

Precision Feeders

**High accuracy feeding
solutions for industrial
processes**



**Volumetric Feeders
for bulk materials**

Feeding – At the centre of total process control



Controlled feed into a Gericke continuous mixer

Proven designs with thousands of running applications.

Gericke volumetric feeders are designed for throughputs from 0.05 to 50,000 litres per hour for most dry solids and liquid applications.

Gericke's range of feeders are based upon a robust modular design which are used in almost all processing applications including:

- Chemical
- Foods
- Pharmaceutical
- Construction Minerals
- Plastics
- Detergents

Gericke – Feeding of bulk material since 1894.

Gericke offer cost effective feeding solutions for most powders, granules, fibres, flavours, pigments and liquids.

Added Benefit:

Expert advice on correct selection and operation of the unit, prompt after sales support by specialist engineers, secure return on investment.



*GLD 87 VR;
Compact feeder suitable
for a wide range of material
characteristics*

Modular feeding equipment – designed for process flexibility

Volumetric feeding

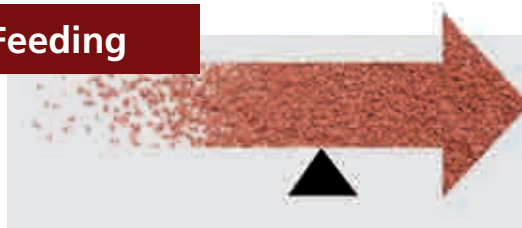


The feed rate is measured by volume against time.

A reliable volumetric device is essential for a high accuracy gravimetric weigh feeder.

Accurate metering of bulk solids is achieved using a spiral helix, rotary valve, rotating agitator, vibrating tray or cylindrical stator. Even in the volumetric mode, the metering rate remains constant under the condition of a repeatable fill level within of the selected feeding tool and an even bulk density of the powder.

Gravimetric Feeding



The feedrate or batch weight is regulated by the process controller.



Batch feeding



Continuous feeding

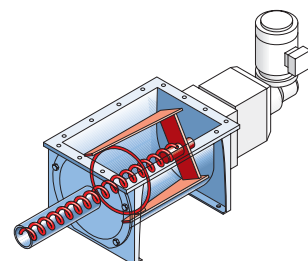
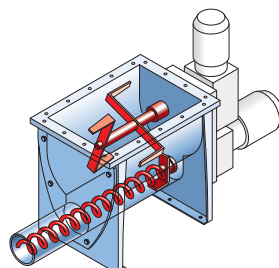
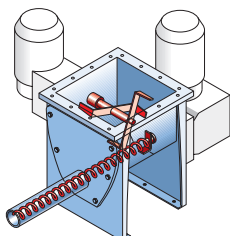
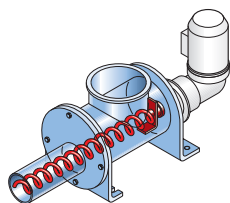


Combination feeding

Using a gravimetric feeder with load cells, a batch weight can be accurately dispensed or the feed rate continuously controlled. The mode is dependent on the process requirements.

Gericke can upgrade most volumetric feeding models into Gravimetric devices.

The right feeder for each specific application



GPD

Low cost, efficient feeder

Application:

Free flowing dry materials for lower feed rates

Advantages:

Quick and simple to dismantle for wet and dry cleaning, light weight unit (9 Kg)

Capacity range*:

0,05–600 l/h

Type:

GPD 100

GLD

Compact feeder with agitator for high accuracy feeding

Application:

Suitable for most dry solids, pilot plants, frequent product changes

Advantages:

Versatile, adaptable, compact, reliable, precise

Capacity range*:

0,05–600 l/h

Type:

GLD 77 (mechanical agitator),
GLD 87 (agitator with independent drive)

GDU

Universal feeder, minimal product retention, used for poor flowing materials

Application:

Medium to high capacity feed rates, hygienic design, difficult products, high feeding accuracy, raisin and fruit feeders, (special applications)

