

# DEPRAG



## Feeding systems for stationary use

**Efficient and intelligent feeding with eacy feed,  
the new generation vibratory bowl feeder.**

- **Approx. 80 % energy savings**
- **Smart factory/Industry 4.0-capable**
- **Efficiency and worldwide application - one design for all markets**

Feed systems are essential for productivity and efficiency in automatic assembly machines. Originally developed for shaft-heavy screws, today's DEPRAG feeding systems are capable of processing screws of all types with or without washers, threaded bolts, pins, rivets, nuts, washers, o-rings and diverse other small components.

Over 40 years of experience in the development and manufacture of feeding technologies and the high standards of our production site guarantee products of consistent outstanding quality.

<b>Feeding Technology</b>		<b>INTELLIGENT EFFICIENT FEEDING</b>
<b>New generation vibratory bowl feeder</b>		



## FEEDING SYSTEMS FOR STATIONARY USE

### 100% reliability → productivity and system uptime!

Our feeding systems have been designed for the reliable supply of fasteners to enable outstanding accuracy and productivity of your assembly system. Integration into your control system is particularly convenient and straightforward. Our feeder line includes vibratory bowl feeders, sword (segment) feeders, linear conveyors, storage systems, tape-on-reel feeders and screw presenters.

### Outstanding reliability and efficiency

- High feed rate
- Even complex components are correctly oriented
- Option for two screwdrivers or multi-spindles on one device
- Storage systems, such as hoppers, increase refill intervals

### Production and choice of materials

The high level of vertical integration, the use of

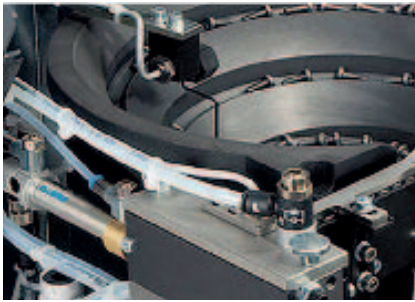
specially hardened, wear-resistant materials such as specific coating methods, ensure the outstanding quality and reliability of our products.

### Ready for immediate use

Before delivery, your feeder undergoes a continuous test in a simulation of series production, replicating your production cycle. Each device endures comprehensive testing – 100%.

## VIBRATORY BOWL FEEDER - EACY FEED

The vibratory feeder is our most utilized feeding device. The eacy feed system combines the ideal fundamentals for sustainable production of the future: energy, efficiency and intelligent communication. eacy feed is available in four fill sizes: 0.15 l, 0.75 l, 1.2 l and 2.5 l in single and double spiral design.



### e for efficiency

eacy feed – new generation vibratory bowl feeder with approx. 80 % reduction in power consumption due to efficient “low energy technology”!



### c for communication

eacy feed – new generation vibratory bowl feeder with intelligent communication capabilities for application in a smart factory/ Industry 4.0 environment.

### a for assembly

eacy feed – new generation vibratory bowl feeder with ergonomic handling by means of an optimised module.



### y for yield

eacy feed – new generation vibratory bowl feeder with optimised, technical efficiency due to robust design and tried and tested modular components.

### Approx. 80 % Energy savings

The revolutionary controller and the new drive allow for the extraordinary energy efficiency of eacy feed

- a significant reduction in power consumption is attained due to the 24 V oscillating magnets, thereby realising energy savings of around 80 %

### Smart Technology

- the revolutionary controller enables remote control and communication
- the eacy feed can be accessed from anywhere in the world via TCP/IP
- all settings can be displayed and adjusted at any time
- eacy feed is particularly suitable for smart factory/Industry 4.0-systems

### Low Consumption and top Flexibility

- revolutionary controller enables around 80 % less power consumption
- new controller and vibratory drive based on 24 V/DC voltage
- universal power unit (115 V – 230 V)
- independent from the local alternating current frequency
- one design for all markets

### Perfect Vibration Intensity

For monitoring and regulation of the vibration intensity an acceleration sensor is mounted on the vibratory drive.

- ensures stable output, independent from fill-level
- no need for readjustments
- supports ideal vibration behaviour and minimises material wear
- simplified reloading procedure
- accommodates all bowl sizes

### Flexible Use

Used in assembly systems within complex automated production lines – eacy feed precisely and reliably supplies connection elements. If eacy feed is used in conjunction with the control and operating unit DPU (DEPRAG Processing Unit) an additional industrial demand is fulfilled: Communication capabilities for Industry 4.0 and Smart Factory.

The use of TCP/IP network protocols allows access to the EACY Feed controller's network from anywhere in the world. All settings can be displayed or adjusted once a connection is established with the smart eacy feed using a smartphone, tablet or computer.

The operator can for example, alter the frequency and amplitude settings via their smartphone so that function of the feeder can be guaranteed from any location.

### Simpler for the Fitter and Operator

The corresponding software PFCi100 has been developed alongside the control unit DPU for maximum user friendliness. The parameters required for the device can be simply and easily adjusted using the slide bars on the touch screen – there is no need to access the feeder's sequence controller.

If several operators are using the same feeder at the same time, the efficiency of the process can often be compromised by the varying working speeds of each individual. DEPRAG feeders cleverly adapt to the individual working speeds of each operator. Once entered via the simple display, the specific operating parameters of each person are saved (storage of up to ten data sets) and can be recalled when there is a shift change. No one feels held back and no one feels overstretched.

## VIBRATORY BOWL FEEDER - EACY FEED

### Precision and Timing

The fill volume influences the feed rate in standard vibratory spiral feeders. If the feed bowl is full, the system works at a slower rate and if it is emptier the rate speeds up. As with the previous generation, the eacy feed is also fitted with a measurement transducer which records the oscillation amplitude in the feed bowl. This thereby adaptively regulates the feeder depending on the fill volume – ensuring reliability as the screws are continuously in readiness for processing.

The feed rate is adjustable using twelve different waveforms. The amplitude or frequency can be set in an instant. Individual settings can be used for example, to optimise the feed volume or reduce the noise level of the feeder. The adjustments can be carried out quickly and without mechanical intervention. When using eacy feed the required settings can simply be selected on the DPU.

Smart factory/Industry 4.0 can be found in all branches of industrial production. Intelligent, integrated smart components are in demand throughout the entire value chain. With the development of the innovative controller PFCi100 we are realising smart factory/Industry 4.0, the fourth industrial revolution. PFCi100 enables remote control, documentation and interaction with eacy feed, enabling the device to be monitored and controlled from anywhere in the world.

### Integrated functions of the PFCi100

- » external master IPC (e.g. DPU100) operational platform
- » enables remote control and communication
- » bus interface
- » adjustable via IPC (DPU100)

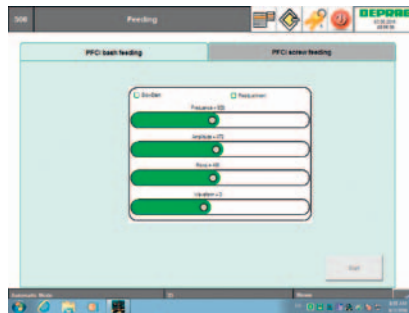
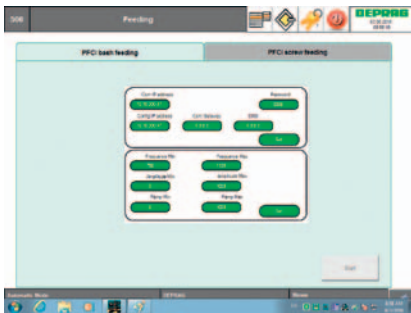
- » communication via TCP/IP
- » programmable via integrated web browser

### Operator platform DPU

The DPU (DEPRAG Processing Unit) provides exceptional user-friendliness. Settings can be simply adjusted via the slide bars on the touch screen.

### DPU setting options

- » frequency
- » amplitude
- » acceleration ramp
- » soft start
- » waveform



## SWORD FEEDER

**Sword feeders or segment feeders are particularly suitable for use in cleanroom environments. One advantage of the sword feeder is the very gentle, low abrasion part feeding.**

**Sword feeders are available in two fill sizes: 0.15 l or 1.5 l**

### Correctly oriented sorting

The feed parts in the supply bin are scooped up into a segmented rail by a tilting motion. The parts slide along this rail through mechanical and directional components and arrive correctly sorted in the storage rail.



### Self-regulated feed intensity

A sensor in the storage rail regulates the number of stroke movements required. The required fasteners are perfectly timed and positioned ready for assembly.

### Low noise level

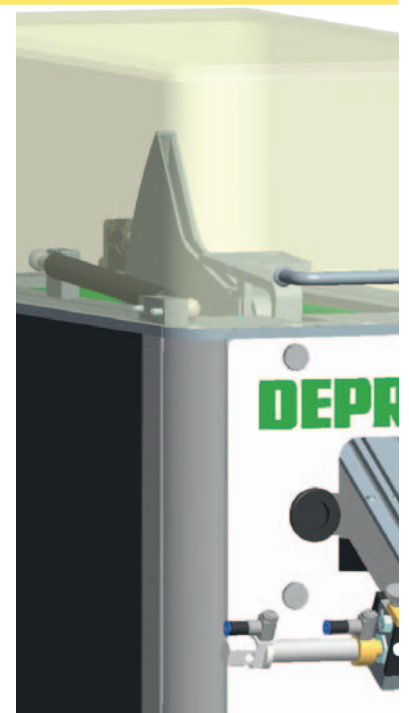
The production operators favor the low noise-level of the sword feeder. Due to the specially designed separator and the adapted controller sequence, the sword feeders are especially quiet.

### Efficient production

The high level of vertical integration, the use of specially hardened, wear-resistant materials, as well as specific coating methods, ensure the outstanding quality, reliability, and efficiency of the sword feeder.

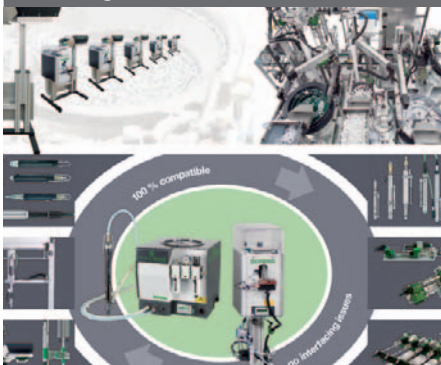
### Customized design

If you need to integrate a feeding system into an application with challenging dimensional conditions, we can adapt our standard devices to fit your operating environment.



