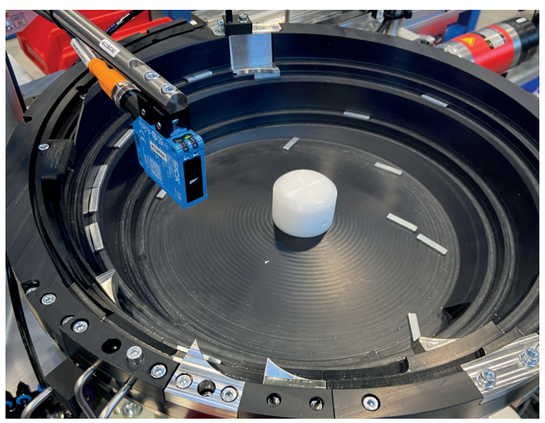
Infos

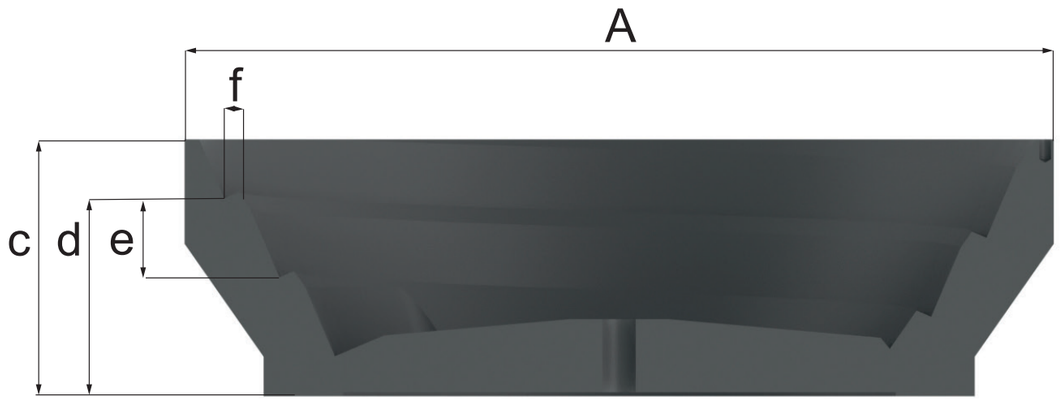
- **The different spiral track widths are made to customer's requests. Other spiral track shapes and multiple tracks can also be realized.**
- **In their standard version, the bowls are made from black PA 6-G.**
- **Alternative materials are also available**
- **Type:**
  - **KKF = conical shape**
  - **TKF = stepped type**
- **Please specify "right" (R) or 'left' (L) feeding direction when ordering the bowl**

Description

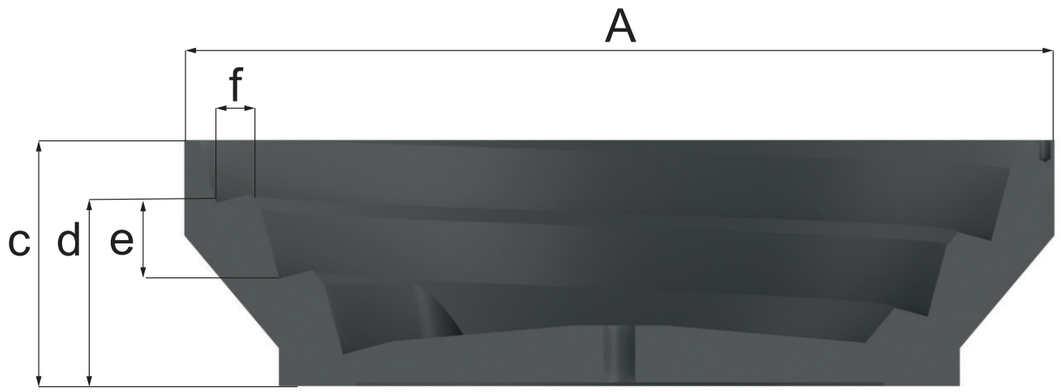
Milled plastic feeder bowls offer excellent sliding and feeding properties by avoiding the unfavourable 'steel on steel' material combination. The bowl blanks shown here are milled and can be adapted to different spiral track widths. The plastic material causes less abrasion on the bulk products and reduces noise emissions.

