HERMES TOOLS

DEPRAG machines unlimited

Feeding Technology

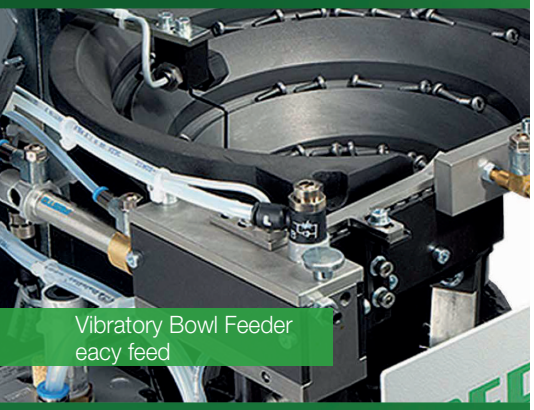
Feeding systems for stationary use

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

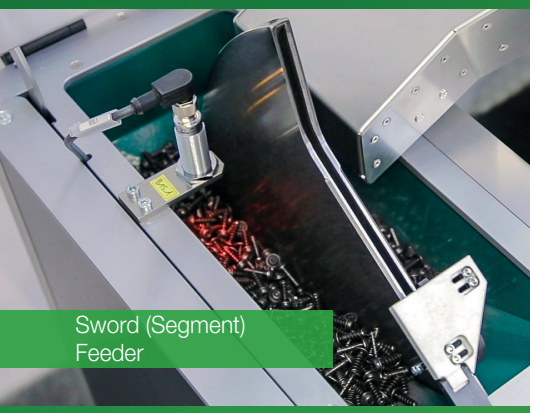
- **Approx. 80 % energy savings**
- **Smart factory/Industry 4.0-capable**
- **Efficiency and worldwide application - one design for all markets**

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.

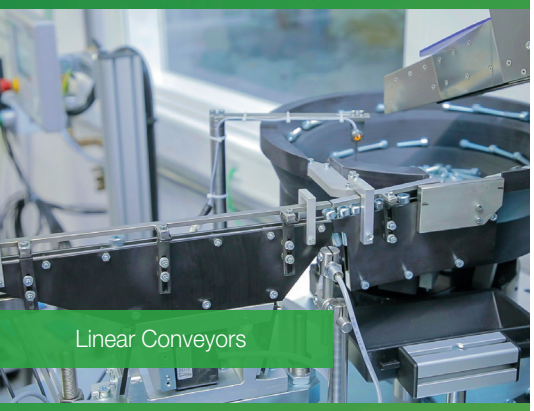
D3830E 11.2024



Vibratory Bowl Feeder
eacy feed



Sword (Segment)
Feeder



Linear Conveyors

Pick-and-Place
Method

OUR RANGE ON FEEDING SYSTEMS

Vibratory Feeder

The vibratory spiral feeder can be used in automated assembly systems as well as manual operations with handheld screwdrivers. It is a versatile product which facilitates reliable component feeding in diverse production environments.

→ Technical data can be found on pages 8 to 11.
→ Technical data Nut Feeders (Vibratory Bowl Feeders) can be found on page 13.

Sword (Segment) 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.

→ Technical data can be found on page 12.

Linear Conveyors

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

Pick-and-Place Method

Feeding to a Pick-and-Place position is often the most attractive solution for screws with very short shafts, rivets with large collar diameters, and parts with complex external geometries.

More feeding systems from our range

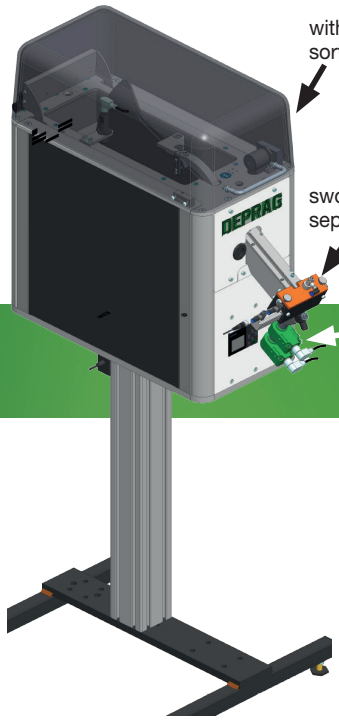
Step Feeder	→ Catalog D3835E
Mini Screw Feeder	→ Catalog D3836E
Tape-on-Reel Feeding	→ Catalog D3870E
Screw Presenters	→ Catalog D3840E
Storage Systems	→ Catalog D3850E

The overview catalog for DEPRAG feeding technology D3810E provides additional information on DEPRAG feeding systems.