Advantages:

Versatile, adaptable, complete emptying

Capacity range*:

1,3–25.600 l/h
(depending on model)

Type:

GDU 201, GDU 451, GDU 801
(with agitator),
GDU 301, GDU 601
(without agitator)

GAC

Universal Feeder for highest accuracy, homogeneity and distribution of bulk materials

Application:

Medium to high feed rates, very difficult materials, highest feeding accuracy batch weighing & feeding station (GAC 233F)

Advantages:

Feeding tool and homogeniser are concentrically aligned with large product entry suitable for difficult products

Capacity range*:

1,3–27.000 l/h

Type:

GAC 207, GAC 232;
GAC 233 F (with separate helix for coarse and trickle feeding)



GPD 100



GLD 87

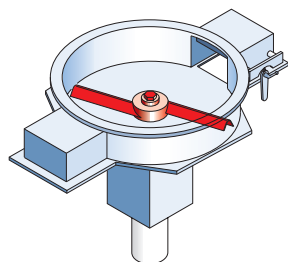
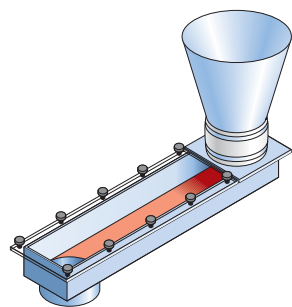


GDU 451



GAC 207

*Approximate throughput values based on Semolina. Minimum value using smallest helix diameter at 5% of speed range and maximum value with largest helix at 100%



VIBRO

Vibro feeder for coarse and fragile products

Application:
Large capacity range, fragile or abrasive products, light and coarse materials, fibres

Advantages:
No rotating parts, gentle operation, easy cleaning, no component wear

Capacity range*:
1–10000 l/h

RA

Discharge and feeding device for very poor flowing products. A rotating paddle sweeps the product towards the outlet valves. An adjustable valve regulates the feed rate

Application:
Discharge from silo's or hoppers, refilling loss-in-weight feeders, component feeding

Advantages:
Discharge without segregation, feed-distribution (1 – 4 outlets) and shut off valve combined into one device

Capacity range*:
0,2–40.000 l/h

Type:
RA 500, RA 800, RA 1200, RAS (RAS Type for over/under pressures)



Vibro feeder



RA with 1 – 4 outlets

Technical advantages of Gericke feeders:

- Robust construction
- High reliability for long life cycle
- Hygienic design (in accordance with EHEDG)
- Large range of feed tool lengths
- No segregation
- Large entry section
- Constant bulk density
- Crevice free surfaces
- Continuous welding (option)
- Range of drive options
- +/- pressure rated options available



