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Lowara

GEN Series with Diesel Engine Pumps

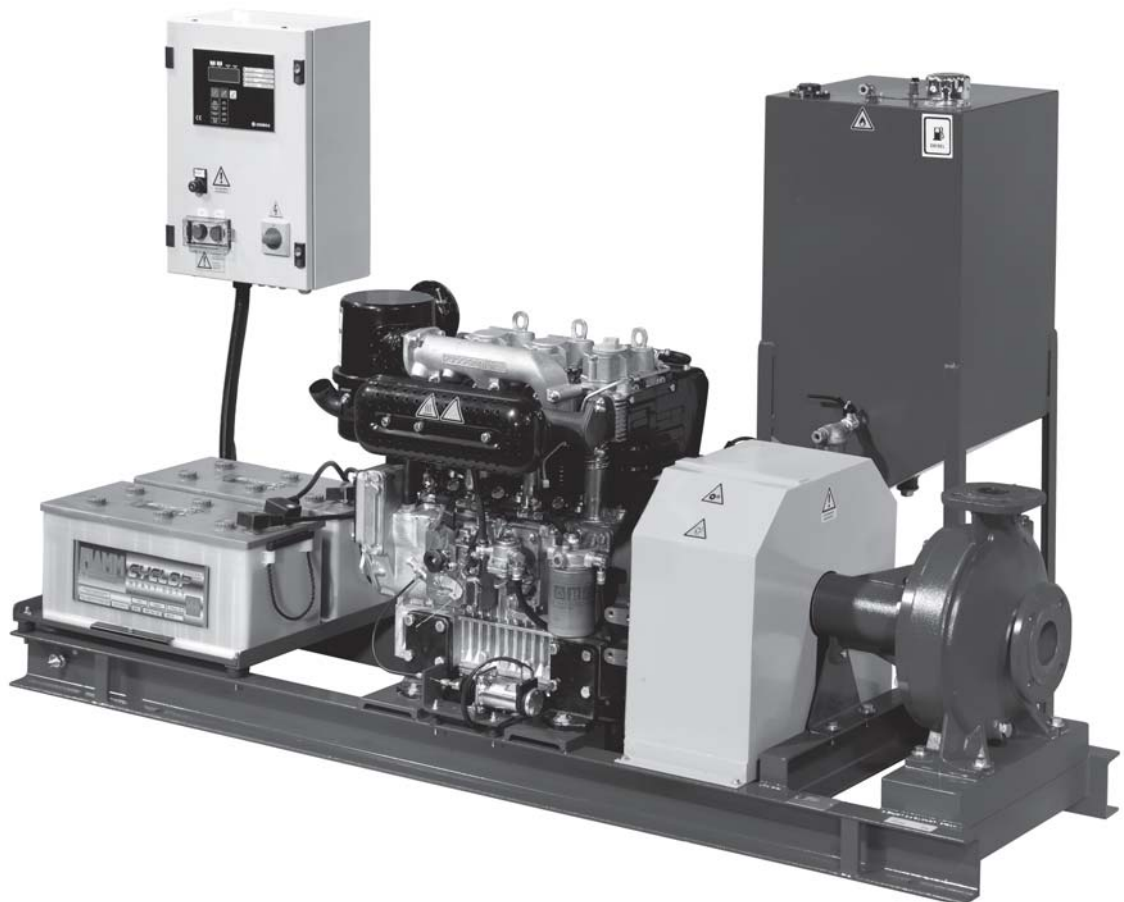
Fire-fighting booster sets

EN 12845

with horizontal centrifugal

FHF and SHF series electric/diesel engine pumps

50 Hz



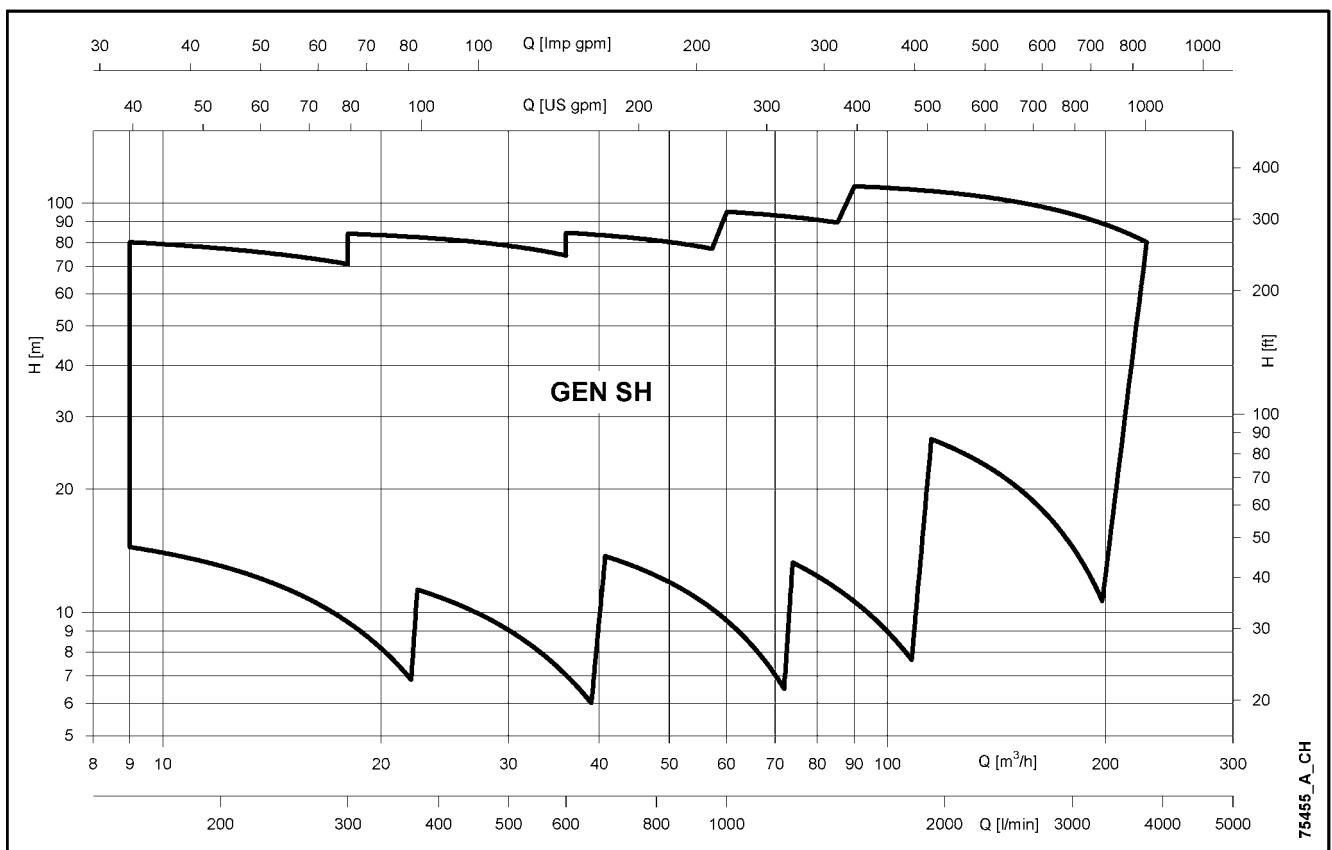
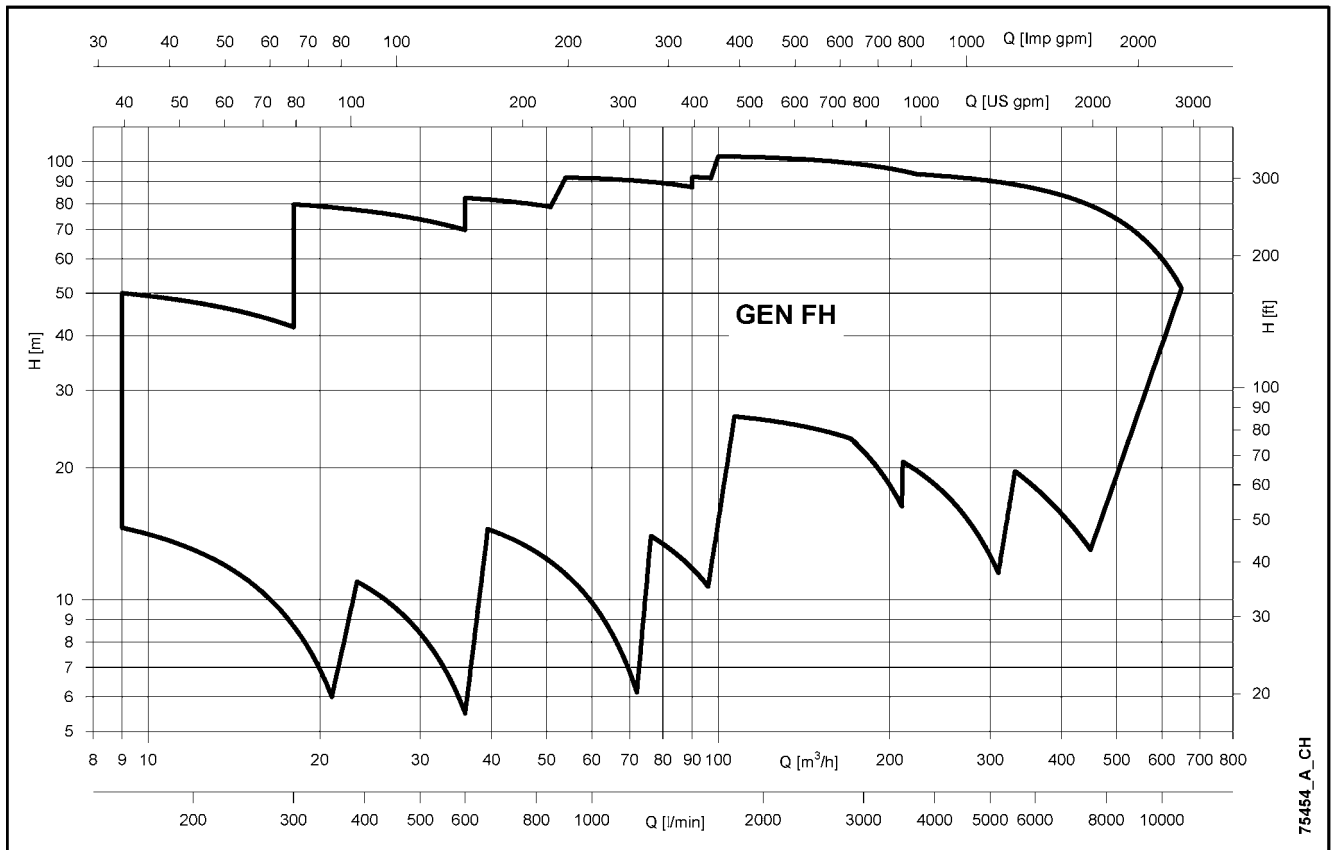
Engineered for life



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GEN00D - GEN01D - GEN10D - GEN11D SERIES HYDRAULIC PERFORMANCE RANGE AT 50 Hz





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CHARACTERISTICS OF THE ELECTRIC PUMPS USED IN GEN BOOSTER SETS SERIES

SV2, 4, 8 ELECTRIC PUMPS (JOCKEY PUMP)

- Multistage centrifugal vertical electric pumps. All metal parts in contact with pumped liquid are made of stainless steel.
- F version: round flanges, in-line discharge and suction ports, AISI 304 (Standard version).
- N version: round flanges, in-line discharge and suction ports, AISI 316 (Available on request).
- Reduced axial thrusts enable the use of **standard motors** that are easily found on the market. **The Lowara surface motors have efficiency values that fall within the range normally referred to as efficiency class 2.**
- Mechanical seal according to EN 12756 (ex DIN 24960) and ISO 3069.
- Easy maintenance. No special tools required for assembly or disassembly.

FHF32, 40, 50, 65, 80, 100, 125 PUMP SERIES

- Single impeller cast iron horizontal centrifugal pump and shaft made of AISI 316L stainless steel. End suction and radial discharge ports.
- Impeller: made of AISI 316L stainless steel laser technology welded, for sizes 32, 40, 50, 65-125, or cast iron for sizes 65-160, 65-200, 65-250, 80, 100, 125.
- Hydraulic sizes and nominal diameter DN of suction and discharge ports according to EN 733 (ex DIN 24255).
- Flanges according to EN 1092-2 (ex UNI 2236) and DIN 2532.
- Motor: motor/pump coupling with bracket, support, flexible coupling with spacer coupling and aligning and anchoring base. **The Lowara surface motors have efficiency values that fall within the range normally referred to as efficiency class 2.**
- Performances according to EN 60034-1.
- **"Back pull out"** design, impeller, adaptor and motor can be extracted without disconnecting the pump body from the pipes.

SHF32, 40, 50, 65, 80 PUMP SERIES

- Single impeller horizontal centrifugal pump with pump body and shaft made of AISI 316L stainless steel. End suction and radial discharge ports.
- Closed impeller made of AISI 316L stainless steel laser technology welded (for sizes 25, 32, 40, 50, 65-160/75 and 65-160/110A) or AISI CF8M cast stainless steel.
- Hydraulic sizes and nominal diameter DN of suction and discharge ports according to EN 733 (ex DIN 24255).
- Flanges according to EN 1092-1 (ex UNI 2236) and DIN 2532.
- Motor: motor/pump coupling with bracket, support, flexible coupling with spacer coupling and aligning and anchoring base. **The Lowara surface motors have efficiency values that fall within the range normally referred to as efficiency class 2.**
- Performances according to EN 60034-1.
- **"Back pull out"** design, impeller, adaptor and motor can be extracted without disconnecting the pump body from the pipes.

FIRE-FIGHTING DIESEL ENGINE PUMP (D..)

The main components of the diesel engine pump are:

- Diesel engine with coupling to service pump.
- Electric panel for control of diesel engine pump and battery charger.
- Diesel engine start circuit with two independent batteries.
- Double engine starting relay.
- Engine shut-off device from electric control (Electric stop).
- Fuel tank for diesel engine equipped with float.
- Base made of structural steel with epoxy powder painting RAL 5010.

The diesel engine pump is mounted on its own base complete with vibration-damping feet, and comes with a wall-mounted electric panel fitted with 3-metre cables (5 metre length available on request), fuel tank with wall or floor mounting depending on capacity, floor-mounted or on-board batteries depending on size.

A panel mounting bracket kit for floor mounting and a jockey pump kit can be supplied on request.

The installation of the diesel engine must provide for adequate ventilation and exhaust of combustion fumes.

FIRE-FIGHTING SETS WITH DIESEL ENGINE PUMP (GEN..00D)

FIRE-FIGHTING SETS WITH ELECTRIC PUMP AND DIESEL ENGINE PUMP (GEN..D)

The main components of the sets are:

- On/off valves on the delivery side of each pump, ball valves with lever handle for diameters up to 2" inclusive, butterfly valve with lever handle from DN65 to DN100 diameter, butterfly valve with handwheel and reduction manual gear for DN125 diameter and above. Monitoring of the ON/OFF status included (Lockable kit available on request).
- Re-circulation device for each service pump.
The re-circulation device allows a minimum capacity in order to prevent the pump overheating when working with closed delivery. It includes the activation pressure switch for the alarms of the pumps running, the test valve for checking the seal of the check valves, the couplings for any connecting pipes to the priming tank in the case of suction lift installation. The connection of each re-circulation to the suction tank or the priming tank is to be seen to by the person installing the equipment.
- Pressure gauge on the delivery side of each service pump between check valve and on/off valve.
- Check valve be inspected type, on the delivery side of each pump. Threaded coupling for diameters up to 2" included, flanged coupling for larger sizes.
- Painted iron delivery manifold (PN 16) and threaded stubs with relative caps for connecting any 24 litre membrane tanks. Blind and welding zinc-plated flanges.
- Two start-up pressure switches for every service pump.
For the electric service pumps, start-up takes place through the pressure switch, but it must be manually stopped using the key-operated selector switch on the panel (excluding the version with automatic shut-off). For the electric jockey pump, if present, both start-up and stopping are determined by the pressure switch.
- Start-up pressure switch circuit for the service pump, including connecting pipes for the delivery manifold, re-circulation circuit.
This circuit includes on/off valve, a non-return valve, a discharge valve and various pipe fittings. The configuration of the circuit allows the pressure switch to intervene also when the relative on/off valve is closed.
- Various pipe fittings (copper, zinc-plated steel).
- Base made of bent sheet or structural iron with epoxidic powder painting RAL 5010.
- Control panel frame made of structural iron with epoxidic powder painting RAL 5010.
- Diesel engine with coupling to service pump.
- Vibration-damping joints on discharge side.
- Electric panel for control of diesel engine pump and battery charger.
- Diesel engine start circuit with two independent batteries.
- Double engine starting relay.
- Engine shut-off device from electric control (Electric stop).

- Fuel tank for diesel engine.
- Electric panel for each electric service pump.

The diesel engine pump is mounted on its own base complete with vibration-damping feet, and comes with a wall-mounted electric panel fitted with 3-metre cables (5 metre length available on request), fuel tank with wall or floor mounting depending on capacity, floor-mounted or on-board batteries depending on size. A panel mounting bracket kit for floor mounting and a jockey pump kit can be supplied on request. The installation of the diesel engine must provide for adequate ventilation and exhaust of combustion fumes.

The control panels for the electric pumps up to 55 kW power supply are fixed on bracket. For higher powers, the control panels for electric pump service are floor mounted, instead the jockey electric pump panel is wall mounted fixed.

Sets featuring a single diesel engine pump plus jockey pump are equipped with electric jockey pump with 1 x 230V single-phase power supply.

SUCTION SIDE KIT

The set is supplied with its suction side free from components.

Upon request, for the SUCTION side of the individual service pump, TWO versions are available according to the system's installation type:

• POSITIVE SUCTION HEAD and SUCTION LIFT KIT

Kit suitable for positive suction head or suction lift installation.

The suction side of the individual pump includes:

- Expansion joint (must be fixed in the suction side of the pump).
- On/off butterfly valve with lever handle up to DN100 diameter, butterfly valve with handwheel and reduction manual gear for DN125 diameter and above. Monitoring of the ON/OFF status included (Lockable kit available on request).
- Suction flanged pipe.
- Pressure gauge.
- Weld-on flange.

Conforming to the requirements of the EN 12845 Standard (chapter 10.5 and chapter 10.6).

These requirements are connected with the type of installation and the measurement of the piping sections. (see table page 100).

OTHER VERSIONS

As well as the basic GENDB versions (direct start-up), GENYB (star triangle start-up), GENIB (impedance start-up), the following versions are also available:

• GEN..A

Basic version with periodic self-test function.

There is a self-test circuit including a weekly clock on the electric panel of each electric service pump. For the time and date pre-set, the pump is started up and kept functioning for 1 minute.

During this interval the check circuit checks that the pressure in the re-circulation circuit closes the pressure switch contact of the pump which is running. In the case of irregularities, the relative auxiliary self-test alarm relay available for remote signalling is activated and memorised.

The EN12845 Standard does not provide for the presence of a self-test circuit but asks for periodic checks to be carried out by the user, hence the periodic self-test function cannot substitute the above checks.

• GEN..X (For fire hydrant systems, UNI 10779)

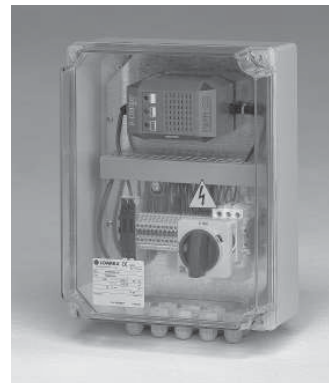
Basic version with automatic shut-off.

There is an automatic shut-off circuit on the electric panel of each electric service pump. In certain situations, it allows automatic shut-off once the system pressure has been kept at higher values than the start-up values for at least twenty minutes.

The self-test and automatic shut-off versions are available for each type of GEND.., GENY.., GENI.. start-up and in combination between them (See identification codes page).

ACCESSORIES WICH CAN BE REQUESTED

- Protection against dry running for the electric jockey pump in one of the following versions:
 - Float switch, in case of suction lift.
 - Probes kit in the case of suction lift (needs probe module optional in the electric jockey pump).
 - Minimum pressure switch, in case of positive suction head.
- QAL12845 panel for independent power supply of the audible/visual alarms for no electrical power, start-up request, pump working and no start-up, for each service pump, as outlined by EN12845 (point 10.8.6.2). The panel is made up of a casing (IP55), complete with general switch, battery charger, battery (external with relative support), terminal board. The electric connection between the contacts on the electric service pump panel, power supply panels and alarms is to be seen to by the person installing the equipment.
- ALARM KIT (three flashing yellow lights and one red).
- Circuit for test flow of the service pumps. Includes the direct reading flow meter (sized according to the capacity of the service pump) with relative piping and on/off ball valve for diameters up to 2" inclusive, butterfly valve with lever handle from DN65 to DN100 diameter, butterfly valve with handwheel and reduction manual gear for DN125 diameter and above. Monitoring of the ON/OFF status included
- Membrane tank with relative ball valve, in the same number as that of the pumps present, for dampening any pressure oscillations in the system. 24 litre model with maximum pressure 8.10 or 16 bar according to the maximum head of the pumps.
- Priming tank for each service pump, in the case of suction lift installation.
- Accessories for the priming tank suck as float switch tap, level indicator, valves, automatic air discharger on each service pump, in the case of suction lift installation.



QAL12845 Panel



Alarms



Flow meter

All the main characteristics of the priming tanks, the flow meters and the available membrane tanks are shown in the accessories section.

SPECIAL EQUIPMENT UPON REQUEST

(Contact the Sales and technical Assistance Service)

Sets for pumping sea water with electric pumps, valves, manifold and AISI 316 piping or compatible alloys.

Non-standard supply power sets.

Sets with two diesel engine service pumps.

Sets with separate electric jockey pump supplied as a kit.

Sets with different electric jockey pump from the standard one.

Sets installed inside prefabricated boxes for outdoor use.

Sets with oversized fuel tank.

Sets with diesel engine pump with compressed air start system.

Diesel engine pump with ambient air cooling device.

Notes

The set is supplied without a suction manifold in accordance with the EN12845 Standard (points 10.6.2.2 and 10.6.2.3) which provides for independent suction for each pump.

Please see the EN12845 Standard on "Fixed systems and fire extinguishing – Automatic sprinkler systems – Design, installation and maintenance" - for sizing the suction piping, define whether the installation is to be considered suction lift or positive suction head for the use limits.

The Standard ask that, whenever possible, the pumps are installed with positive suction head, otherwise priming tanks must be provided with suitable automatic devices for signalling and reintegration.

The EN12845 Standard states that the water pressure should not exceed 12 bar (point 8.2.1).

In some applications it is possible to have pressures of over 12 bar (point 8.2.2).

In this case, pump sets with higher pressures than those within the regulatory limit are used.

The catalogue also shows booster sets with pump closing head up to 150 metres suitable for such installations.

COMMAND PANEL FOR THE ELECTRIC SERVICE PUMP

Painted metal casing (IP 54) complete with:

- General door-locking switch.
- Analogical amperometer.
- "MAN – AUT – 0" selector with extractable key only in automatic position.
- Keyboard for indicating electric voltage presence, correct phase sequence (three phase power supply), start-up request, pump functioning and no start-up, through LED lamps, lamp test button and starting and stopping buttons, according to the provisions of EN12845 paragraph 10.8.6.

Inside:

- 12/24V transformer for auxiliary circuits and electronic board.
- Fuse holder and fuses for power and auxiliary circuits.
- Line contact maker (direct start-up), line and star-triangle contact makers (star-triangle start-up), line contact makers and reactance switching (impedance start-up).
- Star/triangle exchanger timer or reactance switching.
- Relay for signalling no phase.
- Auxiliary relays.
- Amperometric transformer.
- Terminal for the monitoring of the ON/OFF valve status on delivery side.
- Terminal boards.
- Clean contacts (max24V, 1A) for activating acoustic/visual alarms for no phase, pump on demand, pump running and start failure.
- Cable glands (excluding the versions to be fixed to the floor).
- Wiring diagram.



Electric service pump panel

COMMAND PANEL FOR THE ELECTRIC JOCKEY PUMP

Painted metal casing (IP 55) complete with:

- General door-locking switch.
- Visual indicators for line, running, thermal shutdown.
- Manual – automatic selector – excluded.

Inside:

- Transformer for 24V auxiliary circuits.
- Fuse holder and fuses for power and auxiliary circuits.
- Line contact maker.
- Overload cut-out switch.
- Pump shut-off timer (0 ÷ 90 s).
- Terminal boards.
- Cable glands.
- Wiring diagram.

Suitable for connecting to a float switch or a minimum pressure switch for preventing dry running. An optional level control module (supplied upon request) allows the connection of probes with the possibility of regulating the sensitivity according to the hardness of the water.



OPTIONS WHICH CAN BE REQUESTED

CP alternative

Series of clean contacts for checking the status of the electric service pump panel, as well as the contacts already provided for signalling alarms:

- No phase
- Motor running
- Selector position MAN-AUT-0
- No start-up
- Start-up request

Series of clean contacts for checking the status of the electric jockey pump:

- Pump running
- Thermal shutdown (overload)
- No water

KV alternative

Control panel for the electric service pump with analogical voltmeter and with phase switch.

IP55 alternative

Electric service pump panel with extra IP55 protection.

COMMAND PANEL FOR DIESEL ENGINE PUMP

Painted metal casing (IP 54) complete with:

- Electronic unit for control and management of the diesel engine. Display of alarms and status, battery voltage, speedometer, hour counter, alarm programming, date display, main signals and manual start button.
- Man-Auto-0 selector switch with key removable only in the auto position.
- Pair of emergency battery start buttons.
- Main door-lock switch.

Inside:

- Fuse carrier and fuses for power and auxiliary circuits.
- Pair of battery chargers 12Vdc/24Vdc.
- Control unit for management of diesel engine and alarms.
- Auxiliary relays.
- Engine heaters power supply circuits.
- Terminal for the monitoring of the ON/OFF valve status on delivery side.
- Terminal boards.
- RS232 connector for communication port.
- Cable glands.
- Wiring diagrams.

The command panel is supplied with dry contacts (max 1A, 30Vdc/125Vac/277Vac) for alarm signals:

- Non-automatic operating mode.
- Controller fault.
- Motor running.
- Failure to start.
- General alarm.

Single-phase 1x230V standard power supply.



Diesel engine pump panel

OPTIONS WHICH CAN BE REQUESTED

IP55 alternative

Diesel engine service pump panel with additional IP55 protection.

GATE VALVE LOCKABLE KIT

The main gate valves on the suction and delivery side of every service pump and in the flow meter kit are lockable. The gate valve lockable kit allows to seal the position of the valves on the wished state.

The kit includes:

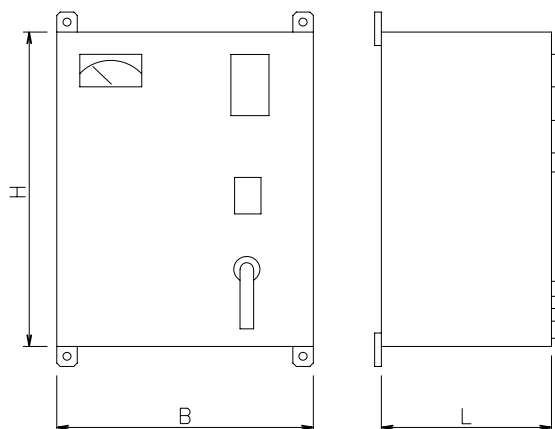
- N. 10 plastic seal.

The set is supplied already assembled, calibrated and factory tested. The set is supplied complete with an instruction manual, pump manuals and wiring diagrams for the panels.

For the sets which include floor panels, the electrical panels are sent together with the set with separate packaging and supplied with 5 metres long connecting cables (longer lengths available upon request). The preparation of the steps and laying the cables are to be seen to by the person installing the equipment.

COMMAND PANEL DIMENSIONS

SERVICE PUMP PANEL



POWER (kW)	B	L	H
from 0,7 to 7,5	400	200	500
from 11 to 15	400	200	600
from 18,5 to 30	500	200	700
from 37 to 55	600	250	800
from 75 to 90	600	300	1500
from 110 to 132	600	400	1700

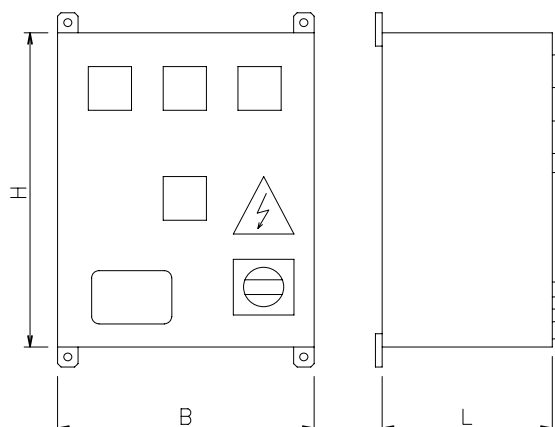
IP55: same dimensions as standard panels

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Power over 55 kW: floor cupboard

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JOCKEY PUMP PANEL

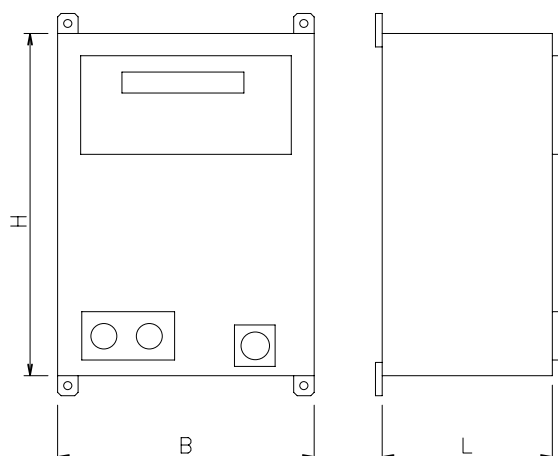


PROTECTION CLASS	B	L	H
IP54	250	160	300
IP55	250	160	300

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QE-PIL_A_DD

DIESEL ENGINE PUMP PANEL



PROTECTION CLASS	B	L	H
IP54/IP55	350	200	500

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* The control panels are included in the supply.



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EN 12845 DIESEL ENGINE PUMP TANKS DIMENSIONS AND CAPACITY

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VOLUME (litres)	B	L	H	TYPE
30	260	280	550	1
65	380	330	550	1
90	420	420	1200	2
110	420	420	1320	2
175	540	550	1280	2
240	570	570	1400	2

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EN 12845 DIESEL ENGINE PUMP TANKS COUPLING AND POSITIONING

PUMP	VOLUME (l)	D..	GEN..00D	GEN..01D	GEN..10D	GEN..11D
FHF32-125/D119	30	WALL MOUNTED	WALL MOUNTED	ON BOARD	ON BOARD	ON BOARD
FHF32-125/D136	30					
FHF32-160/D150	30					
FHF32-160/D164	30					
FHF32-200/D188	30					
FHF32-200/D204	30					
FHF40-125/D112	30	WALL MOUNTED	WALL MOUNTED	ON BOARD	ON BOARD	ON BOARD
FHF40-125/D122	30					
FHF40-125/D143	30					
FHF40-160/D159	30					
FHF40-160/D171	30					
FHF40-200/D190	30					
FHF40-200/D209	30					
FHF40-250/D218	30					
FHF40-250/D233	30					
FHF40-250/D251	30					
FHF50-125/D119	30	WALL MOUNTED	WALL MOUNTED	ON BOARD	ON BOARD	ON BOARD
FHF50-125/D130	30					
FHF50-125/D139	30					
FHF50-160/D158	30					
FHF50-160/D174	30					
FHF50-200/D197	30					
FHF50-200/D209	30					
FHF50-250/D224	30					
FHF50-250/D237	65					
FHF50-250/D250	65					
FHF65-125/D121	30	WALL MOUNTED	WALL MOUNTED	ON BOARD	ON BOARD	ON BOARD
FHF65-125/D129	30					
FHF65-125/D140	30					
FHF65-160/D161	30					
FHF65-160/D168	30					
FHF65-160/D178	30					
FHF65-200/D187	30					
FHF65-200/D198	65					
FHF65-200/D210	65					
FHF65-250/D220	65					
FHF65-250/D241	65					
FHF65-250/D258	90	ON FLOOR	ON FLOOR		ON FLOOR	
FHF80-160/D163	30	WALL MOUNTED	WALL MOUNTED	ON BOARD	ON BOARD	ON BOARD
FHF80-160/D173	30					
FHF80-200/D189	65					
FHF80-200/D207	65					
FHF80-250/D225	90	ON FLOOR	ON FLOOR	ON BOARD	ON FLOOR	ON BOARD
FHF80-250/D238	90					
FHF80-250/D256	110					

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EN 12845 DIESEL ENGINE PUMP TANKS COUPLING AND POSITIONING

PUMP	VOLUME (l)	D..	GEN..00D	GEN..01D	GEN..11D		
FHF100-160/D150	30	WALL MOUNTED	WALL MOUNTED	ON BOARD	ON BOARD		
FHF100-160/D165	65						
FHF100-160/D185	65						
FHF100-200/D168	65						
FHF100-200/D192	65						
FHF100-200/D203	90	ON FLOOR	ON FLOOR	ON BOARD	ON FLOOR		
FHF100-200/D213	90	WALL MOUNTED	WALL MOUNTED		ON BOARD		
FHF100-250/D200	65				ON FLOOR	ON FLOOR	ON FLOOR
FHF100-250/D221	90						
FHF100-250/D235	110						
FHF100-250/D254	175						
FHF100-250/D267	175						
FHF125-200/D180	65	WALL MOUNTED	WALL MOUNTED	ON BOARD	ON BOARD		
FHF125-200/D206	90	ON FLOOR	ON FLOOR	ON BOARD	ON FLOOR		
FHF125-200/D216	110						
FHF125-270/D224	175						
FHF125-270/D237	175						
FHF125-270/D253	240						
FHF125-270/D266	240						

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EN 12845 DIESEL ENGINE PUMP TANKS COUPLING AND POSITIONING

PUMP	VOLUME (l)	D..	GEN..00D	GEN..01D	GEN..10D	GEN..11D
SHF32-125/D121	30	WALL MOUNTED	WALL MOUNTED	ON BOARD	ON BOARD	ON BOARD
SHF32-125/D136	30					
SHF32-160/D150	30					
SHF32-160/D168	30					
SHF32-200/D188	30					
SHF32-200/D204	30					
SHF32-250/D222	30					
SHF32-250/D242	30					
SHF32-250/D256	30					
SHF40-125/D112	30	WALL MOUNTED	WALL MOUNTED	ON BOARD	ON BOARD	ON BOARD
SHF40-125/D126	30					
SHF40-125/D143	30					
SHF40-160/D159	30					
SHF40-160/D171	30					
SHF40-200/D190	30					
SHF40-200/D209	30					
SHF40-250/D218	30					
SHF40-250/D233	30					
SHF40-250/D251	30					
SHF50-125/D119	30	WALL MOUNTED	WALL MOUNTED	ON BOARD	ON BOARD	ON BOARD
SHF50-125/D130	30					
SHF50-125/D139	30					
SHF50-160/D158	30					
SHF50-160/D174	30					
SHF50-200/D197	30					
SHF50-200/D209	30					
SHF50-250/D224	30					
SHF50-250/D237	65					
SHF50-250/D250	65					
SHF65-160/D119	30	WALL MOUNTED	WALL MOUNTED	ON BOARD	ON BOARD	ON BOARD
SHF65-160/D129	30					
SHF65-160/D137	30					
SHF65-160/D168	30					
SHF65-160/D177	30					
SHF65-200/D192	30					
SHF65-200/D203	65					
SHF65-200/D215	65					
SHF65-250/D240	65					
SHF65-250/D255	90	ON FLOOR	ON FLOOR		ON FLOOR	
SHF80-160/D169	30	WALL MOUNTED	WALL MOUNTED	ON BOARD	ON BOARD	ON BOARD
SHF80-160/D177	30					
SHF80-160/D186	65					
SHF80-200/D198	65					
SHF80-200/D215	65					
SHF80-200/D226	90	ON FLOOR	ON FLOOR	ON BOARD	ON FLOOR	ON BOARD
SHF80-250/D237	90					
SHF80-250/D252	110					
SHF80-250/D270	175			ON FLOOR		ON FLOOR

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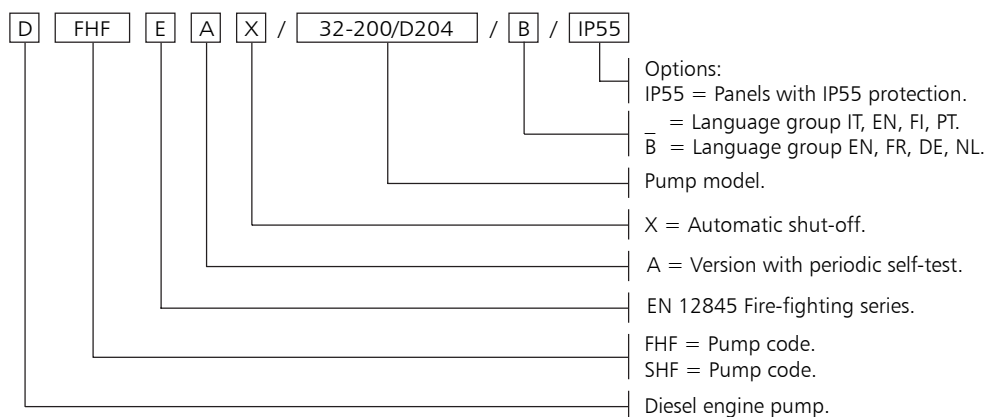


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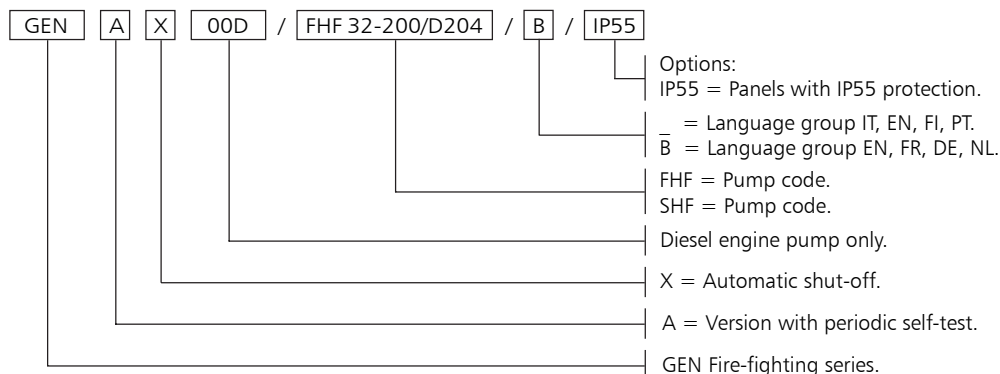
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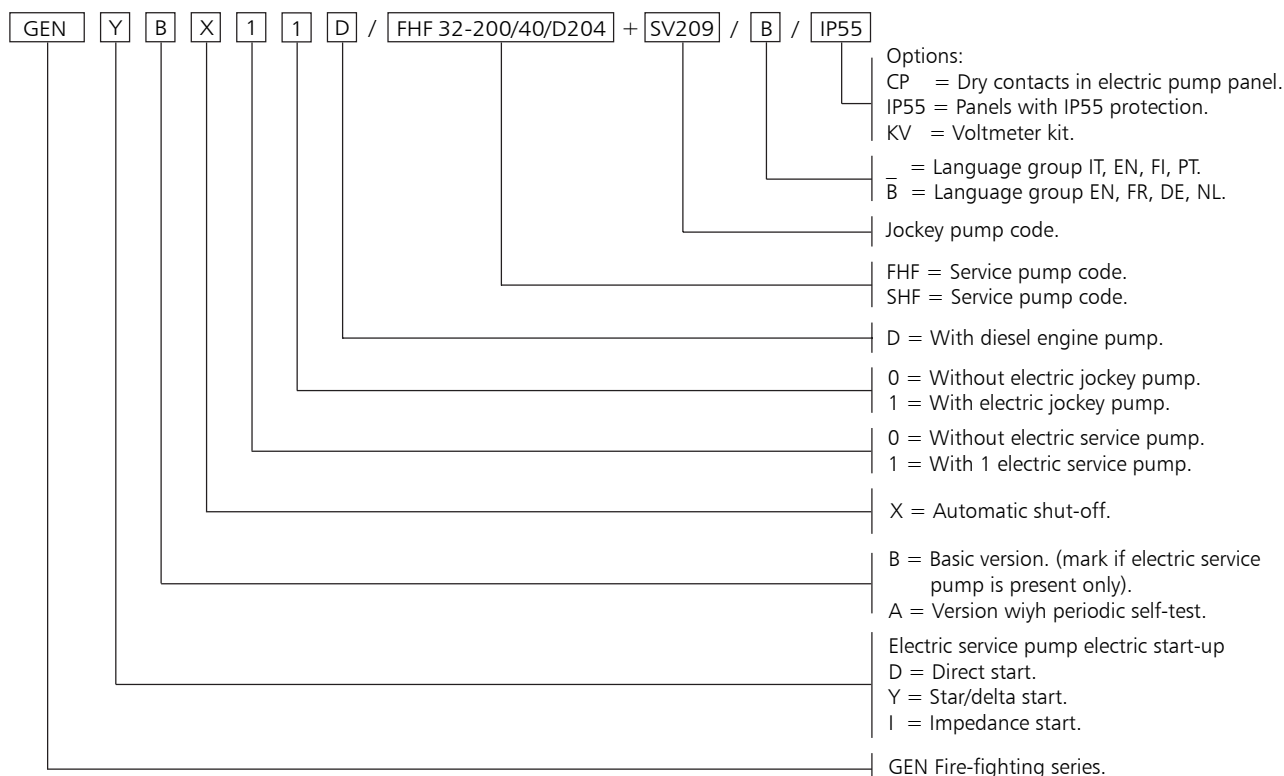
DIESEL ENGINE PUMP



DIESEL ENGINE PUMP SET



SET WITH DIESEL ENGINE PUMP AND ELECTRIC PUMP





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REFERENCE STANDARDS

- The Lowara fire-fighting booster sets are EC certified in conformity with the following directives:
 - Machine Directive 98/37/EC.
 - Low Voltage Directive 2006/95/CE.
 - Electromagnetic Compatibility Directive 89/336/EEC and subsequent modifications.
- The electric pump performance is declared to be in accordance with the following standard:
ISO 9906-A Rotodynamic pumps – hydraulic performance tests and acceptance criteria.
- The fire-fighting booster sets conform to the European fire-fighting Standard EN 12845-2004.
The automatic shut-off versions also conform to the UNI 10779 Italian Standard for hydrant systems.

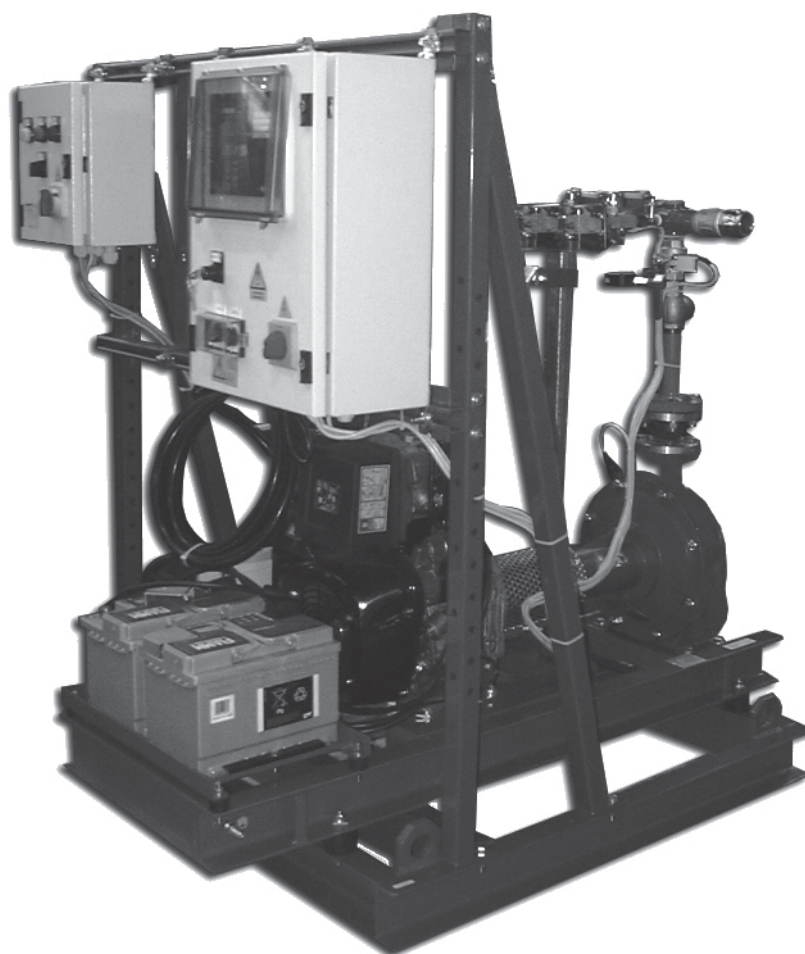


Lowara

GEN..D/FHF Series

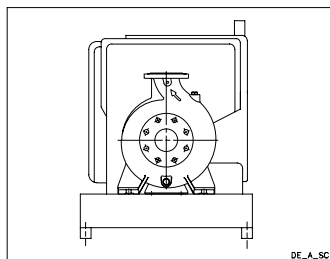
Fire-fighting booster sets
EN 12845
with horizontal centrifugal
FHF series electric/diesel engine pumps

50 Hz

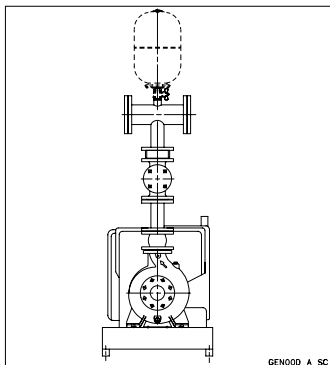




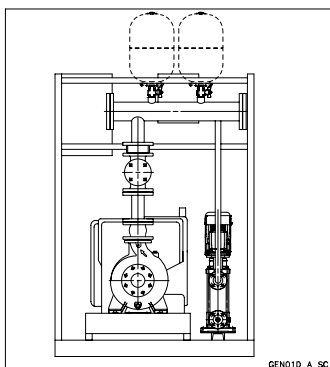
Lowara

RANGE


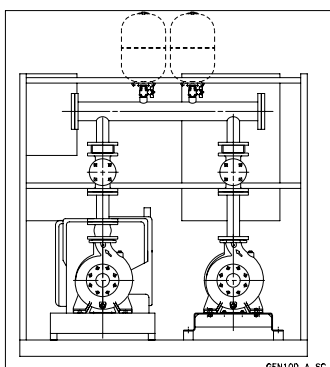
DE_A_SC



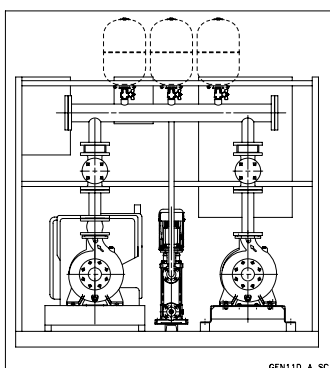
GEN00D_A_SC



GEN01D_A_SC



GEN10D_A_SC



GEN11D_A_SC

GEN..D/FHF RANGE

- The EN 12845 series of fire-fighting booster sets with a diesel engine service pump and an electric service pump, plus an optional jockey pump, is designed to meet the specific requirements of each application.

D.. DIESEL ENGINE PUMP

- Single fire-fighting centrifugal pump in horizontal design with cast iron casing, FHF series.

Head up to 100 m.
Flow up to 650 m³/h.

GEN..00D SERIES

- Fire-fighting sets with diesel engine centrifugal service pump, in horizontal design with cast iron casing, FHF series.

Head up to 100 m.
Flow up to 650 m³/h.

GEN..01D SERIES

- Fire-fighting sets with diesel engine service pump and electric jockey pump. The centrifugal service pump has horizontal design and cast iron casing. FHF series.

Head up to 100 m.
Flow up to 650 m³/h.

GEN..10D SERIES

- Fire-fighting sets with diesel engine service pump and electric service pump. The centrifugal service pump, FHF series, has horizontal design and cast iron casing.

Head up to 100 m.
Flow up to 1300 m³/h.

GEN..11D SERIES

- Fire-fighting sets with diesel engine service pump, electric service pump and electric jockey pump. The centrifugal service pump, FHF series, has horizontal design and cast iron casing.

Head up to 100 m.
Flow up to 1300 m³/h.



