

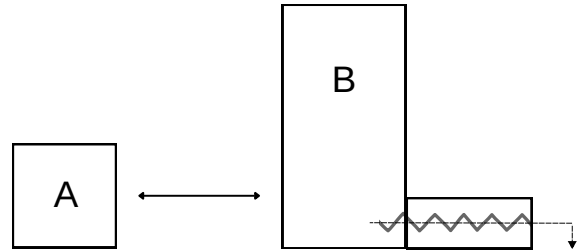
## Single & Twin Screw Micro Feeders

### Typical application of OSS-Micro:

- A. Motor Control
- B. Single Screw Feeder

### Typical application of OTS-Micro:

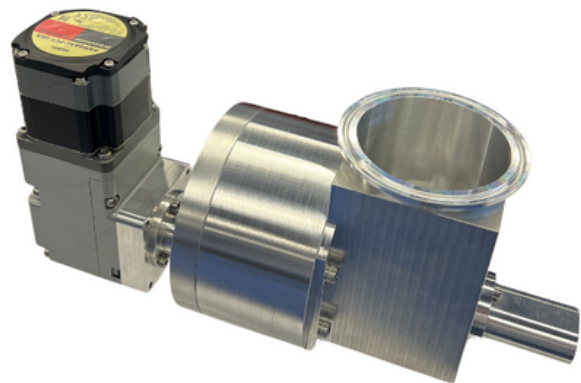
- A. Motor Control
- B. Twin Screw Feeder



## Description

Orbetron's OSS / OTS Micro feeders are designed to feed free-flowing materials and poor-flowing powders at very low rates.

The sanitary clamp feed hopper makes it ideal for applications that require material changes by removing the existing hopper and replacing it with a new clean hopper. The feeders' small footprint can be used as a storage container, eliminating cleaning and the possibility of product contamination. These include a single screw hopper to feed free-flowing products, and a twin screw with a horizontal agitator to feed materials. The feeder can be easily integrated with gravimetric or volumetric controls, as well as installed separately or in a production line with multiple feeding devices.



OTS-Micro is displayed above.

## Dosing Performance

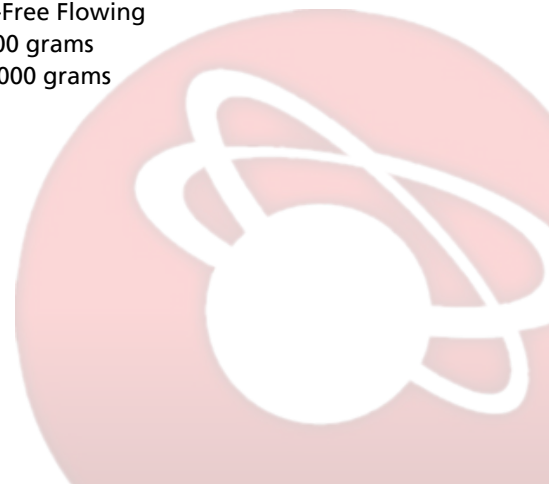
### OSS-Micro

- Used for pellets and powders
- Free-flowing
- Stepper Motor 20 - 1,000 grams
- AC/DC Motor 80 - 5,000 grams

### OTS-Micro

- Used for powder material
- Free-flowing & Non-Free Flowing
- Stepper Motor 5 - 500 grams
- AC/DC Motor 50 - 3,000 grams

Note: All throughputs are estimates and is dependent on bulk density.



