

INTRODUCTION TO THE EN 12845 STANDARD

Introduction

The new UNI EN 12845 system Standard, which replaces UNI 9490 and UNI 9489, concerns the design, installation and maintenance of fixed "sprinkler" fire-fighting systems. The pumping units indicated in paragraph 10 of the Standard are made up from: a supply pump that guarantees the system features (or several pumps functioning in parallel) and a jockey pump or small leaks in the system. The activation of the supply pump, which can be electrical or diesel, is governed by the Standard (UNI EN 12845 point 10.2) on the basis of the type of water supply.

As requested by the Standard, the EBARA supply pumps used in the FFS-FFB range pumping units are equipped with motors that supply: the power requested in the power curve peak in the case of pumps with non-overloading curves; while, for pumps with power curve that increases with the capacity, supply the power requested up to the capacity corresponding to an NPSH requested by the pump not lower than 16 m. In the first case (Fig.1) the power peak can occur within the work field (curve A) or above (curve B).

In the second case (Fig.2) the power curve grows with the flow rate (curve C), the selection of the motor is made at the flow rate corresponding to NPSHr pump of 16 m or over.

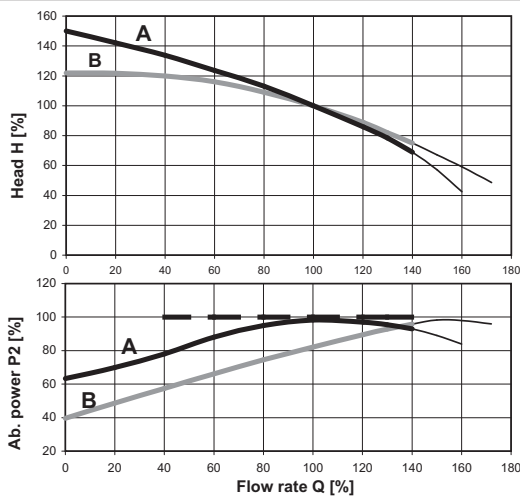


Fig. 1 – Definition of the power requested on the basis of the peak value

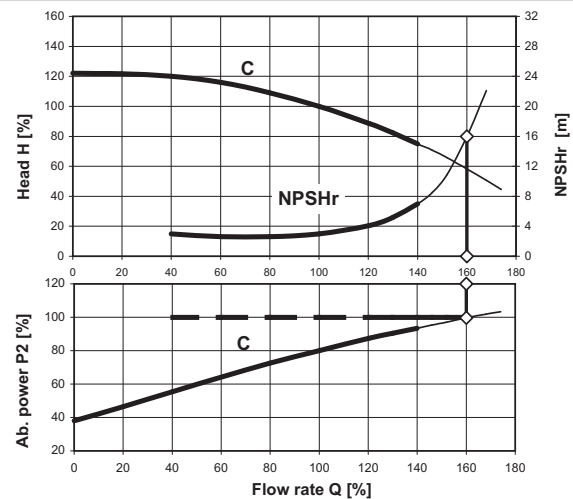


Fig. 2 – Definition of the power requested on the basis of the NPSH

Classes of danger

(UNI EN 12845 paragraph 6 and attachment A)

The choice of the class of danger and water supply (described below) is the competence of the fire extinguishing plant designer.

The Standard envisions that fire extinguishing systems, for protecting building, are designed and built according to classes of danger, divided into three types:

- Light Hazard - LH (slight danger);
- Ordinary Hazard - OH (ordinary danger), divided into OH1, OH2, OH3, OH4
- High Hazard - HH (high danger), divided into:
 - > High Hazard, Process - HHP, then divided into:
 - HHP1 - High Hazard - Process Unit 1
 - HHP2 - High Hazard - Process Unit 2
 - HHP3 - High Hazard - Process Unit 3
 - HHP4 - High Hazard - Process Unit 4
 - > High Hazard, Storage - HHS then divided into:
 - HHS1 - High Hazard - Storage Category I
 - HHS2 - High Hazard - Storage Category II
 - HHS3 - High Hazard - Storage Category III
 - HHS4 - High Hazard - Storage Category IV

Type of water supply

The water supply networks must always supply the pressure and flow rate requested by the system and must guarantee continuity and reliability.

The Standard envisions four different types of water supply (UNI EN 12845 paragraph 9.6):

- Individual water supplies (9.6.1);
- Superior individual water supplies (9.6.2);
- Double water supplies (9.6.3);
- Combined water supplies (9.6.4).

In a fire-fighting pumping unit in compliance with UNI EN 12845, in the cases of "Superior or double water supplies" not more than one supply pump must be activated by an electric motor (point 10.2).

In practice, on these water supply systems, if a unit is supplied with several supply pumps, only one is activated by the electric motor, the others are activated by a diesel engine.

INTRODUCTION TO THE EN 12845 STANDARD

Performance features – Pre/calculated systems

The performance features of the system for the choice of the pumps must be in agreement with that described in paragraph 10.7 of the UNI EN 12845 Standard. Statement 16 of the Standard establishes the minimum pressure and flow rate features, on the basis of pre-calculated systems for LH and OH classes of danger, with water withdrawn from accumulation reservoirs.

For pre-calculated systems in the HHP-HHS classes of danger, the features of the pump are defined on the basis of paragraph 7.3.2 of the UNI EN 12845 Standard. In these cases, the pump must be able to supply 140% of the flow rate at a pressure not lower than 70% of the pressure at the pump design flow rate. The selection of the performance features, of the number of pumps installed is entrusted to the system designer.

Functioning principle

The supply pump of the fire-fighting pumping unit in compliance with UNI EN 12845, in the case of intervention, is started by the activation of two pressure switches via the electric control panel (every pump has its own electric control panel), and must function continuously until stopping, which can only take place manually (UNI EN 12845 10.7.5.2). The start-up of the supply pump causes simultaneous activation of an acoustic signal via alarms remote control unit installed on manned place. The jockey pump, with small flow rate, intervenes in the case of small leaks from the system, (so as not to cause useless interventions of the supply pump) and is started automatically from its own electric control panel and relative pressure switch calibrated at a pressure value slightly higher than the value of the pressure switch of the supply pump. The stopping of the jockey pump takes place automatically on restoring system pressure.

Standards and Directives

- UNI EN 12845, fixed fire extinguisher systems – automatic sprinkler systems.
- UNI 10779, fire extinguishing system - Hydrant network
- UNI EN ISO 9906 Attachment A - Rotodynamic pumps - Hydraulic performance acceptance tests
- 2006/42 EEC Machinery Directive
- 2006/95/CE Low Voltage Directive
- Electromagnetic Compatibility Directive 2004/108

General conditions for use

Use:

- Fixed fire extinguisher systems, automatic sprinkler systems in compliance with the UNI EN 12845 Standard
- Fire extinguishing system, Hydrant networks in compliance with the UNI 10779 Standard

Room for installation and functioning:

- Especially for the pumping unit, closed and protected, with fire resistance no less than 60 minutes (UNI EN 12845 point 10.3)
- Protected via sprinkler (UNI EN 12845 point 10.3.2)
- The pumping unit must not be positioned in buildings or sections of constructions where dangerous processes or risk of explosion are present (UNI EN 12845, point 8.4)
- Protected from freezing (UNI EN 12845 point 8.4)
- Protected from tampering (UNI EN 12845 point 8.4)

Environment temperature:

- Environmental functioning area is $4^{\circ} \div 40^{\circ}\text{C}$ for electric pumps, at an altitude not exceeding 1000 m a.s.l.
- Max. relative humidity 50% at $+40^{\circ}\text{C}$

Water power supply temperature:

- Temperature of the water conveyed is $0^{\circ} \div 40^{\circ}\text{C}$
- Temperature of the water conveyed is $0^{\circ} \div 25^{\circ}\text{C}$, if submersed pumps are used

The water conveyed must not contain solid bodies and fibres in suspension or vegetation, which can cause deposits inside the piping (UNI EN 12845 point 8.1.2).

The pressure of the water must not exceed 12 bar, with exclusion of systems with high vertical development (height difference between the highest and lowest sprinkler > 45 metres) (UNI EN 12845 8.2.1, 8.2.2).

FFS - FFB FIRE-FIGHTING UNITS IN COMPLIANCE WITH UNI EN 12845

The EBARA FFS-FFB type pressure boosting units are applied in the automatic activation water supplies for the automatic fire fighting units in compliance with European Standard UNI EN 12845.

Functioning principle

As established by the UNI EN 12845 Standard, if the firefighting unit supply pumps intervene, they are started by a pair of pressure switches via an electric control panel supplied with each pump and they must function continuously until stopping, which only occurs with a manual control. The start-up of the supply pumps can cause simultaneous activation of an acoustic and luminous long distance indicator. The small flow rate jockey pump (pilot), intervenes in the case of small system leaks and is started and stopped automatically by its own electric control panel and relative pressure switch calibrated at a pressure value slightly higher than the pressure switch value of the supply pump. Stopping takes place when system pressure is reset. The acoustic - luminous indicator also signals a missing phase, the voltage, lack of water and any incorrect position of the shut-off valves both in discharge and suction. The electric control panels are equipped with pump running signals.

Standards and regulations

The FFS-FFB firefighting pressure boosting units are designed and built in compliance with the following Regulations and Standards:

- UNI EN 12845 Standard, extinguisher appliances, water supplies for automatic systems
- UNI EN 12845/10779 Standard, extinguisher systems - Hydrant networks
- 2006/42 EEC Machinery Directive
- 2006/95/CE Low Voltage Directive
- 2004/108 Electromagnetic Compatibility Directive
- European Standards:
EN60204-1; IEC EN60439-1; EN61000-6-4; EN61000-6-2

Conditions for use

The FFS-FFB firefighting pressure boosting units can be used exclusively as envisioned in the UNI EN 12845 LH, OH, HH Standard, in the automatic activation water supplies for the automatic fire fighting units in civil and industrial activities. The water conveyed must not contain solid bodies and fibres in suspension or vegetation and without aggressive and corrosive chemical substances (UNI EN 12845 8.6).

- Minimum temperature of the water conveyed is 0°C, max temperature 40°C (25°C for submersed multistage pumps)
- Environment functioning temperature is 4°÷40°C at a height not exceeding 1000 m a.s.l.
- Max. relative humidity 50% at +40°C

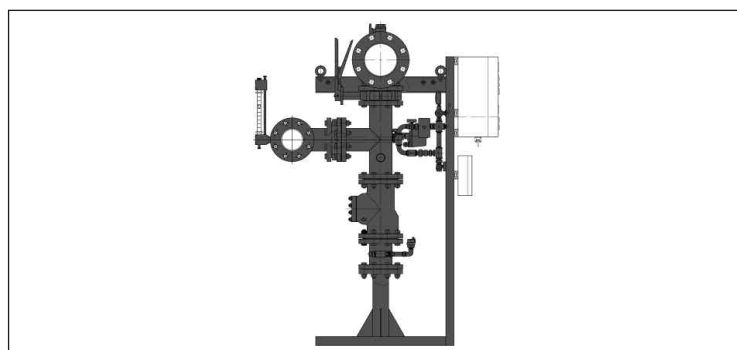
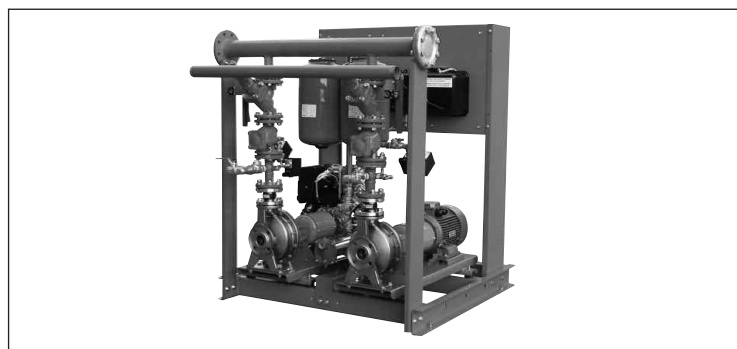
NB: possibly the pumping unit must be installed overhead (UNI EN 12845)

NB: each pump must have its own independent suction pipe (UNI EN 12845).

Versions available

The EBARA fire fighting units are produced in six versions:

- FFS 11/21 3PS: unit made up from 1 or 2 main surface electric pumps, base-joint monobloc and an electric jockey pump;
- FFBE 11/21 ENR: unit made up from 1 or 2 main surface electric pumps, base-joint monobloc and an electric jockey pump;
- FFS 11/21 EVMG: unit made up from 1 or 2 main surface electric pumps, vertical multistage and an electric jockey pump;
- KIT FFS 11/21 S: unit made up from 1 or 2 main submersed electric pumps, vertical multistage and an electric jockey pump;
- FFBD 11/21: unit made up from 1 or 2 main surface pumps, base-joint monobloc and an electric jockey pump;
- FFBD 111: unit made up from 1 pump and 1 main surface electric pumps, base-joint monobloc and an electric jockey pump.



FIRE-FIGHTING UNITS

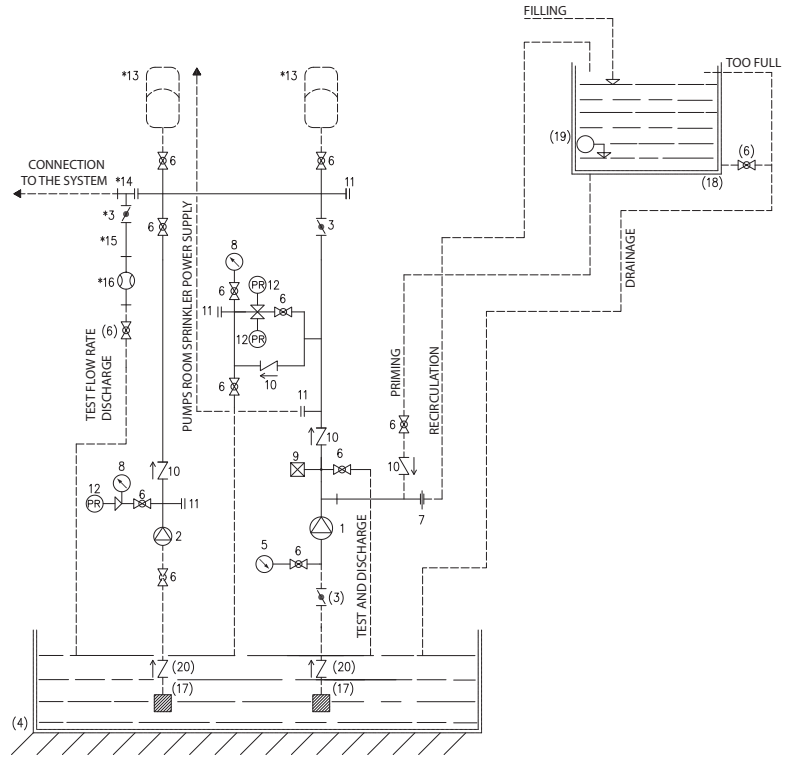
REPRESENTATIVE HYDRAULIC LAYOUT WITH OVERHEAD SURFACE PUMPS - VERSION A

KEY

- 1 Supply pump
- 2 Jockey pump
- 3 Butterfly shut-off valve
- 4 Supply pump tank
- 5 Vacuum gauge
- 6 Ball shut-off valve
- 7 Recirculation circuit connection
- 8 Pressure gauge
- 9 Automatic vent valve
- 10 Non-return valve
- 11 Blind flange/closing cap
- 12 Pump control pressure switch
- 13 Expansion vessel with membrane
- 14 T-shaped fitting, measuring device connection
- 15 Extension stub pipe upstream from measuring device
- 16 Flow rate measuring device
- 17 Filter
- 18 Pump priming tank
- 19 Low level switch for pump start-up
- 20 Foot valve

NB: the components numbered with the asterisk are supplied on request and separately (*3, *14, *15, 16, flow rate measuring device kit) (13 expansion vessel), assembly and inspection are the competence of the system manufacturer.

NB: the components numbered in brackets and the relative hydraulic networks marked are not part of the fire-fighting pressure booster unit, but are competence of the fire-fighting system manufacturer.



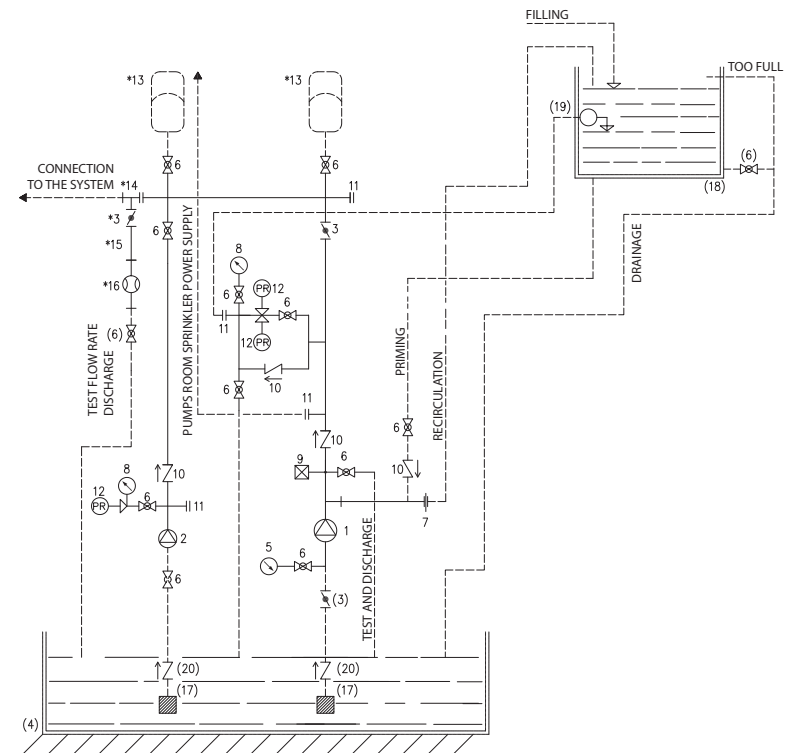
REPRESENTATIVE HYDRAULIC LAYOUT WITH OVERHEAD SURFACE PUMPS - VERSION B

KEY

- 1 Supply pump
- 2 Jockey pump
- 3 Butterfly shut-off valve
- 4 Supply pumps tank
- 5 Vacuum gauge
- 6 Ball shut-off valve
- 7 Recirculation circuit connection
- 8 Pressure gauge
- 9 Automatic vent valve
- 10 Non-return valve
- 11 Blind flange/closing cap
- 12 Pump control pressure switch
- 13 Expansion vessel with membrane
- 14 T-shaped fitting, measuring device connection
- 15 Extension stub pipe upstream from measuring device
- 16 Flow rate measuring device
- 17 Filter
- 18 Pump priming tank
- 19 Pump start-up low level valve
- 20 Foot valve

NB: the components numbered with the asterisk are supplied on request and separately (*3, *14, *15, 16, flow rate measuring device kit) (13 expansion vessel), assembly and inspection are the competence of the system manufacturer.

NB: the components numbered in brackets and the relative hydraulic networks marked are not part of the fire-fighting pressure booster unit, but are competence of the fire-fighting system manufacturer



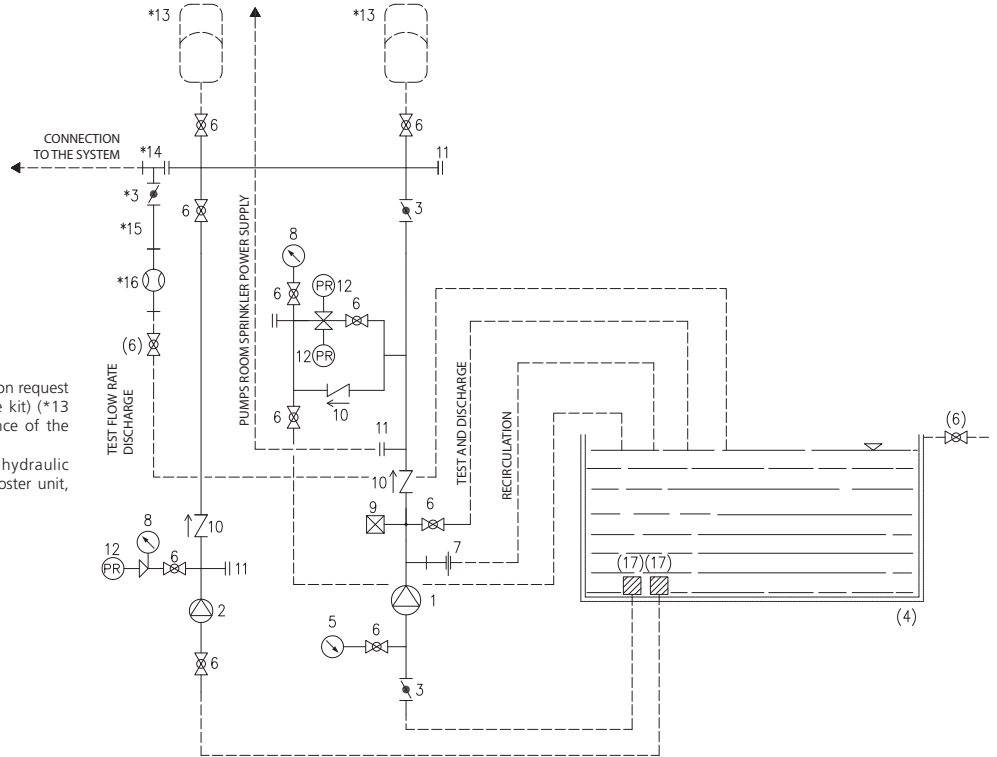
REPRESENTATIVE HYDRAULIC LAYOUT WITH UNDERHEAD SURFACE PUMPS

KEY

- 1 Supply pump
- 2 Jockey pump
- 3 Butterfly shut-off valve
- 4 Supply pumps tank
- 5 Vacuum gauge
- 6 Ball shut-off valve
- 7 Recirculation circuit connection
- 8 Pressure gauge
- 9 Automatic vent valve
- 10 Non-return valve
- 11 Blind flange/closing cap
- 12 Pump control pressure switch
- 13 Expansion vessel with membrane
- 14 T-shaped fitting, measuring device connection
- 15 Extension stub pipe upstream from measuring device
- 16 Flow rate measuring device
- 17 Filter

NB: the components numbered with the asterisk are supplied only on request and separately (*3, *14, *15, *16, flow rate measuring device kit) (*13 expansion vessel), assembly and inspection are the competence of the system manufacturer.

NB: the components numbered in brackets and the relative hydraulic networks marked are not part of the fire-fighting pressure booster unit, but are competence of the fire-fighting system manufacturer.



REPRESENTATIVE HYDRAULIC LAYOUT WITH SUBMERSED PUMPS

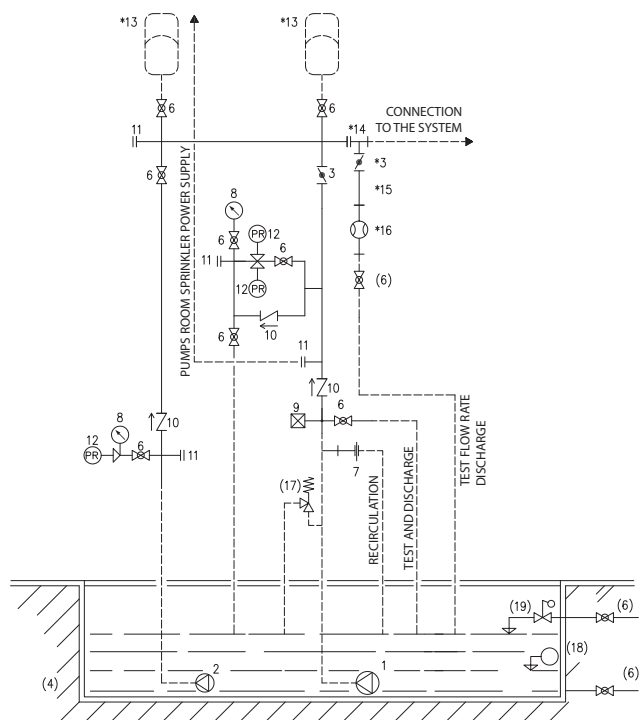
KEY

- 1 Supply pump
- 2 Jockey pump
- 3 Butterfly shut-off valve
- 4 Supply pumps tank
- 5 -
- 6 Ball shut-off valve
- 7 Recirculation circuit connection
- 8 Pressure gauge
- 9 Automatic vent valve
- 10 Non-return valve
- 11 Blind flange/closing cap
- 12 Pump control pressure switch
- 13 Expansion vessel with membrane
- 14 T-shaped fitting, measuring device connection
- 15 Extension stub pipe upstream from measuring device
- 16 Flow rate measuring device
- 17 Safety valve
- 18 Pump start-up minimum level switch
- 19 Filling valve with float

NB: the accessories and tracts of piping from the pumps outlet to the fittings upstream from the check valves, electric connections included, are the competence of the fire-fighting system manufacturer.

NB: the components numbered with the asterisk are supplied on request and separately (*3, *14, *15, *16, flow rate measuring device kit) (*13 expansion vessel), assembly and inspection are the competence of the system manufacturer.

NB: the components numbered in brackets and the relative hydraulic networks marked are not part of the fire-fighting pressure booster unit, but are competence of the fire-fighting system manufacturer.