Typical application: SRC-Z 200 with KKF-Z 200 for feeding of thin plates





KKF = conical shape



TKF = stepped type

Type	KKF-Z 100-X-40	TKF-Z 100-X-40	KKF-Z 160-X-65	TKF-Z 160-X-65	KKF-Z 200-X-65	TKF-Z 200-X-65	KKF-Z 250-X-100	TKF-Z 250-X-100
A = outside bowl Ø (mm)	120	120	220	230	220	230	400	400
c = bowl height (mm)	40	40	65	65	65	65	100	100
d = discharge height of feeder bowl (mm)	32 - 33	32 - 33	50 - 51	48 - 50	50 - 51	48 - 50	83 - 85	87 - 88
e = spiral track pitch (mm)	12	12	20	20	20	20	36	36
F = spiral track width (mm)	1 - 4	1 - 5	1 - 4	1 - 9	1 - 4	1 - 9	1 - 7	1 - 10
Weight of feeder bowl (kg)	0.208	0.204	0.805	0.87	1.03	1.1	3.15	4.7
Max. weight of feeder bowl incl. add-ons (kg)	0.65	0.65	2.5	2.5	4	4	13	13
Max. filling quantity (kg / l)	0.4 / 0.2	0.4 / 0.2	1 / 1.2	1 / 1.2	2 / 1.2	2 / 1.2	15 / 6	15 / 5
suitable for drive	SRA-Z 100	SRA-Z 100	SRC-N 160	SRC-N 160	SRC-N 200	SRC-N 200	SRC-N 250	SRC-N 250

* Measured from the vertical
** Varies acc.to spiral track width
*** approximate value May vary depending on the material and task at hand

Accessories for TAG-N, ZSB-N, KSB-N feeder bowls

Loose centre bowls (non-vibrating)

Loose centre bowls (SRL) for following requirements:

1. Load relief of vibrating system
2. Gentle part handling
3. Noise reduction

Please observe:

Parts presenting unfavourable geometries may get stuck in the gap between bowl centre and bowl. Also, residual parts will remain in the bowl when it is run empty. For heavy parts, we recommend loose bowl centres made from aluminium (SRL AL).

Size	SRL-N 250	SRL-N 400	SRL-N 630
Material	PA, AL	PA, AL	AL

Fixed bowl centres (vibrating)

Fixed bowl centres (SRF) offer following advantages:

1. Parts won't get stuck in gaps
2. Bowl centre won't jam due to soiling or swarf
3. Feeder bowl can be run completely empty

Size	SRF-N 250	SRF-N 400	SRF-N 630
Material	PA, AL, VA	PA, AL, VA	AL, VA

Infos

Selection of material:

- **V2A bowl centres (fixed bowl centres only) The perfect choice when there is abrasive wear caused by the parts, e.g. if the bowl is filled from an upstream hopper.**
- **Plastic or aluminium bowl centres (PA or AL) Here, the selection of the material depends on the weight and form of the parts handled.**
- **Aluminium bowl centres must always be coated, and V2A bowl centres are usually coated as well.**

Loose bowl centres (non-vibrating)

N-type bowls require the installation of a separate bowl centre.

Available materials:

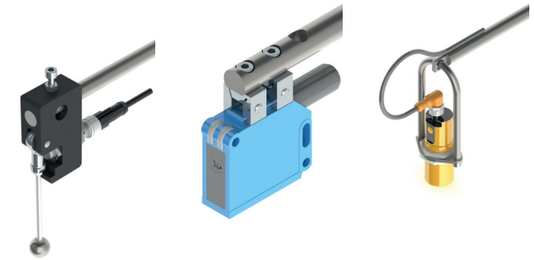
- PA = plastic
- AL = aluminium
- VA = stainless steel

Accessories for vibrating feeders/bowls

Fill level control

Our fill level control devices are known for their compact, rugged design. What's more, they can be connected directly to relays, controllers etc. Also, parts cannot be stuck between the pendulum and the spiral track.