## Design

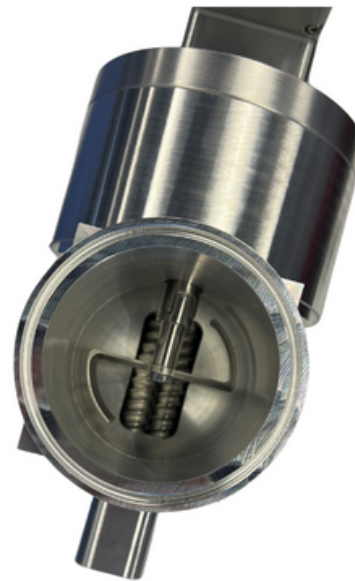
- Compact feeder and gearbox design
- High modularity for easy dismantling and cleaning
- Horizontal material outlet discharge
- Tool-free change of the feeder screw
- Applicable for single spiral and auger screws
- All metal parts which are in material contact are aluminum
- Motor configuration AC/DC, Stepper
- Gearboxes in multiple configurations
- Weight without accessories volumetric 5 lbs

## Options

- *Gravimetric and volumetric controls*
- *Hopper extension modules*
- *Special hoppers are available by request*
- *Removable vertical outlet tube with the size of 2"*
- *Silicon sealing*
- *Gravimetric loss-in-weight batch*
- *Gravimetric gain-in-weight*
- *Gravimetric low-in-weight continuous*
- *Volumetric continuous or batch*
- *Ezi-Dock adaptation for material containment*
- *Integration with OSB Series*
- *Vertical Discharge*
- *SS Configuration*

## Additional

Top-view and interior of OTS-Micro



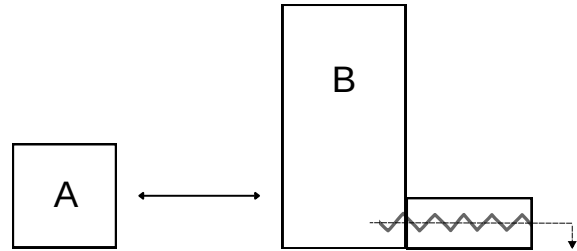
## Single & Twin Screw Feeder with or without Agitation

### Typical application of AS25:

- A. Motor Control
- B. Single Screw Feeder

### Typical application of AT16:

- A. Motor Control
- B. Twin Screw Feeder



## Description

Orbetron's AS25 / AT16 feeders are designed to feed free-flowing materials and poor-flowing powders at very low rates.



The removable feed hopper makes it ideal for applications that require quick material changes by removing the existing hopper and replacing it with a new clean hopper. The removable feed hopper can also be used as a storage container, eliminating cleaning and the possibility of product contamination. These include a single screw hopper to feed free-flowing products, and a twin screw with a horizontal agitator to feed materials. The feeder can be easily integrated with gravimetric or volumetric controls, as well as installed separately or in a production line with multiple feeding devices.






## Dosing Performance

AS25 is displayed above.

### AS25

Screw Type		F 		S 	
		Full-Flight		Spiral	
Gear Reducer	Speed (rpm)	Ø 12 x 5 dm <sup>3</sup> /h	Ø 17 x 17 dm <sup>3</sup> /h	Ø 15 x 11 dm <sup>3</sup> /h	Ø 20 x 11 dm <sup>3</sup> /h
6:1	12-500	0.15-6	1.08-45	0.6-24	1.02-42
21:1	4-143	0.04-2	0.3-13	0.18-7	0.3-12
36:1	2-83	0.025-1	0.18-8	0.1-4	0.17-7
Gear Reducer	Speed (rpm)	Ø 20 x 15 dm <sup>3</sup> /h		Ø 30 x 16 dm <sup>3</sup> /h	Ø 30 x 32 dm <sup>3</sup> /h
6:1	12-500	1.8-75		2.88-120	7.08-294
21:1	4-143	0.5-21		0.8-34	2-84
36:1	2-83	0.3-12		0.48-20	1.18-49

### AT16

Screw Type		C 	F 	S 
		Double Concave	Double Full-Flight	Double Spiral
Gear Reducer	Speed (rpm)	Ø 13 x 11 dm <sup>3</sup> /h	Ø 12 x 5 dm <sup>3</sup> /h	Ø 14 x 10 dm <sup>3</sup> /h
6:1	14-580	0.60-24	0.3-12	1.5-60
21:1	4-166	0.2-7	0.08-3	0.4-17
36:1	2.3-96	0.10-4	0.05-2	0.25-10
Gear Reducer	Speed (rpm)	Ø 14 x 15 dm <sup>3</sup> /h	Ø 14 x 20 dm <sup>3</sup> /h	Ø 14 x 20 dm <sup>3</sup> /h
6:1	14-580	1.2-48	2.4-96	3.6-150
21:1	4-166	0.3-14	0.07-27	1.0-43
36:1	2.3-96	0.2-8	0.4-16	0.6-25