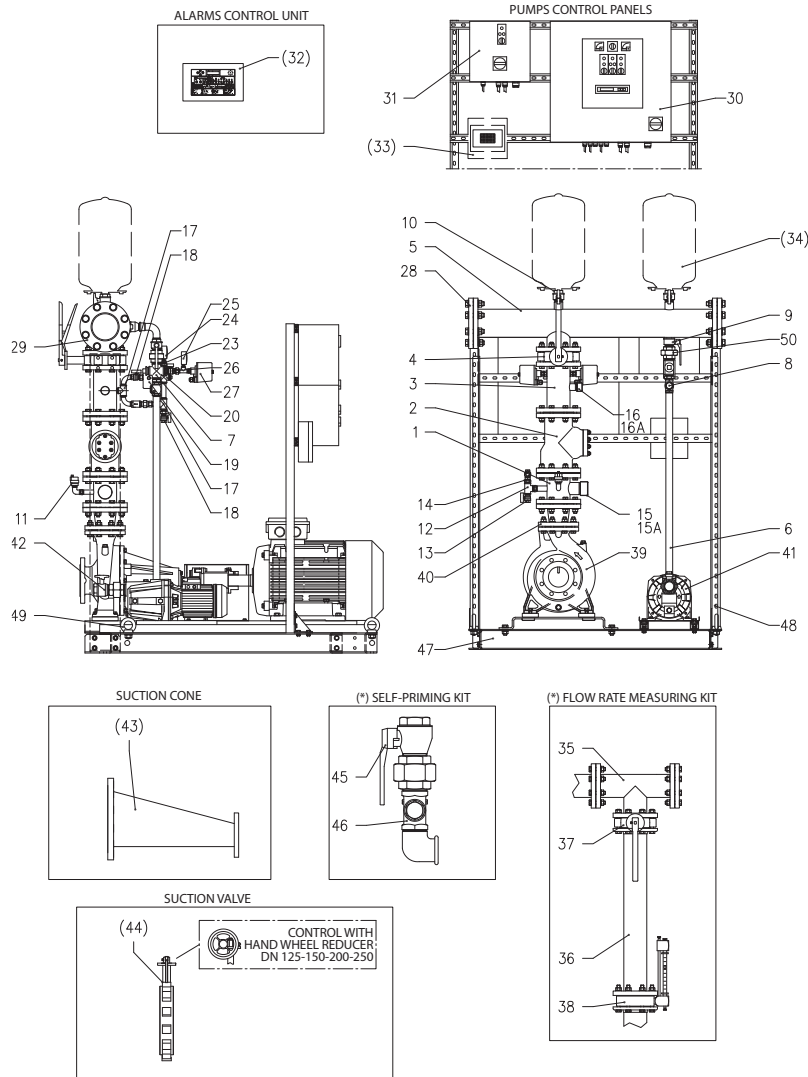


FFS FIRE-FIGHTING UNIT LAYOUT WITH BASE-JOINT ELECTRIC PUMPS

KEY

- 1 Fitting upstream from non-return valve
- 2 Non-return valve with check valves that can be inspected
- 3 Connection stub pipe
- 4 Butterfly shut-off valve with no opening electric signal
- 5 Discharge manifold
- 6 Jockey pump connection pipes
- 7 Cross fitting with closing cap, jockey pump line
- 8 Non-return valve with check valves that can be inspected, jockey pump line
- 9 Ball shut-off valve, jockey pump line
- 10 Ball shut-off valve
- 11 Automatic vent valve
- 12 T-shaped fitting, recirculation circuit
- 13 Test and unload ball valve
- 14 Angle valve/diaphragm, recirculation circuit
- 15/15A closing cap/Priming kit
- 16/16A closing cap/Pumps local sprinkler supply connection set-up
- 17 T-shaped fitting, pressure switch test circuit
- 18 Ball shut-off valve, pressure switch circuit test and discharge
- 19 Electric supply pumps starting pressure switches
- 20 Cross fitting with closing cap, pressure switch test circuit
- 23 Ball shut-off valve, pressure switch test circuit
- 24 Pressure gauge, pressure switch test circuit
- 25 Pressure gauge, jockey pump line
- 26 Ball shut-off valve, jockey pump pressure switch circuit
- 27 Jockey pump start-up pressure switch
- 28 Blind flange
- 29 Counter-flange
- 30 Electric supply pump electric control panel
- 31 Electric supply pump electric control panel
- 32 (*) Manned place alarms control unit
- 33 (*) Acoustic alarm control unit
- 34 (*) Expansion vessel
- 35 Three-way stub pipe
- 36 Stabiliser stub pipe
- 37 Shut-off valve
- 38 Discharge meter
- 39 Power supply electric pump
- 40 Tapered nozzle for pump discharge speed reduction (for units with 3PS pumps)
- 41 Jockey pump
- 42 Ball shut-off valve
- 43 (*) Eccentric tapered nozzle
- 44 (*) Butterfly shut-off valve with no opening electric signal (suction)
- 45 Ball shut-off valve
- 46 Non-return valve with check valves that can be inspected
- 47 Base
- 48 Frame
- 49 Lifting eye-bolts
- 50 Jockey pump line 3 pieces fitting

(*) Supplied separately on request



FIRE-FIGHTING UNITS

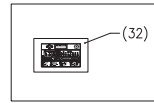
FFB FIRE-FIGHTING UNIT LAYOUT WITH ELECTRIC PUMPS AND BASE-JOINT PUMPS

KEY

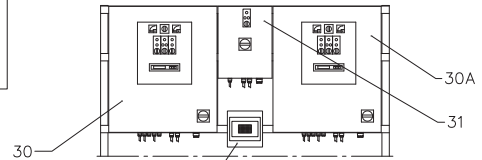
- | | |
|--|---|
| 1 Anti-vibration joint | 27 Jockey pump start-up pressure switch |
| 2 Non-return valve with check valves that can be inspected | 28 Blind flange |
| 3/3A Blind flange (cap/ flow rate measuring device kit | 29 Counter-flange |
| 4 Butterfly shut-off valve with no opening electric signal | 30 Supply pump electric control panel |
| 5 Discharge manifold | 30A Electric supply pump electric control panel (present in the FFBD111 versions) |
| 6 Jockey pump connection pipes | 31 Electric supply pump electric control panel |
| 7 Fitting with closing cap, jockey pump line | 32 (*) Manned place alarms control unit |
| 8 Non-return valve with check valves that can be inspected, jockey pump line | 33 (*) Acoustic alarm control unit |
| 9 Ball shut-off valve, jockey pump line | 34 (*) Expansion vessel |
| 10 Ball shut-off valve for expansion vessels | 36 Stabiliser stub pipe |
| 11 Automatic vent valve | 37 Shut-off valve |
| 12 T-shaped fitting, recirculation circuit | 38 Discharge meter |
| 13 Pressure switch test circuit non-return valve | 39 Supply pump |
| 14 Angle valve/diaphragm, recirculation circuit | 39A Electric supply pump (present in the FFBD111 versions) |
| 15/15A closing cap/Priming kit | 40 Tapered nozzle for pump discharge speed reduction |
| 16/16A closing cap/Pumps local sprinkler supply connection set-up | 41 Jockey pump |
| 17 T-shaped fitting, pressure switch test circuit | 42 Ball shut-off valve, in jockey pump suction line |
| 18 Ball shut-off valve, pressure switch circuit test and discharge | 43 (*) Eccentric tapered nozzle |
| 19 Electric supply pumps starting pressure switches | 44 (*) Butterfly shut-off valve with no opening electric signal (suction) |
| 20 Closing cap fitting, pressure switch test circuit | 45 Ball shut-off valve |
| 21 Fuel tank | 46 Non-return valve with check valves that can be inspected |
| 22 Collection tank | 47 Base |
| 23 Battery | 48 Manifold support thrust blocks |
| 24 Pressure gauge, pressure switch test circuit | 49 Jockey pump line 3 pieces fitting |
| 25 Pressure gauge, jockey pump line | |
| 26 Ball shut-off valve, jockey pump pressure switch circuit | |

(*) Supplied separately on request

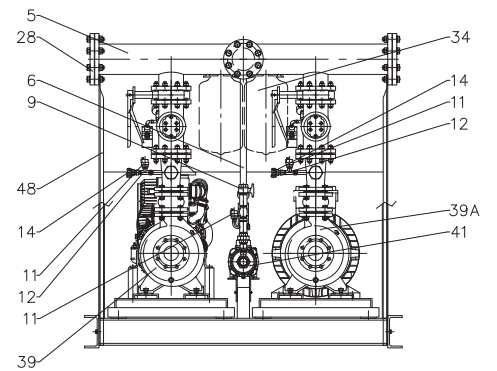
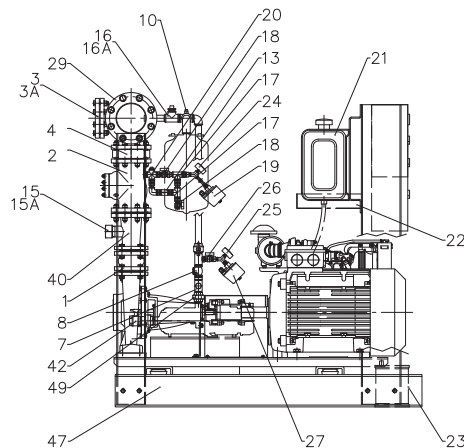
ALARMS CONTROL UNIT



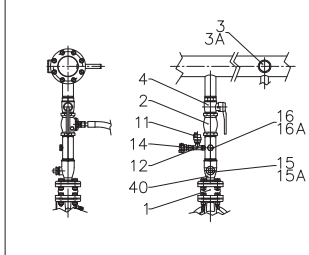
CONTROL PANELS



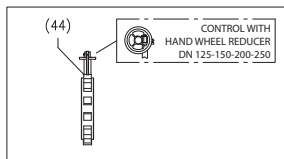
VERSION WITH FLANGED VALVE



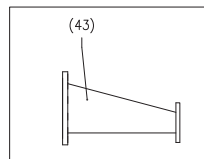
VERSION WITH THREADED VALVE



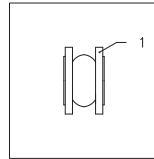
SUCTION VALVE



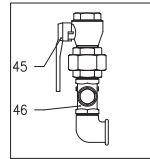
SUCTION CONE



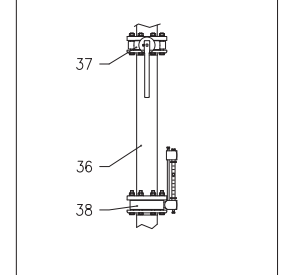
ANTI-VIBRATION JOINT



SELF-PRIMING KIT



FLOW RATE MEASURING KIT
VERSION FOR DIESEL



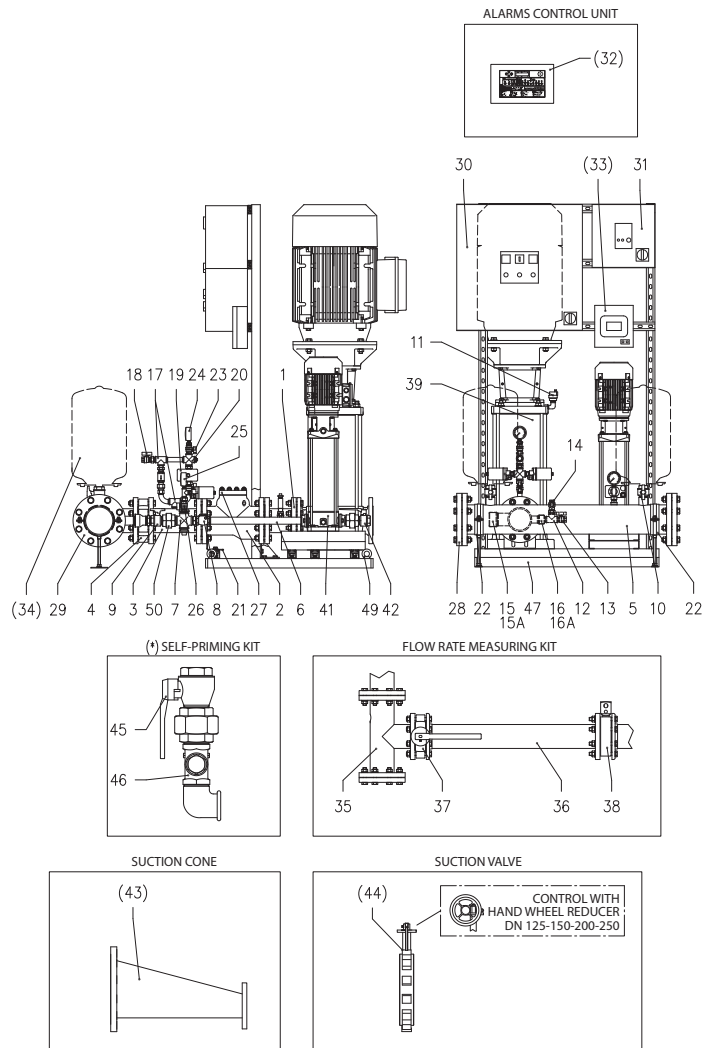
FIRE-FIGHTING UNITS

FFS FIRE-FIGHTING UNIT WITH VERTICAL MULTI-STAGE ELECTRIC PUMPS LAYOUT

KEY

- | | |
|--|---|
| 1 Fitting upstream from non-return valve | 27 Jockey pump start-up pressure switch |
| 2 Non-return valve with check valves that can be inspected | 28 Blind flange |
| 3 Connection stub pipe | 29 Counter-flange |
| 4 Butterfly shut-off valve with no opening electric signal | 30 Electric supply pump electric control panel |
| 5 Discharge manifold | 31 Electric supply pump electric control panel |
| 6 Jockey pump connection pipes | 32 (*) Manned place alarms control unit |
| 7 Cross fitting with closing cap, jockey pump line | 33 (*) Acoustic alarm control unit |
| 8 Non-return valve with check valves that can be inspected, jockey pump line | 34 (*) Expansion vessel |
| 9 Ball shut-off valve, jockey pump line | 35 Three-way stub pipe |
| 10 Ball shut-off valve | 36 Stabiliser stub pipe |
| 11 Automatic vent valve | 37 Shut-off valve |
| 12 T-shaped fitting, recirculation circuit | 38 Discharge meter |
| 13 Test and unload ball valve | 39 Power supply electric pump |
| 14 Angle valve/diaphragm, recirculation circuit | 41 Jockey pump |
| 15/15A closing cap/Priming kit | 42 Ball shut-off valve |
| 16/16A closing cap/Pumps local sprinkler supply connection set-up | 43 (*) Eccentric tapered nozzle |
| 17 T-shaped fitting, pressure switch test circuit | 44 (*) Butterfly shut-off valve with no opening electric signal (suction) |
| 18 Ball shut-off valve, pressure switch circuit test and discharge | 45 Ball shut-off valve |
| 19 Electric supply pumps starting pressure switches | 46 Non-return valve with check valves that can be inspected |
| 20 Cross fitting with closing cap, pressure switch test circuit | 47 Base |
| 21 "L" -shaped support bracket (present only in units with EVMG pumps) | 49 Lifting eye-bolts |
| 22 Manifold support (present only in units with EVMG pumps) | 50 Jockey pump line 3 pieces fitting |
| 23 Ball shut-off valve, pressure switch test circuit | |
| 24 Pressure gauge, pressure switch test circuit | |
| 25 Pressure gauge, jockey pump line | |
| 26 Ball shut-off valve, jockey pump pressure switch circuit | |

(*) Supplied separately on request

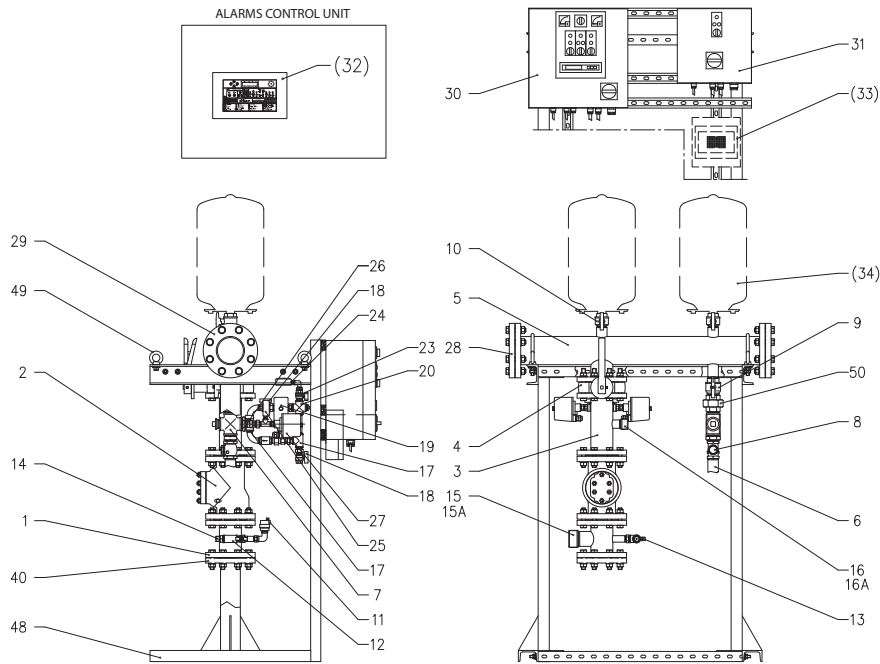


FFS-S FIRE-FIGHTING UNIT KIT WITH SUBMERSED ELECTRIC PUMPS LAYOUT

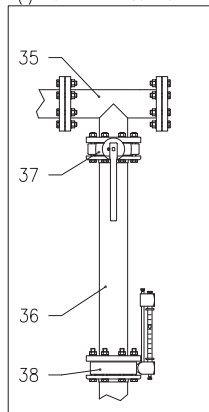
KEY

- | | |
|--|---|
| 1 Fitting upstream from non-return valve | 24 Pressure gauge, pressure switch test circuit |
| 2 Non-return valve with check valves that can be inspected | 25 Pressure gauge, jockey pump line |
| 3 Connection stub pipe | 26 Ball shut-off valve, jockey pump pressure switch circuit |
| 4 Butterfly shut-off valve with no opening electric signal | 27 Jockey pump start-up pressure switch |
| 5 Discharge manifold | 28 Blind flange |
| 6 Jockey pump collection pipes (not envisioned for submersed pumps) | 29 Counter-flange |
| 7 Cross fitting with closing cap, jockey pump line | 30 Electric supply pump electric control panel |
| 8 Non-return valve with check valves that can be inspected, jockey pump line | 31 Electric supply pump electric control panel |
| 9 Ball shut-off valve, jockey pump line | 32 (*) Manned place alarms control unit |
| 10 Ball shut-off valve | 33 (*) Acoustic alarm control unit |
| 11 Automatic vent valve | 34 (*) Expansion vessel |
| 12 T-shaped fitting, recirculation circuit | 35 Three-way stub pipe |
| 13 Test and unload ball valve | 36 Stabiliser stub pipe |
| 14 Angle valve/diaphragm, recirculation circuit | 37 Shut-off valve |
| 15/15A closing cap/Priming kit | 38 Discharge meter |
| 16/16A closing cap/Pumps local sprinkler supply connection set-up | 40 Counter-flange (for unit kits with submersed pumps) |
| 17 T-shaped fitting, pressure switch test circuit | 48 Frame |
| 18 Ball shut-off valve, pressure switch circuit test and discharge | 49 Lifting eye-bolts |
| 19 Electric supply pumps starting pressure switches | 50 Jockey pump line 3 pieces fitting |
| 20 Cross fitting with closing cap, pressure switch test circuit | |
| 23 Ball shut-off valve, pressure switch test circuit | |

(*) Supplied separately on request



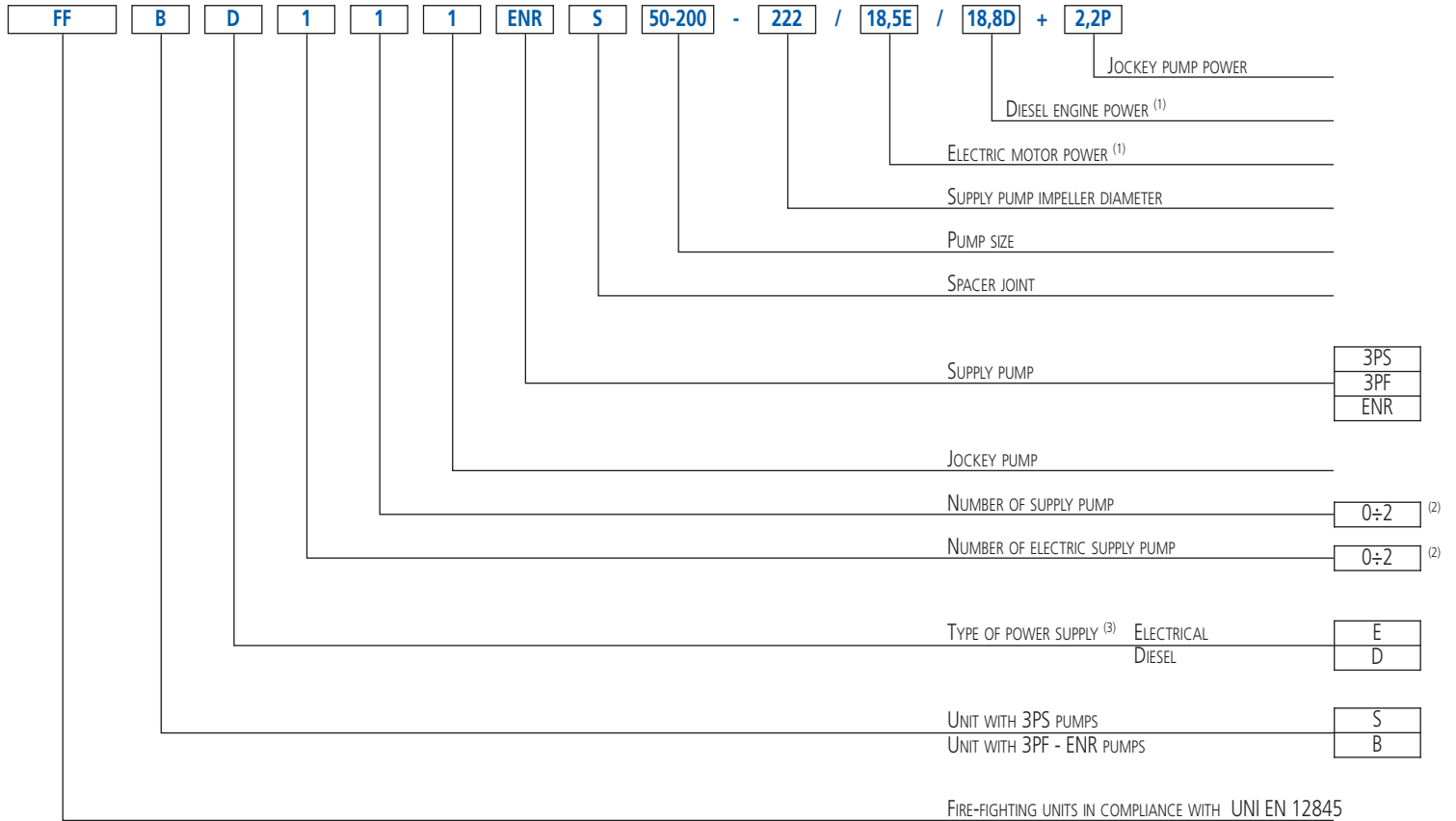
(*) FLOW RATE MEASURING KIT



Data under revision. For more information please contact our sales network.