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 eiter sword feeder or vibratory bowl feeder



with hopper and sort segment

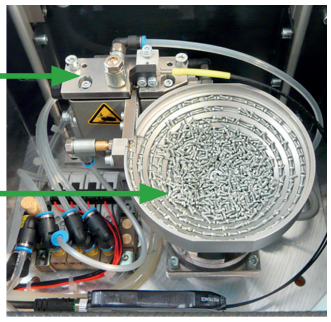
sword feeder with a separator system

blow feed control of the screws

screw separator

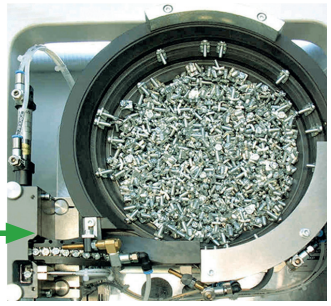
with single or double spiral bowl

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



Distributor system see page 3

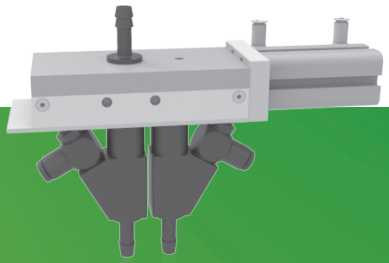
ACCESSORIES

Distributor

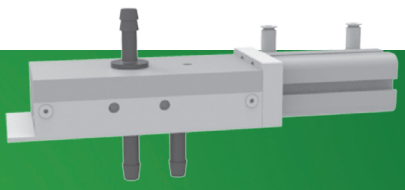
If more than two positions (i.e. screwdriver spindles) have to be supplied out of one feeder, then so called pre-separation hose nozzles can be used. These distributors can supply 2, 3, 4, 5 or even 6 channels.

To increase the feed rate the distributors can be operated by pre-separators (version “V“).

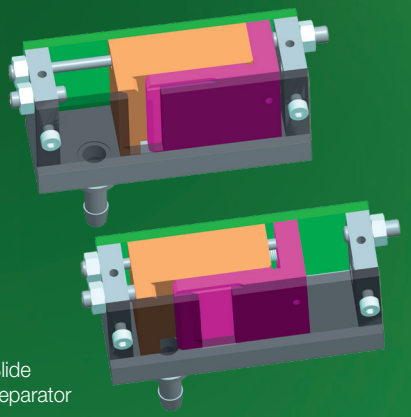
With such a system, the feed parts separator can be operated parallel to the processing time. The feeding of the hardware will be done simultaneously for all channels. This type of feed system is also used when feeding has to be done against gravity (i.e. underfloor assembly).



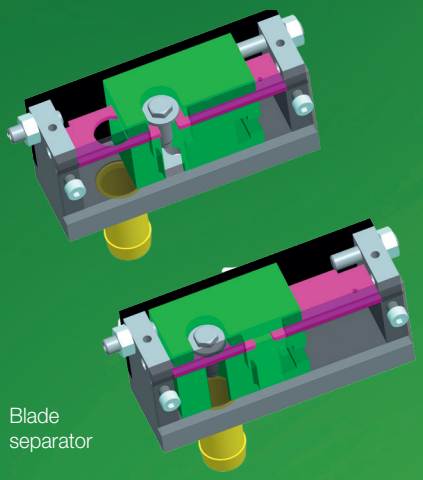
Distributor with hose nozzles that connect to an additional air-blast



Distributor with standard hose nozzles



Slide separator



Blade separator

PFC100 Controller

PFC18L Controller

ACCESSORIES

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).

Control
The **standard version (version „0“)** of the feeding systems, neither pneumatic valves nor a sequence controller are included. Only the control unit is installed as standard in the vibratory bowl feeder. 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 PFC100 for eacy 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

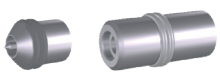
These units conform to the protection type no. IP54. A soft start feature is integrated into the control unit of the vibratory drive.

