

ProFlex® C500 / C3000 / C6000 Volumetric Feeder



- Volumetric feeder system for powders and granules
- Fast, easy disassembly for cleaning the feeder and changing products
- Asymmetric design allows for a compact, in pairs arrangement of up to 8 feeder stations
- Flexible feed hopper with external agitation
- Control electronics available for the feeder

Properties

The ProFlex C feeder system is used for continuous volumetric feeding of bulk materials such as powders and granules.

The ProFlex C has been designed specially to meet the demands of your flexible processes: the components can be easily disassembled, the feed unit changed and the feeder cleaned using one tool only.

The asymmetric design of the ProFlex C allows for a compact, in pairs arrangement of up to 8 feeder stations. Discharge side orientation can be swapped in a few simple steps at any time.

The ProFlex C is available in three different sizes and can be equipped with a range of extension hoppers, helix and helix with center rod for adaptation to the characteristics of the bulk materials and to the required feed rate.

Design

The ProFlex C uses the principle of external agitation: An external drive agitates the wear-resistant elastomer feed hopper, producing a gentle material flow and a constant fill level in the discharge unit.

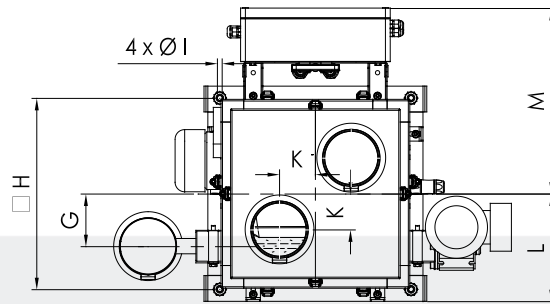
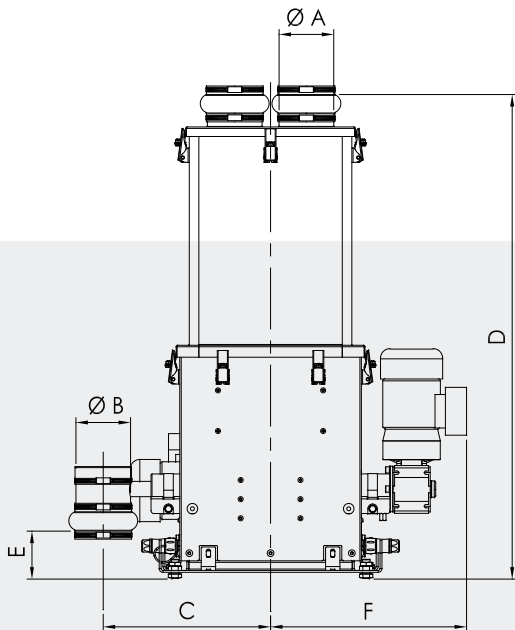
The special geometry of the ProFlex C discharge nozzle generates a low-pulse discharge at low screw rotational speeds.

One particular characteristic of the ProFlex C is its robust construction.

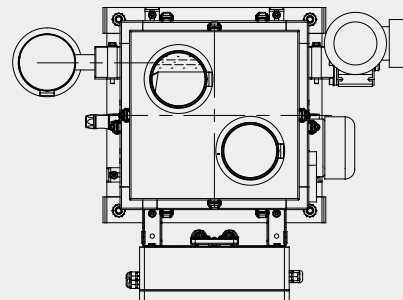
There is a range of electronic components to choose from, in order to best match the feeder to the respective application. From junction boxes to complete electronic controls.

You can choose the elements to match your needs and requirements.

Dimensions



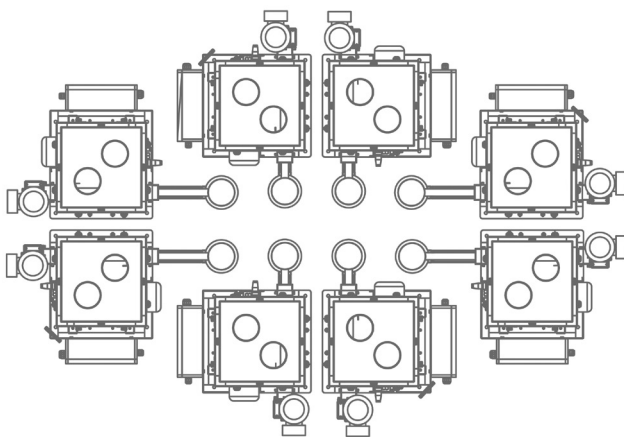
Left-handed variant



Right-handed variant

Extension hopper		Dimensions [mm]												
		A	B	C		D	E	F	G	H	I	K	L	M
				Discharge short	Discharge long									
C500	50 l	114.3	114.3	350	500	1013	100	410	110	400	10	75	225	388
C3000	100 l	168.3	139.7	450	650	1265	146	531	150	550	12	100	303	463
	150 l	168.3	139.7	450	650	1515	146	531	150	550	12	100	303	463
C6000	200 l	168.3	168.3	600	800	1432	145	649	180	680	12	100	365	521
	400 l	168.3	168.3	600	800	2032	145	649	180	680	12	100	365	521

Multiple-Feeder Arrangements



8-fold view



In pairs arrangement of two ProFlex C devices

Theoretical Feed Rates

All feed rates are theoretical nominal feed rates with 100 % screw fill levels. Actual feed rates may be up to 20 % ... 30 % lower in practice, depending on the bulk material and the application.