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GEN..D/FHF BOOSTER SETS SERIES HYDRAULIC PERFORMANCE TABLE AT 50 HZ (JOCKEY PUMP)

PUMP TYPE	NOMINAL POWER		Q = DELIVERY									
			l/min 0	20	30	40	50	60	70	100	120	133
	kW	HP	m³/h 0	1,2	1,8	2,4	3	3,6	4,2	6	7,2	8
			H = TOTAL HEAD METRES COLUMN OF WATER									
SV2 04	0,55	0,75	42,5	37,5	34	30,5	26	20,5	15			
SV2 06	0,75	1	64	56	51	45,5	38,5	31	22			
SV2 09	1,1	1,5	96	84	76,5	68,5	58	46,5	32,5			
SV2 12	1,5	2	128	112	102	91	77	62	44			
SV2 15	2,2	3	160,2	140	128	114	97	78	55,9			
SV4 07	1,1	1,5	70			59,5	56	53	51	37	26	18
SV4 09	1,5	2	90			76,5	73	68,5	65,5	47	33,5	23
SV4 13	2,2	3	131			111	105	99	95	68	48	34

Performance in accordance with the ISO 9906 - Annex A Standard.

EN12845_pp_sv2-4-2p50-en_a_th

PUMP TYPE	NOMINAL POWER		Q = DELIVERY							
			l/min 0	100	120	133	150	167	200	233
	kW	HP	m³/h 0	6	7,2	8	9	10	12	14
			H = TOTAL HEAD METRES COLUMN OF WATER							
SV8 05	2,2	3	68	62	60	57,5	55	51	43	33
SV8 06	3	4	82	74,5	71	69	66	61,5	52	40
SV8 07	4	5,5	95,9	87	88	80	76	71	60	46,2
SV8 09	4	5,5	123	112	107	104	97,5	92	78	60

Performance in accordance with the ISO 9906 - Annex A Standard.

EN12845_pp_sv8-2p50-en_a_th



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Lowara

GEN..D/FHF 32-80 BOOSTER SETS SERIES

HYDRAULIC PERFORMANCE TABLE AT 50 HZ (1 SERVICE PUMP)

TYPE		NOMINAL POWER kW	Q = DELIVERY																			
FHF..			l/min 0	100	150	250	300	400	450	600	700	800	900	1200	1400	1500	1800	2000	2300	3000	3500	
ELECTRIC PUMP	PUMP		m³/h 0	6	9	15	18	24	27	36	42	48	54	72	84	90	108	120	138	180	210	
H = TOTAL HEAD METRES COLUMN OF WATER																						
32-125/07	32-125/D119	1 x 0,75	16,9		14,6	11	8,7															
32-125/11	32-125/D136	1 x 1,1	21,9		19,6	16,3	14,2	9														
32-160/15	32-160/D150	1 x 1,5	27,3		24,5	20,5	17,8	11														
32-160/22	32-160/D164	1 x 2,2	34,7		32	28	25,3	18,8	15													
32-200/30	32-200/D188	1 x 3	44,2		39,8	35,2	32,2	24,6	19,8													
32-200/40	32-200/D204	1 x 4	54,4		50	45	41,9	34,6	30,3													
40-125/11	40-125/D112	1 x 1,1	14,5				13	11,3	10,1	5,8												
40-125/15	40-125/D122	1 x 1,5	18,1				16,7	15	13,9	9,6	6											
40-125/22	40-125/D143	1 x 2,2	24,5				23	21	20,1	15,8	12,3	8,2										
40-160/30	40-160/D159	1 x 3	31,5				29,4	27,5	26,1	21,5	17,4											
40-160/40	40-160/D171	1 x 4	38				36,2	34	33	28,5	24,5	20,1										
40-200/55	40-200/D190	1 x 5,5	46,5				44	41,5	40,2	34,5	29,5											
40-200/75	40-200/D209	1 x 7,5	57				54	52	50	45,5	41	36,1										
40-250/110A	40-250/D218	1 x 11	64				59	56	55	49	45	39,5										
40-250/110	40-250/D233	1 x 11	72				67,5	65	63	57	52	47										
40-250/150	40-250/D251	1 x 15	85				80	77	75	70	65	60										
50-125/22	50-125/D119	1 x 2,2	17							15,1	14	12,8	11,4	6,2								
50-125/30	50-125/D130	1 x 3	20							18,8	18	16,9	15,6	10,5								
50-125/40	50-125/D139	1 x 4	24							23,1	22,5	21,5	20,3	15,8	11,8							
50-160/55	50-160/D158	1 x 5,5	32							30,6	29,5	28	26,6	20,5	14,8							
50-160/75	50-160/D174	1 x 7,5	40							38	37	36	34,4	29	24	21						
50-200/110A	50-200/D197	1 x 11	50,5							46,8	45	43	40,9	32,5	25,7							
50-200/110	50-200/D209	1 x 11	58							54	53	50	48,3	40	33	29						
50-250/150	50-250/D224	1 x 15	68							64	63	61	59	50	41							
50-250/185	50-250/D237	1 x 18,5	77							73	72	70	68	60	52	47						
50-250/220	50-250/D250	1 x 22	86							82,5	81	80	78	70	61	57						
65-125/40	65-125/D121	1 x 4	19									17,3	16,8	14,5	13	11,8						
65-125/55	65-125/D129	1 x 5,5	23									21,3	20,9	19	17,5	16,7	13,7					
65-125/75	65-125/D140	1 x 7,5	27									26	25,6	24,5	23	22,5	20	18				
65-160/110A	65-160/D161	1 x 11	33										31,5	30	28	27,1	24	21,5				
65-160/110	65-160/D168	1 x 11	36										34,5	33	31,5	30,8	28	25,5				
65-160/150	65-160/D178	1 x 15	42										41	40	38,5	37,8	35	33	29,5			
65-200/150	65-200/D187	1 x 15	45										45,5	43	41	40,2	36,5	34				
65-200/185	65-200/D198	1 x 18,5	52										52	51	49	48	44,5	42				
65-200/220	65-200/D210	1 x 22	59										59,5	58	56	55	52	49,5	44,5			
65-250/220	65-250/D220	1 x 22	62										61	58	56	54	48,5	44				
65-250/300	65-250/D241	1 x 30	76										74,5	73	71	69	64	61	54			
65-250/370	65-250/D258	1 x 37	90										88	86	84	83	78	75	68			
80-160/150	80-160/D163	1 x 15	33													32,5	31	30	28	22	16,5	
80-160/185	80-160/D173	1 x 18,5	39													38	36,5	35,5	34	28,5	23,3	
80-200/220	80-200/D189	1 x 22	48													47	45	43,5	41	32,5	24,5	
80-200/300	80-200/D207	1 x 30	60													59,5	58	57	54,5	47	40,5	
80-250/370	80-250/D225	1 x 37	71													70	67	65	61	49	38	
80-250/450	80-250/D238	1 x 45	80													80,5	78	76	73	62	51	
80-250/550	80-250/D256	1 x 55	92													93	91	90	87	77	68	

Performance in accordance with the ISO 9906 - Annex A Standard.

12845_1p-fhf-2p50-en_a_th

Performance relative to 1 service pump.



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Lowara

GEN..D/FHF 100-125 BOOSTER SETS SERIES

HYDRAULIC PERFORMANCE TABLE AT 50 HZ (1 SERVICE PUMP)

TYPE		NOMINAL POWER	Q = DELIVERY														
FHF..			l/min 0	1333	1500	1667	2000	2500	3333	4167	5000	5833	6667	8333	9167	10000	10833
ELECTRIC PUMP	PUMP		m³/h 0	80	90	100	120	150	200	250	300	350	400	500	550	600	650
		kW	H = TOTAL HEAD METRES COLUMN OF WATER														
100-160/185	100-160/D150	1 x 18,5	26,7	26,8	26,6	26	25,8	24,5	21,4	17,4	12,6						
100-160/220	100-160/D165	1 x 22	33	33	32,7	32,4	31,6	30	26,6	22,2	16,8						
100-160/300	100-160/D185	1 x 30	42,3	42	42	42	41	39	36	31,5	26	19,6					
100-200/185	100-200/D168	1 x 18,5	36,4		34,5	34	32,4	29,5	23,2	15,2							
100-200/300	100-200/D192	1 x 30	49		48,5	48	47	45	40	33,2	24,6						
100-200/370	100-200/D203	1 x 37	56		55,6	55	54	52	48	41,0	33,2						
100-200/450	100-200/D213	1 x 45	61		61	61	60	59	55	49	41	31,6					
100-250/300	100-250/D200	1 x 30	54,6			53,3	52	48	41	29,5	14,9						
100-250/450	100-250/D221	1 x 45	68,8			68,1	67	65	58	49	36,3						
100-250/550	100-250/D235	1 x 55	78,5			78,1	77	75	70	62	49	34					
100-250/750	100-250/D254	1 x 75	91,8			91,7	91	89	85	78	68	54					
100-250/900	100-250/D267	1 x 90	103			102,8	102	101	97	90	80	66	49				
125-200/300	125-200/D180	1 x 30	32,4				30,5	29,1	26,5	23,9	21,4	19	16,2				
125-200/450	125-200/D206	1 x 45	47				45,5	44	42	39,2	36,2	32,9	29,4	21,0			
125-200/550	125-200/D216	1 x 55	57,3				55,7	55	53	50	47	44	39,5	29,5	23,5		
125-270/750	125-270/D224	1 x 75	64,9					64,6	63	60	57	54	50	40	34,1		
125-270/900	125-270/D237	1 x 90	75,1					74,5	73	71	68	65	61	51	46	36,7	
125-270/1100	125-270/D253	1 x 110	87,6					86,7	85	83	80	77	74	64	56	47	
125-270/1320	125-270/D266	1 x 132	96,8					96,1	94	92	90	87	83	75	69	61	50,7

Performance in accordance with the ISO 9906 - Annex A Standard.

12845-1p_fhf100-125-2p50-en_a_th

Performance relative to 1 service pump.



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Lowara

GEN..D/FHF 32-80 BOOSTER SETS SERIES

HYDRAULIC PERFORMANCE TABLE AT 50 HZ (2 SERVICE PUMPS)

TYPE		NOMINAL POWER	Q = DELIVERY																		
ELECTRIC PUMP	PUMP		l/min 0	200	300	500	600	800	900	1200	1400	1600	1800	2400	2800	3000	3600	4000	4600	6000	7000
			m³/h 0	12	18	30	36	48	54	72	84	96	108	144	168	180	216	240	276	360	420
			H = TOTAL HEAD METRES COLUMN OF WATER																		
32-125/07	32-125/D119	2 x 0,75	16,9		14,6	11	8,7														
32-125/11	32-125/D136	2 x 1,1	21,9		19,6	16,3	14,2	9													
32-160/15	32-160/D150	2 x 1,5	27,3		24,5	20,5	17,8	11													
32-160/22	32-160/D164	2 x 2,2	34,7		32	28	25,3	18,8	15												
32-200/30	32-200/D188	2 x 3	44,2		39,8	35,2	32,2	24,6	19,8												
32-200/40	32-200/D204	2 x 4	54,4		50	45	41,9	34,6	30,3												
40-125/11	40-125/D112	2 x 1,1	14,5				13	11,3	10,1	5,8											
40-125/15	40-125/D122	2 x 1,5	18,1				16,7	15	13,9	9,6	6										
40-125/22	40-125/D143	2 x 2,2	24,5				23	21	20,1	15,8	12,3	8,2									
40-160/30	40-160/D159	2 x 3	31,5				29,4	27,5	26,1	21,5	17,4										
40-160/40	40-160/D171	2 x 4	38				36,2	34	33	28,5	24,5	20,1									
40-200/55	40-200/D190	2 x 5,5	46,5				44	41,5	40,2	34,5	29,5										
40-200/75	40-200/D209	2 x 7,5	57				54	52	50	45,5	41	36,1									
40-250/110A	40-250/D218	2 x 11	64				59	56	55	49	45	39,5									
40-250/110	40-250/D233	2 x 11	72				67,5	65	63	57	52	47									
40-250/150	40-250/D251	2 x 15	85				80	77	75	70	65	60									
50-125/22	50-125/D119	2 x 2,2	17							15,1	14	12,8	11,4	6,2							
50-125/30	50-125/D130	2 x 3	20							18,8	18	16,9	15,6	10,5							
50-125/40	50-125/D139	2 x 4	24							23,1	22,5	21,5	20,3	15,8	11,8						
50-160/55	50-160/D158	2 x 5,5	32							30,6	29,5	28	26,6	20,5	14,8						
50-160/75	50-160/D174	2 x 7,5	40							38	37	36	34,4	29	24	21					
50-200/110A	50-200/D197	2 x 11	50,5							46,8	45	43	40,9	32,5	25,7						
50-200/110	50-200/D209	2 x 11	58							54	53	50	48,3	40	33	29					
50-250/150	50-250/D224	2 x 15	68							64	63	61	59	50	41						
50-250/185	50-250/D237	2 x 18,5	77							73	72	70	68	60	52	47					
50-250/220	50-250/D250	2 x 22	86							82,5	81	80	78	70	61	57					
65-125/40	65-125/D121	2 x 4	19									17,3	16,8	14,5	13	11,8					
65-125/55	65-125/D129	2 x 5,5	23									21,3	20,9	19	17,5	16,7	13,7				
65-125/75	65-125/D140	2 x 7,5	27									26	25,6	24,5	23	22,5	20	18			
65-160/110A	65-160/D161	2 x 11	33										31,5	30	28	27,1	24	21,5			
65-160/110	65-160/D168	2 x 11	36										34,5	33	31,5	30,8	28	25,5			
65-160/150	65-160/D178	2 x 15	42										41	40	38,5	37,8	35	33	29,5		
65-200/150	65-200/D187	2 x 15	45										45,5	43	41	40,2	36,5	34			
65-200/185	65-200/D198	2 x 18,5	52										52	51	49	48	44,5	42			
65-200/220	65-200/D210	2 x 22	59										59,5	58	56	55	52	49,5	44,5		
65-250/220	65-250/D220	2 x 22	62										61	58	56	54	48,5	44			
65-250/300	65-250/D241	2 x 30	76										74,5	73	71	69	64	61	54		
65-250/370	65-250/D258	2 x 37	90										88	86	84	83	78	75	68		
80-160/150	80-160/D163	2 x 15	33													32,5	31	30	28	22	16,5
80-160/185	80-160/D173	2 x 18,5	39													38	36,5	35,5	34	28,5	23,3
80-200/220	80-200/D189	2 x 22	48													47	45	43,5	41	32,5	24,5
80-200/300	80-200/D207	2 x 30	60													59,5	58	57	54,5	47	40,5
80-250/370	80-250/D225	2 x 37	71													70	67	65	61	49	38
80-250/450	80-250/D238	2 x 45	80													80,5	78	76	73	62	51
80-250/550	80-250/D256	2 x 55	92													93	91	90	87	77	68

Performance in accordance with the ISO 9906 - Annex A Standard.

12845_2p-fhf-2p50-en_a_th

Performance relative to 2 service pumps.



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Lowara

GEN..D/FHF 100-125 BOOSTER SETS SERIES HYDRAULIC PERFORMANCE TABLE AT 50 HZ (2 SERVICE PUMPS)

TYPE		NOMINAL POWER kW	Q = DELIVERY															
FHF..			l/min 0	2666	3000	3334	4000	5000	6666	8334	10000	11666	13334	16666	18334	20000	21666	
ELECTRIC PUMP	PUMP		m³/h 0	160	180	200	240	300	400	500	600	700	800	1000	1100	1200	1300	
			H = TOTAL HEAD METRES COLUMN OF WATER															
100-160/185	100-160/D150	2 x 18,5	26,7	26,8	26,6	26	25,8	24,5	21,4	17,4	12,6							
100-160/220	100-160/D165	2 x 22	33	33	32,7	32,4	31,6	30	26,6	22,2	16,8							
100-160/300	100-160/D185	2 x 30	42,3	42	42	42	41	39	36	31,5	26	19,6						
100-200/185	100-200/D168	2 x 18,5	36,4		34,5	34	32,4	29,5	23,2	15,2								
100-200/300	100-200/D192	2 x 30	49		48,5	48	47	45	40	33,2	24,6							
100-200/370	100-200/D203	2 x 37	56		56	55	54	52	48	41	33							
100-200/450	100-200/D213	2 x 45	61,0		61	60,7	60	59	55	49,0	41,4	31,6						
100-250/300	100-250/D200	2 x 30	54,6			53,3	52	48	41	30	14,9							
100-250/450	100-250/D221	2 x 45	68,8			68,1	67	65	58	49	36							
100-250/550	100-250/D235	2 x 55	78,5			78,1	77	75	70	62	49	34,0						
100-250/750	100-250/D254	2 x 75	91,8			91,7	91	89	85	78	68	54						
100-250/900	100-250/D267	2 x 90	103			102,8	102	101	97	90	80	66	49					
125-200/300	125-200/D180	2 x 30	32,4				30,5	29,1	26,5	23,9	21,4	19	16,2					
125-200/450	125-200/D206	2 x 45	47				45,5	44	42	39,2	36,2	32,9	29,4	21,0				
125-200/550	125-200/D216	2 x 55	57,3				55,7	55	53	50	47	44	39,5	29,5	23,5			
125-270/750	125-270/D224	2 x 75	64,9					65	63	60	57	54	50	40,2	34,1			
125-270/900	125-270/D237	2 x 90	75,1					74,5	73	71	68	65	61	51	46,0	36,7		
125-270/1100	125-270/D253	2 x 110	87,6					86,7	85	83	80	77	74	64	56	46,9		
125-270/1320	125-270/D266	2 x 132	96,8					96,1	94	92	90	87	83	75	69	61	50,7	

Performance in accordance with the ISO 9906 - Annex A Standard.

12845-2p_fhf100-125-2p50-en_a_th

Performance relative to 2 service pumps.

GEN..D/FHF 32-80 BOOSTER SETS **ELECTRICAL DATA TABLE AT 50 Hz**

SERVICE PUMP 3 X 400 V				ELECTRIC JOCKEY PUMP				CURRENT (*) ABSORBED SET			
TYPE FHF..		NOMINAL POWER				1x230V	3x400V	1 x 230V		3x400	
ELECTRIC PUMP	PUMP	Pn kW	In A	TYPE	Pn kW	In A	In A	GEN..00D A	GEN..01D A	GEN..10D A	GEN..11D A
32-125/07	32-125/D119	0,75	2,02	SV206	0,75	5,05	2,02	3	8,05	5,02	7,04
32-125/11	32-125/D136	1,1	2,61	SV206	0,75	5,05	2,02	3	8,05	5,61	7,63
32-160/15	32-160/D150	1,5	3,45	SV206	0,75	5,05	2,02	3	8,05	6,45	8,47
32-160/22	32-160/D164	2,2	5,03	SV206	0,75	5,05	2,02	3	8,05	8,03	10,1
32-200/30	32-200/D188	3	6,01	SV206	0,75	5,05	2,02	3	8,05	9,01	11,0
32-200/40	32-200/D204	4	8,09	SV209	1,1	6,82	2,61	3	9,82	11,1	13,7
40-125/11	40-125/D112	1,1	2,61	SV206	0,75	5,05	2,02	3	8,05	5,61	7,63
40-125/15	40-125/D122	1,5	3,45	SV206	0,75	5,05	2,02	3	8,05	6,45	8,47
40-125/22	40-125/D143	2,2	5,03	SV206	0,75	5,05	2,02	3	8,05	8,03	10,05
40-160/30	40-160/D159	3	6,01	SV206	0,75	5,05	2,02	3	8,05	9,01	11,03
40-160/40	40-160/D171	4	8,09	SV206	0,75	5,05	2,02	3	8,05	11,09	13,11
40-200/55	40-200/D190	5,5	10,1	SV206	0,75	5,05	2,02	3	8,05	13,1	15,1
40-200/75	40-200/D209	7,5	13,7	SV209	1,1	6,82	2,61	3	9,82	16,7	19,3
40-250/110A	40-250/D218	11	20,1	SV209	1,1	6,82	2,61	3	9,82	23,1	25,7
40-250/110	40-250/D233	11	20,1	SV209	1,1	6,82	2,61	3	9,82	23,1	25,71
40-250/150	40-250/D251	15	26,7	SV209	1,1	6,82	2,61	3	9,82	29,7	32,31
50-125/22	50-125/D119	2,2	5,03	SV206	0,75	5,05	2,02	3	8,05	8,03	10,1
50-125/30	50-125/D130	3	6,01	SV206	0,75	5,05	2,02	3	8,05	9,01	11,0
50-125/40	50-125/D139	4	8,09	SV206	0,75	5,05	2,02	3	8,05	11,09	13,1
50-160/55	50-160/D158	5,5	10,1	SV206	0,75	5,05	2,02	3	8,05	13,1	15,1
50-160/75	50-160/D174	7,5	13,7	SV206	0,75	5,05	2,02	3	8,05	16,7	18,7
50-200/110A	50-200/D197	11	20,1	SV209	1,1	6,82	2,61	3	9,82	23,1	25,7
50-200/110	50-200/D209	11	20,1	SV209	1,1	6,82	2,61	3	9,82	23,1	25,71
50-250/150	50-250/D224	15	26,7	SV209	1,1	6,82	2,61	3	9,82	29,7	32,31
50-250/185	50-250/D237	18,5	32,8	SV209	1,1	6,82	2,61	3	9,82	35,8	38,4
50-250/220	50-250/D250	22	38,7	SV209	1,1	6,82	2,61	3	9,82	41,7	44,3
65-125/40	65-125/D121	4	8,09	SV206	0,75	5,05	2,02	3	8,05	11,09	13,1
65-125/55	65-125/D129	5,5	10,1	SV206	0,75	5,05	2,02	3	8,05	13,1	15,1
65-125/75	65-125/D140	7,5	13,7	SV206	0,75	5,05	2,02	3	8,05	16,7	18,7
65-160/110A	65-160/D161	11	20,1	SV206	0,75	5,05	2,02	3	8,05	23,1	25,1
65-160/110	65-160/D168	11	20,1	SV206	0,75	5,05	2,02	3	8,05	23,1	25,12
65-160/150	65-160/D178	15	26,7	SV206	0,75	5,05	2,02	3	8,05	29,7	31,7
65-200/150	65-200/D187	15	26,7	SV206	0,75	5,05	2,02	3	8,05	29,7	31,7
65-200/185	65-200/D198	18,5	32,8	SV209	1,1	6,82	2,61	3	9,82	35,8	38,4
65-200/220	65-200/D210	22	38,7	SV209	1,1	6,82	2,61	3	9,82	41,7	44,3
65-250/220	65-250/D220	22	38,7	SV209	1,1	6,82	2,61	3	9,82	41,7	44,3
65-250/300	65-250/D241	30	54	SV209	1,1	6,82	2,61	3	9,82	57	59,6
65-250/370	65-250/D258	37	65	SV212	1,5	8,9	3,45	3	11,9	68	71,5
80-160/150	80-160/D163	15	26,7	SV407	1,1	6,82	2,61	3	9,82	29,7	32,3
80-160/185	80-160/D173	18,5	32,8	SV407	1,1	6,82	2,61	3	9,82	35,8	38,4
80-200/220	80-200/D189	22	38,7	SV407	1,1	6,82	2,61	3	9,82	41,7	44,3
80-200/300	80-200/D207	30	54	SV409	1,5	8,9	3,45	3	11,9	57	60,5
80-250/370	80-250/D225	37	65	SV409	1,5	8,9	3,45	3	11,9	68	71,5
80-250/450	80-250/D238	45	80	SV409	1,5	8,9	3,45	3	11,9	83	86,5
80-250/550	80-250/D256	55	99	SV413	2,2	12,8	5,03	3	15,8	102	107,0

ENMTP-FHF_2p50-en_a_te



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GEN..D/FHF 100-125 BOOSTER SETS ELECTRICAL DATA TABLE AT 50 Hz

SERVICE PUMP 3 X 400 V				ELECTRIC JOCKEY PUMP				CURRENT (*) ABSORBED SET			
TYPE FHF..		NOMINAL POWER		TIPO	Pn kW	1x230V		1 x 230V		3x400	
ELECTRIC PUMP	PUMP	Pn kW	In A			In A	In A	GEN..00D A	GEN..01D A	GEN..10D A	GEN..11D A
100-160/185	100-160/D150	18,5	32,8	SV407	1,1	6,82	2,61	3	9,82	35,8	38,41
100-160/220	100-160/D165	22	38,7	SV407	1,1	6,82	2,61	3	9,82	41,7	44,31
100-160/300	100-160/D185	30	54	SV407	1,1	6,82	2,61	3	9,82	57	59,61
100-200/185	100-200/D168	18,5	32,8	SV407	1,1	6,82	2,61	3	9,82	35,8	38,4
100-200/300	100-200/D192	30	54	SV407	1,1	6,82	2,61	3	9,82	57	59,6
100-200/370	100-200/D203	37	65	SV407	1,1	6,82	2,61	3	9,82	68	70,6
100-200/450	100-200/D213	45	80	SV409	1,5	8,9	3,45	3	11,9	83	86,45
100-250/300	100-250/D200	30	54	SV407	1,1	6,82	2,61	3	9,82	57	59,61
100-250/450	100-250/D221	45	80	SV409	1,5	8,9	3,45	3	11,9	83	86,45
100-250/550	100-250/D235	55	99	SV409	1,5	8,9	3,45	3	11,9	102	105,45
100-250/750	100-250/D254	75	133	SV413	2,2	12,8	5,03	3	15,8	136	141,03
100-250/900	100-250/D267	90	157	SV413	2,2	12,8	5,03	3	15,8	160	165,0
125-200/300	125-200/D180	30	54	SV805	2,2	12,8	5,03	3	15,8	57	62,0
125-200/450	125-200/D206	45	80	SV805	2,2	12,8	5,03	3	15,8	83,0	88,0
125-200/550	125-200/D216	55	99	SV806	3	-	6,01	3	-	102	108,01
125-270/750	125-270/D224	75	133	SV806	3	-	6,01	3	-	136,0	142,0
125-270/900	125-270/D237	90	157	SV807	4	-	8,02	3	-	160	168,0
125-270/1100	125-270/D253	110	196	SV807	4	-	8,02	4,5	-	200,5	208,5
125-270/1320	125-270/D266	132	235	SV809	4	-	8,02	4,5	-	239,5	247,5

ENMTP-FHF100_2p50-en_a_te

(*)The current indicated is the maximum current absorbed.

At the set 3x400V three phase power supply GEN..10D e GEN..11D to add the control panel current of the engine pump (GEN..0D), 1x230V single phase

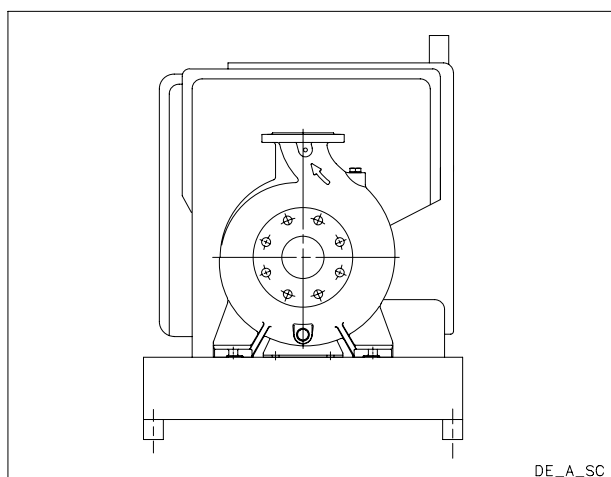
The sets GEN..01D have the electric jockey pump 1x230V single phase power supply.

**Fire-fighting
booster sets
EN 12845**
MARKET SECTORS

CIVIL, INDUSTRIAL

APPLICATIONS

- Fixed fire-fighting systems.
Automatic Sprinkler systems.

**DFHF
Series**

SPECIFICATIONS

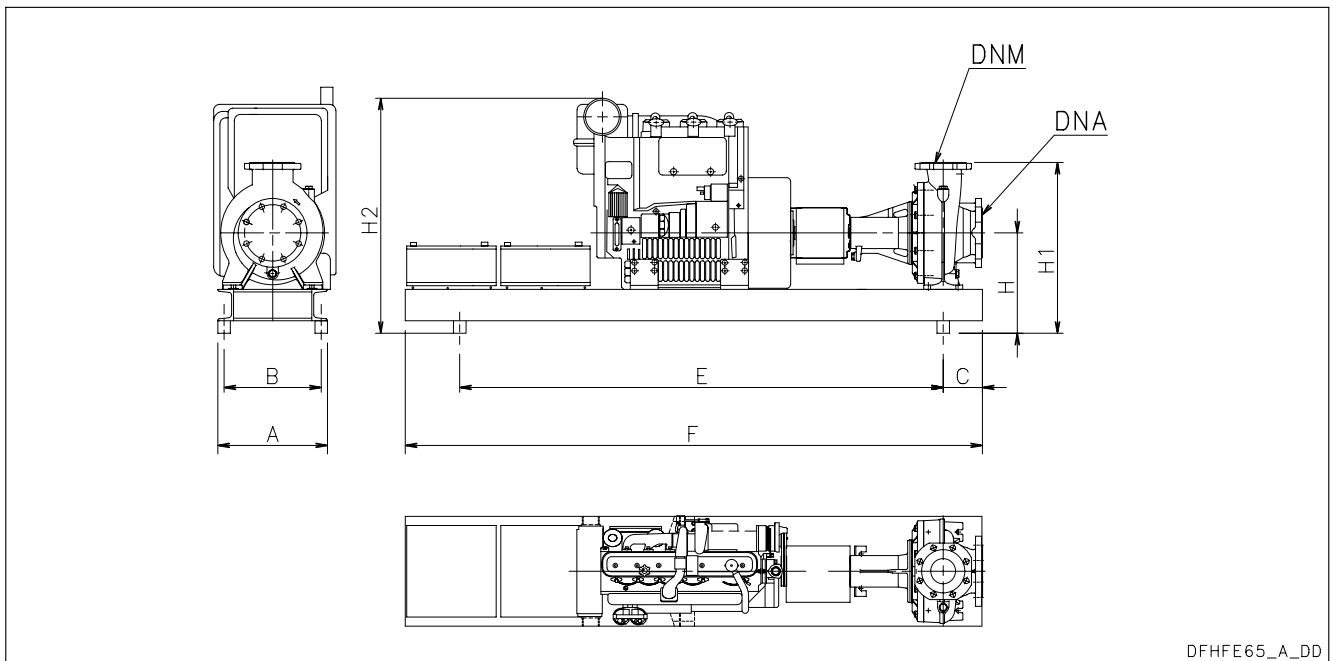
- **Flow** up to 650 m³/h.
- **Head** up to 100 m.
- Panel supply power voltage:
1 x 230V ± 10%.
- Frequency: 50 Hz.
- Voltage for controls outside panel:
12 - 24 Vac.
- Protection grade:
- electric panel: IP54.
- Electric pumps maximum power
132 kW.
- Diesel engine with battery start.
- **Diesel engine service pump
in horizontal design:**
- FHF series.
- Maximum running pressure: 12 bar.



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DIESEL ENGINE PUMP, DFHF 32-80 SERIES FIRE-FIGHTING EN 12845



DFHFE65_A_DD

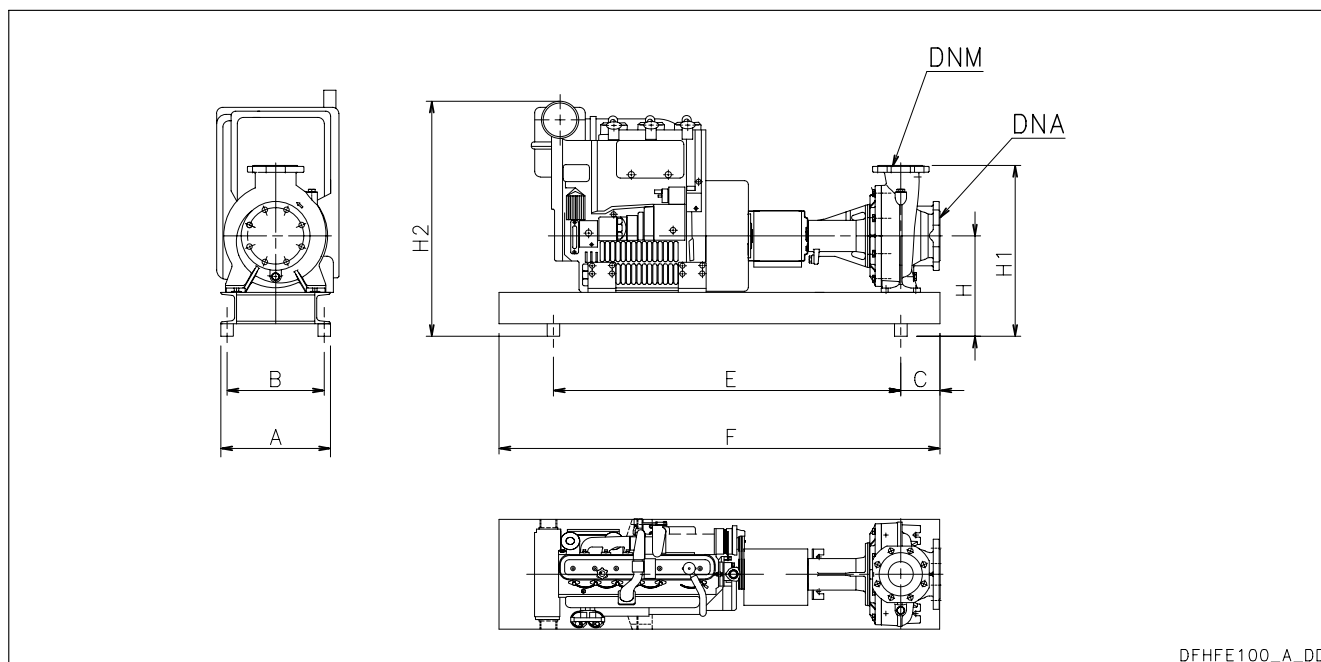
For the dimensions of diesel tanks, see tables pag. 14-16.

**DIESEL ENGINE PUMP, DFHF 32-80 SERIES
FIRE-FIGHTING EN 12845**

D..	DNA	DNM	A	B	C	E	F	H	H1	H2
FHFE32-125/D119	R 2"	32	400	350	80	900	1165	262	402	630
FHFE32-125/D136	R 2"	32	400	350	80	900	1165	262	402	630
FHFE32-160/D150	R 2"	32	400	350	80	900	1165	282	442	650
FHFE32-160/D164	R 2"	32	400	350	80	900	1165	282	442	650
FHFE32-200/D188	R 2"	32	400	350	80	900	1165	260	440	630
FHFE32-200/D204	R 2"	32	500	450	80	1000	1240	310	490	710
FHFE40-125/D112	65	40	400	350	80	900	1165	262	402	630
FHFE40-125/D122	65	40	400	350	80	900	1165	262	402	630
FHFE40-125/D143	65	40	400	350	80	900	1165	262	402	630
FHFE40-160/D159	65	40	400	350	80	900	1165	282	442	650
FHFE40-160/D171	65	40	400	350	80	900	1165	282	442	650
FHFE40-200/D190	65	40	500	450	100	1000	1240	310	490	710
FHFE40-200/D209	65	40	500	450	100	1000	1350	310	490	720
FHFE40-250/D218	65	40	530	480	100	1200	1350	280	505	690
FHFE40-250/D233	65	40	530	480	100	1200	1650	330	555	800
FHFE40-250/D251	65	40	530	480	100	1200	1650	330	555	800
FHFE50-125/D119	65	50	400	350	100	900	1165	282	442	650
FHFE50-125/D130	65	50	400	350	100	900	1165	282	442	650
FHFE50-125/D139	65	50	500	450	100	1000	1165	282	442	650
FHFE50-160/D158	65	50	500	450	100	1000	1240	310	490	710
FHFE50-160/D174	65	50	500	450	100	1000	1350	310	490	720
FHFE50-200/D197	65	50	530	480	100	1200	1350	310	510	720
FHFE50-200/D209	65	50	530	480	100	1200	1650	360	560	830
FHFE50-250/D224	65	50	530	480	100	1200	1650	330	555	800
FHFE50-250/D237	65	50	530	480	100	1500	1950	330	555	800
FHFE50-250/D250	65	50	530	480	100	1500	1950	380	605	900
FHFE65-125/D121	80	65	500	450	100	1000	1165	310	490	710
FHFE65-125/D129	80	65	500	450	100	1000	1240	310	490	710
FHFE65-125/D140	80	65	500	450	100	1000	1350	310	490	720
FHFE65-160/D161	80	65	530	480	100	1200	1350	310	510	720
FHFE65-160/D168	80	65	530	480	100	1200	1650	360	560	830
FHFE65-160/D178	80	65	530	480	100	1200	1650	360	560	830
FHFE65-200/D187	80	65	530	480	100	1200	1650	330	555	800
FHFE65-200/D198	80	65	530	480	100	1500	1950	330	555	800
FHFE65-200/D210	80	65	530	480	100	1500	1950	380	605	800
FHFE65-250/D220	80	65	530	480	100	1500	2050	360	610	880
FHFE65-250/D241	80	65	640	590	100	1800	2200	360	610	1000
FHFE65-250/D258	80	65	640	590	100	1800	2200	360	610	1010
FHFE80-160/D163	100	80	530	480	125	1200	1650	330	555	800
FHFE80-160/D173	100	80	530	480	125	1500	1700	330	555	800
FHFE80-200/D189	100	80	530	480	125	1500	2050	380	630	900
FHFE80-200/D207	100	80	640	590	125	1800	2200	360	610	1000
FHFE80-250/D225	100	80	640	590	125	1800	2200	360	640	1010
FHFE80-250/D238	100	80	640	590	125	1880	2200	365	645	1010
FHFE80-250/D256	100	80	660	610	125	1880	2350	390	670	1080

Dimensions in mm. Tolerance ± 10 mm.

d_fhfe-en_b_td

**DIESEL ENGINE PUMP, DFHF 100-125 SERIES
FIRE-FIGHTING EN 12845**


For the dimensions of diesel tanks, see tables pag. 14-16.

D..	DNA	DNM	A	B	C	E	F	H	H1	H2
FHFE100-160/D150	125	100	530	480	125	1500	2050	348	628	870
FHFE100-160/D165	125	100	530	480	125	1500	2050	398	678	870
FHFE100-160/D185	125	100	640	590	125	1800	2200	348	628	990
FHFE100-200/D168	125	100	530	480	125	1500	2050	373	653	800
FHFE100-200/D192	125	100	640	590	125	1800	2200	373	653	1010
FHFE100-200/D203	125	100	640	590	125	1880	2200	373	653	1000
FHFE100-200/D213	125	100	640	590	125	1800	2200	368	648	1010
FHFE100-250/D200	125	100	640	590	140	1880	2200	348	628	990
FHFE100-250/D221	125	100	640	590	140	1880	2250	348	628	1000
FHFE100-250/D235	125	100	640	590	140	1880	2350	393	673	1080
FHFE100-250/D254	125	100	700	650	140	1300	2100	373	653	1040
FHFE100-250/D267	125	100	700	650	140	1300	2100	373	653	1040
FHFE125-200/D180	150	125	640	590	140	1880	2300	373	688	1010
FHFE125-200/D206	150	125	640	590	140	1880	2250	343	658	1000
FHFE125-200/D216	150	125	640	590	140	1880	2350	393	708	1080
FHFE125-270/D224	150	125	700	650	140	1300	2100	423	778	1090
FHFE125-270/D237	150	125	700	650	140	1300	2100	423	778	1100
FHFE125-270/D253	150	125	700	650	140	1300	2150	478	833	1280
FHFE125-270/D266	150	125	700	650	140	1300	2150	478	833	1280

Dimensions in mm. Tolerance ± 10 mm.

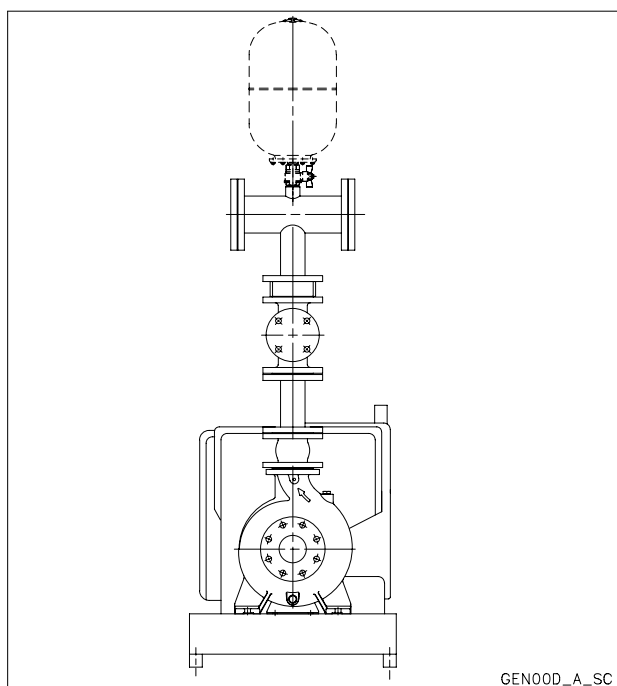
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**Fire-fighting
booster sets
EN 12845**
MARKET SECTORS

CIVIL, INDUSTRIAL

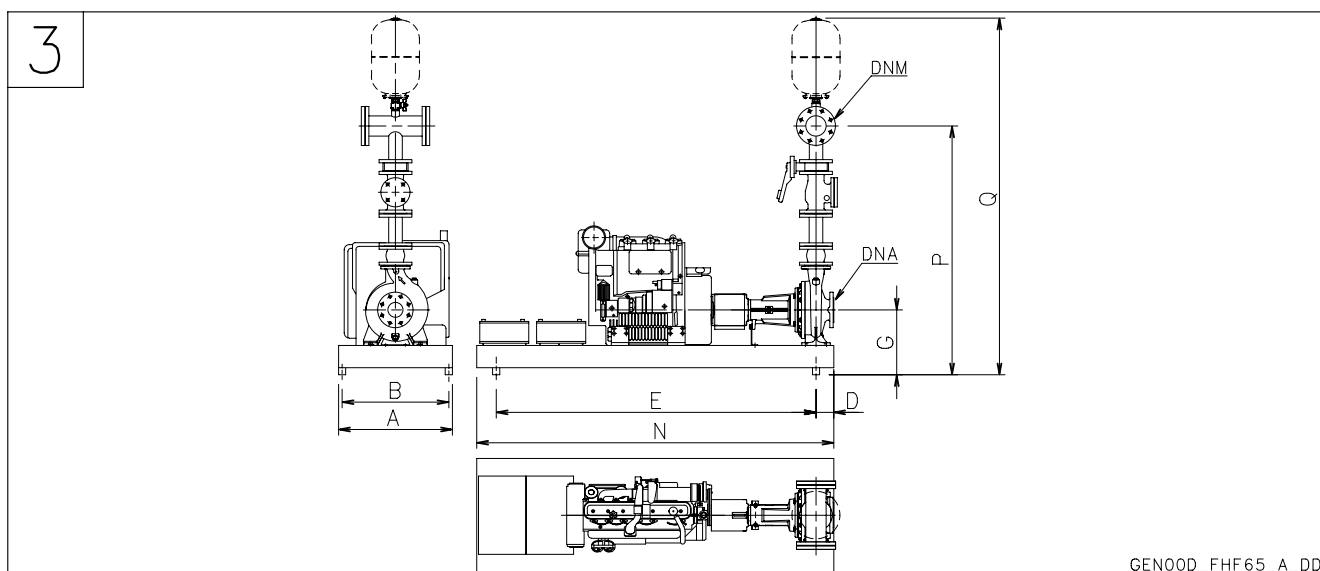
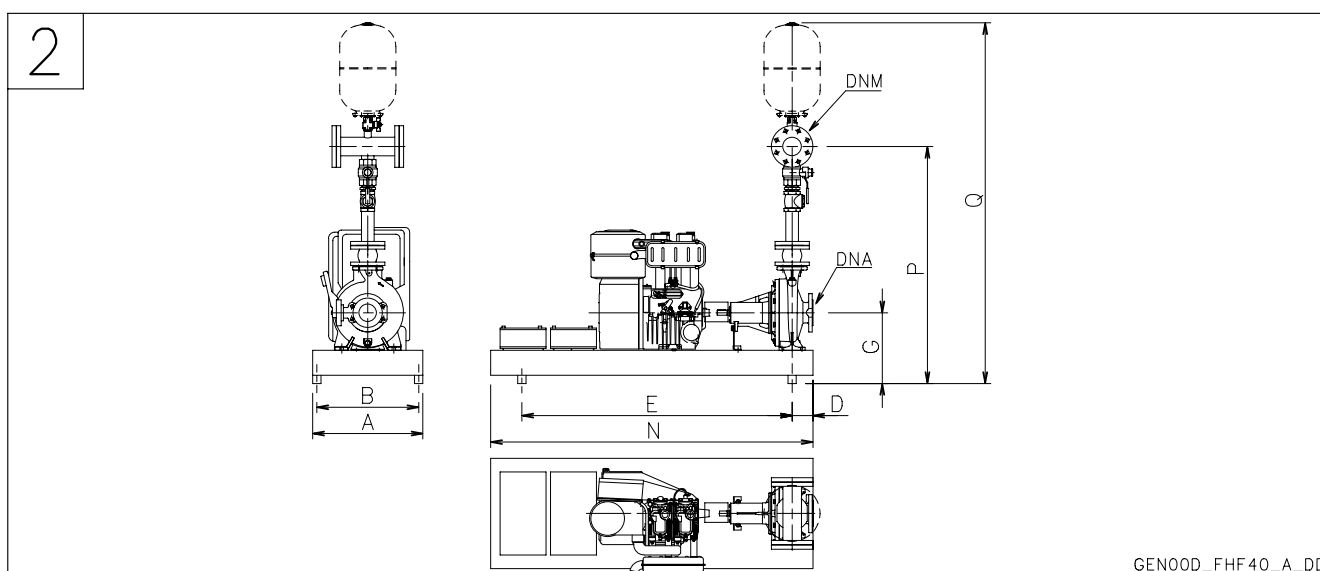
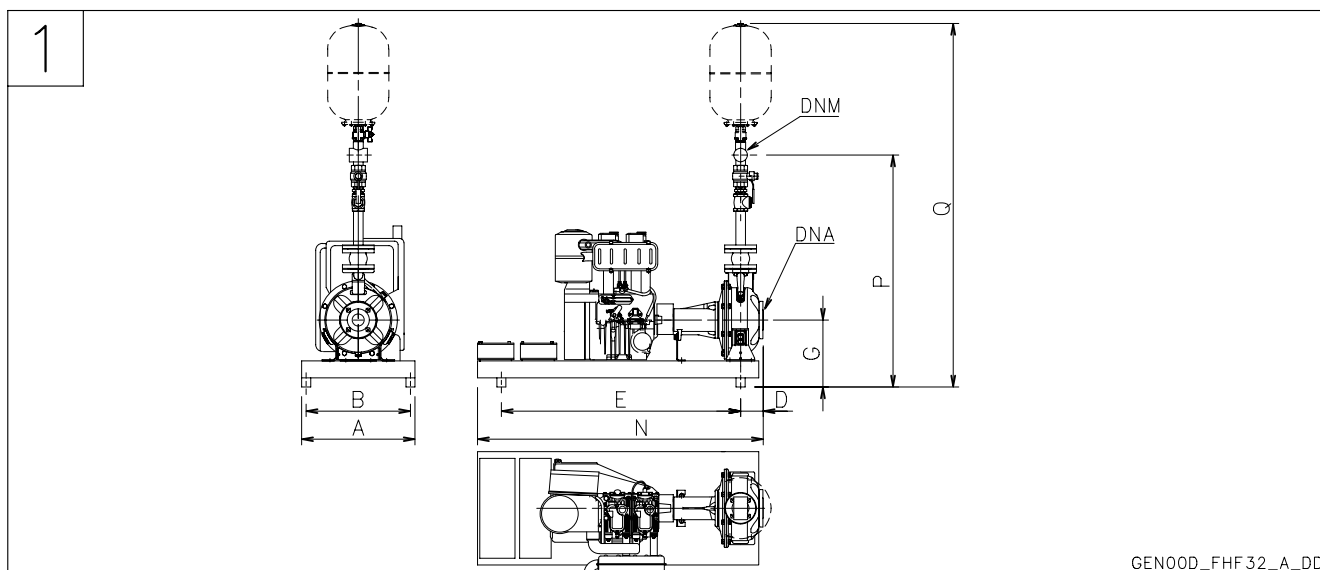
APPLICATIONS

- Fixed fire-fighting systems.
- Automatic Sprinkler systems.

**GEN..00D/FHF
Series**

SPECIFICATIONS

- **Flow** up to 650 m³/h.
- **Head** up to 100 m.
- Panel supply power voltage:
1 x 230V ± 10%.
- Frequency: 50 Hz.
- Voltage for controls outside panel:
12 - 24 Vac.
- Protection grade:
- electric panel: IP54.
- Electric pumps maximum power
132 kW.
- Diesel engine with battery start.
- **Diesel engine service pump
in horizontal design:**
- FHF series.
- Maximum running pressure: 12 bar.

GEN..00D/FHF 32-80 SERIES FIRE-FIGHTING BOOSTER SETS EN 12845



For the dimensions of diesel tanks, see tables pag. 14-16.