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

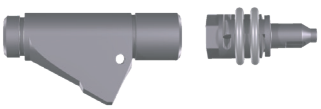
- operational voltage 24 V/DC
- little power consumption
- 10 different menu languages
- illuminated display
- power unit with extended voltage range (115 V – 230 V)
- independent from the respective local A/C voltage
- one design for all markets

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 (Catalog D3850E)



Nosepiece



Special nosepiece with mouthpiece

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.

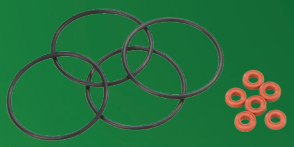
A vibratory feeder or a sword feeder can be used for the processing of **screws**, depending on screw size. Our screw presenter is ideal for the first step in screw supply automation.

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.


Screws


Pins


Nuts


O-Rings

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

A vibratory feeder is the bestsuited 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.

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.


Different components


Small parts on backing film


Labels, etc.


Press-insertion components

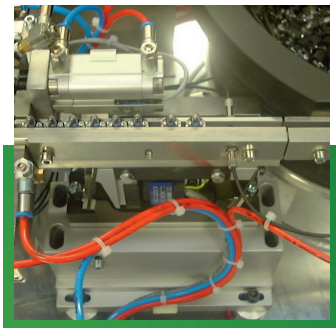
Small parts attached to a backing film on a tape-reel needing to be picked-up by vacuum or gripper, can be processed by a DEPRAG tape-on-reel feeder. It is even possible to process components on both single- and double-sided adhesive tapes.

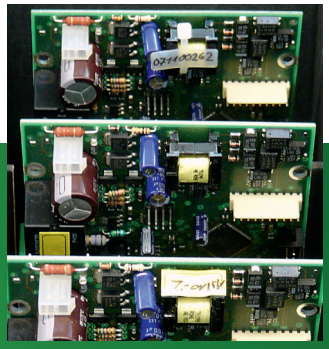
The DEPRAG tape-on-reel feeder predominately retrieves **labels**, stickers, and a protective film arriving on a tape-reel, by utilizing vacuum assistance.

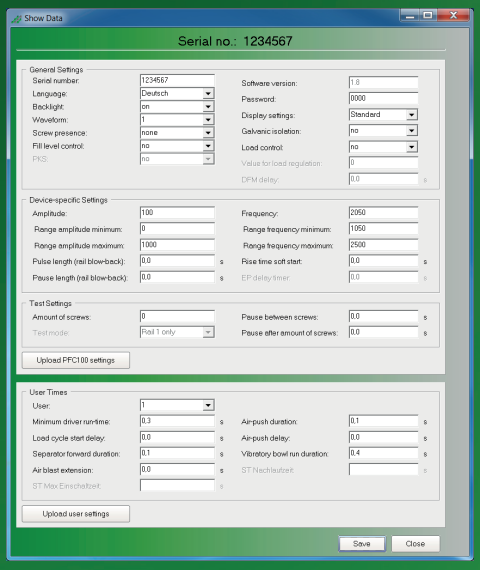
We supply standardized pressinsertion systems, consisting of a press-in device that is combined with a vibratory or sword feeder, to process rivets, pins, sleeves, and balls.

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 filllevel 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.
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.

Please contact us for additional information.


Components requiring gentle handling


Part assembly in cleanrooms



SOFTWARE SOLUTIONS

PFC100 Manager – the parameterisation 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 connection cable 385520B required to connect the PC and PFC100 must be ordered separately.

The software download is available from the myDEPRAG customer portal (my.deprag.com). Registered users can activate the activation code and manage licences in MY ACCOUNT > DEPRAG Apps.

Part number:
Software PFC100 Manager, activation key – part no. 122000

Further information can be found in our catalog D3900E or on our website deprag.com.