## OUR RANGE ON FEEDING SYSTEMS

### One Single Source



**Your end-to-end solution: application consultancy, operator training, fully developed system components, screwdrivers, feeders, controllers and process monitoring. All components are designed to be compatible with each other and have been tried and tested over many years. In-house developed and manufactured!**

#### The perfect solution for your application:

- Vibratory bowl feeder
- Sword feeders
- Linear conveyors
- Pick-and-Place devices
- Tape-on-Reel feeders
- Screw presenters
- Storage devices

### Vibratory Feeder



Stationary feed systems for the processing of small components of all kinds, such as screws, pins, bolts, rivets, nuts, washers and o-rings. Vibratory feeders feature a high output rate in comparison to other feed systems. We offer stationary screwfeeders with vibratory drive for screws < M1 to M20. Screws with a shaft length from 5 mm up to 130 mm can be processed. Even countersunk screws can be fed easily by our vibratory feeders.

#### Design Sizes:

0.05 l Feed volume	Page 11
6.0 l Feed volume	Page 15
12.0 l Feed volume	Page 15

#### Design Sizes eacy feed:

0.15 l Feed volume	Page 12
0.75 l Feed volume	Page 12/17
1.2 l Feed volume	Page 13
2.50 l Feed volume	Page 14/17

### Sword (Segment) Feeder



Sword feeders or segment feeders are used when the requirement calls for gentle, almost noiseless feeding of sensitive fasteners. Our sword feeder systems can process screw sizes from M2 to M6. They are ideal for screws up to 25 mm in length. Sword (segment) feeders are also well-suited for the processing of balls and pins.

#### Design Sizes:

0.15 l Feed volume	Page 16
1.50 l Feed volume	Page 16

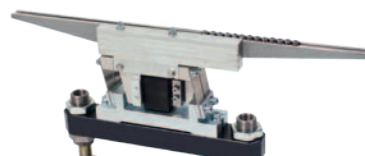
### Linear Conveyors



Our linear conveyors are part of a sophisticated feeding system, which can, for example, in combination with vibratory feeder or Pick-and-Place systems, be coordinated to your application.

Linear conveyors can be used to transport parts over larger distances within your assembly system, to allow for a parts buffer or to allow for the constant and consistent flow of parts.

Our robust linear conveyors enable correct sorting in the feedbowl, thereby preventing jams or parts becoming wedged or backed up to the feedbowl.





## OUR RANGE ON FEEDING SYSTEMS

### Pick-and-Place method - the alternative to feeding through a hose - independent from the part's geometry!

If the screw dimensions do not allow feeding through a feedhose, for example where there is an unfavorable relation between screw head diameter and overall length, we can offer special solutions, such as the pick-and-place procedure with vacuum suction or removal by gripper.

This process can also be used for screw locations which are difficult to access.

For stationary applications, either vacuum technology or grippers are predominately used on Pick & Place devices. The release-and reload procedure, is controlled by a PLC using sensor monitoring.

### Pick-and-Place Method



### DEPRAG tape-on-reel feeders are used to process components that are loaded on single- and/or double- sided adhesive tape reels.

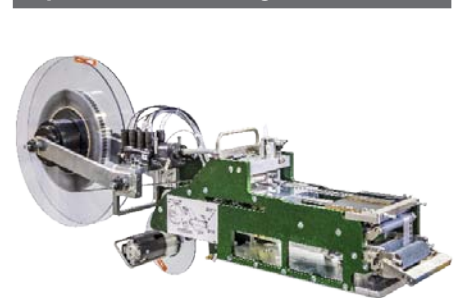
Tape-on-reel feeding technology uses a tape reel inserted in a rolling receptacle. The unwinder pulls the tape until the next component is in the detached position. Once the sensor detects that the piece has reached the detached position, a downholder secures and holds the tape. Once the pick-up tooling (e.g., a vacuum gripper) is ready to proceed (i.e., vacu-

um suction ON), the slide carriage moves back, and the tape is pulled past the carriage blade.

The components are loosened from the tape and are now ready for processing. Once the pick-up tooling has moved away from the pick-up position, the holder retracts, the slide carriage runs forward again, and the winder moves the next component on the tape reel into the pick-up position.

→ Catalogue D3870E

### Tape-on-Reel Feeding



Screw presenters are particularly suitable for the automated supply of screws, both in preparation for manual pick-up and for stationary integrated screwdrivers. Are you looking to automate your assembly? Screw presenters are a fast, cost-effective solution for assembly of small production batches.

- Screw feeding via two lift segments in the screw bin, enabling gentle, quiet feeding. Screws fall onto a vibrating guide rail and are then brushed into the correct position and transported onwards.
- The integrated controller in the device enables stand-alone operation.

- Screw supply is accurate and reliable due to the regulated sequence controller using light barrier and microswitch.
- If required, several DEPRAG screw presenter can be arranged even into confined work spaces due to its compact design.
- Special solutions on request.
- User-friendly
  - Secure, fast pick-up of supplied screws using magnetic bit or vacuum.

→ Catalogue D3840E

### Screw Presenters



Significantly decrease the number of refills by adding a storage system to your feeder.

**Flexible** - no need for costly modifications when using a variety of feeders.

The hopper outlet is adjustable to the size of the component. Additional regulating possibilities allow the hopper to be adjustable into two different directions.

**Low noise and wear-resistant** - the outflow-chute is enclosed, resulting into a substantial reduction in noise. Noise-barriers are available as a special accessory for all vibratory

feeders; they are specifically designed for use together with a hopper.

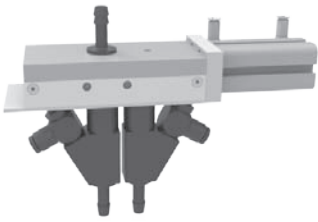
**Simple operation and easy set-up** - the DEPRAG hoppers come with a 24-volt gear motor. They can be operated merely via an output on the higher-level PLC.

**Gentle component handling** minimizes the waiting time of feed parts in the vibratory system.

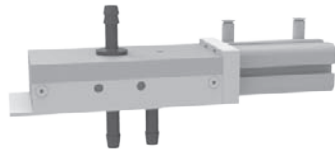
→ Catalogue D3850E

### Storage Systems

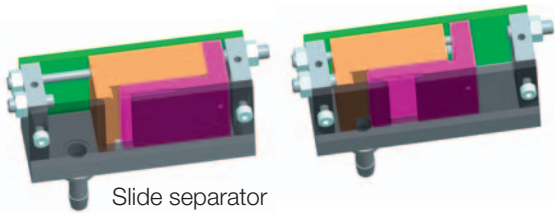




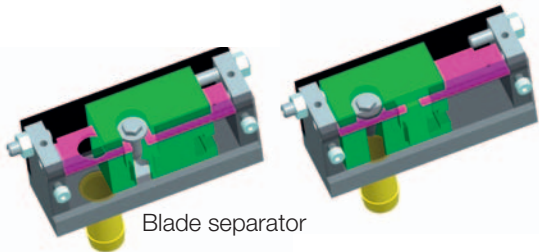
Distributor with hose nozzles that connect to an additional air-blast



Distributor with standard hose nozzles



Slide separator



Blade separator

## Control

The standard version (version "O") of our feed system does not include pneumatic valves or a sequence controller. The vibratory feeder bowl includes the integrated control unit. The necessary pneumatics, as well as sequence controller are the essential components of a complete assembly unit. If components are ordered, the corresponding pneumatic and function diagrams are made available.

To keep design costs to a minimum and to simplify installation, all devices can be supplied with pneumatic valves. There is wiring up to the terminal block (version "P"). Again, if components are delivered we will provide an terminal plan.

The version "P" includes all necessary valves for the operation of the screwfeeding machine.

The third available version with the designation "EP" offers screwfeeding machines with 1 to 4 outlets, and includes pneumatic and electronic sequence control. To feed the next screw, only a 24 V signal is necessary. This means the customer can use a smaller PLC and no programming is necessary for the screw feeding. Therefore, the series "EP" is an especially economical and reliable solution and should be given preference.

## Control Units

We offer different control units to control our vibratory drives.

- **Piezo controller**  
is used for bowl sizes of 0.05 l (0.01 gal.)
- **Feeder controller PFCi100 / PFC100 for easy feed feeding systems**  
is used for bowl sizes of 0.15 l (0.04 gal.), 0.75 l (0.2 gal.), 1.2 l (0.32 gal.) and over 2.5 l (0.66 gal.) capacity

These units conform to the protection type no. IP54. A soft start feature is integrated into the control unit of the vibratory drive.

**NEW: PFC18L Controller**  
(IP30 protection class) to control our 1.5 liter sword feeders.

- operational voltage 24 V/DC
- little power consumption
- 10 different menu languages
- illuminated display
- power unit with extended voltage range (115 V – 230 V)
- independent from the respective local A/C voltage
- one design for all markets

## Distributor

If more than two positions (i.e. screwdriver spindles) have to be supplied out of one feeder, then so called pre-separation hose nozzles can be used. These distributors can supply 2, 3, 4, 5 or even 6 channels.

To increase the feed rate the distributors can be operated by pre-separators (version "V"). With such a system, the feed parts separator can be operated parallel to the processing time. The feeding of the hardware will be done simultaneously for all channels. This type of feed system is also used when feeding has to be done against gravity (i.e. underfloor assembly).

## Screw Separator

The screws exit the feed bowl in a well ordered line ready to be separated at the end of a retaining rail. Different types of separators can be provided depending on the geometry of the material (e.g. screws).