Fill level control devices are used for automatic volumetric control of bulk parts in vibrating feeders, hoppers etc.



Type	EPF24-12	WT12	KI5307
Connection diameter	Ø 12 mm	Ø 12 mm	Ø 14 mm
Operating voltage	10 - 30 VDC	10 - 30 VDC	10-30 VDC
Protection rating	IP67	IP67	IP67
Total cable length beginning at sensor	1,500 mm	1,500 mm	1,500 mm
Fill level control device	Ball or pendulum	Photoelectric sensor	Capacitive sensor
Pendulum swinging range	0° - 45°		

Infos

- **In the standard version, a level control device with sensor (24 VDC) and holder (guide tube Ø 12 mm or Ø14 mm) is supplied.**
- **As an accessory, we offer a stand (column height approx. 600 mm) for mounting on a machine table. Additionally, the sensors can be upgraded with a 5-pin connector for connection to an RNA sensor signal amplifier (ESK2000, ESK2001, ESR 2000 and ESR2500).**

Accessories for vibratory feeders/bowls

Sound enclosures

In addition to reducing noise levels, sound enclosures also offer protection from dust and dirt.

Infos

Type HK-S sound enclosures:

- **Fit vibratory feeders from size SRC- N 250 through SRC-N 630 with type SRG baseplate**
- **Sheet steel enclosure with acoustic liner glued to the inside**
- **Exterior painted RAL 7035, structure painted light grey, special paint jobs available on request**
- **Inset lid (Makrolon)**
- **For sizes 400 and higher, split lid and hinged lid as special versions**

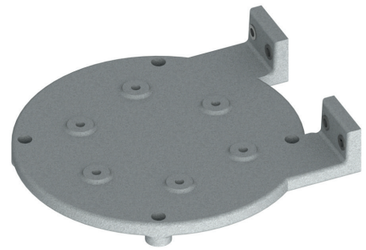
Type	HK-S 250	HK-S 400	HK-S 630
Total diameter	550	880	1100
Overall height	435	525	565
Height of top section*	230	310	350

* Dimensions are variable

Accessories for bowl drive series SRC

SRG baseplates

The baseplate permits easy top-mounting on the machine table. SRG-N baseplates have integrated mounting brackets for controllers. This baseplate is necessary if a cross slide or longitudinal slide is to be used.

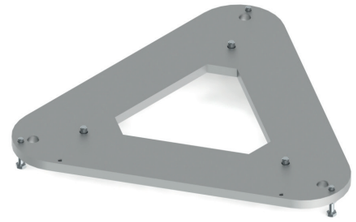


Type	SRG-N 160/200	SRL-N 250	SRL-N 400	SRL-N 630
Plat diameter	218	332	485	720
Adapter hole pitch	4 x 140	4 x 220	4 x 325	4 x 488
Adaptability of the plate from below via threads or from top via countersunk holes.	M8 / Km6	M10 / Km8	M10 / Km8	M10 / Km8
Installation height	23	32	32	35

USJ baseplates

The USJ baseplate serves to mount and align the bowl feeder on the machine table.

The plates are fastened with tension bolts and thrust bolts.



