

## ***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.**

**G**ericke 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.**

**G**ericke 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

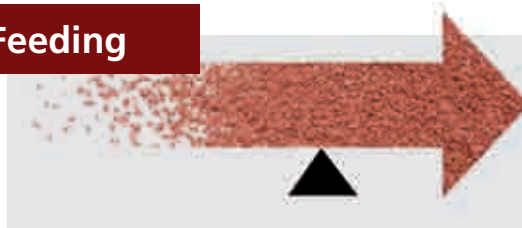


The feed rate is measured by volume against time.

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

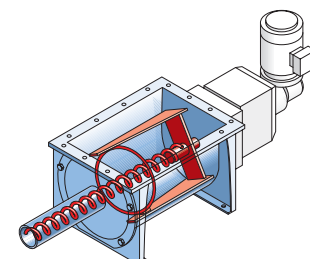
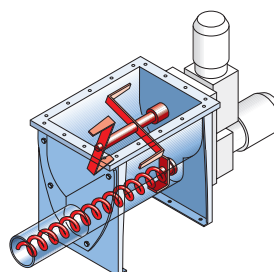
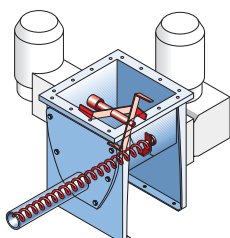
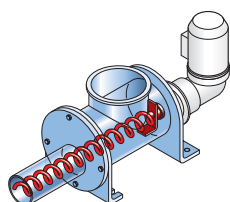


Combination feeding

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

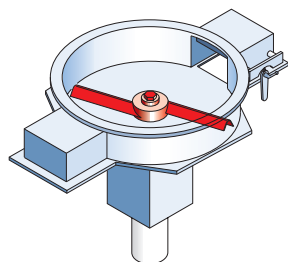
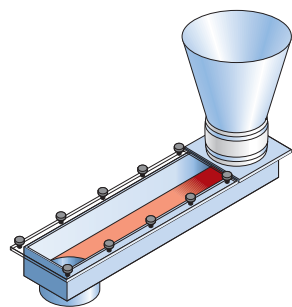


GDU 451



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



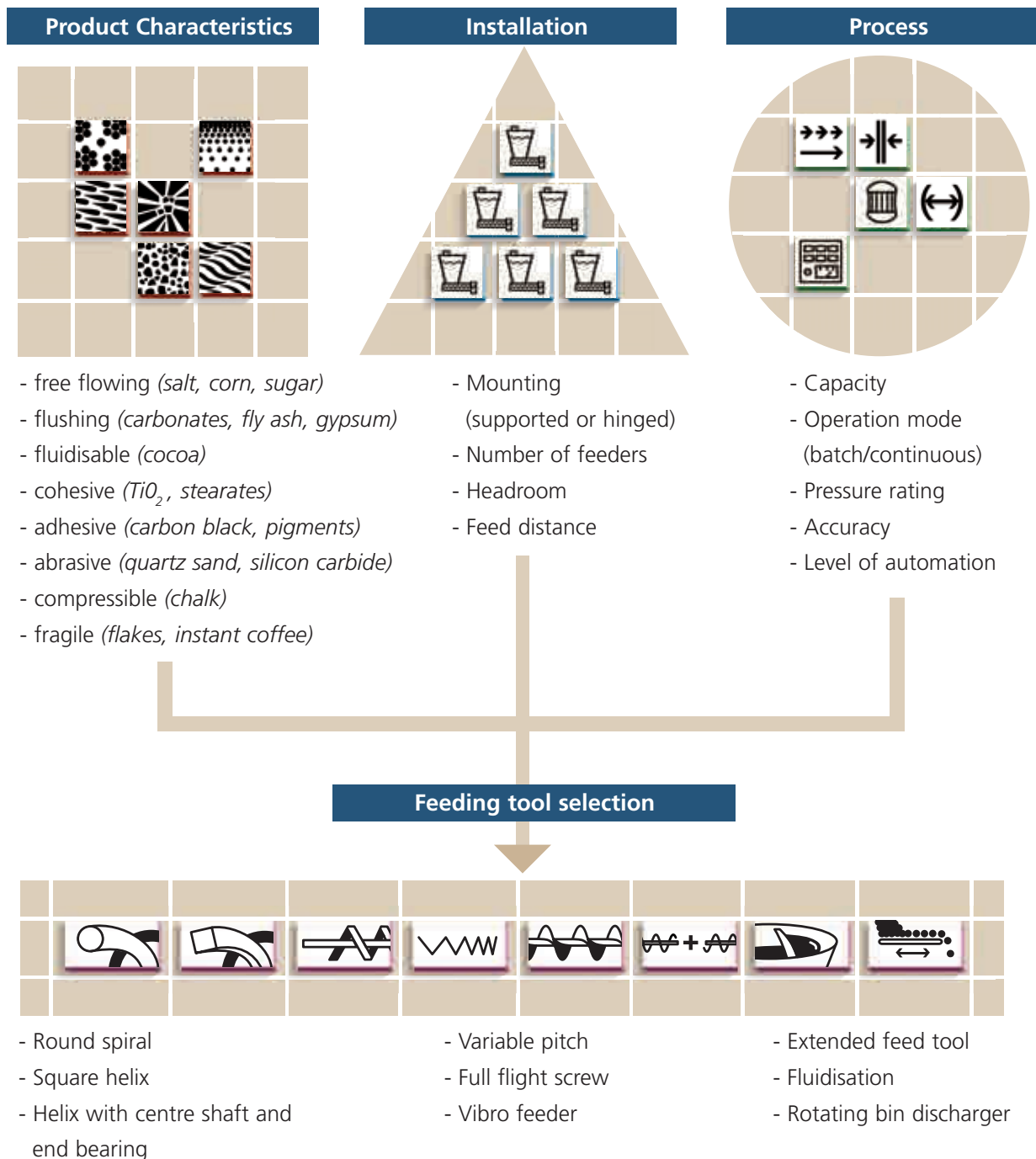
The benefits:

- 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

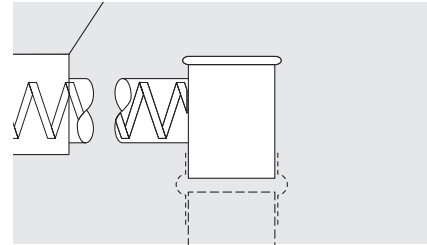
### Bridge breakers

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

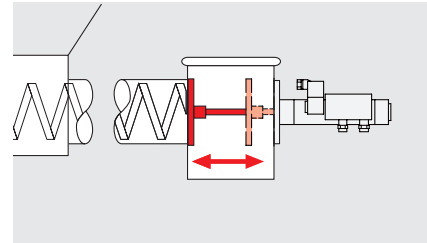
# Ancillary process equipment

**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



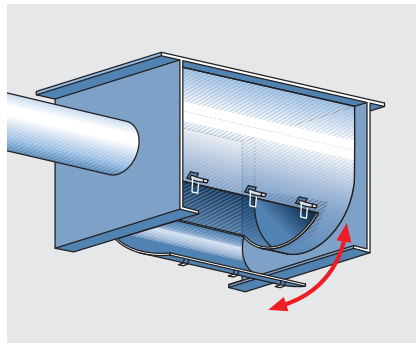
*Type AR vertical outlet connection*



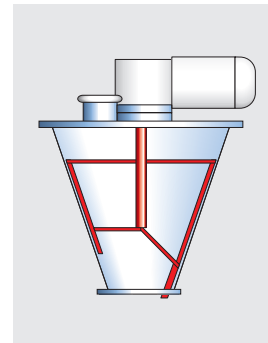
*AGP outlet for instant product shut off (optional position indicator)*



*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      | <b>N</b>                      |           |
| 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      | <b>O</b>                      |           |
| Apple Pectin                | 0.51      | Oat Cream Powder              | 0.57      |
| Ascorbic Acid               | 0.55      | Oat Flakes                    | 0.45      |
| <b>B</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      | <b>P</b>                      |           |
| Brick Dust                  | 1.2       | Peppercorn                    | 0.27      |
| <b>C</b>                    |           | 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       |
| <b>D</b>                    |           | <b>Q</b>                      |           |
| Dacron                      | 0.51      | Quartz Powder                 | 1.2       |
| Dextrose                    | 0.57      | Quartz Sand                   | 1.5       |
| Detergents                  | 0.3       | <b>R</b>                      |           |
| Diatomite                   | 0.08–0.25 | Rice                          | 0.94      |
| Dyestuffs                   | 0.25–0.75 | Rice Crispies                 | 0.11      |
| <b>E</b>                    |           | Rubber (Chips)                | 0.4       |
| Egg Powder                  | 0.35      | Rubber (Granules)             | 0.46      |
| Electrode Carbon            | 1.0       |                               |           |
| Epoxy Resin Powder          | 0.8       | <b>S</b>                      |           |
| <b>F</b>                    |           | 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      |
| <b>G</b>                    |           | 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       | <b>T</b>                      |           |
| Gypsum                      | 0.9       | Talcum                        | 0.46      |
| Gypsum Calcined             | 1.2       | Tea                           | 0.39      |
| Gravel                      | 1.4–1.7   | Teflon Fibres                 | 0.49      |
| <b>H</b>                    |           | Terephthalic Acid             | 0.49      |
| Herbicide                   | 0.4–0.6   | Textile Fibres                | 0.14      |
| <b>I</b>                    |           | 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      |
| <b>K</b>                    |           | Tri–Sodium Phosphate          | 0.75      |
| Kaolin (dry)                | 0.8       | Triphosphoric Acid            | 0.55      |
| <b>L</b>                    |           | Tungsten Carbide              | 3.28      |
| Lime (Quick)                | 0.9       | <b>V</b>                      |           |
| 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      |
| <b>M</b>                    |           | Vitamins                      | 0.45–1.0  |
| Magnesium Carbonate         | 0.25      | <b>W</b>                      |           |
| 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      | <b>Z</b>                      |           |
| 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](http://www.gericke.net).

| Type      | Feed capacity range<br>l/h* | Drive<br>kW | Weight<br>kg | Height, Width, Length<br>(including drive and<br>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<br>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<br>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](http://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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