Euro-HYGIA®s

GR8963

Fig. 1 Euro-HYGIA®

Technical data

Euro-HYGIA® I and II

Head:	up to 70 m
Flow rate: (Euro-HYGIA® III - on request):	up to 108 m^3/h up to 250 m^3/h
Operating pressure:	up to 16 bar
Operating temperature:	95°C (up to 150°C on request)
Sterilisation temperature:	140°C (SIP)

Applications

The unique hygienic design and the use of materials make the Euro-HYGIA® pump range suitable for:

Food and beverage industry

- Liquid transfer in breweries and dairies
- Mixing in soft drink applications
- Food processing plants.

Pharmaceutical industry

- Pure water systems (WFI)
- Biotechnology
- Cosmetics.

Other industrial applications

- Semi-conductor manufacturing
- CIP (Cleaning-In-Place) systems.

Construction

Euro-HYGIA® pumps are single-stage, end-suction centrifugal pumps designed to meet the hygienic requirements of sterile process technology. The pumps are CIP and SIP capable in compliance with the DIN EN 12462 performance criteria.

The design of the wetted parts meets the Qualified Hygienic Design (QHD) standard, EHEDG test certificate for CIP cleanability (TNO), 3A sanitary standard (USA) and GOST (Russia).

The pump housing is made of heavy-duty, rolled and deep-drawn CrNiMo steel DIN EN 1.4404/1.4435, equivalent to AISI 316L.

Three impeller types are available depending on the application: Semi-open, closed and free-flow impeller. For further information, see page 19.

The pumps have a mechanical shaft seal and a fan-cooled asynchronous motor with enclosure class IP 55.

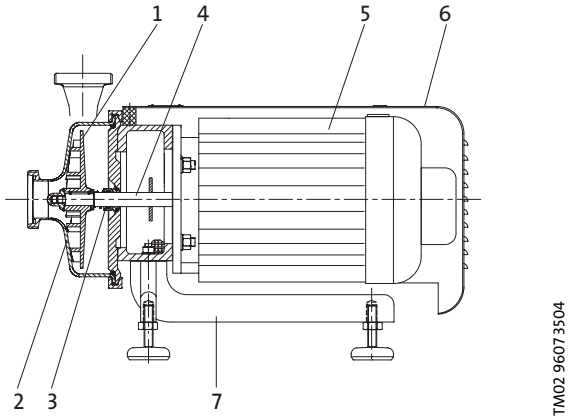


Fig. 2 Sectional drawing of Euro-HYGIA® I Bloc-SUPER on combi-foot

Materials

Pos.	Component	Material	DIN EN
1	Impeller	CrNiMo steel	1.4404/ 1.4435
2	Pump housing	CrNiMo steel	1.4404/ 1.4435
3	Shaft seal	Sterile applications: SiC/SiC/EPDM Hygienic applications: Carbon/ stainless steel/EPDM or FKM	
4	Pump shaft	CrNiMo steel	1.4571
5	Motor		
6	Shroud	Stainless steel	
7	Support	Stainless steel/cast iron	

Design variations

Hilge offers the below design variations for Euro-HYGIA® pumps:

Standard variation	Short description
Euro-HYGIA® Adapta®	Horizontal installation, Adapta® motor stool
Euro-HYGIA® Adapta® SUPER	Horizontal installation, Adapta® motor stool, motor with stainless steel shroud
Euro-HYGIA® Bloc	Horizontal installation
Euro-HYGIA® Bloc-SUPER	Horizontal installation, motor with stainless steel shroud
Variations on request	**Short description**
Euro-HYGIA® Adapta®-V	Vertical installation, Adapta® motor stool
Euro-HYGIA® Bloc-V	Vertical installation
Euro-HYGIA® CN	Horizontal installation, long-coupled version mounted on baseplate
Euro-HYGIA® tronic	Horizontal/vertical installation, motor with built-in frequency converter (up to 7.5 kW)

For further information, see page 23.

Mechanical shaft seal

Hilge offers the following three seal arrangements as standard:

- single seal
- double tandem seal
- double back-to-back seal.

The mechanical shaft seals used are single inboard mechanical shaft seals with an optimum position in the pumped liquid. This ensures lubrication, cooling as well as CIP and SIP according to the criteria of hygienic design.