PFCi100 Controller



PFC100 Controller



PFC18L Controller

## Additional Accessories

To complete the automatic assembly station, we provide additional components, such as:

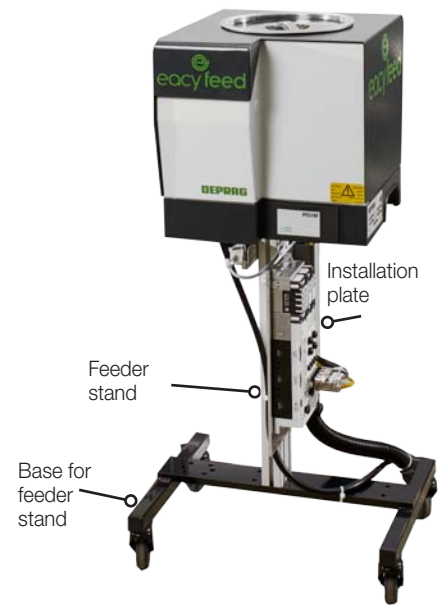
- Standard mouthpiece
- Tiltable mouthpiece
- Nosepiece ball type, single
- Nosepiece ball type, double
- Nosepiece ball type with extension
- Nosepiece split type
- Nosepiece with attachment piece
- Ring proximity switch for screw presence sensors
- Fill level indicator
- Feeder stand
- Base for feeder stand
- Storage devices (Catalogue D3850E)



Nosepiece



Special nosepiece with mouthpiece



# SOFTWARE SOLUTIONS

## PFC100 Manager – the parameterization software for PFC100 controllers

The PFC100 Manager facilitates the reading and saving of parameters as text files **for every PFC100 controller**. Saved parameters can be transferred to any PFC100 controller **quickly and simply using the PFC100 Manager**.

The PFC100 Manager software is supplied on CD. The connection cable 385520B required to connect PC and PFC100 controller is also supplied.

Available languages: German and English

Part number:  
Software PFC100 Manager, including connection cable – part no. 121759  
Activation key for the software – part no. 122000

Further information can be found in our catalog D3900E or on our website [www.deprag.com](http://www.deprag.com).



## MATERIAL TO BE CONVEYED

**Screws or o-rings, nuts or threaded pins, rivets or balls:** Different components and fasteners require different feeding methods. Special provisions come into play for applications requiring technical cleanliness and for sensitive parts requiring particularly gentle handling.

### Screws



A vibratory feeder or a sword feeder can be used for the processing of screws, depending on screw size. Our screw presenter is ideal for the first step in screw supply automation.

### Pins



For the processing of pins, we recommend a vibratory feeder. For standard applications we can offer handheld feeding systems. An adapted separator is often used for stationary applications.

### Nuts



A vibratory feeder is well-suited for the processing of nuts. There are handheld and stationary solutions for the presentation of nuts.

### O-Rings



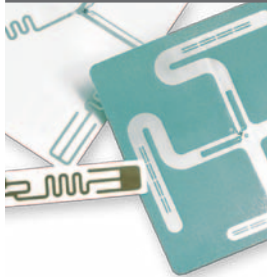
A vibratory feeder is the best-suited device for the processing of O-rings into an assembly solution. In a stationary application: The O-ring is supplied to a pick-up position, stretched and assembled.

### Different Components



Wide-ranging component designs can be processed using a vibratory feeder in combination with a linear-conveyor system. We can utilize sensors so that the most varied of component geometries can be processed, particularly in stationary feeding systems.

### Small parts on backing film



Small parts attached to a backing film on a tape-reel needing to be picked-up by vacuum or gripper, can be processed by a DEPRAG tape-on-reel feeder. It is even possible to process components on both single- and double-sided adhesive tapes.

### Labels, etc.



The DEPRAG tape-on-reel feeder predominately retrieves labels, stickers, and a protective film arriving on a tape-reel, by utilizing vacuum assistance.

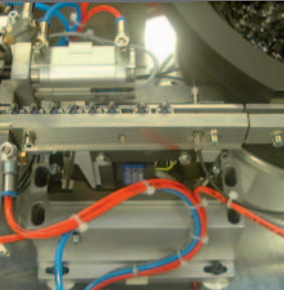
### Press-insertion components



We supply standardized press-insertion systems, consisting of a press-in device that is combined with a vibratory or sword feeder, to process rivets, pins, sleeves, and balls.



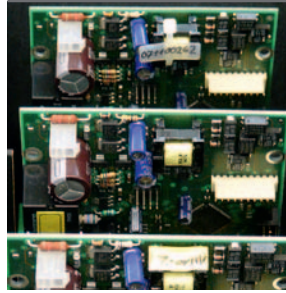
**Components requiring gentle handling**



Sword (segment) feeders are especially suited for gentle feeding procedures. Vibratory Feeders can also be coated with a fibre coating or soft PUR-coating which protects the surface quality of your components. A storage device can be set to keep the fill-level of the feeding-system to an absolute minimum which again serves to protect the surface quality of your components.

If your components need even gentler handling then we can palletise them and process them by a gripper or vacuum handling system. Please contact us for additional information.

**Part assembly in cleanrooms**



A vibratory feeder in connection with a suction device can be used to process components in cleanrooms class D. If your cleanroom requirement is even higher, then a palletised solution with gripper or vacuum handling can be used.

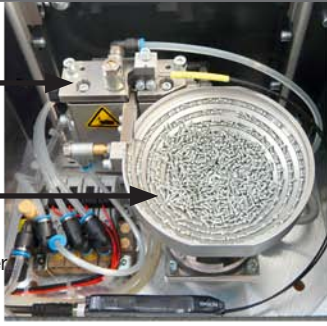
**STRUCTURE OF STATIONARY SCREW FEEDING SYSTEMS**

DEPRAG screw feeders consist of the supply system itself, an air connection, a power switch and an electronic controller including feedhose, in standard length 4m.

**With either vibratory bowl feeder or sword feeder**

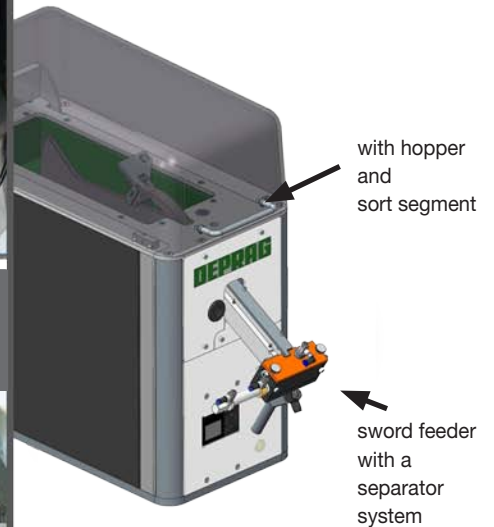


screw separator  
with single or double spiral bowl  
can be combined with any screwdriver model



If feeding with a hose system is not possible, we offer special solutions, such as the pick-and-place procedure

defined pick position with integrated screw pick control option



with hopper and sort segment

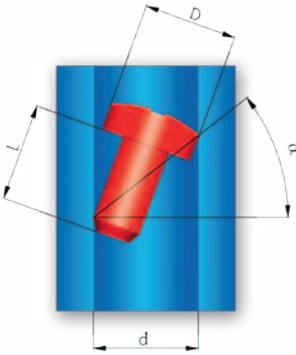
sword feeder with a separator system

Distributor system see page 6

# GUIDELINE FOR THE SELECTION OF A SUITABLE SCREWFEEDER

## STEP 1: Feeding criteria

Basically all "shaft heavy" screws with heads which fulfil the following criteria are suitable for processing with our feed systems:



- Feedability criteria:**  
 $a > 30^\circ$
- $d \sim D + 0.5 \text{ mm}$
- Approximation formula:**  
 $L > D + 2 \text{ mm}$

d = Feed hose ID  
D = Screw head-Ø  
L = Shaft length

## STEP 2: Screw Quality

DIN quality standard fasteners (allowable 3% bad parts) is not always sufficient for reliable feeding machines.

Higher levels of screw/fastener quality improve the feeder's reliability.

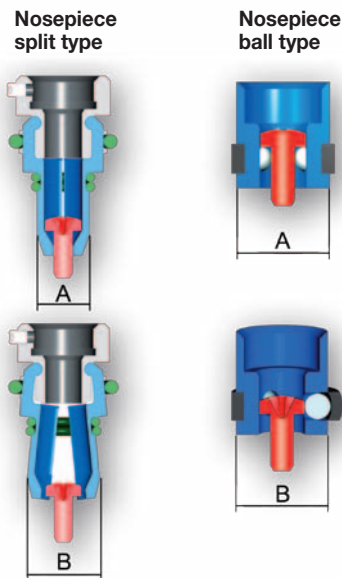
The goal should be a quality grade of 10 ppm ("parts per million"). This means every 100,000 screws there can be 1 bad part.

## STEP 3: Which feeding principle is best suited to your application?

A vibratory spiral bowl is particularly suited to screws with awkward dimensions or those with special feed rate requirements. The sword feeder is used when extremely gentle handling of the parts is required or when very low noise level is a must. If feeding with a hose system is not possible we also offer pick-and-place procedure.

## STEP 4: Determine the screw receiver

At the end of the mouthpiece there is a nosepiece ball type (1 or 2 rows) or a nosepiece split type, mounted to receive and position the screw.



D = Head-Ø  
d = Shaft-Ø  
n = Space required to open

$A = D + 2.5 \text{ mm}$ $B = A + D - d/2$	$B = 3D - 2d + 5 \text{ mm}$
$n = A \times B$	$n = \emptyset B$

## STEP 5: Space available on the component

The available space around the screw head on the assembled components is very important for effective use of the handheld screw feeders. Both the nosepiece split type and ball type have space requirements.

## STEP 6: Single or multiple feeding/screwdrivers

Single and double spiral bowls are available for vibratory bowl feeders. You can also get more out of each feeder with only one outlet using a distributor to further divide the feed parts into several hose outlets. In this way up to twelve outlets can be created from just one feeder by using a double spiral bowl and 2 six-fold distributors. The selection of the correct feeder depends in particular on the cycle time required. Please ask your local representative for further information.

## STEP 7: Specifications

In order to design your feeder we need the following information from you:

- Number of screwdriving spindles to be used
- Cycle time (described in detail if possible)
- Feeding design (vibratory bowl feeder or sword feeder) if you have a preference
- Controller design (without valves as version „O“, with valves as version „P“ or with valves and sequence controller as version „EP“)
- Details of feed part geometry (e.g. dimension sheet of the screw with tolerances)
- Details of required length of feedhose(s) Details of the geometry of the screw-in position (3D model in format STEP or IGES)
- Voltage/mains frequency

To process your order we will also require approx. 1 sample load of parts to fill the capacity of your feeding system.