NOMENCLATURE OF FEEDERS

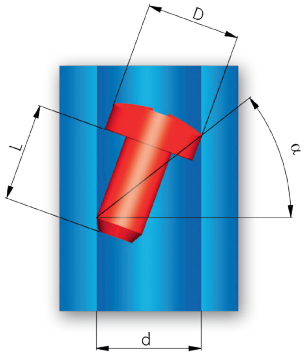
i. e. 0 10 1 1 - 3 - P / 2.5 V

- V → Pre-Separation (→ page 6 screw-separator)
- 2.5 → Filling Capacity - Vibratory Feeders: 0.05 / 0.15 / 0.75 / 1.2 / 2.5 liters (3.5 liters available if required)
  - Sword Feeders: 0.15 / 1.5 liters
- P → Control (→ page 4 Control)
- 3 → Amount of Distributors
- 1 → Amount of Separator Outlets
- 1 → Amount of Bowl Outlets
  - Vibratory Feeders: 1 - Single Spiral, 2 - Double Spiral
  - Sword Feeders: 1
- 10 → Design Series
  - Vibratory Feeders: Code 5 / 10 (eacy feed)
  - Sword Feeders: Code 18
- 0 → Code for stationary version

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°

d ~ D + 0.5 mm

Approximation formula:

L > D + 2 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.

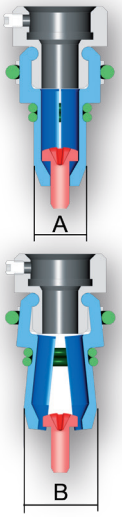
STEP 3:
Which feeding principle is best suited to your application?

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.

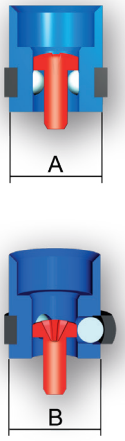
STEP 4:
Determine the screw receiver

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.

Nosepiece split type



Nosepiece ball type



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

A = D + 2.5 mm
B = A + D - d/2

B = 3D - 2d + 5 mm

n = A x B

n = ø 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 „0“, 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.

TECHNICAL DATA FEEDING MACHINES VIBRATORY BOWL FEEDERS

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

Filling capacity 0.05 liter / 0.01 gal.	**Type**	**0611-P/0.05-x** **0611-O/0.05-x**
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
Control Unit	**Type**	**Piezo Controller,** part no. 806652
Dimensions (L x W x H)	mm / in.	106 x 100 x150 / 4 11/64 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	**Type**	**01011 -EP/0.15**	**01022 -EP/0.15**	**01011-2 -EP/0.15**	**01011-3 -EP/0.15**	**01011-4 -EP/0.15**	**–**	**–**
Control unit		PFC100 controller (insulation IP54)						
Filling capacity 0.15 l / 0.04 gal. without PLC	**Type**	**01011 -0/0.15 -P/0.15 -0/0.15V -P/0.15V**	**01022 -0/0.15 -P/0.15 -0/0.15V -P/0.15V**	**01011 -2-0/0.15 -2-P/0.15 -2-0/0.15V -2-P/0.15V**	**01011 -3-0/0.15 -3-P/0.15 -3-0/0.15V -3-P/0.15V**	**01011 -4-0/0.15 -4-P/0.15 -4-0/0.15V -4-P/0.15V**	**01011 -5-0/0.15 -5-P/0.15 -5-0/0.15V -5-P/0.15V**	**01011 -6-0/0.15 -6-P/0.15 -6-0/0.15V -6-P/0.15V**
Control unit		PFC100 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 „0" 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
Included in delivery		Power unit 105535A						
Required accessories		Power cable 812587 (EU) / 812295 (US)						

Optional accessories	see page 13

TECHNICAL DATA FEEDING MACHINES VIBRATORY BOWL FEEDERS

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

Filling capacity 0.75 l / 0.2 gal. with PLC	**Type**	**01011 -EP/0.75**	**01022 -EP/0.75**	**–**	**–**	**01011-2 -EP/0.75**	**01011-3 -EP/0.75**	**01011-4 -EP/0.75**	**–**	**–**
Control unit		PFC100 controller (insulation IP54)								
Filling capacity 0.75 l / 0.2 gal. without PLC	**Type**	**01011 -0/0.75 -P/0.75 -0/0.75V -P/0.75V**	**01022 -0/0.75 -P/0.75 -0/0.75V -P/0.75V**	**01012 -0/0.75 -P/0.75 -0/0.75V -P/0.75V**	**01024 -0/0.75 -P/0.75 -0/0.75V -P/0.75V**	**01011 -2-0/0.75 -2-P/0.75 -2-0/0.75V -2-P/0.75V**	**01011 -3-0/0.75 -3-P/0.75 -3-0/0.75V -3-P/0.75V**	**01011 -4-0/0.75 -4-P/0.75 -4-0/0.75V -4-P/0.75V**	**01011 -5-0/0.75 -5-P/0.75 -5-0/0.75V -5-P/0.75V**	**01011 -6-0/0.75 -6-P/0.75 -6-0/0.75V -6-P/0.75V**
Control unit		PFC100 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 / 15/32	8 / 5/16	12 / 15/32	8 / 15/32	12 / 15/32	12 / 15/32	12 / 15/32	12 / 15/32	12 / 5/32
Max. shaft length	mm / in.	35 / 1 3/8	25 / 31/32	35 / 1 3/8	25 / 31/32	35 / 1 3/8	35 / 1 3/8	35 / 1 3/8	35 /1 3/8	35 / 1 3/8
Range of shaft diameter	mm / in.	1.5 - 6.3 / 0.06 - 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 / 3/8								
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 „0“ 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.