**GEN..00D/FHF 32-80 SERIES
FIRE-FIGHTING BOOSTER SETS EN 12845**

GEN..00D	DIS N°	DNA	DNM	A	B	D	E	G	N	P	Q	FLUSS N°
FHF32-125/D119	1	R 2"	R 1"1/2	400	350	80	900	262	1165	889	1463	1
FHF32-125/D136	1	R 2"	R 1"1/2	400	350	80	900	262	1165	889	1463	1
FHF32-160/D150	1	R 2"	R 1"1/2	400	350	80	900	282	1165	929	1503	1
FHF32-160/D164	1	R 2"	R 1"1/2	400	350	80	900	282	1165	929	1503	1
FHF32-200/D188	1	R 2"	R 1"1/2	400	350	80	900	260	1165	927	1501	1
FHF32-200/D204	1	R 2"	R 1"1/2	500	450	80	1000	310	1240	977	1551	1
FHF40-125/D112	2	65	65	400	350	80	900	262	1165	927	1515	4
FHF40-125/D122	2	65	65	400	350	80	900	262	1165	927	1515	5
FHF40-125/D143	2	65	65	400	350	80	900	262	1165	927	1515	5
FHF40-160/D159	2	65	65	400	350	80	900	282	1165	967	1555	5
FHF40-160/D171	2	65	65	400	350	80	900	282	1165	967	1555	5
FHF40-200/D190	2	65	65	500	450	100	1000	310	1240	1015	1603	5
FHF40-200/D209	2	65	65	500	450	100	1000	310	1350	1015	1603	5
FHF40-250/D218	2	65	65	530	480	100	1200	280	1350	1030	1618	5
FHF40-250/D233	2	65	65	530	480	100	1200	330	1650	1080	1668	5
FHF50-125/D119	2	65	65	400	350	100	900	282	1165	1007	1595	50
FHF50-125/D130	2	65	65	400	350	100	900	282	1165	1007	1595	50
FHF50-125/D139	2	65	65	500	450	100	1000	282	1165	1007	1595	50
FHF50-160/D158	2	65	65	500	450	100	1000	310	1240	1055	1643	50
FHF50-160/D174	2	65	65	500	450	100	1000	310	1350	1055	1643	50
FHF50-200/D197	2	65	65	530	480	100	1200	310	1350	1075	1663	50
FHF50-200/D209	2	65	65	530	480	100	1200	360	1650	1125	1713	50
FHF50-250/D224	2	65	65	530	480	100	1200	330	1650	1120	1708	50
FHF50-250/D237	2	65	65	530	480	100	1500	330	1950	1120	1708	50
FHF50-250/D250	2	65	65	530	480	100	1500	380	1950	1170	1758	48
FHF65-125/D121	3	80	80	500	450	100	1000	310	1165	1289	1883	7
FHF65-125/D129	3	80	80	500	450	100	1000	310	1240	1289	1883	7
FHF65-125/D140	3	80	80	500	450	100	1000	310	1350	1289	1883	57
FHF65-160/D161	3	80	80	530	480	100	1200	310	1350	1309	1903	57
FHF65-160/D168	3	80	80	530	480	100	1200	360	1650	1359	1953	57
FHF65-160/D178	3	80	80	530	480	100	1200	360	1650	1359	1953	57
FHF65-200/D187	3	80	80	530	480	100	1200	330	1650	1354	1948	57
FHF65-200/D198	3	80	80	530	480	100	1500	330	1950	1354	1948	57
FHF65-200/D210	3	80	80	530	480	100	1500	380	1950	1404	1998	57
FHF65-250/D220	3	80	80	530	480	100	1500	360	2050	1409	2003	57
FHF65-250/D241	3	80	80	640	590	100	1800	360	2200	1409	2003	57
FHF65-250/D258	3	80	80	640	590	100	1800	360	2200	1409	2003	57
FHF80-160/D163	3	100	100	530	480	125	1200	330	1650	1407	2014	10
FHF80-160/D173	3	100	100	530	480	125	1500	330	1700	1407	2014	10
FHF80-200/D189	3	100	100	530	480	125	1500	380	2050	1482	2089	10
FHF80-200/D207	3	100	100	640	590	125	1800	360	2200	1462	2069	10
FHF80-250/D225	3	100	100	640	590	125	1800	360	2200	1492	2099	10
FHF80-250/D238	3	100	100	640	590	125	1880	365	2200	1497	2104	10
FHF80-250/D256	3	100	100	660	610	125	1880	390	2350	1522	2129	10

Dimensions in mm. Tolerance ± 10 mm.

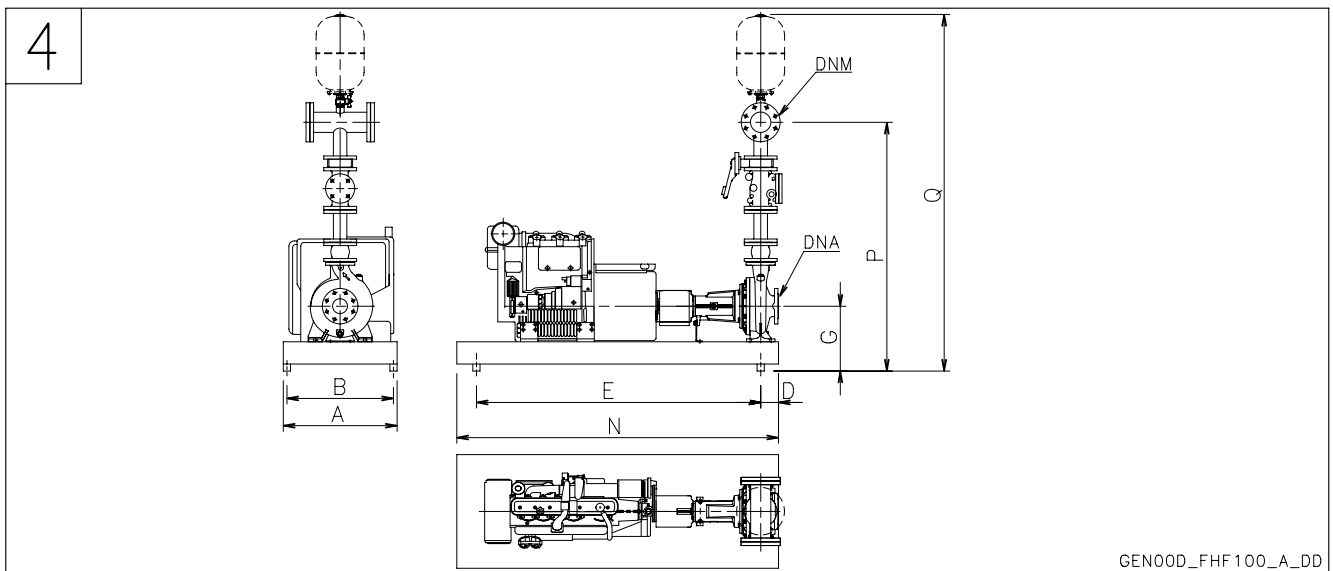
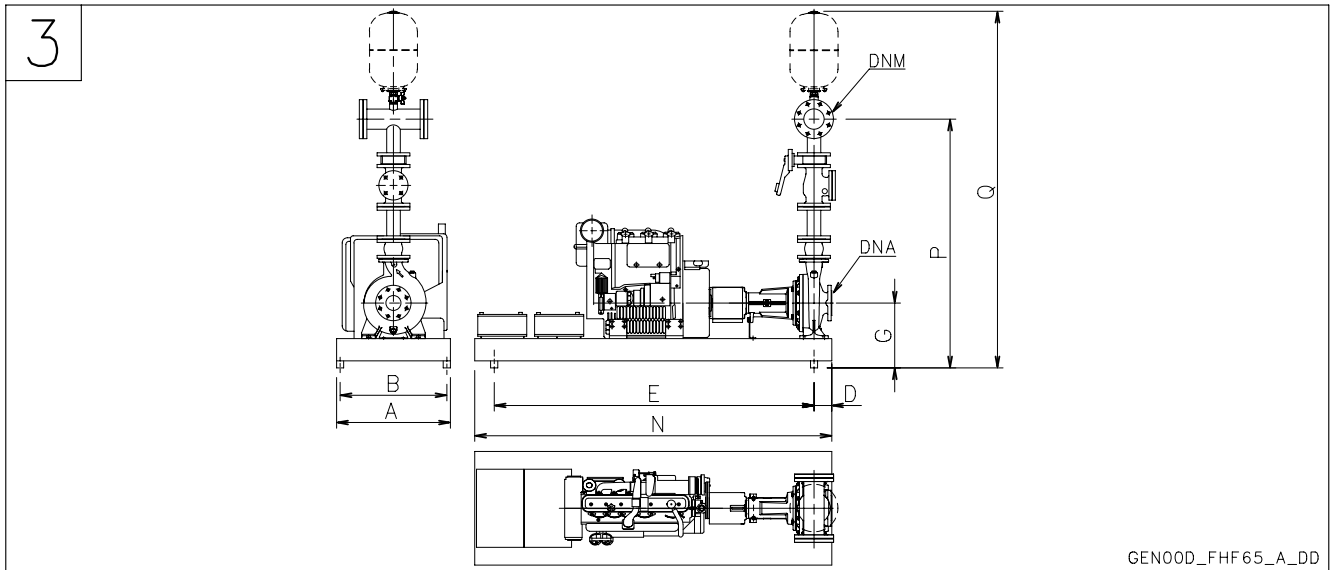
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GEN..00D/FHF 100-125 SERIES FIRE-FIGHTING BOOSTER SETS EN 12845



For the dimensions of diesel tanks, see tables pag. 14-16.

**GEN..00D/FHF 100-125 SERIES
FIRE-FIGHTING BOOSTER SETS EN 12845**

GEN..00D	DRW N°	DNA	DNM	A	B	D	E	G	N	P	Q	FLOW METER N°
FHF100-160/D150	3	125	125	530	480	125	1500	348	2050	1538	2158	57
FHF100-160/D165	3	125	125	530	480	125	1500	398	2050	1588	2208	57
FHF100-160/D185	3	125	125	640	590	125	1800	348	2200	1538	2158	57
FHF100-200/D168	3	125	125	530	480	125	1500	373	2050	1563	2183	57
FHF100-200/D192	3	125	125	640	590	125	1800	373	2200	1563	2183	57
FHF100-200/D203	3	125	125	640	590	125	1880	373	2200	1563	2183	57
FHF100-200/D213	3	125	125	640	590	125	1800	368	2200	1558	2178	57
FHF100-250/D200	3	125	125	640	590	140	1880	348	2200	1538	2158	10
FHF100-250/D221	3	125	125	640	590	140	1880	348	2250	1538	2158	10
FHF100-250/D235	3	125	125	640	590	140	1880	393	2350	1583	2203	10
FHF100-250/D254	4	125	125	700	650	140	1300	373	2100	1563	2183	10
FHF100-250/D267	4	125	125	700	650	140	1300	373	2100	1563	2183	10
FHF125-200/D180	3	150	150	640	590	140	1880	373	2300	1731	2365	10
FHF125-200/D206	3	150	150	640	590	140	1880	343	2250	1701	2335	10
FHF125-200/D216	3	150	150	640	590	140	1880	393	2350	1751	2385	14
FHF125-270/D224	4	150	150	700	650	140	1300	423	2100	1821	2455	14
FHF125-270/D237	4	150	150	700	650	140	1300	423	2100	1821	2455	14
FHF125-270/D253	4	150	150	700	650	140	1300	478	2150	1876	2510	14
FHF125-270/D266	4	150	150	700	650	140	1300	478	2150	1876	2510	14

Dimensions in mm. Tolerance ± 10 mm.

gen00d_fhf100-en_a_td



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Fire-fighting booster sets EN 12845

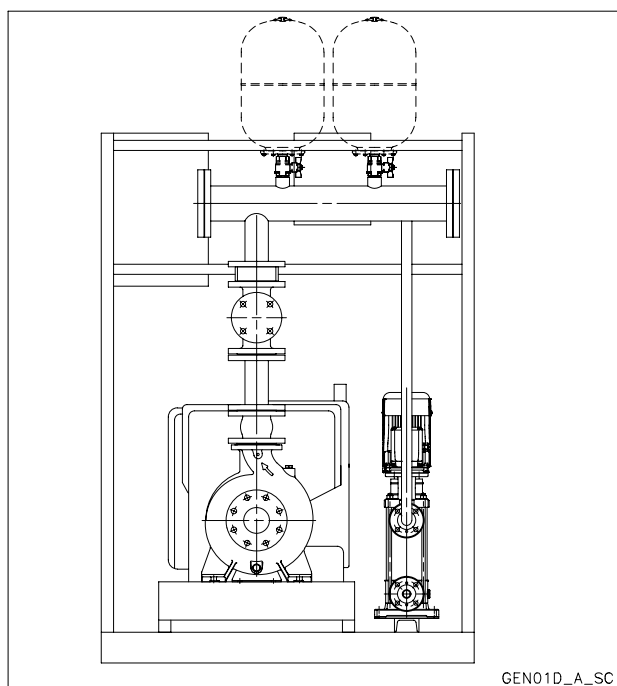
MARKET SECTORS

CIVIL, INDUSTRIAL

APPLICATIONS

- Fixed fire-fighting systems.
- Automatic Sprinkler systems.

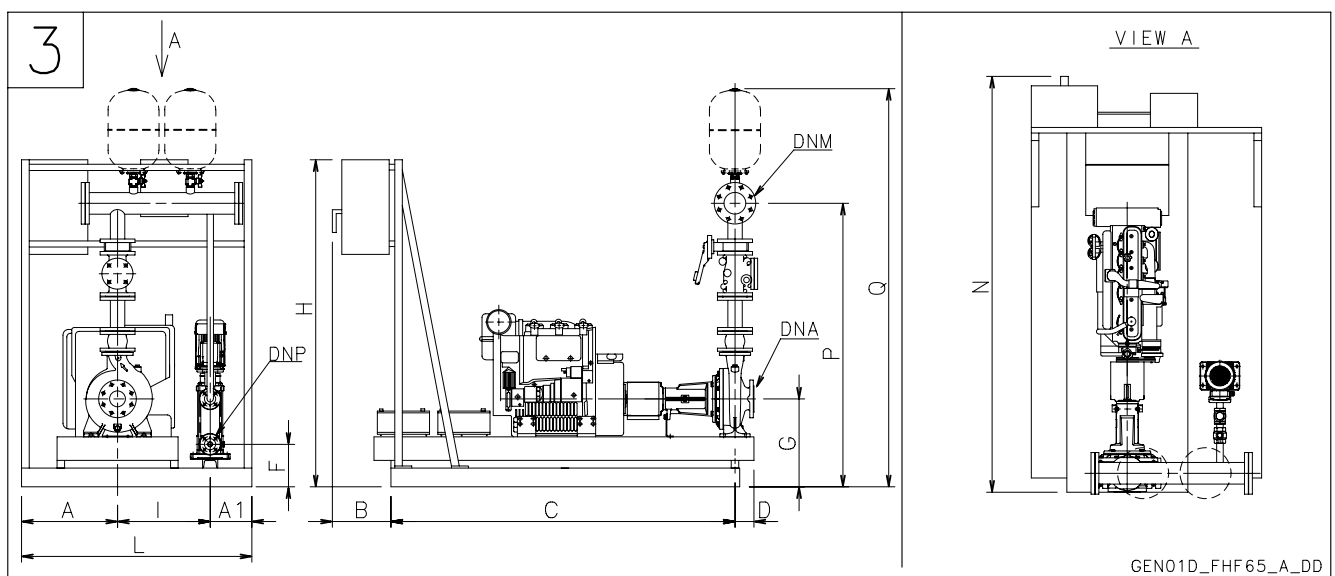
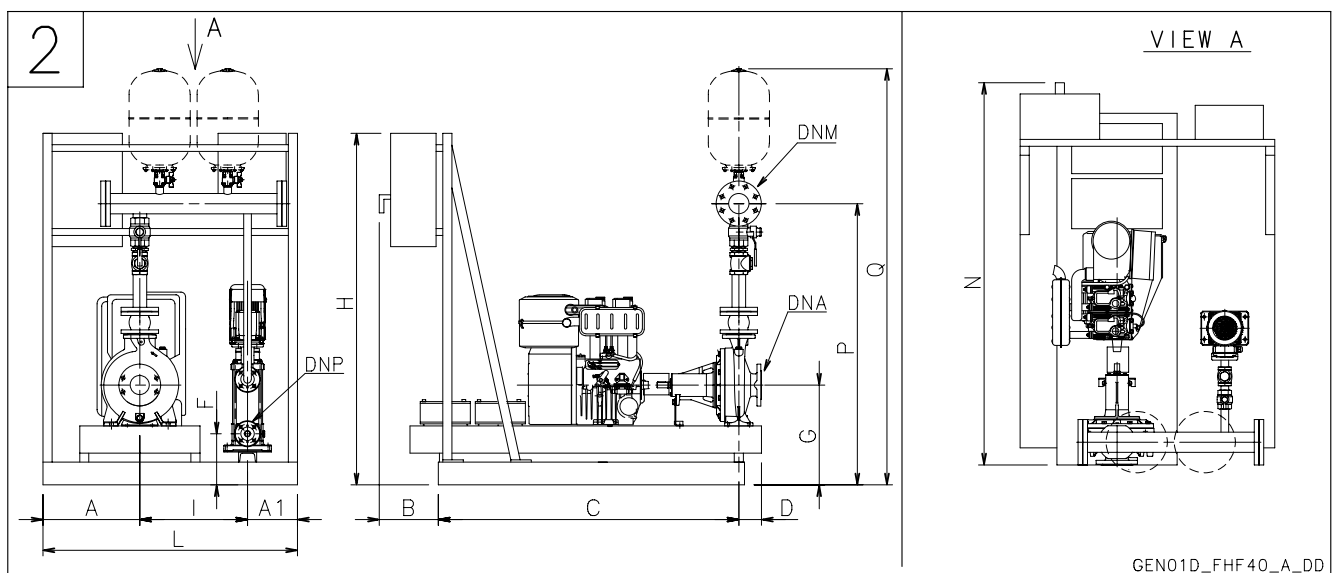
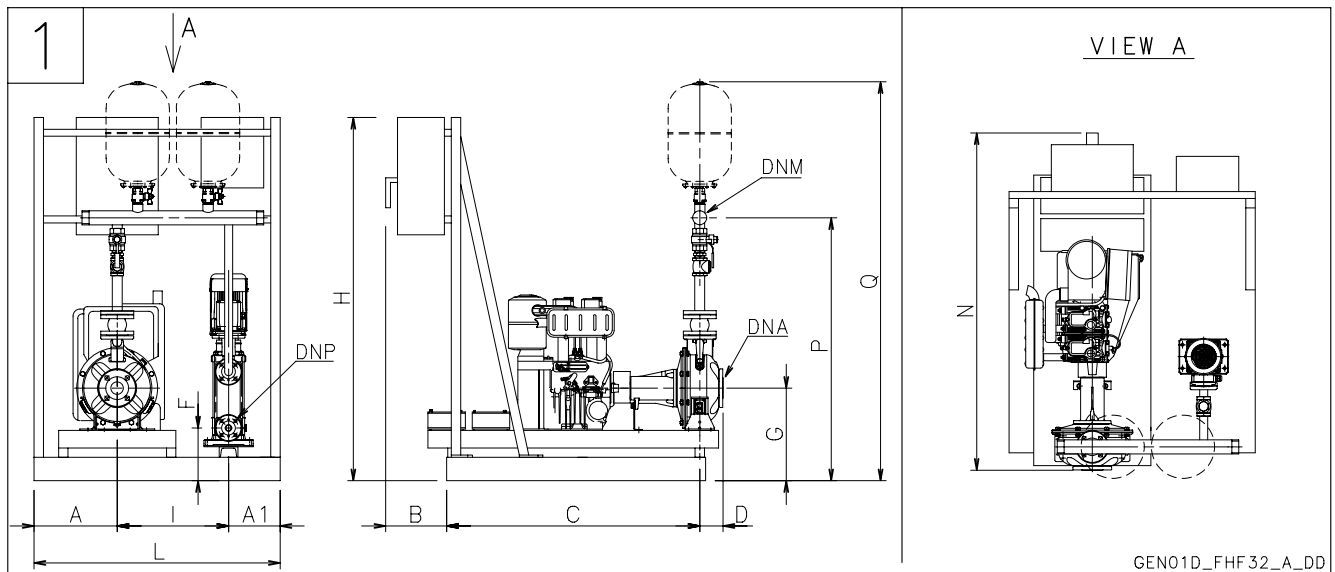
GEN..01D/FHF Series



SPECIFICATIONS

- **Flow** up to 650 m³/h.
- **Head** up to 100 m.
- Panel supply power voltage:
 - Electric pump: 1 x 230V $\pm$ 10%.
 - Diesel engine pump: 1 x 230V $\pm$ 10%.
- Frequency: 50 Hz.
- Voltage for controls outside panel: 12 - 24 Vac.
- Protection grade:
 - electric panel: IP54.
- Electric pumps maximum power
- Electric motor start :
 - Direct start for powers up to 7,5 kW included for electric pump.
- Diesel engine with battery start.
- **Service pump in horizontal design:**
 - FHF series.
- **Electric jockey pump with vertical axis:**
 - SV Series (motor protection grade IP55).
- Maximum running pressure: 12 bar.

GEN..01D/FHF 32-80 SERIES FIRE-FIGHTING BOOSTER SETS EN 12845



For the dimensions of diesel tanks, see tables pag. 14-16.



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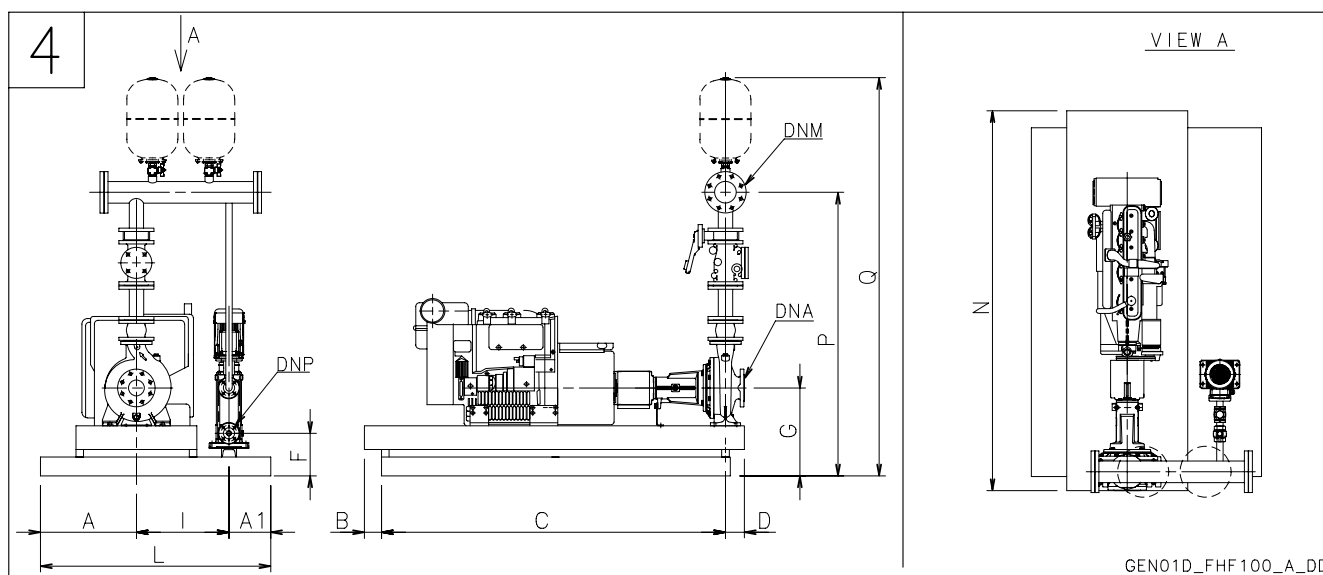
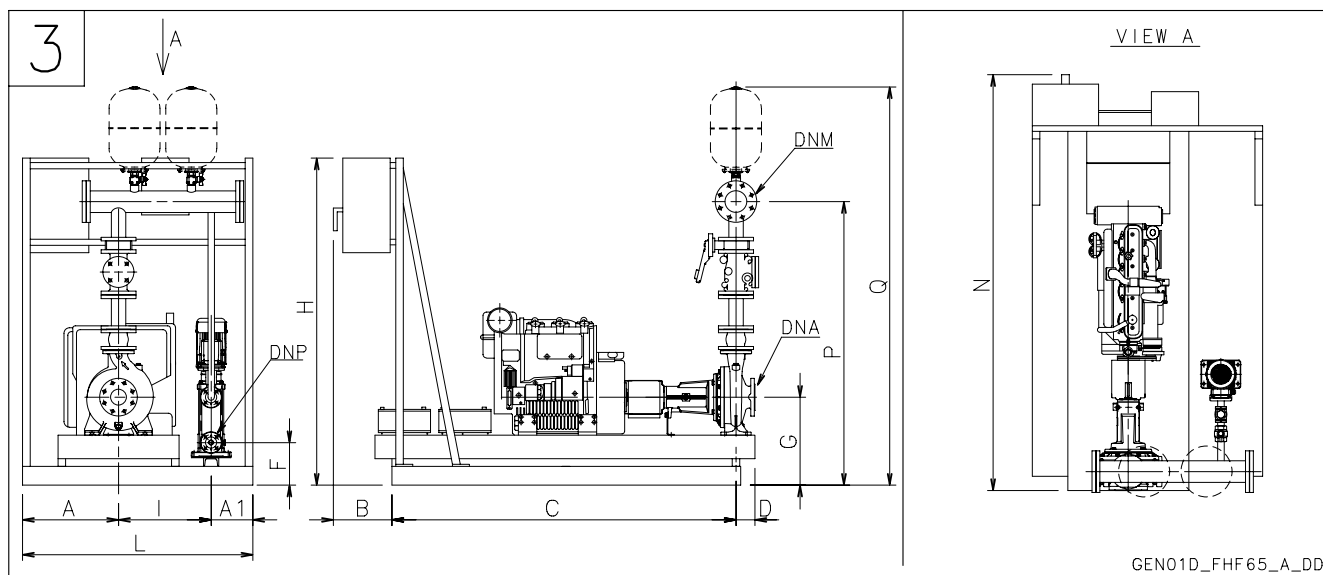
GEN..01D/FHF 32-80 SERIES FIRE-FIGHTING BOOSTER SETS EN 12845

GEN..01D	DRW N°	DNA	DNP	DNM	A	A1	B	C	D	F	G	H	I	L	N	P	Q	FLOW METER N°
FHF32-125/D119	1	R 2"	Rp 1"	R 1"1/2	330	220	260	925	80	255	362	1400	400	950	1265	989	1563	1
FHF32-125/D136	1	R 2"	Rp 1"	R 1"1/2	330	220	260	925	80	255	362	1400	400	950	1265	989	1563	1
FHF32-160/D150	1	R 2"	Rp 1"	R 1"1/2	330	220	260	925	80	255	382	1400	400	950	1265	1029	1603	1
FHF32-160/D164	1	R 2"	Rp 1"	R 1"1/2	330	220	260	925	80	255	382	1400	400	950	1265	1029	1603	1
FHF32-200/D188	1	R 2"	Rp 1"	R 1"1/2	330	220	260	925	80	255	360	1400	400	950	1265	1027	1601	1
FHF32-200/D204	1	R 2"	Rp 1"	R 1"1/2	400	225	260	1025	80	225	410	1400	475	1100	1365	1077	1651	1
FHF40-125/D112	2	65	Rp 1"	65	330	220	260	925	80	255	362	1400	400	950	1265	1027	1615	4
FHF40-125/D122	2	65	Rp 1"	65	330	220	260	925	80	255	362	1400	400	950	1265	1027	1615	5
FHF40-125/D143	2	65	Rp 1"	65	330	220	260	925	80	255	362	1400	400	950	1265	1027	1615	5
FHF40-160/D159	2	65	Rp 1"	65	330	220	260	925	80	255	382	1400	400	950	1265	1067	1655	5
FHF40-160/D171	2	65	Rp 1"	65	330	220	260	925	80	255	382	1400	400	950	1265	1067	1655	5
FHF40-200/D190	2	65	Rp 1"	65	400	225	260	1025	100	255	410	1400	475	1100	1385	1115	1703	5
FHF40-200/D209	2	65	Rp 1"	65	400	225	260	1025	100	225	410	1400	475	1100	1385	1115	1703	5
FHF40-250/D218	2	65	Rp 1"	65	390	235	260	1225	100	225	380	1550	475	1100	1585	1130	1718	5
FHF40-250/D233	2	65	Rp 1"	65	390	235	325	1225	100	225	430	1550	475	1100	1650	1180	1768	5
FHF40-250/D251	2	65	Rp 1"	65	390	235	325	1225	100	225	430	1550	475	1100	1650	1180	1768	5
FHF50-125/D119	2	65	Rp 1"	65	330	220	260	925	100	255	382	1400	400	950	1285	1107	1695	50
FHF50-125/D130	2	65	Rp 1"	65	330	220	260	925	100	255	382	1400	400	950	1285	1107	1695	50
FHF50-125/D139	2	65	Rp 1"	65	400	225	260	1025	100	255	382	1400	475	1100	1385	1107	1695	50
FHF50-160/D158	2	65	Rp 1"	65	400	225	260	1025	100	255	410	1400	475	1100	1385	1155	1743	50
FHF50-160/D174	2	65	Rp 1"	65	400	225	260	1025	100	255	410	1400	475	1100	1385	1155	1743	50
FHF50-200/D197	2	65	Rp 1"	65	390	235	260	1225	100	225	410	1550	475	1100	1585	1175	1763	50
FHF50-200/D209	2	65	Rp 1"	65	390	235	325	1225	100	225	460	1550	475	1100	1650	1225	1813	50
FHF50-250/D224	2	65	Rp 1"	65	390	235	325	1225	100	225	430	1550	475	1100	1650	1220	1808	50
FHF50-250/D237	2	65	Rp 1"	65	425	270	325	1525	100	225	430	1730	475	1170	1950	1220	1808	50
FHF50-250/D250	2	65	Rp 1"	65	425	270	325	1525	100	225	480	1730	475	1170	1950	1270	1858	48
FHF65-125/D121	3	80	Rp 1"	80	400	225	260	1025	100	255	410	1400	475	1100	1385	1389	1983	7
FHF65-125/D129	3	80	Rp 1"	80	400	225	260	1025	100	255	410	1400	475	1100	1385	1389	1983	7
FHF65-125/D140	3	80	Rp 1"	80	400	225	260	1025	100	255	410	1400	475	1100	1385	1389	1983	57
FHF65-160/D161	3	80	Rp 1"	80	390	235	260	1225	100	255	410	1550	475	1100	1585	1409	2003	57
FHF65-160/D168	3	80	Rp 1"	80	390	235	325	1225	100	255	460	1550	475	1100	1650	1459	2053	57
FHF65-160/D178	3	80	Rp 1"	80	390	235	325	1225	100	255	460	1550	475	1100	1650	1459	2053	57
FHF65-200/D187	3	80	Rp 1"	80	390	235	325	1225	100	255	430	1550	475	1100	1650	1454	2048	57
FHF65-200/D198	3	80	Rp 1"	80	425	270	325	1525	100	225	430	1730	475	1170	1950	1454	2048	57
FHF65-200/D210	3	80	Rp 1"	80	425	270	325	1525	100	225	480	1730	475	1170	1950	1504	2098	57
FHF65-250/D220	3	80	Rp 1"	80	425	270	425	1525	100	225	460	1730	475	1170	2050	1509	2103	57
FHF65-250/D241	3	80	Rp 1"	80	500	270	275	1825	100	245	480	1750	530	1300	2200	1529	2123	57
FHF65-250/D258	3	80	Rp 1"	80	500	270	275	1825	100	245	480	1750	530	1300	2200	1529	2123	57
FHF80-160/D163	3	100	Rp 1"1/4	100	390	235	300	1225	125	225	430	1550	475	1100	1650	1507	2114	10
FHF80-160/D173	3	100	Rp 1"1/4	100	425	270	260	1525	125	225	430	1730	475	1170	1910	1507	2114	10
FHF80-200/D189	3	100	Rp 1"1/4	100	425	270	400	1525	125	225	480	1730	475	1170	2050	1582	2189	10
FHF80-200/D207	3	100	Rp 1"1/4	100	500	270	260	1825	125	245	480	1750	530	1300	2210	1582	2189	10
FHF80-250/D225	3	100	Rp 1"1/4	100	500	270	260	1825	125	245	480	1940	530	1300	2210	1612	2219	10
FHF80-250/D238	3	100	Rp 1"1/4	100	490	280	260	1905	125	245	485	1940	530	1300	2290	1617	2224	10
FHF80-250/D256	3	100	Rp 1"1/4	100	505	265	315	1910	125	265	530	1960	530	1300	2350	1662	2269	10

Dimensions in mm. Tolerance ± 10 mm.

gen01d_fhf-en_a_td

GEN..01D/FHF 100-125 SERIES FIRE-FIGHTING BOOSTER SETS EN 12845



For the dimensions of diesel tanks, see tables pag. 14-16.



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GEN..01D/FHF 100-125 SERIES FIRE-FIGHTING BOOSTER SETS EN 12845

GEN..01D	DRW N°	DNA	DNP	DNM	A	A1	B	C	D	F	G	H	I	L	N	P	Q	FLOW METER N°
FHF100-160/D150	3	125	Rp 1"1/4	125	425	270	400	1525	125	225	448	1730	475	1170	2050	1638	2258	14
FHF100-160/D165	3	125	Rp 1"1/4	125	425	270	400	1525	125	225	498	1730	475	1170	2050	1688	2308	14
FHF100-160/D185	3	125	Rp 1"1/4	125	500	270	260	1825	125	245	468	1750	530	1300	2210	1658	2278	14
FHF100-200/D168	3	125	Rp 1"1/4	125	425	270	400	1525	125	225	473	1730	475	1170	2050	1663	2283	14
FHF100-200/D192	3	125	Rp 1"1/4	125	500	270	260	1825	125	245	493	1750	530	1300	2210	1683	2303	14
FHF100-200/D203	3	125	Rp 1"1/4	125	490	280	260	1905	125	245	493	1940	530	1300	2290	1683	2303	14
FHF100-200/D213	3	125	Rp 1"1/4	125	490	280	260	1825	125	245	488	1940	530	1300	2210	1678	2298	14
FHF100-250/D200	3	125	Rp 1"1/4	125	490	280	260	1905	140	245	468	1750	530	1300	2305	1658	2278	14
FHF100-250/D221	3	125	Rp 1"1/4	125	490	280	260	1905	140	245	468	1940	530	1300	2305	1658	2278	14
FHF100-250/D235	3	125	Rp 1"1/4	125	490	280	305	1905	140	245	513	1940	530	1300	2350	1703	2323	14
FHF100-250/D254	4	125	Rp 1"1/4	125	550	265	620	1340	140	265	513	\	570	1385	2100	1703	2323	14
FHF100-250/D267	4	125	Rp 1"1/4	125	550	265	620	1340	140	265	513	\	570	1385	2100	1703	2323	54
FHF125-200/D180	3	150	Rp 1"1/2	150	490	280	260	1905	140	250	493	1750	530	1300	2305	1851	2485	28
FHF125-200/D206	3	150	Rp 1"1/2	150	490	280	260	1905	140	250	463	1940	530	1300	2305	1821	2455	28
FHF125-200/D216	3	150	Rp 1"1/2	150	490	280	305	1905	140	250	513	1940	530	1300	2350	1871	2505	56
FHF125-270/D224	4	150	Rp 1"1/2	150	550	265	620	1340	140	270	563	\	570	1385	2100	1961	2595	56
FHF125-270/D237	4	150	Rp 1"1/2	150	550	265	620	1340	140	270	563	\	570	1385	2100	1961	2595	56
FHF125-270/D253	4	150	Rp 1"1/2	150	550	265	670	1340	140	270	618	\	570	1385	2150	2016	2650	56
FHF125-270/D266	4	150	Rp 1"1/2	150	550	265	670	1340	140	270	618	\	570	1385	2150	2016	2650	56

Dimensions in mm. Tolerance ± 10 mm.

gen01d_fhf100-en_a_td



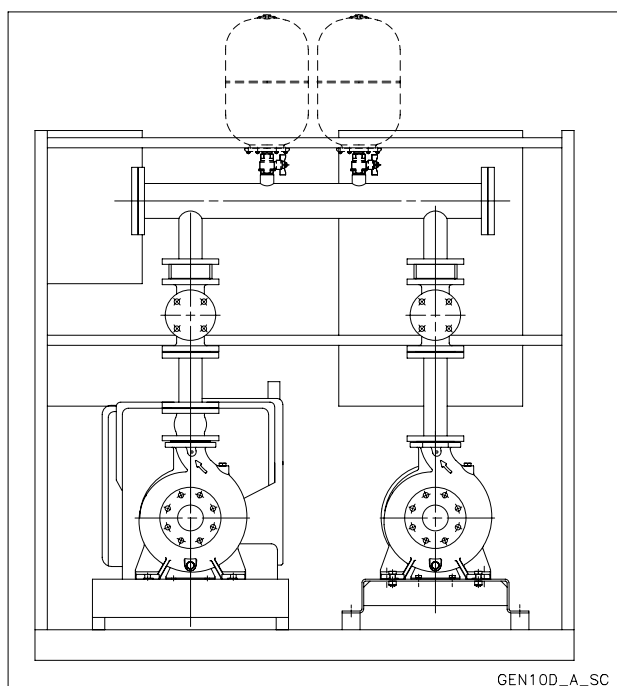
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**Fire-fighting
booster sets
EN 12845**
MARKET SECTORS

CIVIL, INDUSTRIAL

APPLICATIONS

- Fixed fire-fighting systems.
Automatic Sprinkler systems.

**GEN..10D/FHF
Series**

SPECIFICATIONS

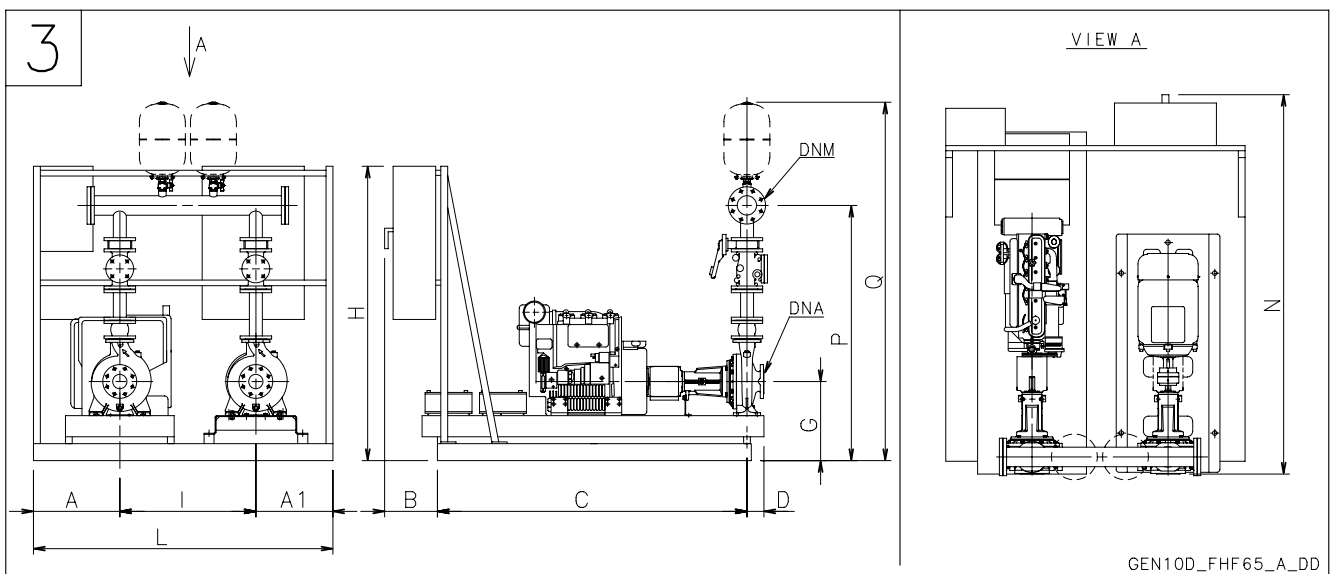
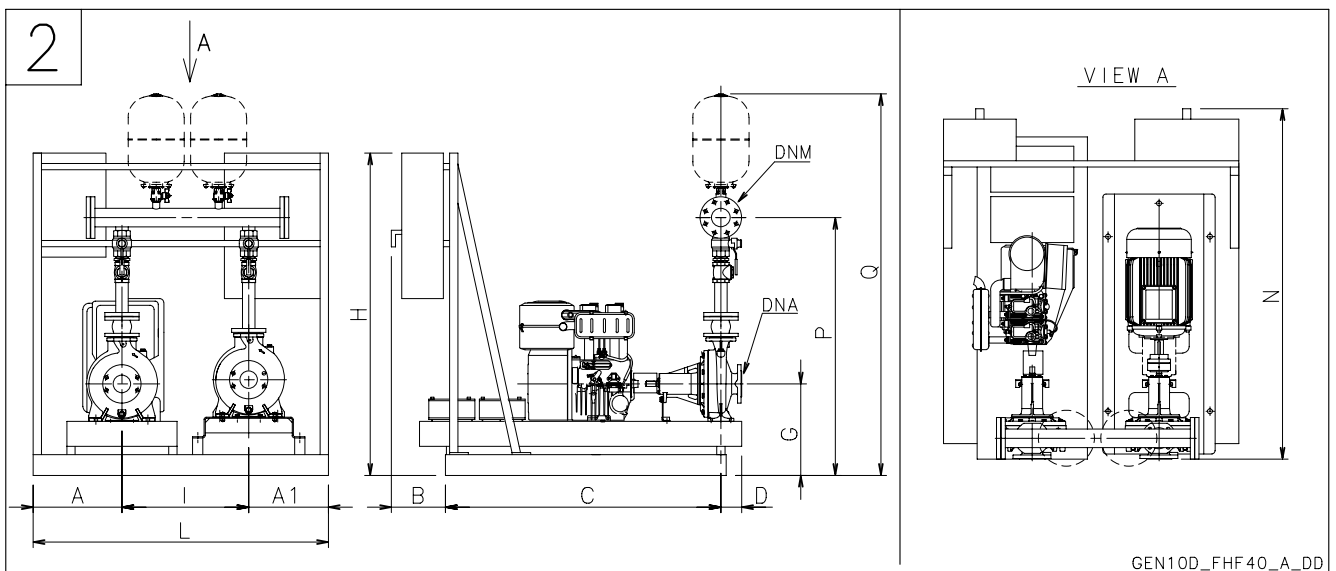
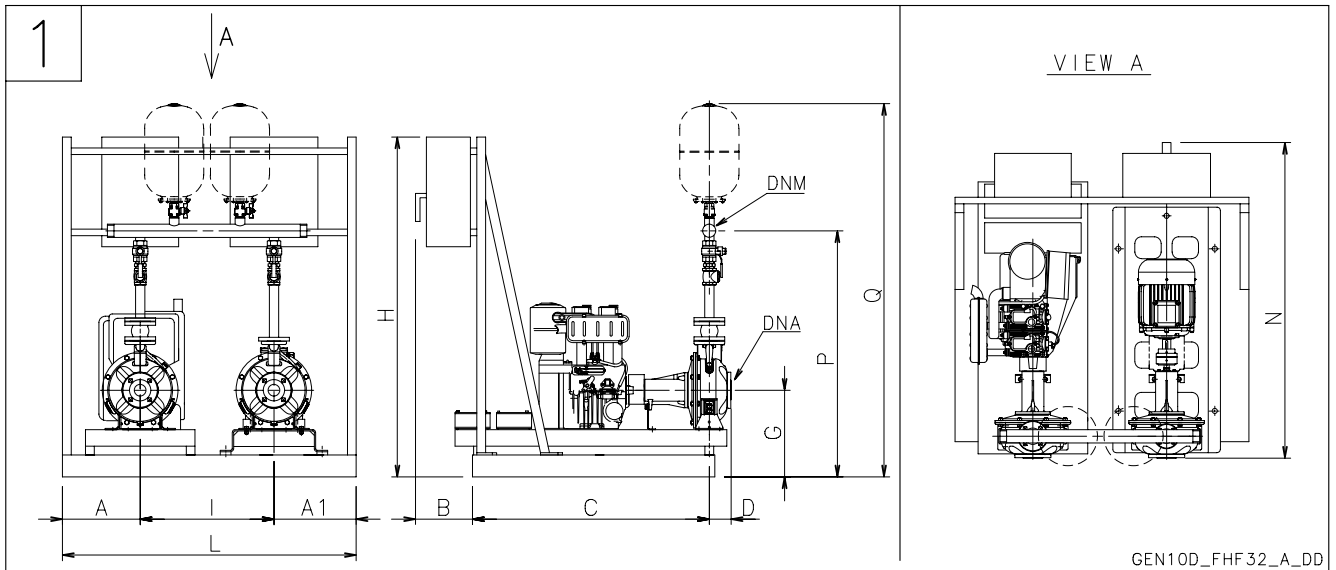
- **Flow** up to 1300 m³/h.
- **Head** up to 100 m.
- Panel supply power voltage:
 - Electric pump: 3 x 400V ± 10%.
 - Diesel engine pump: 1 x 230V ± 10%.
- Frequency: 50 Hz.
- Voltage for controls outside panel: 12 - 24 Vac.
- Protection grade:
 - electric panel: IP54.
- Electric pumps maximum power 132 kW.
- Electric motor start :
 - Direct start for powers up to 7,5 kW included for pump (GEND...).
 - Star/delta start for higher powers (GENY... set).
- Diesel engine with battery start.
- **Service pump in horizontal design:**
 - FHF series (IP55 electric motor protection).
- Maximum running pressure: 12 bar.



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GEN..10D/FHF 32-80 SERIES FIRE-FIGHTING BOOSTER SETS EN 12845



For the dimensions of diesel tanks, see tables pag. 14-16.