FIRE-FIGHTING UNITS

IDENTIFICATION CODE - UNITS WITH BASE-JOINT PUMPS

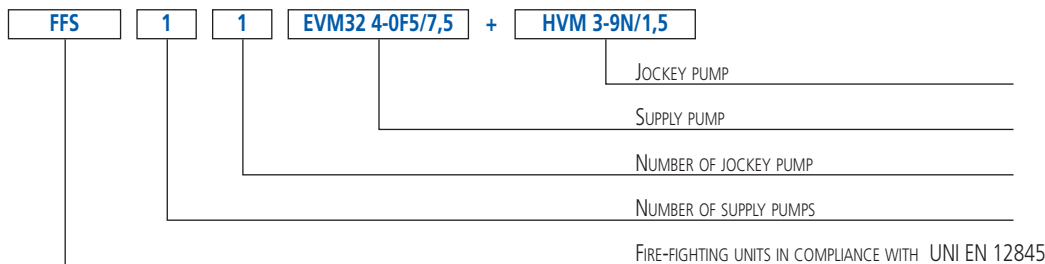


⁽¹⁾ Not indicated in absence of the specific pump

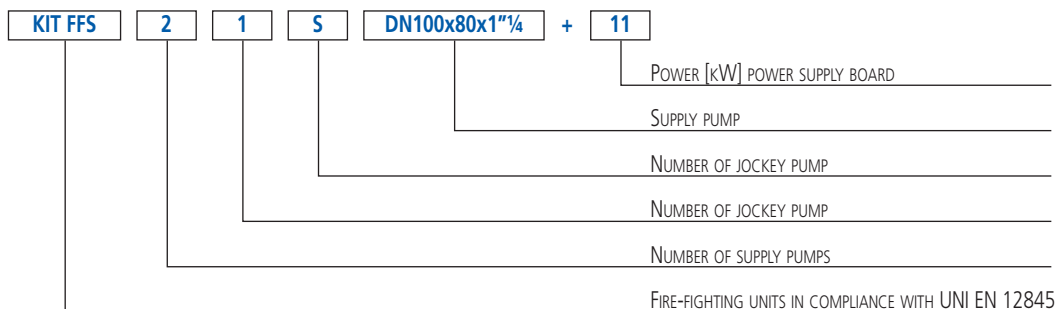
⁽²⁾ Quantity 0 not indicated

⁽³⁾ Not indicated in the units with 3PS pumps

IDENTIFICATION CODE - UNITS WITH VERTICAL MULTISTAGE ELECTRIC PUMPS



IDENTIFICATION CODE - UNITS WITH SUBMERSED ELECTRIC PUMPS



FIRE-FIGHTING UNITS

BASE-JOINT 32-40 (3PF - ENR) PERFORMANCE TABLE

Pump range	Pump size	Q=Flow rate															
		l/min m³/h	100 6	150 9	200 12	250 15	300 18	333 20	360 21	370 22	400 24	450 27	500 30	590 35	660 40	700 42	710 43
		H=Head [m]															
3PF	32-160-166	35,5	34,0	32,0	30,0	27,0	25,0	-	-	-	-	-	-	-	-	-	-
3PF	32-200-186	42,0	40,0	37,5	35,1	31,0	28,0	-	-	-	-	-	-	-	-	-	-
3PF	32-200-200	53,5	52,0	49,5	46,5	43,5	40,5	38,0	-	-	-	-	-	-	-	-	-
3PF	32-200-224	69,0	67,5	65,0	62,5	58,5	55,5	53,0	52,0	49,0	44,0	-	-	-	-	-	-
ENR	32-250-245	82,5	82,0	80,0	76,5	71,0	66,0	60,5	-	-	-	-	-	-	-	-	-
ENR	32-250-255	92,3	91,5	89,5	86,0	80,5	75,5	70,0	68,0	-	-	-	-	-	-	-	-
3PF	40-160-166	-	-	38,5	37,5	36,8	36,0	35,5	35,2	34,5	33,2	31,9	29,2	26,9	25,5	-	-
3PF	40-200-183	-	-	45,5	44,5	44,0	43,0	42,5	42,0	41,0	39,5	38,0	35,1	32,5	31,0	-	-
3PF	40-200-200	-	-	57,0	56,5	55,5	55,0	54,6	54,5	53,5	52,5	51,0	48,0	45,5	44,0	-	-
3PF	40-200-224	-	-	71,0	70,5	70,2	70,0	69,5	69,0	68,5	67,5	66,0	63,0	60,5	59,0	-	-
ENR	40-250-220	-	-	65,5	65	63,5	62,5	61,5	61,0	60,0	57,5	54,5	47,0	-	-	-	-
ENR	40-250-239	-	-	79,8	79,5	78,5	78,0	77,5	77,0	76,0	74,0	71,5	65,5	59,5	-	-	-
ENR	40-250-252	-	-	91,0	90,5	90,0	89,0	88,5	88,3	87,5	86,0	83,5	78,5	73,5	70,0	69,0	-

BASE-JOINT 50-65 (3PF - ENR) PERFORMANCE TABLE

Pump range	Pump size	Q=Flow rate															
		l/min m³/h	400 24	450 27	500 30	590 35	660 40	700 42	800 48	1050 63	1150 69	1200 72	1320 79	1600 96	2200 132	2300 138	2400 144
		H=Head [m]															
3PF	50-160-154	31,0	30,4	29,9	28,7	27,7	27,1	25,5	21,0	19,0	18,0	-	-	-	-	-	-
3PF	50-160-166	38,5	38,0	37,5	36,3	35,4	35,0	33,5	29,0	27,0	26,0	-	-	-	-	-	-
3PF	50-200-197	-	-	53,0	52,0	50,5	50,0	48,0	42,0	38,7	37,0	-	-	-	-	-	-
3PF	50-200-212	-	-	63,0	62,0	61,5	61,0	59,0	54,0	51,0	49,5	-	-	-	-	-	-
3PF	50-200-224	-	-	70,0	69,0	68,5	68,0	66,0	61,0	58,5	57,0	-	-	-	-	-	-
ENR	50-250-222	67,0	66,5	66,0	64,5	63,0	62,0	59,5	49,5	-	-	-	-	-	-	-	-
ENR	50-250-235	76,0	75,5	75,0	74,0	73,0	72,0	69,5	61,0	56,0	-	-	-	-	-	-	-
ENR	50-250-252	90,0	89,8	89,5	88,5	87,5	87,0	85,0	77,5	73,5	71,5	65,0	-	-	-	-	-
3PF	65-200-190	-	-	-	-	-	51,0	50,0	47,5	46,0	45,5	44,0	40,0	30,0	-	-	-
3PF	65-200-201	-	-	-	-	-	58,5	57,5	55,0	53,5	53,0	51,5	47,5	38,0	36,5	-	-
3PF	65-200-208	-	-	-	-	-	62,0	61,0	58,5	57,0	56,5	55,0	51,0	41,5	40,0	-	-
3PF	65-200-212	-	-	-	-	-	65,5	65,0	62,5	61,0	59,5	59,0	55,5	46,5	45,0	-	-
ENR	65-250-226	-	-	-	-	-	66,5	65,5	65,0	64,9	64,0	61,0	50,5	-	-	-	-
ENR	65-250-237	-	-	-	-	-	75,5	75,0	74,5	74,0	73,0	70,0	60,5	58,5	-	-	-
ENR	65-250-252	-	-	-	-	-	89,0	88,0	87,5	87,0	86,5	83,5	74,5	72,5	70,5	-	-

BASE-JOINT 80-100 (ENR) PERFORMANCE TABLE

Pump range	Pump size	Q=Flow rate															
		l/min m³/h	1200 72	1600 96	2000 120	2300 138	2600 156	3000 180	3150 189	3300 198	3500 210	3600 216	3800 228	4400 264	4700 282	5000 300	5200 312
		H=Head [m]															
ENR	80-200-190	47,5	45,5	43,0	40,0	36,4	30,5	-	-	-	-	-	-	-	-	-	-
ENR	80-200-199	54,0	53,0	50,5	47,5	44,0	38,8	36,5	34,0	-	-	-	-	-	-	-	-
ENR	80-200-207	61,0	60,0	58,0	56,0	53,0	48,0	46,0	44,0	41,0	39,1	-	-	-	-	-	-
ENR	80-200-214	66,5	66,0	64,5	63,0	60,5	56,5	55,0	53,0	50,0	48,5	45,5	-	-	-	-	-
ENR	80-250-222	64,0	62,5	60,0	56,5	52,0	45,0	-	-	-	-	-	-	-	-	-	-
ENR	80-250-234	73,5	72,5	70,0	67,0	63,0	55,5	52,5	-	-	-	-	-	-	-	-	-
ENR	80-250-243	82,5	82,0	80,0	77,0	72,5	65,0	61,5	58,5	-	-	-	-	-	-	-	-
ENR	80-250-255	93,0	92,5	91,0	88,5	85,0	78,5	75,5	72,0	67,5	-	-	-	-	-	-	-
ENR	100-200-182	-	39,5	38,5	37,5	36,0	33,5	32,5	31,3	29,7	28,9	27,2	21,8	-	-	-	-
ENR	100-200-190	-	44,5	43,5	43,0	41,5	40,0	38,9	37,9	36,5	35,7	34,0	28,5	25,5	-	-	-
ENR	100-200-194	-	47,0	46,5	45,5	45,0	43,0	42,0	41,5	39,9	39,2	37,6	32,5	29,5	-	-	-
ENR	100-200-197	-	49,5	49,0	48,5	47,5	46,0	45,0	44,0	43,0	42,0	40,5	35,5	33,0	30,0	-	-
ENR	100-200-201	-	52,0	51,5	51,0	50,0	48,5	48,0	47,0	46,0	45,5	44,0	39,3	36,7	33,5	-	-
ENR	100-200-209	-	56,5	56,0	55,5	55,0	53,5	53,0	52,5	51,0	50,5	49,5	45,0	42,5	39,8	38,0	-
ENR	100-200-213	-	59,0	58,5	58,0	57,5	56,0	55,5	55,0	54,0	53,0	52,0	47,5	45,5	43,0	41,0	-
ENR	100-250-221	-	62,0	61,0	60,0	59,0	56,5	56,0	55,0	53,5	52,5	50,5	44,0	-	-	-	-
ENR	100-250-225	-	65,5	64,5	63,5	62,5	60,5	59,5	58,5	57,0	56,0	54,5	48,0	44,0	-	-	-
ENR	100-250-232	-	71,0	70,5	69,5	68,5	66,5	65,5	64,5	63,0	62,0	60,5	54,0	50,0	-	-	-
ENR	100-250-242	-	80,0	79,0	78,5	77,5	76,0	75,5	74,5	73,0	72,0	70,5	64,0	60,0	56,0	-	-
ENR	100-250-248	-	85,0	84,5	84,0	83,0	81,5	81,0	80,5	79,0	78,5	77,0	71,0	67,5	64,0	61,0	-
ENR	100-250-255	-	91,0	90,5	90,0	89,5	88,5	88,0	87,0	86,0	85,5	84,0	78,0	75,0	71,5	68,5	-

FIRE-FIGHTING UNITS

AGA (JOCKEY) PERFORMANCE TABLE

Model	P ₂		Q=Flow rate								
	[HP]	[kW]	l/min	10	20	30	45	50	60	80	100
			m ³ /h	0,6	1,2	1,8	2,7	3	3,6	4,8	6
				H=Head [m]							
AGA 200T	2	1,5		59,0	55,6	52,2	47,3	45,7	42,5	36,4	30,5

AGA SUR (JOCKEY) PERFORMANCE TABLE

Model	P ₂		Q=Flow rate								
	[HP]	[kW]	l/min	10	20	30	40	50	60	70	80
			m ³ /h	0,6	1,2	1,8	2,4	3	3,6	4,2	4,8
				H=Head [m]							
AGA 300T SUR	3	2,2		73,5	68,0	63,5	58,8	54,5	50,9	47,3	44,0

COMPACT (JOCKEY) PERFORMANCE TABLE

Model	P ₂		Q=Flow rate						
	[HP]	[kW]	l/min	20	30	40	50	60	80
			m ³ /h	1,2	1,8	2,4	3	3,6	4,8
				H=Head [m]					
COMPACT A/10	1	0,75		56,5	53,0	48,5	43,5	37,1	20,0
COMPACT A/12	1,2	0,9		67,5	63,5	58,5	52,5	45,0	24,0
COMPACT A/15	1,5	1,1		79,0	74,5	69,0	62,5	54,0	28,0

MATRIX (JOCKEY) PERFORMANCE TABLE

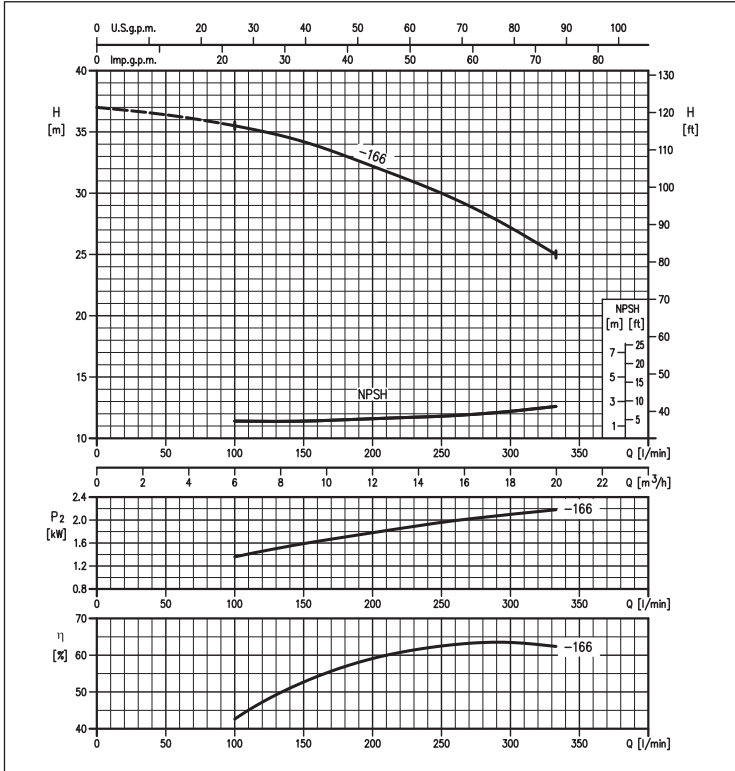
Model	P ₂		Q=Flow rate						
	[HP]	[kW]	l/min	30	45	60	80	100	130
			m ³ /h	1,8	2,7	3,6	4,8	6	7,8
				H=Head [m]					
MATRIX 5-9T/2,2	3	2,2		97,0	92,0	87,0	78,0	66,0	39,6



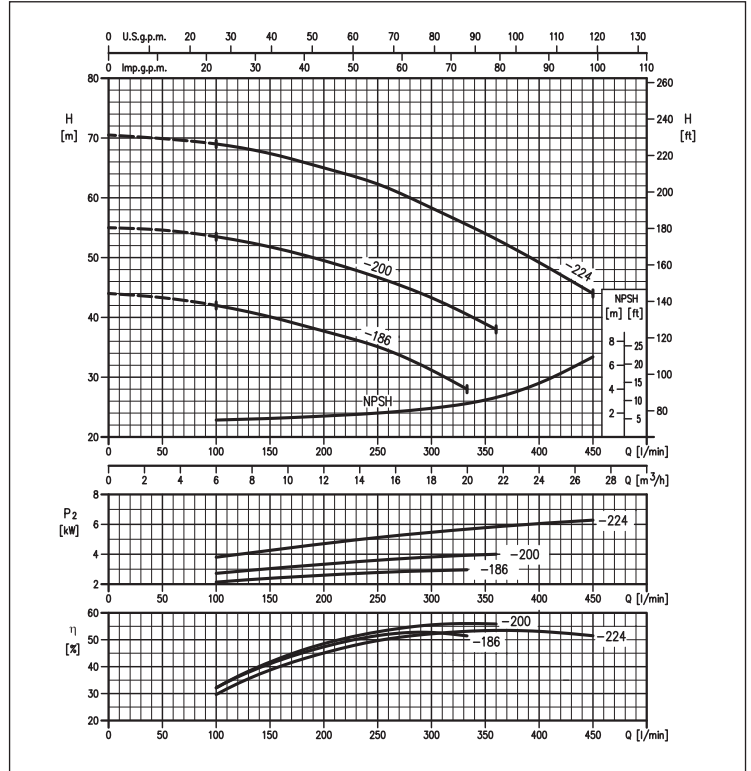
FFS-FFB

FIRE-FIGHTING UNITS

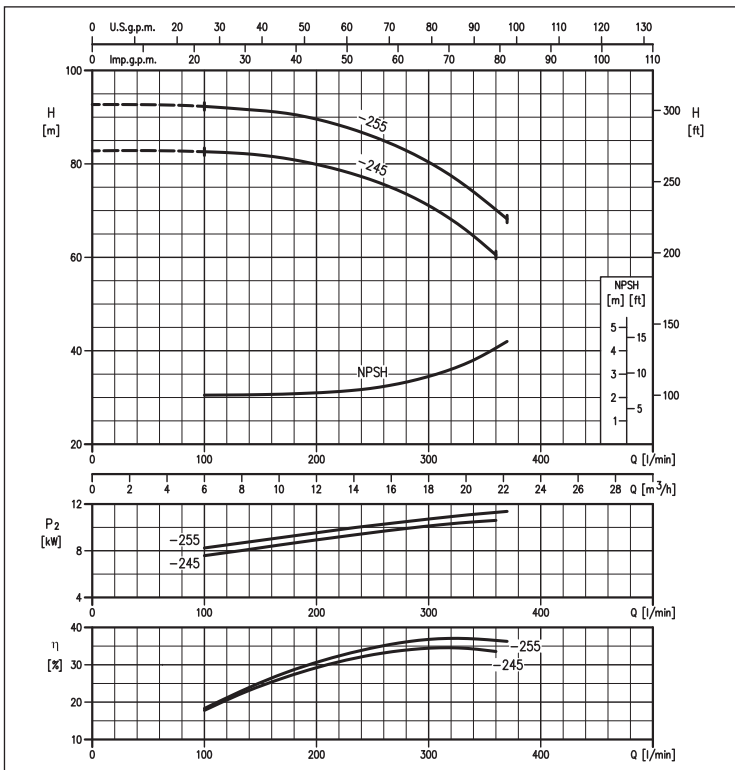
3PF 32-160 range PERFORMANCE CURVES (impeller diameter 166 mm)
(according to ISO 9906 Attachment A)



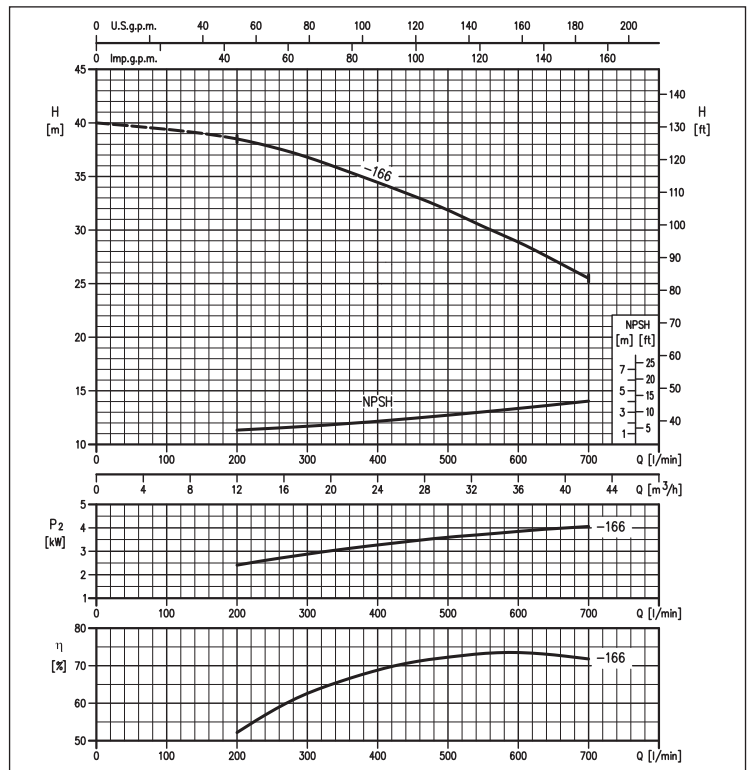
3PF 32-200 range PERFORMANCE CURVES (impeller diameter 186 to 224 mm)
(according to ISO 9906 Attachment A)



ENR 32-250 range PERFORMANCE CURVES (impeller diameter 245 to 255 mm)
(according to ISO 9906 Attachment A)



3PF 40-160 range PERFORMANCE CURVES (impeller diameter 166 mm)
(according to ISO 9906 Attachment A)

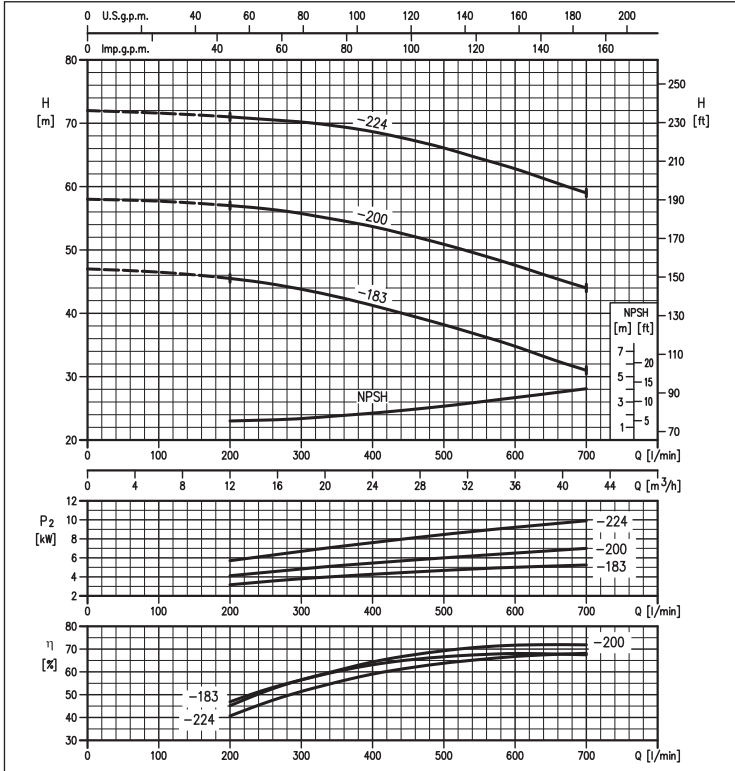




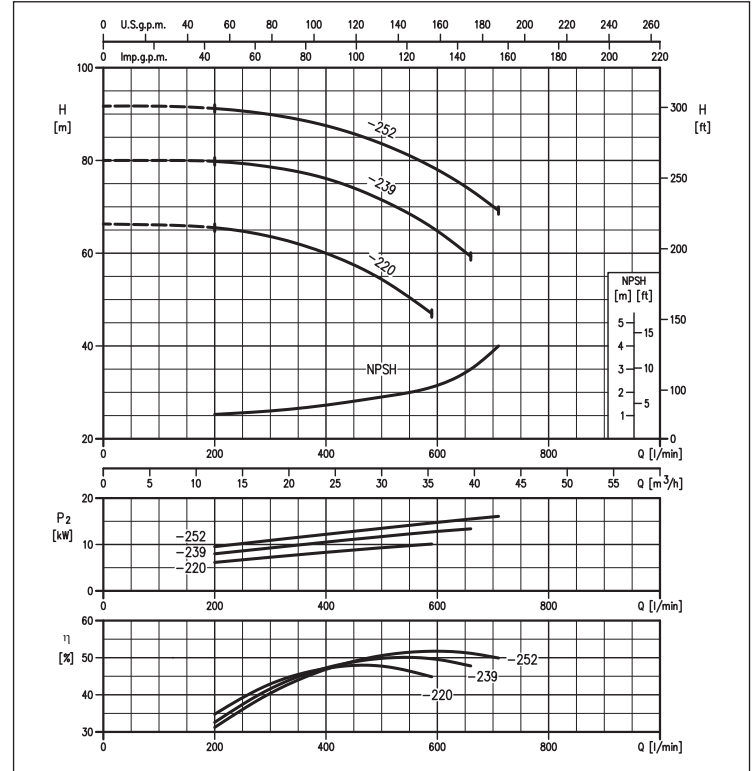
FFS-FFB

FIRE-FIGHTING UNITS

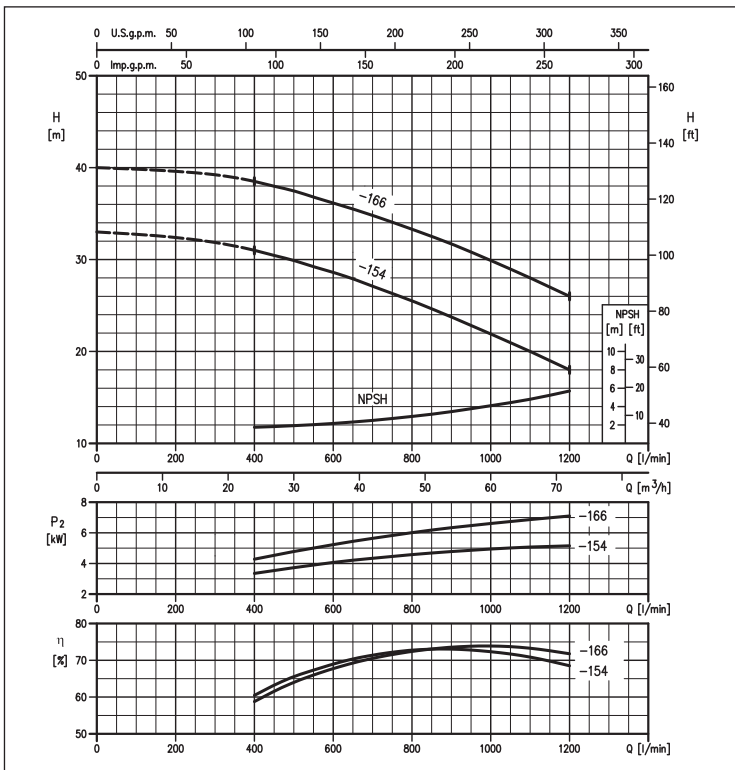
3PF 40-200 range PERFORMANCE CURVES (impeller diameter 183 to 224 mm)
(according to ISO 9906 Attachment A)