Type	USJ 160/200	USJ 250	USJ 400	USJ 630
Outside diameter	222	360	505	709
Tension bolt hole pitch	3 x 175	3 x 287.5	3 x 434.7	3 x 604.5
Thrust bolt	M6	M8	M8	M8
Plate thickness	15	15	15	15

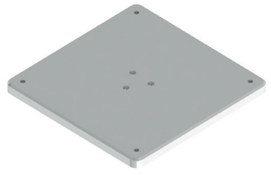
Accessories: Substructures/mounting plates/threaded columns

Substructures with threaded columns from RNA offer a very wide adjusting range. Due to the trapezoidal thread used, they permit very fine height adjustment. The large cast feet are prepared for easy anchoring to the floor.
In combination with our threaded columns, the following maximum substructure heights (bottom of foot to top of column) can be achieved: 790 mm/990 mm and 1190 mm. The adjusting range of the columns is 255 mm.

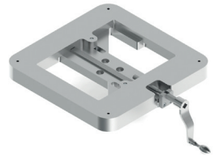
Stand type	UG 400	UG 630
Size	400	630
Foot height	450	450
Foot diameter	340	560

Stand type	UG 400-535	UG 400-735	UG 400-935	UG 630-535	UG 630-735	UG 630-935
A	400	400	400	630	630	630
B_{min}	535	735	935	535	735	935
B_{max}	790	990	1190	790	990	1190
C	340	340	340	560	560	560

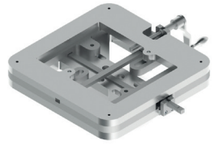
Type UP mounting plate	UP-120	UP-250	UP-400	UP-630
A	120	250	380	550
B	20	21	21	21
C	100	220	325	488



Type UL mounting plate	UL-250	UL-400	UL-630
A	250	380	550
B	44	44	44
C	220	325	488
Total traversing distance X	54	83.5	82

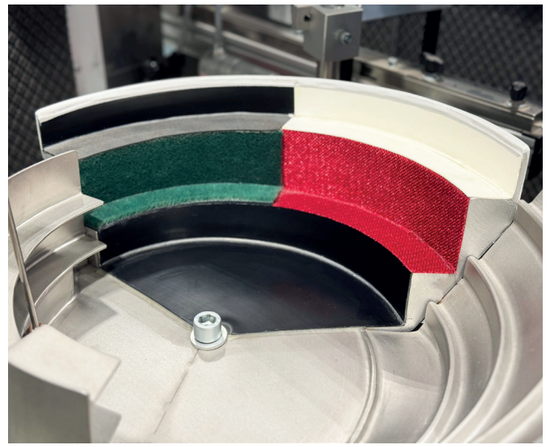


Type UK mounting plate	UK-250	UK-400	UK-630
A	250	380	550
B	64	64	64
C	220	325	488
Total traversing distance X	83.5	83	83.5
Total traversing distance Y	70	83	82



Accessories: Coatings for feeder bowls

Coatings improve the feeder bowls' resistance to wear. Their use results in gentle part handling and reduced operating noise.
The coating material depends on the application and parts to be handled.