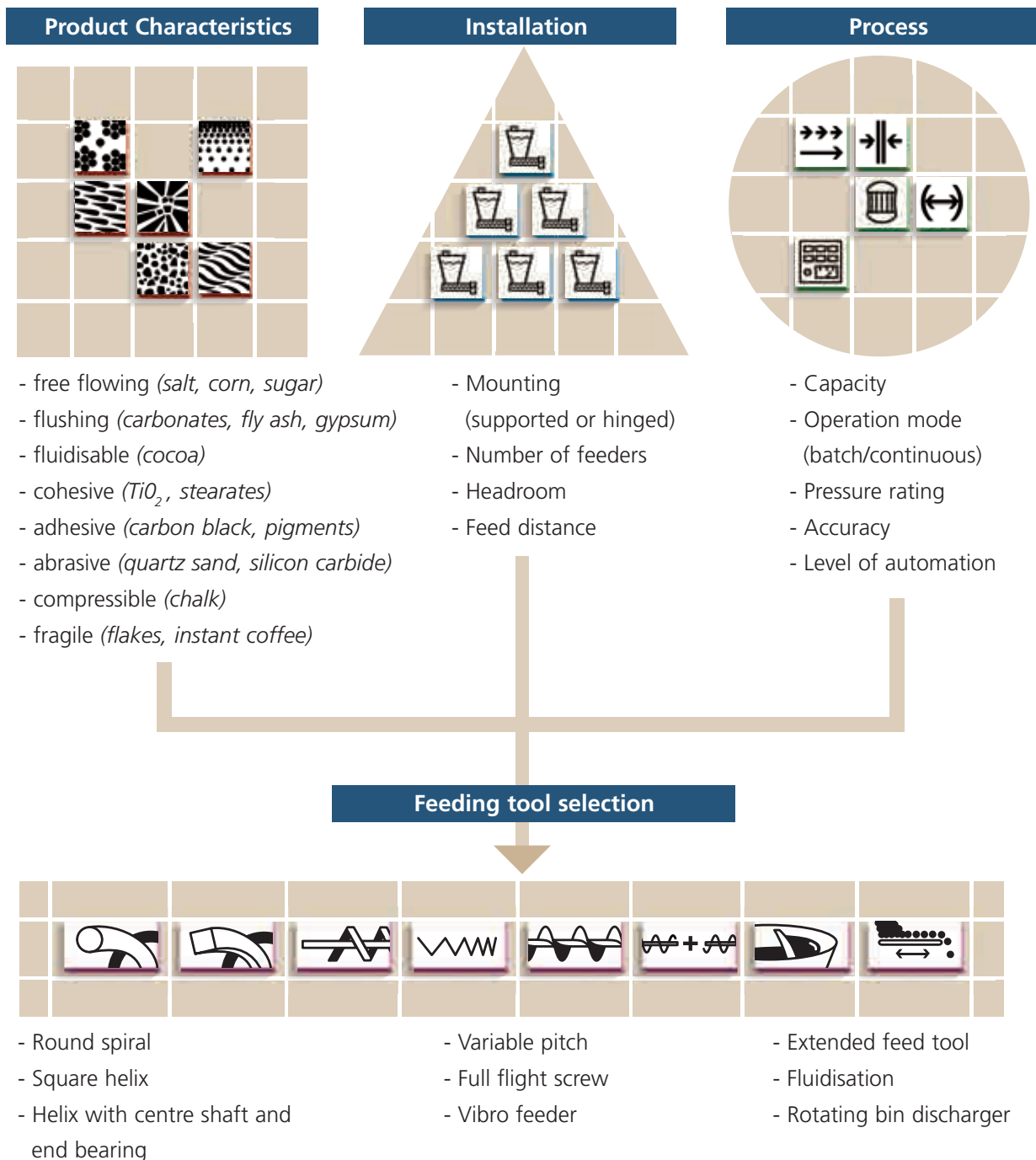
The benefits:

- Easy cleaning
- High feeding accuracy
- Guaranteed recipe reliability
- Versatile applications
- Low maintenance costs
- Simple to control
- Adaptable (easily adaptable)

ISO 9001:2000

ISO 9001-2000 quality guarantee
Gericke is a member of EHEDG

Selecting the correct feeding tool



Accessories for high feed accuracy

Agitator

→ consistent product flow

Homogeniser

→ repeatable bulk density for optimum feed accuracy

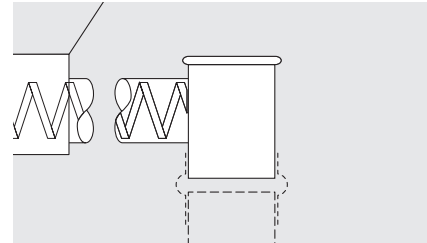
Bridge breakers

→ Ensure difficult products discharge for the surge hopper into the feed chamber

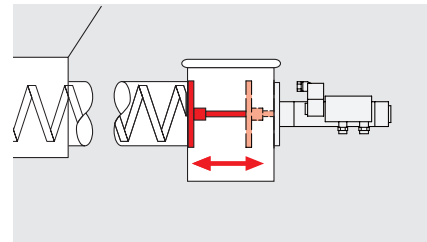
Ancillary process equipment

Gericke feeders are designed using a modular system customised to the specific requirements of the application. The flexibility of the Gericke equipment range offers simplified system design and greater added value.