Filling capacity 0.05 liter – for screws with max. shaft length 8 mm

Filling capacity	<b>Type</b>	<b>0611-P/0.05-x</b>
0.05 liter / 0.01 gal.		<b>0611-O/0.05-x</b>
Amount of connectable drivers		1
Feed rate	parts/min	50
Filling capacity	liter/gal.	0.05/0.01
Max. head diameter	mm / in.	3 / 7/64
Max. shaft length	mm / in.	8 / 5/16
Range of shaft diameter	mm / in.	0.6 - 2.0 / 0.024-0.079
Voltage	V/Hz	230 / 50
Power consumption	W	50
Air pressure requirement	bar / PSI	6 / 85
Air hose dia.	mm / in.	4 / 5/32
Dimensions (W x D x H)	mm / in.	220 x 200 x 180 / 8 5/8 x 7 7/8 x 7 1/16
Weight	kg / lbs	10 / 22
Feedhose length standard - max.	m / ft.	4 / 13.1 - 10 / 32.8
Number of in-/outputs needed for PLC Version "O" and "P"		2 / 4
<b>Control Unit</b>	<b>Type</b>	<b>Piezo Controller</b> , part no. 806652
Dimensions (L x W x H)	mm / in.	106 x 100 x 150 / 4 1/8 x 3 7/8 x 5 7/8

\* The controller can be positioned either next to the feeder in the work area or in the control cabinet.  
 We recommend integration into the control cabinet. Additionally the height of the cable connections (approx 50mm) must be taken into account.



Filling capacity 0.15 liter – for screws with max. shaft length 8 mm

Filling capacity 0.15 l / 0.04 gal. with PLC	<b>Type</b>	<b>01011</b>	<b>01022</b>	<b>01011-2</b>	<b>01011-3</b>	<b>01011-4</b>	-	-
		<b>-EP/0.15</b>	<b>-EP/0.15</b>	<b>-EP/0.15</b>	<b>-EP/0.15</b>	<b>-EP/0.15</b>		
Control unit		PFC100 controller (insulation IP54)						
Filling capacity 0.15 l / 0.04 gal. without PLC	<b>Type</b>	<b>01011</b>	<b>01022</b>	<b>01011</b>	<b>01011</b>	<b>01011</b>	<b>01011</b>	<b>01011</b>
		<b>-0/0.15</b>	<b>-0/0.15</b>	<b>-2-0/0.15</b>	<b>-3-0/0.15</b>	<b>-4-0/0.15</b>	<b>-5-0/0.15</b>	<b>-6-0/0.15</b>
		<b>-P/0.15</b>	<b>-P/0.15</b>	<b>-2-P/0.15</b>	<b>-3-P/0.15</b>	<b>-4-P/0.15</b>	<b>-5-P/0.15</b>	<b>-6-P/0.15</b>
		<b>-0/0.15V</b>	<b>-0/0.15V</b>	<b>-2-0/0.15V</b>	<b>-3-0/0.15V</b>	<b>-4-0/0.15V</b>	<b>-5-0/0.15V</b>	<b>-6-0/0.15V</b>
		<b>-P/0.15V</b>	<b>-P/0.15V</b>	<b>-2-P/0.15V</b>	<b>-3-P/0.15V</b>	<b>-4-P/0.15V</b>	<b>-5-P/0.15V</b>	<b>-6-P/0.15V</b>
Control unit		PFC100 controller (insulation IP54)						
Filling capacity 0.15 l / 0.04 gal. without PLC (integrated version with regulation of the feeder controller directly via DEPRAG - PLC)	<b>Type</b>	<b>01011i</b>	<b>01022i</b>	<b>01011i</b>	<b>01011i</b>	<b>01011i</b>	<b>01011i</b>	<b>01011i</b>
		<b>-0/0.15</b>	<b>-0/0.15</b>	<b>-2-0/0.15</b>	<b>-3-0/0.15</b>	<b>-4-0/0.15</b>	<b>-5-0/0.15</b>	<b>-6-0/0.15</b>
		<b>-P/0.15</b>	<b>-P/0.15</b>	<b>-2-P/0.15</b>	<b>-3-P/0.15</b>	<b>-4-P/0.15</b>	<b>-5-P/0.15</b>	<b>-6-P/0.15</b>
		<b>-0/0.15V</b>	<b>-0/0.15V</b>	<b>-2-0/0.15V</b>	<b>-3-0/0.15V</b>	<b>-4-0/0.15V</b>	<b>-5-0/0.15V</b>	<b>-6-0/0.15V</b>
		<b>-P/0.15V</b>	<b>-P/0.15V</b>	<b>-2-P/0.15V</b>	<b>-3-P/0.15V</b>	<b>-4-P/0.15V</b>	<b>-5-P/0.15V</b>	<b>-6-P/0.15V</b>
Control unit		PFCi100 controller (insulation IP54)						
Amount of connectable drivers		1	2	2	3	4	5	6
Feed rate	parts/min	60	2x60	2x25	3x17	4x13	5x10	6x8
Filling capacity	liter / gal.	0.15 / 0.04	0.15 / 0.04	0.15 / 0.04	0.15 / 0.04	0.15 / 0.04	0.15 / 0.04	0.15 / 0.04
Max. head diameter	mm / in.	5 / 13/64	4 / 5/32	5 / 13/64	5 / 13/64	5 / 13/64	5 / 13/64	5 / 13/64
Max. shaft length	mm / in.	8 / 5/16	8 / 5/16	8 / 5/16	8 / 5/16	8 / 5/16	8 / 5/16	8 / 5/16
Range of shaft diameter	mm / in.	1.2 - 2.5 / 0.046 - 0.1						
Voltage	V	24 Volt DC						
Max. power consumption	VA	50						
Air pressure requirement	bar / PSI	6 / 85.2						
Air hose dia.	mm / in.	10 / 3/8						
Weight approx.	kg / lbs.	26 / 57.2	28 / 61.6	28 / 61.6	29 / 63.8	30 / 66	31 / 68.2	32 / 70.4
Dimensions (WxDxH) approx.	mm / in.	296 x 352 x 258 / 11.54 x 13.73 x 10.06						
Feedhose length standard	m / ft.	4 / 13.1						
max.	m / ft.	8 / 26.2						
Number of in-/outputs needed for PLC	version „O“ and „P“	3/5	6/8	6/7	8/9	10/9	12/11	13/11
	version „EP“	2/1	3/2	3/1	4/1	5/1	-	-
	additional version „V“	4/6	8/10	8/9	11/12	14/13	17/16	19/17
<b>Included in delivery</b>		Power unit 105535A						
<b>Required accessories</b>		Power cable 812587 (EU) / 812295 (US)						
<b>Optional accessories</b>		see page 18						

# TECHNICAL DATA FEEDING MACHINES VIBRATORY BOWL FEEDERS

Filling capacity 0.75 liter – for screws with max. shaft length 35 mm  
– for small components