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GEN..10D/FHF 32-80 SERIES FIRE-FIGHTING BOOSTER SETS EN 12845

GEN..10D	DRW N°	DNA	DNM	A	A1	B	C	D	G	H	I	L	N	P	Q	FLOW METER N°
FHF32-160/15/D150	1	R 2"	R 2"	320	310	260	925	80	382	1400	470	1100	1265	1035	1615	2
FHF32-160/22/D164	1	R 2"	R 2"	320	310	260	925	80	382	1400	470	1100	1265	1035	1615	2
FHF32-200/30/D188	1	R 2"	R 2"	320	310	260	925	80	360	1400	470	1100	1265	1033	1613	2
FHF32-200/40/D204	1	R 2"	R 2"	380	350	260	1025	80	410	1400	570	1300	1365	1083	1663	2
FHF40-125/15/D122	2	65	65	320	310	260	925	80	362	1400	470	1100	1265	1027	1615	5
FHF40-125/22/D143	2	65	65	320	310	260	925	80	362	1400	470	1100	1265	1027	1615	5
FHF40-160/30/D159	2	65	65	320	310	260	925	80	382	1400	470	1100	1265	1067	1655	5
FHF40-160/40/D171	2	65	65	320	310	260	925	80	382	1400	470	1100	1265	1067	1655	5
FHF40-200/55/D190	2	65	65	380	350	260	1025	100	410	1400	570	1300	1385	1115	1703	5
FHF40-200/75/D209	2	65	65	380	350	260	1025	100	410	1400	570	1300	1385	1115	1703	5
FHF40-250/110/D218	2	65	65	420	420	260	1225	100	380	1550	610	1450	1585	1130	1718	5
FHF40-250/110/D233	2	65	65	420	420	325	1225	100	430	1550	610	1450	1650	1180	1768	5
FHF40-250/150/D251	2	65	65	420	420	325	1225	100	430	1550	610	1450	1650	1180	1768	5
FHF50-125/22/D119	2	65	80	320	310	260	925	100	382	1400	470	1100	1285	1114	1708	51
FHF50-125/30/D130	2	65	80	320	310	260	925	100	382	1400	470	1100	1285	1114	1708	51
FHF50-125/40/D139	2	65	80	380	350	260	1025	100	382	1400	570	1300	1385	1114	1708	51
FHF50-160/55/D158	2	65	80	380	350	260	1025	100	410	1400	570	1300	1385	1162	1756	51
FHF50-160/75/D174	2	65	80	380	350	260	1025	100	410	1400	570	1300	1385	1162	1756	51
FHF50-200/110/D197	2	65	80	420	420	260	1225	100	410	1550	610	1450	1585	1182	1776	51
FHF50-200/110/D209	2	65	80	420	420	325	1225	100	460	1550	610	1450	1650	1232	1826	51
FHF50-250/150/D224	2	65	80	420	420	325	1225	100	430	1550	610	1450	1650	1227	1821	51
FHF50-250/185/D237	2	65	80	420	420	325	1525	100	430	1730	610	1450	1950	1227	1821	51
FHF50-250/220/D250	2	65	80	420	420	325	1525	100	480	1730	610	1450	1950	1277	1871	7
FHF65-160/110/D161	3	80	100	420	420	260	1225	100	410	1550	610	1450	1585	1421	2028	10
FHF65-160/110/D168	3	80	100	420	420	325	1225	100	460	1550	610	1450	1650	1471	2078	10
FHF65-160/150/D178	3	80	100	420	420	325	1225	100	460	1550	610	1450	1650	1471	2078	10
FHF65-200/150/D187	3	80	100	420	420	325	1225	100	430	1550	610	1450	1650	1466	2073	10
FHF65-200/185/D198	3	80	100	420	420	325	1525	100	430	1730	610	1450	1950	1466	2073	10
FHF65-200/220/D210	3	80	100	420	420	325	1525	100	480	1730	610	1450	1950	1516	2123	10
FHF80-160/150/D163	3	100	125	420	420	300	1225	125	430	1550	610	1450	1650	1520	2140	13
FHF80-160/185/D173	3	100	125	420	420	260	1525	125	430	1730	610	1450	1910	1520	2140	13
FHF80-200/220/D189	3	100	125	420	420	400	1525	125	480	1730	610	1450	2050	1595	2215	13

Dimensions in mm. Tolerance ± 10 mm.

gen10d_fhf-en_a_td



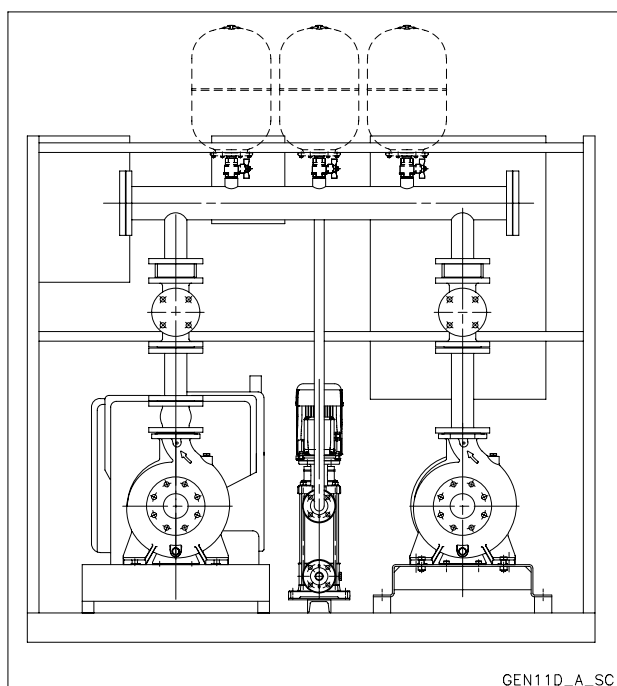
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**Fire-fighting
booster sets
EN 12845**
MARKET SECTORS

CIVIL, INDUSTRIAL

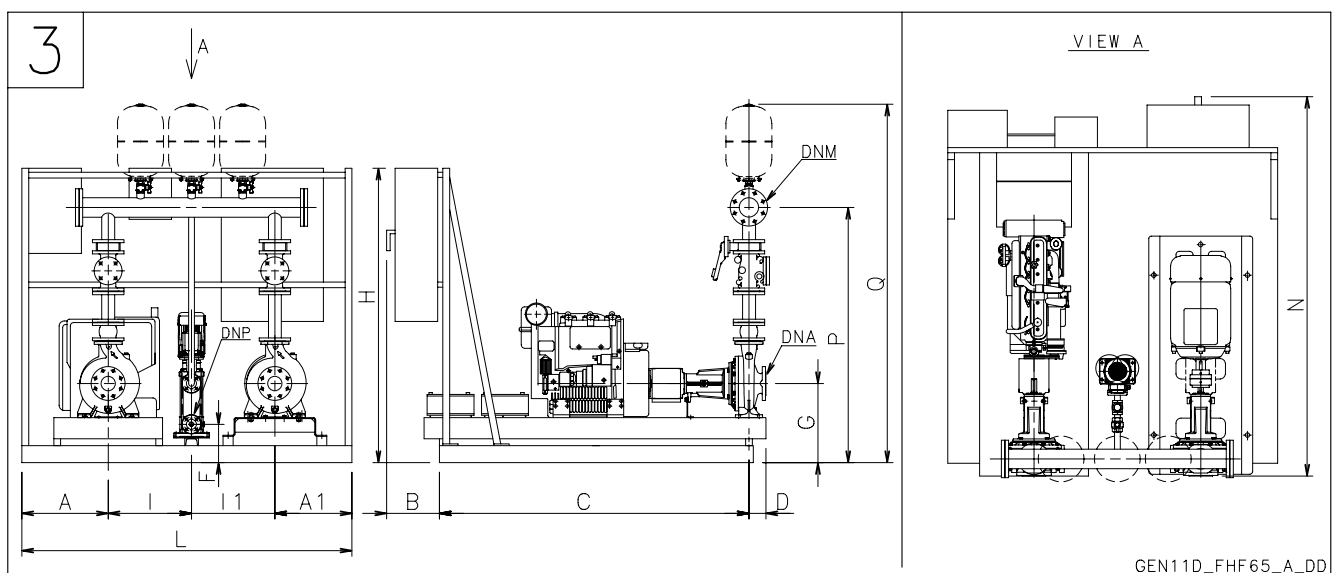
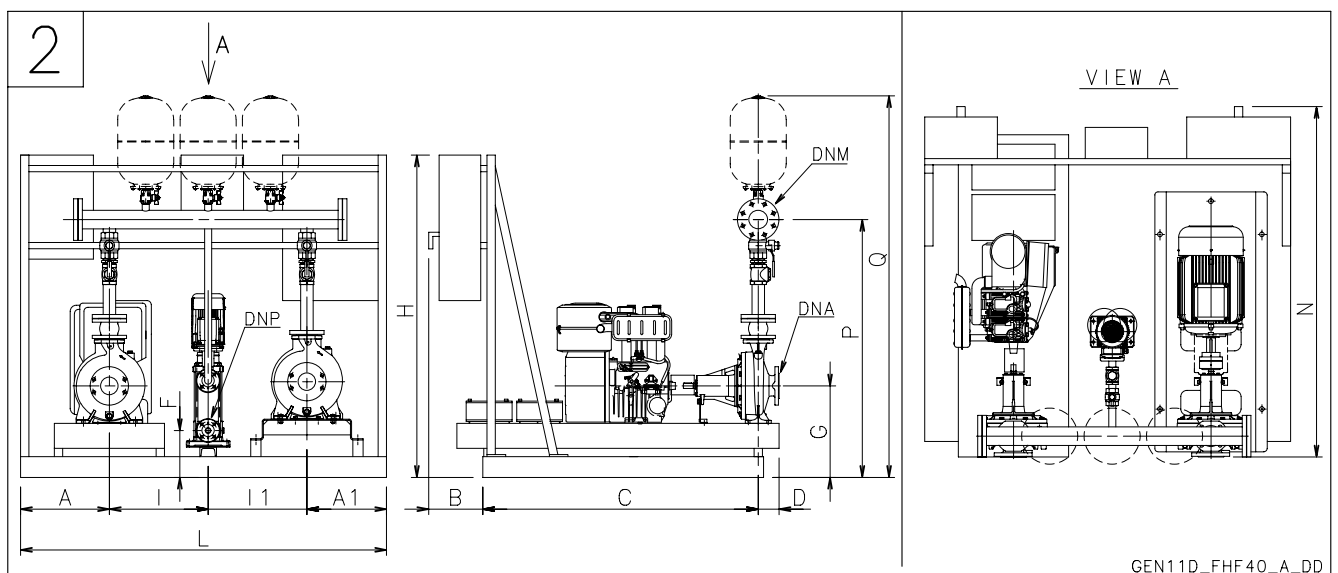
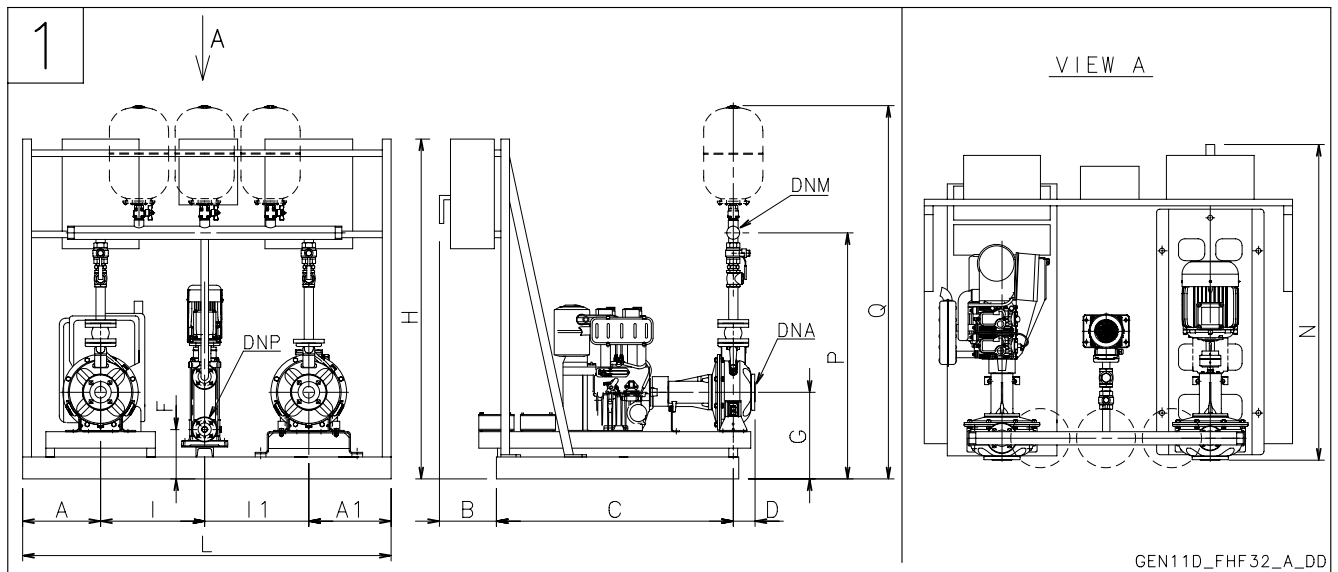
APPLICATIONS

- Fixed fire-fighting systems.
- Automatic Sprinkler systems.

**GEN..11D/FHF
Series**

SPECIFICATIONS

- **Flow** up to 1300 m³/h.
- **Head** up to 100 m.
- Panel supply power voltage:
 - Electric pump: 3 x 400V $\pm$ 10%.
 - Diesel engine pump: 1 x 230V $\pm$ 10%.
- Frequency: 50 Hz.
- Voltage for controls outside panel: 12 - 24 Vac.
- Protection grade:
 - electric panel: IP54.
- Electric pumps maximum power 132 kW.
- Electric motor start :
 - Direct start for powers up to 7,5 kW included for pump (GEND...).
 - Star/delta start for higher powers (GENY... set).
- Diesel engine with battery start.
- **Service pump in horizontal design:**
 - FHF series (IP55 electric motor protection).
- **Electric jockey pump with vertical axis:**
 - SV Series (motor protection grade IP55).
- Maximum running pressure: 12 bar.

GEN..11D/FHF 32-80 SERIES FIRE-FIGHTING BOOSTER SETS EN 12845



For the dimensions of diesel tanks, see tables pag. 14-16.



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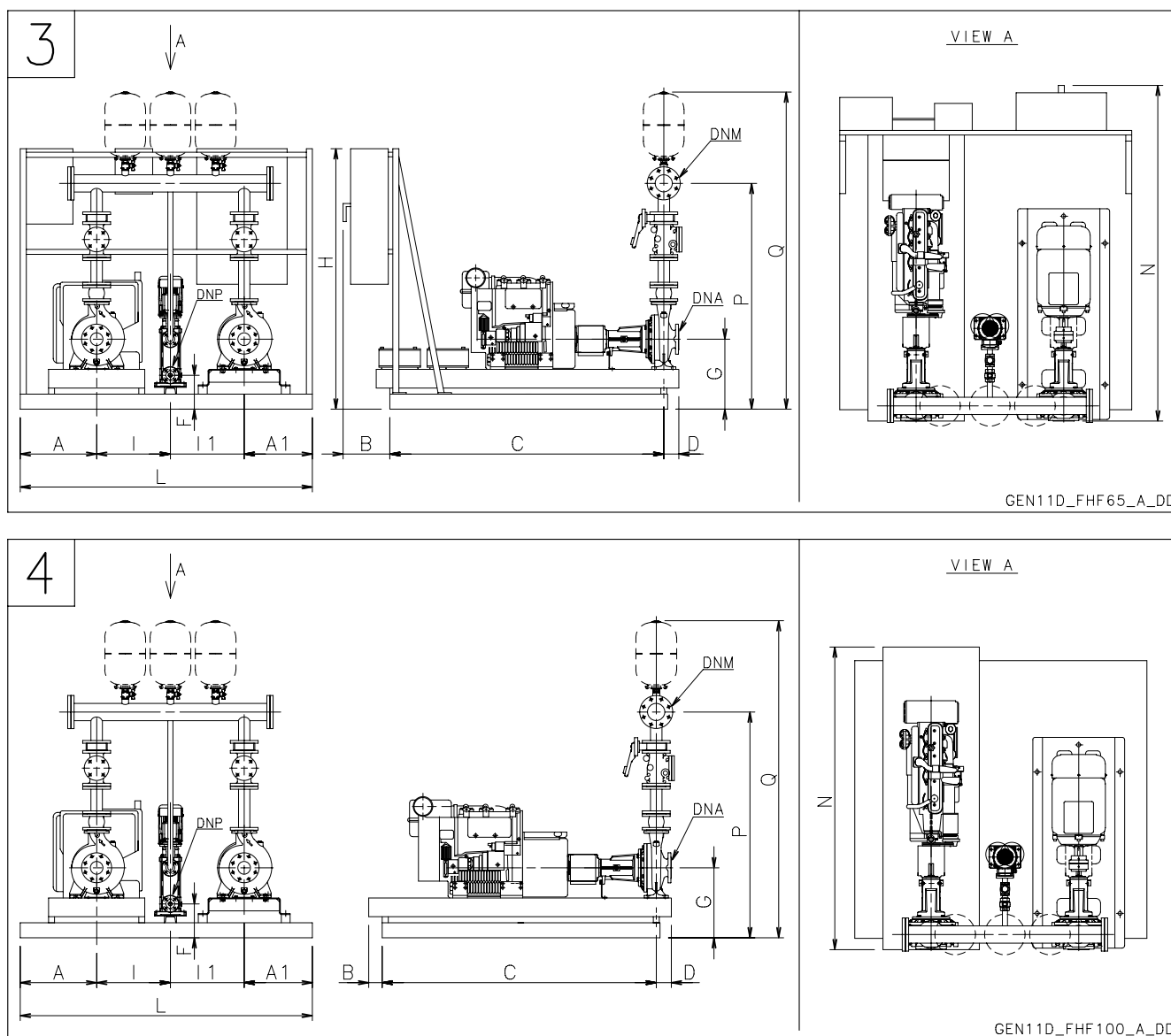
GEN..11D/FHF 32-80 SERIES FIRE-FIGHTING BOOSTER SETS EN 12845

GEN..11D	DRW N°	DNA	DNP	DNM	A	A1	B	C	D	F	G	H	I	I1	L	N	P	Q	FLOW METER N°
FHF32-125/07/D119	1	R 2"	Rp 1"	R 2"	340	310	260	925	80	255	362	1400	400	400	1450	1265	995	1575	2
FHF32-125/11/D136	1	R 2"	Rp 1"	R 2"	340	310	260	925	80	255	362	1400	400	400	1450	1265	995	1575	2
FHF32-160/15/D150	1	R 2"	Rp 1"	R 2"	330	320	260	925	80	255	382	1400	400	400	1450	1265	1035	1615	2
FHF32-160/22/D164	1	R 2"	Rp 1"	R 2"	330	320	260	925	80	255	382	1400	400	400	1450	1265	1035	1615	2
FHF32-200/30/D188	1	R 2"	Rp 1"	R 2"	330	320	260	925	80	255	360	1400	400	400	1450	1265	1033	1613	2
FHF32-200/40/D204	1	R 2"	Rp 1"	R 2"	400	375	260	1025	80	225	410	1400	475	430	1680	1365	1083	1663	2
FHF40-125/11/D112	2	65	Rp 1"	65	340	310	260	925	80	255	362	1400	400	400	1450	1265	1027	1615	4
FHF40-125/15/D122	2	65	Rp 1"	65	330	320	260	925	80	255	362	1400	400	400	1450	1265	1027	1615	5
FHF40-125/22/D143	2	65	Rp 1"	65	330	320	260	925	80	255	362	1400	400	400	1450	1265	1027	1615	5
FHF40-160/30/D159	2	65	Rp 1"	65	330	320	260	925	80	255	382	1400	400	400	1450	1265	1067	1655	5
FHF40-160/40/D171	2	65	Rp 1"	65	330	320	260	925	80	255	382	1400	400	400	1450	1265	1067	1655	5
FHF40-200/55/D190	2	65	Rp 1"	65	400	375	260	1025	100	255	410	1400	475	430	1680	1385	1115	1703	5
FHF40-200/75/D209	2	65	Rp 1"	65	400	375	260	1025	100	225	410	1400	475	430	1680	1385	1115	1703	5
FHF40-250/110/D218	2	65	Rp 1"	65	400	400	260	1225	100	225	380	1550	475	475	1750	1585	1130	1718	5
FHF40-250/110/D233	2	65	Rp 1"	65	400	400	325	1225	100	225	430	1550	475	475	1750	1650	1180	1768	5
FHF40-250/150/D251	2	65	Rp 1"	65	400	400	325	1225	100	225	430	1550	475	475	1750	1650	1180	1768	5
FHF50-125/22/D119	2	65	Rp 1"	80	330	320	260	925	100	255	382	1400	400	400	1450	1285	1114	1708	51
FHF50-125/30/D130	2	65	Rp 1"	80	330	320	260	925	100	255	382	1400	400	400	1450	1285	1114	1708	51
FHF50-125/40/D139	2	65	Rp 1"	80	400	375	260	1025	100	255	382	1400	475	430	1680	1385	1114	1708	51
FHF50-160/55/D158	2	65	Rp 1"	80	400	375	260	1025	100	255	410	1400	475	430	1680	1385	1162	1756	51
FHF50-160/75/D174	2	65	Rp 1"	80	400	375	260	1025	100	255	410	1400	475	430	1680	1385	1162	1756	51
FHF50-200/110/D197	2	65	Rp 1"	80	400	400	260	1225	100	225	410	1550	475	475	1750	1585	1182	1776	51
FHF50-200/110/D209	2	65	Rp 1"	80	400	400	325	1225	100	225	460	1550	475	475	1750	1650	1232	1826	51
FHF50-250/150/D224	2	65	Rp 1"	80	400	400	325	1225	100	225	430	1550	475	475	1750	1650	1227	1821	51
FHF50-250/185/D237	2	65	Rp 1"	80	400	400	325	1525	100	225	430	1730	475	475	1750	1950	1227	1821	51
FHF50-250/220/D250	2	65	Rp 1"	80	400	400	325	1525	100	225	480	1730	475	475	1750	1950	1277	1871	7
FHF65-125/40/D121	3	80	Rp 1"	100	400	375	260	1025	100	255	410	1400	475	430	1680	1385	1401	2008	9
FHF65-125/55/D129	3	80	Rp 1"	100	400	375	260	1025	100	255	410	1400	475	430	1680	1385	1401	2008	9
FHF65-125/75/D140	3	80	Rp 1"	100	400	375	260	1025	100	255	410	1400	475	430	1680	1385	1401	2008	10
FHF65-160/110/D161	3	80	Rp 1"	100	400	400	260	1225	100	255	410	1550	475	475	1750	1585	1421	2028	10
FHF65-160/110/D168	3	80	Rp 1"	100	400	400	325	1225	100	255	460	1550	475	475	1750	1650	1471	2078	10
FHF65-160/150/D178	3	80	Rp 1"	100	400	400	325	1225	100	255	460	1550	475	475	1750	1650	1471	2078	10
FHF65-200/150/D187	3	80	Rp 1"	100	400	400	325	1225	100	255	430	1550	475	475	1750	1650	1466	2073	10
FHF65-200/185/D198	3	80	Rp 1"	100	400	400	325	1525	100	225	430	1730	475	475	1750	1950	1466	2073	10
FHF65-200/220/D210	3	80	Rp 1"	100	400	400	325	1525	100	225	480	1730	475	475	1750	1950	1516	2123	10
FHF65-250/220/D220	3	80	Rp 1"	100	400	400	425	1525	100	225	460	1730	475	475	1750	2050	1521	2128	10
FHF65-250/300/D241	3	80	Rp 1"	100	470	450	275	1825	100	245	480	1750	530	490	1940	2200	1541	2148	10
FHF65-250/370/D258	3	80	Rp 1"	100	470	450	310	1825	100	245	480	1750	530	490	1940	2235	1541	2148	10
FHF80-160/150/D163	3	100	Rp 1"1/4	125	400	400	300	1225	125	225	430	1550	475	475	1750	1650	1520	2140	13
FHF80-160/185/D173	3	100	Rp 1"1/4	125	400	400	260	1525	125	225	430	1730	475	475	1750	1910	1520	2140	13
FHF80-200/220/D189	3	100	Rp 1"1/4	125	400	400	400	1525	125	225	480	1730	475	475	1750	2050	1595	2215	13
FHF80-200/300/D207	3	100	Rp 1"1/4	125	470	450	260	1825	125	245	480	1750	530	490	1940	2210	1595	2215	13
FHF80-250/370/D225	3	100	Rp 1"1/4	125	470	450	310	1825	125	245	480	1940	530	490	1940	2260	1625	2245	13
FHF80-250/450/D238	3	100	Rp 1"1/4	125	470	450	310	1905	125	245	485	1940	530	490	1940	2340	1630	2250	13
FHF80-250/550/D256	3	100	Rp 1"1/4	125	490	490	315	1910	125	265	530	1960	530	530	2040	2350	1675	2295	13

Dimensions in mm. Tolerance ± 10 mm.

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GEN..11D/FHF 100-125 SERIES FIRE-FIGHTING BOOSTER SETS EN 12845



For the dimensions of diesel tanks, see tables pag. 14-16.



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GEN..11D/FHF 100-125 SERIES FIRE-FIGHTING BOOSTER SETS EN 12845

GEN..11D	DRW N°	DNA	DNP	DNM	A	A1	B	C	D	F	G	H	I	I1	L	N	P	Q	FLOW METER N°
FHF100-160/185/D150	3	125	Rp 1"1/4	150	400	400	400	1525	125	225	448	1730	475	475	1750	2050	1652	2286	17
FHF100-160/220/D165	3	125	Rp 1"1/4	150	400	400	400	1525	125	225	498	1730	475	475	1750	2050	1702	2336	17
FHF100-160/300/D185	3	125	Rp 1"1/4	200	470	390	260	1825	125	245	468	1750	530	490	1880	2210	1698	2357	20
FHF100-200/185/D168	3	125	Rp 1"1/4	150	400	400	400	1525	125	225	473	1730	475	475	1750	2050	1677	2311	17
FHF100-200/300/D192	3	125	Rp 1"1/4	150	470	390	260	1825	125	245	493	1750	530	490	1880	2210	1697	2331	17
FHF100-200/370/D203	3	125	Rp 1"1/4	150	470	450	310	1905	125	245	493	1940	530	490	1940	2340	1697	2331	17
FHF100-200/450/D213	3	125	Rp 1"1/4	200	470	470	310	1825	125	245	488	1940	530	530	2000	2260	1718	2377	20
FHF100-250/300/D200	3	125	Rp 1"1/4	150	470	450	310	1905	140	245	468	1750	530	490	1940	2355	1672	2306	17
FHF100-250/450/D221	3	125	Rp 1"1/4	200	470	450	310	1905	140	245	468	1940	530	490	1940	2355	1698	2357	20
FHF100-250/550/D235	3	125	Rp 1"1/4	200	485	495	310	1905	140	245	513	1940	530	530	2040	2355	1743	2402	20
FHF100-250/750/D254	4	125	Rp 1"1/4	200	550	545	620	1340	140	265	513	\	570	570	2235	2100	1743	2402	20
FHF100-250/900/D267	4	125	Rp 1"1/4	200	550	545	620	1340	140	265	513	\	570	570	2235	2100	1743	2402	21
FHF125-200/300/D180	3	150	Rp 1"1/2	200	470	450	310	1905	140	250	493	1750	530	490	1940	2355	1877	2536	21
FHF125-200/450/D206	3	150	Rp 1"1/2	200	485	495	310	1905	140	250	463	1940	530	530	2040	2355	1847	2506	21
FHF125-200/550/D216	3	150	Rp 1"1/2	200	485	495	310	1905	140	250	513	1940	530	530	2040	2355	1897	2556	22
FHF125-270/750/D223	4	150	Rp 1"1/2	250	550	555	620	1340	140	270	563	\	570	570	2245	2100	2014	2700	25
FHF125-270/900/D237	4	150	Rp 1"1/2	250	550	555	620	1340	140	270	563	\	570	570	2245	2100	2014	2700	25
FHF125-270/1100/D253	4	150	Rp 1"1/2	250	550	615	670	1340	140	270	618	\	570	640	2375	2150	2069	2755	25
FHF125-270/1320/D266	4	150	Rp 1"1/2	250	550	615	670	1340	140	270	618	\	570	640	2375	2150	2069	2755	25

Dimensions in mm. Tolerance ± 10 mm.

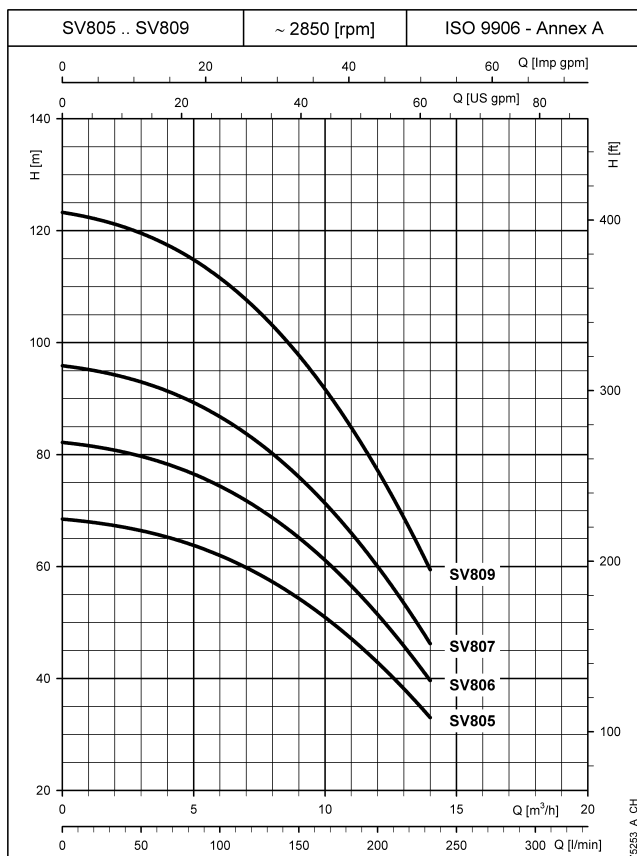
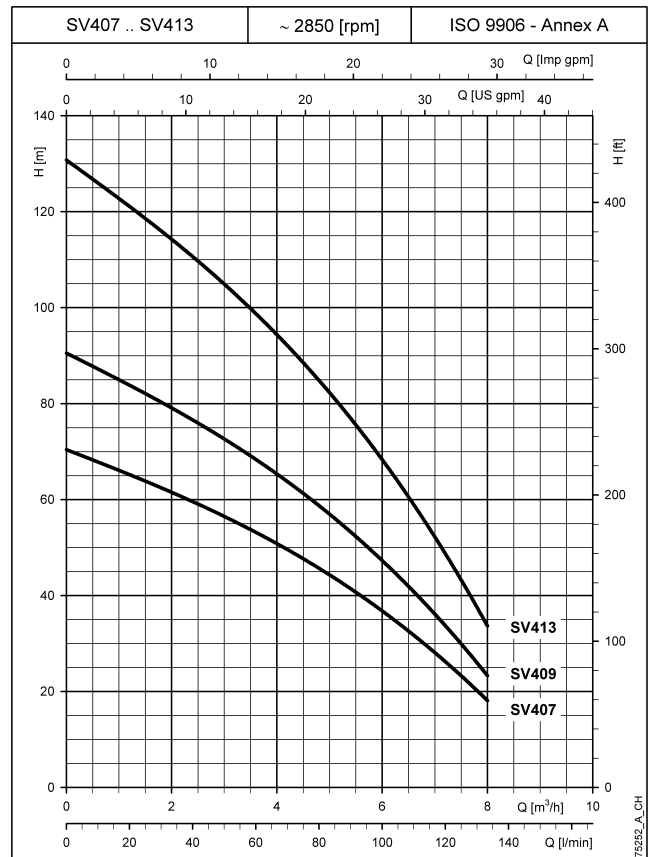
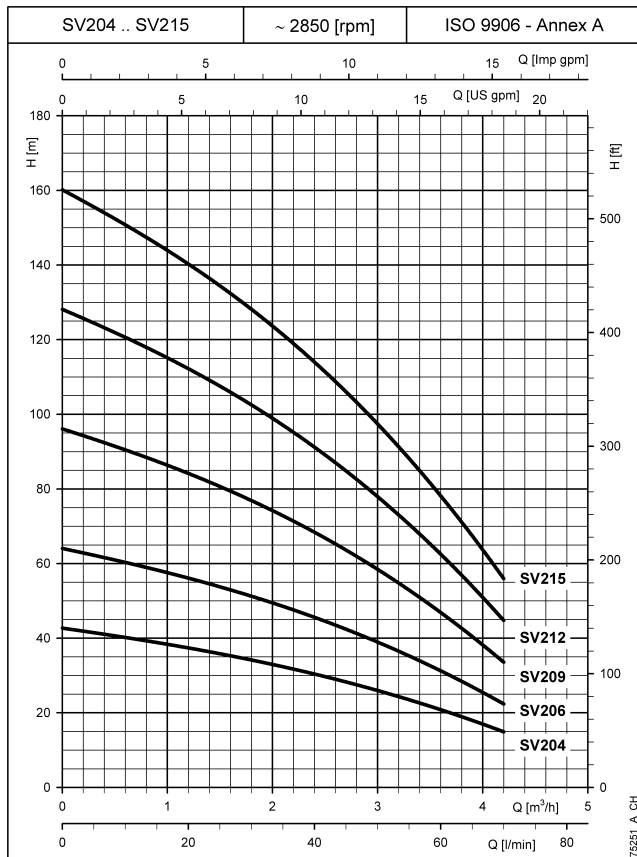
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GEN..D/FHF BOOSTER SETS SERIES OPERATING CHARACTERISTICS AT 50 Hz (JOCKEY PUMP)



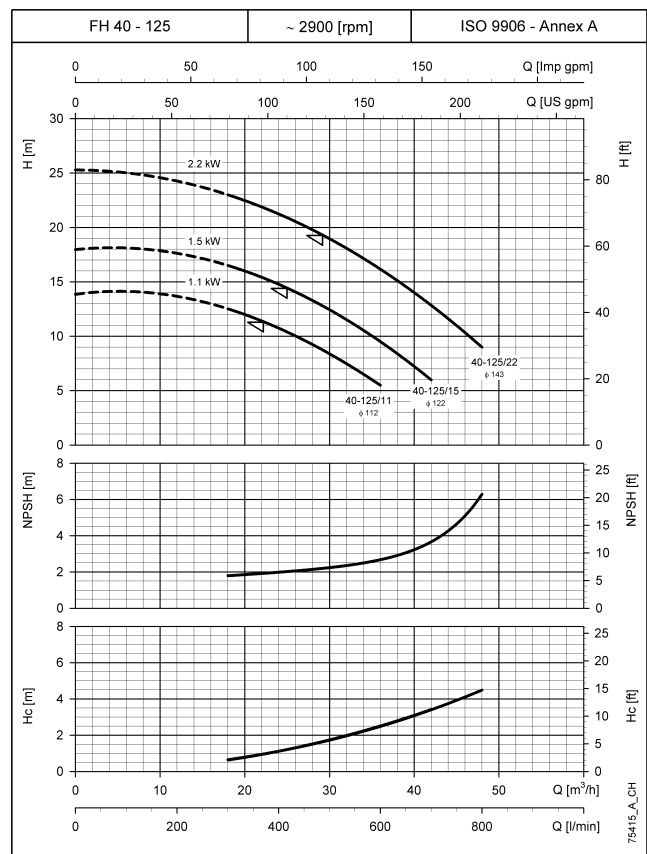
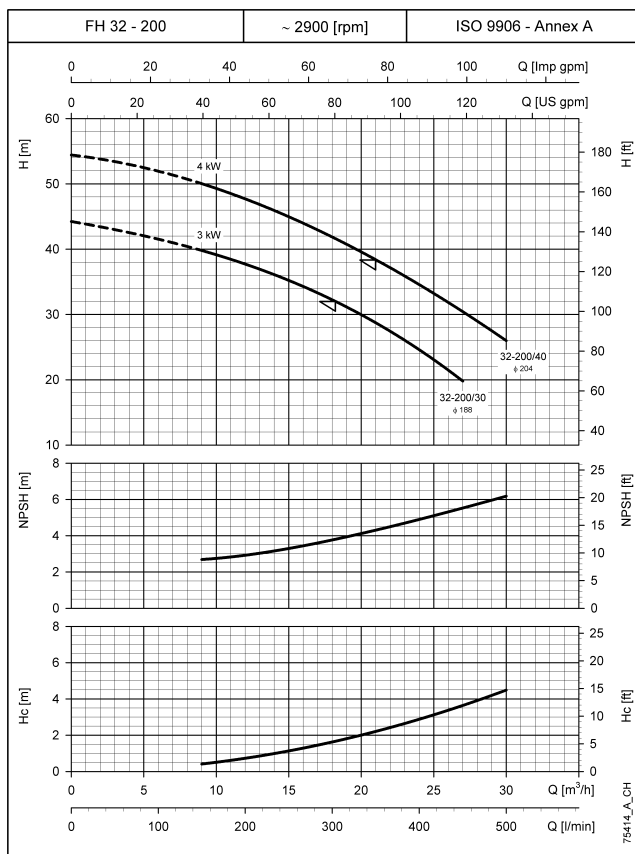
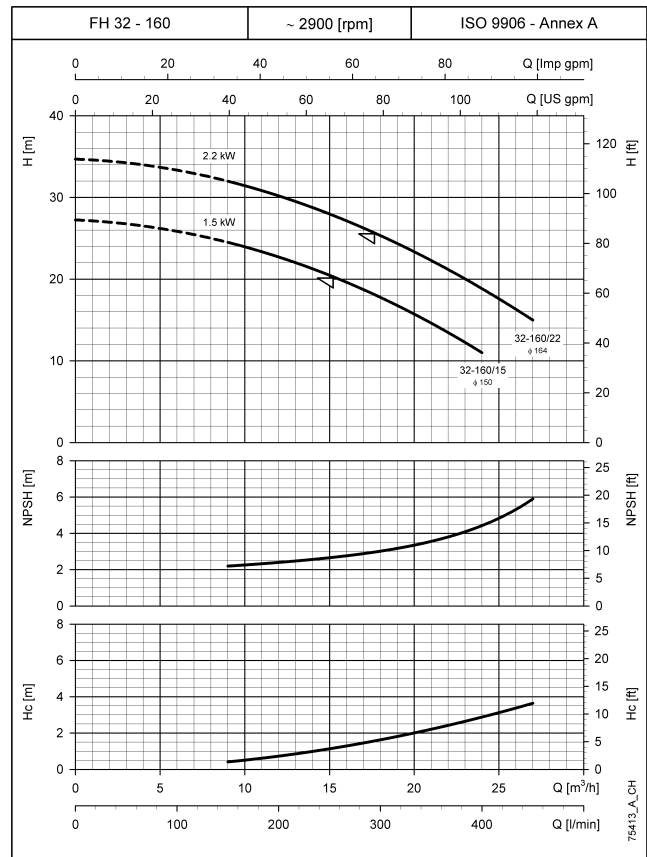
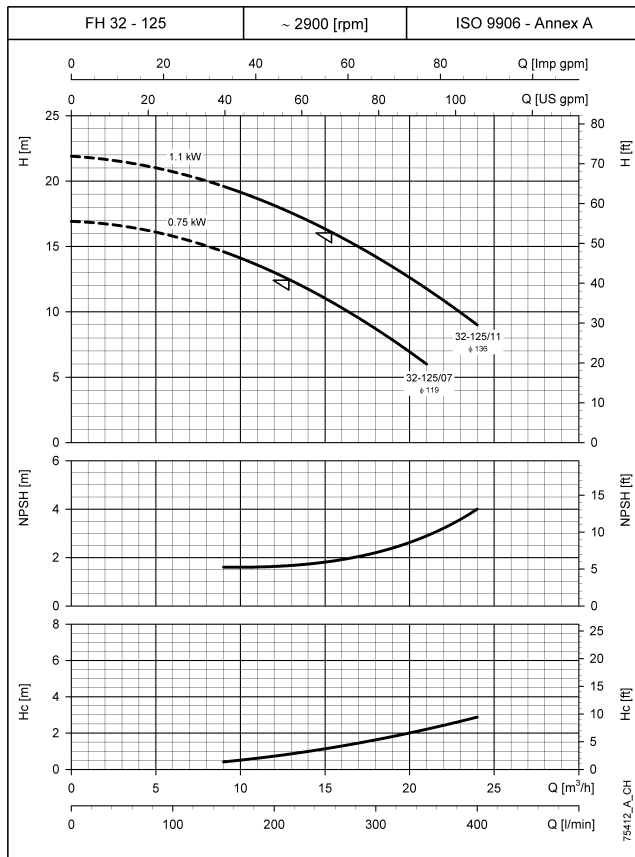
The performance curves do not take into account flow resistance in the valves and piping.
The curves indicate the performance with one pump running.
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.
The NPSH values are laboratory values, for practical use we suggest increasing these values by 0,5 m.



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GEN..D/FHF BOOSTER SETS SERIES OPERATING CHARACTERISTICS AT 50 Hz (SERVICE PUMP)



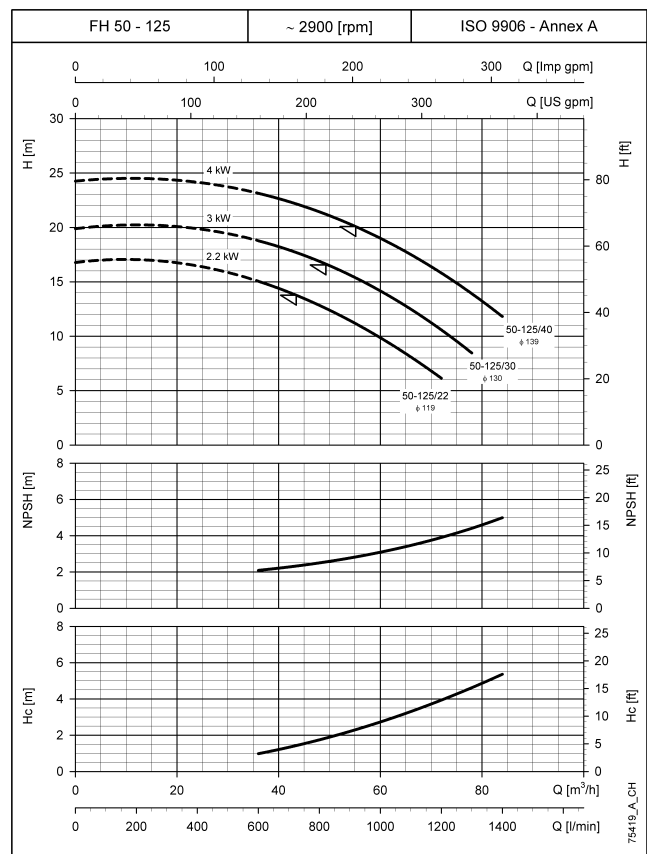
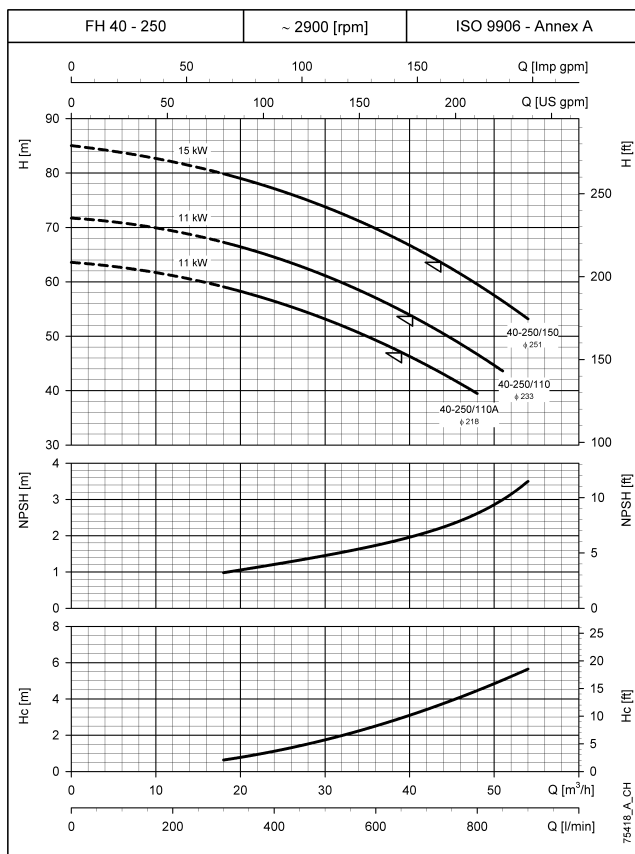
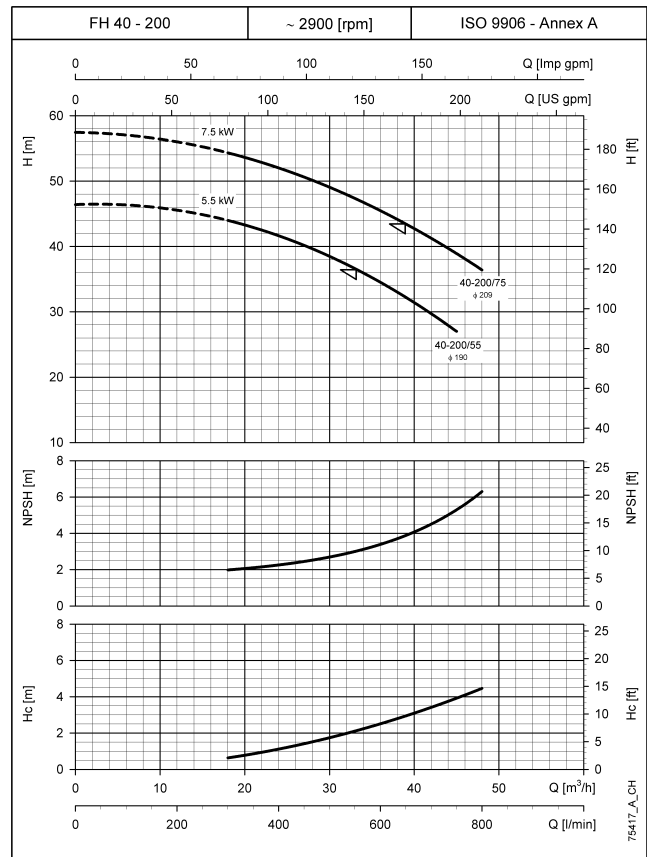
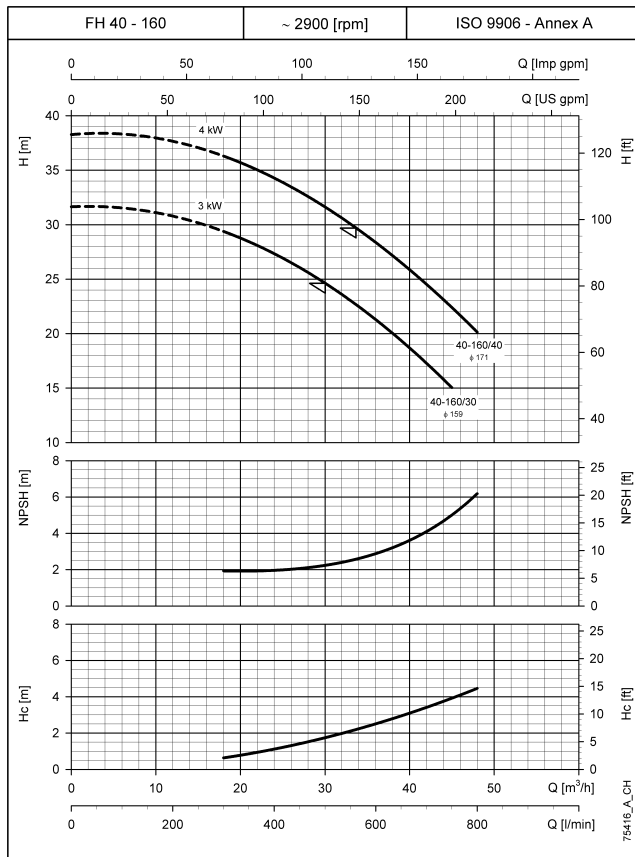
The performance curves do not take into account flow resistance in the valves and piping.
The curves indicate the performance with one pump running.
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.
The NPSH values are laboratory values, for practical use we suggest increasing these values by 0,5 m.



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GEN..D/FHF BOOSTER SETS SERIES OPERATING CHARACTERISTICS AT 50 Hz (SERVICE PUMP)



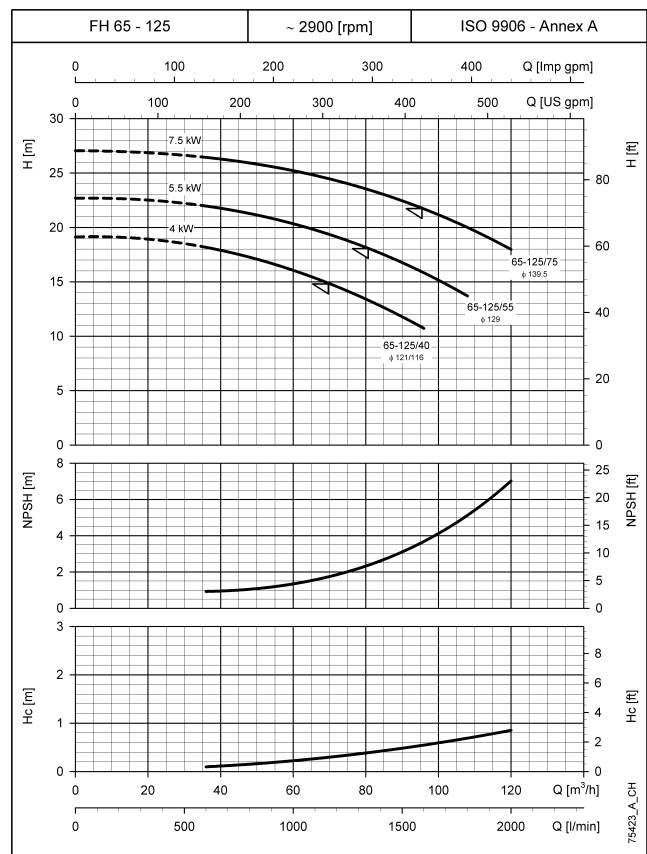
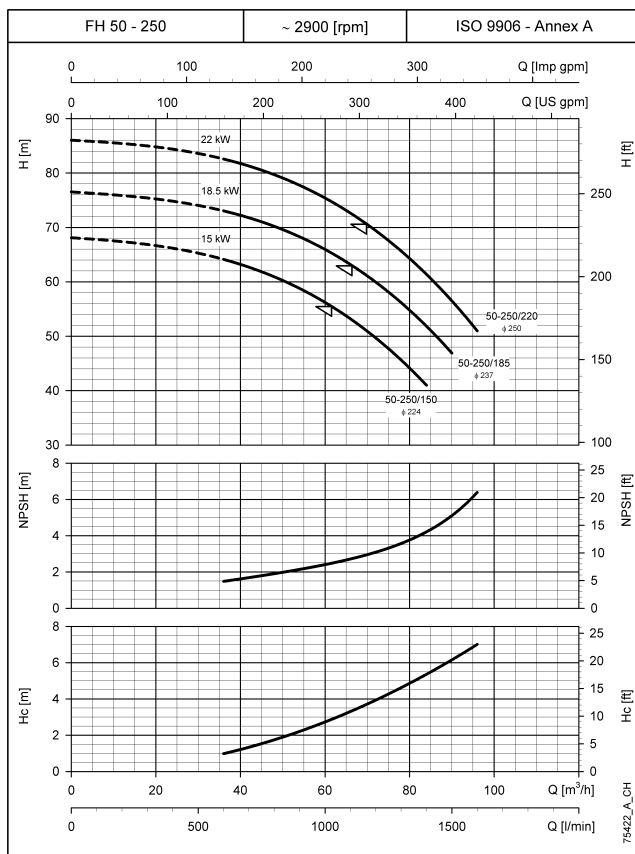
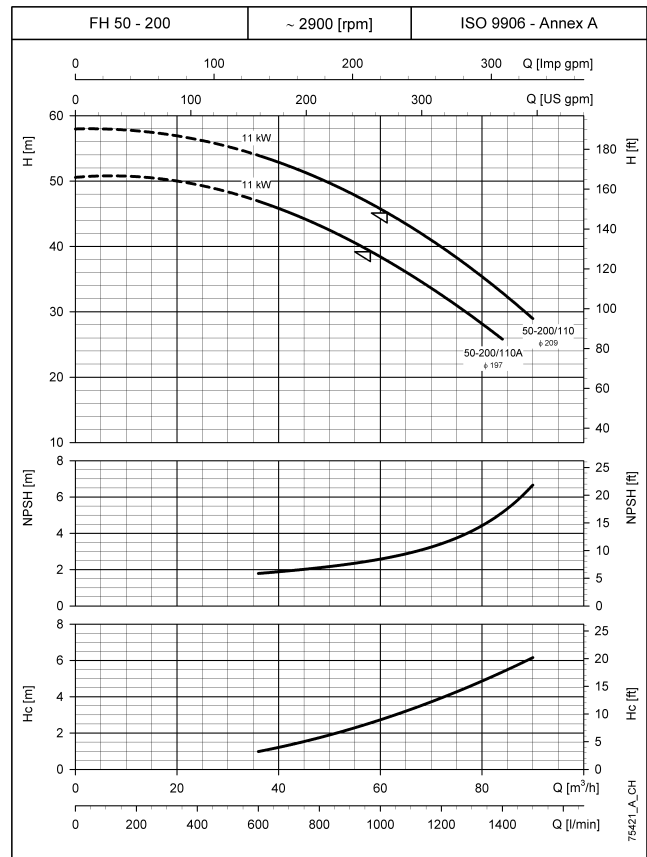
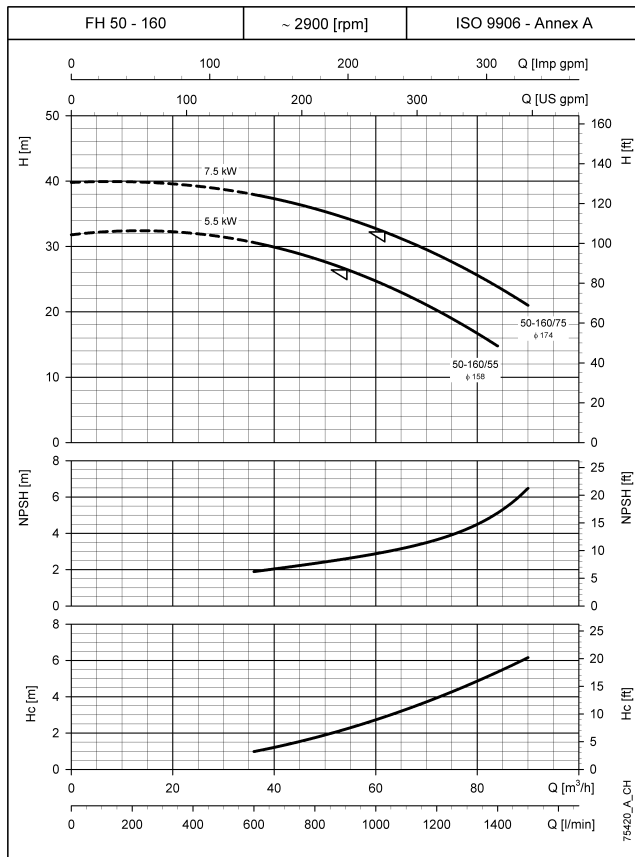
The performance curves do not take into account flow resistance in the valves and piping.
The curves indicate the performance with one pump running.
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.
The NPSH values are laboratory values, for practical use we suggest increasing these values by 0,5 m.