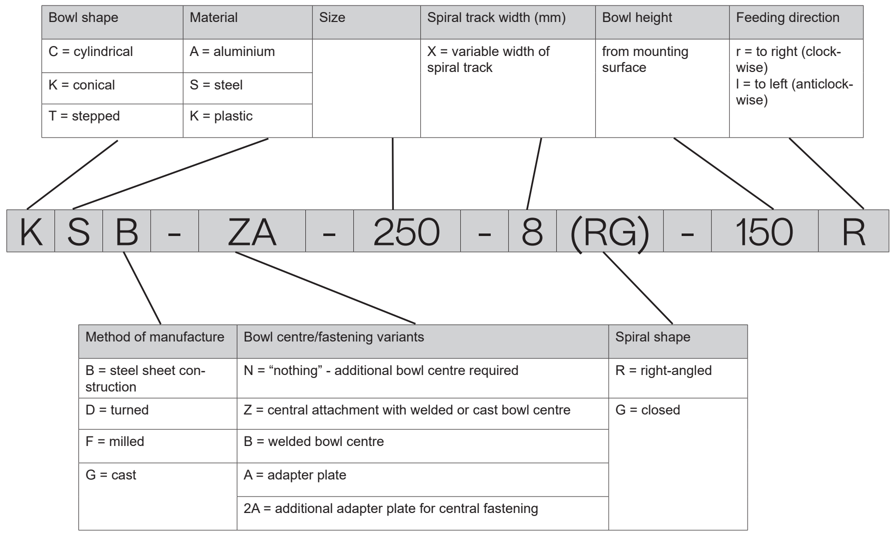
Coating material	Properties	Areas of application
Polyurethane film - smooth / rough 1 mm coat thickness Colour: black	• High strength • Excellent soundproofing • Both sides can be glued (using the smooth or the rough side as running surface) • Rough running surface suitable for slightly moist parts,	Dry and clean metal parts and heavy plastic parts
Polyurethane film - smooth / rough 2 mm coat thickness Colour: black	Same as above, plus: • Very high resistance to wear • Abrasion-resistant • Impact-resistance, excellent soundproofing	Same as above, plus: heavy, sharp-edged metal, glass parts and abrasive parts, such as screws, forged and stamped parts
Polyurethane film, fluted Colour: black	• Oil can drain off via the flutes	Oily, wet and sticky parts (stamped parts, screw blanks)
Habasit film (HAM-5P) Colour: green Food-grade version Colour: white	• Good feeding performance even with slight liquid films • Minor static charging of plastic parts, the side wall is coated with polyurethane film (1mm thick)	Parts with smooth surfaces, lightweight plastic parts, slightly oily parts (drawing oil, parting agent)
Brush coating	• Oily parts • Gentle part handling • Noise reduction	Screw blanks, heavy metal parts, parts with sensitive surfaces
Flock coating Textile surface	• Gentle part handling • Increase of feed rate	Lightweight parts with sensitive surfaces
Metaline	• Wear resistant surface covers joints • Adjustable hardness and surface • Various colours available	Light to medium-heavy plastic and metal parts with dry surfaces, pharmaceutical industry: FDA-approved