eacyfeed

Filling capacity 0.75 l / 0.2 gal. with PLC	<b>Type</b>	<b>01011</b>	<b>01022</b>	–	–	<b>01011-2</b>	<b>01011-3</b>	<b>01011-4</b>	–	–
		<b>-EP/0.75</b>	<b>-EP/0.75</b>			<b>-EP/0.75</b>	<b>-EP/0.75</b>	<b>-EP/0.75</b>		
Control unit		PFC100 controller (insulation IP54)								
Filling capacity 0.75 l / 0.2 gal. without PLC	<b>Type</b>	<b>01011</b>	<b>01022</b>	<b>01012</b>	<b>01024</b>	<b>01011</b>	<b>01011</b>	<b>01011</b>	<b>01011</b>	<b>01011</b>
		<b>-0/0.75</b>	<b>-0/0.75</b>	<b>-0/0.75</b>	<b>-0/0.75</b>	<b>-2-0/0.75</b>	<b>-3-0/0.75</b>	<b>-4-0/0.75</b>	<b>-5-0/0.75</b>	<b>-6-0/0.75</b>
		<b>-P/0.75</b>	<b>-P/0.75</b>	<b>-P/0.75</b>	<b>-P/0.75</b>	<b>-2-P/0.75</b>	<b>-3-P/0.75</b>	<b>-4-P/0.75</b>	<b>-5-P/0.75</b>	<b>-6-P/0.75</b>
		<b>-0/0.75V</b>	<b>-0/0.75V</b>	<b>-0/0.75V</b>	<b>-0/0.75V</b>	<b>-2-0/0.75V</b>	<b>-3-0/0.75V</b>	<b>-4-0/0.75V</b>	<b>-5-0/0.75V</b>	<b>-6-0/0.75V</b>
		<b>-P/0.75V</b>	<b>-P/0.75V</b>	<b>-P/0.75V</b>	<b>-P/0.75V</b>	<b>-2-P/0.75V</b>	<b>-3-P/0.75V</b>	<b>-4-P/0.75V</b>	<b>-5-P/0.75V</b>	<b>-6-P/0.75V</b>
Control unit		PFC100 controller (insulation IP54)								
Filling capacity 0.75 l / 0.2 gal. without PLC (integrated version with regulation of the feeder controller directly via DEPRAG - PLC)	<b>Type</b>	<b>01011i</b>	<b>01022i</b>	<b>01012i</b>	<b>01024i</b>	<b>01011i</b>	<b>01011i</b>	<b>01011i</b>	<b>01011i</b>	<b>01011i</b>
		<b>-0/0.75</b>	<b>-0/0.75</b>	<b>-0/0.75</b>	<b>-0/0.75</b>	<b>-2-0/0.75</b>	<b>-3-0/0.75</b>	<b>-4-0/0.75</b>	<b>-5-0/0.75</b>	<b>-6-0/0.75</b>
		<b>-P/0.75</b>	<b>-P/0.75</b>	<b>-P/0.75</b>	<b>-P/0.75</b>	<b>-2-P/0.75</b>	<b>-3-P/0.75</b>	<b>-4-P/0.75</b>	<b>-5-P/0.75</b>	<b>-6-P/0.75</b>
		<b>-0/0.75V</b>	<b>-0/0.75V</b>	<b>-0/0.75V</b>	<b>-0/0.75V</b>	<b>-2-0/0.75V</b>	<b>-3-0/0.75V</b>	<b>-4-0/0.75V</b>	<b>-5-0/0.75V</b>	<b>-6-0/0.75V</b>
		<b>-P/0.75V</b>	<b>-P/0.75V</b>	<b>-P/0.75V</b>	<b>-P/0.75V</b>	<b>-2-P/0.75V</b>	<b>-3-P/0.75V</b>	<b>-4-P/0.75V</b>	<b>-5-P/0.75V</b>	<b>-6-P/0.75V</b>
Control unit		PFCi100 controller (insulation IP54)								
Amount of connectable drivers		1	2	2	4	2	3	4	5	6
Feed rate	parts/min	40	2x40	2x20	4x20	2x20	3x13	4x10	5x8	6x6
Filling capacity	liter / gal.	0.75 / 0.2	0.75 / 0.2	0.75 / 0.2	0.75 / 0.2	0.75 / 0.2	0.75 / 0.2	0.75 / 0.2	0.75 / 0.2	0.75 / 0.2
Max. head diameter	mm / in.	12 / <sup>15</sup> / <sub>32</sub>	8 / <sup>5</sup> / <sub>16</sub>	12 / <sup>15</sup> / <sub>32</sub>	8 / <sup>15</sup> / <sub>32</sub>	12 / <sup>15</sup> / <sub>32</sub>	12 / <sup>15</sup> / <sub>32</sub>	12 / <sup>15</sup> / <sub>32</sub>	12 / <sup>15</sup> / <sub>32</sub>	12 / <sup>5</sup> / <sub>32</sub>
Max. shaft length	mm / in.	35 / 1 <sup>3</sup> / <sub>8</sub>	25 / <sup>31</sup> / <sub>32</sub>	35 / 1 <sup>3</sup> / <sub>8</sub>	25 / <sup>31</sup> / <sub>32</sub>	35 / 1 <sup>3</sup> / <sub>8</sub>	35 / 1 <sup>3</sup> / <sub>8</sub>	35 / 1 <sup>3</sup> / <sub>8</sub>	35 / 1 <sup>3</sup> / <sub>8</sub>	35 / 1 <sup>3</sup> / <sub>8</sub>
Range of shaft diameter	mm / in.	1.5 - 7 / 0.06 - 0.27								
Voltage	V	24 Volt DC								
Max. power consumption	VA	50								
Air pressure requirement	bar / PSI	6 / 85.2								
Air hose dia.	mm / in.	10 / <sup>3</sup> / <sub>8</sub>								
Weight approx.	kg / lbs.	36 / 79.2	38 / 83.6	36 / 79.2	38 / 83.6	42 / 92.4	42 / 92.4	42 / 92.4	44 / 96.8	44 / 96.8
Dimensions (WxDxH) approx.	mm / in.	360 x 414 x 368 / 14.04 x 16.15 x 14.35								
Feedhose length standard	m / ft.	4 / 13.1								
max.	m / ft.	8 / 26.2								
Number of in-/outputs needed for PLC										
Version „O“ and „P“		3/5	6/8	8/10	16/18	6/7	8/9	10/9	12/11	13/11
Version „EP“		2/1	3/2	–	–	3/1	4/1	5/1	–	–
Additional version „V“		4/6	8/10	10/12	20/22	8/9	11/12	14/13	17/16	19/17

Also suitable for the feeding of: – rotation symmetric parts, such as rivets, bolts, pins, washers, sleeves, etc.

- small components
- balls and much more

The choice of feeding machine for small components will be determined after testing. Therefore, we require a sufficient quantity (approximately 1 liter/0.26 gal.) of the components to be fed.

<b>Included in delivery</b>	Power unit 105535A
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## Required accessories

Power cable	Part no.	812587 (EU) / 812295 (US)
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## Optional accessories

see page 18



**Filling capacity 1.2 liter – for screws with max. shaft length 50 mm**



Filling capacity 1.2 l / 0.32 gal. with PLC	<b>Type</b>	<b>01011 -EP/1.2</b>	<b>01011-2 -EP/1.2</b>	<b>01011-3 -EP/1.2</b>	<b>01011-4 -EP/1.2</b>	-	-
Control unit		PFC100 controller (insulation IP54)					
Filling capacity 1.2 l / 0.32 gal. without PLC	<b>Type</b>	<b>01011 -0/1.2 -P/1.2 -0/1.2V -P/1.2V</b>	<b>01011 -2-0/1.2 -2-P/1.2 -2-0/1.2V -2-P/1.2V</b>	<b>01011 -3-0/1.2 -3-P/1.2 -3-0/1.2V -3-P/1.2V</b>	<b>01011 -4-0/1.2 -4-P/1.2 -4-0/1.2V -4-P/1.2V</b>	<b>01011 -5-0/1.2 -5-P/1.2 -5-0/1.2V -5-P/1.2V</b>	<b>01011 -6-0/1.2 -6-P/1.2 -6-0/1.2V -6-P/1.2V</b>
Control unit		PFC100 controller (insulation IP54)					
Filling capacity 1.2 l / 0.32 gal. without PLC integrated version with regulation of the feeder controller directly via DEPRAG - PLC)	<b>Type</b>	<b>01011i -0/1.2 -P/1.2 -0/1.2V -P/1.2V</b>	<b>01011i -2-0/1.2 -2-P/1.2 -2-0/1.2V -2-P/1.2V</b>	<b>01011i -3-0/1.2 -3-P/1.2 -3-0/1.2V -3-P/1.2V</b>	<b>01011i -4-0/1.2 -4-P/1.2 -4-0/1.2V -4-P/1.2V</b>	<b>01011i -5-0/1.2 -5-P/1.2 -5-0/1.2V -5-P/1.2V</b>	<b>01011i -6-0/1.2 -6-P/1.2 -6-0/1.2V -6-P/1.2V</b>
Control unit		PFCi100 controller (insulation IP54)					
Amount of connectable drivers		1	2	3	4	5	6
Feed rate	parts/min	25	2x12	3x8	4x6	5x5	6x4
Filling capacity	liter / gal.	1.2 / 0.32	1.2 / 0.32	1.2 / 0.32	1.2 / 0.32	1.2 / 0.32	1.2 / 0.32
Max. head diameter	mm / in.	16 / 5/8					
Max. shaft length	mm / in.	50 / 1 <sup>5</sup> / <sub>16</sub>					
Range of shaft diameter	mm / in.	3 - 7 / 0.118 - 0.276					
Voltage	V	24 Volt DC					
Max. power consumption	VA	150					
Air pressure requirement	bar / PSI	6 / 85.2					
Air hose dia.	mm / in.	10 / 3/8					
Weight approx.	kg / lbs.	40 / 88	46 / 101.2	46 / 101.2	46 / 101.2	48 / 105.6	48 / 105.6
Dimensions (WxDxH) approx.	mm / in.	360 x 414 x 368 / 14.04 x 16.15 x 14.35					
Feedhose length standard	m / ft.	4 / 13.1					
max.	m / ft.	8 / 26.2					
Number of in-/outputs needed for PLC							
Version „0“ and „P“		3/5	6/7	8/9	10/9	12/11	13/11
Version „EP“		2/1	3/1	4/1	5/1	-	-
Additional version „V“		4/6	8/9	11/12	14/13	17/16	19/17
<b>Included in delivery</b>		Power unit 2041061					

**Required accessories**

Power cable	Part no.	812587 (EU) / 812295 (US)
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**Optional accessories**

	see page 18
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## TECHNICAL DATA FEEDING MACHINES VIBRATORY BOWL FEEDERS

Filling capacity 2.5 liter – for screws with max. shaft length 60 mm  
– for small components



