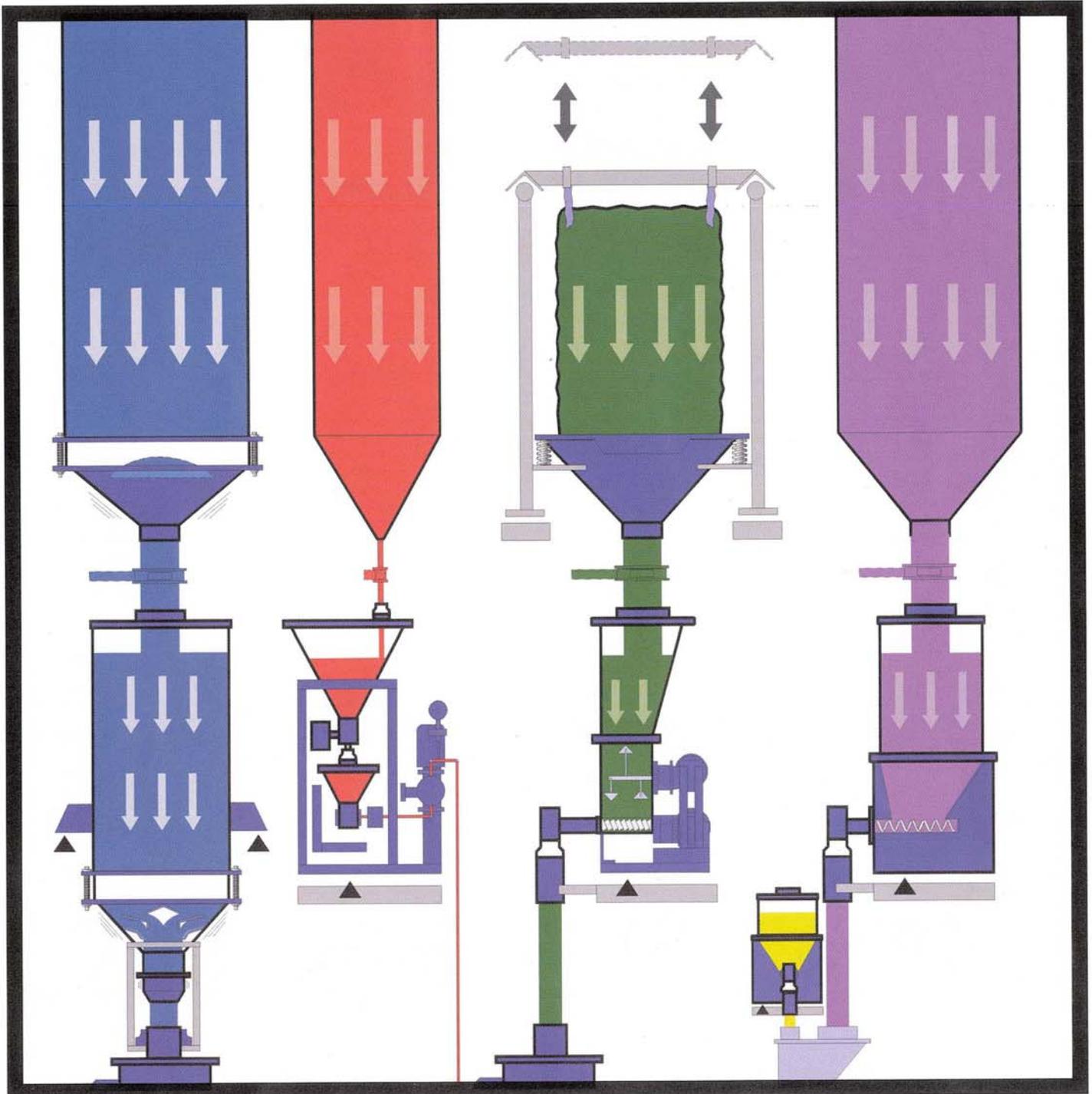


Brabender Technologie Feeders

For Every Ingredient and Application



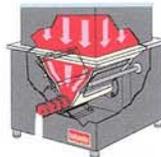
Brabender Means Accuracy

*Accuracy depends on the best combination of components:
feed device, scale, load cell, controller, refill*

Feed Device

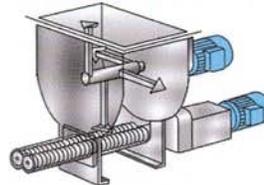
Single screw, twin screw, or vibratory tray, the feed device selected depends on the ingredient. With over 10,000 installations, Brabender engineers will choose the correct feed device for your powders, flakes, granules and fibers.

