

Application

Volumetric feeding of free flowing to very hard flowing powders (e.g. lumpy, moist or bridge building materials) as well as fibers, flakes and other bulk materials. The feeder can be upgraded to a loss-in-weight feeder system at any time.

Design

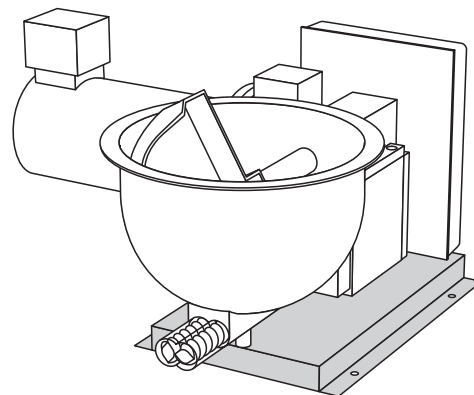
Twin screw feeder with interchangeable feeding tools. All parts in contact with the material being fed are stainless steel. Feeding equipment is easy to disassemble. The horizontal agitator gently moves the bulk material to the large throat and then into the screws.

Feeder screws are easily interchangeable.

Controller: (see separate data sheets)

The K-MV-KT20 can use the microprocessor based DigiDrive DC closed loop motor speed controller. The pulse width modulation features of the DigiDrive controller allow the motor to run efficiently at all speeds, increasing motor life and providing control accuracy to within ± 1 rpm. The simple user friendly interface allows entry and display of feeder output in selectable engineering units.

The K-Tron Smart Hipo Module (KSHM) volumetric version can be used as an alternative to the DigiDrive.



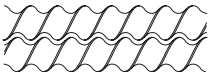
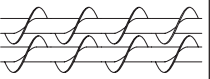
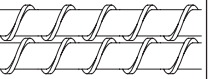
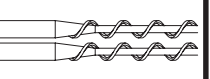
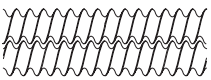
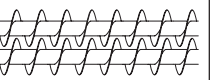
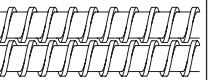
K-MV-KT20 on European base plate for units with hoppers up to 80 liters

Feed Screws and Feed Rates

Actual feeder screws will be determined by the material being fed.

The following rates are theoretical values for optimal products.

Actual feed rates depend on individual material characteristics.

Pitch	Type of drive	Twin concave screws		Twin auger screws		Twin spiral screws		Double spiral screws		Speed range	Gearbox type
coarse pitch											
	⊖	dm ³ /h 2 - 200	ft ³ /hr 0.07 - 7.1	dm ³ /h 3 - 200	ft ³ /hr 0.11 - 7.1	dm ³ /h 2.5 - 200	ft ³ /hr 0.088 - 7.1	dm ³ /h 1.7 - 170	ft ³ /hr 0.06 - 6	rpm 8 - 746	A
		0.7 - 70	0.025 - 2.5	1.2 - 115	0.042 - 4.1	0.9 - 82	0.032 - 2.9	0.7 - 70	0.025 - 2.5	4 - 357	B
		0.3 - 20	0.011 - 0.7	0.5 - 45	0.018 - 1.6	0.3 - 30	0.011 - 1.1	0.6 - 26	0.021 - 0.92	2 - 154	C
		0.2 - 17	0.007 - 0.6	0.3 - 28	0.011 - 1	0.2 - 20	0.007 - 0.2	0.2 - 17	0.007 - 0.6	0.9 - 89	B+V
	⊗	12 - 200	0.42 - 7.1	12 - 200	0.42 - 7.1	12 - 200	0.42 - 7.1	10 - 170	0.35 - 6	52 - 910	A
fine pitch		dm ³ /h 6 - 95	ft ³ /hr 0.21 - 3.4	dm ³ /h 6 - 95	ft ³ /hr 0.21 - 3.4	dm ³ /h 6 - 95	ft ³ /hr 0.21 - 3.4	dm ³ /h 4.5 - 81	ft ³ /hr 0.16 - 2.9	rpm 25 - 435	B
		2.5 - 41	0.088 - 1.4	2.5 - 41	0.088 - 1.4	2.5 - 41	0.088 - 1.4	2 - 35	0.071 - 1.2	11 - 188	C
											
	⊖	dm ³ /h 0.7 - 70	ft ³ /hr 0.025 - 2.5	dm ³ /h 1 - 90	ft ³ /hr 0.035 - 3.2	dm ³ /h 1 - 90	ft ³ /hr 0.035 - 3.2	dm ³ /h 0.8 - 76	ft ³ /hr 0.028 - 2.7	rpm 8 - 746	A
		0.3 - 27	0.011 - 0.95	0.4 - 40	0.014 - 1.4	0.4 - 40	0.014 - 1.4	0.4 - 34	0.014 - 1.2	4 - 357	B
		0.1 - 9	0.004 - 0.32	0.15 - 16	0.005 - 0.56	0.15 - 15	0.005 - 0.53	0.2 - 13	0.007 - 0.46	2 - 154	C
		0.07 - 6.5	0.003 - 0.23	0.1 - 10	0.004 - 0.35	0.1 - 10	0.004 - 0.35	0.1 - 8	0.004 - 0.28	0.9 - 89	B+V
	⊗	4 - 70	0.14 - 2.5	5.2 - 90	0.18 - 3.2	5.2 - 90	0.18 - 3.2	4.4 - 76	0.16 - 2.7	52 - 910	A
		2 - 33	0.071 - 1.2	2.5 - 43	0.088 - 1.5	2.5 - 43	0.088 - 1.5	2.2 - 36	0.078 - 1.3	25 - 435	B
		0.35 - 6	0.013 - 0.21	0.6 - 10	0.021 - 0.35	0.6 - 11	0.021 - 0.39	0.5 - 9.5	0.018 - 0.34	11 - 188	C