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GEN..D/FHF BOOSTER SETS SERIES OPERATING CHARACTERISTICS AT 50 Hz (SERVICE PUMP)



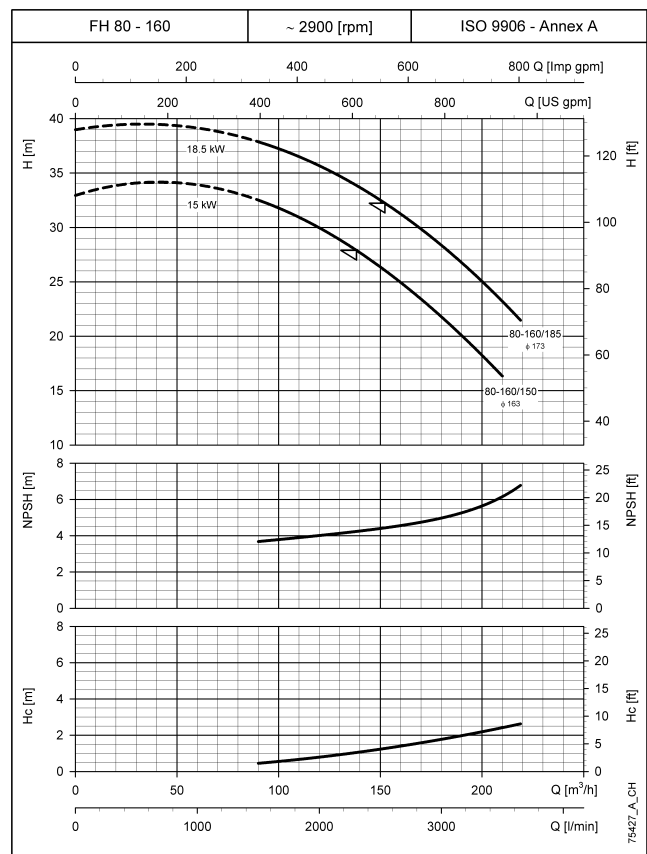
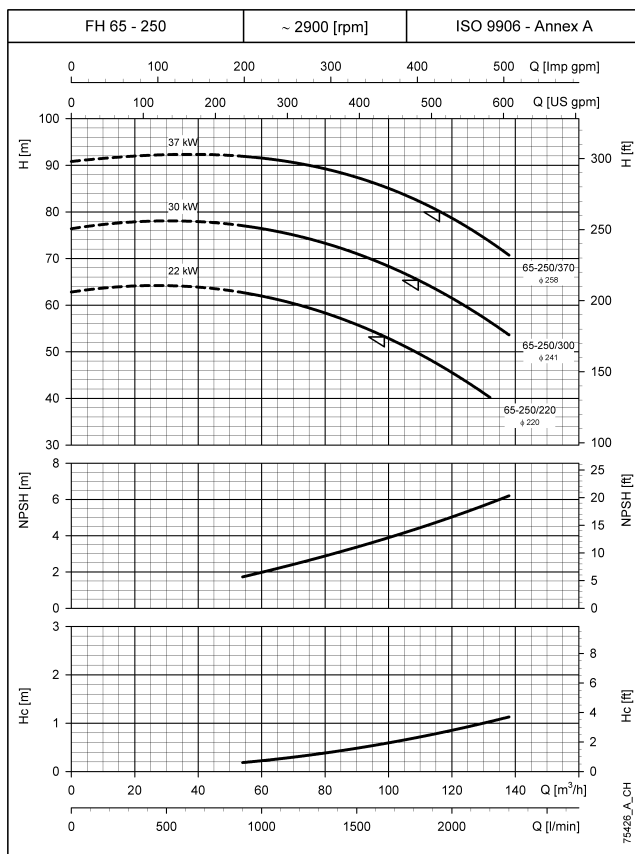
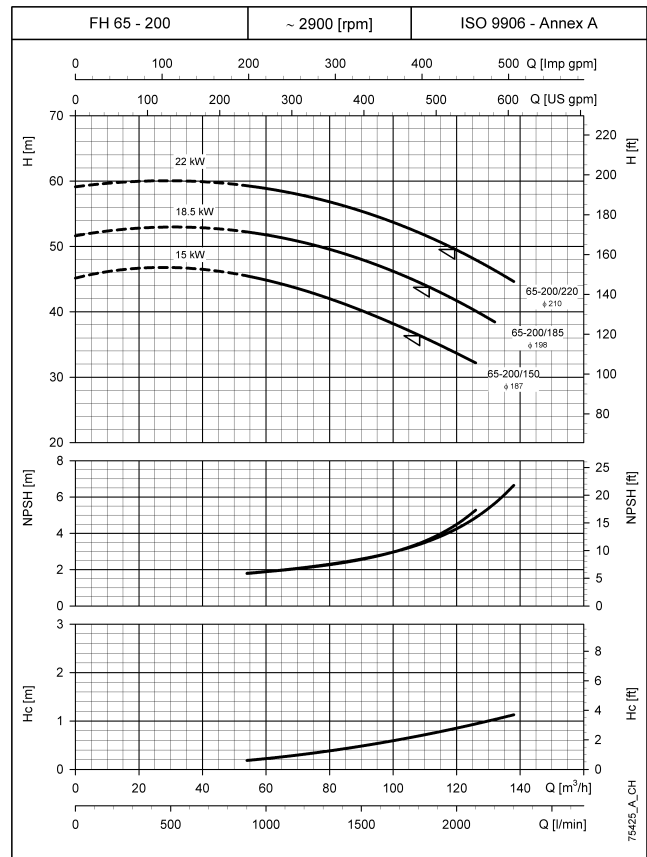
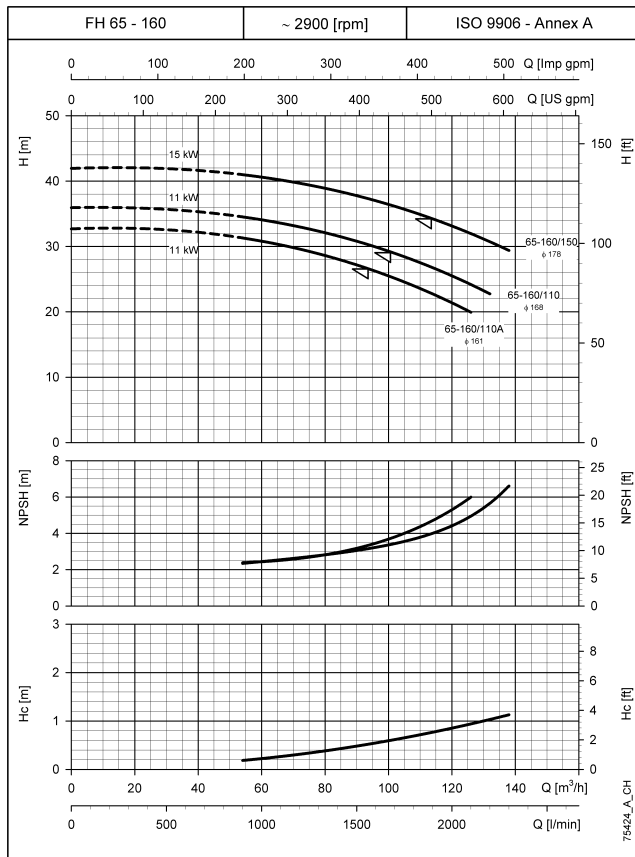
The performance curves do not take into account flow resistance in the valves and piping.
The curves indicate the performance with one pump running.
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.
The NPSH values are laboratory values, for practical use we suggest increasing these values by 0,5 m.



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GEN..D/FHF BOOSTER SETS SERIES OPERATING CHARACTERISTICS AT 50 Hz (SERVICE PUMP)



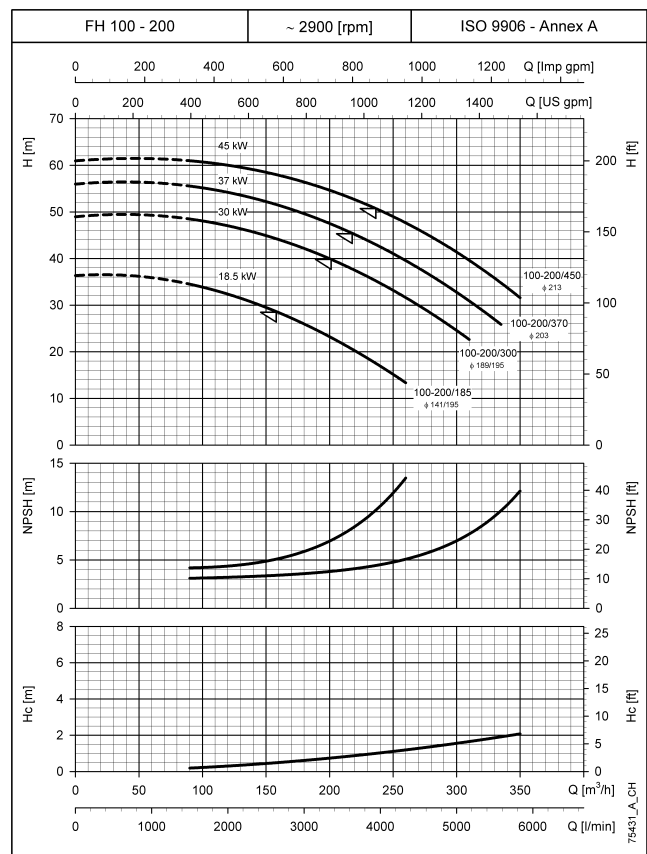
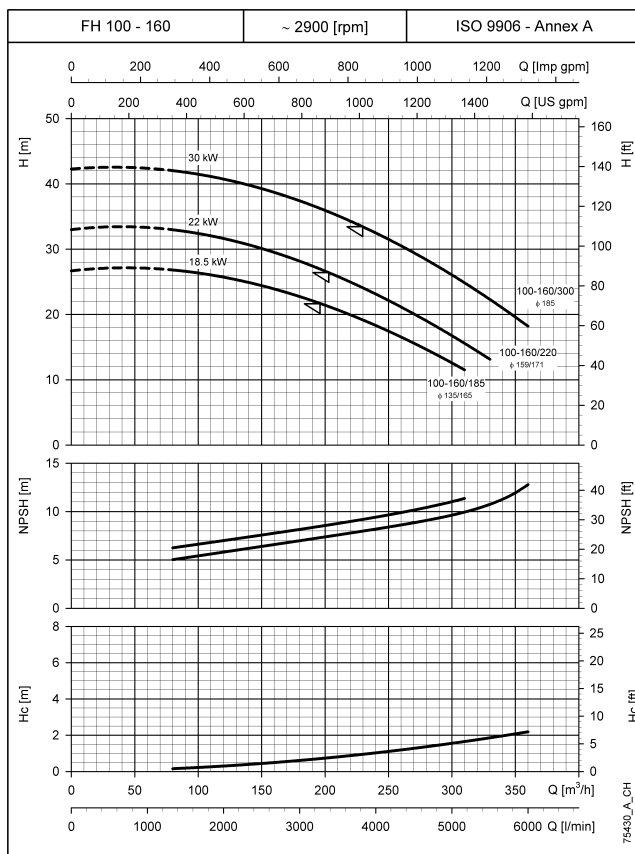
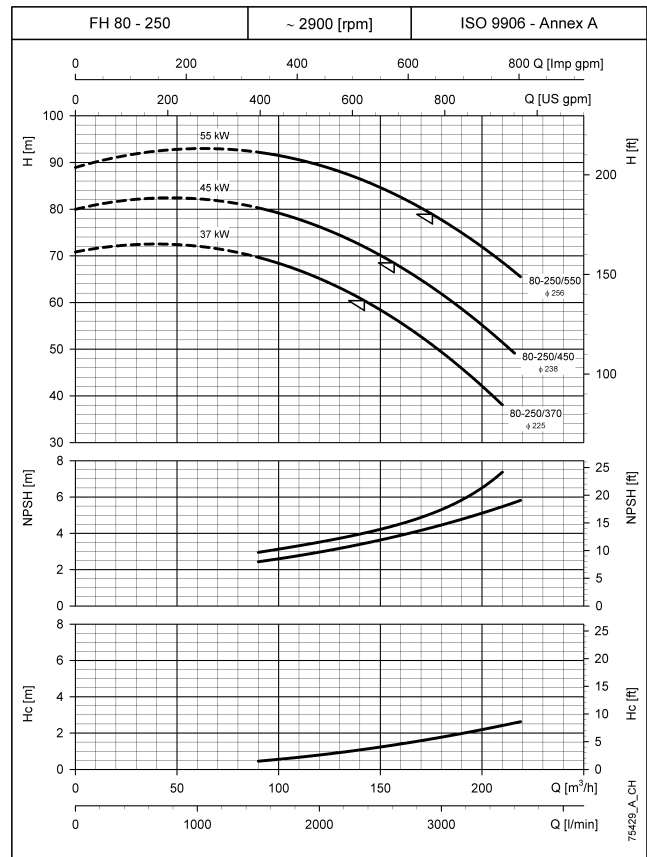
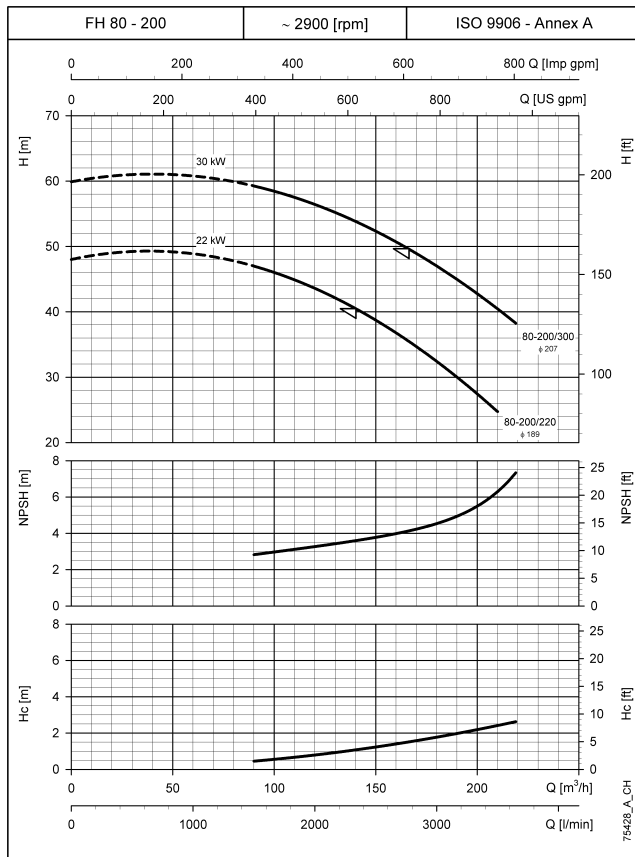
The performance curves do not take into account flow resistance in the valves and piping.
The curves indicate the performance with one pump running.
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.
The NPSH values are laboratory values, for practical use we suggest increasing these values by 0,5 m.



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GEN..D/FHF BOOSTER SETS SERIES OPERATING CHARACTERISTICS AT 50 Hz (SERVICE PUMP)



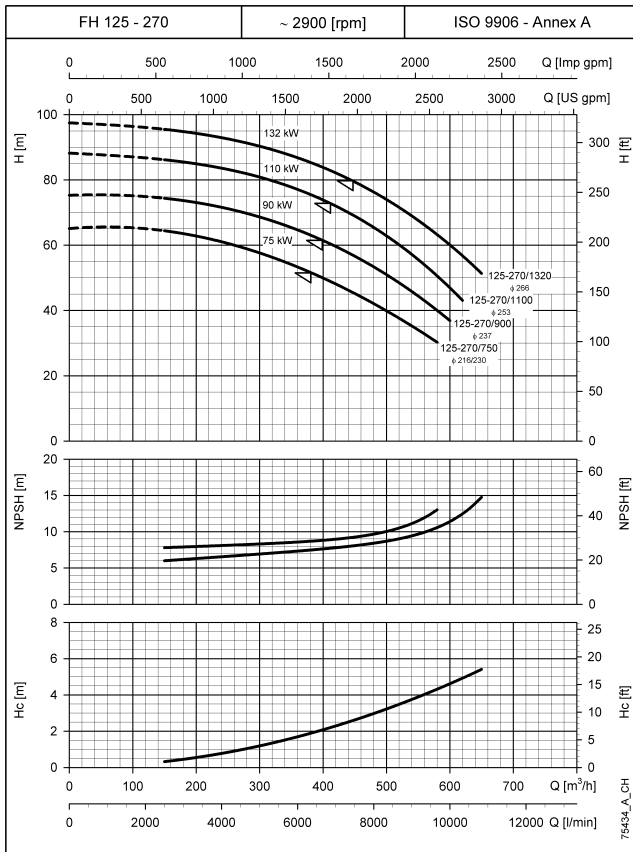
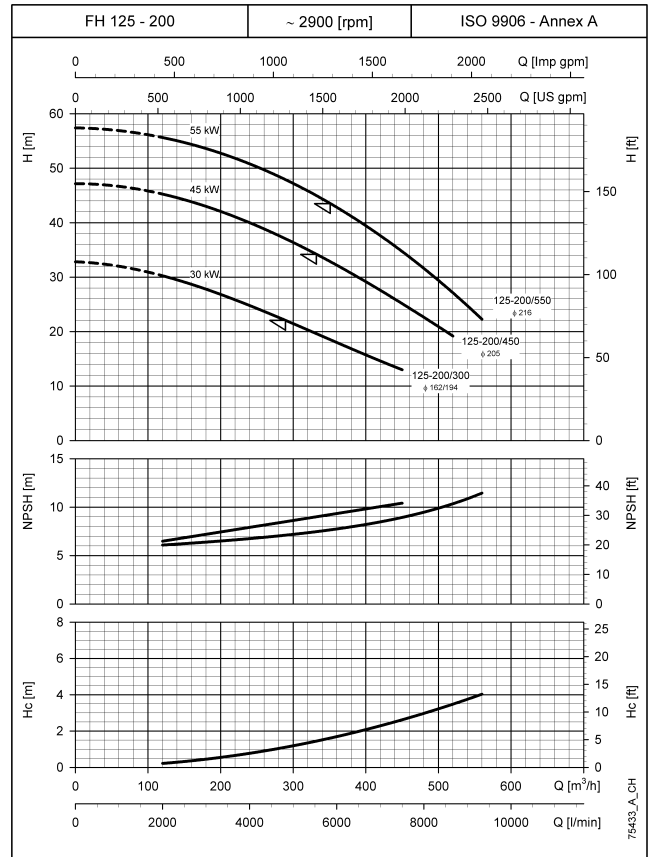
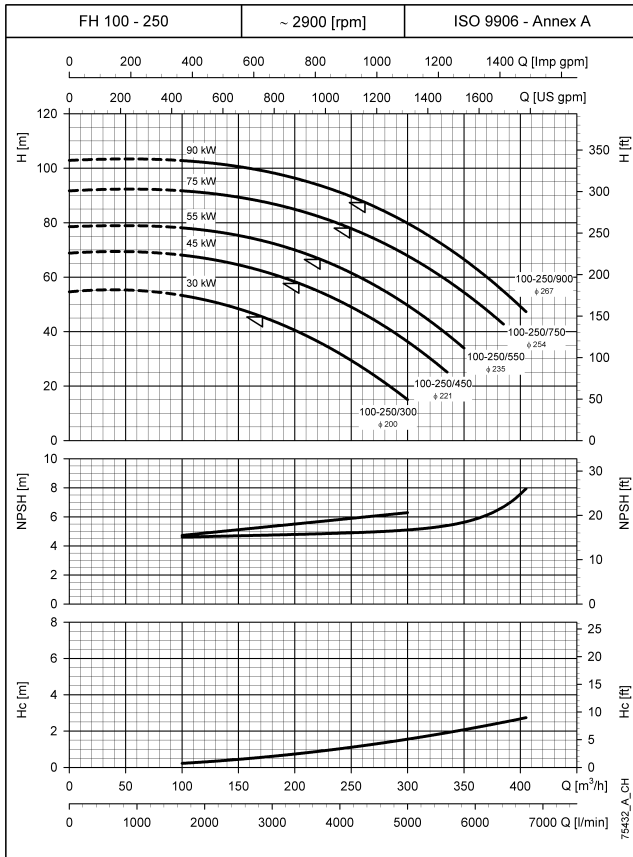
The performance curves do not take into account flow resistance in the valves and piping.
The curves indicate the performance with one pump running.
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.
The NPSH values are laboratory values, for practical use we suggest increasing these values by 0,5 m.



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GEN..D/FHF BOOSTER SETS SERIES OPERATING CHARACTERISTICS AT 50 Hz (SERVICE PUMP)

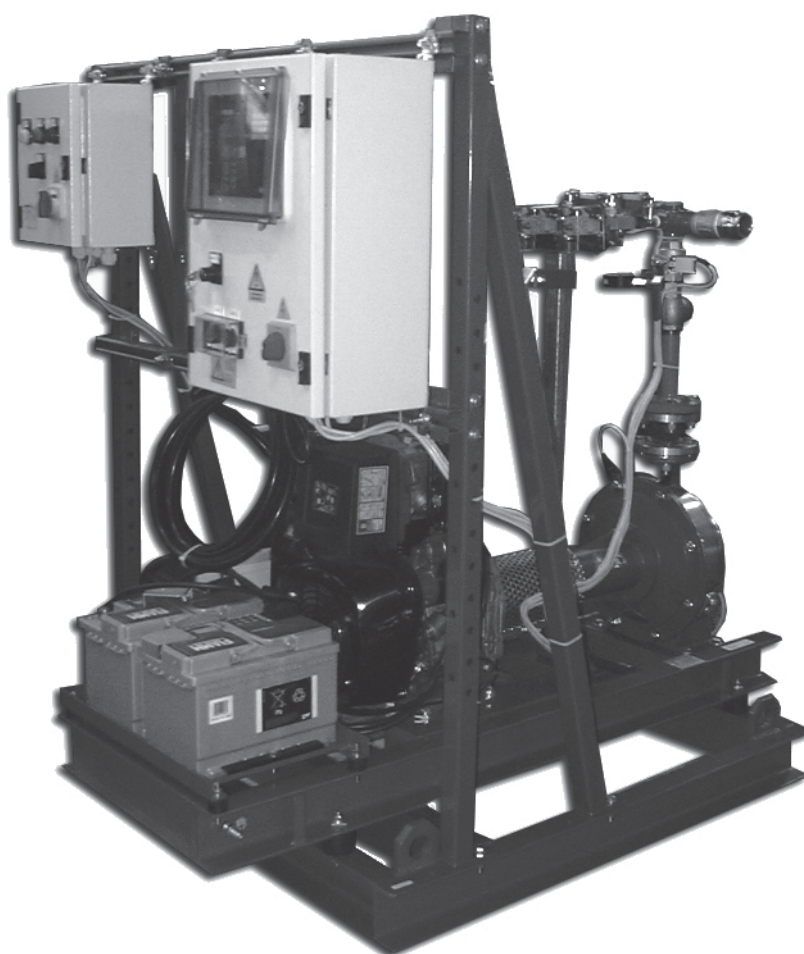


The performance curves do not take into account flow resistance in the valves and piping.
The curves indicate the performance with one pump running.
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.
The NPSH values are laboratory values, for practical use we suggest increasing these values by 0,5 m.

GEN..D/SHF Series

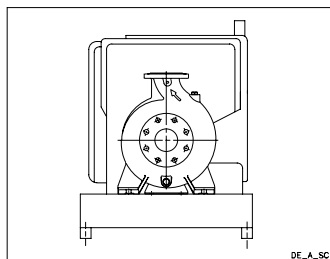
Fire-fighting booster sets
EN 12845
with horizontal centrifugal
SHF series electric/diesel engine pumps

50 Hz





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RANGE


DE_A_SC

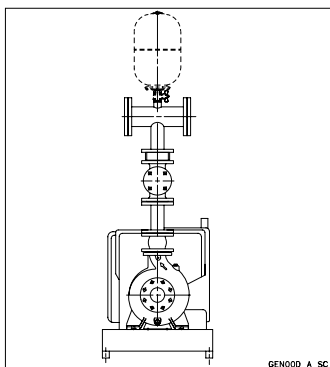
GEN..D/SHF RANGE

- The EN 12845 series of fire-fighting booster sets with a diesel engine service pump and an electric service pump, plus an optional jockey pump, is designed to meet the specific requirements of each application.

D.. DIESEL ENGINE PUMP

- Single fire-fighting centrifugal pump in horizontal design with stainless steel casing, SHF series.

Head up to 100 m.
Flow up to 220 m³/h.

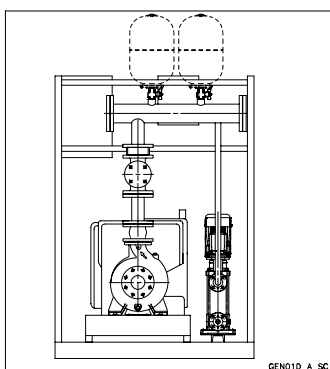


GEN00D_A_SC

GEN..00D SERIES

- Fire-fighting sets with diesel engine centrifugal service pump, in horizontal design with stainless steel casing, SHF series.

Head up to 100 m.
Flow up to 220 m³/h.

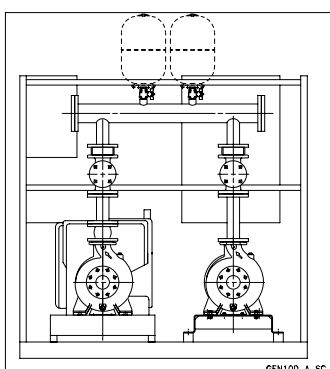


GEN01D_A_SC

GEN..01D SERIES

- Fire-fighting sets with diesel engine service pump and electric jockey pump. The centrifugal service pump has horizontal design and stainless steel casing. SHF series.

Head up to 100 m.
Flow up to 220 m³/h.

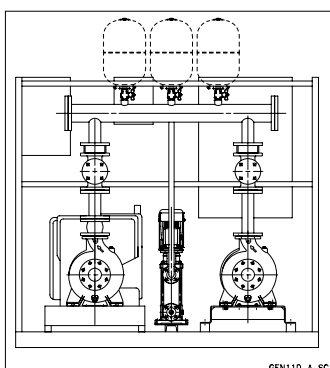


GEN10D_A_SC

GEN..10D SERIES

- Fire-fighting sets with diesel engine service pump and electric service pump. The centrifugal service pump, SHF series, has horizontal design and stainless steel casing.

Head up to 100 m.
Flow up to 440 m³/h.



GEN11D_A_SC

GEN..11D SERIES

- Fire-fighting sets with diesel engine service pump, electric service pump and electric jockey pump. The centrifugal service pump, SHF series, has horizontal design and stainless steel casing.

Head up to 100 m.
Flow up to 440 m³/h.



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GEN..D/SHF BOOSTER SETS SERIES HYDRAULIC PERFORMANCE TABLE AT 50 HZ (JOCKEY PUMP)

PUMP TYPE	NOMINAL POWER		Q = DELIVERY									
	kW	HP	l/min 0	20	30	40	50	60	70	100	120	133
			m³/h 0	1,2	1,8	2,4	3	3,6	4,2	6	7,2	8
			H = TOTAL HEAD METRES COLUMN OF WATER									
SV2 04	0,55	0,75	42,5	37,5	34	30,5	26	20,5	15			
SV2 06	0,75	1	64	56	51	45,5	38,5	31	22			
SV2 09	1,1	1,5	96	84	76,5	68,5	58	46,5	32,5			
SV2 12	1,5	2	128	112	102	91	77	62	44			
SV2 15	2,2	3	160,2	140	128	114	97	78	55,9			
SV4 07	1,1	1,5	70			59,5	56	53	51	37	26	18
SV4 09	1,5	2	90			76,5	73	68,5	65,5	47	33,5	23
SV4 13	2,2	3	131			111	105	99	95	68	48	34

Performance in accordance with the ISO 9906 - Annex A Standard.

EN12845_pp_sv2-4-2p50-en_a_th



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GEN..D/SHF 32-80 BOOSTER SETS SERIES HYDRAULIC PERFORMANCE TABLE AT 50 HZ (1 SERVICE PUMP)

TYPE		NOMINAL POWER kW	Q = DELIVERY																			
SHF..			l/min 0	150	200	250	300	400	450	600	700	800	900	1000	1200	1500	1800	2000	2500	3150	3700	
ELECTRIC PUMP	PUMP		m³/h 0	9	12	15	18	24	27	36	42	48	54	60	72	90	108	120	150	189	222	
H = TOTAL HEAD METRES COLUMN OF WATER																						
32-125/07	32-125/D121	1 x 0,75	16,6	14,4	13	11,3	9,5															
32-125/11	32-125/D136	1 x 1,1	21,6	19,4	17,8	16,2	14,2	9,8														
32-160/15	32-160/D150	1 x 1,5	27,6	24,6	22,7	20,6	18,1	12,7														
32-160/22	32-160/D168	1 x 2,2	35	32,5	31	29	26,6	21	18													
32-200/30	32-200/D188	1 x 3	43,7	38,5	36	33	30	22,3														
32-200/40	32-200/D204	1 x 4	53,5	49	46,8	44	41	33,8	28,8													
32-250/55	32-250/D222	1 x 5,5	61,7	56,7	54,2	51,2	47,9	40														
32-250/75	32-250/D242	1 x 7,5	74,1	68,9	66,2	63	60	52,2														
32-250/110	32-250/D256	1 x 11	86,2	80,1	77,5	74,3	71	63,3	58,7													
40-125/11	40-125/D112	1 x 1,1	14,4				12,5	10,9	10	7												
40-125/15	40-125/D126	1 x 1,5	17,5				16	14,4	13,4	10,2	8											
40-125/22	40-125/D143	1 x 2,2	25,3				22,2	20,4	19,5	15,9	13,2											
40-160/30	40-160/D159	1 x 3	32,2				29,5	26,9	25,4	20,8	17											
40-160/40	40-160/D171	1 x 4	38				35,5	33,2	31,7	26,7	22,8	18,5										
40-200/55	40-200/D190	1 x 5,5	49,1				46,4	43,8	42	36,2	31	25										
40-200/75	40-200/D209	1 x 7,5	58,2				55,1	52,3	50,8	45	40	34,5										
40-250/110A	40-250/D218	1 x 11	64,9				62	59,5	58	51,5	44,6											
40-250/110	40-250/D233	1 x 11	74,7				71,4	69	67,8	61,5	55,2											
40-250/150	40-250/D251	1 x 15	87,7				84,2	81,5	80	74,3	69,2	62,5										
50-125/22	50-125/D119	1 x 2,2	17,2							14,6	13,4	12,2	11	9,5	6,5							
50-125/30	50-125/D130	1 x 3	21,7							18,8	17,5	16,3	14,8	13,4	10,5							
50-125/40	50-125/D139	1 x 4	25,7							23,3	22,2	20,8	19,3	18	15							
50-160/55	50-160/D158	1 x 5,5	34,1							30,6	29,2	27,6	28	26,6	19,8							
50-160/75	50-160/D174	1 x 7,5	40,8							37,5	36,2	34,8	25,8	24	27	18,6						
50-200/110A	50-200/D197	1 x 11	53							47,5	45,3	42,8	40	36,8	29,8							
50-200/110	50-200/D209	1 x 11	60,1							55	52,8	50,3	47,5	44,3	37,5							
50-250/150	50-250/D224	1 x 15	70,2							66,6	65	63,3	61	58,3	51							
50-250/185	50-250/D237	1 x 18,5	80							75	73,2	71,4	69	66,3	59,5							
50-250/220	50-250/D250	1 x 22	88,9							84,6	82,8	80,7	78,5	75,8	69,5							
65-160/40	65-160/D119	1 x 4	19,6									16,8	16	15,2	13,5	10,8	7,6					
65-160/55	65-160/D129	1 x 5,5	24,2									21,4	20,7	19,8	18	15,2	11,8					
65-160/75	65-160/D137	1 x 7,5	28,2									26	25,3	24,7	23	20	16,8	14,5				
65-160/110A	65-160/D168	1 x 11	38,2									35,4	34,3	33	30	25,5	20					
65-160/110	65-160/D177	1 x 11	43,2									40,8	39,8	38,5	35,5	30,6	25,4	21,4				
65-200/150	65-200/D192	1 x 15	53										48,8	47,5	44,3	38,5	32					
65-200/185	65-200/D203	1 x 18,5	60,2										56,5	55,3	52	47	40	35,4				
65-200/220	65-200/D215	1 x 22	68										64,4	63,3	60	55	49	44,5				
65-250/300	65-250/D240	1 x 30	84,3											81,7	79,5	75	69	64				
65-250/370	65-250/D255	1 x 37	98												95,3	93	88	82,5	78			
80-160/110	80-160/D169	1 x 11	33,6												31,9	30	27,5	25,5	20,5	12,5		
80-160/150	80-160/D177	1 x 15	40,3												38,8	37	34,5	33	27,5	20		
80-160/185	80-160/D186	1 x 18,5	47,2												45,7	44	41,5	40	35	27,5	19,5	
80-200/220	80-200/D198	1 x 22	53													49,8	47,5	46	41	33,5		
80-200/300	80-200/D215	1 x 30	63,6													61,2	59	57	52	44	36,5	
80-200/370	80-200/D226	1 x 37	71,4													69,5	67,5	66	61	53,5	46	
80-250/450	80-250/D237	1 x 45	83,5													80,5	78	76	70	61		
80-250/550	80-250/D252	1 x 55	95,7													93,6	91	89	83,5	75	64,6	
80-250/750	80-250/D270	1 x 75	112													110	108	106	101	92	82	

Performance in accordance with the ISO 9906 - Annex A Standard.

12845_1p-shf-2p50-en_a_th

Performance relative to 1 service pump.



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GEN..D/SHF 32-80 BOOSTER SETS SERIES HYDRAULIC PERFORMANCE TABLE AT 50 HZ (2 SERVICE PUMPS)

TYPE		NOMINAL POWER	Q = DELIVERY																		
SHF..			l/min 0	300	400	500	600	800	900	1200	1400	1600	1800	2000	2400	3000	3600	4000	5000	6300	7400
ELECTRIC PUMP	PUMP		m³/h 0	18	24	30	36	48	54	72	84	96	108	120	144	180	216	240	300	378	444
H = TOTAL HEAD METRES COLUMN OF WATER																					
32-125/07	32-125/D121	2 x 0,75	16,6	14,4	13	11,3	9,5														
32-125/11	32-125/D136	2 x 1,1	21,6	19,4	17,8	16,2	14,2	9,8													
32-160/15	32-160/D150	2 x 1,5	27,6	24,6	22,7	20,6	18,1	12,7													
32-160/22	32-160/D168	2 x 2,2	35	32,5	31	29	26,6	21	18												
32-200/30	32-200/D188	2 x 3	43,7	38,5	36	33	30	22,3													
32-200/40	32-200/D204	2 x 4	53,5	49	46,8	44	41	33,8	28,8												
32-250/55	32-250/D222	2 x 5,5	61,7	56,7	54,2	51,2	47,9	40													
32-250/75	32-250/D242	2 x 7,5	74,1	68,9	66,2	63	60	52,2													
32-250/110	32-250/D256	2 x 11	86,2	80,1	77,5	74,3	71	63,3	58,7												
40-125/11	40-125/D112	2 x 1,1	14,4				12,5	10,9	10	7											
40-125/15	40-125/D126	2 x 1,5	17,5				16	14,4	13,4	10,2	8										
40-125/22	40-125/D143	2 x 2,2	25,3				22,2	20,4	19,5	15,9	13,2										
40-160/30	40-160/D159	2 x 3	32,2				29,5	26,9	25,4	20,8	17										
40-160/40	40-160/D171	2 x 4	38				35,5	33,2	31,7	26,7	22,8	18,5									
40-200/55	40-200/D190	2 x 5,5	49,1				46,4	43,8	42	36,2	31	25									
40-200/75	40-200/D209	2 x 7,5	58,2				55,1	52,3	50,8	45	40	34,5									
40-250/110A	40-250/D218	2 x 11	64,9				62	59,5	58	51,5	44,6										
40-250/110	40-250/D233	2 x 11	74,7				71,4	69	67,8	61,5	55,2										
40-250/150	40-250/D251	2 x 15	87,7				84,2	81,5	80	74,3	69,2	62,5									
50-125/22	50-125/D119	2 x 2,2	17,2							14,6	13,4	12,2	11	9,5	6,5						
50-125/30	50-125/D130	2 x 3	21,7							18,8	17,5	16,3	14,8	13,4	10,5						
50-125/40	50-125/D139	2 x 4	25,7							23,3	22,2	20,8	19,3	18	15						
50-160/55	50-160/D158	2 x 5,5	34,1							30,6	29,2	27,6	28	26,6	19,8						
50-160/75	50-160/D174	2 x 7,5	40,8							37,5	36,2	34,8	25,8	24	27	18,6					
50-200/110A	50-200/D197	2 x 11	53							47,5	45,3	42,8	40	36,8	29,8						
50-200/110	50-200/D209	2 x 11	60,1							55	52,8	50,3	47,5	44,3	37,5						
50-250/150	50-250/D224	2 x 15	70,2							66,6	65	63,3	61	58,3	51						
50-250/185	50-250/D237	2 x 18,5	80							75	73,2	71,4	69	66,3	59,5						
50-250/220	50-250/D250	2 x 22	88,9							84,6	82,8	80,7	78,5	75,8	69,5						
65-160/40	65-160/D119	2 x 4	19,6									16,8	16	15,2	13,5	10,8	7,6				
65-160/55	65-160/D129	2 x 5,5	24,2									21,4	20,7	19,8	18	15,2	11,8				
65-160/75	65-160/D137	2 x 7,5	28,2									26	25,3	24,7	23	20	16,8	14,5			
65-160/110A	65-160/D168	2 x 11	38,2									35,4	34,3	33	30	25,5	20				
65-160/110	65-160/D177	2 x 11	43,2									40,8	39,8	38,5	35,5	30,6	25,4	21,4			
65-200/150	65-200/D192	2 x 15	53										48,8	47,5	44,3	38,5	32				
65-200/185	65-200/D203	2 x 18,5	60,2										56,5	55,3	52	47	40	35,4			
65-200/220	65-200/D215	2 x 22	68										64,4	63,3	60	55	49	44,5			
65-250/300	65-250/D240	2 x 30	84,3											81,7	79,5	75	69	64			
65-250/370	65-250/D255	2 x 37	98											95,3	93	88	82,5	78			
80-160/110	80-160/D169	2 x 11	33,6												31,9	30	27,5	25,5	20,5	12,5	
80-160/150	80-160/D177	2 x 15	40,3												38,8	37	34,5	33	27,5	20	
80-160/185	80-160/D186	2 x 18,5	47,2												45,7	44	41,5	40	35	27,5	19,5
80-200/220	80-200/D198	2 x 22	53													49,8	47,5	46	41	33,5	
80-200/300	80-200/D215	2 x 30	63,6													61,2	59	57	52	44	36,5
80-200/370	80-200/D226	2 x 37	71,4													69,5	67,5	66	61	53,5	46
80-250/450	80-250/D237	2 x 45	83,5													80,5	78	76	70	61	
80-250/550	80-250/D252	2 x 55	95,7													93,6	91	89	83,5	75	64,6
80-250/750	80-250/D270	2 x 75	112													110	108	106	101	92	82

Performance in accordance with the ISO 9906 - Annex A Standard.

12845_2p-shf-2p50-en_a_th

Performance relative to 2 service pumps.

GEN..D/SHF 32-80 BOOSTER SETS **ELECTRICAL DATA TABLE AT 50 Hz**

SERVICE PUMP 3 X 400 V				ELECTRIC JOCKEY PUMP				CURRENT (*) ABSORBED SET			
TYPE SHF..		NOMINAL POWER				1x230V	3x400V	1 x 230V		3x400	
ELECTRIC PUMP	PUMP	P _n kW	I _n A	TYPE	P _n kW	I _n A	I _n A	GEN..00D A	GEN..01D A	GEN..10D A	GEN..11D A
32-125/07	32-125/D121	0,75	2,02	SV206	0,75	5,05	2,02	3	8,05	5,02	7,04
32-125/11	32-125/D136	1,1	2,61	SV206	0,75	5,05	2,02	3	8,05	5,61	7,63
32-160/15	32-160/D150	1,5	3,45	SV206	0,75	5,05	2,02	3	8,05	6,45	8,47
32-160/22	32-160/D168	2,2	5,03	SV206	0,75	5,05	2,02	3	8,05	8,03	10,1
32-200/30	32-200/D188	3	6,01	SV206	0,75	5,05	2,02	3	8,05	9,01	11,0
32-200/40	32-200/D204	4	8,09	SV209	1,1	6,82	2,61	3	9,82	11,1	13,7
32-250/55	32-250/D222	5,5	10,1	SV209	1,1	6,82	2,61	3	9,82	13,1	15,71
32-250/75	32-250/D242	7,5	13,7	SV209	1,1	6,82	2,61	3	9,82	16,7	19,31
32-250/110	32-250/D256	11	20,1	SV209	1,1	6,82	2,61	3	9,82	23,1	25,71
40-125/11	40-125/D112	1,1	2,61	SV206	0,75	5,05	2,02	3	8,05	5,61	7,63
40-125/15	40-125/D126	1,5	3,45	SV206	0,75	5,05	2,02	3	8,05	6,45	8,47
40-125/22	40-125/D143	2,2	5,03	SV206	0,75	5,05	2,02	3	8,05	8,03	10,1
40-160/30	40-160/D159	3	6,01	SV206	0,75	5,05	2,02	3	8,05	9,01	11,0
40-160/40	40-160/D171	4	8,09	SV206	0,75	5,05	2,02	3	8,05	11,1	13,1
40-200/55	40-200/D190	5,5	10,1	SV206	0,75	5,05	2,02	3	8,05	13,1	15,12
40-200/75	40-200/D209	7,5	13,7	SV209	1,1	6,82	2,61	3	9,82	16,7	19,31
40-250/110A	40-250/D218	11	20,1	SV209	1,1	6,82	2,61	3	9,82	23,1	25,7
40-250/110	40-250/D233	11	20,1	SV209	1,1	6,82	2,61	3	9,82	23,1	25,7
40-250/150	40-250/D251	15	26,7	SV209	1,1	6,82	2,61	3	9,82	29,7	32,3
50-125/22	50-125/D119	2,2	5,03	SV206	0,75	5,05	2,02	3	8,05	8,03	10,1
50-125/30	50-125/D130	3	6,01	SV206	0,75	5,05	2,02	3	8,05	9,01	11,0
50-125/40	50-125/D139	4	8,09	SV206	0,75	5,05	2,02	3	8,05	11,1	13,1
50-160/55	50-160/D158	5,5	10,1	SV206	0,75	5,05	2,02	3	8,05	13,1	15,12
50-160/75	50-160/D174	7,5	13,7	SV206	0,75	5,05	2,02	3	8,05	16,7	18,72
50-200/110A	50-200/D197	11	20,1	SV209	1,1	6,82	2,61	3	9,82	23,1	25,7
50-200/110	50-200/D209	11	20,1	SV209	1,1	6,82	2,61	3	9,82	23,1	25,7
50-250/150	50-250/D224	15	26,7	SV209	1,1	6,82	2,61	3	9,82	29,7	32,3
50-250/185	50-250/D237	18,5	32,8	SV209	1,1	6,82	2,61	3	9,82	35,8	38,4
50-250/220	50-250/D250	22	38,7	SV209	1,1	6,82	2,61	3	9,82	41,7	44,3
65-160/40	65-160/D119	4	8,09	SV206	0,75	5,05	2,02	3	8,05	11,09	13,1
65-160/55	65-160/D129	5,5	10,1	SV206	0,75	5,05	2,02	3	8,05	13,1	15,12
65-160/75	65-160/D137	7,5	13,7	SV206	0,75	5,05	2,02	3	8,05	16,7	18,7
65-160/110A	65-160/D168	11	20,1	SV206	0,75	5,05	2,02	3	8,05	23,1	25,1
65-160/110	65-160/D177	11	20,1	SV206	0,75	5,05	2,02	3	8,05	23,1	25,1
65-200/150	65-200/D192	15	26,7	SV209	1,1	6,82	2,61	3	9,82	29,7	32,3
65-200/185	65-200/D203	18,5	32,8	SV209	1,1	6,82	2,61	3	9,82	35,8	38,4
65-200/220	65-200/D215	22	38,7	SV209	1,1	6,82	2,61	3	9,82	41,7	44,3
65-250/300	65-250/D240	30	54	SV209	1,1	6,82	2,61	3	9,82	57	59,6
65-250/370	65-250/D255	37	65	SV212	1,5	8,9	3,45	3	11,9	68	71,5
80-160/110	80-160/D169	11	20,1	SV407	1,1	6,82	2,61	3	9,82	23,1	25,7
80-160/150	80-160/D177	15	26,7	SV407	1,1	6,82	2,61	3	9,82	29,7	32,3
80-160/185	80-160/D186	18,5	32,8	SV407	1,1	6,82	2,61	3	9,82	35,8	38,4
80-200/220	80-200/D198	22	38,7	SV407	1,1	6,82	2,61	3	9,82	41,7	44,3
80-200/300	80-200/D215	30	54	SV409	1,5	8,9	3,45	3	11,9	57	60,5
80-200/370	80-200/D226	37	65	SV409	1,5	8,9	3,45	3	11,9	68	71,5
80-250/450	80-250/D237	45	80	SV409	1,5	8,9	3,45	3	11,9	83	86,5
80-250/550	80-250/D252	55	99	SV413	2,2	12,8	5,03	3	15,8	102	107,0
80-250/750	80-250/D270	75	133	SV413	2,2	12,8	5,03	3	15,8	136	141,0

ENMTP-SHF_2p50-en_a_te

(*)The current indicated is the maximum current absorbed.