eacyfeed

Filling capacity 2.5 l / 0.66 gal. with PLC	<b>Type</b>	<b>01011</b>	<b>01022</b>	-	-	<b>01011-2</b>	<b>01011-3</b>	<b>01011-4</b>	-	-
		<b>-EP/2.5</b>	<b>-EP/2.5</b>			<b>-EP/2.5</b>	<b>-EP/2.5</b>	<b>-EP/2.5</b>		
Control unit		PFC100 controller (insulation IP54)								
Filling capacity 2.5 l / 0.66 gal. without PLC	<b>Type</b>	<b>01011</b>	<b>01022</b>	<b>01012</b>	<b>01024</b>	<b>01011</b>	<b>01011</b>	<b>01011</b>	<b>01011</b>	<b>01011</b>
		<b>-0/2.5</b>	<b>-0/2.5</b>	<b>-0/2.5</b>	<b>-0/2.5</b>	<b>-2-0/2.5</b>	<b>-3-0/2.5</b>	<b>-4-0/2.5</b>	<b>-5-0/2.5</b>	<b>-6-0/2.5</b>
		<b>-P/2.5</b>	<b>-P/2.5</b>	<b>-P/2.5</b>	<b>-P/2.5</b>	<b>-2-P/2.5</b>	<b>-3-P/2.5</b>	<b>-4-P/2.5</b>	<b>-5-P/2.5</b>	<b>-6-P/2.5</b>
		<b>-0/2.5V</b>	<b>-0/2.5V</b>	<b>-0/2.5V</b>	<b>-0/2.5V</b>	<b>-2-0/2.5V</b>	<b>-3-0/2.5V</b>	<b>-4-0/2.5V</b>	<b>-5-0/2.5V</b>	<b>-6-0/2.5V</b>
		<b>-P/2.5V</b>	<b>-P/2.5V</b>	<b>-P/2.5V</b>	<b>-P/2.5V</b>	<b>-2-P/2.5V</b>	<b>-3-P/2.5V</b>	<b>-4-P/2.5V</b>	<b>-5-P/2.5V</b>	<b>-6-P/2.5V</b>
Control unit		PFC100 controller (insulation IP54)								
Filling capacity 2.5 l / 0.66 gal. without PLC (integrated version with regulation of the feeder controller directly via DEPRAG - PLC)	<b>Type</b>	<b>01011i</b>	<b>01022i</b>	<b>01012i</b>	<b>01024i</b>	<b>01011i</b>	<b>01011i</b>	<b>01011i</b>	<b>01011i</b>	<b>01011i</b>
		<b>-0/2.5</b>	<b>-0/2.5</b>	<b>-0/2.5</b>	<b>-0/2.5</b>	<b>-2-0/2.5</b>	<b>-3-0/2.5</b>	<b>-4-0/2.5</b>	<b>-5-0/2.5</b>	<b>-6-0/2.5</b>
		<b>-P/2.5</b>	<b>-P/2.5</b>	<b>-P/2.5</b>	<b>-P/2.5</b>	<b>-2-P/2.5</b>	<b>-3-P/2.5</b>	<b>-4-P/2.5</b>	<b>-5-P/2.5</b>	<b>-6-P/2.5</b>
		<b>-0/2.5V</b>	<b>-0/2.5V</b>	<b>-0/2.5V</b>	<b>-0/2.5V</b>	<b>-2-0/2.5V</b>	<b>-3-0/2.5V</b>	<b>-4-0/2.5V</b>	<b>-5-0/2.5V</b>	<b>-6-0/2.5V</b>
		<b>-P/2.5V</b>	<b>-P/2.5V</b>	<b>-P/2.5V</b>	<b>-P/2.5V</b>	<b>-2-P/2.5V</b>	<b>-3-P/2.5V</b>	<b>-4-P/2.5V</b>	<b>-5-P/2.5V</b>	<b>-6-P/2.5V</b>
Control unit		PFCi100 controller (insulation IP54)								
Amount of connectable drivers		1	2	2	4	2	3	4	5	6
Feed rate	parts/min	40	2x40	2x20	4x20	2x20	3x13	4x10	5x8	6x6
Filling capacity	liter / gal.	2.5 / 0.66	2.5 / 0.66	2.5 / 0.66	2.5 / 0.66	2.5 / 0.66	2.5 / 0.66	2.5 / 0.66	2.5 / 0.66	2.5 / 0.66
Max. head diameter	mm / in.	16 / <sup>5</sup> / <sub>8</sub>	14 / <sup>35</sup> / <sub>64</sub>	16 / <sup>5</sup> / <sub>8</sub>	14 / <sup>35</sup> / <sub>64</sub>	16 / <sup>5</sup> / <sub>8</sub>	16 / <sup>5</sup> / <sub>8</sub>	16 / <sup>5</sup> / <sub>8</sub>	15 / <sup>19</sup> / <sub>32</sub>	16 / <sup>5</sup> / <sub>8</sub>
Max. shaft length	mm / in.	60 / 2 <sup>23</sup> / <sub>64</sub>	45 / 1 <sup>49</sup> / <sub>64</sub>	60 / 2 <sup>23</sup> / <sub>64</sub>	45 / 1 <sup>49</sup> / <sub>64</sub>	60 / 2 <sup>23</sup> / <sub>64</sub>	60 / 2 <sup>23</sup> / <sub>64</sub>	60 / 2 <sup>23</sup> / <sub>64</sub>	60 / 2 <sup>23</sup> / <sub>64</sub>	60 / 2 <sup>23</sup> / <sub>64</sub>
Range of shaft diameter	mm / in.	4 - 8 / <sup>5</sup> / <sub>32</sub> - <sup>5</sup> / <sub>16</sub>								
Voltage	V	24 Volt DC								
Max. power consumption	VA	150								
Air pressure requirement	bar / PSI	6 / 85.2								
Air hose dia.	mm / in.	10 / <sup>3</sup> / <sub>8</sub>								
Weight approx.	kg / lbs.	60 / 132								
Dimensions (WxDxH) approx.	mm / in.	547 x 600 x 294 / 21.33 x 23.4 x 11.5								
Feedhose length standard	m / ft.	4 / 13.1								
max.	m / ft.	8 / 26.2								
Number of in-/outputs needed for PLC										
Version „O“ and „P“		3/5	6/8	8/10	16/18	6/7	8/9	10/9	12/11	13/11
Version „EP“		2/1	3/2	-	-	3/1	4/1	5/1	-	-
Additional version „V“		4/6	8/10	10/12	20/22	8/9	11/12	14/13	17/16	19/17

Also suitable for the feeding of: – rotation symmetric parts, such as rivets, bolts, pins, washers, sleeves, etc.  
– small components  
– balls and much more

The choice of feeding machine for small components will be determined after testing. Therefore, we require a sufficient quantity (approximately 1 liter/0.26 gal.) of the components to be fed.

<b>Included in delivery</b>	Power unit 2041061
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### Required accessories

Power cable	Part no.	812587 (EU) / 812295 (US)
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### Optional accessories

	see page 18
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Filling capacity 6.0 liter – for screws with max. shaft length 100 mm

Filling capacity	Type	0511-O/6.0	0511-2-O/6.0	0511-3-O/6.0	0511-4-O/6.0	0511-5-O/6.0	0511-6-O/6.0
6 liter / 1.6 gal.		0511-P/6.0	0511-2-P/6.0 0511-2-O/6.0V 0511-2-P/6.0V	0511-3-P/6.0 0511-3-O/6.0V 0511-3-P/6.0V	0511-4-P/6.0 0511-4-O/6.0V 0511-4-P/6.0V	0511-5-P/6.0 0511-5-O/6.0V 0511-5-P/6.0V	0511-6-P/6.0 0511-6-O/6.0V 0511-6-P/6.0V
Amount of connectable drivers		1	2	3	4	5	6
Feed rate	parts/min	25	2 x 12	3 x 8	4 x 6	5 x 5	6 x 4
Filling capacity	liter / gal.				6 / 1.6		
Max. head diameter	mm / in.				30 / 1 <sup>3</sup> / <sub>16</sub>		
Max. shaft length	mm / in.				100 / 4		
Range of shaft diameter	mm / in.				8 - 16 / 0.315 - 0.63		
Air pressure requirement	bar / PSI				6.3 / 90		
Air hose dia.	mm / in.				10 / <sup>3</sup> / <sub>8</sub>		
Weight (design "O")	kg / lbs.				250 / 550		
Feedhose length standard	m / ft.				4 / 13.1		
max	m / ft.				8 / 26.2		
Number of in-/outputs needed for PLC							
Version "O" and "P"	min.	2/6	5/8	7/10	9/10	11/12	12/12
Version "V"	min.	–	7/10	10/13	13/14	16/17	18/18
Control unit		SZG controller 5-SL (insulation IP54)					

Filling capacity 12.0 liter – for screws with max. shaft length 130 mm

Filling capacity	Type	0511	0511	0512	0522	0511	0511
12 liter / 3.2 gal		-O/12 -P/12	-2-O/12 -2-P/12 -2-O/12 V -2-P/12 V	-O/12 -P/12 -O/12 V -P/12 V	-O/12 -P/12	-3-O/12 -3-P/12 -3-O/12 V -3-P/12 V	-4-O/12 -4-P/12 -4-O/12 V -4-P/12 V
Amount of connectable drivers		1	2	2	2	3	4
Preferred type for identical amount of spindles			●				
Feed rate	parts/min	20	2 x 10	2 x 11	2 x 20	3 x 7	4 x 5
Filling capacity	liter / gal.	12 / 3.2	12 / 3.2	12 / 3.2	12 / 3.2	12 / 3.2	12 / 3.2
Max. head diameter	mm / in.	40 / 1 <sup>37</sup> / <sub>64</sub>	40 / 1 <sup>37</sup> / <sub>64</sub>	40 / 1 <sup>37</sup> / <sub>64</sub>	30 / 1 <sup>3</sup> / <sub>16</sub>	40 / 1 <sup>37</sup> / <sub>64</sub>	40 / 1 <sup>37</sup> / <sub>64</sub>
Max. shaft length	mm / in.	130 / 5 <sup>1</sup> / <sub>8</sub>	130 / 5 <sup>1</sup> / <sub>8</sub>	130 / 5 <sup>1</sup> / <sub>8</sub>	120 / 4 <sup>23</sup> / <sub>32</sub>	130 / 5 <sup>1</sup> / <sub>8</sub>	130 / 5 <sup>1</sup> / <sub>8</sub>
Range of shaft diameter	mm / in.	14-20 / <sup>35</sup> / <sub>64</sub> - <sup>25</sup> / <sub>32</sub>	14-20 / <sup>35</sup> / <sub>64</sub> - <sup>25</sup> / <sub>32</sub>	14-20 / <sup>35</sup> / <sub>64</sub> - <sup>25</sup> / <sub>32</sub>	12-18 / <sup>15</sup> / <sub>32</sub> - <sup>45</sup> / <sub>64</sub>	14-20 / <sup>35</sup> / <sub>64</sub> - <sup>25</sup> / <sub>32</sub>	14-20 / <sup>35</sup> / <sub>64</sub> - <sup>25</sup> / <sub>32</sub>
Air pressure requirement	bar / PSI	6.3 / 90	6.3 / 90	6.3 / 90	6.3 / 90	6.3 / 90	6.3 / 90
Air hose dia.	mm / in.	10 / <sup>3</sup> / <sub>8</sub>	10 / <sup>3</sup> / <sub>8</sub>	10 / <sup>3</sup> / <sub>8</sub>	10 / <sup>3</sup> / <sub>8</sub>	10 / <sup>3</sup> / <sub>8</sub>	10 / <sup>3</sup> / <sub>8</sub>
Weight	kg / lbs	as per customer's specification approx. 500					
Feedhose length standard	m / ft.	4 / 13.1	4 / 13.1	4 / 13.1	4 / 13.1	4 / 13.1	4 / 13.1
max	m / ft.	8 / 26.2	8 / 26.2	8 / 26.2	8 / 26.2	8 / 26.2	8 / 26.2
Number of in-/outputs needed for PLC							
Version "O" and "P"	min.	5/6	8/8	6/7	9/9	11/10	12/10
Version "V"	min.	–	10/10	8/9	–	14/13	16/14
Control unit for vibratory conveyor		Special controller					
Control unit for linear conveyor		Special controller					