⊖ DC-motor with speed controller / Range 1 : 100 / Max. motor speed 2000 RPM

⊗ AC-motor with frequency inverter / Range 1 : 17 / Max. motor speed 2440 RPM / NOTE: in USA AC motor range is 1:12 with max. motor speed of 1725

Configuration

Description	Alternatives	Remarks	Weight kg(lb)
Vertical agitator	3x400/230 V 0.18/0.25 kW	4D (50L, 80L) 6D (110 L, 180L)	25 (55) 36 (79.2)
Cover		4D 6D	2 (4.4) 3 (6.6)
Hopper		4D or 6D see below	
Horiz. agitator			0.3 (0.66)
Trough	5 L		2 (4.4)
Gear box	A B C B+V		6 (13.2)
Motor	100 or 200VDC 0.45kW IP65 180VDC 0.25kW IP65 3phaseAC freq. inverter KS:230/400V KA:230/460V 0.55 kW, IP 55 3phaseAC w. variator KS:230/400V KA:230/460V 0.25kW, IP55		12 (26.4)
Screws		see front page	2 (4.4)
Outlet	Horiz. outlet Vertical outlet Pressure compensation	horiz. outlet standard	4 (8.8)

Materials:

Parts in contact with bulk material*: Stainless steel, DIN material no. 1.4404 / 1.4435, AISI 316L

*Horiz. agitator: DIN 1.4034 AISI 420
50-55 HRC, electrolyte polished

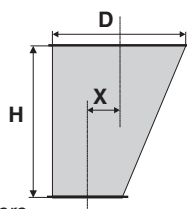
Seals: PTFE, Neoprene, Silicon
Painting: Light grey RAL 7035

Temperature-Limits:

Ambient: 0 to 40.5 °C (32 to 105°F)
Material: standard: -20 to 55 °C (-4 to 130 °F)
option: -15 to 150 °C (0 to 300 °F)

Options

- 1 Standard hopper
- 2 Safety screen
- 3 Vertical outlet
- 4 Special paint / finish
- 5 Extended screws



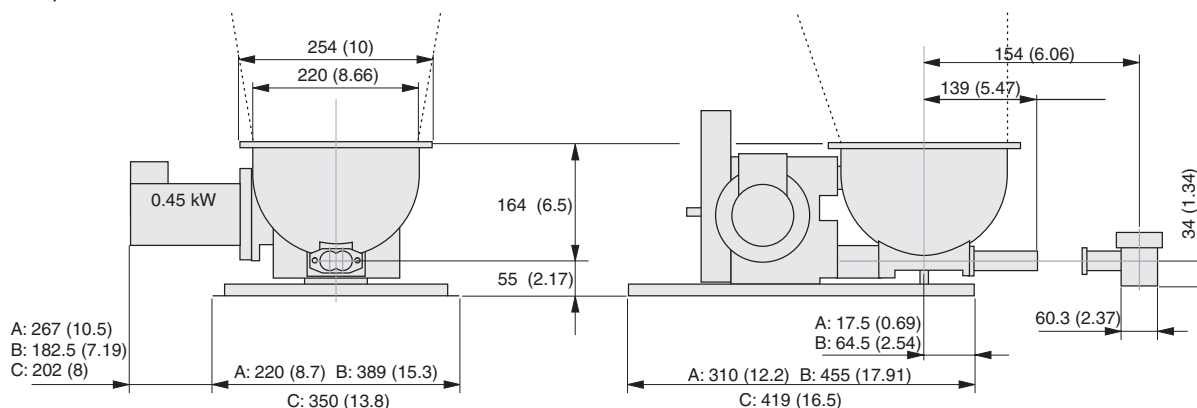
Asymmetrical Extension Hoppers

Volume dm³ (ft³)	H mm (in)	D mm (in)	X mm (in)	Weight kg (lb)
10 (0.35)	283 (11)	220 (8.7)	-	3 (6.6)
20 (0.71)	566 (22.28)	220 (8.7)	-	6 (13.2)
50 (1.76)	615 (24.2)	400 (15.7)	90 (3.5)	6 (13.2)
80 (2.8)	869 (34.2)	400 (15.7)	90 (3.5)	9 (19.8)
110* (3.88)	922 (36.3)	600 (23.6)	190 (7.5)	17 (37.4)
180* (6.35)	1176 (46.3)	600 (23.6)	190 (7.5)	23 (50.6)

* require support

Dimensions mm (in)

A: Baseplate dimensions for European units with hoppers up to 80 liters
B: Baseplate dimensions for European units with 110 liter hoppers or larger
C: Baseplate dimensions for US units



Caution: these measurements are for general reference only. Please consult dimensional drawing for exact measurements

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