At the set 3x400V three phase power supply GEN..10D e GEN..11D to add the control panel current of the engine pump (GEN..0D), 1x230V single phase

The sets GEN..01D have the electric jockey pump 1x230V single phase power supply.



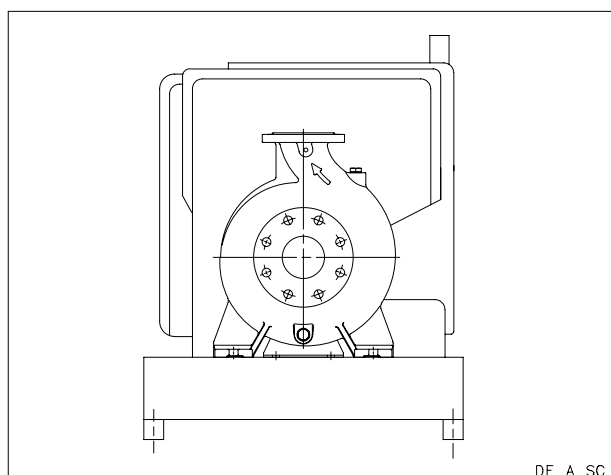
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**Fire-fighting
booster sets
EN 12845**
MARKET SECTORS

CIVIL, INDUSTRIAL

APPLICATIONS

- Fixed fire-fighting systems.
Automatic Sprinkler systems.

**DSHF
Series**

SPECIFICATIONS

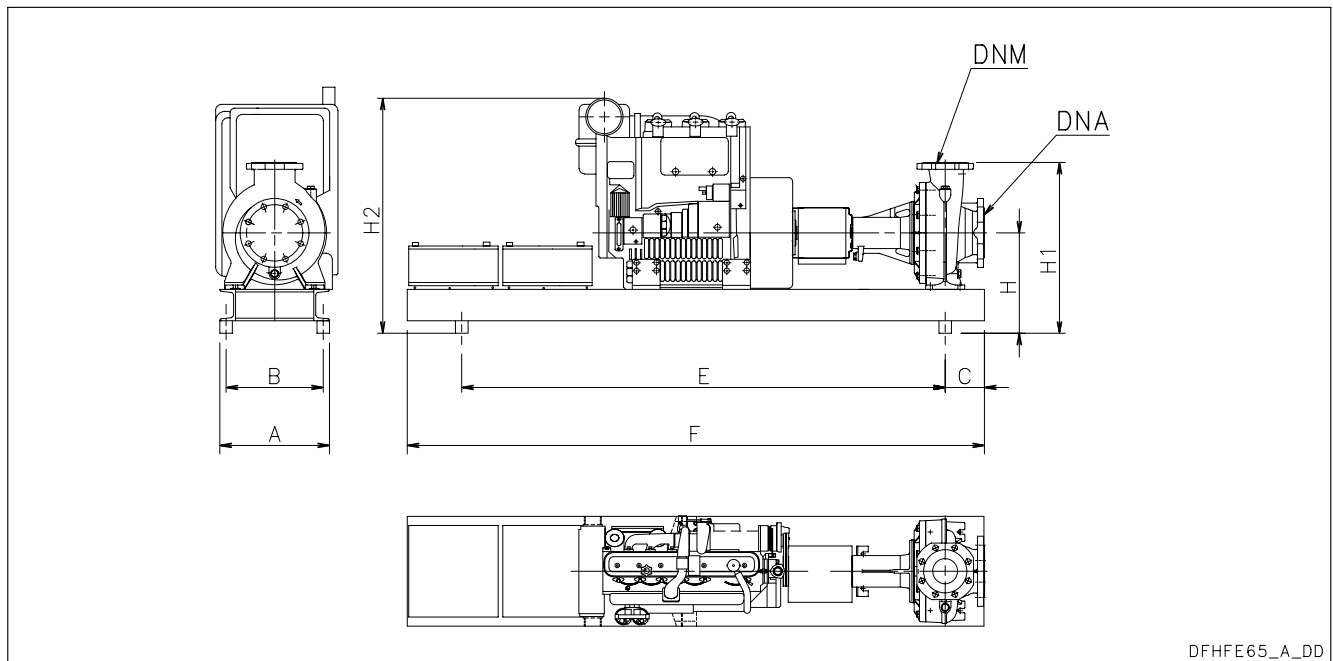
- **Flow** up to 220 m³/h.
- **Head** up to 100 m.
- Panel supply power voltage:
1 x 230V ± 10%.
- Frequency: 50 Hz.
- Voltage for controls outside panel:
12 - 24 Vac.
- Protection grade:
- electric panel: IP54.
- Electric pumps maximum power
75 kW.
- Diesel engine with battery start.
- **Diesel engine service pump
in horizontal design:**
- SHF series.
- Maximum running pressure: 12 bar.



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DIESEL ENGINE PUMP, DSHF 32-80 SERIES FIRE-FIGHTING EN 12845



DFHFE65_A_DD

For the dimensions of diesel tanks, see tables pag. 14-17.



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DIESEL ENGINE PUMP, DSHF 32-80 SERIES FIRE-FIGHTING EN 12845

D..	DNA	DNM	A	B	C	E	F	H	H1	H2
SHFE32-125/D121	R 2"	32	400	350	80	900	1165	262	402	630
SHFE32-125/D136	R 2"	32	400	350	80	900	1165	262	402	630
SHFE32-160/D150	R 2"	32	400	350	80	900	1165	282	442	650
SHFE32-160/D168	R 2"	32	400	350	80	900	1165	282	442	650
SHFE32-200/D188	R 2"	32	400	350	80	900	1165	260	440	630
SHFE32-200/D204	R 2"	32	500	450	80	1000	1165	260	440	630
SHFE32-250/D222	R 2"	32	500	450	100	1000	1240	280	505	680
SHFE32-250/D242	R 2"	32	500	450	100	1000	1350	280	505	690
SHFE32-250/D256	R 2"	32	500	450	100	1000	1350	280	505	690
SHFE40-125/D112	65	40	400	350	80	900	1165	262	402	630
SHFE40-125/D126	65	40	400	350	80	900	1165	262	402	630
SHFE40-125/D143	65	40	400	350	80	900	1165	262	402	630
SHFE40-160/D159	65	40	400	350	80	900	1165	282	442	650
SHFE40-160/D171	65	40	400	350	80	900	1165	282	442	650
SHFE40-200/D190	65	40	500	450	100	1000	1240	310	490	710
SHFE40-200/D209	65	40	500	450	100	1000	1350	310	490	720
SHFE40-250/D218	65	40	530	480	100	1200	1350	280	505	690
SHFE40-250/D233	65	40	530	480	100	1200	1650	330	555	800
SHFE40-250/D251	65	40	530	480	100	1200	1650	330	555	800
SHFE50-125/D119	65	50	400	350	100	900	1165	282	442	650
SHFE50-125/D130	65	50	400	350	100	900	1165	282	442	650
SHFE50-125/D139	65	50	500	450	100	1000	1165	282	442	650
SHFE50-160/D158	65	50	500	450	100	1000	1240	310	490	710
SHFE50-160/D174	65	50	500	450	100	1000	1350	310	490	720
SHFE50-200/D197	65	50	530	480	100	1200	1350	310	510	720
SHFE50-200/D209	65	50	530	480	100	1200	1350	310	510	720
SHFE50-250/D224	65	50	530	480	100	1200	1650	330	555	800
SHFE50-250/D237	65	50	530	480	100	1500	1950	330	555	800
SHFE50-250/D250	65	50	530	480	100	1500	1950	380	605	800
SHFE65-160/D119	80	65	500	450	100	1000	1165	260	460	630
SHFE65-160/D129	80	65	500	450	100	1000	1240	310	510	710
SHFE65-160/D137	80	65	530	480	100	1200	1350	310	510	720
SHFE65-160/D168	80	65	530	480	100	1200	1350	310	510	720
SHFE65-160/D177	80	65	530	480	100	1200	1650	360	560	830
SHFE65-200/D192	80	65	530	480	100	1200	1650	330	555	800
SHFE65-200/D203	80	65	530	480	100	1500	1950	330	555	800
SHFE65-200/D215	80	65	530	480	100	1500	1950	380	605	900
SHFE65-250/D240	80	65	640	590	100	1800	2200	360	610	1000
SHFE65-250/D255	80	65	640	590	100	1800	2200	360	610	1010
SHFE80-160/D169	100	80	530	480	125	1200	1650	330	555	800
SHFE80-160/D177	100	80	530	480	125	1200	1650	330	555	800
SHFE80-160/D186	100	80	530	480	125	1500	2050	380	605	800
SHFE80-200/D198	100	80	530	480	125	1500	2050	380	630	900
SHFE80-200/D215	100	80	640	590	125	1800	2200	360	610	1000
SHFE80-200/D226	100	80	640	590	125	1800	2200	360	610	1010
SHFE80-250/D237	100	80	640	590	125	1880	2200	365	645	1010
SHFE80-250/D252	100	80	660	610	125	1880	2350	390	670	1080
SHFE80-250/D270	100	80	700	650	125	1300	2100	420	700	1090

Dimensions in mm. Tolerance ± 10 mm.

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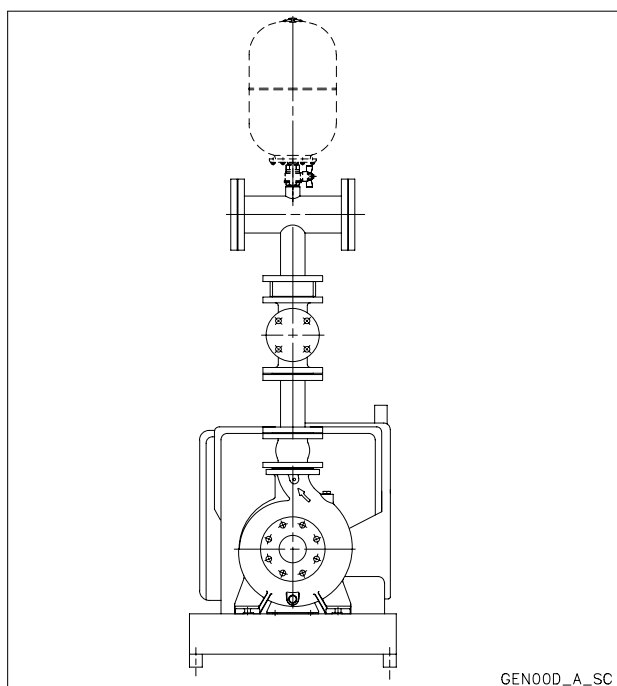
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**Fire-fighting
booster sets
EN 12845**
MARKET SECTORS

CIVIL, INDUSTRIAL

APPLICATIONS

- Fixed fire-fighting systems.
- Automatic Sprinkler systems.

**GEN..00D/SHF
Series**

SPECIFICATIONS

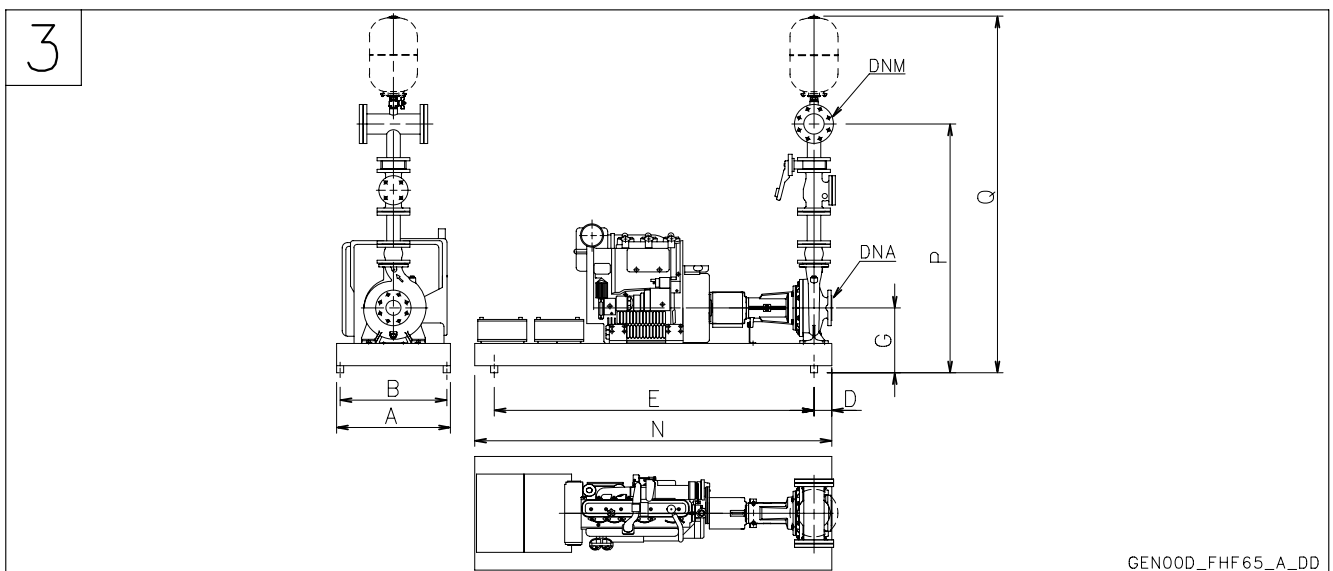
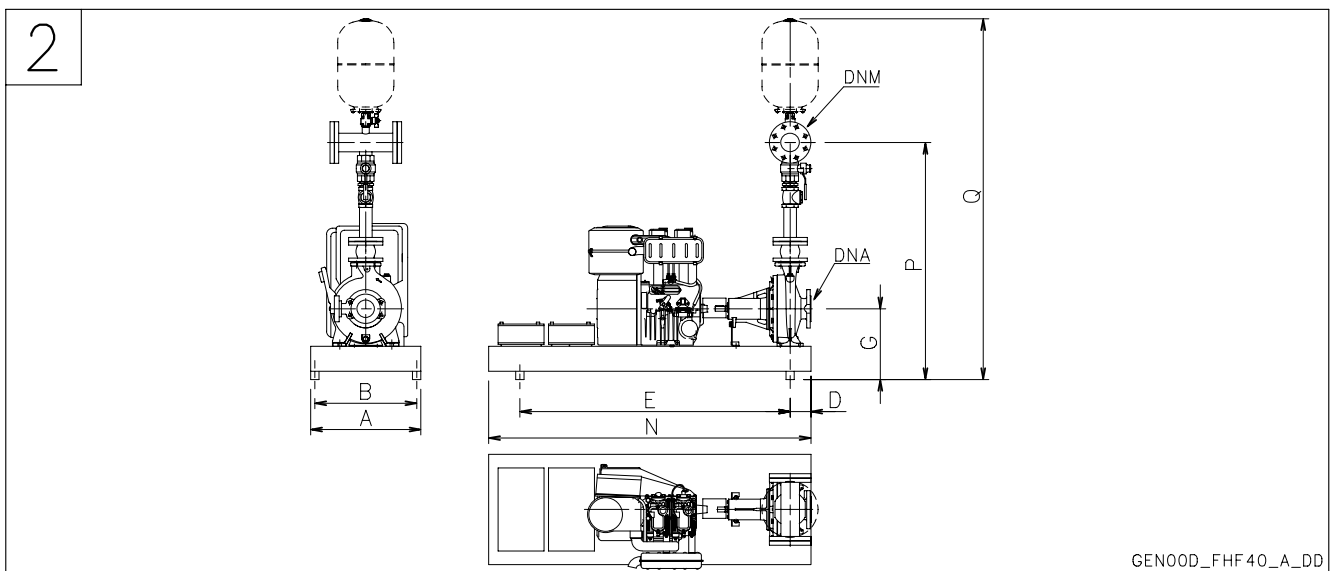
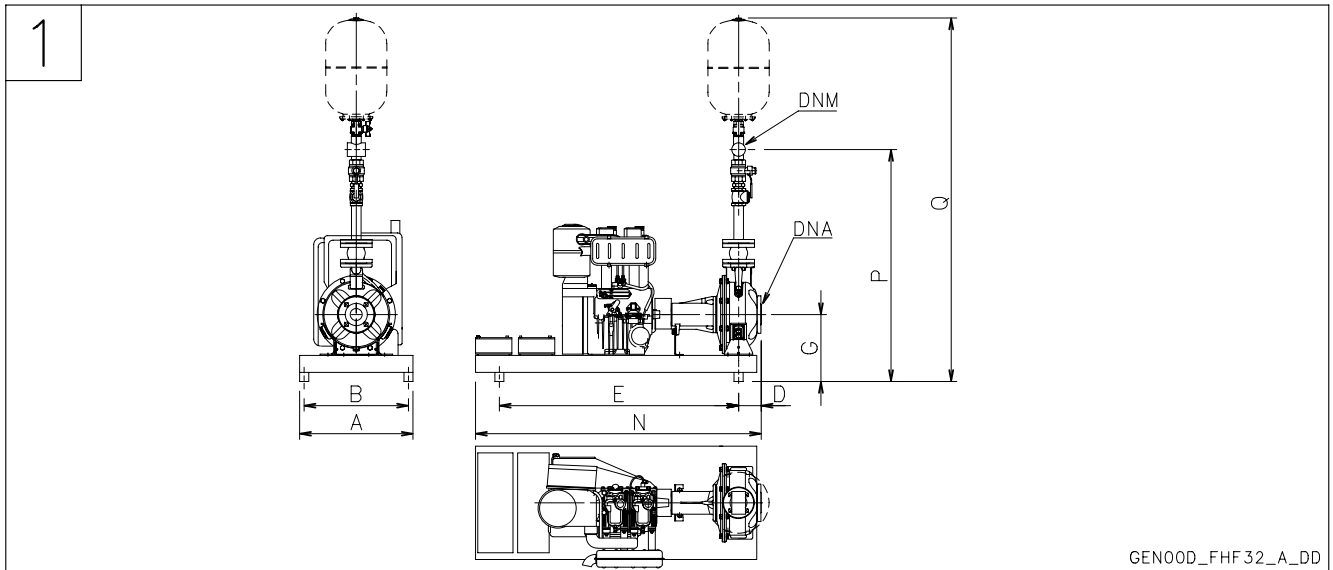
- **Flow** up to 220 m³/h.
- **Head** up to 100 m.
- Panel supply power voltage:
1 x 230V ± 10%.
- Frequency: 50 Hz.
- Voltage for controls outside panel:
12 - 24 Vac.
- Protection grade:
- electric panel: IP54.
- Electric pumps maximum power
75 kW.
- Diesel engine with battery start.
- **Diesel engine service pump
in horizontal design:**
- SHF series.
- Maximum running pressure: 12 bar.



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GEN..00D/SHF 32-80 SERIES FIRE-FIGHTING BOOSTER SETS EN 12845



For the dimensions of diesel tanks, see tables pag. 14-17.

**GEN..00D/SHF 32-80 SERIES
FIRE-FIGHTING BOOSTER SETS EN 12845**

GEN..00D	DIS N°	DNA	DNM	A	B	D	E	G	N	P	Q	FLUSS N°
SHF32-125/D121	1	R 2"	R 1"1/2	400	350	80	900	262	1165	889	1463	1
SHF32-125/D136	1	R 2"	R 1"1/2	400	350	80	900	262	1165	889	1463	1
SHF32-160/D150	1	R 2"	R 1"1/2	400	350	80	900	282	1165	929	1503	1
SHF32-160/D168	1	R 2"	R 1"1/2	400	350	80	900	282	1165	929	1503	1
SHF32-200/D188	1	R 2"	R 1"1/2	400	350	80	900	260	1165	927	1501	1
SHF32-200/D204	1	R 2"	R 1"1/2	500	450	80	1000	260	1165	927	1501	1
SHF32-250/D222	1	R 2"	R 1"1/2	500	450	100	1000	280	1240	992	1566	1
SHF32-250/D242	1	R 2"	R 1"1/2	500	450	100	1000	280	1350	992	1566	1
SHF32-250/D256	1	R 2"	R 1"1/2	500	450	100	1000	280	1350	992	1566	1
SHF40-125/D112	2	65	65	400	350	80	900	262	1165	927	1515	5
SHF40-125/D126	2	65	65	400	350	80	900	262	1165	927	1515	5
SHF40-125/D143	2	65	65	400	350	80	900	262	1165	927	1515	5
SHF40-160/D159	2	65	65	400	350	80	900	282	1165	967	1555	5
SHF40-160/D171	2	65	65	400	350	80	900	282	1165	967	1555	5
SHF40-200/D190	2	65	65	500	450	100	1000	310	1240	1015	1603	5
SHF40-200/D209	2	65	65	500	450	100	1000	310	1350	1015	1603	5
SHF40-250/D218	2	65	65	530	480	100	1200	280	1350	1030	1618	5
SHF40-250/D233	2	65	65	530	480	100	1200	330	1650	1080	1668	5
SHF40-250/D251	2	65	65	530	480	100	1200	330	1650	1080	1668	5
SHF50-125/D119	2	65	65	400	350	100	900	282	1165	1007	1595	50
SHF50-125/D130	2	65	65	400	350	100	900	282	1165	1007	1595	50
SHF50-125/D139	2	65	65	500	450	100	1000	282	1165	1007	1595	50
SHF50-160/D158	2	65	65	500	450	100	1000	310	1240	1055	1643	50
SHF50-160/D174	2	65	65	500	450	100	1000	310	1350	1055	1643	50
SHF50-200/D197	2	65	65	530	480	100	1200	310	1350	1075	1663	50
SHF50-200/D209	2	65	65	530	480	100	1200	310	1350	1075	1663	50
SHF50-250/D224	2	65	65	530	480	100	1200	330	1650	1120	1708	50
SHF50-250/D237	2	65	65	530	480	100	1500	330	1950	1120	1708	50
SHF50-250/D250	2	65	65	530	480	100	1500	380	1950	1170	1758	50
SHF65-160/D119	3	80	80	500	450	100	1000	260	1240	1259	1853	7
SHF65-160/D129	3	80	80	500	450	100	1000	310	1240	1309	1903	7
SHF65-160/D137	3	80	80	530	480	100	1200	310	1350	1309	1903	57
SHF65-160/D168	3	80	80	530	480	100	1200	310	1350	1309	1903	57
SHF65-160/D177	3	80	80	530	480	100	1200	360	1650	1359	1953	57
SHF65-200/D192	3	80	80	530	480	100	1200	330	1650	1354	1948	57
SHF65-200/D203	3	80	80	530	480	100	1500	330	1950	1354	1948	57
SHF65-200/D215	3	80	80	530	480	100	1500	380	1950	1429	2023	57
SHF65-250/D240	3	80	80	640	590	100	1800	360	2200	1409	2003	57
SHF65-250/D255	3	80	80	640	590	100	1800	360	2200	1409	2003	57
SHF80-160/D169	3	100	100	530	480	125	1200	330	1650	1407	2014	10
SHF80-160/D177	3	100	100	530	480	125	1200	330	1650	1407	2014	10
SHF80-160/D186	3	100	100	530	480	125	1500	380	2050	1457	2064	10
SHF80-200/D198	3	100	100	530	480	125	1500	380	2050	1482	2089	10
SHF80-200/D215	3	100	100	640	590	125	1800	360	2200	1462	2069	10
SHF80-200/D226	3	100	100	640	590	125	1800	360	2200	1462	2069	10
SHF80-250/D237	3	100	100	640	590	125	1880	365	2200	1497	2104	10
SHF80-250/D252	3	100	100	660	610	125	1880	390	2350	1522	2129	10
SHF80-250/D270	3	100	100	700	650	125	1300	420	2100	1552	2159	10

Dimensions in mm. Tolerance ± 10 mm.

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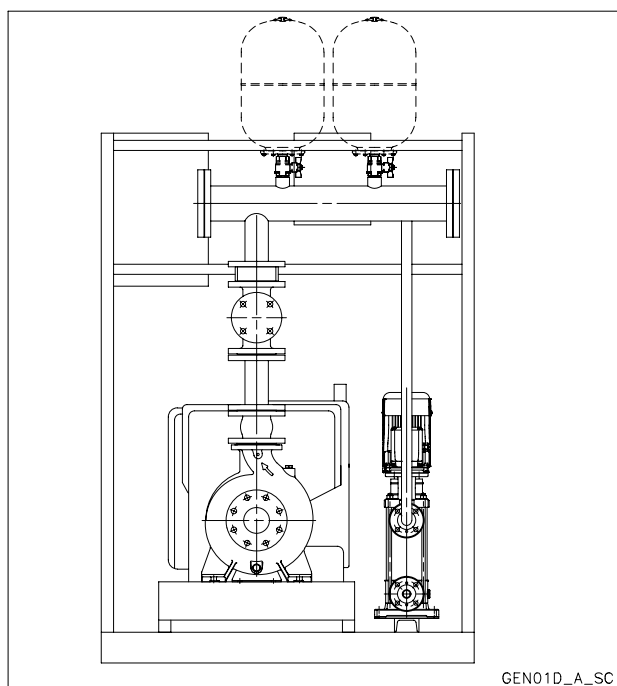
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**Fire-fighting
booster sets
EN 12845**
MARKET SECTORS

CIVIL, INDUSTRIAL

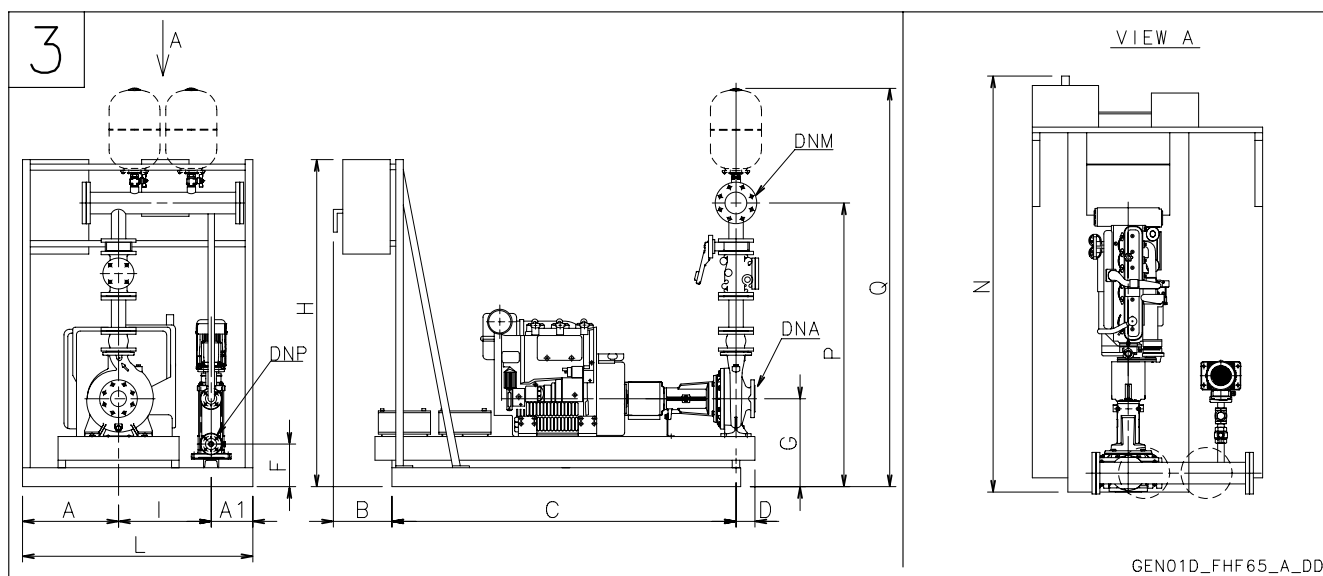
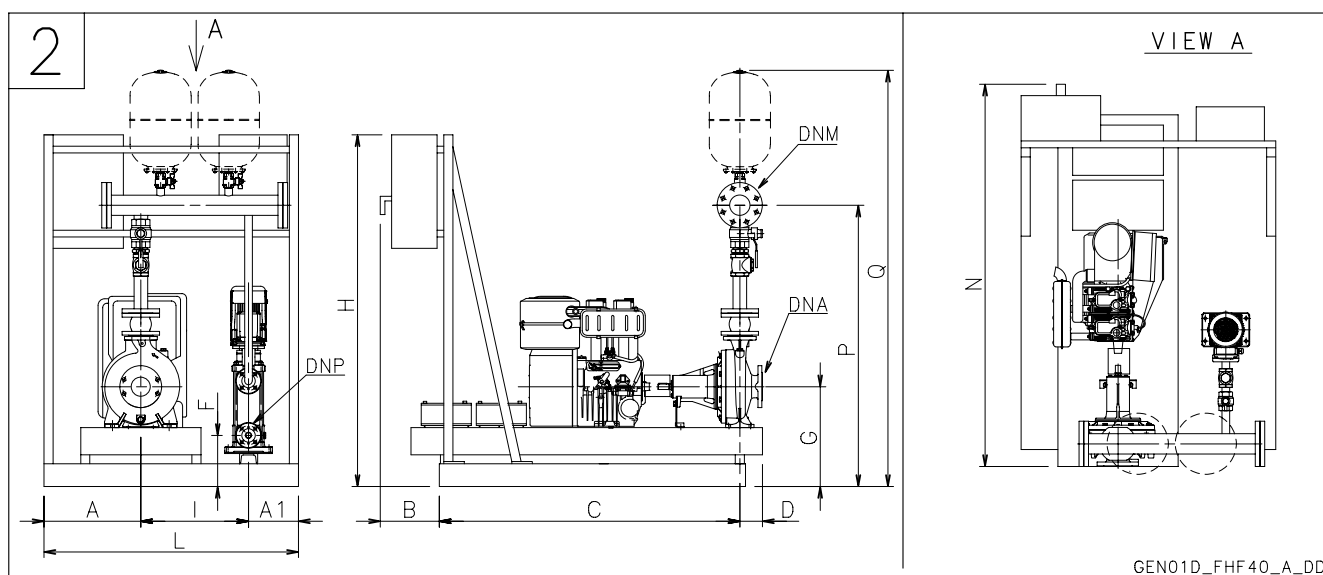
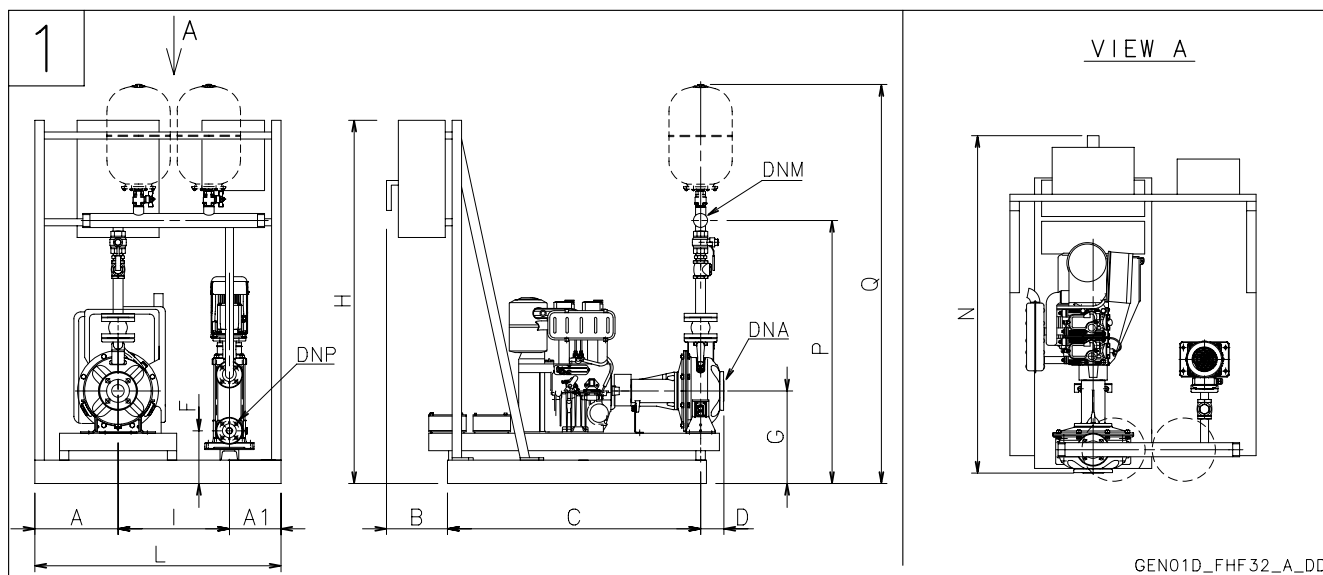
APPLICATIONS

- Fixed fire-fighting systems.
- Automatic Sprinkler systems.

**GEN..01D/SHF
Series**

SPECIFICATIONS

- **Flow** up to 220 m³/h.
- **Head** up to 100 m.
- Panel supply power voltage:
 - Electric pump: 1 x 230V ± 10%.
 - Diesel engine pump: 1 x 230V ± 10%.
- Frequency: 50 Hz.
- Voltage for controls outside panel: 12 - 24 Vac.
- Protection grade:
 - electric panel: IP54.
- Electric pumps maximum power 75 kW.
- Electric motor start :
 - Direct start for powers up to 7,5 kW included for electric pump.
- Diesel engine with battery start.
- **Service pump in horizontal design:**
 - SHF series.
- **Electric jockey pump with vertical axis:**
 - SV Series (motor protection grade IP55).
- Maximum running pressure: 12 bar.

GEN..01D/SHF 32-80 SERIES FIRE-FIGHTING BOOSTER SETS EN 12845



For the dimensions of diesel tanks, see tables pag. 14-17.



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GEN..01D/SHF 32-80 SERIES FIRE-FIGHTING BOOSTER SETS EN 12845

GEN..01D	DRW N°	DNA	DNP	DNM	A	A1	B	C	D	F	G	H	I	L	N	P	Q	FLOW METER N°
SHF32-125/D121	1	R 2"	Rp 1"	R 1"1/2	330	220	260	925	80	230	362	1400	400	950	1265	989	1563	1
SHF32-125/D136	1	R 2"	Rp 1"	R 1"1/2	330	220	260	925	80	230	362	1400	400	950	1265	989	1563	1
SHF32-160/D150	1	R 2"	Rp 1"	R 1"1/2	330	220	260	925	80	230	382	1400	400	950	1265	1029	1603	1
SHF32-160/D168	1	R 2"	Rp 1"	R 1"1/2	330	220	260	925	80	230	382	1400	400	950	1265	1029	1603	1
SHF32-200/D188	1	R 2"	Rp 1"	R 1"1/2	330	220	260	925	80	230	360	1400	400	950	1265	1027	1601	1
SHF32-200/D204	1	R 2"	Rp 1"	R 1"1/2	400	225	260	1025	80	230	360	1400	475	1100	1365	1027	1601	1
SHF32-250/D222	1	R 2"	Rp 1"	R 1"1/2	400	225	260	1025	100	230	380	1400	475	1100	1385	1092	1666	1
SHF32-250/D242	1	R 2"	Rp 1"	R 1"1/2	400	225	260	1025	100	230	380	1400	475	1100	1385	1092	1666	1
SHF32-250/D256	1	R 2"	Rp 1"	R 1"1/2	400	225	260	1025	100	230	380	1550	475	1100	1385	1092	1666	1
SHF40-125/D112	2	65	Rp 1"	65	330	220	260	925	80	230	362	1400	400	950	1265	1027	1615	5
SHF40-125/D126	2	65	Rp 1"	65	330	220	260	925	80	230	362	1400	400	950	1265	1027	1615	5
SHF40-125/D143	2	65	Rp 1"	65	330	220	260	925	80	230	362	1400	400	950	1265	1027	1615	5
SHF40-160/D159	2	65	Rp 1"	65	330	220	260	925	80	230	382	1400	400	950	1265	1067	1655	5
SHF40-160/D171	2	65	Rp 1"	65	330	220	260	925	80	230	382	1400	400	950	1265	1067	1655	5
SHF40-200/D190	2	65	Rp 1"	65	400	225	260	1025	100	230	410	1400	475	1100	1385	1115	1703	5
SHF40-200/D209	2	65	Rp 1"	65	400	225	260	1025	100	230	410	1400	475	1100	1385	1115	1703	5
SHF40-250/D218	2	65	Rp 1"	65	390	235	260	1225	100	230	380	1550	475	1100	1585	1130	1718	5
SHF40-250/D233	2	65	Rp 1"	65	390	235	325	1225	100	230	430	1550	475	1100	1650	1180	1768	5
SHF40-250/D251	2	65	Rp 1"	65	390	235	325	1225	100	230	430	1550	475	1100	1650	1180	1768	5
SHF50-125/D119	2	65	Rp 1"	65	330	220	260	925	100	230	382	1400	400	950	1285	1107	1695	50
SHF50-125/D130	2	65	Rp 1"	65	330	220	260	925	100	230	382	1400	400	950	1285	1107	1695	50
SHF50-125/D139	2	65	Rp 1"	65	400	225	260	1025	100	230	382	1400	475	1100	1385	1107	1695	50
SHF50-160/D158	2	65	Rp 1"	65	400	225	260	1025	100	230	410	1400	475	1100	1385	1155	1743	50
SHF50-160/D174	2	65	Rp 1"	65	400	225	260	1025	100	230	410	1400	475	1100	1385	1155	1743	50
SHF50-200/D197	2	65	Rp 1"	65	390	235	260	1225	100	230	410	1550	475	1100	1585	1175	1763	50
SHF50-200/D209	2	65	Rp 1"	65	390	235	260	1225	100	230	410	1550	475	1100	1585	1175	1763	50
SHF50-250/D224	2	65	Rp 1"	65	390	235	325	1225	100	230	430	1550	475	1100	1650	1220	1808	50
SHF50-250/D237	2	65	Rp 1"	65	425	270	325	1525	100	230	430	1730	475	1170	1950	1220	1808	50
SHF50-250/D250	2	65	Rp 1"	65	425	270	325	1525	100	230	480	1730	475	1170	1950	1270	1858	50
SHF65-160/D119	3	80	Rp 1"	80	400	225	260	1025	100	230	360	1400	475	1100	1385	1359	1953	7
SHF65-160/D129	3	80	Rp 1"	80	400	225	260	1025	100	230	410	1400	475	1100	1385	1409	2003	7
SHF65-160/D137	3	80	Rp 1"	80	390	235	260	1225	100	230	410	1400	475	1100	1585	1409	2003	57
SHF65-160/D168	3	80	Rp 1"	80	390	235	260	1225	100	230	410	1550	475	1100	1585	1409	2003	57
SHF65-160/D177	3	80	Rp 1"	80	390	235	325	1225	100	230	460	1550	475	1100	1650	1459	2053	57
SHF65-200/D192	3	80	Rp 1"	80	425	270	325	1525	100	230	430	1550	475	1170	1950	1454	2048	57
SHF65-200/D203	3	80	Rp 1"	80	425	270	325	1525	100	230	430	1730	475	1170	1950	1454	2048	57
SHF65-200/D215	3	80	Rp 1"	80	425	270	325	1525	100	230	480	1730	475	1170	1950	1529	2123	57
SHF65-250/D240	3	80	Rp 1"	80	500	270	275	1825	100	250	480	1750	530	1300	2200	1529	2123	57
SHF65-250/D255	3	80	Rp 1"	80	500	270	275	1825	100	250	480	1940	530	1300	2200	1529	2123	57
SHF80-160/D169	3	100	Rp 1" 1/4	100	390	235	300	1225	125	230	430	1550	475	1100	1650	1507	2114	10
SHF80-160/D177	3	100	Rp 1" 1/4	100	390	235	300	1225	125	230	430	1550	475	1100	1650	1507	2114	10
SHF80-160/D186	3	100	Rp 1" 1/4	100	425	270	400	1525	125	230	480	1730	475	1170	2050	1557	2164	10
SHF80-200/D198	3	100	Rp 1" 1/4	100	425	270	400	1525	125	230	480	1730	475	1170	2050	1582	2189	10
SHF80-200/D215	3	100	Rp 1" 1/4	100	500	270	260	1825	125	250	480	1750	530	1300	2210	1582	2189	10
SHF80-200/D226	3	100	Rp 1" 1/4	100	500	270	260	1825	125	250	480	1940	530	1300	2210	1582	2189	10
SHF80-250/D237	3	100	Rp 1" 1/4	100	490	280	260	1905	125	250	485	1940	530	1300	2290	1617	2224	10
SHF80-250/D252	3	100	Rp 1" 1/4	100	505	265	315	1910	125	270	530	1960	530	1300	2350	1662	2269	10
SHF80-250/D270	3	100	Rp 1" 1/4	100	550	265	635	1340	125	270	560	*	570	1385	2100	1692	2299	10

* Wall mounted control panel.

gen01d_shf-en_a_td

Dimensions in mm. Tolerance ± 10 mm.



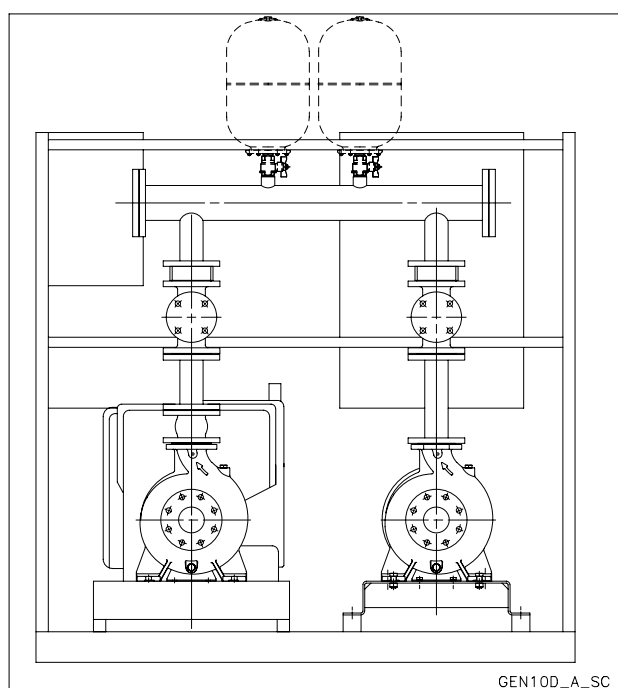
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**Fire-fighting
booster sets
EN 12845**
MARKET SECTORS

CIVIL, INDUSTRIAL

APPLICATIONS

- Fixed fire-fighting systems.
- Automatic Sprinkler systems.

**Serie
GEN..10D/SHF**

SPECIFICATIONS

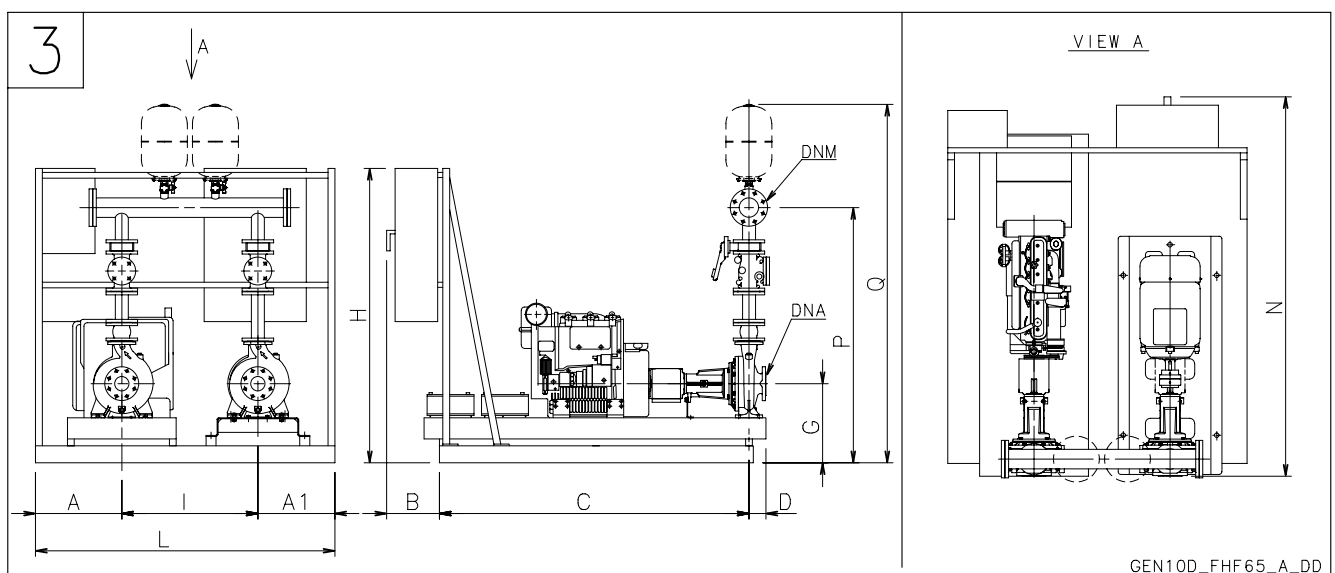
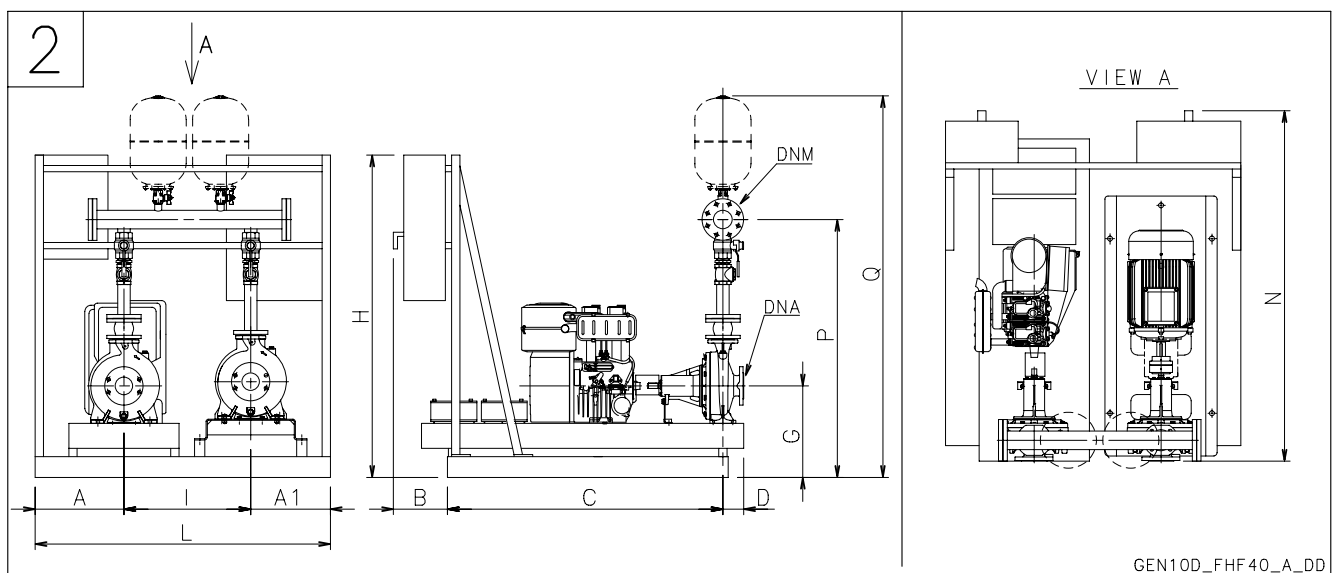
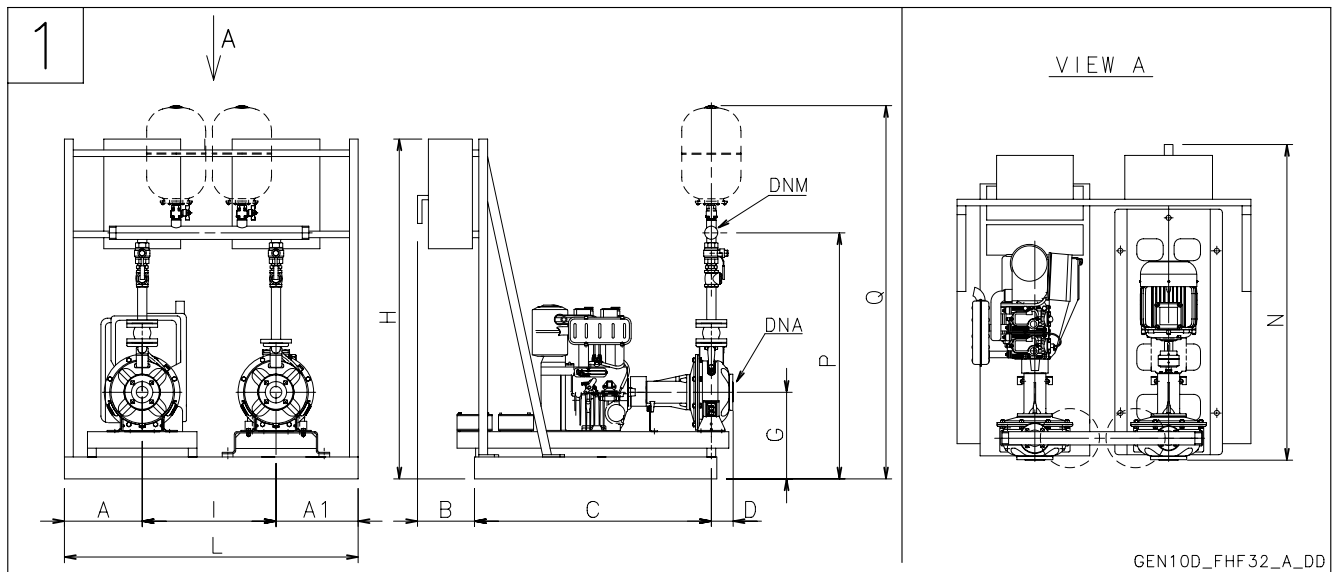
- **Flow** up to 440 m³/h.
- **Head** up to 100 m.
- Panel supply power voltage:
 - Electric pump: 3 x 400V ± 10%.
 - Diesel engine pump: 1 x 230V ± 10%.
- Frequency: 50 Hz.
- Voltage for controls outside panel: 12 - 24 Vac.
- Protection grade:
 - electric panel: IP54.
- Electric pumps maximum power 75 kW.
- Electric motor start :
 - Direct start for powers up to 7,5 kW included for pump (GEND...).
 - Star/delta start for higher powers (GENY... set).
- Diesel engine with battery start.
- **Service pump in horizontal design:**
 - SHF series (IP55 electric motor protection).
- Maximum running pressure: 12 bar.