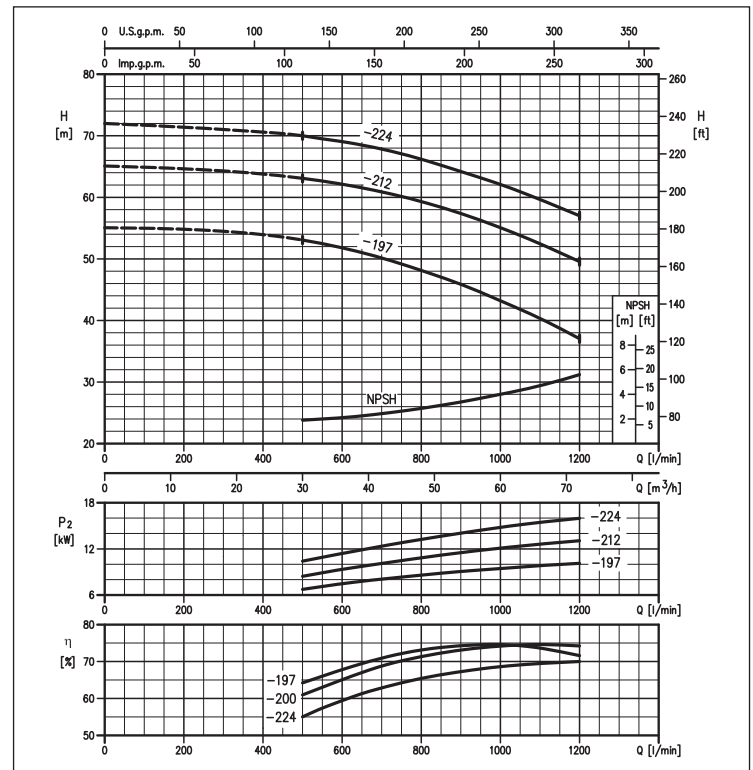
ENR 40-250 range PERFORMANCE CURVES (impeller diameter 186 to 224 mm)
(according to ISO 9906 Attachment A)



3PF 50-160 range PERFORMANCE CURVES (impeller diameter 154 to 166 mm)
(according to ISO 9906 Attachment A)



3PF 50-200 range PERFORMANCE CURVES (impeller diameter 197 to 224 mm)
(according to ISO 9906 Attachment A)

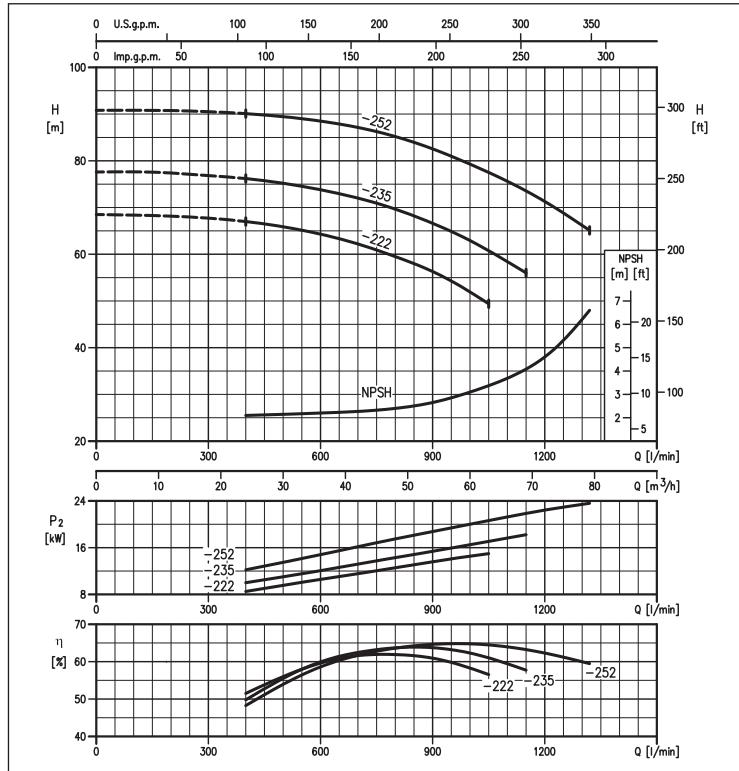




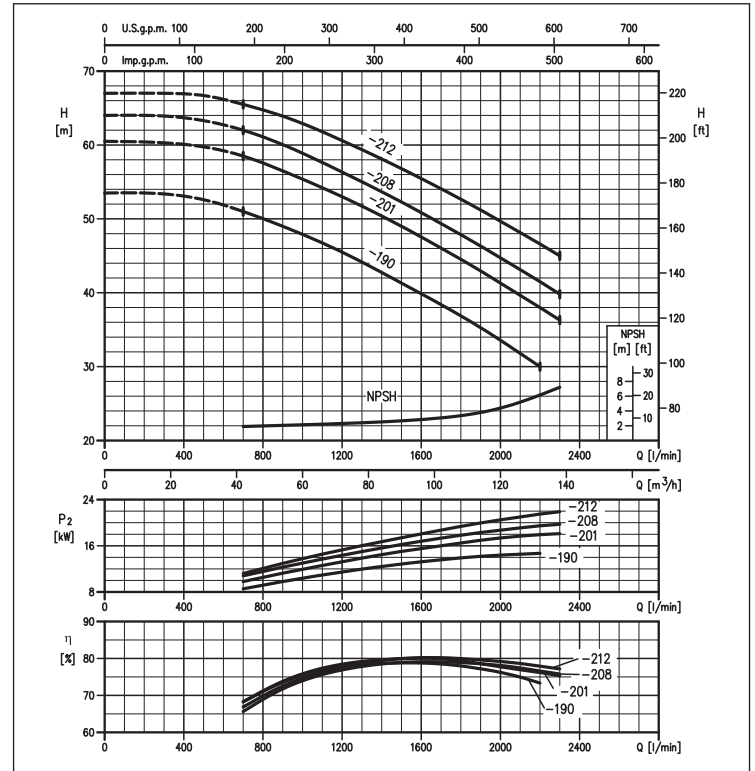
FFS-FFB

FIRE-FIGHTING UNITS

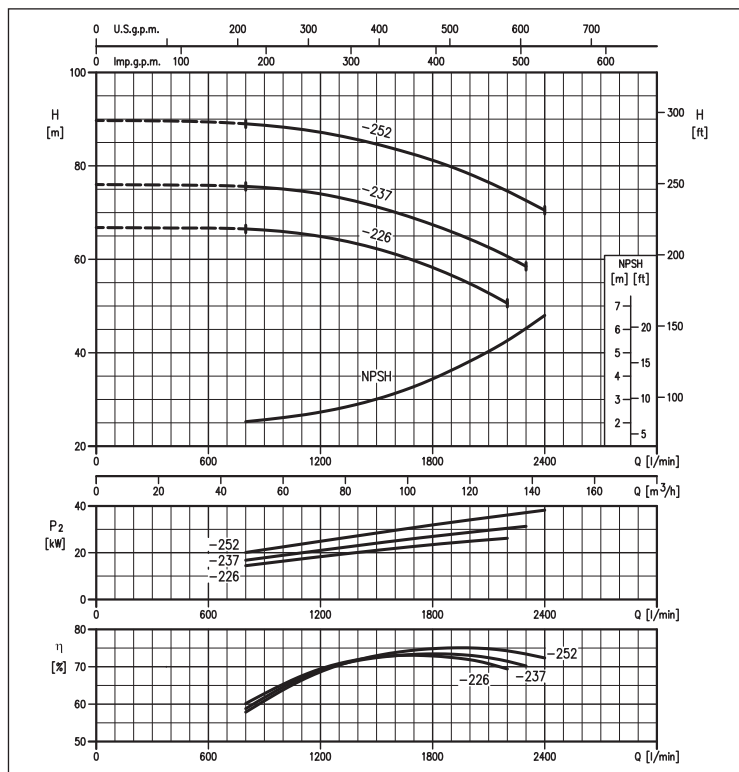
ENR 50-250 range PERFORMANCE CURVES (impeller diameter 222 to 252 mm)
(according to ISO 9906 Attachment A)



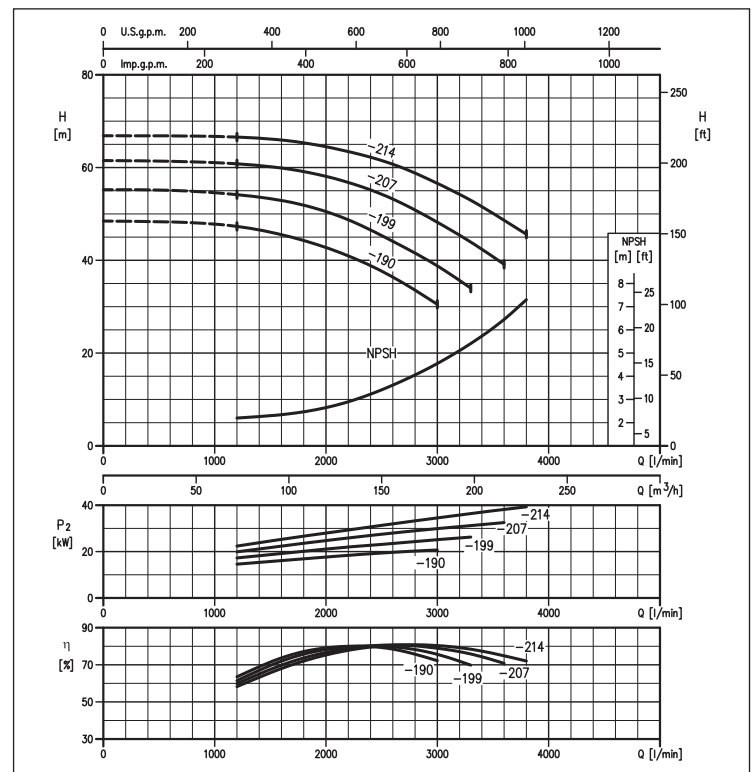
3PF 65-200 range PERFORMANCE CURVES (impeller diameter 190 to 212 mm)
(according to ISO 9906 Attachment A)



ENR 65-250 range PERFORMANCE CURVES (impeller diameter 226 to 252 mm)
(according to ISO 9906 Attachment A)



ENR 80-200 range PERFORMANCE CURVES (impeller diameter 190 to 214 mm)
(according to ISO 9906 Attachment A)



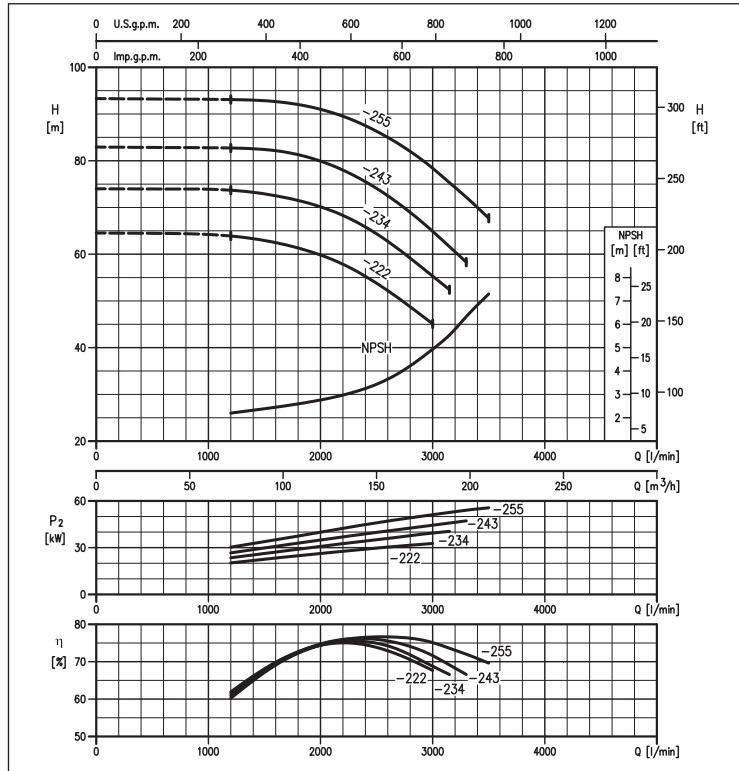
Data under revision. For more information please contact our sales network.



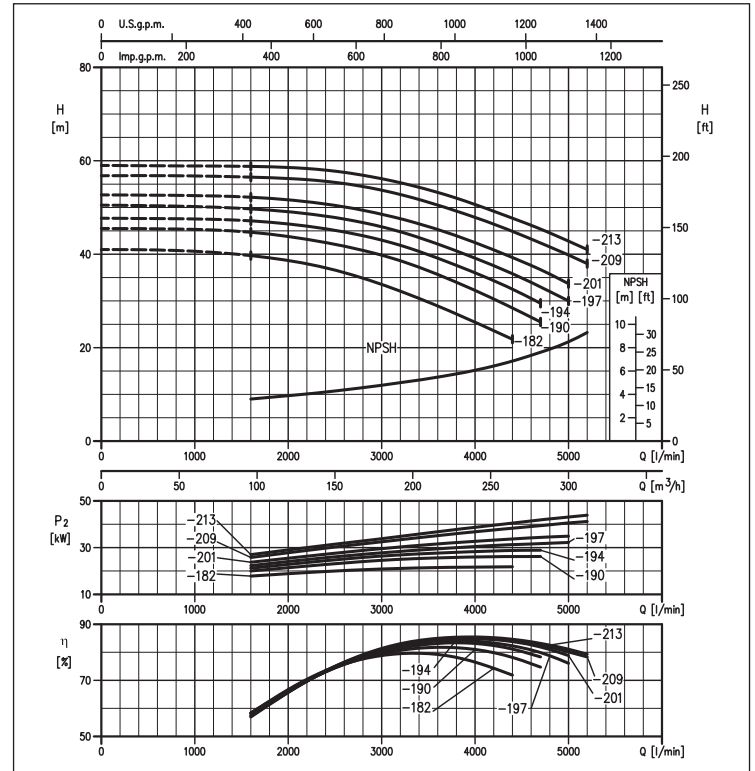
FFS-FFB

FIRE-FIGHTING UNITS

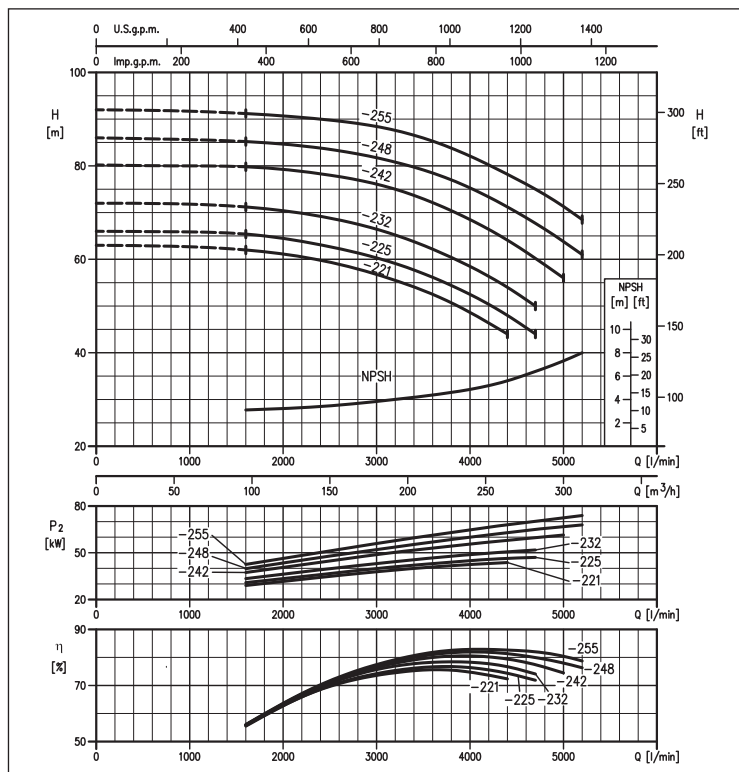
ENR 80-250 range PERFORMANCE CURVES (impeller diameter 222 to 255 mm)
(according to ISO 9906 Attachment A)



ENR 100-200 range PERFORMANCE CURVES (impeller diameter 182 to 213 mm)
(according to ISO 9906 Attachment A)



ENR 100-250 range PERFORMANCE CURVES (impeller diameter 221 to 255 mm)
(according to ISO 9906 Attachment A)



Data under revision. For more information please contact our sales network.

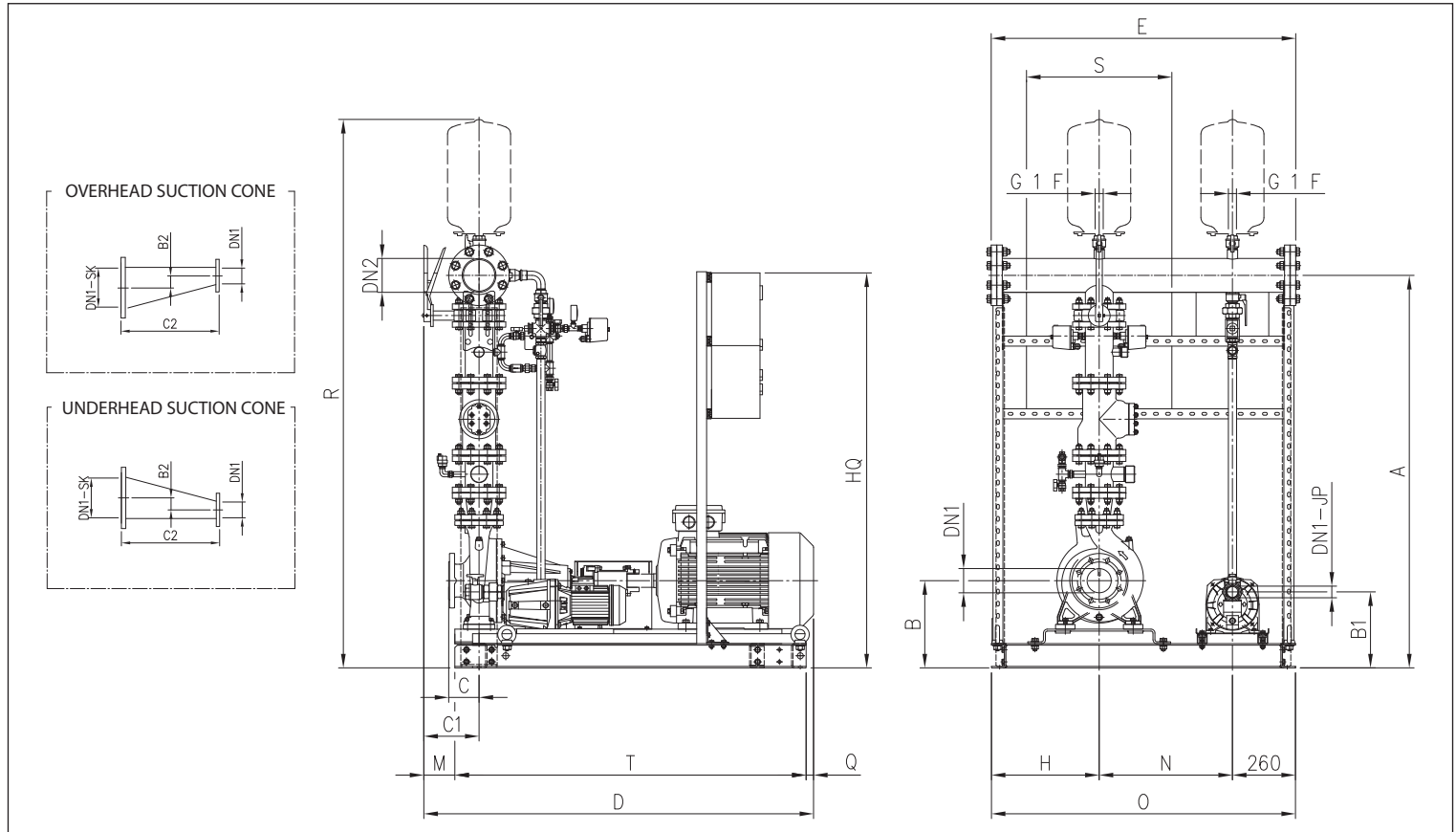
FIRE-FIGHTING UNITS FFS/FFBE

BASE-JOINT ELECTRIC MODELS TABLE

Pump	Size impeller diameter	Electric motor [kW]	FFS11/FFBE11	Jockey pump	FFS21/FFBE21	Jockey pump
3PF	32-160-166	3	FFS 11 3PS 32-160-166/3	AGA 200T	FFS 21 3PS 32-160-166/3	AGA 200T
3PF	32-200-186	4	FFS 11 3PS 32-200-186/4	AGA 300T SUR	FFS 21 3PS 32-200-186/4	AGA 300T SUR
3PF	32-200-200	5,5	FFS 11 3PS 32-200-200/5,5	AGA 300T SUR	FFS 21 3PS 32-200-200/5,5	AGA 300T SUR
3PF	32-200-224	7,5	FFS 11 3PS 32-200-224/7,5	AGA 300T SUR	FFS 21 3PS 32-200-224/7,5	AGA 300T SUR
ENR	32-250-245	11	FFBE 11 ENRS 32-250-245/11	MATRIX 5-9T/2,2	FFBE 21 ENRS 32-250-245/11	MATRIX 5-9T/2,2
ENR	32-250-255	15	FFBE 11 ENRS 32-250-255/15	MATRIX 5-9T/2,2	FFBE 21 ENRS 32-250-255/15	MATRIX 5-9T/2,2
3PF	40-160-166	5,5	FFS 11 3PS 40-160-166/5,5	AGA 200T	FFS 21 3PS 40-160-166/5,5	AGA 200T
3PF	40-200-183	7,5	FFS 11 3PS 40-200-183/7,5	AGA 300T SUR	FFS 21 3PS 40-200-183/7,5	AGA 300T SUR
3PF	40-200-200	9,2	FFS 11 3PS 40-200-200/9,2	AGA 300T SUR	FFS 21 3PS 40-200-200/9,2	AGA 300T SUR
3PF	40-200-224	15	FFS 11 3PS 40-200-224/15	AGA 300T SUR	FFS 21 3PS 40-200-224/15	AGA 300T SUR
ENR	40-250-220	11	FFBE 11 ENRS 40-250-220/11	MATRIX 5-9T/2,2	FFBE 21 ENRS 40-250-220/11	MATRIX 5-9T/2,2
ENR	40-250-239	15	FFBE 11 ENRS 40-250-239/15	MATRIX 5-9T/2,2	FFBE 21 ENRS 40-250-239/15	MATRIX 5-9T/2,2
ENR	40-250-252	18,5	FFBE 11 ENRS 40-250-252/18,5	MATRIX 5-9T/2,2	FFBE 21 ENRS 40-250-252/18,5	MATRIX 5-9T/2,2
3PF	50-160-166	9,2	FFS 11 3PS 50-160-166/9,2	AGA 200T	FFS 21 3PS 50-160-166/9,2	AGA 200T
3PF	50-200-197	11	FFS 11 3PS 50-200-197/11	AGA 300T SUR	FFS 21 3PS 50-200-197/11	AGA 300T SUR
3PF	50-200-212	15	FFS 11 3PS 50-200-212/15	AGA 300T SUR	FFS 21 3PS 50-200-212/15	AGA 300T SUR
3PF	50-200-224	18,5	FFS 11 3PS 50-200-224/18,5	AGA 300T SUR	FFS 21 3PS 50-200-224/18,5	AGA 300T SUR
ENR	50-250-222	18,5	FFBE 11 ENRS 50-250-222/18,5	MATRIX 5-9T/2,2	FFBE 21 ENRS 50-250-222/18,5	MATRIX 5-9T/2,2
ENR	50-250-235	22	FFBE 11 ENRS 50-250-235/22	MATRIX 5-9T/2,2	FFBE 21 ENRS 50-250-235/22	MATRIX 5-9T/2,2
ENR	50-250-252	30	FFBE 11 ENRS 50-250-252/30	MATRIX 5-9T/2,2	FFBE 21 ENRS 50-250-252/30	MATRIX 5-9T/2,2
3PF	65-200-190	15	FFS 11 3PS 65-200-190/15	AGA 300T SUR	FFS 21 3PS 65-200-190/15	AGA 300T SUR
3PF	65-200-201	18,5	FFS 11 3PS 65-200-201/18,5	AGA 300T SUR	FFS 21 3PS 65-200-201/18,5	AGA 300T SUR
3PF	65-200-208	22	FFS 11 3PS 65-200-208/22	AGA 300T SUR	FFS 21 3PS 65-200-208/22	AGA 300T SUR
3PF	65-200-212	30	FFS 11 3PS 65-200-212/30	AGA 300T SUR	FFS 21 3PS 65-200-212/30	AGA 300T SUR
ENR	65-250-226	30	FFBE 11 ENRS 65-250-226/30	MATRIX 5-9T/2,2	FFBE 21 ENRS 65-250-226/30	MATRIX 5-9T/2,2
ENR	65-250-237	37	FFBE 11 ENRS 65-250-237/37	MATRIX 5-9T/2,2	FFBE 21 ENRS 65-250-237/37	MATRIX 5-9T/2,2
ENR	65-250-252	45	FFBE 11 ENRS 65-250-252/45	MATRIX 5-9T/2,2	FFBE 21 ENRS 65-250-252/45	MATRIX 5-9T/2,2
ENR	80-200-190	22	FFBE 11 ENRS 80-200-190/22	AGA 300T SUR	FFBE 21 ENRS 80-200-190/22	AGA 300T SUR
ENR	80-200-199	30	FFBE 11 ENRS 80-200-199/30	AGA 300T SUR	FFBE 21 ENRS 80-200-199/30	AGA 300T SUR
ENR	80-200-207	37	FFBE 11 ENRS 80-200-207/37	AGA 300T SUR	FFBE 21 ENRS 80-200-207/37	AGA 300T SUR
ENR	80-200-214	45	FFBE 11 ENRS 80-200-214/45	AGA 300T SUR	FFBE 21 ENRS 80-200-214/45	AGA 300T SUR
ENR	80-250-222	37	FFBE 11 ENRS 80-250-222/37	MATRIX 5-9T/2,2	FFBE 21 ENRS 80-250-222/37	MATRIX 5-9T/2,2
ENR	80-250-234	45	FFBE 11 ENRS 80-250-234/45	MATRIX 5-9T/2,2	FFBE 21 ENRS 80-250-234/45	MATRIX 5-9T/2,2
ENR	80-250-243	55	FFBE 11 ENRS 80-250-243/55	MATRIX 5-9T/2,2	FFBE 21 ENRS 80-250-243/55	MATRIX 5-9T/2,2
ENR	80-250-255	75	FFBE 11 ENRS 80-250-255/75	MATRIX 5-9T/2,2	FFBE 21 ENRS 80-250-255/75	MATRIX 5-9T/2,2
ENR	100-200-182	22	FFBE 11 ENRS 100-200-182/22	AGA 300T SUR	FFBE 21 ENRS 100-200-182/22	AGA 300T SUR
ENR	100-200-194	30	FFBE 11 ENRS 100-200-194/30	AGA 300T SUR	FFBE 21 ENRS 100-200-194/30	AGA 300T SUR
ENR	100-200-201	37	FFBE 11 ENRS 100-200-201/37	AGA 300T SUR	FFBE 21 ENRS 100-200-201/37	AGA 300T SUR
ENR	100-200-209	45	FFBE 11 ENRS 100-200-209/45	AGA 300T SUR	FFBE 21 ENRS 100-200-209/45	AGA 300T SUR
ENR	100-200-213	55	FFBE 11 ENRS 100-200-213/55	AGA 300T SUR	FFBE 21 ENRS 100-200-213/55	AGA 300T SUR
ENR	100-250-221	45	FFBE 11 ENRS 100-250-221/45	MATRIX 5-9T/2,2	FFBE 21 ENRS 100-250-221/45	MATRIX 5-9T/2,2
ENR	100-250-232	55	FFBE 11 ENRS 100-250-232/55	MATRIX 5-9T/2,2	FFBE 21 ENRS 100-250-232/55	MATRIX 5-9T/2,2
ENR	100-250-248	75	FFBE 11 ENRS 100-250-248/75	MATRIX 5-9T/2,2	FFBE 21 ENRS 100-250-248/75	MATRIX 5-9T/2,2
ENR	100-250-255	90	FFBE 11 ENRS 100-250-255/90	MATRIX 5-9T/2,2	FFBE 21 ENRS 100-250-255/90	MATRIX 5-9T/2,2

For performance data, see from page 140 to page 145.