Single Screw



Flexwall, External Agitator

Twin Screw



Internal Stirring Agitator

Vibratory Tray

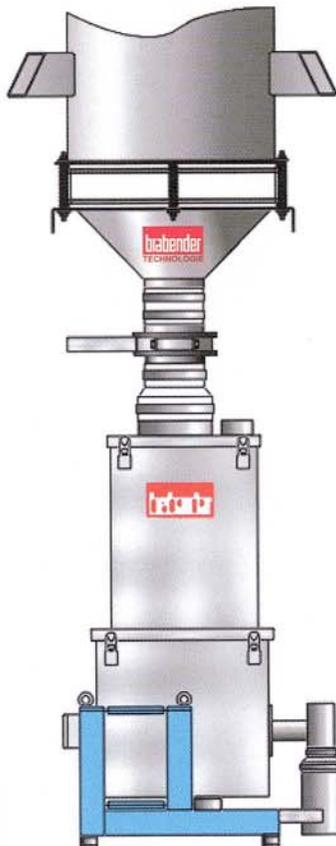


Amplitude Feedback with Resonant Frequency Control

Scale and Load Cell

The scale utilizes parallel flexures extending from an L shaped (frame) mounting base. The vertical beams of the base support the flexures and the pre-wired junction boxes. Four parallel flexure arms support the feeder and weigh hopper, concentrating the load onto one (not 2 or 3) digital load cell (IDL-F). The bottom of the "L" frame mounts to the floor.

The load cell is digital, utilizing the Brabender perfected tensioned wire and named Intelligent Digital Load Cell-Filtered (IDL-F). This truly digital load cell offers 1:million resolution, microprocessor based filtering and low displacement (8/1000 inch movement from full load to no load). The scale appears not to move. Low displacement is very important after refill or scale upset allowing the feeder to return quickly to gravimetric control. The load cell signal is temperature compensated and is connected to the controller serially via RS422 link. Load cell filtering enables the scale to produce stable weight readings even in highly vibrating surroundings.



Controller

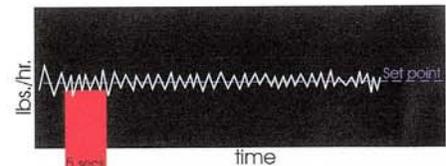
Each Congrav® controller model incorporates a proprietary algorithm with self tuning PID and max. feed rate self calculation for fast "on line" control. Each controller uses self diagnostics to ensure feed rate control is at set point.

Refill Device

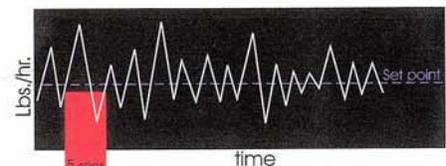
Brabender manufactures a variety of fast, flexible and reliable refill devices including 6 inch FlexWall® feeders, bin activators and bulk bag unloaders.

The Brabender Result Highly Accurate, Stable Feed Rate

Short Term Interval Feed Rate Repeatability.



A smooth flow from your feeder provides consistent high quality product.



Fluctuating feed rates reduce your extruder polymer quality.

Accuracy verification on line

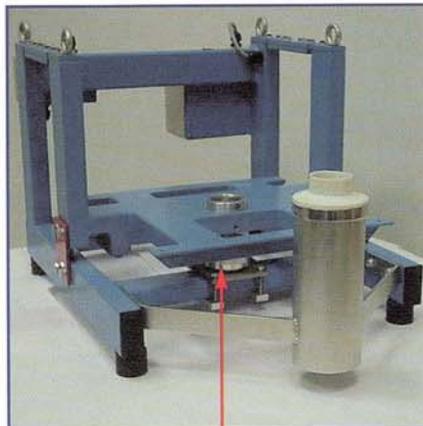
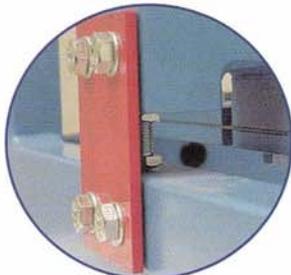
This exclusive Brabender feature provides a feed rate "on line" check and a remote "off line" scale check to prove feed rate performance on line without process feed interruption.

Count On Us, Give Us A Call.