Standard seals have seal faces of carbon/stainless steel and O-rings of EPDM.
On request Hilge offers other seal face material combinations.

For further information, see page 20.

Surface treatment

As standard all wetted parts are electro-polished to improve corrosion-resistance and surface finish.

Connections

Depending on the nominal diameter of the Euro-HYGIA® pump, Hilge offers the following pipe connections as standard:

- Threads to DIN 11851, PN 25-40
- Flanges to DIN EN 1092-1, PN 10 (DIN 2633/42, PN 10) (industrial applications only)
- Pipe threads to DIN ISO 228, PN 10 (max.)
- Sterile threads to DIN 11864-1, PN 16
- Sterile flanges to DIN 11864-2, PN 16.

Other connections are available on request, e.g. SMS, RJT, clamp connections to DIN, ISO, Tri-Clover, special sterile threaded fittings and flanges.

For further information about pipe connections for Euro-HYGIA® pumps, see page 27 to 28.

Product features and benefits

Euro-HYGIA® pumps offer the following product features and benefits:

- A wide range of support possibilities for both motor and pump.
- Extremely reliable operation under most working conditions.
- Optimised hydraulics for high efficiency
  - reduced power consumption.
- MultiFunction inducer for NPSH reduction or pumping of liquids containing gas (Euro-HYGIA® II).
- Motors for special voltages and frequencies.
- Euro-HYGIA® Adapta® and Euro-HYGIA® CN with explosion- or flameproof three-phase motors are available for ATEX-applications.
- Motors for variable speed drive with built-in frequency converter as "tronic". Available for motor sizes up to 7.5 kW.
- Mobile pumps mounted on two-wheel stainless steel trolley with on/off switch and electric cable.
- DN 15 diaphragm valve drain for sterile processes.
- DN 15 drain connection.
- Heating jacket for pump housing.
- Integral flange ring for bolted housing closure (HPM).
- Special paint finish for drive and cast iron or steel parts.

Contra

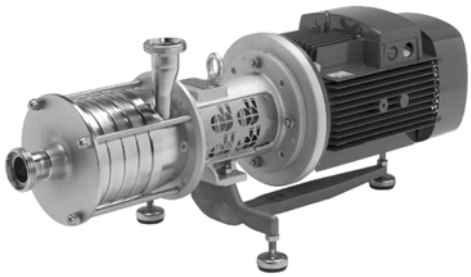


Fig. 3 Contra pump

Technical data

Contra I and II

Head:	up to 160 m
Flow rate:	up to 55 m^3/h
Operating pressure:	up to 25 bar
Operating temperature:	95°C (up to 150°C on request)
Sterilisation temperature:	140°C (SIP)

Applications

The unique hygienic design and the use of materials makes the Contra pump range suitable for pressure boosting in:

Food and beverage industry

- Breweries and dairies
- Carbonising systems
- Food processing plants.

Pharmaceutical industry

- Purification systems
- Pure water systems (WFI).

Other industrial applications

- Surface treatment systems
- Water processing systems
- CIP feeding systems.

Construction

Contra pumps are either single-stage or multi-stage, end-suction centrifugal pumps designed in accordance with the Qualified Hygienic Design (QHD) criteria, the EHEDG certification and the 3A sanitary material specification.
The pumps are CIP and SIP capable in compliance with the DIN EN 12462 performance criteria. Furthermore, the pumps meet the GMP requirements for FDA-approved materials.

Fig. 4 Certification

The pump housing is made of rolled and forged stainless steel, DIN EN 1.4404/1.4435, equivalent to AISI 316L. This guarantees a homogeneous pore-free surface, in contrast to cast materials.

The Contra pumps have open diffusers. The O-ring seal locations for the housing and impellers are designed to meet the criteria of hygienic design with metal-to-metal contact seal areas and no pump housing dead-ends.

Contra pumps are fitted with a semi-open impeller as standard. For further information, see page 19.

The vertical versions are fully self-draining through the suction port of the pumps.

The pumps have a mechanical shaft seal and a fan-cooled asynchronous motor with enclosure class IP 55.