FFS11 DIMENSIONS - 3PS ELECTRIC PUMP+JOCKEY

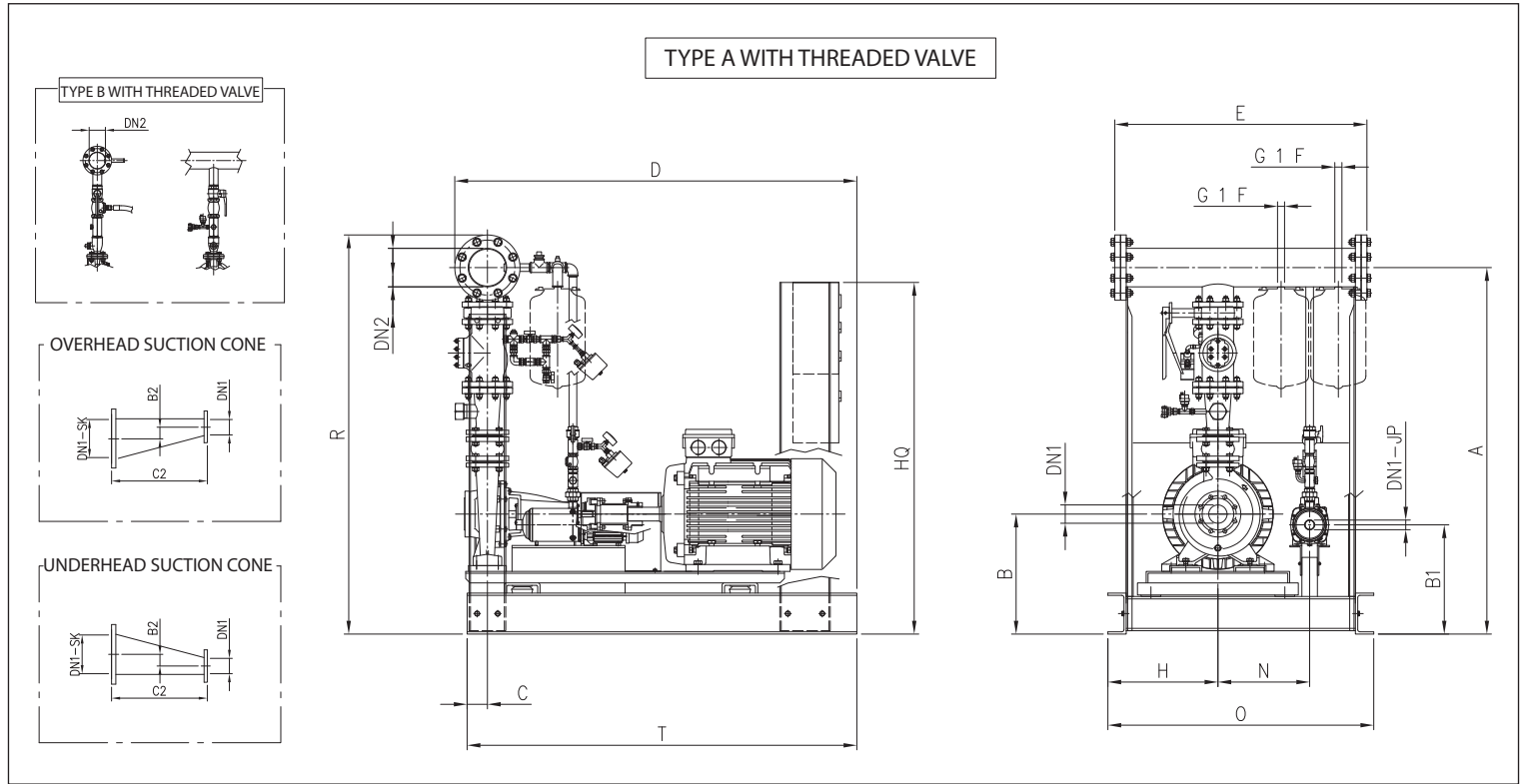


DIMENSIONS TABLE

Model	Jockey pump	Dimensions [mm]																				Weight [kg]					
		A	B	B1	C	C1	D	E	H	DN1	DN1-JP	DN2	R	M	N	O	Q	HQ	S	T	DN1-SK [1]		DN1-SK [2]	B2 [1]	B2 [2]	C2 [1]	C2 [2]
FFS11 3PS 32-160-166/3	AGA 200T	1075	280	315	80	165	1215	1035	330	50	G1½	80	1695	65	450	1040	-	1230	400	1150	65	80	10	15	110	145	239,0
FFS11 3PS 32-200-186/4	AGA 300T SUR	1125	310	315	80	165	1215	1035	330	50	G1½	80	1745	65	450	1040	-	1230	400	1150	65	80	10	15	110	145	256,0
FFS11 3PS 32-200-200/5,5	AGA 300T SUR	1125	310	315	80	165	1215	1035	330	50	G1½	80	1745	65	450	1040	-	1260	400	1150	65	80	10	15	110	145	272,0
FFS11 3PS 32-200-224/7,5	AGA 300T SUR	1125	310	315	80	165	1215	1035	330	50	G1½	80	1745	65	450	1040	-	1260	400	1150	65	80	10	15	110	145	278,0
FFS11 3PS 40-160-166/5,5	AGA 200T	1165	280	315	80	170	1220	1040	330	65	G1½	100	1795	70	450	1040	-	1230	400	1150	100	100	20	20	190	190	274,0
FFS11 3PS 40-200-183/7,5	AGA 300T SUR	1210	310	315	100	170	1220	1040	330	65	G1½	100	1840	70	450	1040	-	1260	400	1150	100	100	20	20	190	190	293,0
FFS11 3PS 40-200-200/9,2	AGA 300T SUR	1210	310	315	100	170	1220	1040	330	65	G1½	100	1840	70	450	1040	-	1360	500	1150	100	100	20	20	190	190	307,0
FFS11 3PS 40-200-224/15	AGA 300T SUR	1210	310	315	100	170	1240	1040	330	65	G1½	100	1840	70	450	1040	20	1410	500	1150	100	100	20	20	190	190	353,0
FFS11 3PS 50-160-166/9,2	AGA 200T	1425	310	315	100	180	1230	1040	330	65	G1½	125	2070	80	450	1040	-	1360	500	1150	125	125	30	30	300	300	335,0
FFS11 3PS 50-200-197/11	AGA 300T SUR	1445	310	315	100	180	1250	1040	330	65	G1½	125	2090	80	450	1040	20	1410	500	1150	125	125	30	30	300	300	366,0
FFS11 3PS 50-200-212/15	AGA 300T SUR	1445	310	315	100	180	1250	1040	330	65	G1½	125	2090	80	450	1040	20	1410	500	1150	125	125	30	30	300	300	383,0
FFS11 3PS 50-200-224/18,5	AGA 300T SUR	1445	310	315	100	180	1295	1040	330	65	G1½	125	2090	80	450	1040	65	1410	500	1150	125	125	30	30	300	300	397,0
FFS11 3PS 65-200-190/15	AGA 300T SUR	1585	330	315	100	230	1340	1040	330	80	G1½	125	2230	130	450	1040	60	1430	500	1150	200	200	65	65	550	550	434,0
FFS11 3PS 65-200-201/18,5	AGA 300T SUR	1585	330	315	100	230	1385	1040	330	80	G1½	125	2230	130	450	1040	105	1530	600	1150	200	200	65	65	550	550	448,0
FFS11 3PS 65-200-208/22	AGA 300T SUR	1585	330	315	100	230	1420	1040	330	80	G1½	125	2230	130	450	1040	140	1530	600	1150	200	200	65	65	550	550	522,0
FFS11 3PS 65-200-212/30	AGA 300T SUR	1615	360	315	100	230	1580	1255	445	80	G1½	125	2260	130	550	1255	-	1630	600	1450	200	200	65	65	550	550	641,0

[1]= Underhead
[2]= Overhead

FFBE11 DIMENSIONS - ENRS ELECTRIC PUMP+JOCKEY

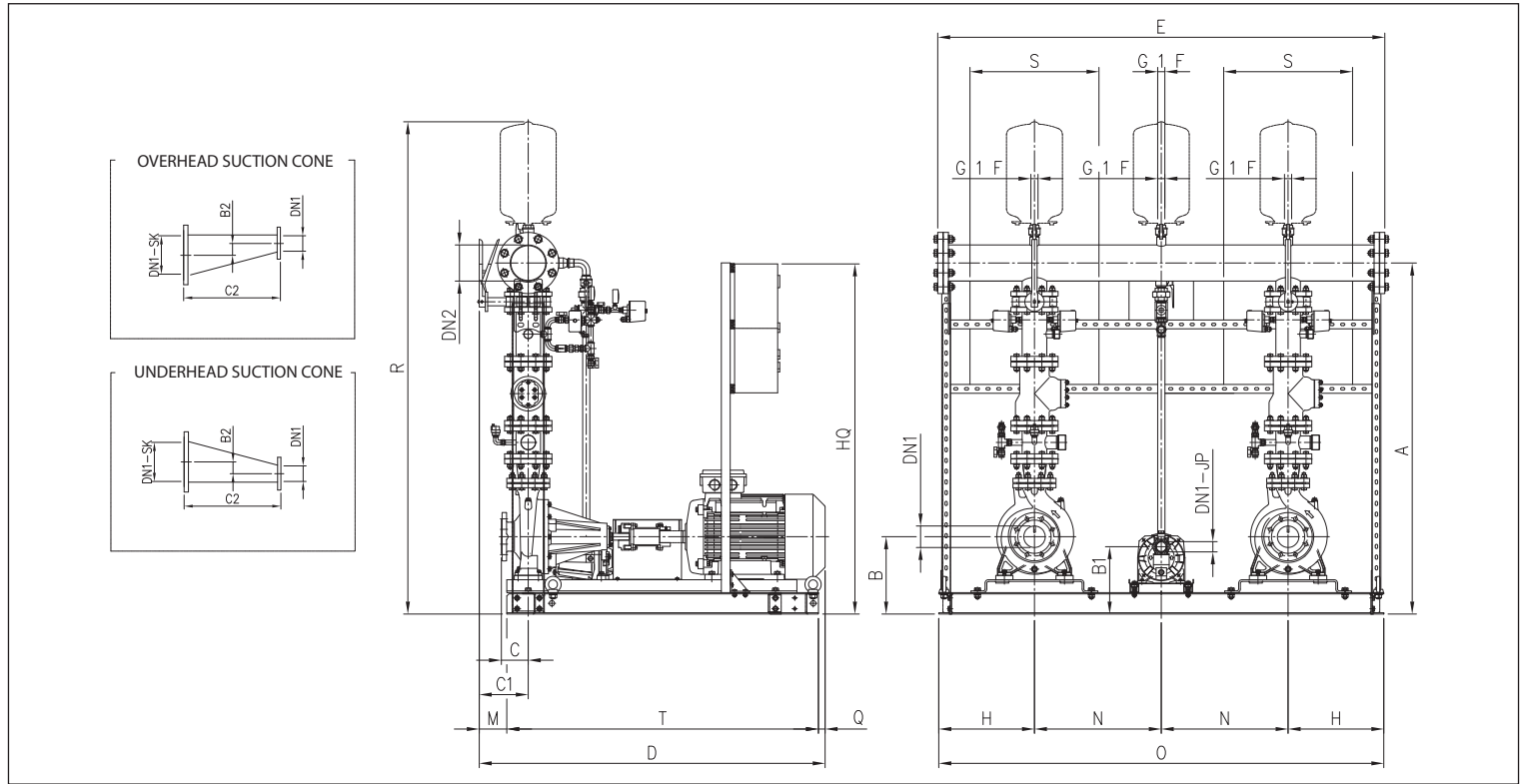


DIMENSIONS TABLE

Model	Jockey pump	Tipo	Dimensions [mm]																			
			A	B	C	D	E	H	N	DN1	DN1-JP	DN2	R	HQ	O	T	DN1-SK [1]	[2]	B2 [1]	[2]	C2 [1]	[2]
FFBE11 ENRS32-250-245/11E+2.2P	MATRIX 5-9T/2.2	B	1022	392	100	1220	754	258	270	50	G1¼	80	1122	1345	750	1220	65	80	10	15	110	145
FFBE11 ENRS32-250-255/15E+2.2P	MATRIX 5-9T/2.2	B	1022	392	100	1220	754	258	270	50	G1¼	80	1122	1345	750	1220	65	80	10	15	110	145
FFBE11 ENRS40-250-220/11E+2.2P	MATRIX 5-9T/2.2	B	1077	392	100	1220	754	258	270	65	G1¼	80	1177	1345	750	1220	100	100	20	20	190	190
FFBE11 ENRS40-250-239/15E+2.2P	MATRIX 5-9T/2.2	B	1077	392	100	1220	754	258	270	65	G1¼	80	1177	1345	750	1220	100	100	20	20	190	190
FFBE11 ENRS40-250-252/18.5E+2.2P	MATRIX 5-9T/2.2	B	1077	392	100	1220	754	258	270	65	G1¼	80	1177	1345	750	1220	100	100	20	20	190	190
FFBE11 ENRS50-250-222/18.5E+2.2P	MATRIX 5-9T/2.2	B	1162	392	100	1230	754	258	270	65	G1¼	100	1272	1345	750	1220	125	125	30	30	300	300
FFBE11 ENRS50-250-235/22E+2.2P	MATRIX 5-9T/2.2	B	1162	392	65	1245	897	315	310	65	G1¼	100	1272	1505	910	1200	125	125	30	30	300	300
FFBE11 ENRS50-250-252/30E+2.2P	MATRIX 5-9T/2.2	B	1207	437	65	1445	997	370	340	65	G1¼	100	1317	1517	1020	1400	125	125	30	30	300	300
FFBE11 ENRS65-250-226/30E+2.2P	MATRIX 5-9T/2.2	A	1669	437	65	1478	1001	370	340	80	G1¼	150	1812	1517	1020	1400	200	200	65	65	550	550
FFBE11 ENRS65-250-237/37E+2.2P	MATRIX 5-9T/2.2	A	1722	490	125	1718	1099	450	430	80	G1¼	150	1865	1535	1160	1700	200	200	65	65	550	550
FFBE11 ENRS65-250-252/45E+2.2P	MATRIX 5-9T/2.2	A	1747	515	125	1718	1099	450	430	80	G1¼	150	1890	1535	1160	1700	200	200	65	65	550	550
FFBE11 ENRS80-200-190/22E+2.2P	AGA 300T SUR	A	1799	417	125	1505	1009	370	340	100	G1½	200	1969	1517	1020	1400	250	250	80	80	720	720
FFBE11 ENRS80-200-199/30E+2.2P	AGA 300T SUR	A	1819	437	125	1505	1009	370	340	100	G1½	200	1989	1517	1020	1400	250	250	80	80	720	720
FFBE11 ENRS80-200-207/37E+2.2P	AGA 300T SUR	A	1872	490	125	1745	1107	450	430	100	G1½	200	2042	1535	1160	1700	250	250	80	80	720	720
FFBE11 ENRS80-200-214/45E+2.2P	AGA 300T SUR	A	1897	515	125	1745	1107	450	430	100	G1½	200	2067	1535	1160	1700	250	250	80	80	720	720
FFBE11 ENRS80-250-222/37E+2.2P	MATRIX 5-9T/2.2	A	1902	490	125	1745	1107	450	430	100	G1¼	200	2072	1535	1160	1700	200	200	52	52	210	210
FFBE11 ENRS80-250-234/45E+2.2P	MATRIX 5-9T/2.2	A	1927	515	125	1745	1107	450	430	100	G1¼	200	2097	1535	1160	1700	200	200	52	52	210	210
FFBE11 ENRS80-250-243/55E+2.2P	MATRIX 5-9T/2.2	A	1952	540	125	1745	1107	450	430	100	G1¼	200	2122	1535	1160	1700	200	200	52	52	210	210
FFBE11 ENRS80-250-255/75E+2.2P	MATRIX 5-9T/2.2	A	1982	570	125	1745	1107	450	430	100	G1¼	200	2152	1535	1160	1700	200	200	52	52	210	210
FFBE11 ENRS100-200-182/22E+2.2P	AGA 300T SUR	A	1749	437	125	1505	1009	370	340	125	G1½	200	1919	1517	1020	1400	250	250	67	67	620	620
FFBE11 ENRS100-200-194/30E+2.2P	AGA 300T SUR	A	1749	437	125	1505	1009	370	340	125	G1½	200	1919	1517	1020	1400	250	250	67	67	620	620
FFBE11 ENRS100-200-201/37E+2.2P	AGA 300T SUR	A	1749	437	125	1505	1107	450	430	125	G1½	200	1919	1535	1160	1700	250	250	67	67	620	620
FFBE11 ENRS100-200-209/45E+2.2P	AGA 300T SUR	A	1827	515	125	1745	1107	450	430	125	G1½	200	1997	1535	1160	1700	250	250	67	67	620	620
FFBE11 ENRS100-200-213/55E+2.2P	AGA 300T SUR	A	1852	540	125	1745	1107	450	430	125	G1½	200	2022	1535	1160	1700	250	250	67	67	620	620
FFBE11 ENRS100-250-221/45E+2.2P	MATRIX 5-9T/2.2	A	1827	515	125	1745	1107	450	430	125	G1¼	200	1997	1535	1160	1700	250	250	67	67	620	620
FFBE11 ENRS100-250-232/55E+2.2P	MATRIX 5-9T/2.2	A	1852	540	125	1745	1107	450	430	125	G1¼	200	2022	1535	1160	1700	250	250	67	67	620	620
FFBE11 ENRS100-250-248/75E+2.2P	MATRIX 5-9T/2.2	A	1882	570	125	1745	1107	450	430	125	G1¼	200	2052	1535	1160	1700	250	250	67	67	620	620
FFBE11 ENRS100-250-255/90E+2.2P	MATRIX 5-9T/2.2	A	1882	570	125	1745	1107	450	430	125	G1¼	200	2052	1535	1160	1700	250	250	67	67	620	620

[1]= Underhead
[2]= Overhead

FFS21 DIMENSIONS - 3PS ELECTRIC PUMP+JOCKEY

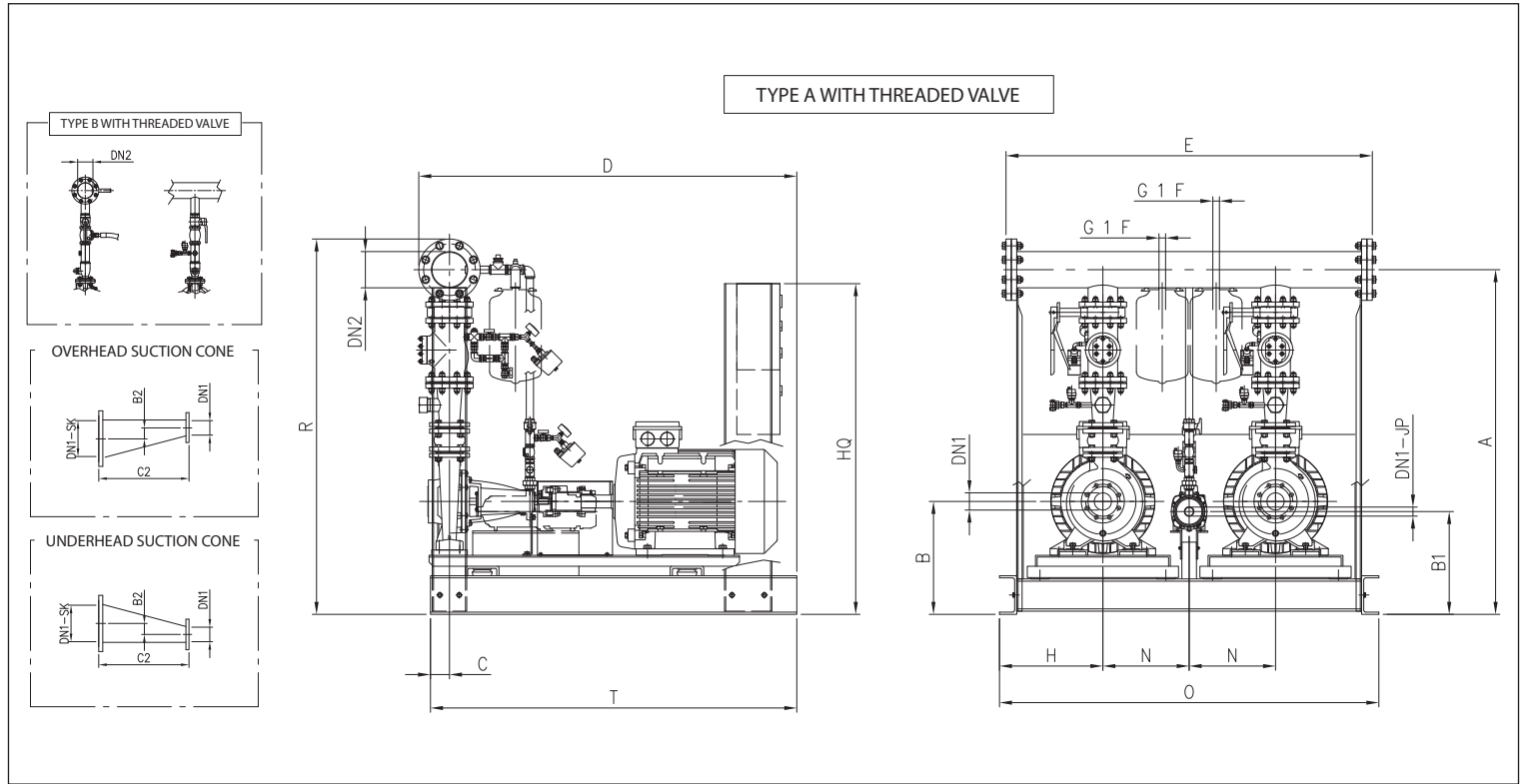


DIMENSIONS TABLE

Model	Jockey pump	Dimensions [mm]																			Weight [kg]						
		A	B	B1	C	C1	D	E	H	DN1	DN1-JP	DN2	R	M	N	O	Q	HQ	S	T		DN1-SK [1] [2]	B2 [1] [2]	C2 [1] [2]			
FFS21 3PS 32-160-166/3	AGA 200T	1090	280	315	80	165	1215	1560	330	50	G1½	100	1720	65	450	1560	-	1230	400	1150	65	80	10	15	110	145	368,0
FFS21 3PS 32-200-186/4	AGA 300T SUR	1135	310	315	80	165	1215	1560	330	50	G1½	100	1765	65	450	1560	-	1230	400	1150	65	80	10	15	110	145	402,0
FFS21 3PS 32-200-200/5,5	AGA 300T SUR	1135	310	315	80	165	1215	1560	330	50	G1½	100	1765	65	450	1560	-	1260	400	1150	65	80	10	15	110	145	435,0
FFS21 3PS 32-200-224/7,5	AGA 300T SUR	1175	310	315	80	165	1215	1560	330	50	G1½	100	1765	65	450	1560	-	1260	400	1150	65	80	10	15	110	145	446,0
FFS21 3PS 40-160-166/5,5	AGA 200T	1225	280	315	80	170	1220	1560	330	65	G1½	125	1820	70	450	1560	-	1230	400	1150	100	100	20	20	190	190	438,0
FFS21 3PS 40-200-183/7,5	AGA 300T SUR	1225	310	315	100	170	1220	1560	330	65	G1½	125	1870	70	450	1560	-	1260	400	1150	100	100	20	20	190	190	475,0
FFS21 3PS 40-200-200/9,2	AGA 300T SUR	1225	310	315	100	170	1220	1560	330	65	G1½	125	1870	70	450	1560	-	1360	500	1150	100	100	20	20	190	190	502,0
FFS21 3PS 40-200-224/15	AGA 300T SUR	1440	310	315	100	170	1240	1560	330	65	G1½	125	1870	70	450	1560	20	1410	500	1150	100	100	20	20	190	190	593,0
FFS21 3PS 50-160-166/9,2	AGA 200T	1440	310	315	100	180	1230	1570	330	65	G1½	150	2100	80	450	1560	-	1360	500	1150	125	125	30	30	300	300	543,0
FFS21 3PS 50-200-197/11	AGA 300T SUR	1460	310	315	100	180	1250	1570	330	65	G1½	150	2120	80	450	1560	20	1410	500	1150	125	125	30	30	300	300	604,0
FFS21 3PS 50-200-212/15	AGA 300T SUR	1460	310	315	100	180	1250	1570	330	65	G1½	150	2120	80	450	1560	20	1410	500	1150	125	125	30	30	300	300	638,0
FFS21 3PS 50-200-224/18,5	AGA 300T SUR	1460	310	315	100	180	1295	1570	330	65	G1½	150	2120	80	450	1560	65	1410	500	1150	125	125	30	30	300	300	666,0
FFS21 3PS 65-200-190/15	AGA 300T SUR	1600	330	315	100	230	1340	1570	330	80	G1½	150	2260	130	450	1560	60	1430	500	1150	200	200	65	65	550	550	745,0
FFS21 3PS 65-200-201/18,5	AGA 300T SUR	1600	330	315	100	230	1385	1570	330	80	G1½	150	2260	130	450	1560	105	1530	600	1150	200	200	65	65	550	550	775,0
FFS21 3PS 65-200-208/22	AGA 300T SUR	1600	330	315	100	230	1420	1570	330	80	G1½	150	2260	130	450	1560	140	1530	600	1150	200	200	65	65	550	550	921,0
FFS21 3PS 65-200-212/30	AGA 300T SUR	1630	360	315	100	230	1580	2080	445	80	G1½	150	2290	130	590	2070	-	1630	600	1450	200	200	65	65	550	550	1152,0