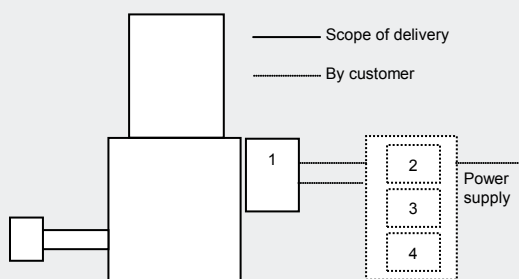
Installation size	Bulk materials	Conveying unit type	Inner diameter [mm]	Feed rate [dm ³ /h] (200 min ⁻¹)
C500	Powder	Helix 19 x 9.5	21.8	26
		Helix 19 x 19	21.8	58
		Helix 25 x 12.5	28	58
		Helix 25 x 25	28	132
		Helix 35 x 17.5	38.4	174
		Helix 35 x 35	38.4	375
		Helix 44 x 22	47.8	358
		Helix 44 x 44	47.8	759
	Granules	Helix 19 x 19	28	101
		Helix 25 x 25	38.4	249
		Helix 35 x 17.5	47.8	261
		Helix 35 x 35	47.8	544
	Powder, Flushing	Helix with center rod 19 x 9.5	21.8	17
		Helix with center rod 19 x 19	21.8	41
		Helix with center rod 25 x 12.5	28	47
		Helix with center rod 25 x 25	28	109
Helix with center rod 35 x 17.5		38.4	137	
Helix with center rod 35 x 35		38.4	301	
Helix with center rod 44 x 22		47.8	275	
Helix with center rod 44 x 44		47.8	593	
C3000	Powder	Helix 35 x 17.5	38.4	174
		Helix 35 x 35	38.4	375
		Helix 44 x 22	47.8	358
		Helix 44 x 44	47.8	759
		Helix 57 x 28.5	60.3	768
		Helix 57 x 57	60.3	1640
		Helix 76 x 38	79.3	1824
		Helix 76 x 76	79.3	3891
	Granules	Helix 35 x 17.5	47.8	261
		Helix 35 x 35	47.8	544
		Helix 44 x 22	60.3	533
		Helix 44 x 44	60.3	1098
		Helix 57 x 28.5	79.3	1188
	Powder, Flushing	Helix 57 x 57	79.3	2455
		Helix with center rod 35 x 17.5	38.4	137
		Helix with center rod 35 x 35	38.4	301
Helix with center rod 44 x 22		47.8	275	
Helix with center rod 44 x 44		47.8	593	
Helix with center rod 57 x 28.5		60.3	638	
Helix with center rod 57 x 57		60.3	1380	
Helix with center rod 76 x 38		79.3	1600	
C6000	Powder	Helix 57 x 28.5	60.3	768
		Helix 57 x 57	60.3	1640
		Helix 76 x 38	79.3	1824
		Helix 76 x 76	79.3	3891
		Helix 89 x 44.5	97.6	2983
		Helix 89 x 89	97.6	6302
		Helix 102 x 51	110.3	4466
		Helix 102 x 102	110.3	9463
	Granules	Helix 57 x 28.5	79.3	1188
		Helix 57 x 57	79.3	2455
		Helix 76 x 38	97.6	2375
		Helix 76 x 76	97.6	4933
		Helix 89 x 44.5	110.3	3572
		Helix 89 x 89	110.3	7397
	Powder, Flushing	Helix with center rod 57 x 28.5	60.3	638
		Helix with center rod 57 x 57	60.3	1380
Helix with center rod 76 x 38		79.3	1600	
Helix with center rod 76 x 76		79.3	3444	
Helix with center rod 89 x 44.5		97.6	2654	
Helix with center rod 89 x 89		97.6	5645	
Helix with center rod 102 x 51		110.3	3974	
Helix with center rod 102 x 102		110.3	8479	

Technical Data

Installation Size		C500	C3000	C6000
Max. feed rate		759 dm ³ /h	3891 dm ³ /h	9463 dm ³ /h
Adjustment range		1 : 20	1 : 20	1 : 20
Available discharge unit diameters	Single helix Single screw	19 / 25 / 35 / 44 mm	35 / 44 / 57 / 76 mm	57 / 76 / 89 / 102 mm
	Twin shaft	22 mm	-	-
Discharge length from center of feeder		350 / 500 mm	450 / 650 mm	600 / 800 mm
Extension hopper		50 dm ³	100 / 150 dm ³	200/400 dm ³
Feed Hopper		EPDM / 20 dm ³	PUR / 60 dm ³	PUR / 100 dm ³
Weight, empty		about 70 kg	ca. 170 kg	about 220 kg
Motor protection class		IP55		
Connection voltage		230/400 VAC 3-phase (110/230 VAC 1-phase on request)		
Ambient temperature		-20 °C ... +50 °C		
Bulk solids temperature		-30 °C ... +50 °C (higher available on request)		
Bulk material density		0.3 ... 1.2 kg/dm ³ (higher available on request)		
Grain size		up to 5 mm		
Flow properties		free flowing to slightly sluggish		
Components in contact with the bulk material		Stainless steel 1.4301		

ProFlex C Electrical System Variants

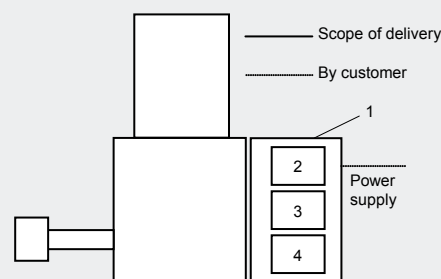
Junction box



1 – Junction box/housing 2 – Frequency convertor (helix drive) 3 – Set point presetting 4 – Motor Start/Stop (agitation drive)

Both drives come factory wired with a junction box. Electrical supply and control will be provided on site.

Mechatronic



This feeder comes completely factory cabled. The electrical components are included in the order and will be matched to suit each other. Manual/Auto mode switch included. Start/Stop and set point entry via the integrated touchpad (manual), or via contact and 4 ... 20 mA analogue signal provided by customer (auto).

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