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GEN..10D/SHF 32-80 SERIES FIRE-FIGHTING BOOSTER SETS EN 12845



For the dimensions of diesel tanks, see tables pag. 14-17.



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GEN..10D/SHF 32-80 SERIES FIRE-FIGHTING BOOSTER SETS EN 12845

GEN..10D	DRW N°	DNA	DNM	A	A1	B	C	D	G	H	I	L	N	P	Q	FLOW METER N°
SHF32-160/15/D150	1	R 2"	R 2"	320	310	260	925	80	382	1400	470	1100	1265	1035	1615	2
SHF32-160/22/D168	1	R 2"	R 2"	320	310	260	925	80	382	1400	470	1100	1265	1035	1615	2
SHF32-200/30/D188	1	R 2"	R 2"	320	310	260	925	80	360	1400	470	1100	1265	1033	1613	2
SHF32-200/40/D204	1	R 2"	R 2"	380	350	260	1025	80	360	1400	570	1300	1365	1033	1613	2
SHF40-125/15/D126	2	65	65	320	310	260	925	80	362	1400	470	1100	1265	1027	1615	5
SHF40-125/22/D143	2	65	65	320	310	260	925	80	362	1400	470	1100	1265	1027	1615	5
SHF40-160/30/D159	2	65	65	320	310	260	925	80	382	1400	470	1100	1265	1067	1655	5
SHF40-160/40/D171	2	65	65	320	310	260	925	80	382	1400	470	1100	1265	1067	1655	5
SHF40-200/55/D190	2	65	65	380	350	260	1025	100	410	1400	570	1300	1385	1115	1703	5
SHF40-200/75/D209	2	65	65	380	350	260	1025	100	410	1400	570	1300	1385	1115	1703	5
SHF40-250/110A/D218	2	65	65	420	420	260	1225	100	380	1550	610	1450	1585	1130	1718	5
SHF40-250/110/D233	2	65	65	420	420	325	1225	100	430	1550	610	1450	1650	1180	1768	5
SHF40-250/150/D251	2	65	65	420	420	325	1225	100	430	1550	610	1450	1650	1180	1768	5
SHF50-125/22/D119	2	65	80	320	310	260	925	100	382	1400	470	1100	1285	1114	1708	51
SHF50-125/30/D130	2	65	80	320	310	260	925	100	382	1400	470	1100	1285	1114	1708	51
SHF50-125/40/D139	2	65	80	380	350	260	1025	100	382	1400	570	1300	1385	1114	1708	51
SHF50-160/55/D158	2	65	80	380	350	260	1025	100	410	1400	570	1300	1385	1162	1756	51
SHF50-160/75/D174	2	65	80	380	350	260	1025	100	410	1400	570	1300	1385	1162	1756	51
SHF50-200/110A/D197	2	65	80	420	420	260	1225	100	410	1550	610	1450	1585	1182	1776	51
SHF50-200/110/D209	2	65	80	420	420	260	1225	100	410	1550	610	1450	1585	1182	1776	51
SHF50-250/150/D224	2	65	80	420	420	325	1225	100	430	1550	610	1450	1650	1227	1821	51
SHF50-250/185/D237	2	65	80	420	420	325	1525	100	430	1730	610	1450	1950	1227	1821	51
SHF50-250/220/D250	2	65	80	420	420	325	1525	100	480	1730	610	1450	1950	1277	1871	51
SHF65-160/75/D137	3	80	100	420	420	260	1225	100	410	1400	610	1450	1585	1421	2028	10
SHF65-160/110A/D168	3	80	100	420	420	260	1225	100	410	1550	610	1450	1585	1421	2028	10
SHF65-160/110/D177	3	80	100	420	420	325	1225	100	460	1550	610	1450	1650	1471	2078	10
SHF65-200/150/D192	3	80	100	420	420	325	1525	100	430	1550	610	1450	1950	1466	2073	10
SHF65-200/185/D203	3	80	100	420	420	325	1525	100	430	1730	610	1450	1950	1466	2073	10
SHF80-160/110/D169	3	100	125	420	420	300	1225	125	430	1550	610	1450	1650	1520	2140	13
SHF80-160/150/D177	3	100	125	420	420	300	1225	125	430	1550	610	1450	1650	1520	2140	13
SHF80-160/185/D186	3	100	125	420	420	400	1525	125	480	1730	610	1450	2050	1570	2190	13
SHF80-200/220/D198	3	100	125	420	420	400	1525	125	480	1730	610	1450	2050	1595	2215	13

Dimensions in mm. Tolerance ± 10 mm.

gen10d_shf-en_a_td



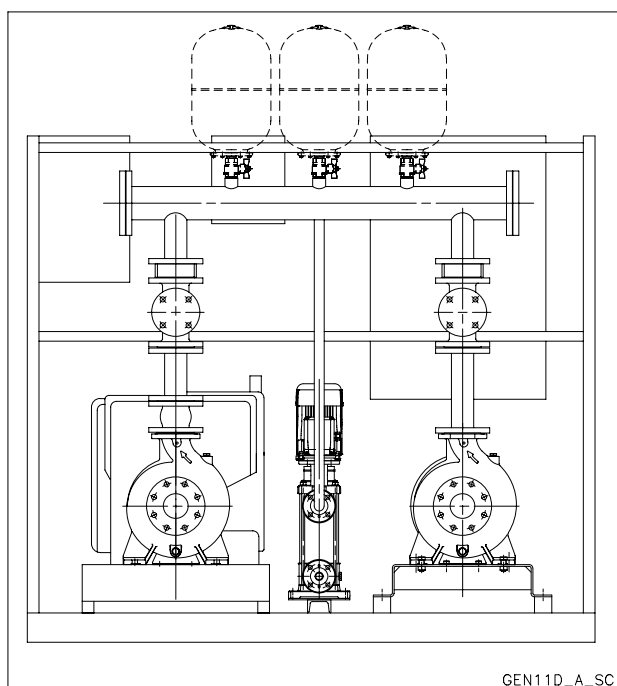
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**Fire-fighting
booster sets
EN 12845**
MARKET SECTORS

CIVIL, INDUSTRIAL

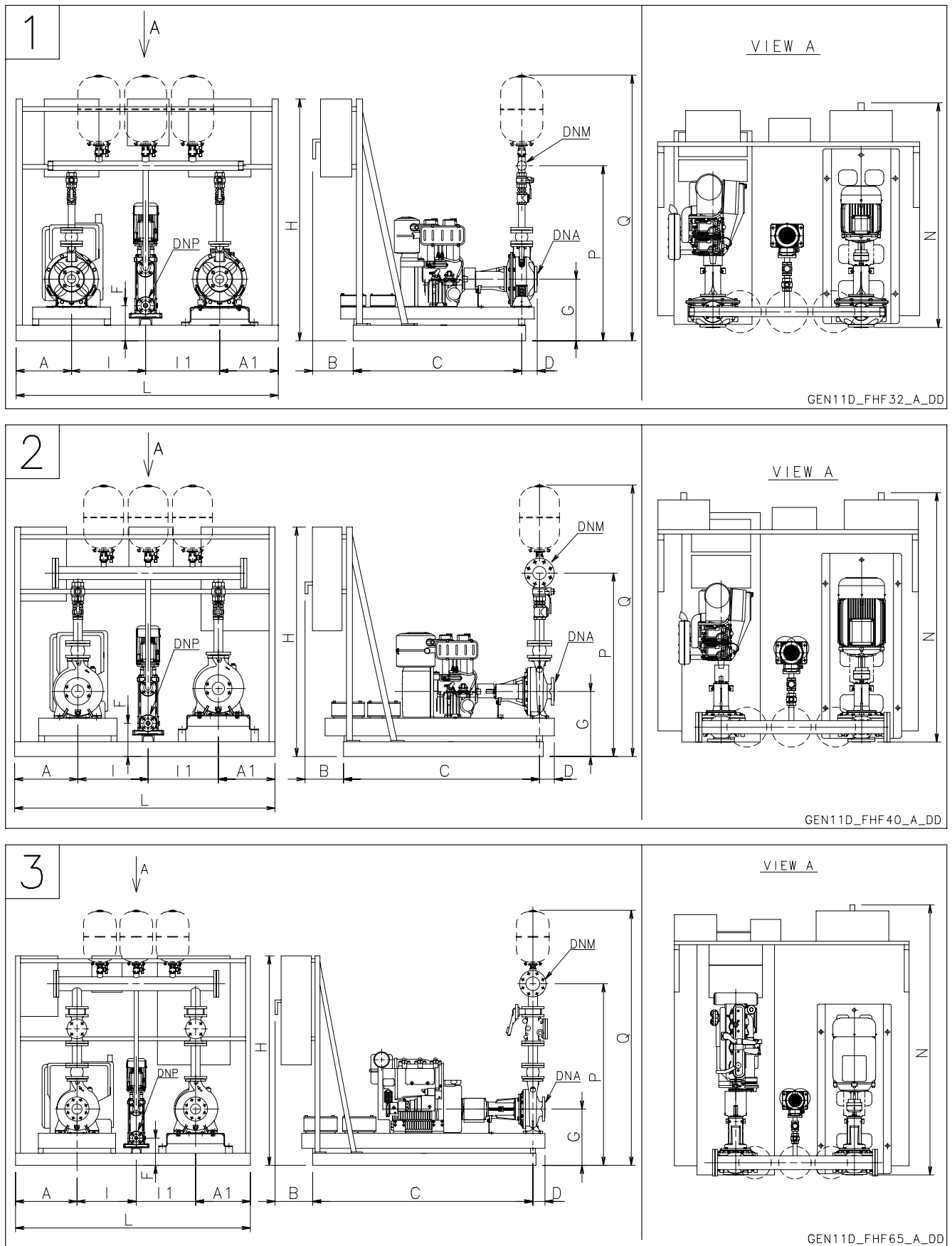
APPLICATIONS

- Fixed fire-fighting systems.
- Automatic Sprinkler systems.

**GEN..11D/SHF
Series**

SPECIFICATIONS

- **Flow** up to 440 m³/h.
- **Head** up to 100 m.
- Panel supply power voltage:
 - Electric pump: 3 x 400V ± 10%.
 - Diesel engine pump: 1 x 230V ± 10%.
- Frequency: 50 Hz.
- Voltage for controls outside panel: 12 - 24 Vac.
- Protection grade:
 - electric panel: IP54.
- Electric pumps maximum power 75 kW.
- Electric motor start :
 - Direct start for powers up to 7,5 kW included for pump (GEND...).
 - Star/delta start for higher powers (GENY... set).
- Diesel engine with battery start.
- **Service pump in horizontal design:**
 - SHF series (IP55 electric motor protection).
- **Electric jockey pump with vertical axis:**
 - SV Series (motor protection grade IP55).
- Maximum running pressure: 12 bar.

GEN..11D/SHF 32-80 SERIES FIRE-FIGHTING BOOSTER SETS EN 12845



For the dimensions of diesel tanks, see tables pag. 14-17.



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GEN..11D/SHF 32-80 SERIES FIRE-FIGHTING BOOSTER SETS EN 12845

GEN..11D	DRW N°	DNA	DNP	DNM	A	A1	B	C	D	F	G	H	I	I1	L	N	P	Q	FLOW METER N°
SHF32-125/07/D121	1	R 2"	Rp 1"	R 2"	340	310	260	925	80	230	362	1400	400	400	1450	1265	995	1575	2
SHF32-125/11/D136	1	R 2"	Rp 1"	R 2"	340	310	260	925	80	230	362	1400	400	400	1450	1265	995	1575	2
SHF32-160/15/D150	1	R 2"	Rp 1"	R 2"	330	320	260	925	80	230	382	1400	400	400	1450	1265	1035	1615	2
SHF32-160/22/D168	1	R 2"	Rp 1"	R 2"	330	320	260	925	80	230	382	1400	400	400	1450	1265	1035	1615	2
SHF32-200/30/D188	1	R 2"	Rp 1"	R 2"	330	320	260	925	80	230	360	1400	400	400	1450	1265	1033	1613	2
SHF32-200/40/D204	1	R 2"	Rp 1"	R 2"	400	375	260	1025	80	230	360	1400	475	430	1680	1365	1033	1613	2
SHF32-250/55/D222	1	R 2"	Rp 1"	R 2"	355	375	260	1080	100	230	380	1400	475	475	1680	1440	1098	1678	2
SHF32-250/75/D242	1	R 2"	Rp 1"	R 2"	355	375	260	1080	100	230	380	1400	475	475	1680	1440	1098	1678	2
SHF32-250/110/D256	1	R 2"	Rp 1"	R 2"	355	375	260	1080	100	230	380	1550	475	475	1680	1440	1098	1678	2
SHF40-125/11/D112	2	65	Rp 1"	65	340	310	260	925	80	230	362	1400	400	400	1450	1265	1027	1615	5
SHF40-125/15/D126	2	65	Rp 1"	65	330	320	260	925	80	230	362	1400	400	400	1450	1265	1027	1615	5
SHF40-125/22/D143	2	65	Rp 1"	65	330	320	260	925	80	230	362	1400	400	400	1450	1265	1027	1615	5
SHF40-160/30/D159	2	65	Rp 1"	65	330	320	260	925	80	230	382	1400	400	400	1450	1265	1067	1655	5
SHF40-160/40/D171	2	65	Rp 1"	65	330	320	260	925	80	230	382	1400	400	400	1450	1265	1067	1655	5
SHF40-200/55/D190	2	65	Rp 1"	65	400	375	260	1025	100	230	410	1400	475	430	1680	1385	1115	1703	5
SHF40-200/75/D209	2	65	Rp 1"	65	400	375	260	1025	100	230	410	1400	475	430	1680	1385	1115	1703	5
SHF40-250/110A/D218	2	65	Rp 1"	65	400	400	260	1225	100	230	380	1550	475	475	1750	1585	1130	1718	5
SHF40-250/110/D233	2	65	Rp 1"	65	400	400	325	1225	100	230	430	1550	475	475	1750	1650	1180	1768	5
SHF40-250/150/D251	2	65	Rp 1"	65	400	400	325	1225	100	230	430	1550	475	475	1750	1650	1180	1768	5
SHF50-125/22/D119	2	65	Rp 1"	80	330	320	260	925	100	230	382	1400	400	400	1450	1285	1114	1708	51
SHF50-125/30/D130	2	65	Rp 1"	80	330	320	260	925	100	230	382	1400	400	400	1450	1285	1114	1708	51
SHF50-125/40/D139	2	65	Rp 1"	80	400	375	260	1025	100	230	382	1400	475	430	1680	1385	1114	1708	51
SHF50-160/55/D158	2	65	Rp 1"	80	400	375	260	1025	100	230	410	1400	475	430	1680	1385	1162	1756	51
SHF50-160/75/D174	2	65	Rp 1"	80	400	375	260	1025	100	230	410	1400	475	430	1680	1385	1162	1756	51
SHF50-200/110A/D197	2	65	Rp 1"	80	400	400	260	1225	100	230	410	1550	475	475	1750	1585	1182	1776	51
SHF50-200/110/D209	2	65	Rp 1"	80	400	400	260	1225	100	230	410	1550	475	475	1750	1585	1182	1776	51
SHF50-250/150/D224	2	65	Rp 1"	80	400	400	325	1225	100	230	430	1550	475	475	1750	1650	1227	1821	51
SHF50-250/185/D237	2	65	Rp 1"	80	400	400	325	1525	100	230	430	1730	475	475	1750	1950	1227	1821	51
SHF50-250/220/D250	2	65	Rp 1"	80	400	400	325	1525	100	230	480	1730	475	475	1750	1950	1277	1871	51
SHF65-160/40/D119	3	80	Rp 1"	100	400	375	260	1025	100	230	360	1400	475	430	1680	1385	1371	1978	9
SHF65-160/55/D129	3	80	Rp 1"	100	355	375	260	1080	100	230	410	1400	475	475	1680	1440	1421	2028	9
SHF65-160/75/D137	3	80	Rp 1"	100	400	400	260	1225	100	230	410	1400	475	475	1750	1585	1421	2028	10
SHF65-160/110A/D168	3	80	Rp 1"	100	400	400	260	1225	100	230	410	1550	475	475	1750	1585	1421	2028	10
SHF65-160/110/D177	3	80	Rp 1"	100	400	400	325	1225	100	230	460	1550	475	475	1750	1650	1471	2078	10
SHF65-200/150/D192	3	80	Rp 1"	100	400	400	325	1525	100	230	430	1550	475	475	1750	1950	1466	2073	10
SHF65-200/185/D203	3	80	Rp 1"	100	400	400	325	1525	100	230	430	1730	475	475	1750	1950	1466	2073	10
SHF65-200/220/D215	3	80	Rp 1"	100	400	400	325	1525	100	230	480	1730	475	475	1750	1950	1541	2148	10
SHF65-250/300/D240	3	80	Rp 1"	100	470	450	275	1825	100	250	480	1750	530	490	1940	2200	1541	2148	10
SHF65-250/370/D255	3	80	Rp 1"	100	470	450	310	1825	100	250	480	1940	530	490	1940	2235	1541	2148	10
SHF80-160/110/D169	3	100	Rp 1" 1/4	125	400	400	300	1225	125	230	430	1550	475	475	1750	1650	1520	2140	13
SHF80-160/150/D177	3	100	Rp 1" 1/4	125	400	400	300	1225	125	230	430	1550	475	475	1750	1650	1520	2140	13
SHF80-160/185/D186	3	100	Rp 1" 1/4	125	400	400	400	1525	125	230	480	1730	475	475	1750	2050	1570	2190	13
SHF80-200/220/D198	3	100	Rp 1" 1/4	125	400	400	400	1525	125	230	480	1730	475	475	1750	2050	1595	2215	13
SHF80-200/300/D215	3	100	Rp 1" 1/4	125	470	450	260	1825	125	250	480	1750	530	490	1940	2210	1595	2215	13
SHF80-200/370/D226	3	100	Rp 1" 1/4	125	470	450	260	1825	125	250	480	1940	530	490	1940	2210	1595	2215	13
SHF80-250/450/D237	3	100	Rp 1" 1/4	125	470	450	310	1905	125	250	485	1940	530	490	1940	2340	1630	2250	13
SHF80-250/550/D252	3	100	Rp 1" 1/4	125	490	490	315	1910	125	270	530	1960	530	530	2040	2350	1675	2295	13
SHF80-250/750/D270	3	100	Rp 1" 1/4	125	585	540	605	1370	125	270	560	*	570	570	2265	2100	1705	2325	13

* Wall mounted control panel.

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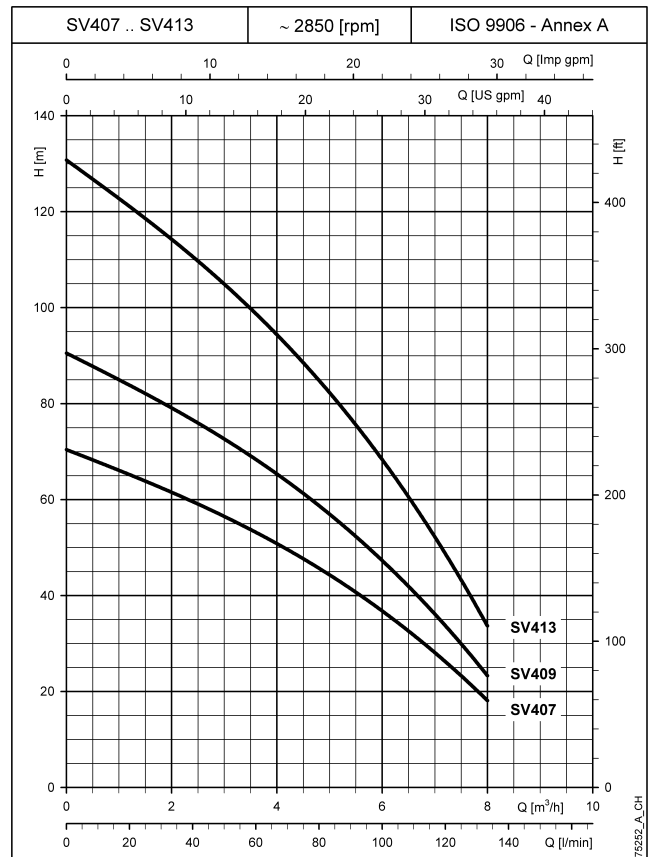
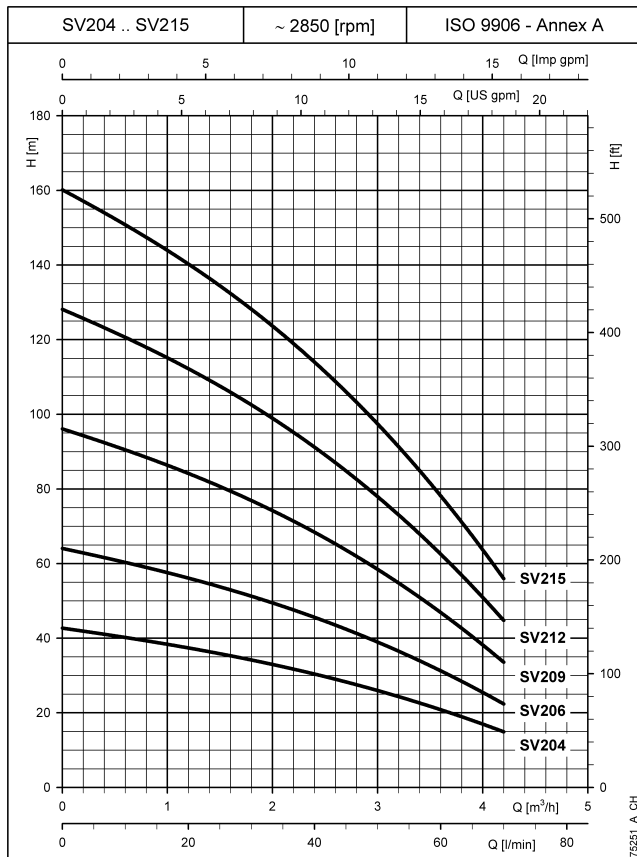
Dimensions in mm. Tolerance ± 10 mm.



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GEN../SHF BOOSTER SETS SERIES OPERATING CHARACTERISTICS AT 50 Hz (JOCKEY PUMP)



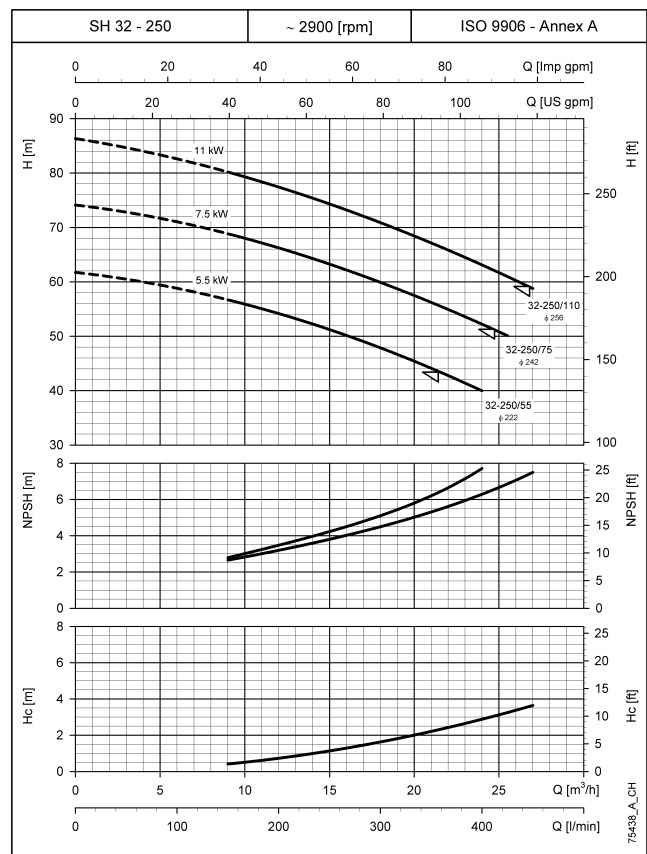
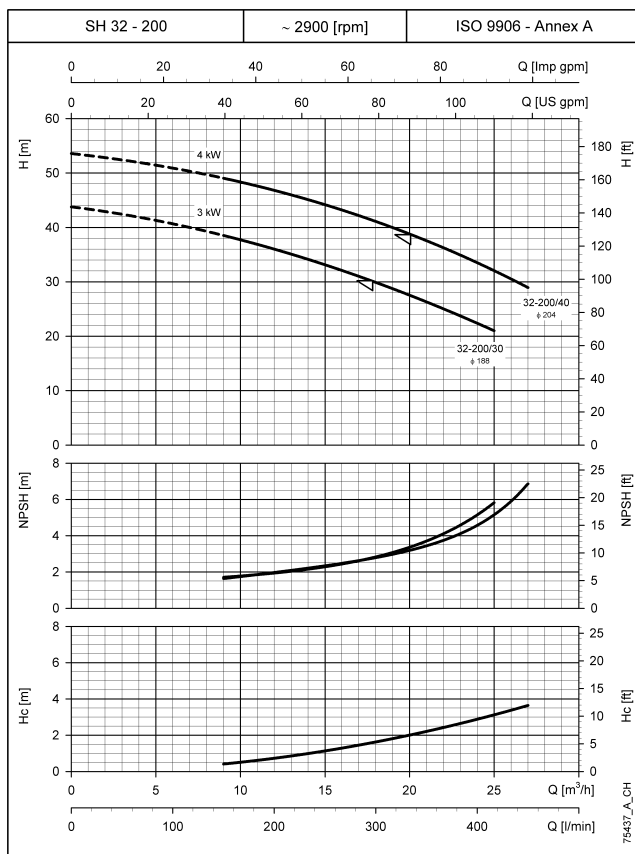
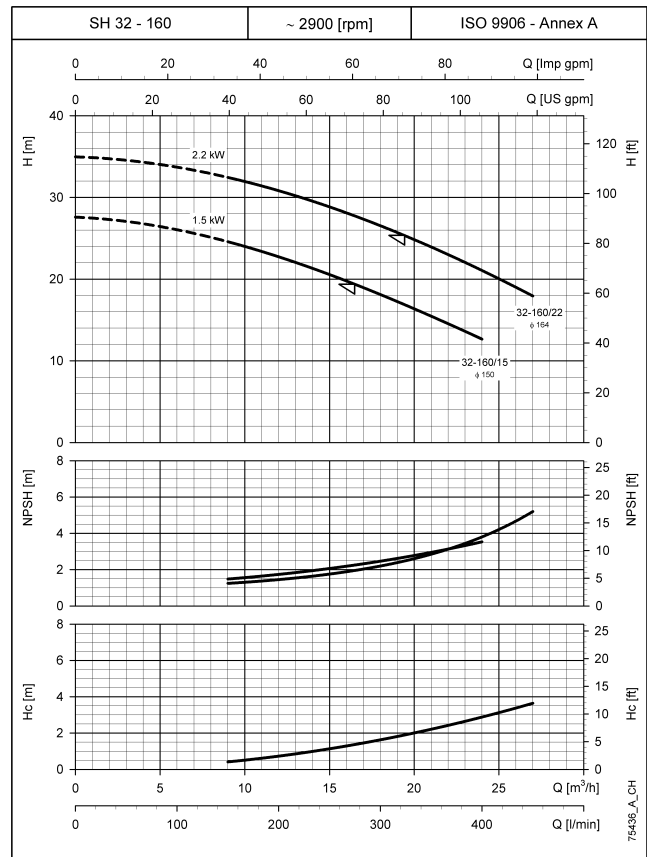
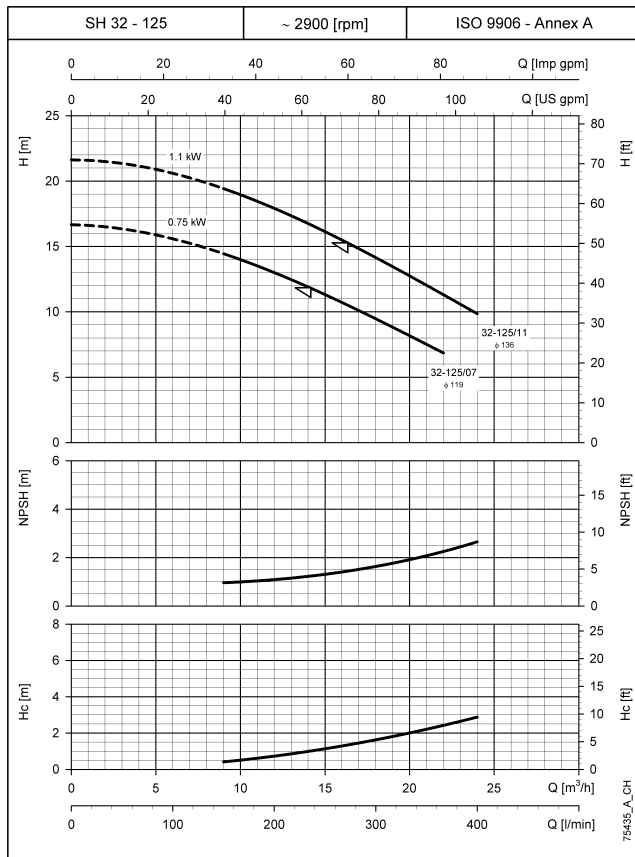
The performance curves do not take into account flow resistance in the valves and piping.
The curves indicate the performance with one pump running.
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.
The NPSH values are laboratory values, for practical use we suggest increasing these values by 0,5 m.



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GEN../SHF BOOSTER SETS SERIES OPERATING CHARACTERISTICS AT 50 Hz (SERVICE PUMP)



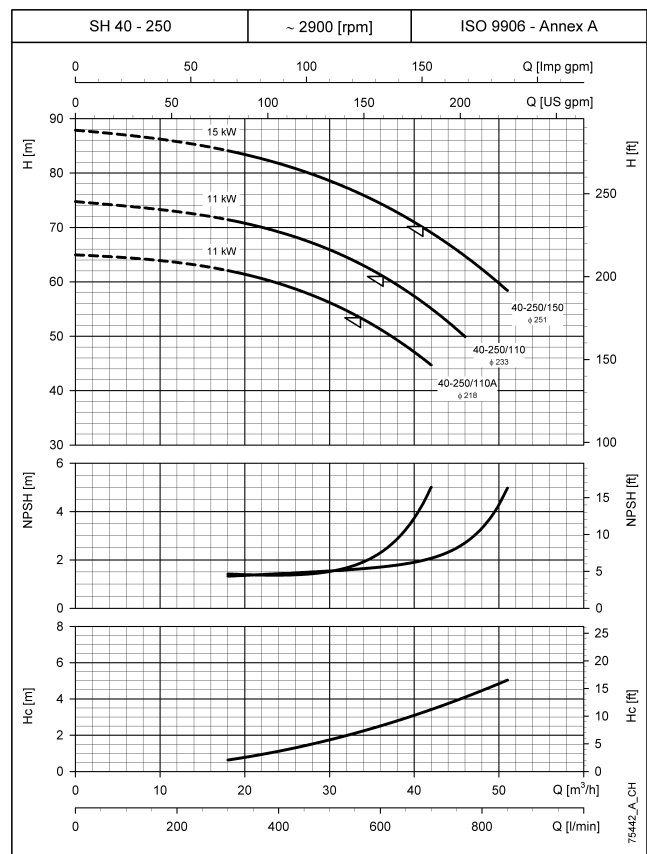
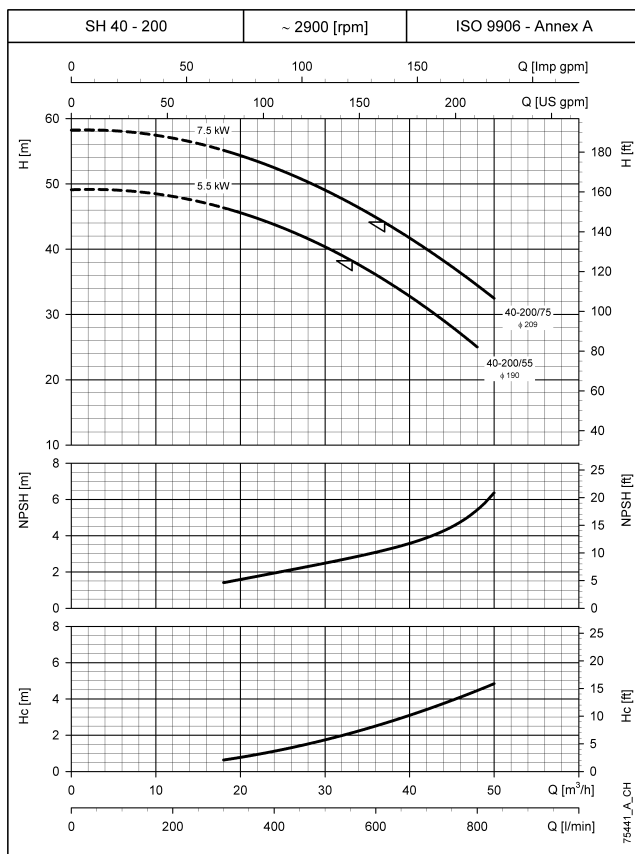
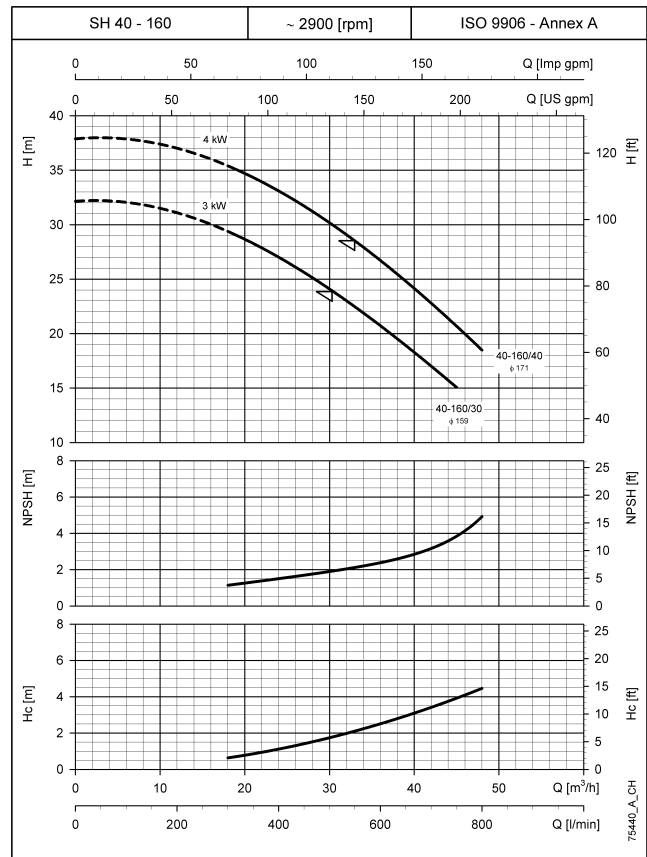
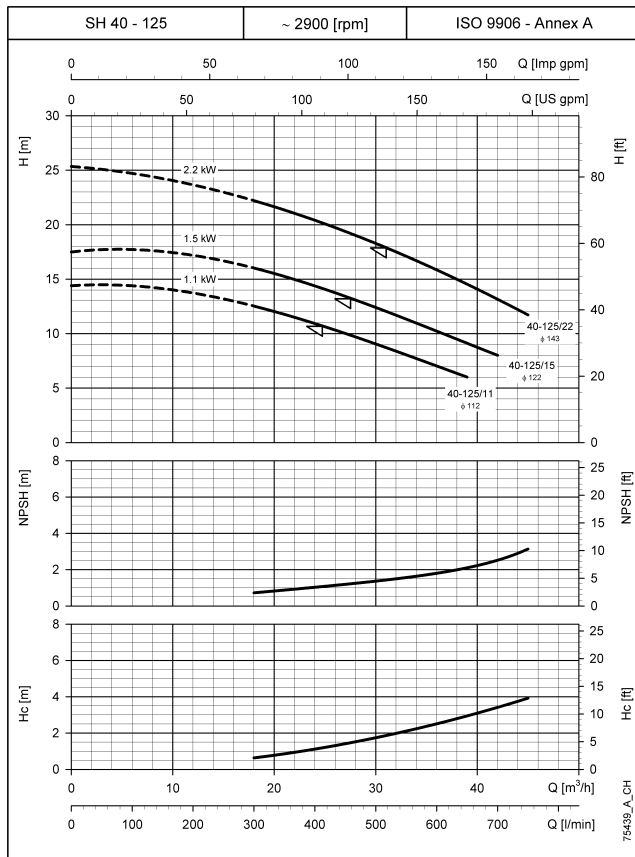
The performance curves do not take into account flow resistance in the valves and piping.
The curves indicate the performance with one pump running.
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.
The NPSH values are laboratory values, for practical use we suggest increasing these values by 0,5 m.



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GEN../SHF BOOSTER SETS SERIES OPERATING CHARACTERISTICS AT 50 Hz (SERVICE PUMP)



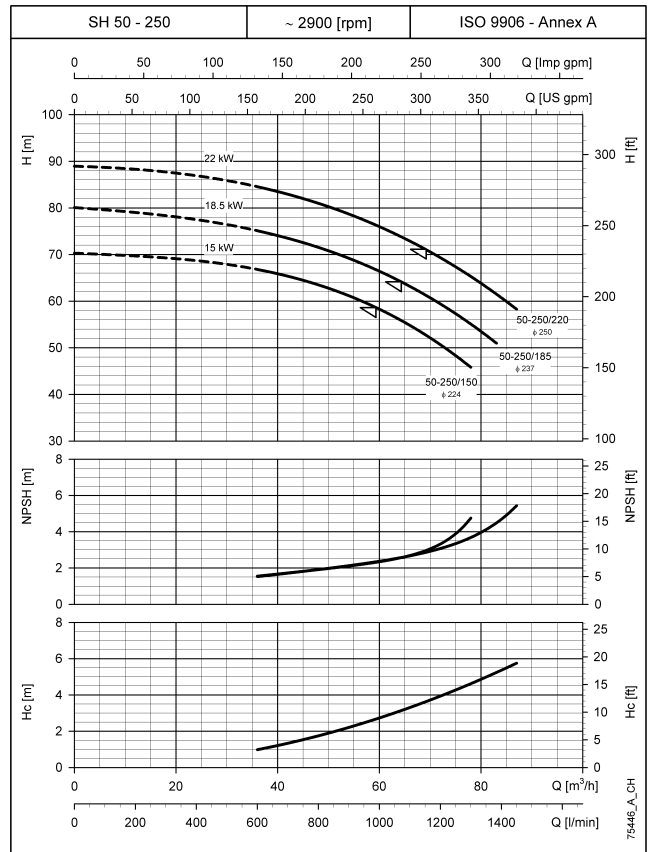
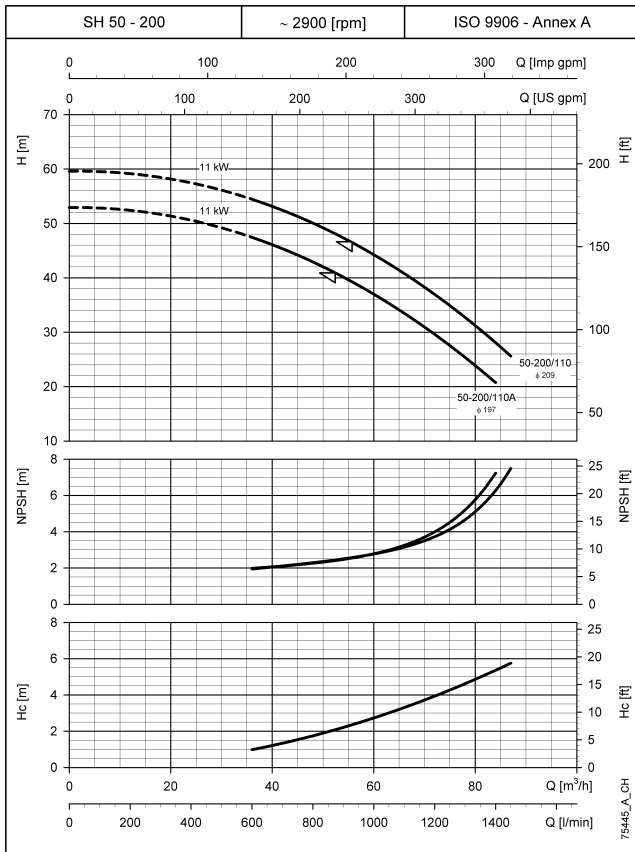
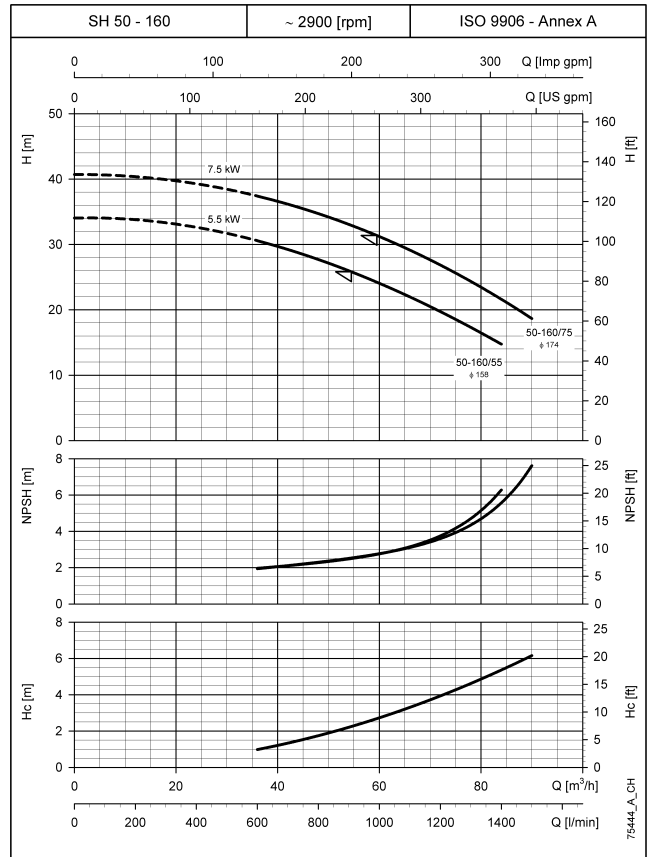
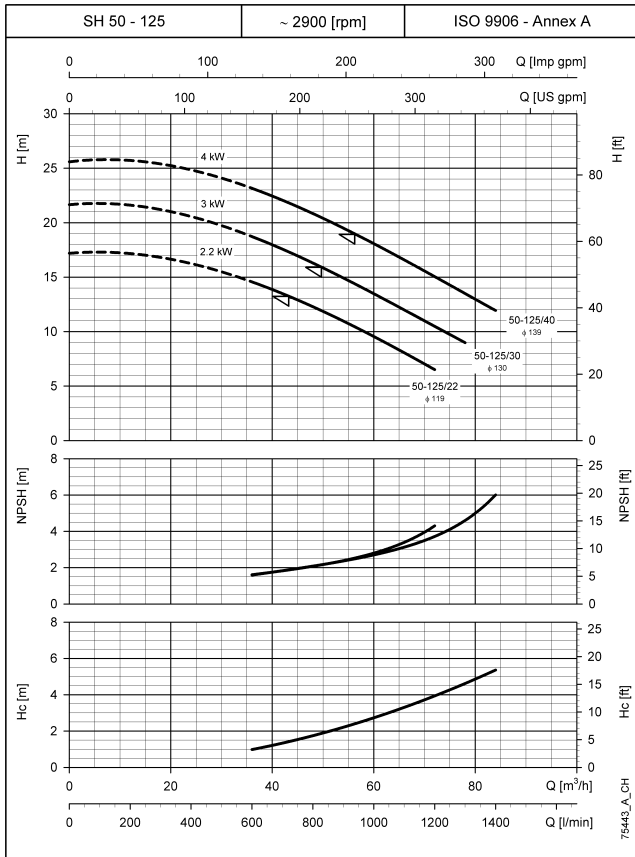
The performance curves do not take into account flow resistance in the valves and piping.
The curves indicate the performance with one pump running.
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.
The NPSH values are laboratory values, for practical use we suggest increasing these values by 0,5 m.