[1]= Underhead
[2]= Overhead

FFBE21 DIMENSIONS - ENRS ELECTRIC PUMP+JOCKEY



DIMENSIONS TABLE

Model	Jockey pump	Tipo	Dimensions [mm]																			
			A	B	C	D	E	H	N	DN1	DN1-JP	DN2	R	HQ	O	T	DN1-SK [1]	[2]	B2 [1]	[2]	C2 [1]	[2]
FFBE21 ENRS32-250-245/11E+2.2P	MATRIX 5-9T/2.2	B	1022	392	100	1220	1050	255	270	50	G1¼	80	1122	1345	1050	1220	65	80	10	15	110	145
FFBE21 ENRS32-250-255/15E+2.2P	MATRIX 5-9T/2.2	B	1022	392	100	1220	1050	255	270	50	G1¼	80	1122	1345	1050	1220	65	80	10	15	110	145
FFBE21 ENRS40-250-220/11E+2.2P	MATRIX 5-9T/2.2	B	1077	392	100	1220	1050	255	270	65	G1¼	80	1177	1345	1050	1220	100	100	20	20	190	190
FFBE21 ENRS40-250-239/15E+2.2P	MATRIX 5-9T/2.2	B	1077	392	100	1220	1050	255	270	65	G1¼	80	1177	1345	1050	1220	100	100	20	20	190	190
FFBE21 ENRS40-250-252/18.5E+2.2P	MATRIX 5-9T/2.2	B	1077	392	100	1220	1050	255	270	65	G1¼	80	1177	1345	1050	1220	100	100	20	20	190	190
FFBE21 ENRS50-250-222/18.5E+2.2P	MATRIX 5-9T/2.2	B	1162	392	100	1230	1050	255	270	65	G1¼	100	1272	1345	1050	1220	125	125	30	30	300	300
FFBE21 ENRS50-250-235/22E+2.2P	MATRIX 5-9T/2.2	B	1162	385	65	1245	1237	315	310	65	G1¼	100	1272	1505	1250	1200	125	125	30	30	300	300
FFBE21 ENRS50-250-252/30E+2.2P	MATRIX 5-9T/2.2	B	1207	437	65	1445	1402	370	340	65	G1¼	100	1317	1517	1420	1400	125	125	30	30	300	300
FFBE21 ENRS65-250-226/30E+2.2P	MATRIX 5-9T/2.2	A	1669	437	65	1478	1406	370	340	80	G1¼	150	1812	1517	1420	1400	200	200	65	65	550	550
FFBE21 ENRS65-250-237/37E+2.2P	MATRIX 5-9T/2.2	A	1722	490	125	1718	1698	450	430	80	G1¼	150	1865	1535	1760	1700	200	200	65	65	550	550
FFBE21 ENRS65-250-252/45E+2.2P	MATRIX 5-9T/2.2	A	1747	515	125	1718	1698	450	430	80	G1¼	150	1890	1535	1760	1700	200	200	65	65	550	550
FFBE21 ENRS80-200-190/22E+2.2P	AGA 300T SUR	A	1799	417	125	1505	1414	370	340	100	G1½	200	1969	1517	1420	1400	250	250	80	80	720	720
FFBE21 ENRS80-200-199/30E+2.2P	AGA 300T SUR	A	1819	437	125	1505	1414	370	340	100	G1½	200	1989	1517	1420	1400	250	250	80	80	720	720
FFBE21 ENRS80-200-207/37E+2.2P	AGA 300T SUR	A	1872	490	125	1745	1706	450	430	100	G1½	200	2042	1535	1760	1700	250	250	80	80	720	720
FFBE21 ENRS80-200-214/45E+2.2P	AGA 300T SUR	A	1897	515	125	1745	1706	450	430	100	G1½	200	2067	1535	1760	1700	250	250	80	80	720	720
FFBE21 ENRS80-250-222/37E+2.2P	MATRIX 5-9T/2.2	A	1902	490	125	1745	1706	450	430	100	G1¼	200	2072	1535	1760	1700	200	200	52	52	210	210
FFBE21 ENRS80-250-234/45E+2.2P	MATRIX 5-9T/2.2	A	1927	515	125	1745	1706	450	430	100	G1¼	200	2097	1535	1760	1700	200	200	52	52	210	210
FFBE21 ENRS80-250-243/55E+2.2P	MATRIX 5-9T/2.2	A	1952	540	125	1745	1706	450	430	100	G1¼	200	2122	1535	1760	1700	200	200	52	52	210	210
FFBE21 ENRS80-250-255/75E+2.2P	MATRIX 5-9T/2.2	A	1982	570	125	1745	1706	450	430	100	G1¼	200	2152	1535	1760	1700	200	200	52	52	210	210
FFBE21 ENRS100-200-182/22E+2.2P	AGA 300T SUR	A	1749	437	125	1505	1414	370	340	125	G1½	200	1919	1517	1420	1400	250	250	67	67	620	620
FFBE21 ENRS100-200-194/30E+2.2P	AGA 300T SUR	A	1749	437	125	1505	1414	370	340	125	G1½	200	1919	1517	1420	1400	250	250	67	67	620	620
FFBE21 ENRS100-200-201/37E+2.2P	AGA 300T SUR	A	1749	437	125	1505	1706	450	430	125	G1½	200	1919	1535	1760	1700	250	250	67	67	620	620
FFBE21 ENRS100-200-209/45E+2.2P	AGA 300T SUR	A	1827	515	125	1745	1706	450	430	125	G1½	200	1997	1535	1760	1700	250	250	67	67	620	620
FFBE21 ENRS100-200-213/55E+2.2P	AGA 300T SUR	A	1852	540	125	1745	1706	450	430	125	G1½	200	2022	1535	1760	1700	250	250	67	67	620	620
FFBE21 ENRS100-250-221/45E+2.2P	MATRIX 5-9T/2.2	A	1827	515	125	1745	1706	450	430	125	G1¼	200	1997	1535	1760	1700	250	250	67	67	620	620
FFBE21 ENRS100-250-232/55E+2.2P	MATRIX 5-9T/2.2	A	1852	540	125	1745	1706	450	430	125	G1¼	200	2022	1535	1760	1700	250	250	67	67	620	620
FFBE21 ENRS100-250-248/75E+2.2P	MATRIX 5-9T/2.2	A	1882	570	125	1745	1706	450	430	125	G1¼	200	2052	1535	1760	1700	250	250	67	67	620	620
FFBE21 ENRS100-250-255/90E+2.2P	MATRIX 5-9T/2.2	A	1882	570	125	1745	1706	450	430	125	G1¼	200	2052	1535	1760	1700	250	250	67	67	620	620

[1]= Underhead
[2]= Overhead

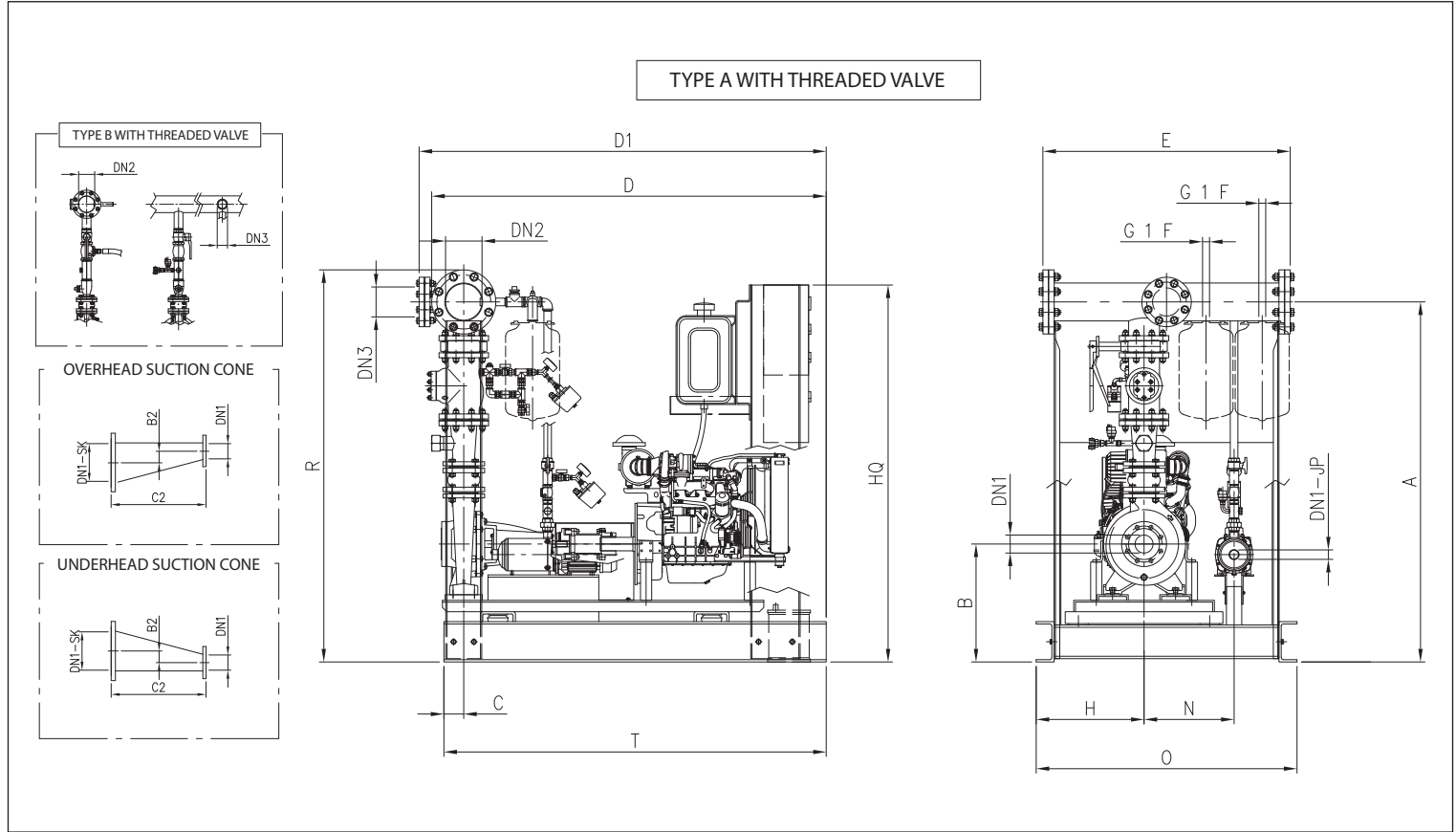
FIRE-FIGHTING UNITS FFBD

BASE-JOINT DIESEL MODELS TABLE

Pump	Size impeller diameter	Diesel engine [kW]	FFBD11	Jockey pump	FFBD21	Jockey pump
3PF	32-200-186	4,6	FFBD11 3PS 32-200-186/4,6	COMPACT A/10	FFBD21 3PS 32-200-186/4,6	COMPACT A/10
3PF	32-200-200	6,2	FFBD11 3PS 32-200-200/6,2	COMPACT A/12	FFBD21 3PS 32-200-200/6,2	COMPACT A/12
3PF	32-200-224	7,8	FFBD11 3PS 32-200-224/7,8	COMPACT A/10	FFBD21 3PS 32-200-224/7,8	COMPACT A/10
ENR	32-250-255	14,9	FFBD11 ENRS 32-250-255/14,9	MATRIX 5-9T/2.2	FFBD21 ENRS 32-250-255/14,9	MATRIX 5-9T/2.2
3PF	40-160-166	6,2	FFBD11 3PS 40-160-166/6,2	COMPACT A/10	FFBD21 3PS 40-160-166/6,2	COMPACT A/10
3PF	40-200-183	7,8	FFBD11 3PS 40-200-183/7,8	COMPACT A/10	FFBD21 3PS 40-200-183/7,8	COMPACT A/10
3PF	40-200-224	14,9	FFBD11 3PS 40-200-224/14,9	COMPACT A/10	FFBD21 3PS 40-200-224/14,9	COMPACT A/10
ENR	40-250-239	14,9	FFBD11 ENRS 40-250-239/14,9	MATRIX 5-9T/2.2	FFBD21 ENRS 40-250-239/14,9	MATRIX 5-9T/2.2
ENR	40-250-252	18,8	FFBD11 ENRS 40-250-252/18,8	MATRIX 5-9T/2.2	FFBD21 ENRS 40-250-252/18,8	MATRIX 5-9T/2.2
3PF	50-160-154	7,8	FFBD11 3PS 50-160-154/7,8	COMPACT A/10	FFBD21 3PS 50-160-154/7,8	COMPACT A/10
3PF	50-200-212	14,9	FFBD11 3PS 50-200-212/14,9	COMPACT A/10	FFBD21 3PS 50-200-212/14,9	COMPACT A/10
3PF	50-200-224	18,8	FFBD11 3PS 50-200-224/18,8	COMPACT A/10	FFBD21 3PS 50-200-224/18,8	COMPACT A/10
ENR	50-250-222	18,8	FFBD11 ENRS 50-250-222/18,8	MATRIX 5-9T/2.2	FFBD21 ENRS 50-250-222/18,8	MATRIX 5-9T/2.2
ENR	50-250-252	28,6	FFBD11 ENRS 50-250-252/28,6	MATRIX 5-9T/2.2	FFBD21 ENRS 50-250-252/28,6	MATRIX 5-9T/2.2
3PF	65-200-190	14,9	FFBD11 3PS 65-200-190/14,9	COMPACT A/12	FFBD21 3PS 65-200-190/14,9	COMPACT A/12
3PF	65-200-212	28,6	FFBD11 3PS 65-200-212/28,6	COMPACT A/10	FFBD21 3PS 65-200-212/28,6	COMPACT A/10
ENR	65-250-226	28,6	FFBD11 ENRS 65-250-226/28,6	MATRIX 5-9T/2.2	FFBD21 ENRS 65-250-226/28,6	MATRIX 5-9T/2.2
ENR	65-250-237	37	FFBD11 ENRS 65-250-237/37	MATRIX 5-9T/2.2	FFBD21 ENRS 65-250-237/37	MATRIX 5-9T/2.2
ENR	65-250-252	53	FFBD11 ENRS 65-250-252/53	MATRIX 5-9T/2.2	FFBD21 ENRS 65-250-252/53	MATRIX 5-9T/2.2
ENR	80-200-199	28,6	FFBD11 ENRS 80-200-199/28,6	AGA 300T SUR	FFBD21 ENRS 80-200-199/28,6	AGA 300T SUR
ENR	80-200-207	37	FFBD11 ENRS 80-200-207/37	AGA 300T SUR	FFBD21 ENRS 80-200-207/37	AGA 300T SUR
ENR	80-200-214	53	FFBD11 ENRS 80-200-214/53	AGA 300T SUR	FFBD21 ENRS 80-200-214/53	AGA 300T SUR
ENR	80-250-222	37	FFBD11 ENRS 80-250-222/37	MATRIX 5-9T/2.2	FFBD21 ENRS 80-250-222/37	MATRIX 5-9T/2.2
ENR	80-250-243	53	FFBD11 ENRS 80-250-243/53	MATRIX 5-9T/2.2	FFBD21 ENRS 80-250-243/53	MATRIX 5-9T/2.2
ENR	80-250-255	68	FFBD11 ENRS 80-250-255/68	MATRIX 5-9T/2.2	FFBD21 ENRS 80-250-255/68	MATRIX 5-9T/2.2
ENR	100-200-190	28,6	FFBD11 ENRS 100-200-190/28,6	AGA 300T SUR	FFBD21 ENRS 100-200-190/28,6	AGA 300T SUR
ENR	100-200-197	37	FFBD11 ENRS 100-200-197/37	AGA 300T SUR	FFBD21 ENRS 100-200-197/37	AGA 300T SUR
ENR	100-200-213	53	FFBD11 ENRS 100-200-213/53	AGA 300T SUR	FFBD21 ENRS 100-200-213/53	AGA 300T SUR
ENR	100-250-225	53	FFBD11 ENRS 100-250-225/53	MATRIX 5-9T/2.2	FFBD21 ENRS 100-250-225/53	MATRIX 5-9T/2.2
ENR	100-250-242	68	FFBD11 ENRS 100-250-242/68	MATRIX 5-9T/2.2	FFBD21 ENRS 100-250-242/68	MATRIX 5-9T/2.2
ENR	100-250-255	103	FFBD11 ENRS 100-250-255/103	MATRIX 5-9T/2.2	FFBD21 ENRS 100-250-255/103	MATRIX 5-9T/2.2

For performance data, see from page 140 to page 145.

FFBD11 DIMENSIONS - 3PFS-ENRS DIESEL PUMP+JOCKEY

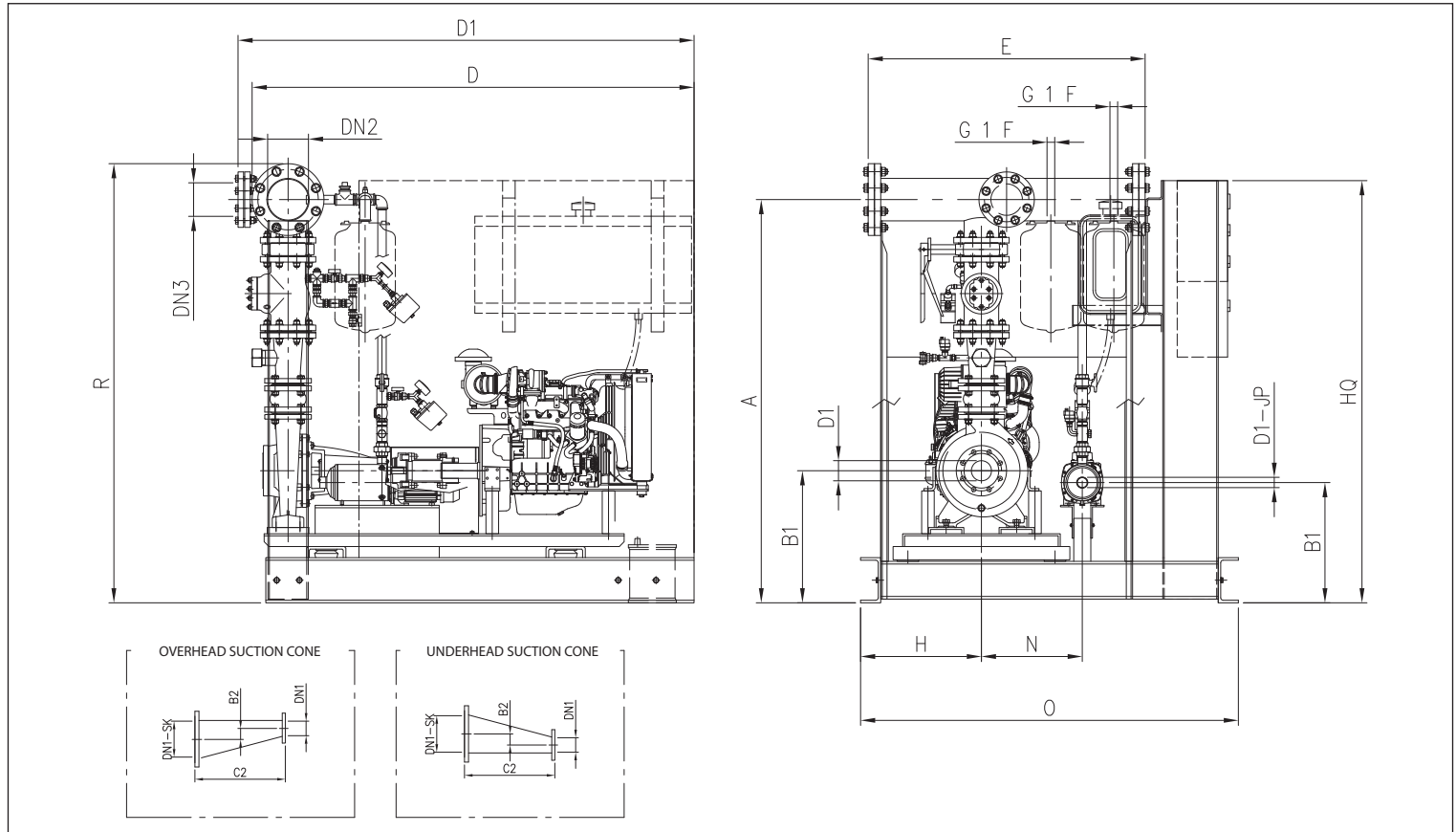


DIMENSIONS TABLE

Model	Jockey pump	Dimensions [mm]																							
		Tipo	A	B	B1	C	D	D1	E	H	N	DN1	DN1-JP	DN2	DN3	R	HQ	O	T	DN1-SK [1] [2]	B2 [1] [2]	C2 [1] [2]			
FFBD11 3PS32-160-166/4.6D+0.75P	COMPACT A/10	B	1022	362	~250	65	1235	1215	897	315	310	50	G1	80	G2	1122	1505	910	1200	65	80	10	15	110	145
FFBD11 3PS32-200-186/4.6D+0.75P	COMPACT A/10	B	1045	365	~250	65	1235	1215	897	315	310	50	G1	80	G2	1145	1505	910	1200	65	80	10	15	110	145
FFBD11 3PS32-200-200/6.2D+0.9P	COMPACT A/12	B	1045	365	~250	65	1235	1215	897	315	310	50	G1	80	G2	1145	1505	910	1200	65	80	10	15	110	145
FFBD11 3PS32-200-224/7.8D+1.1P	COMPACT A/15	B	1045	365	~250	65	1235	1215	897	315	310	50	G1	80	G2	1145	1505	910	1200	65	80	10	15	110	145
FFBD11 ENRS32-250-255/14.9D+2.2P	MATRIX 5-9T/2.2	B	1115	390	~250	65	1235	1215	897	315	310	50	G1¼	80	G2	1215	1505	910	1200	65	80	10	15	110	145
FFBD11 3PS40-160-166/6.2D+0.75P	COMPACT A/10	B	1080	365	~250	65	1235	1215	897	315	310	65	G1	80	G2	1180	1505	910	1200	100	100	20	20	190	190
FFBD11 3PS40-200-183/7.8D+0.75P	COMPACT A/10	B	1085	350	~250	65	1235	1215	897	315	310	65	G1	80	G2	1185	1505	910	1200	100	100	20	20	190	190
FFBD11 3PS40-200-224/14.9D+1.1P	COMPACT A/15	B	1125	390	~250	65	1235	1215	897	315	310	65	G1	80	G2	1225	1505	910	1200	100	100	20	20	190	190
FFBD11 ENRS40-250-239/14.9D+2.2P	MATRIX 5-9T/2.2	B	1171	391	~250	65	1235	1215	897	315	310	65	G1¼	80	G2	1177	1505	910	1200	100	100	20	20	190	190
FFBD11 ENRS40-250-252/18.8D+2.2P	MATRIX 5-9T/2.2	B	1231	451	~260	65	1435	1415	997	370	340	65	G1¼	80	G2	1177	1517	1020	1400	100	100	20	20	190	190
FFBD11 3PS50-160-154/7.8D+0.75P	COMPACT A/10	B	1195	365	~250	65	1245	1233	901	315	310	65	G1	100	G2½	1305	1505	910	1200	125	125	30	30	300	300
FFBD11 3PS50-200-212/14.9D+0.9P	COMPACT A/12	B	1272	422	~260	65	1445	1433	1001	370	340	65	G1	100	G2½	1382	1517	1020	1400	125	125	30	30	300	300
FFBD11 3PS50-200-224/18.8D+1.1P	COMPACT A/15	B	1267	417	~260	65	1445	1433	1001	370	340	65	G1	100	G2½	1377	1517	1020	1400	125	125	30	30	300	300
FFBD11 ENRS50-250-222/18.8D+2.2P	MATRIX 5-9T/2.2	B	1292	417	~260	65	1245	1233	1001	370	340	65	G1¼	100	G2½	1402	1517	1020	1400	125	125	30	30	300	300
FFBD11 ENRS50-250-252/28.6D+2.2P	MATRIX 5-9T/2.2	A	1445	504	~390	125	1700	1724	1099	450	430	65	G1¼	125	DN65	1580	1535	1160	1700	125	125	30	30	300	300
FFBD11 3PS65-200-190/14.9D+0.9P	COMPACT A/12	A	1558	422	~260	65	1460	1486	1001	370	340	80	G1	125	DN80	1683	1517	1020	1400	200	200	65	65	550	550
FFBD11 3PS65-200-212/28.6D+1.1P	COMPACT A/15	A	1640	504	~390	125	1700	1726	1099	450	430	80	G1	125	DN80	1765	1535	1160	1700	200	200	65	65	550	550
FFBD11 ENRS65-250-226/28.6D+2.2P	MATRIX 5-9T/2.2	A	1736	504	~390	125	1718	1739	1099	450	430	80	G1¼	150	DN80	1879	1830	1160	1700	200	200	30	30	550	550
FFBD11 ENRS80-200-199/28.6D+2.2P	AGA 300T SUR	A	1886	504	~390	125	1745	1767	1107	450	430	100	G1½	200	DN100	2056	1830	1160	1700	250	250	80	80	720	720
FFBD11 ENRS100-200-190/28.6D+2.2P	AGA 300T SUR	A	1816	504	~390	125	1745	1769	1107	450	430	125	G1½	200	DN125	1986	1830	1160	1700	250	250	67	67	620	620