*Downtime is unacceptable, all components must be reliable.
Brabender supports you 24 hours, call 888-284-4574.*

Protected Scale

The scale concentrates the load onto a SINGLE load cell (IDL-F). In contrast to configurations employing 2 or 3 load cells, the Brabender design presents advantages for trouble-shooting, maintenance, and spare parts inventory. Easy scale lock-down during maintenance and shipping provides 100% load cell protection.



Non-Weighed Process Connection

A stainless steel fixed process connection is mounted on the scale base to ensure weighing integrity is not affected at this very sensitive interconnection point.

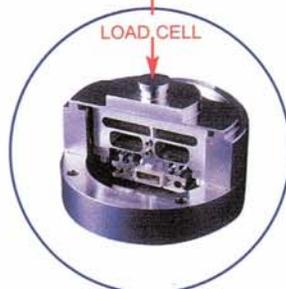


Feeder outlet connected to this flex.

Easy Clean/Quick Change



The FlexWall® feeder is well known to provide the fastest and easiest means of emptying, cleaning, and reassembling of any screw feeder. The internally agitated twin screw feeder has an optional easy access clean out panel.



Intelligent Digital Load Cell-Filtered (IDL-F)
A single vibrating wire digital load cell with microprocessor filtering, RS422 serial connection from Load Cell Terminal Box to controller.

Fast, Reliable Installation

Each feeder is fully assembled, factory tested, pre-wired to terminal boxes and locked down for load cell protection. All you need to do at installation is put the feeder in place, wire it to the controller, and unlock the scale.

Protected Load Cell

A mechanical overload protection spring provides overload protection as an integral part of the scale. The filtered Digital load cell offers stable weight values.

Noise Protected, Self Tuning Controllers

Brabender offers controllers tested to the highest standards of interference suppression, electrostatic discharge and radio frequency interference.



Congrav S
Single Feeder Controller



Congrav LM/3
Up to 16 feeders controlled by one operator interface



Single Cable Connection (SCC)
Controls up to 32 feeders from feeder mounted controllers and drives (ISC and SC) all on a Single Cable Connection Bus.

Dependable AC Motor and Drive

Rugged AC motor supplied on all screw feeders. No DC motor brushes to replace or proprietary SCR's.



Brabender offers Wood's and Lenze (as standard) or customer requested (optional).