**Design**

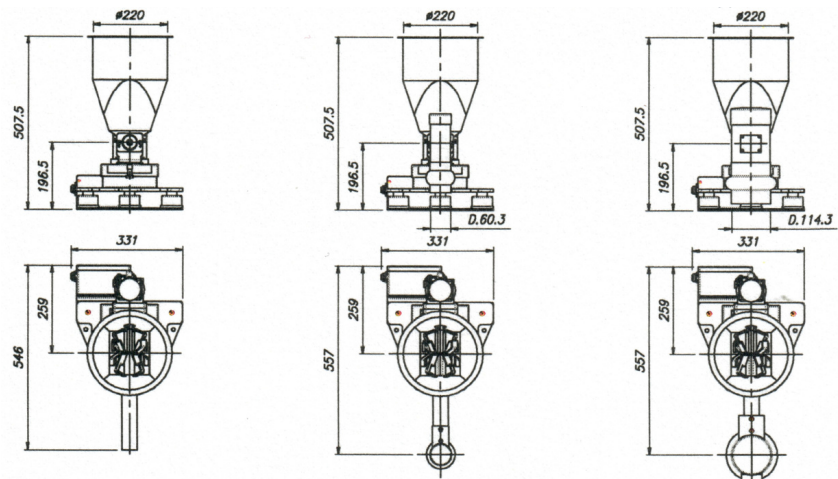
- Compact feeder and gearbox design
- High modularity for easy dismantling and cleaning
- Horizontal material outlet discharge
- Tool-free change of the feeder screw
- Applicable for single spiral and auger screws
- All metal parts which are in material contact are in stainless steel 1.4404 (AS1316L)
- Mechanical gearbox with lifetime lubrication
- Motor configuration AC/DC, Stepper
- Gearboxes in multiple configurations
- Weight without accessories volumetric 6kg
- Gravimetric 13kg
- Exchange hopper 9kg

**Options**

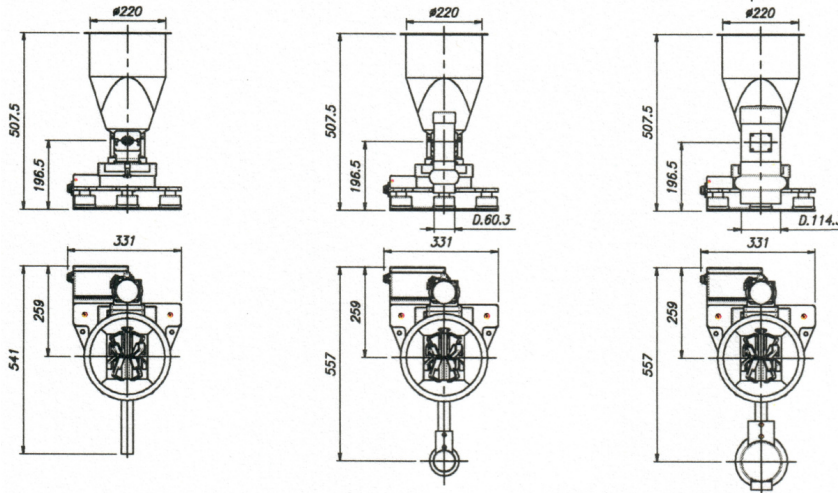
- Gravimetric and volumetric controls
- Hopper extension modules
- Special hoppers are available by request
- Removable vertical outlet tube with the size of 4"
- Counter bearing for very poor flowing or heavy materials
- Silicon sealing
- Gravimetric loss-in-weight batch
- Gravimetric gain-in-weight
- Gravimetric low-in-weight continuous
- Volumetric continuous or batch
- Ezi-Dock adaptation for material containment
- Integration with OSB Series
- Vertical Discharge