[1]= Underhead
[2]= Overhead

FFBD11 DIMENSIONS - ENRS DIESEL PUMP+JOCKEY

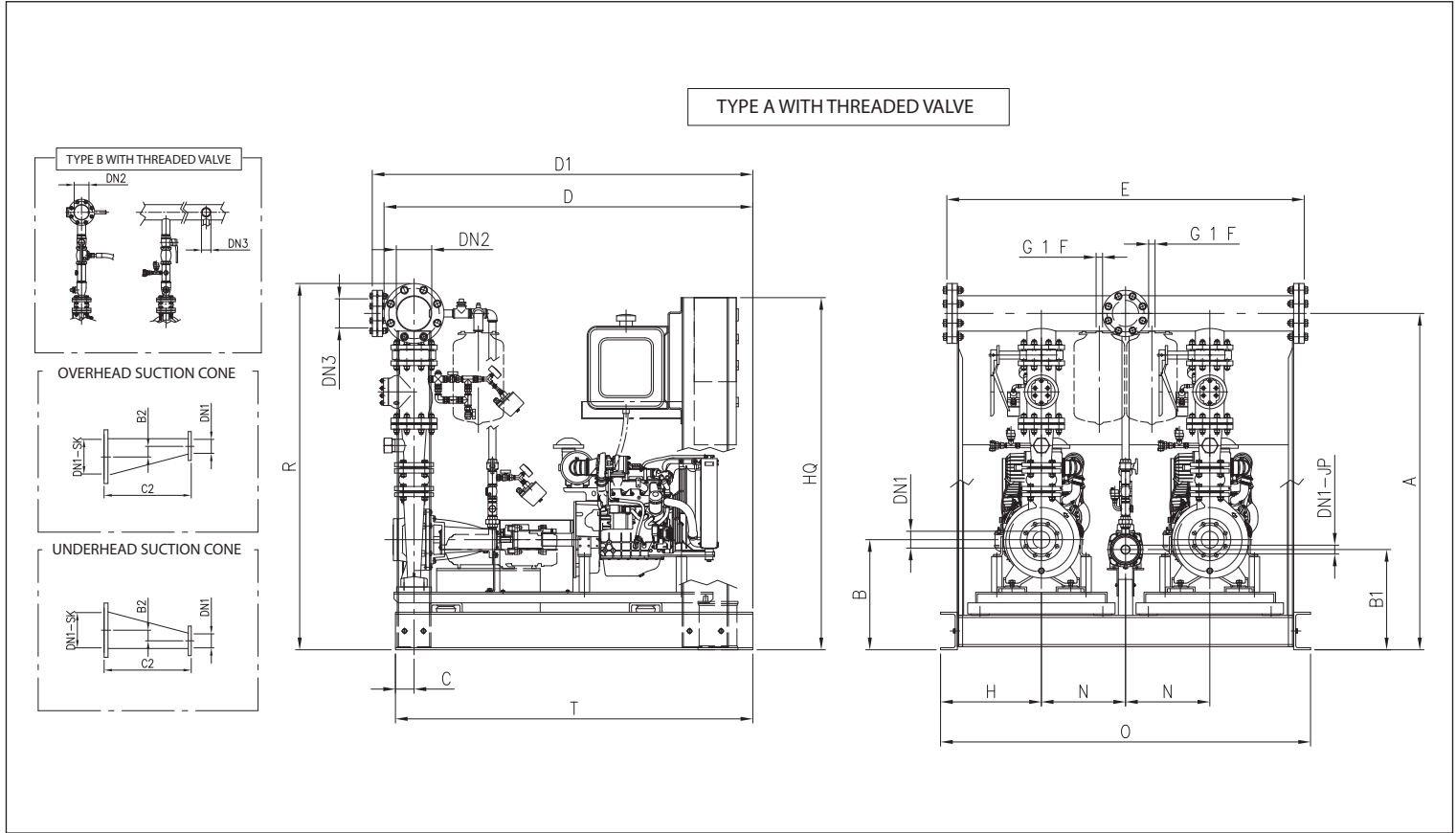


DIMENSIONS TABLE

Model	Jockey pump	Dimensions [mm]																						
		A	B	B1	C	D	D1	E	H	N	DN1	DN1-JP	DN2	DN3	R	HQ	O	T	DN1-SK [1] [2]	B2 [1] [2]	C2 [1] [2]			
FFBD11 ENRS65-250-237/37D+2.2P	MATRIX 5-9T/2.2	1752	520	~390	125	1718	1739	1698	450	430	80	G1¼	150	DN80	1895	1830	1760	1700	200	200	30	30	550	550
FFBD11 ENRS65-250-252/53D+2.2P	MATRIX 5-9T/2.2	1752	520	~390	125	1718	1739	1698	450	430	80	G1¼	150	DN80	1895	1830	1760	1700	200	200	30	30	550	550
FFBD11 ENRS80-200-207/37D+2.2P	AGA 300T SUR	1902	520	~390	125	1745	1767	1706	450	430	100	G1½	200	DN100	2072	1830	1760	1700	250	250	80	80	720	720
FFBD11 ENRS80-200-214/53D+2.2P	AGA 300T SUR	1902	520	~390	125	1745	1767	1706	450	430	100	G1½	200	DN100	2072	1830	1760	1700	250	250	80	80	720	720
FFBD11 ENRS80-250-222/37D+2.2P	MATRIX 5-9T/2.2	1932	520	~390	125	1745	1767	1706	450	430	100	G1¼	200	DN100	2102	1830	1760	1700	200	200	52	52	210	210
FFBD11 ENRS80-250-243/53D+2.2P	MATRIX 5-9T/2.2	1932	520	~390	125	1745	1767	1706	450	430	100	G1¼	200	DN100	2102	1830	1760	1700	200	200	52	52	210	210
FFBD11 ENRS80-250-255/68D+2.2P	MATRIX 5-9T/2.2	1932	540	~390	125	1745	1767	1706	450	430	100	G1¼	200	DN100	2122	1830	1760	1700	200	200	52	52	210	210
FFBD11 ENRS100-200-197/37D+2.2P	AGA 300T SUR	1832	520	~390	125	1745	1769	1706	450	430	125	G1½	200	DN125	2002	1830	1760	1700	250	250	67	67	620	620
FFBD11 ENRS100-200-213/53D+2.2P	AGA 300T SUR	1832	520	~390	125	1745	1769	1706	450	430	125	G1½	200	DN125	2002	1830	1760	1700	250	250	67	67	620	620
FFBD11 ENRS100-250-225/53D+2.2P	MATRIX 5-9T/2.2	1832	520	~390	125	1745	1769	1706	450	430	125	G1¼	200	DN125	2002	1830	1760	1700	250	250	67	67	620	620
FFBD11 ENRS100-250-242/68D+2.2P	MATRIX 5-9T/2.2	1852	540	~390	125	1745	1769	1706	450	430	125	G1¼	200	DN125	2022	1830	1760	1700	250	250	67	67	620	620
FFBD11 ENRS100-250-255/103D+2.2P	MATRIX 5-9T/2.2	1912	600	~390	125	2045	2069	1709	450	430	125	G1¼	200	DN125	2082	1830	1760	2000	250	250	67	67	620	620

[1]= Underhead
[2]= Overhead

FFBD21 DIMENSIONS - 3PFS-ENRS DIESEL PUMPS+JOCKEY

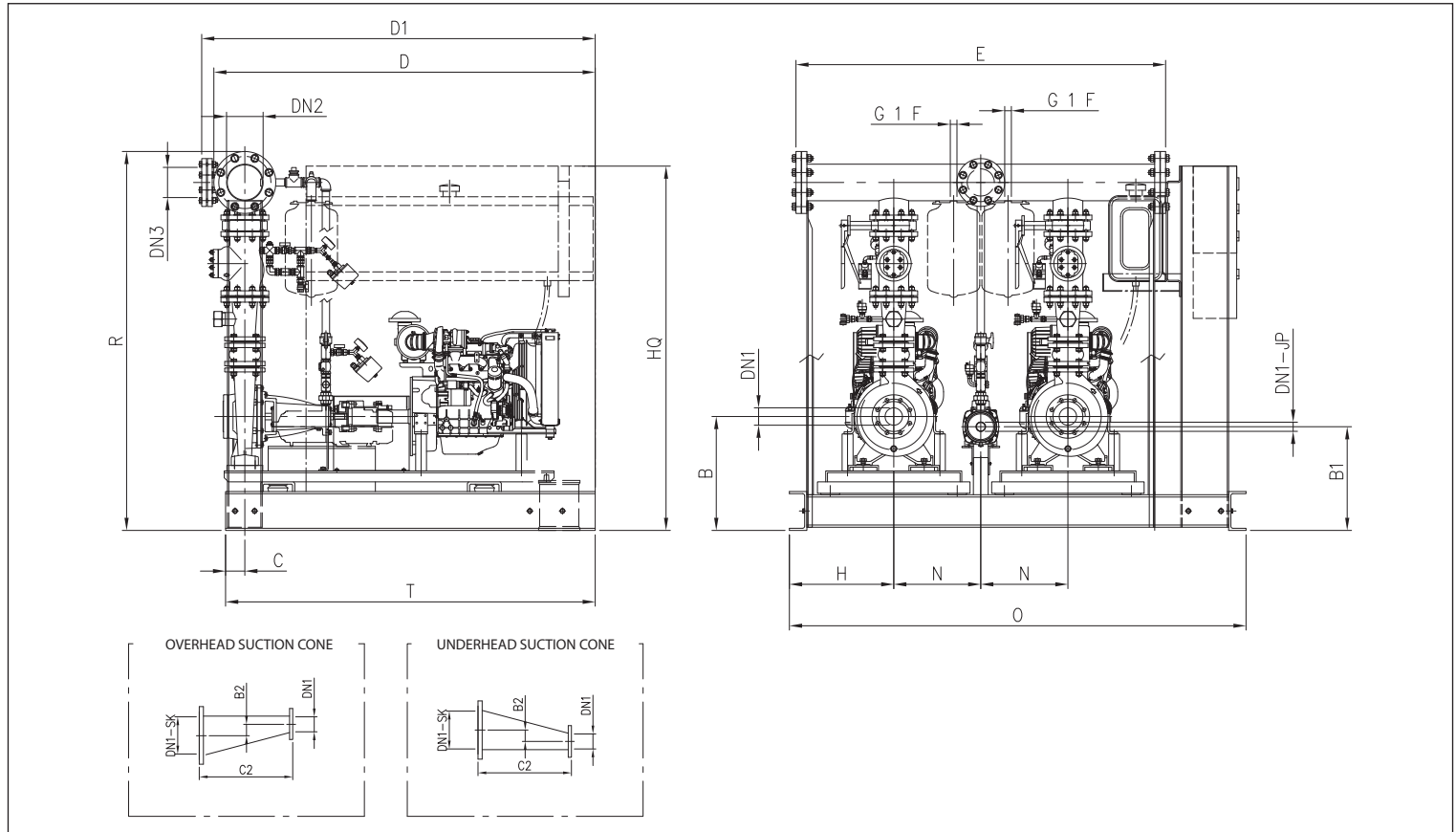


DIMENSIONS TABLE

Model	Jockey pump	Dimensions [mm]																							
		Tipo	A	B	B1	C	D	D1	E	H	N	DN1	DN1-JP	DN2	DN3	R	HQ	O	T	DN1-SK [1] [2]	B2 [1] [2]	C2 [1] [2]			
FFBD21 3PS32-160-166/4.6D+0.75P	COMPACT A/10	B	1022	362	~250	65	1235	1215	1237	315	310	50	G1	80	G2	1122	1505	1250	1200	65	80	10	15	110	145
FFBD21 3PS32-200-186/4.6D+0.75P	COMPACT A/10	B	1045	365	~250	65	1235	1215	1237	315	310	50	G1	80	G2	1145	1505	1250	1200	65	80	10	15	110	145
FFBD21 3PS32-200-200/6.2D+0.9P	COMPACT A/12	B	1045	365	~250	65	1235	1215	1237	315	310	50	G1	80	G2	1145	1505	1250	1200	65	80	10	15	110	145
FFBD21 3PS32-200-224/7.8D+1.1P	COMPACT A/15	B	1045	365	~250	65	1235	1215	1237	315	310	50	G1	80	G2	1145	1505	1250	1200	65	80	10	15	110	145
FFBD21 ENRS32-250-255/14.9D+2.2P	MATRIX 5-9T/2.2	B	1115	390	~250	65	1235	1215	1237	315	310	50	G1¼	80	G2	1215	1505	1250	1200	65	80	10	15	110	145
FFBD21 3PS40-160-166/6.2D+0.75P	COMPACT A/10	B	1080	362	~250	65	1235	1215	1237	315	310	65	G1	80	G2	1180	1505	1250	1200	100	100	20	20	190	190
FFBD21 3PS40-200-183/7.8D+0.75P	COMPACT A/10	B	1085	350	~250	65	1235	1215	1237	315	310	65	G1	80	G2	1185	1505	1250	1200	100	100	20	20	190	190
FFBD21 3PS40-200-224/14.9D+1.1P	COMPACT A/15	B	1125	390	~250	65	1235	1215	1237	315	310	65	G1	80	G2	1225	1505	1250	1200	100	100	20	20	190	190
FFBD21 ENRS40-250-239/14.9D+2.2P	MATRIX 5-9T/2.2	B	1171	391	~250	65	1235	1215	1237	315	310	65	G1¼	80	G2	1271	1505	1250	1200	100	100	20	20	190	190
FFBD21 ENRS40-250-252/18.8D+2.2P	MATRIX 5-9T/2.2	B	1231	451	~260	65	1435	1415	1402	370	340	65	G1¼	80	G2	1331	1517	1420	1400	100	100	20	20	190	190
FFBD21 3PS50-160-154/7.8D+0.75P	COMPACT A/10	B	1195	365	~250	65	1245	1233	1301	315	310	65	G1	100	G2½	1305	1505	1250	1200	125	125	30	30	300	300
FFBD21 3PS50-200-212/14.9D+0.9P	COMPACT A/12	B	1272	422	~260	65	1445	1433	1406	370	340	65	G1	100	G2½	1382	1517	1420	1400	125	125	30	30	300	300
FFBD21 3PS50-200-224/18.8D+1.1P	COMPACT A/15	B	1267	417	~260	65	1445	1433	1406	370	340	65	G1	100	G2½	1377	1517	1420	1400	125	125	30	30	300	300
FFBD21 ENRS50-250-222/18.8D+2.2P	MATRIX 5-9T/2.2	B	1292	417	~260	65	1245	1233	1406	370	340	65	G1¼	100	G2½	1402	1517	1420	1400	125	125	30	30	300	300
FFBD21 ENRS50-250-252/28.6D+2.2P	MATRIX 5-9T/2.2	A	1445	504	~390	125	1700	1724	1698	450	430	65	G1¼	125	DN65	1580	1535	1760	1700	125	125	30	30	300	300
FFBD21 3PS65-200-190/14.9D+0.9P	COMPACT A/12	A	1558	422	~260	65	1460	1486	1406	370	340	80	G1	125	DN80	1683	1517	1420	1400	200	200	65	65	550	550
FFBD21 3PS65-200-212/28.6D+1.1P	COMPACT A/15	A	1640	504	~390	125	1700	1726	1698	450	430	80	G1	125	DN80	1765	1535	1760	1700	200	200	65	65	550	550
FFBD21 ENRS65-250-226/28.6D+2.2P	MATRIX 5-9T/2.2	A	1736	504	~390	125	1718	1739	1698	450	430	80	G1¼	150	DN80	1879	1830	1760	1700	200	200	30	30	550	550
FFBD21 ENRS80-200-199/28.6D+2.2P	AGA 300T SUR	A	1886	504	~390	125	1745	1767	1706	450	430	100	G1½	200	DN100	2056	1830	1760	1700	250	250	80	80	720	720
FFBD21 ENRS100-200-190/28.6D+2.2P	AGA 300T SUR	A	1816	504	~390	125	1745	1769	1706	450	430	125	G1½	200	DN125	1986	1830	1760	1700	250	250	67	67	620	620

[1]= Underhead
[2]= Overhead

FFBD21 DIMENSIONS - ENRS DIESEL PUMPS+JOCKEY



DIMENSIONS TABLE

Model	Jockey pump	Dimensions [mm]																						
		A	B	B1	C	D	D1	E	H	N	DN1	DN1-JP	DN2	DN3	R	HQ	O	T	DN1-SK [1] [2]	B2 [1] [2]	C2 [1] [2]			
FFBD21 ENRS65-250-237/37D+2.2P	MATRIX 5-9T/2.2	1752	550	~390	125	1718	1739	2038	450	430	80	G1¼	150	DN80	1925	1830	2100	1700	200	200	30	30	550	550
FFBD21 ENRS65-250-252/53D+2.2P	MATRIX 5-9T/2.2	1752	550	~390	125	1718	1739	2038	450	430	80	G1¼	150	DN80	1925	1830	2100	1700	200	200	30	30	550	550
FFBD21 ENRS80-200-207/37D+2.2P	AGA 300T SUR	1902	550	~390	125	1745	1767	2046	450	430	100	G1½	200	DN100	2102	1830	2100	1700	250	250	80	80	720	720
FFBD21 ENRS80-200-214/53D+2.2P	AGA 300T SUR	1902	550	~390	125	1745	1767	2046	450	430	100	G1½	200	DN100	2102	1830	2100	1700	250	250	80	80	720	720
FFBD21 ENRS80-250-222/37D+2.2P	MATRIX 5-9T/2.2	1932	550	~390	125	1745	1767	2046	450	430	100	G1¼	200	DN100	2132	1830	2100	1700	200	200	52	52	210	210
FFBD21 ENRS80-250-243/53D+2.2P	MATRIX 5-9T/2.2	1932	550	~390	125	1745	1767	2046	450	430	100	G1¼	200	DN100	2132	1830	2100	1700	200	200	52	52	210	210
FFBD21 ENRS80-250-255/68D+2.2P	MATRIX 5-9T/2.2	1932	570	~390	125	1745	1767	2046	450	430	100	G1¼	200	DN100	2152	1830	2100	1700	200	200	52	52	210	210
FFBD21 ENRS100-200-197/37D+2.2P	AGA 300T SUR	1832	550	~390	125	1745	1769	2046	450	430	125	G1½	200	DN125	2032	1830	2100	1700	250	250	67	67	620	620
FFBD21 ENRS100-200-213/53D+2.2P	AGA 300T SUR	1832	550	~390	125	1745	1769	2046	450	430	125	G1½	200	DN125	2032	1830	2100	1700	250	250	67	67	620	620
FFBD21 ENRS100-250-225/53D+2.2P	MATRIX 5-9T/2.2	1832	550	~390	125	1745	1769	2046	450	430	125	G1¼	200	DN125	2032	1830	2100	1700	250	250	67	67	620	620
FFBD21 ENRS100-250-242/68D+2.2P	MATRIX 5-9T/2.2	1852	570	~390	125	1745	1769	2046	450	430	125	G1¼	200	DN125	2052	1830	2100	1700	250	250	67	67	620	620
FFBD21 ENRS100-250-255/103D+2.2P	MATRIX 5-9T/2.2	1912	600	~390	125	2045	2069	2046	450	430	125	G1¼	200	DN125	2082	1830	2100	2000	250	250	67	67	620	620

