

tender file

Vario 800 flex shaft type 2

Cubic shaft system for creating an inlet, filter, retention, control or base shaft. Shaft system consists of one base plate, four wall elements and one cover plate – see separate item. The height can be adjusted by adding additional wall elements (Vario 800 flex shaft type 2) or respectively wall elements (Vario 800 flex shaft type 1) up to 7 layers.

The shaft system has the same footprint like the EcoBloc family. Inspection and high pressure jetting due to inspection channels 2 x DN 200 possible.

Free positioning within the EcoBloc system.

- corner position with two free side faces
- central position with one free side face
- fully integrated into the EcoBloc system.

Long-term load-bearing capacity up to HGV60 load (HS-25) verified.

Technical data:

- Dimensions (LxWxH): 800 x 800 x 660 mm*
- Weight: approx. 35 kg
- Material: Polypropylene PP (100% recyclable)
- Colour: grey
- Volume: 420 litres
- Connections 4 x DN 200/ 1 x DN 315 / 1x DN 400 (4 x 8" pipe/ 1 x 12" pipe/ 1 x 16" pipe) each side face
- Clear width of Ø600mm

* Height without cover plate

Optional components

- Alternative inlet with GRAF inlet module DN600
- Extendible with GRAF infiltration connecting piece DN600
- Extendible with Infiltration filter strainer

Note:

The Vario 800 shaft system should be laid on a geotextile or membrane which in turn is laid on a blinding which has been smoothed flat. Installation of the system should be carried out following the manufacturer's instructions.

Product: GRAF Vario 800 flex shaft type 2

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Vario 800 flex shaft type 1

Cubic shaft system for creating an inlet, filter, retention, control or base shaft. Shaft system consists of one base plate, four wall elements and one cover plate – see separate item. The height can be adjusted by adding additional wall elements (Vario 800 flex shaft type 2) or respectively wall elements (Vario 800 flex shaft type 1) up to 7 layers.

The shaft system has the same footprint like the EcoBloc family. Inspection and high pressure jetting due to inspection channels 2 x DN 200 possible.

Free positioning within the EcoBloc system.

- corner position with two free side faces
- central position with one free side face
- fully integrated into the EcoBloc system.

Long-term load-bearing capacity up to HGV60 load (HS-25) verified.

Technical data:

- Dimensions (LxWxH): 800 x 800 x 355 mm*
- Weight: approx. 25 kg
- Material: Polypropylene PP (100% recyclable)
- Colour: grey
- Volume: 230 litres
- Connections 4 x DN 200 (4 x 8" pipe)
- Clear width of Ø600mm

* Height without cover plate

Optional components

- Alternative inlet with GRAF inlet module DN600
- Extendible with GRAF infiltration connecting piece DN600
- Extendible with Infiltration filter strainer

Note:

The Vario 800 shaft system should be laid on a geotextile or membrane which in turn is laid on a blinding which has been smoothed flat. Installation of the system should be carried out following the manufacturer's instructions.

Product: GRAF Vario 800 flex shaft type 1

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Vario 800 base/ cover set

Set consisting out of Vario 800 base and cover plate. Vario 800 base plate as the base layer unit for creating a Vario 800 shaft system. Vario 800 cover plate for entry of GRAF shaft accessories or GRAF telescopic dome shaft.

Product: GRAF Vario 800 base/ cover set

Accessories

GRAF-Tex geotextile

Graf-Tex geotextile (8 ounce, non-woven geo-textile fabric), 100% polypropylene filter membrane, mechanically needle-punched to form continuous filament. Rot-proof material between soil and infiltration system prevents infiltration layers from silting up. The Graf-Tex geotextile ensures long lifetime, consistent infiltration and high permeability.

Technical data:

- Opening width: 100 µm
- Water permeability coefficient kv (s = 20 kPa): $1,0 \times 10^{-3}$ m/s
- Tensile strength (lengthwise / crosswise): 15 kN/m / 15 kN/m
- Punch push-through force (x-s): 2,0 kN
- Weight: 200 g/m²
- Robustness class: 3
- Roll material: Roll width 5 m (196.9")

Product: GRAF-Tex geotextile

Infiltration inlet module DN 600 (24" pipe)

Infiltration inlet module for different pipeline geometries. Compatible with the Vario 800 flex shaft system, GRAF Infiltration shaft system DN 600 (24"), VS-Control external M, VS-Control external L and GRAF underground tanks. Incl. profile seal for an entry for GRAF Telescopic dome shaft up to class D or other VS components.