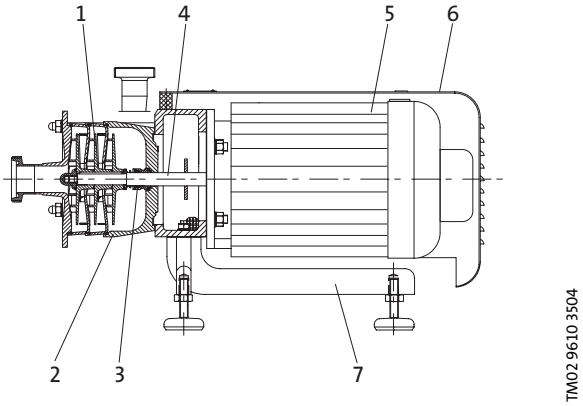


Fig. 5 Sectional drawing of Contra I Bloc-SUPER on combi-foot

Materials

Pos.	Component	Material	EN/DIN
1	Impeller	CrNiMo steel	1.4404/ 1.4435
2	Pump housing	CrNiMo steel	1.4404/ 1.4435
3	Shaft seal	Sterile applications: SiC/SiC/ EPDM Hygienic applications: Carbon/ stainless steel/EPDM or FKM	
4	Pump shaft	CrNiMo steel	1.4571/ 1.4462
5	Motor		
6	Shroud	Stainless steel	
7	Support	Stainless steel/cast iron	

Design variations

Hilge offers the below design variations for Contra pumps:

Standard variation	Short description
Contra Adapta®	Horizontal installation, Adapta® motor stool
Contra Adapta® SUPER	Horizontal installation, Adapta® motor stool, motor with stainless steel shroud
Contra Adapta®-V	Vertical installation, Adapta® motor stool
Contra Bloc	Horizontal installation
Contra Bloc-SUPER	Horizontal installation, motor with stainless steel shroud
Variations on request	**Short description**
Contra Bloc-V	Vertical installation
Contra CN	Horizontal installation, long-coupled version mounted on baseplate
Contra tronic	Horizontal/vertical installation, motor with built-in frequency converter (up to 7.5 kW)

Mechanical shaft seal

Hilge offers the following three seal arrangements as standard:

- single seal
- double tandem seal
- double back-to-back seal.

The mechanical shaft seals used are single inboard mechanical shaft seals with an optimum position in the pumped liquid. This ensures lubrication, cooling as well as CIP and SIP according to the criteria of hygienic design.

Standard seals have seal faces of carbon/stainless steel and O-rings of EPDM.
On request Hilge offers other seal face material combinations.

For further information, see page 20.

Surface treatment

As standard all wetted parts are electro-polished to improve corrosion-resistance and surface finish.

Connections

Depending on the nominal diameter of the Contra pump, Hilge offers the below pipe connections as standard:

- Threads to DIN 11851, PN 25-40
- Flanges to DIN EN 1092-1, PN 10 (DIN 2642, PN 10) (industrial applications only)
- Pipe threads to DIN ISO 228, PN 10 (max.)
- Sterile threads to DIN 11864-1, PN 16
- Sterile flanges to DIN 11864-2, PN 16.

Other connections are available on request, e.g. SMS, RJT, clamp connections to DIN, ISO, Tri-Clover, special sterile threaded fittings and flanges.

For further information about pipe connections for Contra pumps, see page 29 to page 34.

Product features and benefits

The Contra pumps have the following product features and benefits:

- A wide range of support possibilities for both motor and pump.
- Extremely reliable operation under most working conditions.
- Optimised hydraulics for high efficiency - reduced power consumption.
- Contra Adapta® and CN with explosion- or flame-proof motors are available for ATEX-applications.
- Motors with special voltages and frequencies.
- Pump with water-cooled motor for clean room applications.
- Adapta® "tronic" versions are fitted with motors for variable speed drive with built-in frequency converter.
  Available for motor sizes up to 7.5 kW.
- Flush or barrier fluid systems for tandem or back-to-back double mechanical seals.
- Mobile pumps mounted on two-wheel trolley with on/off switch.
- Special paint for motor, cast iron and carbon steel parts (except for Adapta® Bloc).