Wood's ETRAC
VFD Control

Programmable sealed keypad and display

Screw Feed Mechanism Capacity

Feeder Model	Screw Type ¹				Part No.		Screw ² Speed r.p.m.	Max. ³ Theoretical Feed Rate cu.ft./hr.	Feeder Model	Screw Type ¹				Part No.		Screw ² Speed r.p.m.	Max. ³ Theoretical Feed Rate cu.ft./hr.				
	S	B	TC	F	Dia. mm.	Pitch mm.				Dia. ins.	Dia. mm.	Pitch mm.	Dia. ins.	Dia. mm.	Pitch mm.						
FW 18 1/12hp	x				9	7	1/3	200	0.16	DDSR12 1/8hp (1 motor)					12	04	12mm	79	0.06		
	x				13	10	1/2	200	0.42			x			12	12	12mm	79	0.25		
	x				13	15	1/2	200	0.71		DDSR20 1/2hp (1 motor)	x				20	05	20mm	425	0.18	
	x				18	13	3/4	200	1.06				x			20	12	20mm	425	0.9	
	x				18	19	3/4	200	1.59				x			20	11	20mm	425	1.8	
				18	29	3/4	200	2.65		x			20	20	20mm	425	3.4				
FW33 1/4hp	x				18	13	3/4	205	1.0	DDSR40 1/2hp (2 motors)	x				40	12	40mm	335	5		
	x				18	19	3/4	205	1.6			x			40	23	40mm	335	8.6		
	x				18	29	3/4	205	2.7			x			40	27	40mm	335	19.6		
	x	x			28	22	1	205	5.3			x			40	50	40mm	335	50		
	x				28	35	1	205	8.1	DDSR60 3/4 hp (2 motors)	x				60	43	60mm	189	15		
	x				33	22	1 1/3	205	7.1			x			60	65	60mm	189	42		
	x	x			33	35	1 1/3	205	11.7			x			60	75	60mm	189	85		
				x	33	22/35	1 1/3	205	2.1		DDSR80 1 1/2hp (2 motors)	x				80	54	80mm	150	64	
				33	22/35	1 1/3	205	2.1		x				80	70	80mm	150	109			
FW40plus 1/2hp	x				18	13	3/4	335	2		x			80	90	80mm	150	187			
	x				18	19	3/4	335	3	DSR28 1/3hp (1 motor)	x				13	10	1/2	220	0.43		
	x	x			18	29	3/4	335	4			x			13	15	1/2	220	0.65		
	x				28	22	1	335	8			x			18	13	3/4	220	1.1		
	x				28	35	1	335	14			x			18	19	3/4	220	2.0		
	x				33	22	1 1/3	335	11			x			18	29	3/4	220	3.1		
	x	x			33	35	1 1/3	335	19			x			28	22	1	220	5.1		
	x				40	27	1 1/2	335	21			x			28	35	1	220	8.2		
	x				40	42	1 1/2	335	35		DSR67 1/2hp (2 motors)	x				28	22	1	168	4.2	
				x	33	22/35	1 1/3	335	6				x			28	35	1	168	7.1	
FW79 1/2hp	x	x			40	27	1 1/2	168	11				x			40	27	1 1/2	168	11	
	x	x			40	42	1 1/2	168	18			x			40	42	1 1/2	168	18		
	x	x			52	39	2	168	28			x			52	39	2	168	28		
	x	x			52	62	2	168	44			x			52	62	2	168	45		
	x	x			79	45	3	168	71			x			67	71	2 3/4	168	87		
	x	x			79	82	3	168	135			x			50	45	2	168	23		
				x	52	30/45	2	168	7.1			x			50	70	2	168	40		
				x	52	45/60	2	168	14.3	DSR103 1hp (2 motors)		x				52	39	2	152	24	
				x	79	45/60	3	168	28.6/60.7			x			52	62	2	152	40		
	FW80plus	x	x			40	27	1 1/2	192 ⁴		12		x			79	45	3	152	64.3	
x		x			40	42	1 1/2	192 ⁴	20			x			79	82	3	152	118		
x		x			52	39	2	192 ⁴	30			x			103	66	4	152	160.6		
x					52	62	2	192 ⁴	50			x			103	105	4	152	267.5		
					50	70	2	192 ⁴	44			x			50	45	2	152	21.1		
		x			79	45	3	192 ⁴	84			x			79	50	3	152	60.7		
FW120 1hp	x	x			79	82	3	192 ⁴	159			x			79	88	3	152	114.3		
	x	x			79	82	3	192 ⁴	159		DSR155 2hp (2 motors)	x	x			103	105	4	132	239	
	x	x			103	66	4	152	159			x	x		120	120	5	132	354		
	x	x			103	105	4	152	265			x	x		155	100	6	132	508		
	x	x			120	120	5	152	407			x	x		155	165	6	132	853		
				x	120	66/90	5	152	89.3	DSR200 3hp (2 motors)		x	x			200	100	8	100	700	
	FW155 2hp	x	x			103	105	4	132			239		x	x		200	200	8	100	1400
		x	x			120	120	5	132			354									
x		x			155	100	6	132	508												
x		x			155	165	6	132	853												
FW40-T 1/2hp			x		40	23	40mm	335	8.7												
			x		40	27	40mm	335	20												
			x		40	50	40mm	335	51												

1. S = single screw, B = blade screw, TC = twin concave screw, F = fiber screw. Twin Spiral and Twin Blade screw are not shown.

2. Free flowing ingredients can have increased screw r.p.m.

3. Actual Feed Rate Calculation: Multiply Max. Theoretical Feed Rate x K Efficiency Factor (0.9 pellets, 0.8 good flowing, 0.5 poor flowing.)

As screw dia. increases, K Efficiency Factor increases.