- Material: PE-LLD
- Connections:
 - 1 x DN 160 or 1 x DN 200 (1 x 6" pipe or 1 x 8" pipe)
 - 1 x DN 250 or 1 x DN 315 (1 x 10" pipe or 1 x 12" pipe)
- Dimensions: useful lengths 550 mm (21.7")
- Weight: approx. 14 kg
- Color: grey
- Alternative use:
 - entry for GRAF Telescopic dome shaft up to class D
 - entry geometry for Infiltration filter strainer DN 600 (24" pipe)
 - design of an emergency overflow for VS-Control external M or VS-Control external L

Product: GRAF Infiltration inlet module DN 600 (24" pipe)

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Infiltration filter strainer DN 600 (24" pipe)

Infiltration filter strainer for filtering the incoming rainwater. In combination with the GRAF infiltration inlet module DN600 (24" pipe) suitable for the Vario 800 shaft system.

- Material: stainless steel
- Nominal size: DN 600 (24" pipe)
- Mesh width: 0.5 mm (0.02")

Product: GRAF Infiltration filter strainer DN 600 (24" pipe)

Infiltration connecting piece 1000 DN 600 (24"), DN 200 (8" pipe) contact surface

Infiltration connecting piece for the installation in deep soil. Compatible with the Vario 800 flex shaft system, GRAF Infiltration shaft system DN 600 (24"), VS-Control external M, VS-Control external L and GRAF underground tanks. Incl. profile seal for an entry for GRAF Telescopic dome shaft up to class D.

Technical data:

- Material: PE-LLD
- Connections: 2 x DN 200 (8" pipe) contact surface
- Dimensions: useful length 1000 mm (3' 3")/ can be shortened to 750 mm (29.5") or 500 mm (19.7")
- Can be shortened with commercially available jig saws
- Weight: approx. 19.5 kg (43.0 lbs)
- Colour: grey

Product: GRAF Infiltration connecting piece 1000 DN 600 (24")

Infiltration connecting piece 1000 DN 600 (24"), DN 200 (8" pipe) pipe connection

Infiltration connecting piece for the installation in deep soil incl. DN 200 (8" pipe) pipe connection. Compatible with the Vario 800 flex shaft system, GRAF Infiltration shaft system DN 600 (24"), VS-Control external M, VS-Control external L and GRAF underground tanks. Incl. profile seal for an entry for GRAF Telescopic dome shaft up to class D.

Technical data:

- Material: PE-LLD
- Connections: 1 x DN 200 (8" pipe) contact surface and 1 x DN 200 (8" pipe) pipe connection
- Dimensions: useful length 1000 mm (3' 3.4")/ can be shortened to 750 mm (29.5") or 500 mm (19.7")
- Can be shortened with commercially available jig saws
- Weight: approx. 20.5 kg (45.2 lbs)
- Colour: grey

Product: GRAF Infiltration connecting piece 1000 DN 600 (24")

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Mini telescopic dome shaft with PP lid, suitable for pedestrian loading

Mini telescopic dome shaft with PP lid, suitable for pedestrian loading allows the infinitely adjustment to ground situations between:

- underground tank Carat / Carat XL: 750 and 950 mm (29.5" and 37.4")
- underground tank Platin: 455 and 655 mm (17.9" and 25.8")

Flat design for a flushed closure with the sward, can be tilted by max. 5°. Including EPDM seal, sealed up to the top edge of ground. PP cover with childproof lock.

- Length: 360 mm (14.2")
- Ø inner: 600 mm (23.6")
- Ø outer: 780 mm (30.7")
- Colour: grass green

Product: GRAF Mini telescopic dome shaft with PP lid, suitable for pedestrian loading

Maxi telescopic dome shaft with PP lid, suitable for pedestrian loading

Maxi telescopic dome shaft with PP lid, suitable for pedestrian loading allows height adjustment to ensure flush level fitting with surrounding ground surface between:

- underground tank Carat / Carat XL: 750 and 1050 mm (29.5" and 41.3")
- underground tank Platin: 455 and 755 mm (17.9" and 29.7")

Flat design for a flushed closure, can be tilted by max. 5°. Including EPDM seal, sealed up to the top edge of ground. PP cover with childproof lock.