- Special designs for agitators and homogenisers
- Surface finish and coatings; EGPDFE, Bead blast, electro-polished
- Variable feed tool lengths
- Shaft seals: stuffing box, PTFE lip seals, air purge glands
- AR outlet for vertical discharge
- ARFE outlet, flanged with end bearing
- ARFG outlet with "GranufLOW" flow control
- AGP shut off valve with position indicator
- Hinged bottom door with safety switch
- FDA approved seals



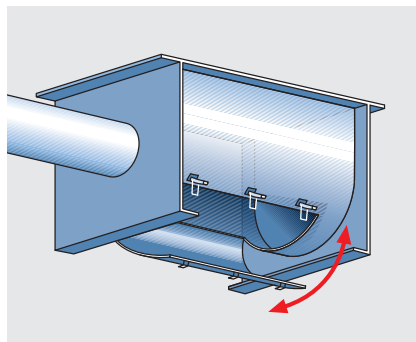
Type AR vertical outlet connection



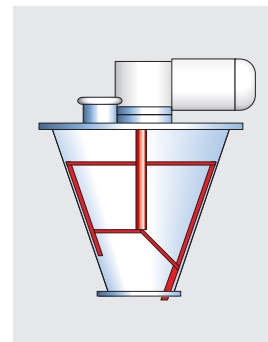
AGP outlet for instant product shut off (optional position indicator)



Semi-automated feeding station for accurate dosing into various sacks and boxes



GAC feeder with hinged door for quick cleaning



Hopper with vertical agitator

- Drive options
- Variable speed integrated frequency inverter
- Pressure tight design
- High temperature applications
- ATEX zones: 1, 2, 22, 21
- Special feeders for raisins and fruits.
- Pneumatic conveying feeder refill systems