4. Also available with 335 rpm reducer and max. feed rate increases proportionally.

Webs: www.brabenderti.com
www.flexwall-plus.com
 E-Mail: sales@brabenderti.com

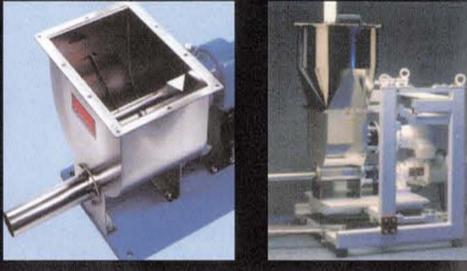
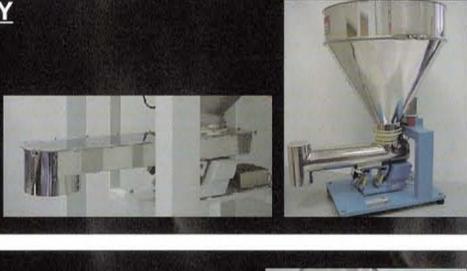
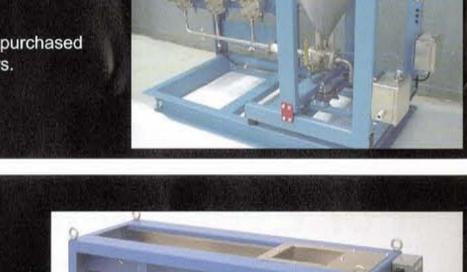


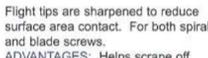
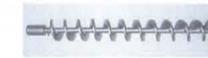
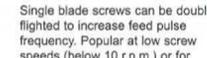
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 24 Hour Service
 Spare Parts
 Technical Information

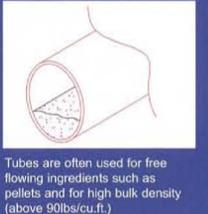
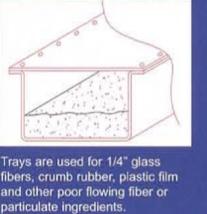
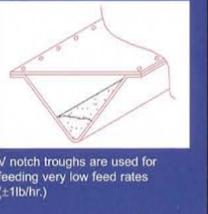
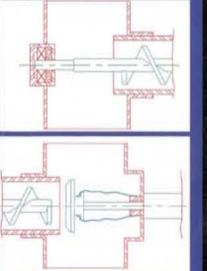
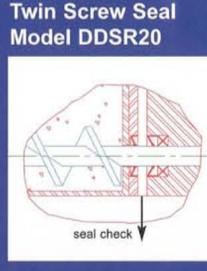
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BRABENDER FEEDERS FOR ALL YOUR NEEDS

Because not every ingredient, feed rate, storage and process application is the same