Vibratory Feeders

Vibratory feeder decision matrix

Size	100	150	160	200	250	400	630	800
Cylindrical bowls Stainless steel sheet			ZSB-Z 160-12-70	ZSB-Z 200-12-80	ZSB-N 250-30-110 ZSB-ZA 250-30-125	ZSB-N 400-30-160 ZSB-BA 400-30-175 ZSB-Z2A 400-30-190	ZSB-N 630-50-180 ZSB-BA 630-50-195	ZSB-B 800-80-220
Conical bowls Stainless steel sheet				KSB-Z 200-18-55 KSB-ZA 200-5RG-150	KSB-N 250-20-90 KSB-ZA 250-20-105 KSB-ZA 250-20-150 KSB-ZA 250-8RG-150	KSB-N 400-50-160 KSB-BA 400-50-175 KSB-BA 400-15RG-220 KSB-Z2A 400-50-190 KSB-Z2A 400-15RG-235	KSB-N 630-50-180 KSB-BA 630-50-190 KSB-BA 630-15RG-250	KSB-B 800-80-170
Stepped bowls Cast aluminium				TAG-Z 200-10-80 TAG-Z 200(324)-20-105	TAG-N 250-20-105 TAG-N 250-32-130 TAG-N 250-32-145 TAG-ZA 250-32-165 TAG-ZA 250(541)-32-180	TAG-N 400-32-175 TAG-N 400-50-190 TAG-N 400-50-215 TAG-ZA 400-50-240	TAG-N 630-50-220 TAG-N 630-65-230 TAG-ZA 630-50-240 TAG-ZA 630-65-250	
Plastic bowls milled			KKF-Z 160-X-65 TKF-Z 160-X-65	KKF-Z 200-X-65 TKF-Z 200-X-65	KKF-ZA 250-X-100 TKF-ZA 250-X-100	on request		
Plastic bowls printed	KKD-Z 100	KKD-Z 150		KKD-Z 200				
Fixed bowl centre					SRF-N 250(PA) SRF-N 250(AL) SRF-N 250(VA)	SRF-N 400(PA) SRF-N 400(AL) SRF-N 400(VA)	SRF-N 630(PA) SRF-N 630(VA)	
Loose bowl centre					SRL-N 250(PA) SRL-N 250(AL)	SRL-N 400(PA) SRL-N 400(AL)	SRL-N 630(AL)	
Adapter plates					AAG-Z 250	AAG-R 400 AAG-R400(544) SA AAG-Z 400 AAG-Z 400(Z) AAG-Z 400(250)SA	AAG-ZB 630 AAG-R 630 AAG-R 630(666)SA	
Drives	SRA-Z 100-2	SRA-Z 150-2	SRC-N 160-2	SRC-N 200-2 SRC-B 200-2 SRA-Z 200-2	SRC-N 250-2 SRC-B 250-2	SRC-N 400-2 SRC-N 400-1 SRHL 400-2 SRHL 400-1	SRC-N 630-1	SRC-N 800-1
Baseplates			SRG-200 USJ-200	SRG-200 USJ-200	SRG-250 USJ-250	SRG-400 USJ-400	SRG-630 USJ-630	
Mounting plates					UP 250	UP 400	UP 630	
Longitudinal slides					UL 250	UL 400	UL 630	
Cross-slides					UK 250	UK 400	UK 630	
Substructure with threaded column					UG 400-535 UG 400-735 UG 400-935	UG 630-535 UG 630-735 UG 630-935	UG 630-535 UG 630-735 UG 630-935	
Sound enclosures					HK-S 250	HK-S 400	HK-S 630	
Stand-alone mounting Phase control	SCU 1000 SCU 2000 ESG 2000 ESK 2000 ESK 2001 ESK 2002	SCU 1000 SCU 2000 ESG 2000 ESK 2000 ESK 2001 ESK 2002	SCU 1000 SCU 2000 ESG 2000 ESK 2000 ESK 2001 ESK 2002	SCU 1000 SCU 2000 ESG 2000 ESK 2000 ESK 2001 ESK 2002	SCU 1000 SCU 2000 ESG 2000 ESK 2000 ESK 2001 ESK 2002	SCU 1000 SCU 2000 ESG 2000 ESK 2000 ESK 2001 ESK 2002	SCU 1000 SCU 2000 ESG 2000 ESK 2000 ESK 2001 ESK 2002	ESG 2000 ESK 2000
Stand-alone mounting Variable frequency control	SCF 2000 SCF 3000 6A ESR 2000 ESR 2500 ESR 3000/6A	SCF 2000 SCF 3000 6A ESR 2000 ESR 2500 ESR 3000/6A	SCF 2000 SCF 3000 6A ESR 2000 ESR 2500 ESR 3000/6A	SCF 2000 SCF 3000 6A ESR 2000 ESR 2500 ESR 3000/6A	SCF 2000 SCF 3000 6A ESR 2000 ESR 2500 ESR 3000/6A	SCF 2000 SCF 3000 6A ESR 2000 ESR 2500 ESR 3000/6A	SCF 2000 SCF 3000 6A ESR 2000 ESR 2500 ESR 3000/6A	ESR 3000/12A ESR 2800
Panel-mounting Phase control	ESM 906	ESM 906	ESM 906	ESM 906	ESM 906	ESM 906 ESM 910*	ESM 906	ESM 910
Panel-mounting Variable frequency control	ESR 3000/6A SCF 3000M 6A	ESR 3000/6A SCF 3000M 6A	ESR 3000/6A SCF 3000M 6A	ESR 3000/6A SCF 3000M 6A	ESR 3000/6A SCF 3000M 6A	ESR 3000/6A ESR 3000/16A ESR 3000/6A SCF 3000M 6A	ESR 3000/6A SCF 3000M 6A	ESR 3000/6A SCF 3000M 6A

* only for drives upwards of 6 A



Please specify the feeding direction when ordering the bowls or drives.