**Drawings**

**AS25**



**AT16**

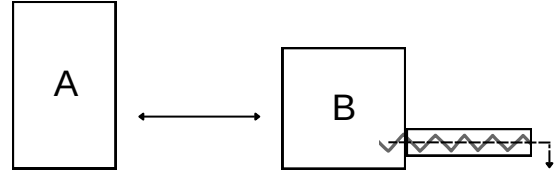




## Single Screw Feeder with Agitation

### Typical application of AS60:

- A. Motor Control
- B. Single Screw Feeder





### Description

Orbetron feeders have been designed to have a wide range of flexibility for the different bulk solid materials and throughput ranges. Our universal single screw feeder AS60 is suitable for feeding granules, pellets, free and non-free flowing powders, regrind materials, flakes, and fibers.

The AS60 is designed with a multiple-wing agitator ensuring full agitation of the entire ingredient compartment. The multiple-wing agitator eliminates bridging and induces free material flow and an optimum screw-filling level for consistent linear mass flow. On all mechanical connections for the material inlet and outlet of the feeder, it is possible to mount different accessories to reach the highest performance and precise accuracy in the desired application. The feeder can be used in a single standalone application or it can be integrated into a multiple feeding system.



### Dosing Performance

Screw Type		S 					F 				
		Spiral					Full-Flight				
Gear Reducer	Speed (rpm)	Ø 50 x 50 dm³/h	Ø 43 x 80 dm³/h	Ø 30 x 32 dm³/h	Ø 20 x 20 dm³/h	Ø 15 x 15 dm³/h	Ø 50 x 70 dm³/h	Ø 50 x 50 dm³/h	Ø 32 x 32 dm³/h	Ø 17 x 17 dm³/h	
7:1	8-617	20-1380	60-4600	5-400	2-140	1-45	65-5350	45-3500	15-900	1-60	
15:1	4-288	10-640	30-2150	3-180	1-65	1-20	35-2500	25-1630	5-420	1-25	
28:1	2-154	5-340	15-1140	2-100	1-35	1-10	20-1330	10-870	3-220	1-15	
Gear Reducer	Speed (rpm)	Ø 50 x 25 dm³/h	Ø 43 x 40 dm³/h	Ø 30 x 16 dm³/h	Ø 20 x 11 dm³/h	Ø 15 x 11 dm³/h		Ø 50 x 25 dm³/h	Ø 32 x 16 dm³/h	Ø 17 x 11 dm³/h	
7:1	8-617	10-580	25-1850	5-160	1-55	1-30		20-1530	5-370	1-35	
15:1	4-288	5-270	10-640	1-75	1-25	1-15		10-710	2-175	1-15	
28:1	2-154	2-140	5-340	1-40	1-15	1-8		5-380	1-90	1-9	