## TECHNICAL DATA FEEDING MACHINES SWORD FEEDERS

### Filling capacity 0.15 liter – for screws with max. shaft length 8 mm

Filling capacity	<b>Type</b>	<b>0811-O/0.15</b>
0.15 liter / 0.04 gal		<b>0811-P/0.15</b>
Amount of connectable drivers		1
Feed rate	parts/min	30
Filling capacity	liter / gal.	0.15 / 0.04
Max. head diameter	mm / in.	5 / <sup>13</sup> / <sub>64</sub>
Max. shaft length	mm / in.	8 / <sup>5</sup> / <sub>16</sub>
Range of shaft diameter	mm / in.	1.0 - 2.5 / <sup>3</sup> / <sub>64</sub> - <sup>3</sup> / <sub>32</sub>
Air pressure requirement	bar / PSI	6.3 / 90
Air hose dia.	mm / in.	10 / <sup>25</sup> / <sub>64</sub>
Weight	kg / lbs	6 / 13.2
Feedhose length	standard m / ft.	4 / 13.1
	max m / ft.	5 / 16.4
Number of in-/outputs needed for PLC		
Version "O" and "P"	min.	4/5

### Filling capacity 1.5 liter – for screws with max. shaft length 25 mm

Filling capacity	1.5 liter / 0.4 gal						
<b>with PLC, control unit PFC18L Controller (insulation IP30)</b>	<b>Type</b>	<b>01811-EP/1.5</b>	-	-	-	-	-
<b>without PLC, without control unit (control via external PLC)</b>	<b>Type</b>	<b>01811-O/1.5</b> <b>01811-P/1.5</b>	<b>01811-2-O/1.5</b> <b>01811-2-P/1.5</b> <b>01811-2-O/1.5V</b> <b>01811-2-P/1.5V</b>	<b>01811-3-O/1.5</b> <b>01811-3-P/1.5</b> <b>01811-3-O/1.5V</b> <b>01811-3-P/1.5V</b>	<b>01811-4-O/1.5</b> <b>01811-4-P/1.5</b> <b>01811-4-O/1.5V</b> <b>01811-4-P/1.5V</b>	<b>01811-5-O/1.5</b> <b>01811-5-P/1.5</b> <b>01811-5-O/1.5V</b> <b>01811-5-P/1.5V</b>	<b>01811-6-O/1.5</b> <b>01811-6-P/1.5</b> <b>01811-6-O/1.5V</b> <b>01811-6-P/1.5V</b>
Amount of connectable drivers		1	2	3	4	5	6
Feed rate	parts/min	30	2 x 15	3 x 10	4 x 8	5 x 6	6 x 5
Filling capacity	liter / gal.	1.5 / 0.4					
Max. head diameter	mm / in.	12 / <sup>15</sup> / <sub>32</sub>					
Max. shaft length	mm / in.	25 / <sup>63</sup> / <sub>64</sub>					
Range of shaft diameter	mm / in.	2 - 6.3 / 0.08 - 0.25					
Voltage	V	24 Volt DC					
Max. power consumption	VA	50					
Air pressure requirement	bar / PSI	6 / 85.2					
Air hose dia.	mm / in.	10 / <sup>3</sup> / <sub>8</sub>					
Dimensions (WxDxH) approx.	mm / in.	408 x 666 x 1223 / 15.9 x 25.97 x 47.7					
Weight (design "O")	kg / lbs	35/77	38/84	40/88	40/88	42/92	42/92
Feedhose length	standard m / ft.	4/13.1	4/13.1	4/13.1	4/13.1	4/13.1	4/13.1
	max m / ft.	8/26.2	8/26.2	8/26.2	8/26.2	8/26.2	8/26.2
Number of in-/outputs needed for PLC							
Version "O" and "P"	min.	8/6	11/9	13/12	15/13	17/16	18/17
Version "V"	min.	-	11/9	13/12	15/13	17/16	18/17
Version "EP"	min.	3/1	-	-	-	-	-
<b>Included in delivery (only for type 01811-EP/1.5)</b>	Power unit	105535A -					
<b>Required accessories (only for type 01811-EP/1.5)</b>							
Power cable	Part no.	812587 (EU) 812295 (US) -					

#### Optional accessories

see page 18



# TECHNICAL DATA NUT FEEDERS (VIBRATORY BOWL FEEDERS)

Filling capacity 0.75 / 2.5 liter – maximum permissible nut height 5 mm / 8 mm



Filling capacity	0.75 liter / 0.2 gal.			2.5 liter / 0.66 gal.			
with PLC	<b>Type</b>	<b>01011M</b> <b>-EP/0.75</b>	-	-	<b>01011M</b> <b>-EP/2.5</b>	-	
Control unit	PFC100 controller (insulation IP54)						
without PLC	<b>Type</b>	<b>01011M</b> <b>-0/0.75</b> <b>-P/0.75</b> <b>-0/0.75V</b> <b>-P/0.75V</b>	<b>01012M</b> <b>-0/0.75</b> <b>-P/0.75</b> <b>-0/0.75V</b> <b>-P/0.75V</b>	<b>01024M</b> <b>-0/0.75</b> <b>-P/0.75</b> <b>-0/0.75V</b> <b>-P/0.75V</b>	<b>01011M</b> <b>-0/2.5</b> <b>-P/2.5</b> <b>-0/2.5V</b> <b>-P/2.5V</b>	<b>01012M</b> <b>-0/2.5</b> <b>-P/2.5</b> <b>-0/2.5V</b> <b>-P/2.5V</b>	<b>01024M</b> <b>-0/2.5</b> <b>-P/2.5</b> <b>-0/2.5V</b> <b>-P/2.5V</b>
Control unit	PFC100 controller (insulation IP54)						
without PLC	<b>Type</b>	<b>01011iM</b> <b>-0/0.75</b> <b>-P/0.75</b> <b>-0/0.75V</b> <b>-P/0.75V</b>	<b>01012iM</b> <b>-0/0.75</b> <b>-P/0.75</b> <b>-0/0.75V</b> <b>-P/0.75V</b>	<b>01024iM</b> <b>-0/0.75</b> <b>-P/0.75</b> <b>-0/0.75V</b> <b>-P/0.75V</b>	<b>01011iM</b> <b>-0/2.5</b> <b>-P/2.5</b> <b>-0/2.5V</b> <b>-P/2.5V</b>	<b>01012iM</b> <b>-0/2.5</b> <b>-P/2.5</b> <b>-0/2.5V</b> <b>-P/2.5V</b>	<b>01024iM</b> <b>-0/2.5</b> <b>-P/2.5</b> <b>-0/2.5V</b> <b>-P/2.5V</b>
(integrated version with regulation of the feeder controller directly via external PLC)							
Control unit	PFCi100 controller (insulation IP54)						
Amount of connectable drivers	1	2	4	1	2	4	
Feed rate parts/min	40	2x25	4x25	40	2x25	4x25	
Filling capacity liter / gal.	0.75 / 0.2	0.75 / 0.2	0.75 / 0.2	2.5 / 0.66	2.5 / 0.66	2.5 / 0.66	
Across flats mm / in.	4-8 / <sup>5</sup> / <sub>32</sub> - <sup>5</sup> / <sub>16</sub>	4-8 / <sup>5</sup> / <sub>32</sub> - <sup>5</sup> / <sub>16</sub>	4-8 / <sup>5</sup> / <sub>32</sub> - <sup>5</sup> / <sub>16</sub>	5.5-17 / <sup>5</sup> / <sub>32</sub> - <sup>43</sup> / <sub>64</sub>	5.5-13 / <sup>5</sup> / <sub>32</sub> - <sup>1</sup> / <sub>2</sub>	5.5-13 / <sup>5</sup> / <sub>32</sub> - <sup>1</sup> / <sub>2</sub>	
Female thread mm / in.	3-5 / <sup>1</sup> / <sub>8</sub> - <sup>3</sup> / <sub>16</sub>	3-5 / <sup>1</sup> / <sub>8</sub> - <sup>3</sup> / <sub>16</sub>	3-5 / <sup>1</sup> / <sub>8</sub> - <sup>3</sup> / <sub>16</sub>	3-8 / <sup>1</sup> / <sub>8</sub> - <sup>5</sup> / <sub>16</sub>	3-8 / <sup>1</sup> / <sub>8</sub> - <sup>5</sup> / <sub>16</sub>	3-8 / <sup>1</sup> / <sub>8</sub> - <sup>5</sup> / <sub>16</sub>	
Max. possible nut height mm / in.	5 / <sup>3</sup> / <sub>16</sub>	5 / <sup>3</sup> / <sub>16</sub>	5 / <sup>3</sup> / <sub>16</sub>	8 / <sup>5</sup> / <sub>16</sub>	8 / <sup>5</sup> / <sub>16</sub>	8 / <sup>5</sup> / <sub>16</sub>	
Voltage V	24 Volt DC			24 Volt DC			
Max. power consumption VA	50			150			
Air pressure requirement bar / PSI	6 / 85.2			6 / 85.2			
Air hose dia. mm / in.	10 / <sup>3</sup> / <sub>8</sub>			10 / <sup>3</sup> / <sub>8</sub>			
Dimensions (WxDxH) approx. mm / in.	360 x 414 x 368 / 14.04 x 16.15 x 14.35			547 x 600 x 294 / 21.33 x 23.4 x 11.5			
Number of in-/outputs needed for PLC							
Version „0“ and „P“	3/5	4/6	8/10	3/5	4/6	7/14	
Version „EP“	2/1	-	-	2/1	-	-	
Additional version „V“	4/6	6/8	10/12	4/6	6/8	11/18	
<b>Included in delivery</b>	Power unit 105535A			Power unit 2041061			
<b>Required accessories</b>							
Power cable Part no.	812587 (EU) / 812295 (US)			812587 (EU) / 812295 (US)			

<b>Optional accessories</b>	see page 18
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## POWER USAGE

The design of the feeding systems can be made for either 230 volts or for 115 volts of power-connection. For the corresponding maximum usage (in W) please refer to the listing below.