APPLICATION	FEEDER	FEATURES	MODELS	OPTIONS																																												
<p>Select from the FlexWall® family for most ingredients and applications:</p> <ul style="list-style-type: none"> Accurately feeds most ingredients. Fits with extension hopper in low headroom locations. Quick access/dismantle for cleaning. For frequent cleaning (eg. food). Couples well with bulk bags. 	<p>FLEXWALL®</p> <p>Volumetric Loss-in-Weight</p> <p>Single Screw Twin Screw</p> 	<ul style="list-style-type: none"> External paddle agitation of polyurethane hopper ensures mass flow in entire hopper. Easy paddle amplitude adjustment. AC motor with VFD. Flexible hopper removes quickly. Easy screw/tube removal/change. Entire hopper agitated. 304 SS mirror finish housing. D (Dairy) models, USDA accepted, built to 3A Dairy specifications. 	<p><i>Screw capacities are max. theoretical before screw fill efficiency.</i></p> <table border="1"> <thead> <tr> <th>Models</th> <th>Max. Ext. Hopper Vol. cu.ft.</th> <th>Trapezoid Real Mass Flow Design</th> <th>Max. Feed Rate cu.ft./hr.</th> </tr> </thead> <tbody> <tr><td>FW18</td><td>1/6</td><td></td><td>3</td></tr> <tr><td>FW33</td><td>2</td><td></td><td>12</td></tr> <tr><td>FW40plus</td><td>2</td><td>x</td><td>35</td></tr> <tr><td>FW79</td><td>9</td><td></td><td>180</td></tr> <tr><td>FW80plus</td><td>7</td><td>x</td><td>278</td></tr> <tr><td>FW120</td><td>23</td><td></td><td>407</td></tr> <tr><td>FW155</td><td>39</td><td></td><td>853</td></tr> <tr><td>FW40T^(win)</td><td>9</td><td></td><td>51</td></tr> </tbody> </table>	Models	Max. Ext. Hopper Vol. cu.ft.	Trapezoid Real Mass Flow Design	Max. Feed Rate cu.ft./hr.	FW18	1/6		3	FW33	2		12	FW40plus	2	x	35	FW79	9		180	FW80plus	7	x	278	FW120	23		407	FW155	39		853	FW40T ^(win)	9		51	<ul style="list-style-type: none"> Separate agitator drive motor. External motor for Class I (XP) environment. Angled front for multi-feeder compact integration (Trapezoid). 316 SS contact metal parts. Conductive polyurethane hopper. Drum tipper/feeder for full drum inverting and feeding. Bulk bag discharger feed out. Small bag unloading hopper. FlexWall® plus - screw removal from rear. 								
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<p>Select FlexWall® except where:</p> <ul style="list-style-type: none"> Ingredient responds best to an internal agitator. All SS ingredient contact is required. Some explosion proof (NEC hazardous environment) needed. Ingredient temperature above 80°C continuous. Powder feed rates below 1lb/hr. (to 50 grams/hr.). 	<p>DOSING SCREW</p> <p>Volumetric Loss-in-Weight</p> <p>Single Screw Twin Screw</p> 	<ul style="list-style-type: none"> Positive internal agitator positioned above screw(s). Separate drive motor for agitation on larger feeders. AC motor(s) with VFD for screw drive. Mass flow extension hopper. Twin concave screws are self-wiping. Screw is below agitator, no ingredient heel below screw. 	<table border="1"> <thead> <tr> <th>Models</th> <th>Max. Ext. Hopper Vol. cu.ft.</th> <th>Max. Feed Rate cu.ft./hr.</th> <th>Screw Type</th> </tr> </thead> <tbody> <tr><td>DDSR12</td><td>1/10</td><td>0.25</td><td>TC</td></tr> <tr><td>DDSR20</td><td>2/3</td><td>3.4</td><td>TC</td></tr> <tr><td>DDSR40</td><td>5</td><td>50</td><td>TC</td></tr> <tr><td>DDSR60</td><td>12</td><td>85</td><td>TC</td></tr> <tr><td>DDSR80</td><td>30</td><td>187</td><td>TC</td></tr> <tr><td>DSR28</td><td>2/3</td><td>8.2</td><td>SS</td></tr> <tr><td>DSR67</td><td>4</td><td>87</td><td>SS</td></tr> <tr><td>DSR103</td><td>10</td><td>267.5</td><td>SS</td></tr> <tr><td>DSR155</td><td>30</td><td>853</td><td>SS</td></tr> <tr><td>DSR200</td><td>BAV</td><td>1400</td><td>SS</td></tr> </tbody> </table> <p><small>Numerals indicate screw diameter in mm.</small></p>	Models	Max. Ext. Hopper Vol. cu.ft.	Max. Feed Rate cu.ft./hr.	Screw Type	DDSR12	1/10	0.25	TC	DDSR20	2/3	3.4	TC	DDSR40	5	50	TC	DDSR60	12	85	TC	DDSR80	30	187	TC	DSR28	2/3	8.2	SS	DSR67	4	87	SS	DSR103	10	267.5	SS	DSR155	30	853	SS	DSR200	BAV	1400	SS	<ul style="list-style-type: none"> External motors for Class I (XP). 316 SS contact parts. Agitated (vertical shaft top drive) extension hopper. Small bag unloading hopper.
Models	Max. Ext. Hopper Vol. cu.ft.	Max. Feed Rate cu.ft./hr.	Screw Type																																													
DDSR12	1/10	0.25	TC																																													
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DSR155	30	853	SS																																													
DSR200	BAV	1400	SS																																													