- Length: 476 mm (18.7")
- Ø inner: 600 mm (23.6")
- Ø outer: 850 mm (33.5")
- Colour: grass green

Product: GRAF Maxi telescopic dome shaft with PP lid, suitable for pedestrian loading

Telescopic dome shaft with cast iron lid, suitable for vehicle loading

Telescopic dome shaft with class B 125 cast iron cover, suitable for vehicle loading allows height adjustment to ensure flush level fitting with surrounding ground surface between:

- underground tank Carat / Carat XL: 750 and 1050 mm (29.5" and 41.3")
- underground tank Platin: 455 and 755 mm (17.9" and 29.7")

Flat design for a flushed closure, can be tilted by max. 5°. Including EPDM seal, sealed up to the top edge of ground. Cast iron cover with childproof lock.

- Length: 476 mm (18.7")
- Ø inner: 600 mm (23.6")
- Ø outer: 850 mm (33.5")
- Colour: black

Product: GRAF Telescopic dome shaft with cast iron lid, suitable for vehicle loading

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Telescopic dome shaft TRUCK for covers by customers, suitable for lorry-bearing

Telescopic dome shaft TRUCK for concrete rings, suitable for lorry-bearing allows height adjustment to ensure flush level fitting with surrounding ground surface between:

- underground tank Carat / Carat XL: 750 and 1050 mm (29.5" and 41.3")
- underground tank Platin: 455 and 755 mm (17.9" and 29.7")

Flat design for a flushed closure, can be tilted by max. 5°. Including EPDM seal, sealed up to the top edge of ground. For concrete rings and lorry-bearing covers (provided by customer).

- Length: 460 mm (18.1")
- Ø inner: 600 mm (23.6")
- Ø outer: 855 mm (33.7")
- Colour: black

Product: GRAF Telescopic dome shaft TRUCK for covers by customers, suitable for lorry-bearing

Telescopic infiltration shaft, cast iron, suitable for vehicle loading, dirt trap included

Telescopic infiltration shaft, cast iron cover and dirt trap included. Suitable for vehicle loads up to a maximum of 3.5 t.

Smooth telescopic adjustment from 255 mm (10") – 555 mm (1'-9.9") between ground level and:

- Infiltration shaft system DN 600 (24")
- Vario 800 flex shaft

Flat design for a flushed closure with the surface, can be tilted by max. 5°. Including EPDM seal, sealed up to the top edge of ground.

- Length: 575 mm (1'-10.6"), cast iron cover included
- Inner diameter: 600 mm (1'-11.6")
- Outside-diameter: 855 mm (2'-9.7")
- Surface of the inlet: approx. 900 cm²
- Weight: 106 kg (233.7 lbs)

Product: GRAF telescopic infiltration shaft, cast iron

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Telescopic ventilation shaft, suitable for vehicle loading, dirt trap included

Telescopic ventilation shaft, concrete/cast iron cover and dirt trap included. Suitable for vehicle loads up to a maximum of 3.5 t. Ventilation holes in the shaft cover.

Smooth telescopic adjustment from 255 mm (10") – 555 mm (1'-9.9") between ground level and:

- Infiltration shaft system DN 600 (24")
- Vario 800 flex shaft
- VS-Control external M
- VS-Control external L

Flat design for a flushed closure with the surface, can be tilted by max. 5°. Including EPDM seal, sealed up to the top edge of ground.

- Length: 575 mm (1'-10.6"), concrete/cast iron cover included
- Inner diameter: 600 mm (1'-11.6")
- Outside-diameter: 855 mm (2'-9.7")
- Weight: 116 kg (255.7 lbs)

Product: GRAF Telescopic ventilation shaft, vehicle

Telescopic ventilation shaft, suitable for lorry loading, dirt trap included

Telescopic ventilation shaft, concrete/cast iron cover and dirt trap included. Suitable for vehicle or truck loads up to a maximum of 40 t. Ventilation holes in the shaft cover.

Smooth telescopic adjustment from 290 mm (11") – 590 mm (1'-11") between ground level and:

- Infiltration shaft system DN 600 (24")
- Vario 800 flex shaft
- VS-Control external M
- VS-Control external L

Flat design for a flushed closure with the surface, can be tilted by max. 5°. Including EPDM seal, sealed up to the top edge of ground.

- Length: 610 mm (2') ,concrete/cast iron cover included
- Inner diameter: 600 mm (1'-11.6")
- Outside-diameter: 855 mm (2'-9.7")
- Weight: 189 kg (416.7 lbs)

Product: GRAF Telescopic ventilation shaft, lorry