Unit	Type	010xx-x/0.15	010xx-x/0.75	010xx-x/1.2	010xx-x/2.5	05xx-x/6.0	018xx-x/1.5
Voltage	V	24 Volt DC	24 Volt DC	24 Volt DC		115 or 230	24 Volt DC
Power consumption	W	50	50	150		550	50

Unit	Type	0811-O/0.15	0811-P/0.15
Power supply	V	not applicable	24
Power consumption	W	0	10

## OPTIONAL EQUIPMENT

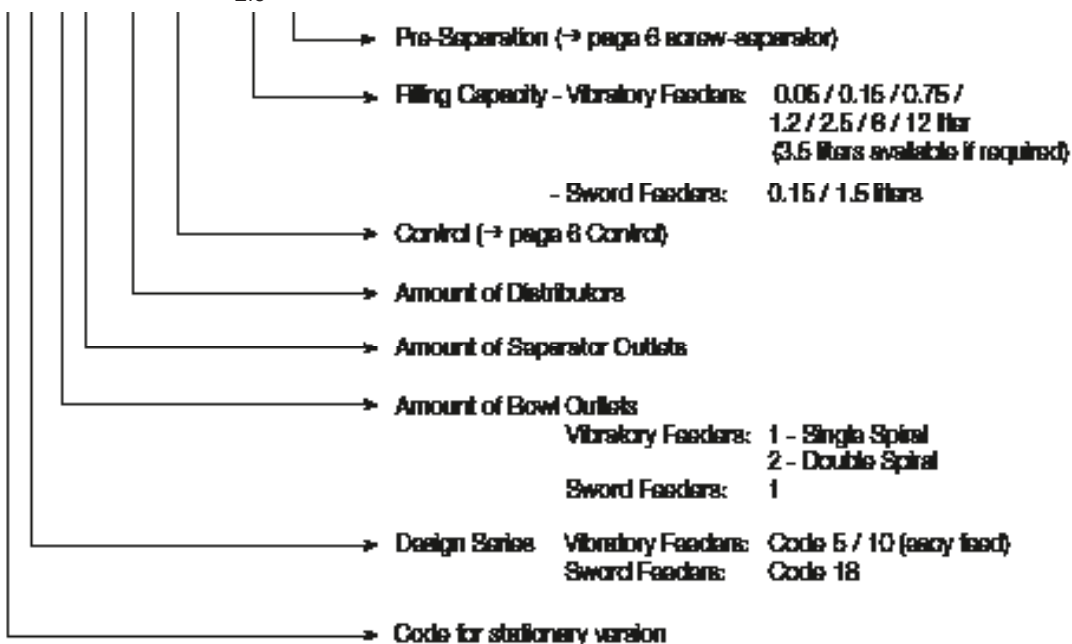
### for feeding systems

- Stationary mouthpiece (standard)
- Tiltable mouthpiece
- Nosepiece ball type (single)
- Nosepiece ball type (double)
- Nosepiece split type
- Ring proximity switch with impulse extension 100 ms, with connector, cable and connector plug for screw presence control installed and wired
- Feeder bowl, coated with polyurethane
- Hopper (Catalog D3850E)
- Downholder (for screws with washers)
- "Semi-pick and place-system"
- Set of wheels for stand
- Set of wheels for stand in ESD-capable version

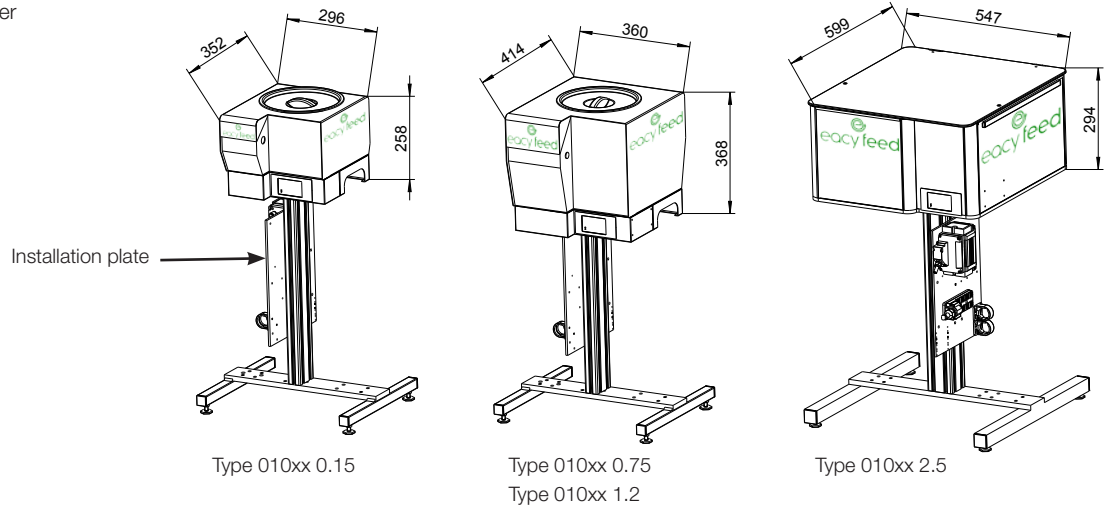
for feeding systems with feed bowl volume		0.15 liter	0.75 liter	1.2 liter	1.5 liter	2.5 liter
Fill level indicator	Part no.	414965J	414965A	414965A	420494B	414965D
Stand	Part no.	994449	994449	994449	994449	999309
Retaining plate (holder for power supply)	Part no.	9198574	9198574	9198573	9198574	-

## NOMENCLATURE OF FEEDERS

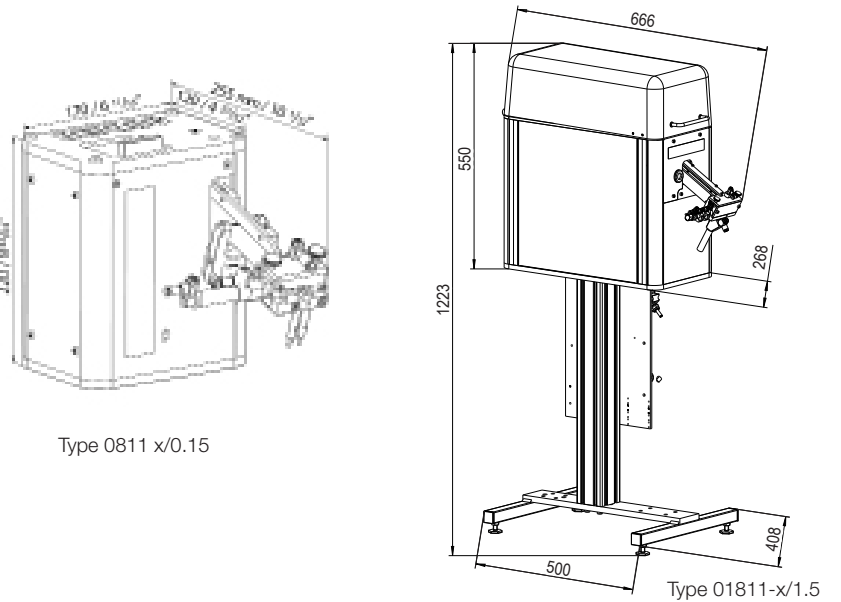
i. e. 0 10 1 1 - 3 - P / 2.5



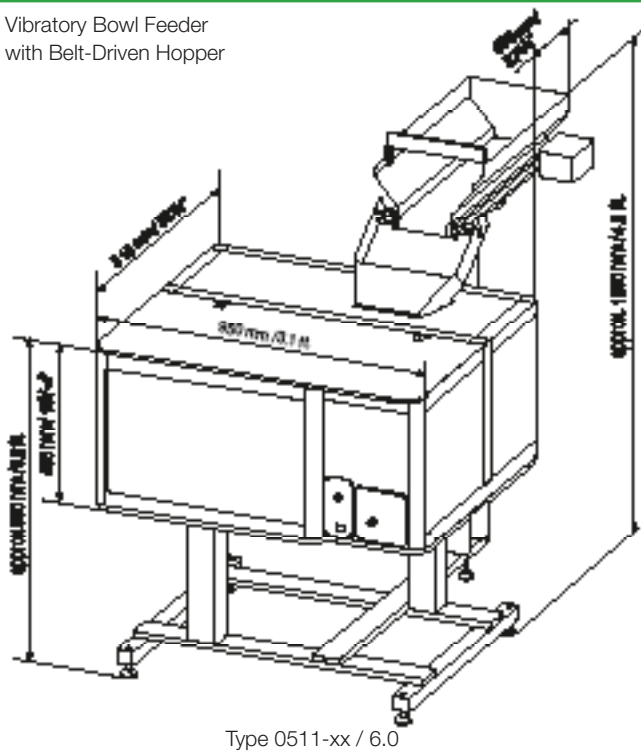
Vibratory Bowl Feeder



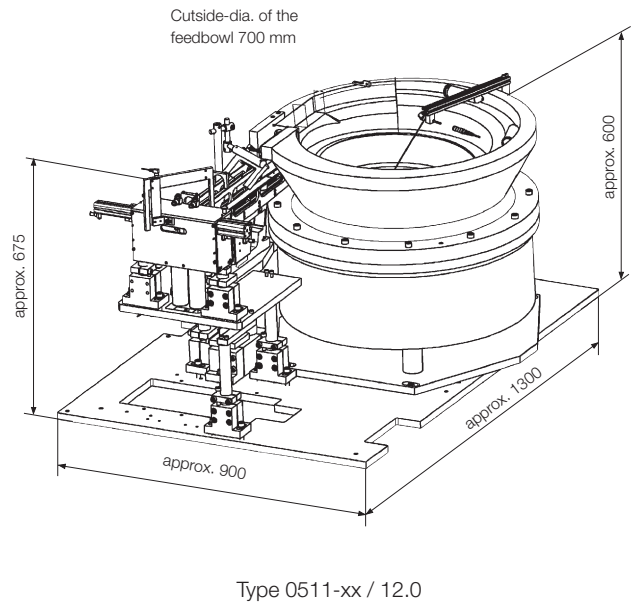
Sword Feeder



Vibratory Bowl Feeder with Belt-Driven Hopper



Vibratory Bowl Feeder



# DEPRAG

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**CERTIFIED AS PER DIN EN ISO 9001**

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