Included in delivery	Power unit 105535A

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

Optional accessories	see page 13

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

Filling capacity 1.2 l / 0.32 gal. with PLC	**Type**	**01011 -EP/1.2**	**01011-2 -EP/1.2**	**01011-3 -EP/1.2**	**01011-4 -EP/1.2**	**–**	**–**
Control unit		PFC100 controller (insulation IP54)					
Filling capacity 1.2 l / 0.32 gal. without PLC	**Type**	**01011 -0/1.2 -P/1.2 -0/1.2V -P/1.2V**	**01011 -2-0/1.2 -2-P/1.2 -2-0/1.2V -2-P/1.2V**	**01011 -3-0/1.2 -3-P/1.2 -3-0/1.2V -3-P/1.2V**	**01011 -4-0/1.2 -4-P/1.2 -4-0/1.2V -4-P/1.2V**	**01011 -5-0/1.2 -5-P/1.2 -5-0/1.2V -5-P/1.2V**	**01011 -6-0/1.2 -6-P/1.2 -6-0/1.2V -6-P/1.2V**
Control unit		PFC100 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 15/16					
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
Included in delivery		Power unit 2041061					

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

Optional accessories	see page 13

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

Filling capacity 2.5 l / 0.66 gal. with PLC	**Type**	**01011 -EP/2.5**	**01022 -EP/2.5**	**–**	**–**	**01011-2 -EP/2.5**	**01011-3 -EP/2.5**	**01011-4 -EP/2.5**	**–**	**–**
Control unit		PFC100 controller (insulation IP54)								
Filling capacity 2.5 l / 0.66 gal. without PLC	**Type**	**01011 -0/2.5 -P/2.5 -0/2.5V -P/2.5V**	**01022 -0/2.5 -P/2.5 -0/2.5V -P/2.5V**	**01012 -0/2.5 -P/2.5 -0/2.5V -P/2.5V**	**01024 -0/2.5 -P/2.5 -0/2.5V -P/2.5V**	**01011 -2-0/2.5 -2-P/2.5 -2-0/2.5V -2-P/2.5V**	**01011 -3-0/2.5 -3-P/2.5 -3-0/2.5V -3-P/2.5V**	**01011 -4-0/2.5 -4-P/2.5 -4-0/2.5V -4-P/2.5V**	**01011 -5-0/2.5 -5-P/2.5 -5-0/2.5V -5-P/2.5V**	**01011 -6-0/2.5 -6-P/2.5 -6-0/2.5V -6-P/2.5V**
Control unit		PFC100 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 / 5/8	14 / 35/64	16 / 5/8	14 / 35/64	16 / 5/8	16 / 5/8	16 / 5/8	15 / 19/32	16 / 5/8
Max. shaft length	mm / in.	60 / 2 23/64	45 / 1 49/64	60 / 2 23/64	45 / 1 49/64	60 / 2 23/64	60 / 2 23/64	60 / 2 23/64	60 / 2 23/64	60 / 2 23/64
Range of shaft diameter	mm / in.	4 - 8 / 5/32 - 5/16								
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.	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 „0“ 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.