GDU 601 with extended feed screw

Selection of
reference products

Density kg/l

Activated Charcoal	0.21	Manganese Ore	1.8
Acrylic Resin (Fibres)	0.14	Marble Chips	1.5
Acrylic Resins (Granulated)	0.61	Marble Dust	1.2
Additives	0.2–0.4	Metallic Powder	3.04
Adipic Acid	0.62	Mica Flakes	0.16
Aerosil	0.046	Milk Powder	0.58
Aluminium Chloride	0.59	Molybdenum Oxide	1.82
Aluminium Flakes	1.30		
Aluminium Fluoride	1.22	N	
Aluminium Oxide	0.90	Nuts	0.41
Aluminium Powder	1.30	Nylon (Fibres)	0.16
Aluminium Silicate	0.54	Nylon (Flakes)	0.52
Aluminium Sulphate	0.90	Nylon (Granules)	0.57
Ammonium Nitrate	0.62	Nylon (Powder)	0.63
Ammonium Phosphate	0.83		
Antimony Oxide	0.69	O	
Apple Pectin	0.51	Oat Cream Powder	0.57
Ascorbic Acid	0.55	Oat Flakes	0.45
B		Oat Flour	0.39
Barium Carbonate	0.17–1.4	Onion (Chopped)	0.24
Barium Stearate	0.23	Onion(Powder)	0.41
Barium Sulphate	1.45	Ores	1.4–2.6
Barley Flour	0.63	Oxalic Acid	0.85
Bauxite	1.2		
Borax	0.97	P	
Brick Dust	1.2	Peppercorn	0.27
C		Perlite (Expanded)	0.12
Cab–O–Sil	0.03	Perlite (Rock)	1.17
Calcium Carbonate	1.2	Perlon Wool	0.25
Calcium Chloride	0.97–1.1	Pesticide	0.4–0.6
Calcium Stearate	0.39	Phenol Resin (Powder)	0.54
Calcium Sulphate	0.74	Pigments	0.2–1.0
Carbon Black	0.4	Polyethylene (Granules)	0.57
Casting Powder	0.69	Polyethylene (Powder)	0.67
Celite	0.25	Poly–Electrolyte	0.5–0.7
Cellulose Acetate	0.13	Polyester Chips	0.15
Cement	1.2	Polyester Resin (Flakes)	0.4
Ceramic Mixture	1.4	Polypropylene (Granules)	0.5
Charcoal Powder	0.40	Polypropylene (Powder)	0.54
Chicory Powder	0.49	Polystyrene (Expanded)	0.1
Chocolate Powder	0.65	Polystyrene (Granules)	0.6
Cinnamon Sugar	0.74	Polystyrene (Powder)	0.65
Citric Acid	0.8	Polyvinyl Chloride (Granules)	0.62
Coal Dust	0.59	Potash (Flakes)	0.5
Cocoa Beans	0.56	Potassium Permanganate	1.1
Cocoa Powder	0.5	Potassium Sulphate	2.25
Coffee Beans	0.39	Potato Flour	0.7
Coffee Powder	0.18	PTFE (Granules)	0.53
Corn	0.6	PTFE Powder (Algoflow)	0.51
Cornflour	0.74	PVC Floor Covering Chips	0.6
Corn Starch	0.48	PVC Powder	1.0
D		Q	
Dacron	0.51	Quartz Powder	1.2
Dextrose	0.57	Quartz Sand	1.5
Detergents	0.3	R	
Diatomite	0.08–0.25	Rice	0.94
Dyestuffs	0.25–0.75	Rice Crispies	0.11
E		Rubber (Chips)	0.4
Egg Powder	0.35	Rubber (Granules)	0.46
Electrode Carbon	1.0		
Epoxy Resin Powder	0.8	S	
F		Salt	1.18
Feedstuffs (Animal)	0.49	Sand	1.6
Ferric Chloride	1.6	Sawdust	0.29–0.45
Ferric Oxide	0.87–1.3	Silica – Gel	0.25
Felspar	1.2–1.8	Silica	1.05
Ferrasil	0.98	Silica Acid (Powder)	0.23
Fibre–Glass Fibres	0.2	Sipernat	0.22
Filtration Aids	0.23	Slag	0.4
Filter Cakes	0.65	Slag Wool	0.09
Fish Food	0.77	Soap Flakes	0.47
Flavourings	0.33	Soap Powder	0.58
Flue Ash	1.06	Soda	1.0
Flue Dust	1.30	Sodium Bicarbonate	0.98
Foam Plastic Flakes	0.011	Sodium Chloride	1.18
Foam Rubber	0.05	Sodium Nitrate	1.35
Foam Shavings	0.25	Sodium Perborate	0.78
Fungicide	0.41	Sodium Tripolyphosphate	0.78
Fullers Earth	0.35–0.6	Spice Mixture	0.75
G		Spinach Powder (Dry)	0.42
Garlic Powder	0.33	Stabilisers	0.4
Gelatine	0.74	Starch Granules	0.75
Glass (Ground)	1.7	Starch Powder	0.67
Glass (Splinters)	1.65	Stearic Acid	0.55
Glass (Fibres)	0.2	Styropor Pellets	0.58
Glass (Frit)	1.95	Sucrose	0.54
Glass (Beads)	0.4	Sucrose (Crystalline)	0.81
Glazing Mixture	0.62	Sugar (Crystalline)	1.02
Glue Powder	0.6	Sugar (Powder)	0.62
Graphite (Granules)	1.12	Sugar (Raw)	0.81
Graphite (Powder)	0.58	Synthetic Wax Powder	0.42
Graphite (Salt)	0.5	Synthetic Resin Granules	0.55–0.65
Grass Seed	0.16	Synthetic Resin Powder	0.65–0.75
Grinding Powder	2.3	T	
Gypsum	0.9	Talcum	0.46
Gypsum Calcined	1.2	Tea	0.39
Gravel	1.4–1.7	Teflon Fibres	0.49
H		Terephthalic Acid	0.49
Herbicide	0.4–0.6	Textile Fibres	0.14
I		Titanium Dioxide (White)	0.79
Insecticide	0.4–0.6	Tobacco (Cigarettes)	0.19
Iron Powder	3.5	Tobacco (Leaf)	0.1
Iron Sulphate	1.3	Tri–Calcium Phosphate	0.49
K		Tri–Sodium Phosphate	0.75
Kaolin (dry)	0.8	Triphosphoric Acid	0.55
L		Tungsten Carbide	3.28
Lime (Quick)	0.9	V	
Lime (Slaked)	0.62	Varnish Powder (Course)	0.98
Limestone (Crushed)	1.35	Vinyl Resin (Granules)	0.6
Limestone (Flour)	1.25	Vinyl Resin Powder	0.57
M		Vitamins	0.45–1.0
Magnesium Carbonate	0.25	W	
Magnesium Oxide	0.62	Washing Powder	0.3
Magnesium Stearate	0.34	Wheat Flour	0.64
Malt Flour	0.63	Wood Shavings	0.17
Malted Milk	0.53	Z	
Manganese Dioxide	1.08	Zinc Granules	4.0
		Zinc Oxide	0.98
		Zinc Stearate	0.22