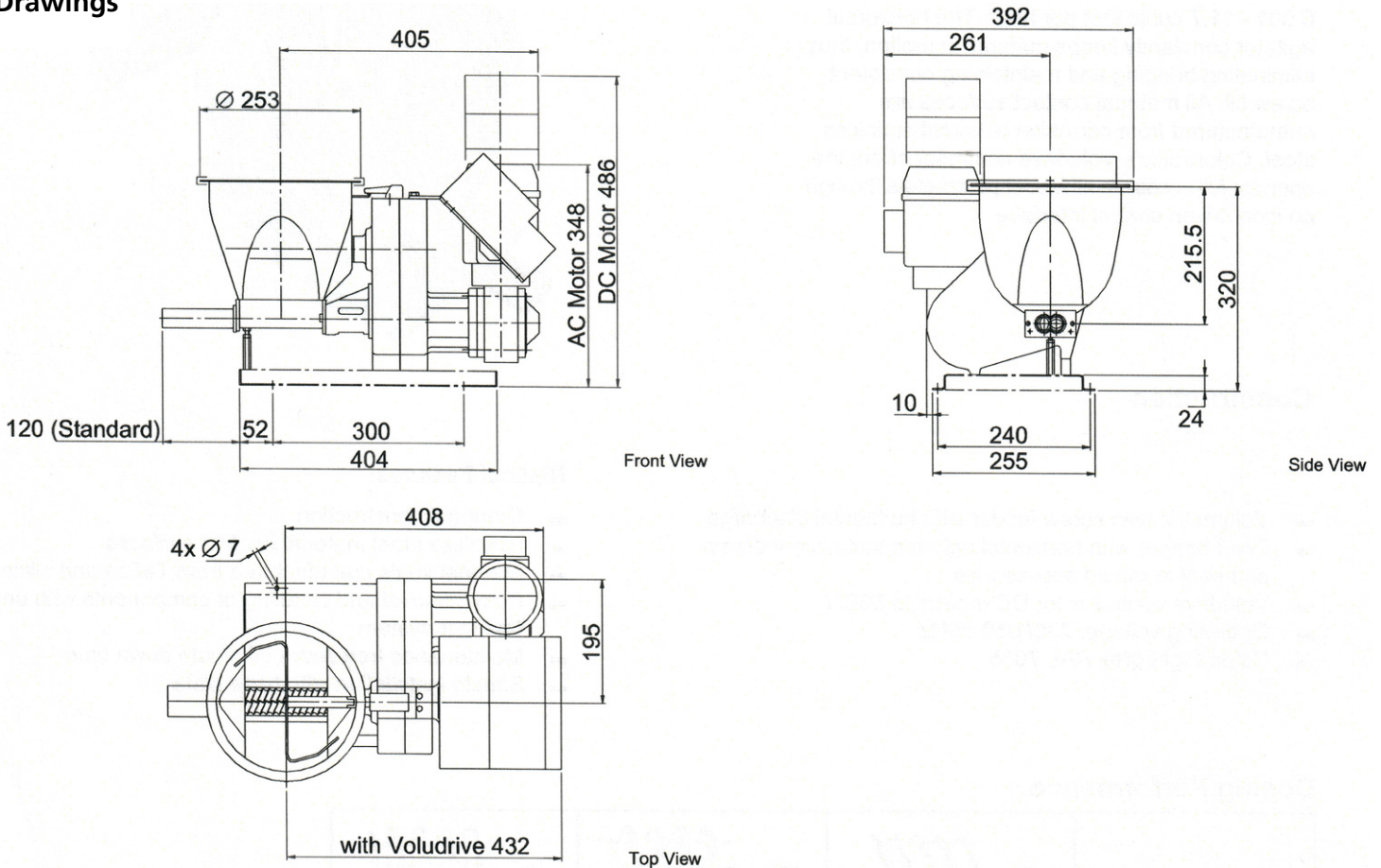
### Design

- Compact feeder and gearbox design
- High modularity for easy dismantling and cleaning
- Horizontal material outlet discharge
- Tool-free change of the feeder screw
- Applicable for twin screw spiral, auger, and concave screws
- All metal parts which are in material contact are in stainless steel 1.4404 (AS1316L)
- Mechanical gearbox with lifetime lubrication
- Motor configuration AC, DC
- Operating and material temperature -20..60°C (-4..130°F)
- Gearboxes in the sizes of 7:1, 15:1, 28:1, STD
- Weight without accessories 33 kg
- Color outside light grey

### Options

- Compact feeder and gear box design
- High modularity for easy dismantling and cleaning
- Horizontal material outlet discharge
- Tool free change of the feeder screw
- Applicable for single spiral and auger screws
- All material contact metal parts are stainless steel 1.4404 (AS1316L)
- Mechanical gear box with lifetime lubrication
- 370W DC motor with speed control in protection class IP 54
- Operating and material temperature -20..60°C (-4..130°F)
- Gear boxes in the sizes of 7:1, 15:1, 28:1
- Weight without accessories 33 kg
- Color outside light grey RAL7035 Unit conforms to directives.