Included in delivery	Power unit 2041061

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

Optional accessories	see page 13

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TECHNICAL DATA FEEDING MACHINES SWORD FEEDERS

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

Filling capacity 0.15 liter / 0.04 gal	**Type**	**0811-O/0.15** **0811-P/0.15**
Amount of connectable drivers		1
Feed rate	parts/min	30
Filling capacity	liter / gal.	0.15 / 0.04
Max. head diameter	mm / in.	5 / 13/64
Max. shaft length	mm / in.	8 / 5/16
Range of shaft diameter	mm / in.	1.0 - 2.5 / 3/64 - 3/32
Air pressure requirement	bar / PSI	6.3 / 90
Air hose dia.	mm / in.	10 / 25/64
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					
with PLC, control unit PFC18L Controller (insulation IP30)	**Type**	**01811-EP/1.5**	**–**	**–**	**–**	**–**	**–**
without PLC, without control unit (control via external PLC)	**Type**	**01811-O/1.5** **01811-P/1.5**	**01811-2-O/1.5** **01811-2-P/1.5** **01811-2-O/1.5V** **01811-2-P/1.5V**	**01811-3-O/1.5** **01811-3-P/1.5** **01811-3-O/1.5V** **01811-3-P/1.5V**	**01811-4-O/1.5** **01811-4-P/1.5** **01811-4-O/1.5V** **01811-4-P/1.5V**	**01811-5-O/1.5** **01811-5-P/1.5** **01811-5-O/1.5V** **01811-5-P/1.5V**	**01811-6-O/1.5** **01811-6-P/1.5** **01811-6-O/1.5V** **01811-6-P/1.5V**
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 / 15/32					
Max. shaft length	mm / in.	25 / 63/64					
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 / 3/8					
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	–	–	–	–	–
Included in delivery (only for type 01811-EP/1.5)		Power unit 105535A	–				
Required accessories (only for type 01811-EP/1.5) Power cable	Part no.	812587 (EU) 812295 (US)	–				

Optional accessories	see page 13

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	**Type**	**01011M -EP/0.75**	**–**	**–**	**01011M -EP/2.5**	**–**	**–**
Control unit		PFC100 controller (insulation IP54)					
without PLC	**Type**	**01011M -0/0.75 -P/0.75 -0/0.75V -P/0.75V**	**01012M -0/0.75 -P/0.75 -0/0.75V -P/0.75V**	**01024M -0/0.75 -P/0.75 -0/0.75V -P/0.75V**	**01011M -0/2.5 -P/2.5 -0/2.5V -P/2.5V**	**01012M -0/2.5 -P/2.5 -0/2.5V -P/2.5V**	**01024M -0/2.5 -P/2.5 -0/2.5V -P/2.5V**
Control unit		PFC100 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 / 5/32-5/16	4-8 / 5/32-5/16	4-8 / 5/32-5/16	5.5-17 / 5/32-43/64	5.5-13 / 5/32-1/2	5.5-13 / 5/32-1/2
Female thread	mm / in.	3-5 / 1/8- 3/16	3-5 / 1/8- 3/16	3-5 / 1/8- 3/16	3-8 / 1/8- 5/16	3-8 / 1/8- 5/16	3-8 / 1/8- 5/16
Max. possible nut height	mm / in.	5 / 3/16	5 / 3/16	5 / 3/16	8 / 5/16	8 / 5/16	8 / 5/16
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 / 3/8			10 / 3/8		
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
Included in delivery		Power unit 105535A			Power unit 2041061		
Required accessories							
Power cable	Part no.	812587 (EU) / 812295 (US)			812587 (EU) / 812295 (US)		
Optional accessories		see below					

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

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	-

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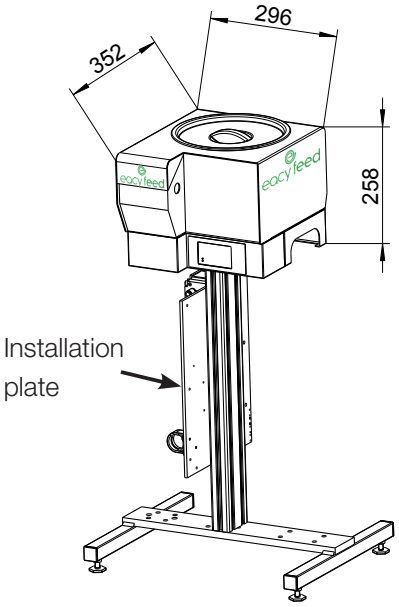
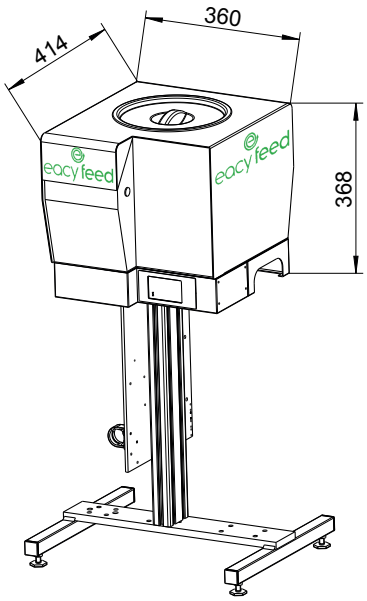
DIMENSIONS