World-wide Service Support

Material reference chart:

The stated values are for indicative purposes only and are subject to confirmation after receipt of all application details. Planning drawings are available in dxf format from the Gericke web-site www.gericke.net.

Type	Feed capacity range l/h*	Drive kW	Weight kg	Height, Width, Length (including drive and feed device) mm	Specials
GPD 100	0,05 – 600	0,12	9	270, 150, 480	without agitator
GLD 77	0,05 – 600	0,12	12	350, 200, 540	mechanical agitator
GLD 87	0,05 – 600	0,12	18	350, 350, 540	with independent drive
GAC 207	1,3 – 4.800	0,55	75	500, 290, 1110	homogenising
GAC 232	1,3 – 27.000	0,55	90	540, 390, 1260	homogenising
GAC 233 F	batch operation	0,55	140	450, 400, 1400	2 feedworms
GDU 201	1,3 – 800	0,55	50	340, 420, 1000	minimal product retention
GDU 301	1,3 – 11.200	0,55	40	280, 290, 1100	without agitator
GDU 451	10 – 11.200	0,55	100	680, 390, 1200	minimal product retention
GDU 601	10 – 25.000	0,55	50	360, 390, 1400	sack tipping
GDU 801	500 – 50.000	3,0	450	910, 1150, 2000	difficult powder
Vibro	0,5 – 10.000				
KAD150	batch operation	0,37	40	900, 510 diameter	conditioning
RA 500	400 – 40.000	3,0	100	ca. 600 diameter	1–4 outlets
RA 800	400 – 80.000	5,5	150	ca. 900 diameter	1–4 outlets
RA1200	400 – 100.000		200	ca. 1300 diameter	1–4 outlets

* Approximate throughput values based on Semolina. Minimum value using smallest helix diameter at 5% of speed range and maximum value with largest helix at 100%



Feeding and sifting station for Pharmaceutical powders

For further information about gravimetric feeders and controllers please request the Gericke leaflets No 624 **Easydos** and No 625 **Gravimetric feeders**.

We will be pleased to forward copies or alternatively they can be downloaded for our website www.gericke.net

Gericke feeders are used in a vast variety of production applications including: ice tea, syrups, spices, mustard, milk powder, cereal bars, pizza toppings, gypsum boards, salt, ceramics, metal coatings, PVC powder and many more.

Gericke

Powder Processing Equipment and Systems

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