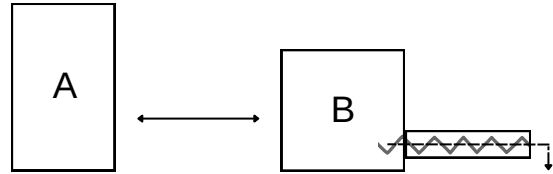
### Drawings



## Single Screw Feeder

### Typical application of NS70:

- A. Motor Control
- B. Single Screw Feeder



### Description



Orbetron's Feeders have been designed to grant a wide range of flexibility for different types of bulk solid materials and throughput ranges.

The Single Screw Feeder NS70 is suitable for feeding granules, pellets, free-flowing regrinds, and flakes in continuous and batching processes.

Specifically, the NS70 Feeder can be controlled gravimetrically or volumetrically. The compact, modular design permits the operator the flexibility to meet changing process requirements. Feed rates range from (1-3180 l/h) (.03-112 cuft/h). The efficient design of the feed hopper yields a large screw intake length and ensures no dead zones in material flow. Quick material changes are ensured through the bottom cleanout and feeds crew quick removal from the rear.



### Dosing Performance

PERFORMANCE TABLE	SCREW TYPE		 SPIRAL SCREW	 AUGER SCREW
	GEAR	SPEED/MIN <sup>-1</sup>	l/h cuft/h	l/h cuft/h
	6:1	35 - 653	6-3180 .2-112	3 -3134 .1-110
	23:1	9 - 169	2-823 .07-29	1 - 811 .2-28
	36:1	6 - 108	1-526 .2-18	1 - 518 .2-18



### Design

- Compact feeder and gearbox design. High modularity for easy dismantling and cleaning. Horizontal material outlet discharge.
- Tool-free change of the feeder screw. Applicable for single spiral and auger screws.
- All material contact metal parts are in mechanically polished aluminum, food-grade.
- 106W DC, 220 VDC, 3200 rpm motor with speed control in protection class IP 54.
- Operating and material temperature -20+60°C.
- Gearboxes in the sizes of 6:1, 23:1, 93:1, 150:1, 308:1. The unit conforms to directives.
- Weight without accessories 15 kg.

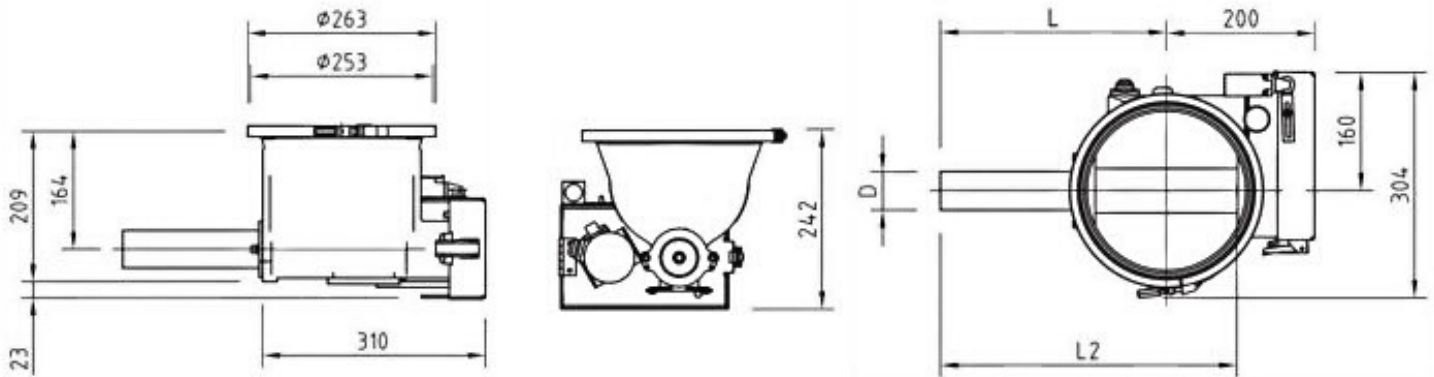
### Options

- Hopper extension modules in the sizes of 20l, 50l, 75l, 85l, 100l, 135l, 185l, special hoppers are on request available
- Removable vertical outlet tube with the size of 4"
- Screw and outlet tube extensions up to the total screw length of 600 mm
- All sealing is silicon freestyle in continuous or batching processes. All sealing is in contact with material.