<p>Select where a screw feeder is not preferred:</p> <ul style="list-style-type: none"> High bulk density ingredients. Abrasive ingredients. Chips and irregular shaped ingredients. Plastic pellets "pulsationless" flow/wide range. No shear on ingredient. 	<p>VIBRATORY TRAY</p> <p>Volumetric Loss-in-Weight</p> <p>Vibrating Tray Vibrating Tube</p> 	<ul style="list-style-type: none"> Rate stable with varying load (amplitude feedback and resonant frequency control). No rotating shaft seals to wear. Wide feed rate range with electronic adjustment. Tray covered with see-through plexiglass. 304 SS contact metal parts. 	<table border="1"> <thead> <tr> <th>Models</th> <th>Max. Ext. Hopper Vol. cu.ft.</th> <th>Max. Feed Rate cu.ft./hr.</th> </tr> </thead> <tbody> <tr><td>DVT/DVR 30</td><td>2</td><td>3.2</td></tr> <tr><td>DVT/DVR 75</td><td>5</td><td>112</td></tr> <tr><td>DVT/DVR 120</td><td>5</td><td>251</td></tr> <tr><td>DVT/DVR200</td><td>11</td><td>387</td></tr> </tbody> </table>	Models	Max. Ext. Hopper Vol. cu.ft.	Max. Feed Rate cu.ft./hr.	DVT/DVR 30	2	3.2	DVT/DVR 75	5	112	DVT/DVR 120	5	251	DVT/DVR200	11	387	<ul style="list-style-type: none"> Agitated (vertical shaft top drive) extension hopper. 316 SS contact parts. NEC rating to Class II Div.2. 																													
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DVT/DVR200	11	387																																														
<p>Select for feed rates above 30 cu.ft./hr. and for large feeder storage:</p> <ul style="list-style-type: none"> Wood flour. Chopped plastic film (flakes). Batching with no offset, feed from center line of hopper. 	<p>SILO TRAY</p> <p>Volumetric Loss-in Weight</p> <p>Center discharge or with vibratory tray/screw for offset discharge.</p> 	<ul style="list-style-type: none"> Live bin bottom activation of bin contents for optimal flow. Center baffle splits flow to 4 internal trays, prevents bridging. Linear horizontal vibration induces flow in trays. Entire bin bottom induces controlled flow. VFD on vibration motors varies flow. Storage with circular vertical walls. 	<table border="1"> <thead> <tr> <th>Models</th> <th>Dia. Ins.</th> <th>Max. Ext. Hopper Vol. cu.ft.</th> <th>Max. Feed Rate cu.ft./hr.</th> </tr> </thead> <tbody> <tr><td>ST450</td><td>18</td><td>3</td><td>100</td></tr> <tr><td>ST600</td><td>24</td><td>7</td><td>500</td></tr> <tr><td>ST900</td><td>36</td><td>21</td><td>2000</td></tr> <tr><td>ST1200</td><td>48</td><td>50</td><td>3500</td></tr> </tbody> </table>	Models	Dia. Ins.	Max. Ext. Hopper Vol. cu.ft.	Max. Feed Rate cu.ft./hr.	ST450	18	3	100	ST600	24	7	500	ST900	36	21	2000	ST1200	48	50	3500	<ul style="list-style-type: none"> Vibratory tray or screw at outlet for feed out offset from center line of silo tray bin. 316 SS contact parts. Valve on outlet for batching. Motor rate Class I (XP). 																								
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<p>Select for liquid feeding in conjunction with dry feeders or for very precise liquid feed:</p> <ul style="list-style-type: none"> Continuous feeding of liquids requiring precise feed rate control. 	<p>LIQUID</p> <p>Loss-in-weight (only)</p> <p>Volumetric pumps can be purchased directly from pump vendors.</p> 	<ul style="list-style-type: none"> Liquid tank weighed, pump not weighed to ensure discharge piping does not affect weighing. Suction line has flexible and horizontal section to provide transition from weighed tank and pump. High feed rate precision even at low feed rates (eg: 30 grams/hr.). 	<p>Liquid loss-in-weight feed systems incorporate positive displacement metering pumps. (Pumping rate is linear with pump speed or stroke rate and not affected by discharge pressure).</p> <p>Liquid tanks are sized for approximately 4 minutes gravimetric cycle at max. feed rate.</p>	<ul style="list-style-type: none"> Optional heated, insulated and agitated weigh tank. Pumps and motors selected to meet application needs. Customer's good experience with pumps is basis of selection by Brabender. 																																												