SIPLA

GR8965

Fig. 6 SIPLA pump

Technical data

SIPLA pumps

Head:	up to 56 m
Flow rate:	up to 80 m^3/h
Operating pressure:	up to 10 bar
Operating temperature:	95°C
Sterilisation temperature:	140°C (SIP)

Applications

The unique hygienic design, the use of materials and the exceptional self-priming capability make the SIPLA pump range suitable for:

Food and beverage industry

- Transfer of yeast
- Transfer of cheese whey.

Pharmaceutical industry

- Transfer of glycerine.

Other industrial applications

- CIP returned pumping.

Construction

SIPLA pumps are single-stage, self-priming side-channel pumps designed in accordance with the 3A sanitary standard.

Fig. 7 Certification

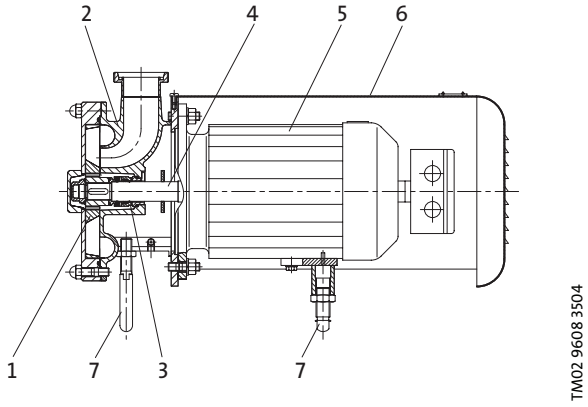
The pump housing and front cover are made of precision cast stainless steel DIN EN 1.4404 and the impeller nut of stainless steel DIN EN 1.4435, equivalent to AISI 316L.

SIPLA pumps are fitted with an open star impeller as standard.

The pump shaft is made of stainless steel DIN EN 1.4571 (equal to AISI 316TI).

Thanks to its unique side-channel design, the SIPLA pump is capable of handling liquids with a high content of air as in CIP return systems.

The pumps have a mechanical shaft seal and a fan-cooled asynchronous motor with enclosure class IP 55.



TM02 9608 3504

Fig. 8 Sectional drawing of SIPLA Bloc-SUPER on stainless steel ball feet

Materials

Pos.	Component	Material	EN/DIN
1	Impeller	CrNiMo steel	1.4404
2	Pump housing	CrNiMo steel	1.4404
3	Shaft seal	Hygienic applications: Carbon/ stainless steel /EPDM or FKM	
4	Pump shaft	CrNiMo steel	1.4571
5	Motor		
6	Shroud	Stainless steel	
7	Support	Stainless steel/cast iron	

Design variations

Hilge offers the below design variations for SIPLA pumps:

Standard variation	Short description
SIPLA Adapta® SUPER	Horizontal installation, Adapta® motor stool, motor with stainless steel shroud
SIPLA Bloc	Horizontal installation
SIPLA Bloc-SUPER	Horizontal installation, motor with stainless steel shroud
Variations on request	**Short description**
SIPLA CN	Horizontal installation, long-coupled version mounted on baseplate
SIPLA tronic	Horizontal/vertical installation, motor with built-in frequency converter (up to 7.5 kW)

For further information, see page 24.

Mechanical shaft seal

SIPLA pumps are fitted with a single inboard mechanical shaft seal with an optimum position in the pumped liquid that ensuring efficient CIP, SIP, cooling and lubrication.

As standard Hilge offers a shaft seal with seal faces of carbon/stainless steel and O-rings of either EPDM or FKM.

On request Hilge offers shaft seals with seal faces of silicon carbide/silicon carbide and an O-ring of EPDM or FKM.

For further information, see page 20.

Surface treatment

As standard all wetted parts are electro-polished to improve corrosion-resistance and surface finish.

Connections

Depending on the nominal diameter of the SIPLA pump, Hilge offers threaded pipe connections according to DIN 11851.

Optional connections are threaded connections: SMS, RJT, IDF clamp connections to DIN and clamps Tri-Clamp/Tri-Clover.

Product features and benefits

The SIPLA pumps have the following product features and benefits:

- A wide range of support possibilities for both motor and pump.
- Extremely reliable operation under most working conditions.
- Optimised hydraulics for high efficiency - reduced power consumption.
- Motors for variable speed drive with built-in frequency converter, "tronic". Available for motor sizes up to 7.5 kW.
- ATEX-certified pumps available on request.