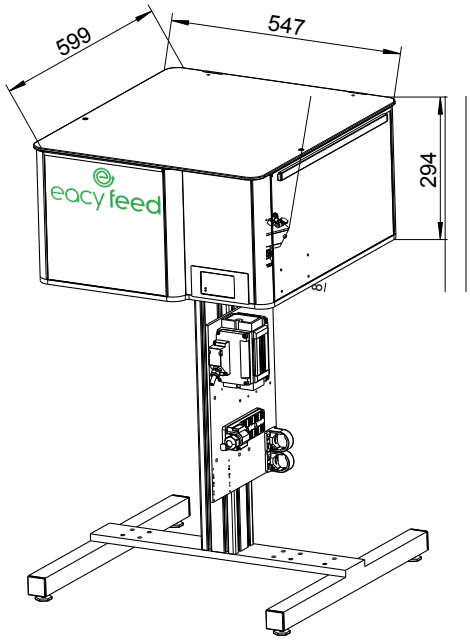
Vibratory Bowl Feeder



Type 010xx 0.15



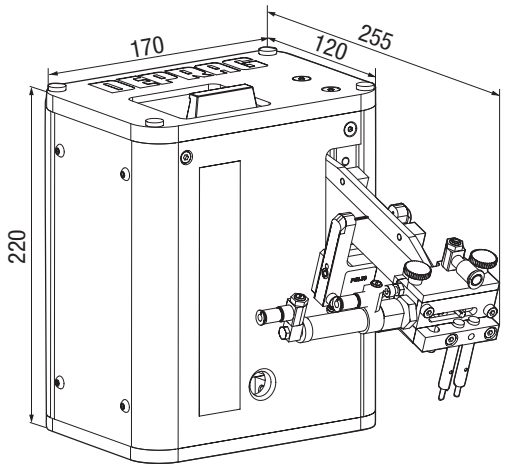
Type 010xx 0.75
Type 010xx 1.2



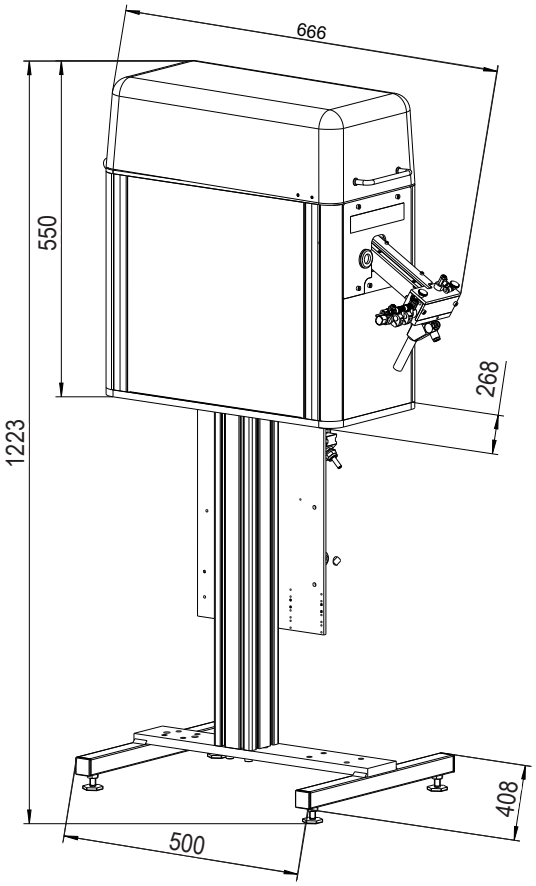
Type 010xx 2.5

DIMENSIONS

Sword Feeder



Type 0811 x/0.15



Type 01811-x/1.5

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