<p>Select where headroom is limited and/or when refill hopper for LIW is not possible:</p> <ul style="list-style-type: none"> Normally used for higher feed rates (above 200 lbs./hr.). Where headroom is limited. Where refill storage above the feeder is not possible. No shear on ingredient. 	<p>WEIGH BELT</p> <p>Gravimetric Feeding modes:</p> <ul style="list-style-type: none"> continuous batch metering 	<ul style="list-style-type: none"> Easy access to components (removable housing & panels). Belt can be removed in seconds without tools. Self adjusting belt tensioning. Self adjusting belt tracking. Six belt scrapers ensure constant belt tare. Model G2-225 includes discharge end access for feed rate sampling. 	<table border="1"> <thead> <tr> <th>Models</th> <th>Belt Width Ins.</th> <th>Max. Feed Rate cu.ft./hr.</th> <th>Max. Feed Rate lbs./hr.</th> </tr> </thead> <tbody> <tr><td>G1 150</td><td>6</td><td>88</td><td>5500</td></tr> <tr><td>G2 225</td><td>9</td><td>470</td><td>24450</td></tr> <tr><td>G1 350</td><td>14</td><td>850</td><td>48000</td></tr> <tr><td>G1 600</td><td>24</td><td>1750</td><td>77000</td></tr> <tr><td>G1 800</td><td>32</td><td>3500</td><td>220000</td></tr> </tbody> </table>	Models	Belt Width Ins.	Max. Feed Rate cu.ft./hr.	Max. Feed Rate lbs./hr.	G1 150	6	88	5500	G2 225	9	470	24450	G1 350	14	850	48000	G1 600	24	1750	77000	G1 800	32	3500	220000	<ul style="list-style-type: none"> Housing in SS construction. Sanitary models (FDA approved, 3A dairy specifications). Full bottom hopper for easy removal of accumulated dust. High temp. design to 170°C (338°F). Motor and load cell rated for Class I (XP) environment. Extension hopper on inlet. Vent connection for customer supplied exhaust system. 																				
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SCREW TYPES	Spiral	Spiral with Center Rod	Spiral with Reduced Diameter and Spiked Agitator on Screw	Spiral with Center Cone (Fibers)	Relief Ground Flight Tips	Blade	Double Flighted	Twin Concave
	 <p>Spiral screws are the most common selection because they offer a very small surface contact area to ingredient.</p> <p>ADVANTAGES: The screws produce little ingredient build-up and low shear. This reduces particle size degradation.</p>	 <p>A center rod is inserted to strengthen spiral.</p> <p>ADVANTAGES: Can handle high friction ingredients or high bulk density (above 90lbs/cu.ft.)</p>	 <p>Feeder models have a max. screw dia. limitation. Smaller dia. screws can be used with this design incorporating spikes placed on outside of flights.</p> <p>ADVANTAGES: The spikes improve flow and eliminate bridges into the reduced dia. for powders with poor flow properties</p>	 <p>These screws provide a constant withdrawal of ingredient from the screw hopper into the exposed flights. This is achieved by the progressive flight volume in the screw hopper section.</p> <p>ADVANTAGES: This reduces the possibility of bridging in the screw hopper and shear on the ingredient is low. Good for 1/4" fiber glass and wood fibers.</p>	 <p>Flight tips are sharpened to reduce surface area contact. For both spiral and blade screws.</p> <p>ADVANTAGES: Helps scrape off tube residue and reduces friction force.</p>	 <p>Blade screws offer increased flow resistance (higher friction and shear) compared to spiral screws. Screw is rigid (does not compress like spiral-spring).</p> <p>ADVANTAGES: Preferred for floodable powders, bulk densities above 90lbs/cu.ft. and for highly abrasive ingredients that create high friction between screw O.D. and tube I.D.</p>	 <p>Single blade screws can be double flighted to increase feed pulse frequency. Popular at low screw speeds (below 10 r.p.m.) or for batching dribble feed.</p> <p>Caution: Friction and surface area are increased in this double flighted section.</p> <p>ADVANTAGES: Reduces flow surges.</p>	 <p>For powders only due to small clearance between screw and tube. Compared to blade and spiral, the twin concave produces highest flow resistance.</p> <p>ADVANTAGES: Large inlet into screws reduces possibility of bridging above screws. Since screws are self wiping, the flight volume remains constant even with sticky powders, increasing accuracy.</p>

VIBRATION	ACCESSORIES	SEAL TYPES
<p>Vibration Tube Feeder</p>  <p>Tubes are often used for free flowing ingredients such as pellets and for high bulk density (above 90lbs/cu.ft.)</p>	<p>Vibration Tray Feeder</p>  <p>Trays are used for 1/4" glass fibers, crumb rubber, plastic film and other poor flowing fiber or particulate ingredients.</p>	<p>Vibration V Trough Feeder</p>  <p>V notch troughs are used for feeding very low feed rates (<math>\leq 1\text{lb/hr}</math>).</p>
<p>Outboard Bearing</p>  <p>Screw flight tips can contact tube ID at bottom due to gravity, particularly when screw is empty. An outboard bearing eliminates flight tip contact.</p>	<p>Shut-off Valve</p>  <p>Pneumatically actuated plunger valve seats against the screw tube to stop flow. Used for batching applications.</p>	<p>FlexWall® Seal Model FW79</p>  <p>seal check</p>
		<p>Twin Screw Seal Model DDSR20</p>  <p>seal check</p>
		<p>Twin Screw Agitator Shaft Seal</p> 