### Applications

- Volumetric continuous or batch
- Gravimetric loss-in-weight continuous
- Gravimetric loss-in-weight batch
- Gravimetric gain-in-weight

### Drawings

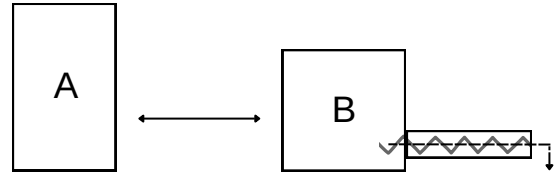




## Single Screw Feeder with Agitation

### Typical application of AS130:

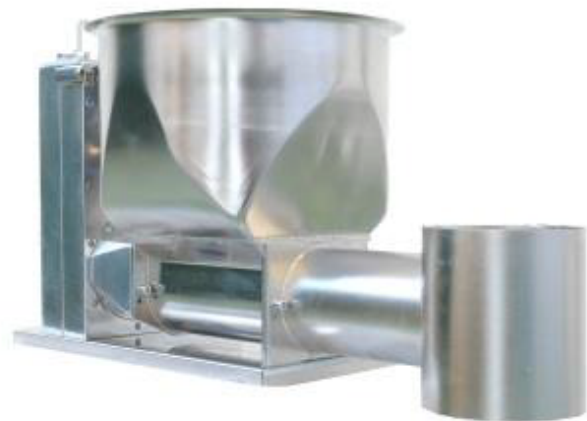
- A. Motor Control
- B. Single Screw Feeder




### Description

Orbetron's single screw feeder AS130 is designed for dosing powders, pellets, regrinds, fibers, and flakes in a continuous and batching process.

The compact modular design gives the operator the flexibility to meet changing process requirements. Volumetric feed rates range 200-26129 l/h 7-922 cuft/h. The horizontal agitator constantly keeps material in motion, thus eliminating bridging and maintaining consistent screw fill. All material contact surfaces are manufactured from corrosion resistant stainless steel. The volumetric controller offers the operator full access to all feeder parameters through an icon driven control interface.



### Dosing Performance

Screw Type		F 		
		Full-Flight		
Gear Reducer	Speed (rpm)	Ø 80 x 80 dm <sup>3</sup> /h	Ø 100 x 100 dm <sup>3</sup> /h	Ø 120 x 120 dm <sup>3</sup> /h
7:1	8 – 617	155 – 13000	360 – 30000	660 – 56000
15:1	4 – 288	80 – 6000	180 – 14000	330 – 26000
Gear Reducer	Speed (rpm)	Ø 80 x 100 dm <sup>3</sup> /h	Ø 100 x 120 dm <sup>3</sup> /h	
7:1	8 – 617	230 – 19000	450 – 38000	
15:1	4 – 288	115 – 9000	230 – 18000	



## Design

- Compact feeder and gearbox design
- High modularity for easy dismantling and cleaning
- Horizontal material outlet discharge
- Tool-free change of the feeder screw
- Applicable for twin screw, auger, and concave screws
- All material contact metals are stainless steel 1.4404(AS1316L)
- Mechanical gearbox with lifetime lubrication
- 750 W DC motor (3000 rpm) with speed control in protection class IP 54 or up to 2,2 kW AC motor
- Operating and material temperature -20..60°C
- Gearboxes in the sizes of 15:1, 28:1, STD
- Weight without accessories 75 kg
- Color outside light grey

## Options

- *Gravimetric and volumetric controls*
- *Hopper extension modules, and special hoppers available on request*
- *Removable vertical outlet tube*
- *Counterbearing for very poor flowing or heavy materials*
- *Different color on request*
- *FDA certification: FDA CFR 21 #178.3570*
- *ATEX Zone inside 3D T140°C, 2D T140°C, 2D T140°C/2G T4, 1D T140°C/2G T4*

## Drawings