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GEN../SHF BOOSTER SETS SERIES OPERATING CHARACTERISTICS AT 50 Hz (SERVICE PUMP)



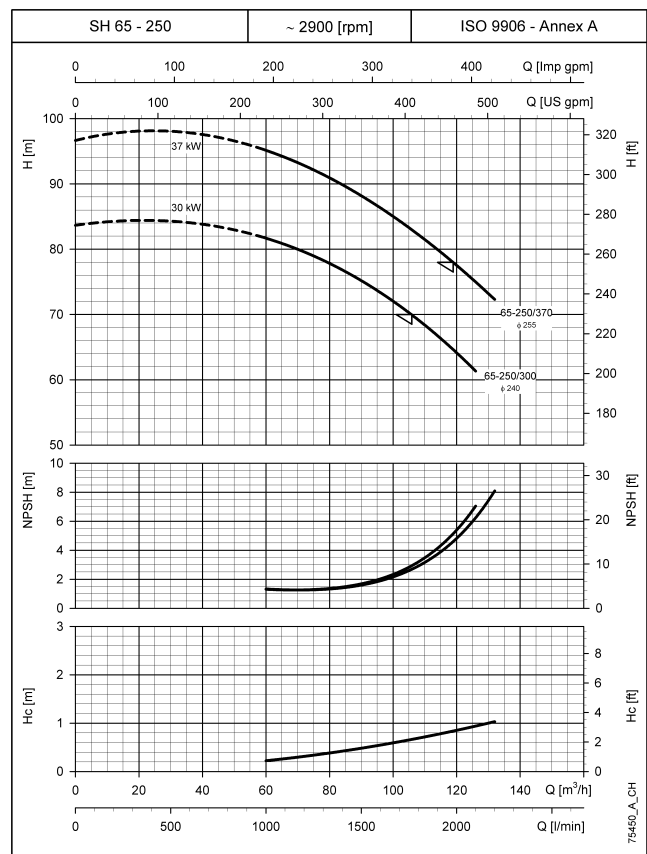
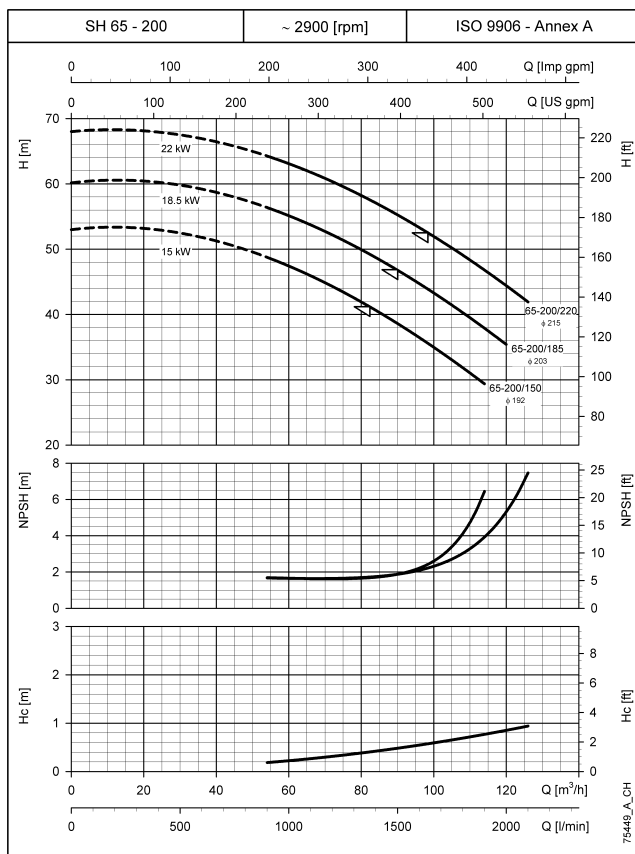
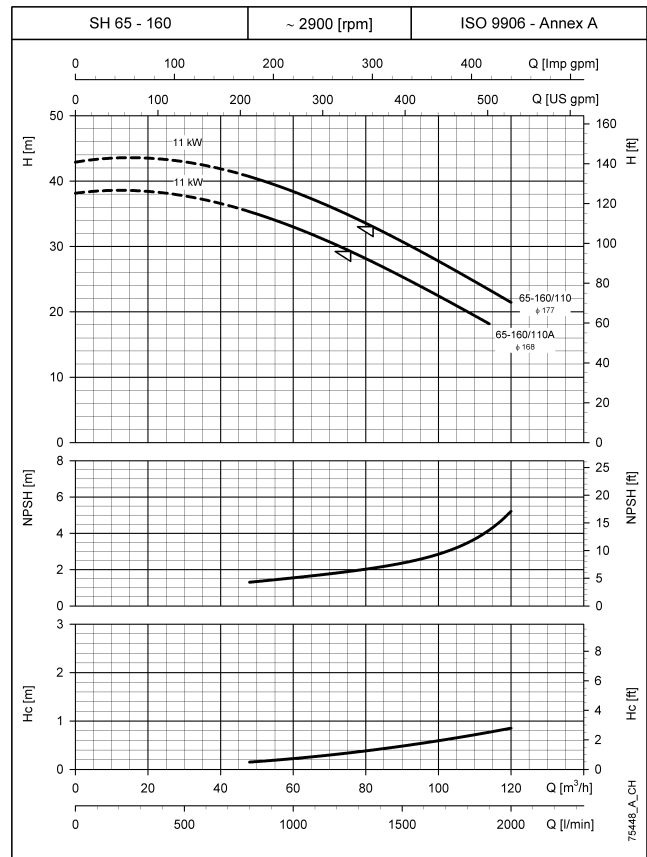
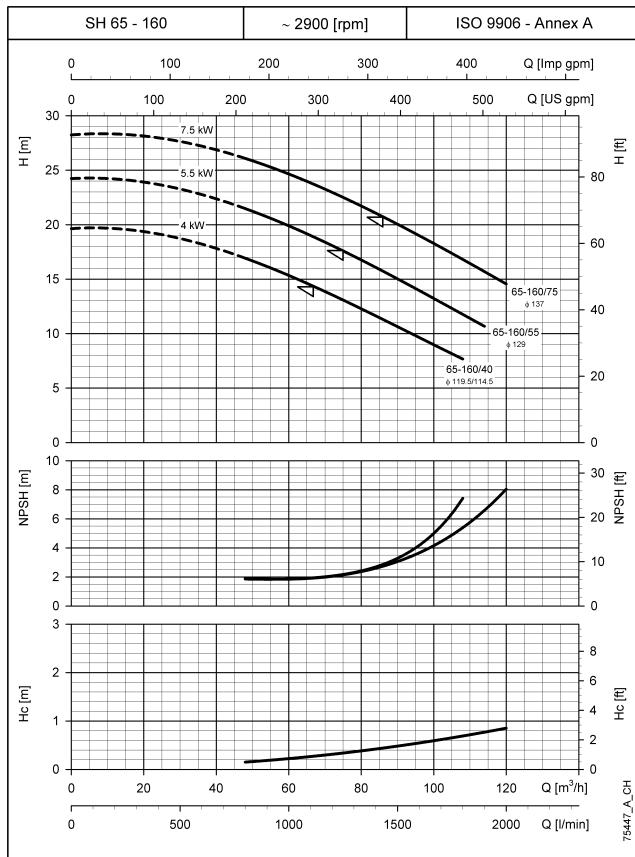
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These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.
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GEN../SHF BOOSTER SETS SERIES OPERATING CHARACTERISTICS AT 50 Hz (SERVICE PUMP)



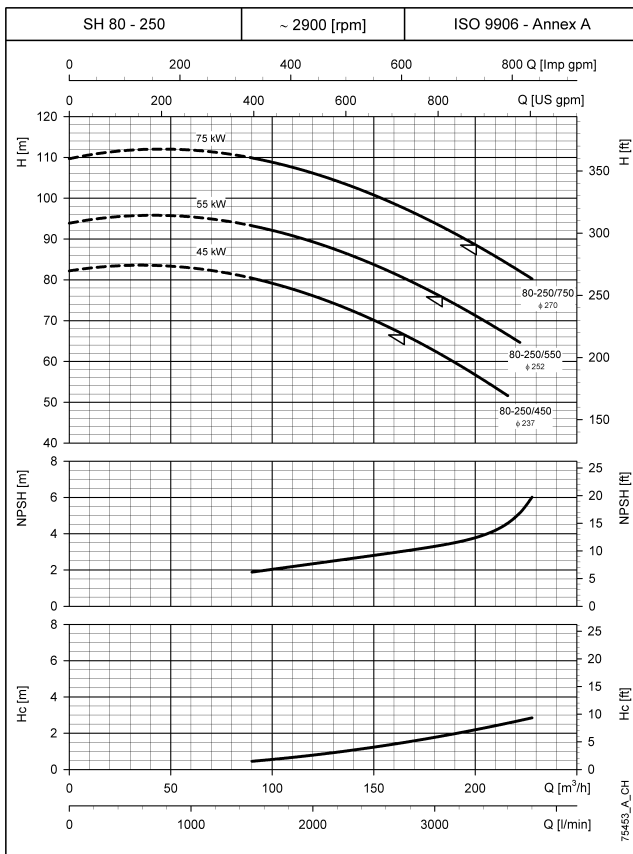
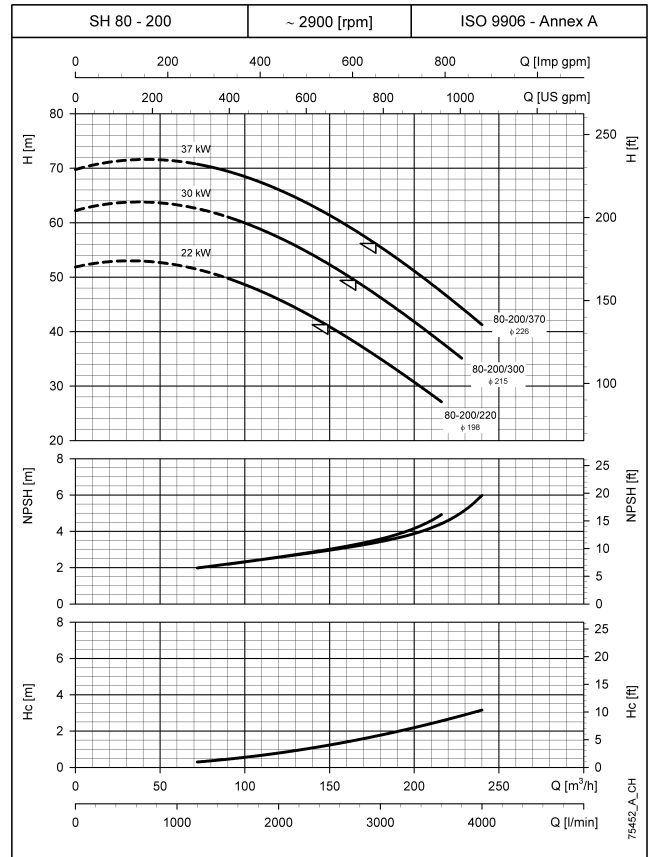
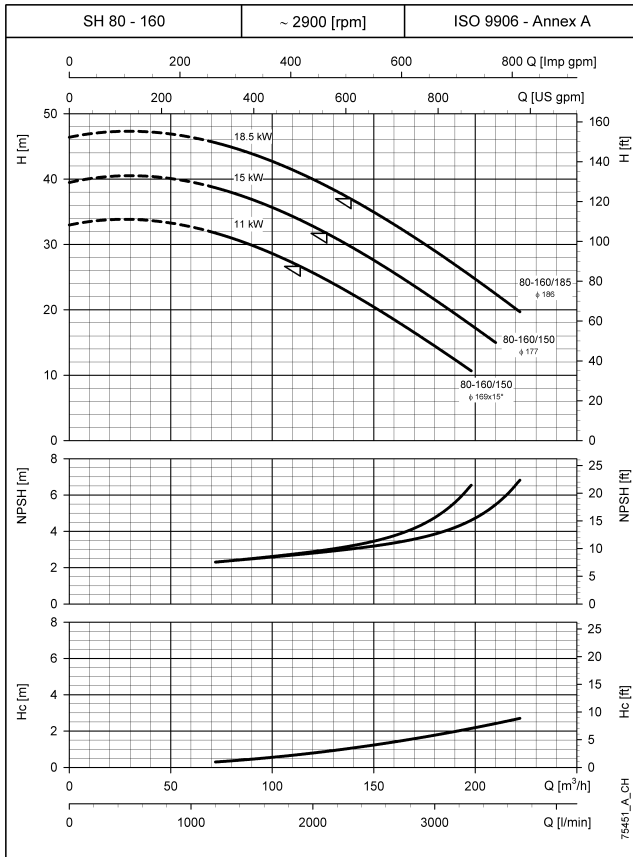
The performance curves do not take into account flow resistance in the valves and piping.
The curves indicate the performance with one pump running.
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.
The NPSH values are laboratory values, for practical use we suggest increasing these values by 0,5 m.



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GEN../SHF BOOSTER SETS SERIES OPERATING CHARACTERISTICS AT 50 Hz (SERVICE PUMP)



The performance curves do not take into account flow resistance in the valves and piping.
The curves indicate the performance with one pump running.
These performances are valid for liquids with density $\rho = 1.0 \text{ Kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.
The NPSH values are laboratory values, for practical use we suggest increasing these values by 0,5 m.



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ACCESSORIES

DIAPHRAGM TANKS

The booster sets are ready for installation, directly on the manifold, of 24-litre diaphragm tanks, one for each pump. The sets are also equipped with caps to close off the unused couplings. Larger tanks can also be connected to the unused end of the discharge manifold. For proper sizing of the tank please refer to the technical appendix.

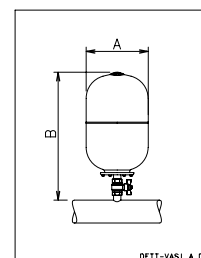
Kit featuring the following accessories are **available on request**:

- diaphragm tank;
- on-off ball valve;
- operating instructions;
- packaging.

DIAPHRAGM TANK KIT

Volume Litres	PN bar	DIMENSIONS (mm)			Materials		
		ø A	B	Valve	Diaphragm	Vessel	Valve
8	8	205	390	1" FF	EPDM	Painted steel	Nickel-plated brass
24	8	270	555	1" FF	EPDM	Painted steel	Nickel-plated brass
24	10	270	555	1" FF	EPDM	Painted steel	Nickel-plated brass
24	16	270	555	1" FF	EPDM	Painted steel	Nickel-plated brass
24	10	270	575	1" FF	Butyl	Stainless steel	AISI 316 Stainless steel

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COUNTERFLANGE KIT

Counterflange coupling kits made of zinc-plated or stainless steel are available on request.

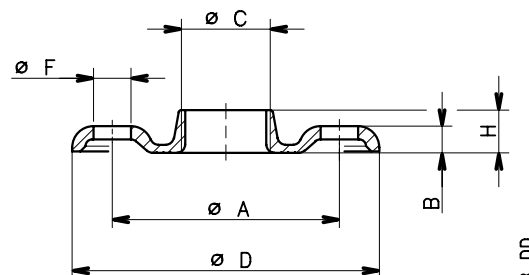
The counterflange kits are equipped with:

- N. 2 flanges.
- gasket and bolts/screws.

THREADED COUNTERFLANGES

KIT TYPE	DN	ø C	DIMENSIONS (mm)				HOLES		PN
			ø A	B	ø D	H	ø F	N°	
2"	50	Rp 2	125	16	165	24	18	4	25
2" 1/2	65	Rp 2 1/2	145	16	185	23	18	4	16
3"	80	Rp 3	160	17	200	27	18	8	16

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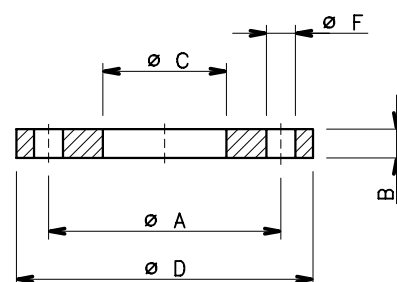


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WELD-ON COUNTERFLANGES

KIT TYPE	DN	ø C	DIMENSIONS (mm)			HOLES		PN
			ø A	B	ø D	ø F	N°	
2"	50	61	125	19	165	18	4	16
2"1/2	65	77	145	20	185	18	4	16
3"	80	90	160	20	200	18	8	16
4"	100	116	180	22	220	18	8	16
5"	125	141,5	210	22	250	18	8	16
6"	150	170,5	240	24	285	22	8	16
8"	200	221,5	295	26	340	22	12	16
10"	250	276,5	355	29	405	26	12	16
12"	300	327,5	410	32	460	26	12	16

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ACCESSORIES FOR BOOSTER SETS

SUCTION SIDE KIT

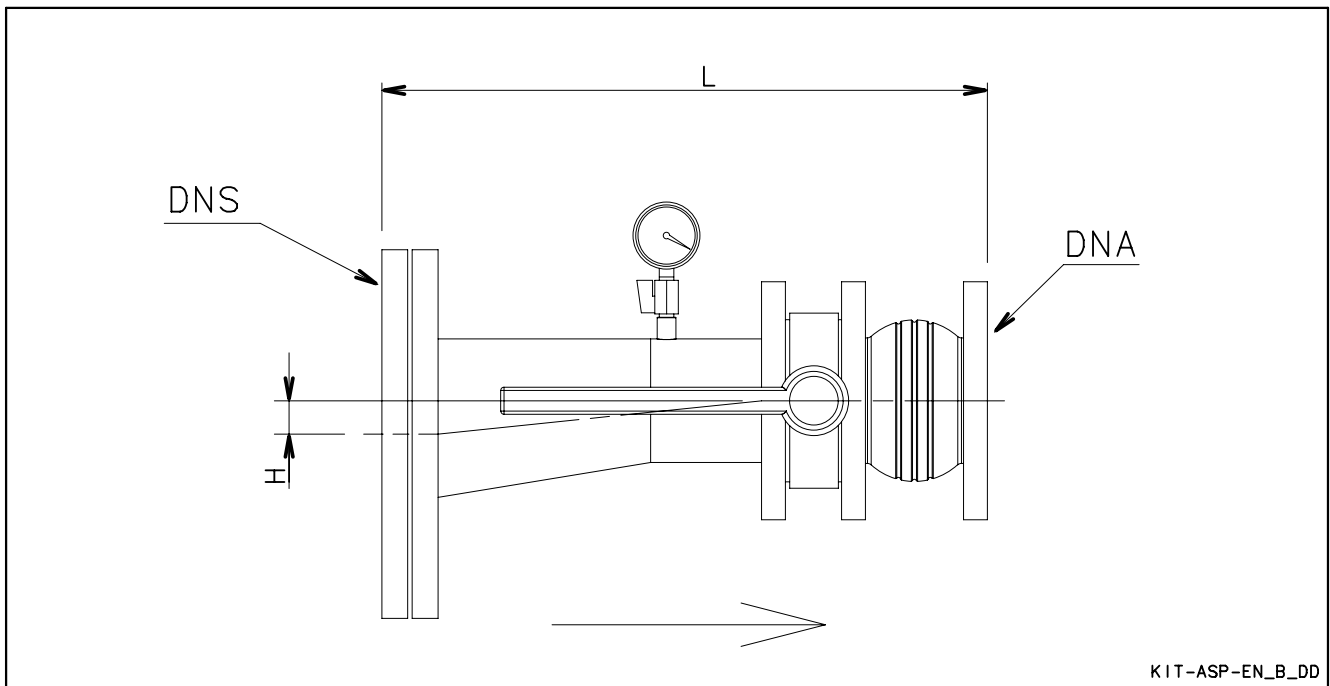
The EN 12845 fire-fighting booster sets are supplied without valves and stubs on the suction side of the service pump and can be completed with suitable kits that depend on legal standards. These requirements are expressed by EN 12845 (chapter 10.5 and chapter 10.6) and are connected with the maximum speed value of the water in the pipes, their minimum section and type of installation - suction lift or positive suction head.

To provide for one suction kit for each duty pump.

The suction side kit are equipped with:

- Expansion joint (must be fixed in the suction side of the pump).
- On/off butterfly valve with lever handle up to DN100 diameter, butterfly valve with handwheel and reduction manual gear for DN125 diameter and above. Monitoring of the ON/OFF status included (Lockable kit available on request).
- Suction flanged pipe.
- Pressure gauge.
- Weld-on flange.

The following table summarises the pump type installed on the fire-fighting sets and the kit that corresponds to the installation type.



KIT-ASP-EN_B_DD

GEN../FHF 32-80 SERIES FIRE-FIGHTING BOOSTER SETS SUCTION SIDE KIT DIMENSIONS TABLE

PUMP	POSITIVE SUCTION HEAD				SUCTION LIFT			
	DNS	DNA	L	H	DNS	DNA	L	H
FHF32-125/07	65	50	369	8	80	50	411	15
FHF32-125/11	65	50	369	8	80	50	411	15
FHF32-160/15	65	50	369	8	80	50	411	15
FHF32-160/22	65	50	369	8	80	50	411	15
FHF32-200/30	65	50	369	8	80	50	411	15
FHF32-200/40	80	50	411	15	80	50	411	15
FHF40-125/11	80	65	384	7	80	65	384	7
FHF40-125/15	80	65	384	7	100	65	486	19
FHF40-125/22	100	65	486	19	100	65	486	19
FHF40-160/30	100	65	486	19	100	65	486	19
FHF40-160/40	100	65	486	19	100	65	486	19
FHF40-200/55	100	65	486	19	100	65	686	19
FHF40-200/75	100	65	486	19	125	65	578	32
FHF40-250/110A	100	65	486	19	125	65	578	32
FHF40-250/110	100	65	486	19	125	65	578	32
FHF40-250/150	100	65	486	19	125	65	578	32
FHF50-125/22	100	65	486	19	125	65	578	32
FHF50-125/30	125	65	578	32	125	65	578	32
FHF50-125/40	125	65	578	32	125	65	578	32
FHF50-160/55	125	65	578	32	125	65	578	32
FHF50-160/75	125	65	578	32	150	65	688	46
FHF50-200/110A	125	65	578	32	150	65	688	46
FHF50-200/110	125	65	578	32	150	65	688	46
FHF50-250/150	125	65	578	32	150	65	688	46
FHF50-250/185	125	65	578	32	150	65	688	46
FHF50-250/220	150	65	688	46	150	65	688	46
FHF65-125/40	150	80	653	40	150	80	653	40
FHF65-125/55	150	80	653	40	150	80	653	40
FHF65-125/75	150	80	653	40	200	80	845	65
FHF65-160/110A	150	80	653	40	200	80	845	65
FHF65-160/110	200	80	845	65	200	80	845	65
FHF65-160/150	200	80	845	65	200	80	845	65
FHF65-200/150	200	80	845	65	200	80	845	65
FHF65-200/185	200	80	845	65	200	80	845	65
FHF65-200/220	200	80	845	65	200	80	845	65
FHF65-250/220	200	80	845	65	200	80	845	65
FHF65-250/300	200	80	845	65	200	80	845	65
FHF65-250/370	200	80	845	65	200	80	845	65
FHF80-160/150	200	100	776	53	200	100	776	53
FHF80-160/185	200	100	776	53	250 *	100	982	80
FHF80-200/220	200	100	776	53	250 *	100	982	80
FHF80-200/300	200	100	776	53	250 *	100	982	80
FHF80-250/370	200	100	776	53	250 *	100	982	80
FHF80-250/450	200	100	776	53	250 *	100	982	80
FHF80-250/550	250 *	100	982	80	250 *	100	982	80

Dimensions in mm. Tolerance ± 10 mm.

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* Insert the 20 mm minimal thickness under the GEN10 fire-fighting booster sets only.



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GEN../FHF 100-125 SERIES FIRE-FIGHTING BOOSTER SETS SUCTION SIDE KIT DIMENSIONS TABLE

PUMP	POSITIVE SUCTION HEAD				SUCTION LIFT			
	DNS	DNA	L	H	DNS	DNA	L	H
FHF100-160/185	250	125	951	67	250	125	951	67
FHF100-160/220	250	125	951	67	250	125	951	67
FHF100-160/300	250	125	951	67	300 *	125	1131	92
FHF100-200/185	200	125	735	40	250	125	951	67
FHF100-200/300	250	125	951	67	250	125	951	67
FHF100-200/370	250	125	951	67	300 *	125	1131	92
FHF100-200/450	250	125	951	67	300 *	125	1131	92
FHF100-250/300	250	125	951	67	250	125	951	67
FHF100-250/450	250	125	951	67	250	125	951	67
FHF100-250/550	250	125	951	67	300 *	125	1131	92
FHF100-250/750	250	125	951	67	300 *	125	1131	92
FHF100-250/900	300 *	125	1131	92	300 *	125	1131	92
FHF125-200/300	300	150	1051	78	300	150	1051	78
FHF125-200/450	300	150	1051	78	350 **	150	1175	94
FHF125-200/550	300	150	1051	78	400 **	150	1367	119
FHF125-270/750	350 **	150	1175	94	400 **	150	1367	119
FHF125-270/900	350 **	150	1175	94	400 **	150	1367	119
FHF125-270/1100	350 **	150	1175	94	400 **	150	1367	119
FHF125-270/1320	400 **	150	1367	119	400 **	150	1367	119

Dimensions in mm. Tolerance ± 10 mm.

kit-asp-en-fhf100_a_td

* Insert the 50 mm minimal thickness under the GEN10 fire-fighting booster sets only.

** Insert the 100 mm minimal thickness under the GEN10 fire-fighting booster sets only.

GEN../SHF 32-80 SERIES FIRE-FIGHTING BOOSTER SETS SUCTION SIDE KIT DIMENSIONS TABLE

PUMP	POSITIVE SUCTION HEAD				SUCTION LIFT			
	DNS	DNA	L	H	DNS	DNA	L	H
SHF32-125/07	65	50	369	8	80	50	411	15
SHF32-125/11	65	50	369	8	80	50	411	15
SHF32-160/15	65	50	369	8	80	50	411	15
SHF32-160/22	65	50	369	8	80	50	411	15
SHF32-200/30	65	50	369	8	80	50	411	15
SHF32-200/40	80	50	411	15	80	50	411	15
SHF32-250/55	80	50	411	15	80	50	411	15
SHF32-250/75	80	50	411	15	100	50	513	27
SHF32-250/110	80	50	411	15	100	50	513	27
SHF40-125/11	80	65	384	7	100	65	486	19
SHF40-125/15	100	65	486	19	100	65	486	19
SHF40-125/22	100	65	486	19	100	65	486	19
SHF40-160/30	100	65	486	19	100	65	486	19
SHF40-160/40	100	65	486	19	100	65	486	19
SHF40-200/55	100	65	486	19	100	65	486	19
SHF40-200/75	100	65	486	19	100	65	486	19
SHF40-250/110A	100	65	486	19	100	65	486	19
SHF40-250/110	100	65	486	19	100	65	486	19
SHF40-250/150	100	65	486	19	125	65	578	32
SHF50-125/22	100	65	486	19	125	65	578	32
SHF50-125/30	125	65	578	32	125	65	578	32
SHF50-125/40	125	65	578	32	150	65	688	46
SHF50-160/55	125	65	578	32	125	65	578	32
SHF50-160/75	125	65	578	32	150	65	688	46
SHF50-200/110A	125	65	578	32	125	65	578	32
SHF50-200/110	125	65	578	32	125	65	578	32
SHF50-250/150	125	65	578	32	150	65	688	46
SHF50-250/185	125	65	578	32	150	65	688	46
SHF50-250/220	150	65	688	46	150	65	688	46
SHF65-160/40	150	80	653	40	150	80	653	40
SHF65-160/55	150	80	653	40	150	80	653	40
SHF65-160/75	150	80	653	40	200	80	845	65
SHF65-160/110A	150	80	653	40	150	80	653	40
SHF65-160/110	150	80	653	40	150	80	653	40
SHF65-200/150	150	80	653	40	150	80	653	40
SHF65-200/185	150	80	653	40	200	80	845	65
SHF65-200/220	200	80	845	65	200	80	845	65
SHF65-250/300	200	80	845	65	200	80	845	65
SHF65-250/370	200	80	845	65	200	80	845	65
SHF80-160/110	200	100	776	53	200	100	776	53
SHF80-160/150	200	100	776	53	200	100	776	53
SHF80-160/185	200	100	776	53	200	100	776	53
SHF80-200/220	200	100	776	53	250 *	100	982	80
SHF80-200/300	200	100	776	53	250 *	100	982	80
SHF80-200/370	250 *	100	982	80	250 *	100	982	80
SHF80-250/450	250 *	100	982	80	250 *	100	982	80
SHF80-250/550	250 *	100	982	80	250 *	100	982	80
SHF80-250/750	250 *	100	982	80	250 *	100	982	80

Dimensions in mm. Tolerance ± 10 mm.

kit-asp-en-shf_a_td

* Insert the 20 mm minimal thickness under the GEN10 fire-fighting booster sets only.

ALARM KIT

The alarm kit is used for providing audible and visual signals for the alarms signalling no line (yellow colour), start-up request (yellow colour), pump working (red colour), no start-up (yellow colour).

In accordance with the EN 12845 standard, the alarms are placed in a permanently supervised room (EN 12845 point 10.8.6.2).

The kit includes:

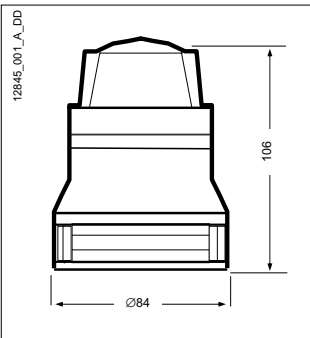
- 3 integrated audible and yellow flashing visual alarms.
- 1 integrated audible and red flashing visual alarm.

One kit must be used for each service pump.

The alarms are suitable to be connected to the alarm battery electric panel or to an independent power supply source. The electric connections must be seen to by the person installing the equipment.

DESCRIPTION	VALUE
Power supply voltage	12 V cc
Current rating	0,42 A
Dimensions	84 x 106 mm
Protection grade	IP30
Sound	Intermittent or continuous
Light	Flashing or fixed
Colour	Red or yellow

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ALARM ELECTRIC PANEL WITH BATTERY AND BATTERY CHARGER

Electric panel for independent power supply of the audible-visual alarms supplied complete with hermetic battery and assembly accessories. Guarantees the independence of the alarm power supply as per legal standard EN 12845, through back-up battery.

The plastic electric panel (transparent cover) with general door-locking switch includes the back-up battery charger and connection terminals.

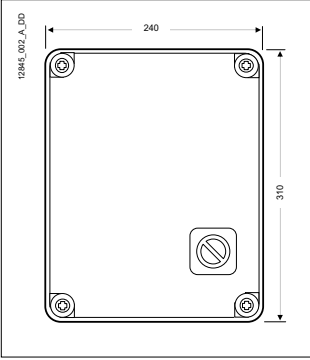
The kit includes:

- QAL 12856 electric panel complete with brackets for fixing it to the wall and cable glands.
- Back-up battery.
- Battery support bracket for fixing it to the wall.
- Battery connection cable.
- Wiring diagram.
- Packaging.

The panel allows two alarm kits to be connected (total of 8 audible-visual alarms), The electric connections must be seen to by the person installing the equipment.

DESCRIPTION	VALUE
Power supply voltage (single-phase)	230V 1~ 50-60 Hz
Current rating *	3,5 A
Dimensions	320 x 240 x 120 mm
Protection grade	IP55
Battery (external)	Hermetic lead
Battery voltage rating	12 Vcc
Battery capacity rating	27 Ah (uncharged in 20 h)
Battery dimensions	170 x 175 x 125 mm
Battery weight	9 kg

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* Current rating of battery charger.



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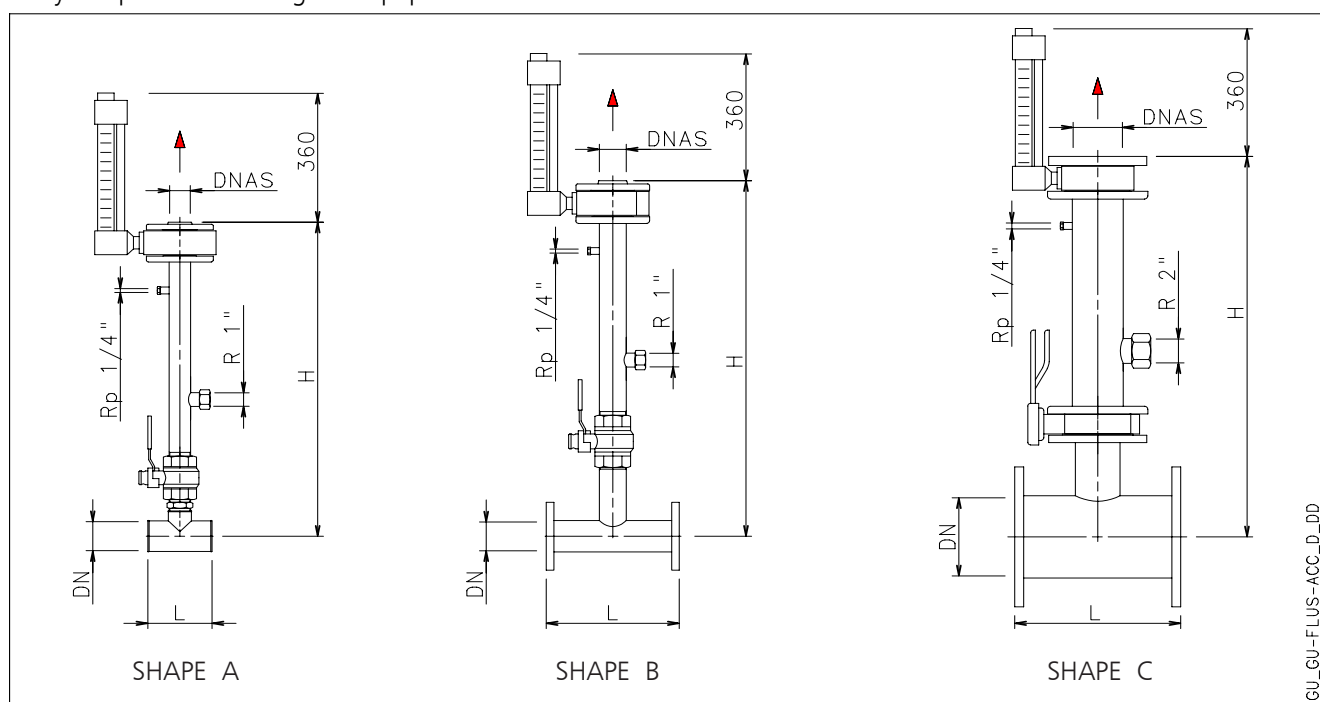
FLOW METER KIT

The flow meter is supplied as part of the assembly kit. The EN 12845 standard requires the presence of the flow meter for checking the hydraulic performance during the test stage and duration periodic inspections.

The kit includes:

- Direct reading flow meter.
- On/off ball valve for diameters up to 2" inclusive, butterfly valve with lever handle from DN65 to DN100 diameter, butterfly valve with handwheel and reduction manual gear for DN125 diameter and above. Monitoring of the ON/OFF status included (Lockable kit available on request).
- Connection piping.

The meter is available in various sizes according to the flow of a service pump and suitable for being connected to the offtake of the head manifold. For a correct match, identify the type as shown in the set size tables. The flow meter must be installed, where possible, in a stretch of piping with a steady flow and sufficient back pressure at the discharge outlet. The assembly and the discharge piping towards the tank and discharge outlet are to be seen to by the person installing the equipment.



TYPE	SHAPE	DN	DNAS	Q max (m3/h)	DIMENSIONS (mm)		
45	A	25	40	40	76	395	
46	A	32	40	40	90	400	
1	A	40	40	40	100	405	
47	A	40	50	65	116	425	
2	A	50	40	40	105	415	
3	A	50	50	65	105	435	
4	B	65	40	40	340	500	
5	B	65	50	65	340	520	
50	C	65	65	100	340	605	
48	C	65	80	130	340	810	
58	C	65	100	250	340	815	
29	B	80	40	40	340	505	
6	B	80	50	65	340	525	
51	C	80	65	100	340	615	
7	C	80	80	130	340	615	
57	C	80	100	250	340	820	
30	B	100	40	40	340	520	
8	B	100	50	65	340	540	
52	C	100	65	100	340	625	
9	C	100	80	130	340	625	
10	C	100	100	250	340	635	
49	C	100	125	420	340	945	
31	B	125	40	40	340	530	
11	B	125	50	65	340	550	
53	C	125	65	100	340	640	
12	C	125	80	130	340	640	
13	C	125	100	250	340	650	
14	C	125	125	420	340	760	
54	C	125	150	580	340	1085	
TYPE	SHAPE	DN	DNAS	Q max (m3/h)	DIMENSIONS (mm)		
55	C	125	200	1000	340	1345	
32	B	150	40	40	380	545	
33	B	150	50	65	380	565	
15	C	150	80	130	380	655	
16	C	150	100	250	380	660	
17	C	150	125	420	380	775	
28	C	150	150	580	380	900	
56	C	150	200	1000	380	1380	
34	B	200	40	40	380	570	
35	B	200	50	65	380	590	
18	C	200	80	130	380	680	
19	C	200	100	250	380	690	
20	C	200	125	420	380	800	
21	C	200	150	580	380	925	
22	C	200	200	1000	380	1170	
36	B	250	40	40	440	600	
37	B	250	50	65	440	620	
38	C	250	80	130	440	705	
39	C	250	100	250	440	715	
23	C	250	125	420	440	825	
24	C	250	150	580	440	950	
25	C	250	200	1000	440	1195	
40	B	300	40	40	440	625	
41	B	300	50	65	440	645	
42	C	300	80	130	440	730	
43	C	300	100	250	440	740	
44	C	300	125	420	440	850	
26	C	300	150	580	440	975	
27	C	300	200	1000	440	1220	

Shape A-B: DNAS flange threaded version
Shape C: DNAS flange version to be welded

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PRIMING TANK

The priming tank is used in suction lift installations and carries out the function of maintaining the pump body and suction pipe full of water even if there are leaks through the bottom valve.

Each pump must have its own independent priming tank, placed at a higher level than the pump. The tank must be connected to a water source for adding water and keeping it full. The diameter of the connecting pipe to the pump depends on the use class. The return piping for re-circulation can be connected to the tank, which must also provide for discharge if it is too full.

A level indicator automatically actions the service pump if the level of the tank drops and is not reintegrated. The hydraulic connections must be seen to by the person installing the equipment.

The horizontal 500 l tank is made of zinc-plated steel.

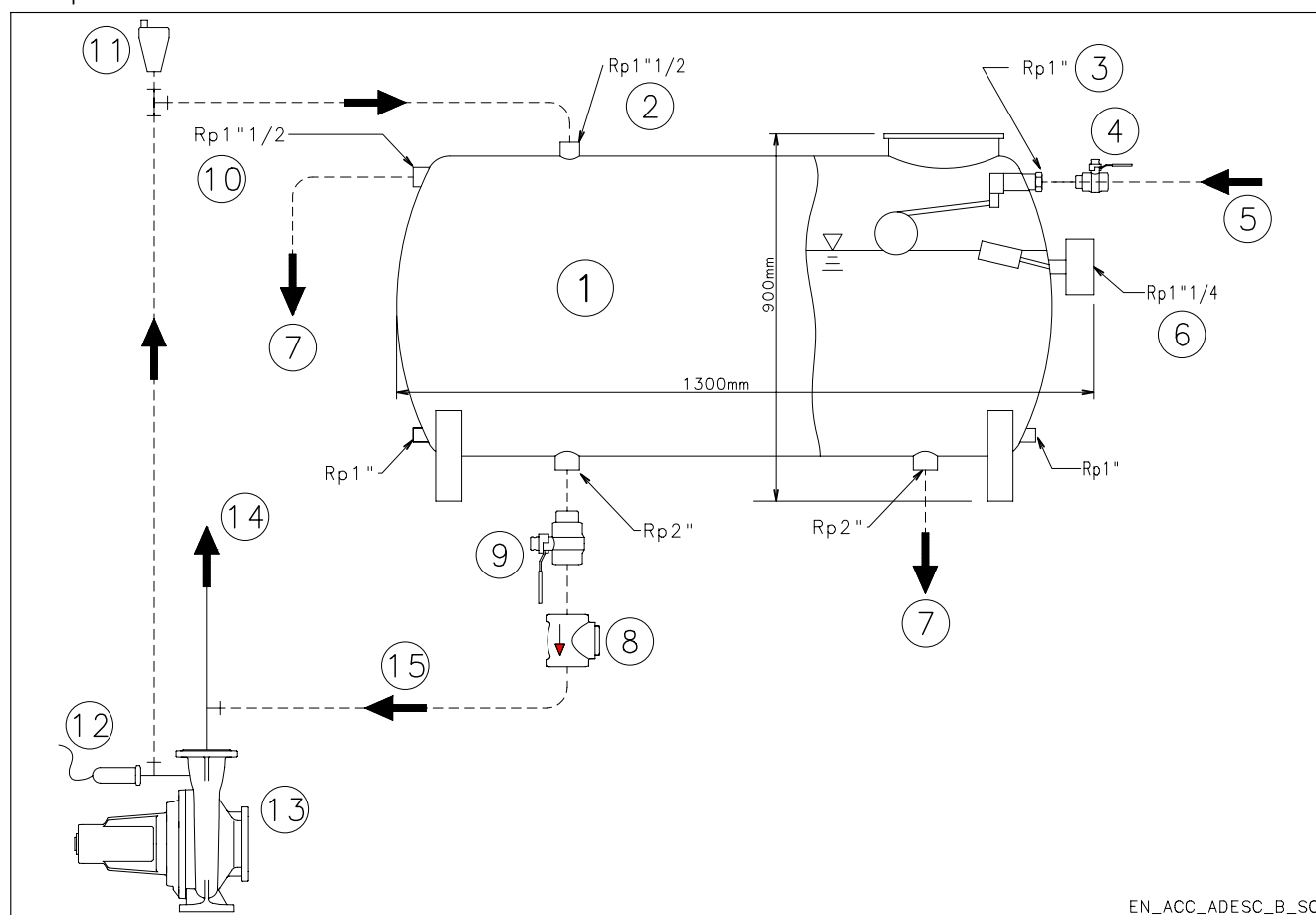
ACCESSORIES PRIMING TANK KIT

The available accessories kit includes:

- Filling and discharge valves, reductions, non-return valve, closing plugs and automatic air discharger.
- Float switch tap complete with ring nut for fixing to the hole through the tank.
- Level indicator to connect to the electric panel and assembly instruction sheet.

Available on request tank support, height 75, 100, 150, 200 cm.

Example of connection to the the tank and accessories:



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N°	DESCRIPTION	N°	DESCRIPTION
1	Pump priming tank	9	Priming supply on-off valve
2	Pipe return from pump delivery side	10	Over flow
3	Floating valve	11	Pump air bleed
4	In flow on-off valve	12	Pressure switch
5	In flow	13	Pump
6	Low level switch	14	To trunk main
7	Drain	15	Pipe connection to delivery side of the pump
8	Priming supply non return valve		

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ELECTRIC JOCKEY PUMP KIT

The jockey pump or compensation pump has the job of keeping the system under pressure and compensating for any small loses without the intervention of the service pumps. In fact, the jockey pump is commanded by an automatic shut-off panel. Should an electric jockey pump of a different size from the standard be required or should it be installed later on sets which are not predisposed, or should non-standard different size requirements be required, it is possible to configure the booster set with just the service pumps and add the electric jockey pump, also later on.

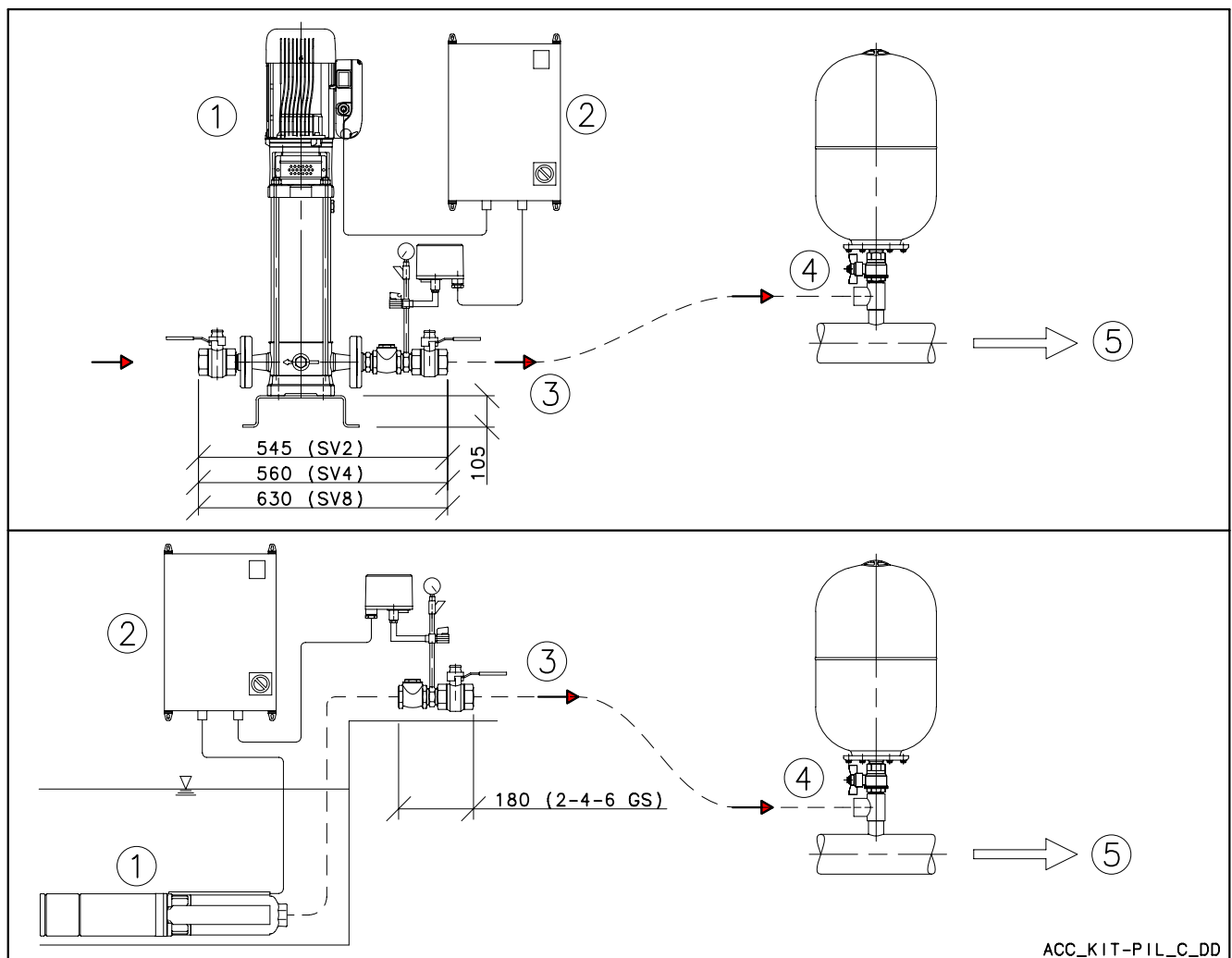
The kit includes:

- the hydraulic components for installing the electric pump (base, valves, pressure switch).
- the pre-chosen electric pump and the relative electric panel.

The hydraulic connection to the set can be easily carried out using one of the couplings on the delivery manifold for the membrane tanks using an adaptor.

Kits are available for the vertical electric jockey pumps SV2, SV4, SV8 series and submersed series 2GS, 4GS, 6GS.

The diagram illustrates some connection examples:



N°	DESCRIPTION
1	Electric pump
2	Control Box
3	Connection to trunk main
4	Pipe connection to delivery side of the jockey pump
5	To trunk main

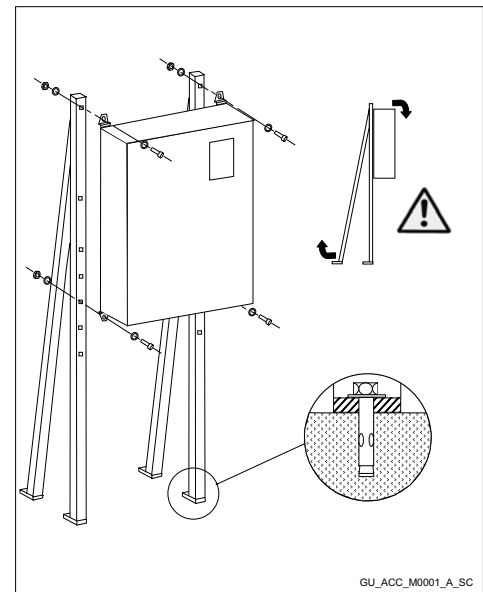


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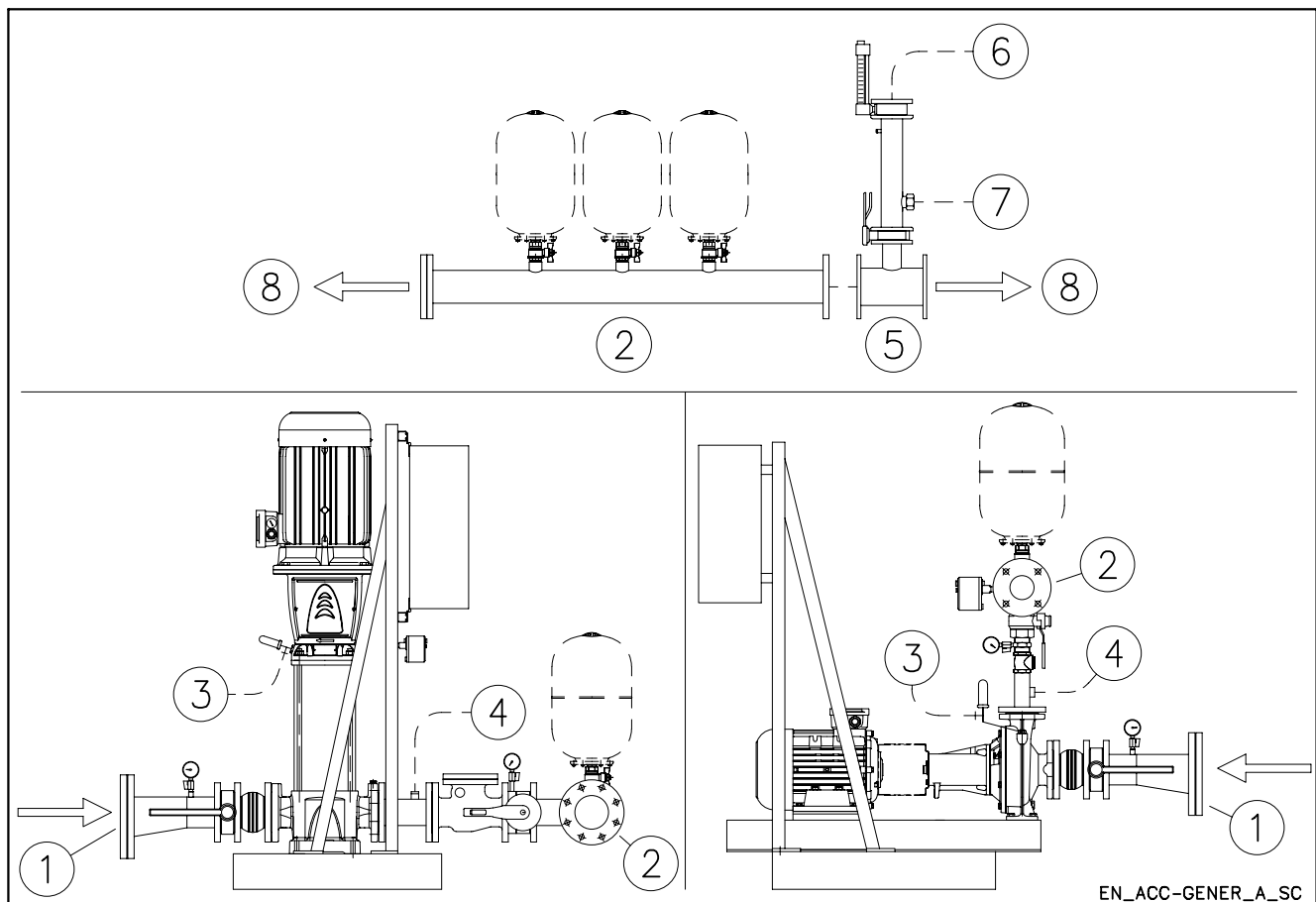
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PANEL BRACKET KIT

The electric command panels supplied separately, for example in the sets with submersed pumps, are suitable for being mounted on the wall. Universal bracket kit are available, upon request, for supporting the panels; it must be fixed to the floor using blocks.



HYDRAULIC CONNECTION FOR FIRE-FIGHTING EN 12845 SETS



N°	DESCRIPTION	N°	DESCRIPTION
1	Suction piping kit *	5	Flow meter kit *
2	Delivery manifold	6	Drain
3	Drain	7	Open discharge
4	From priming tank *	8	To trunk main

* See the instruction sheets.

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