[1]= Underhead
[2]= Overhead

FIRE-FIGHTING UNITS FFBD111

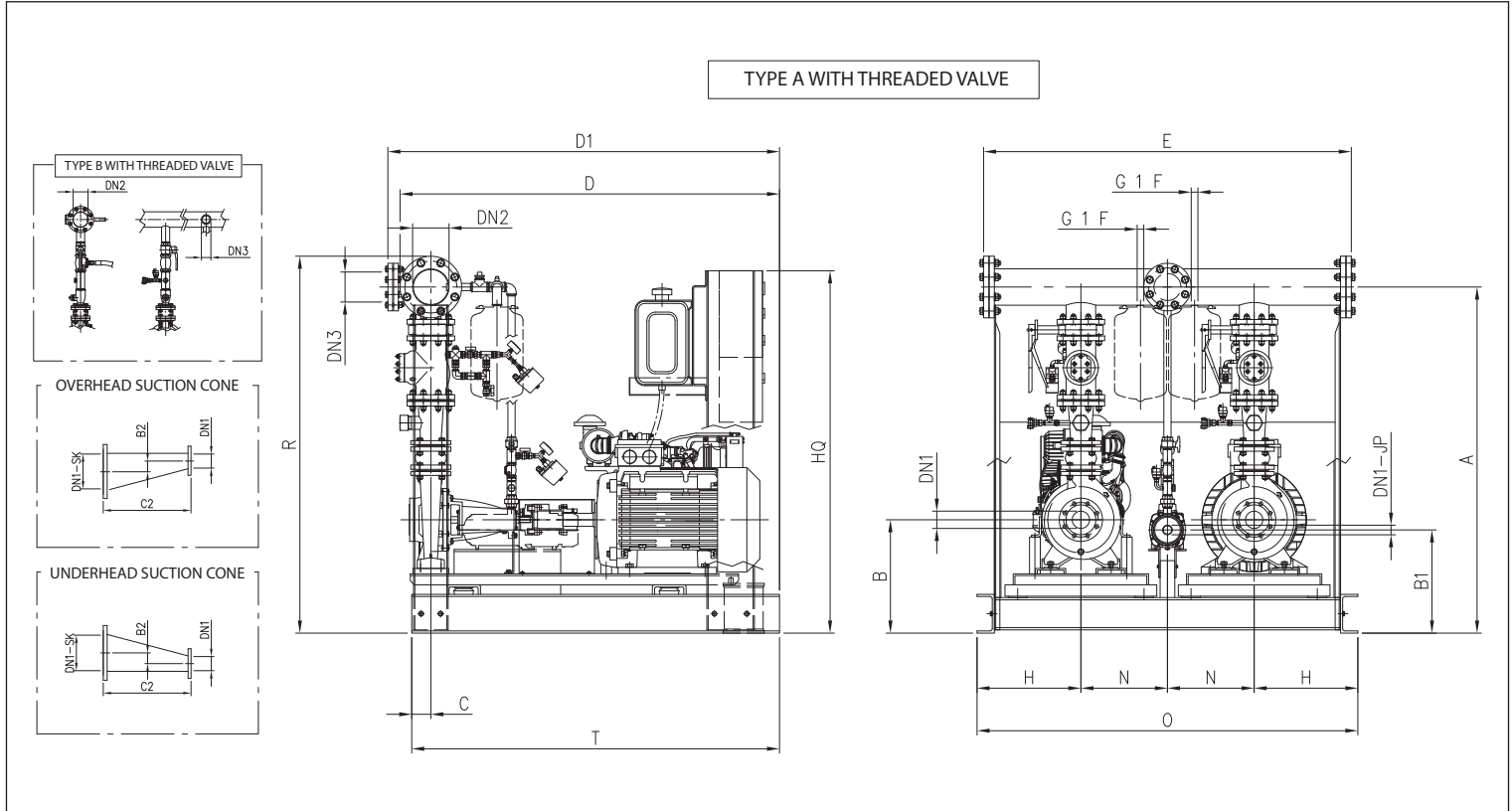
BASE-JOINT ELECTRIC-DIESEL MODELS TABLE

Pump	Size impeller diameter	Electric motor [kW]	Diesel engine [kW]	FFBD111	Jockey pump
3PF	32-160-166	3	4,6	FFBD111 3PS 32-160-166/3E/4,6D	COMPACT A/10
3PF	32-200-186	4	4,6	FFBD111 3PS 32-200-186/4E/4,6D	COMPACT A/10
3PF	32-200-200	5,5	6,2	FFBD111 3PS 32-200-200/5,5E/6,2D	COMPACT A/12
3PF	32-200-224	7,5	7,8	FFBD111 3PS 32-200-224/7,5E/7,8D	COMPACT A/10
ENR	32-250-245	11	14,9	FFBD111 ENRS 32-250-245/11E/14,9D	MATRIX 5-9T/2,2
ENR	32-250-255	15	14,9	FFBD111 ENRS 32-250-255/15E/14,9D	MATRIX 5-9T/2,2
3PF	40-160-166	5,5	6,2	FFBD111 3PS 40-160-166/5,5E/6,2D	COMPACT A/10
3PF	40-200-183	7,5	7,8	FFBD111 3PS 40-200-183/7,5E/7,8D	COMPACT A/10
3PF	40-200-200	9,2	14,9	FFBD111 3PS 40-200-200/11E/14,9D	COMPACT A/12
3PF	40-200-224	15	14,9	FFBD111 3PS 40-200-224/15E/14,9D	COMPACT A/10
ENR	40-250-239	15	14,9	FFBD111 ENRS 40-250-239/15E/14,9D	MATRIX 5-9T/2,2
ENR	40-250-252	18,5	18,8	FFBD111 ENRS 40-250-252/18,5E/18,8D	MATRIX 5-9T/2,2
3PF	50-160-154	7,5	7,8	FFBD111 3PS 50-160-154/7,5E/7,8D	COMPACT A/10
3PF	50-200-197	11	14,9	FFBD111 3PS 50-200-197/11E/14,9D	COMPACT A/12
3PF	50-200-212	15	14,9	FFBD111 3PS 50-200-212/15E/14,9D	COMPACT A/10
3PF	50-200-224	18,5	18,8	FFBD111 3PS 50-200-224/18,5E/18,8D	COMPACT A/10
ENR	50-250-222	18,5	18,8	FFBD111 ENRS 50-250-222/18,5E/18,8D	MATRIX 5-9T/2,2
ENR	50-250-235	22	28,6	FFBD111 ENRS 50-250-235/22E/28,6D	MATRIX 5-9T/2,2
ENR	50-250-252	30	28,6	FFBD111 ENRS 50-250-252/30E/28,6D	MATRIX 5-9T/2,2
3PF	65-200-190	15	14,9	FFBD111 3PS 65-200-190/15E/14,9D	COMPACT A/12
3PF	65-200-208	22	28,6	FFBD111 3PS 65-200-208/22E/28,6D	COMPACT A/10
3PF	65-200-212	30	28,6	FFBD111 3PS 65-200-212/30E/28,6D	COMPACT A/10
ENR	65-250-226	30	28,6	FFBD111 ENRS 65-250-226/30E/28,6D	MATRIX 5-9T/2,2
ENR	65-250-237	37	37	FFBD111 ENRS 65-250-237/37E/37D	MATRIX 5-9T/2,2
ENR	65-250-252	45	53	FFBD111 ENRS 65-250-252/45E/53D	MATRIX 5-9T/2,2
ENR	80-200-190	22	28,6	FFBD111 ENRS 80-200-190/22E/28,6D	AGA 300T SUR
ENR	80-200-199	30	28,6	FFBD111 ENRS 80-200-199/30E/28,6D	AGA 300T SUR
ENR	80-200-207	37	37	FFBD111 ENRS 80-200-207/37E/37D	AGA 300T SUR
ENR	80-200-214	45	53	FFBD111 ENRS 80-200-214/45E/53D	AGA 300T SUR
ENR	80-250-222	37	37	FFBD111 ENRS 80-250-222/37E/37D	MATRIX 5-9T/2,2
ENR	80-250-234	45	53	FFBD111 ENRS 80-250-234/45E/53D	MATRIX 5-9T/2,2
ENR	80-250-243	55	53	FFBD111 ENRS 80-250-243/55E/53D	MATRIX 5-9T/2,2
ENR	80-250-255	75	68	FFBD111 ENRS 80-250-255/75E/68D	MATRIX 5-9T/2,2
ENR	100-200-182	22	28,6	FFBD111 ENRS 100-200-182/22E/28,6D	AGA 300T SUR
ENR	100-200-190	30	28,6	FFBD111 ENRS 100-200-190/30E/28,6D	AGA 300T SUR
ENR	100-200-194	30	37	FFBD111 ENRS 100-200-194/30E/37D	AGA 300T SUR
ENR	100-200-197	37	37	FFBD111 ENRS 100-200-197/37E/37D	AGA 300T SUR
ENR	100-200-209	45	53	FFBD111 ENRS 100-200-209/45E/53D	AGA 300T SUR
ENR	100-200-213	55	53	FFBD111 ENRS 100-200-213/55E/53D	AGA 300T SUR
ENR	100-250-221	45	53	FFBD111 ENRS 100-250-221/45E/53D	MATRIX 5-9T/2,2
ENR	100-250-225	55	53	FFBD111 ENRS 100-250-225/55E/53D	MATRIX 5-9T/2,2
ENR	100-250-232	55	68	FFBD111 ENRS 100-250-232/55E/68D	MATRIX 5-9T/2,2
ENR	100-250-242	75	68	FFBD111 ENRS 100-250-242/75E/68D	MATRIX 5-9T/2,2
ENR	100-250-255	90	103	FFBD111 ENRS 100-250-255/90E/103D	MATRIX 5-9T/2,2

For performance data, see from page 140 to page 145.

FIRE-FIGHTING UNITS FFBD111

FFBD11 DIMENSIONS - 3PFS-ENRS ELECTRIC PUMP AND DIESEL PUMP+JOCKEY

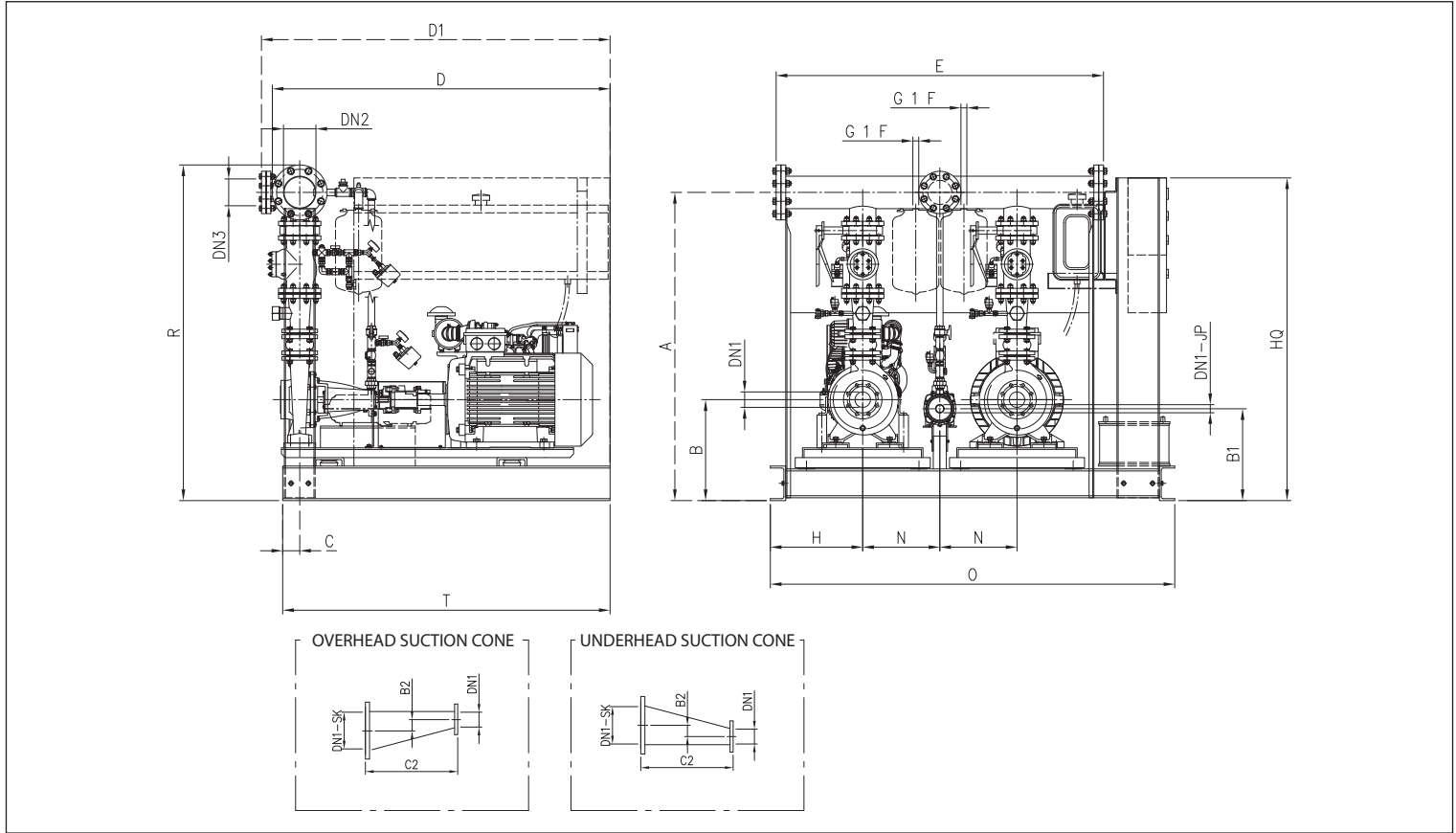


DIMENSIONS TABLE

Model	Jockey pump	Tipo	Dimensions [mm]																						
			A	B	B1	C	D	D1	E	H	N	DN1	DN1-JP	DN2	DN3	R	HQ	O	T	DN1-SK [1] [2]	B2 [1] [2]	C2 [1] [2]			
FFBD111 3PS32-160-166/3E/4.6D+0.75P	COMPACT A/10	B	1022	362	~250	65	1235	1215	1237	315	310	50	G1	80	G2	1122	1505	1250	1200	65	80	10	15	110	145
FFBD111 3PS32-200-186/4E/4.6D+0.75P	COMPACT A/10	B	1045	365	~250	65	1235	1215	1237	315	310	50	G1	80	G2	1145	1505	1250	1200	65	80	10	15	110	145
FFBD111 3PS32-200-200/5,5E/6.2D+0.9P	COMPACT A/12	B	1045	365	~250	65	1235	1215	1237	315	310	50	G1	80	G2	1145	1505	1250	1200	65	80	10	15	110	145
FFBD111 3PS32-200-224/7.5E/7.8D+1.1P	COMPACT A/15	B	1045	365	~250	65	1235	1215	1237	315	310	50	G1	80	G2	1145	1505	1250	1200	65	80	10	15	110	145
FFBD111 ENRS32-250-245/11E/14.9D+2.2P	MATRIX 5-9T/2.2	B	1115	390	~250	65	1235	1215	1237	315	310	50	G1¼	80	G2	1215	1505	1250	1200	65	80	10	15	110	145
FFBD111 ENRS32-250-255/15E/14.9D+2.2P	MATRIX 5-9T/2.2	B	1116	391	~250	65	1435	1415	1402	315	310	50	G1¼	80	G2	1216	1505	1250	1200	65	80	10	15	110	145
FFBD111 3PS40-160-166/5,5E/6.2D+0.75P	COMPACT A/10	B	1075	365	~250	65	1235	1215	1237	315	310	65	G1	80	G2	1180	1505	1250	1200	100	100	20	20	190	190
FFBD111 3PS40-200-183/7,5E/7.8D+0.75P	COMPACT A/10	B	1100	365	~250	65	1235	1215	1237	315	310	65	G1	80	G2	1200	1505	1250	1200	100	100	20	20	190	190
FFBD111 3PS40-200-200/11E/14.9D+0.9P	COMPACT A/12	B	1125	390	~250	65	1235	1215	1237	315	310	65	G1	80	G2	1225	1505	1250	1200	100	100	20	20	190	190
FFBD111 3PS40-200-224/15E/14.9D+1.1P	COMPACT A/15	B	1125	390	~250	65	1235	1215	1237	315	310	65	G1	80	G2	1225	1505	1250	1200	100	100	20	20	190	190
FFBD111 ENRS40-250-239/15E/14.9D+2.2P	MATRIX 5-9T/2.2	B	1171	391	~250	65	1235	1215	1237	315	310	65	G1¼	80	G2	1271	1505	1250	1200	100	100	20	20	190	190
FFBD111 ENRS40-250-252/18,5E/18.8D+2.2P	MATRIX 5-9T/2.2	B	1197	417	~260	65	1435	1415	1402	370	340	65	G1¼	80	G2	1297	1517	1250	1400	100	100	20	20	190	190
FFBD111 3PS50-160-154/7,5E/7.8D+0.75P	COMPACT A/10	B	1195	365	~250	65	1245	1233	1241	315	310	65	G1	100	G2½	1305	1505	1250	1200	125	125	30	30	300	300
FFBD111 3PS50-200-197/11E/14.9D+0.9P	COMPACT A/12	B	1240	390	~250	65	1245	1233	1241	315	310	65	G1	100	G2½	1350	1505	1250	1200	125	125	30	30	300	300
FFBD111 3PS50-200-212/15E/14.9D+0.9P	COMPACT A/15	B	1272	422	~260	65	1445	1433	1406	370	340	65	G1	100	G2½	1382	1517	1420	1400	125	125	30	30	300	300
FFBD111 3PS50-200-224/18,5E/18.8D+1.1P	COMPACT A/15	B	1267	417	~260	65	1445	1433	1406	370	340	65	G1	100	G2½	1377	1517	1420	1400	125	125	30	30	300	300
FFBD111 ENRS50-250-222/18,5E/18.8D+2.2P	MATRIX 5-9T/2.2	B	1292	417	~260	65	1445	1433	1402	370	340	65	G1¼	100	G2½	1402	1517	1420	1400	125	125	30	30	300	300
FFBD111 ENRS50-250-235/22E/28.6D+2.2P	MATRIX 5-9T/2.2	A	1455	504	~390	125	1685	1724	1698	450	430	65	G1¼	125	DN65	1565	1535	1760	1700	125	125	30	30	300	300
FFBD111 ENRS50-250-252/30E/28.6D+2.2P	MATRIX 5-9T/2.2	A	1455	504	~390	125	1700	1724	1698	450	430	65	G1¼	125	DN65	1580	1535	1760	1700	125	125	30	30	300	300
FFBD111 3PS65-200-190/15E/14.9D+0.9P	COMPACT A/12	A	1558	422	~260	65	1460	1486	1402	370	340	80	G1	125	DN80	1683	1517	1420	1400	200	200	65	65	550	550
FFBD111 3PS65-200-208/22E/28.6D+1.1P	COMPACT A/15	A	1587	451	~260	65	1460	1486	1402	370	340	80	G1	125	DN80	1712	1517	1420	1400	200	200	65	65	550	550
FFBD111 3PS65-200-212/30E/28.6D+2.2P	COMPACT A/15	A	1640	504	~390	125	1700	1726	1694	450	430	80	G1	125	DN80	1765	1535	1760	1700	200	200	65	65	550	550
FFBD111 ENRS65-250-226/30E/28.6D+2.2P	MATRIX 5-9T/2.2	A	1736	504	~390	125	1718	1739	1698	450	430	80	G1¼	150	DN80	1879	1535	1760	1700	200	200	65	65	550	550
FFBD111 ENRS80-200-190/22E/28.6D+2.2P	AGA 300T SUR	A	1886	504	~390	125	1745	1767	1706	450	430	100	G1½	200	DN100	2056	1535	1760	1700	250	250	80	80	720	720
FFBD111 ENRS80-200-199/30E/28.6D+2.2P	AGA 300T SUR	A	1886	504	~390	125	1745	1767	1706	450	430	100	G1½	200	DN100	2056	1535	1760	1700	250	250	80	80	720	720
FFBD111 ENRS100-200-182/22E/28.6D+2.2P	AGA 300T SUR	A	1816	504	~390	125	1745	1769	1706	370	430	125	G1½	200	DN125	1986	1535	1760	1700	250	250	67	67	620	620
FFBD111 ENRS100-200-190/30E/28.6D+2.2P	AGA 300T SUR	A	1816	504	~390	125	1745	1769	1706	370	430	125	G1½	200	DN125	1986	1535	1760	1700	250	250	67	67	620	620

[1]= Underhead
[2]= Overhead

FFBD111 DIMENSIONS - ENRS ELECTRIC PUMP AND DIESEL PUMP+JOCKEY



DIMENSIONS TABLE

Model	Pilot pump	Dimensions [mm]																						
		A	B	B1	C	D	D1	E	H	N	DN1	DN1-JP	DN2	DN3	R	HQ	O	T	DN1-SK [1]	B2 [1]	C2 [1]	[2]	[2]	[2]
FFBD111 ENRS65-250-237/37E/37D+2.2P	MATRIX 5-9T/2.2	1782	550	~390	125	1718	1739	2038	450	430	80	G1¼	150	DN80	1925	1830	2100	1700	200	200	30	30	550	550
FFBD111 ENRS65-250-252/45E/53D+2.2P	MATRIX 5-9T/2.2	1782	550	~390	125	1718	1739	2038	450	430	80	G1¼	150	DN80	1925	1830	2100	1700	200	200	30	30	550	550
FFBD111 ENRS80-200-207/37E/37D+2.2P	AGA 300T SUR	1932	550	~390	125	1745	1767	2046	450	430	100	G1½	200	DN100	2102	1830	2100	1700	250	250	80	80	720	720
FFBD111 ENRS80-200-214/45E/53D+2.2P	AGA 300T SUR	1932	550	~390	125	1745	1767	2046	450	430	100	G1½	200	DN100	2102	1830	2100	1700	250	250	80	80	720	720
FFBD111 ENRS80-250-222/37E/37D+2.2P	MATRIX 5-9T/2.2	1962	550	~390	125	1475	1767	2046	450	430	100	G1¼	200	DN100	2132	1830	2100	1700	200	200	52	52	210	210
FFBD111 ENRS80-250-234/45E/53D+2.2P	MATRIX 5-9T/2.2	1962	550	~390	125	1745	1767	2046	450	430	100	G1¼	200	DN100	2132	1830	2100	1700	200	200	52	52	210	210
FFBD111 ENRS80-250-243/55E/53D+2.2P	MATRIX 5-9T/2.2	1962	550	~390	125	1745	1767	2046	450	430	100	G1¼	200	DN100	2132	1830	2100	1700	200	200	52	52	210	210
FFBD111 ENRS80-250-255/75E/68D+2.2P	MATRIX 5-9T/2.2	1982	550	~390	125	1745	1767	2046	450	430	100	G1¼	200	DN100	2152	1830	2100	1700	200	200	52	52	210	210
FFBD111 ENRS100-200-194/30E/37D+2.2P	AGA 300T SUR	1862	550	~390	125	1745	1769	2046	450	430	125	G1½	200	DN125	2032	1830	2100	1700	250	250	67	67	620	620
FFBD111 ENRS100-200-197/37E/37D+2.2P	AGA 300T SUR	1862	550	~390	125	1745	1769	2046	450	430	125	G1½	200	DN125	2032	1830	2100	1700	250	250	67	67	620	620
FFBD111 ENRS100-200-197/45E/53D+2.2P	AGA 300T SUR	1862	550	~390	125	1745	1769	2046	450	430	125	G1½	200	DN125	2032	1830	2100	1700	250	250	67	67	620	620
FFBD111 ENRS100-200-213/55E/53D+2.2P	AGA 300T SUR	1882	570	~390	125	1745	1769	2046	450	430	125	G1½	200	DN125	2052	1830	2100	1700	250	250	67	67	620	620
FFBD111 ENRS100-250-221/45E/53D+2.2P	MATRIX 5-9T/2.2	1862	550	~390	125	1745	1769	2046	450	430	125	G1¼	200	DN125	2032	1830	2100	1700	250	250	67	67	620	620
FFBD111 ENRS100-250-225/55E/53D+2.2P	MATRIX 5-9T/2.2	1882	570	~390	125	1745	1769	2046	450	430	125	G1¼	200	DN125	2052	1830	2100	1700	250	250	67	67	620	620
FFBD111 ENRS100-250-232/55E/68D+2.2P	MATRIX 5-9T/2.2	1882	570	~390	125	1745	1769	2046	450	430	125	G1¼	200	DN125	2052	1830	2100	1700	250	250	67	67	620	620
FFBD111 ENRS100-250-242/75E/68D+2.2P	MATRIX 5-9T/2.2	1912	600	~390	125	1745	1769	2046	450	430	125	G1¼	200	DN125	2082	1830	2100	1700	250	250	67	67	620	620
FFBD111 ENRS100-250-255/90E/103D+2.2P	MATRIX 5-9T/2.2	1912	600	~390	125	2045	2069	2046	450	430	125	G1¼	200	DN125	2082	1830	2100	2000	250	250	67	67	620	620

[1]= Underhead
[2]= Overhead

FIRE-FIGHTING UNITS FFS EVMG

VERTICAL MULTISTAGE PERFORMANCE TABLE (EVMG 5-10-18)

EVMG pump range	l/min					Q=Flow rate					
	40	60	75	100	130	150	200	250	300	350	400
	m ³ /h					H=Head [m]					
	2,4	3,6	4,5	6	7,8	9	12	15	18	21	24
EVMG 5 7N5/1,5	64,5	59,0	54,0	43,0	24,1	-	-	-	-	-	-
EVMG 5 8N5/1,5	73,5	67,5	61,5	49,0	27,5	-	-	-	-	-	-
EVMG 5 10N5/2,2	93,5	86,0	79,0	63,0	36,6	-	-	-	-	-	-
EVMG 5 11N5/2,2	103,0	94,5	86,5	69,5	40,5	-	-	-	-	-	-
EVMG 5 12N5/2,2	112,0	103,0	94,5	75,5	44,0	-	-	-	-	-	-
EVMG 5 14N5/3,0	131,0	120,0	110,0	88,0	51,0	-	-	-	-	-	-
EVMG 10 6N5/2,2	-	-	63,0	61,0	57,0	53,0	39,5	23,4	-	-	-
EVMG 10 8N5/3,0	-	-	84,0	81,5	75,5	70,5	52,5	31,2	-	-	-
EVMG 10 10N5/4,0	-	-	105,0	102,0	94,5	88,0	66,0	39,0	-	-	-
EVMG 10 11N5/4,0	-	-	116,0	112,0	104,0	97,0	72,5	43,0	-	-	-
EVMG 10 12N5/5,5	-	-	130,0	126,0	118,0	111,0	86,5	55,0	-	-	-
EVMG 18 4F5/4,0	-	-	-	-	61,5	60,5	57,0	51,5	44,0	34,3	23,2
EVMG 18 5F5/5,5	-	-	-	-	77,0	75,5	71,5	64,5	54,5	43,0	29,0
EVMG 18 6F5/5,5	-	-	-	-	92,0	91,0	85,5	77,0	65,5	51,5	34,8
EVMG 18 7F5/7,5	-	-	-	-	108,0	106,0	100,0	90,0	76,5	60,0	40,5
EVMG 18 8F5/7,5	-	-	-	-	123,0	121,0	114,0	103,0	87,5	68,5	46,5

VERTICAL MULTISTAGE PERFORMANCE TABLE (EVMG 32-45-64)

EVMG pump range	l/min				Q=Flow rate					
	200	350	500	600	700	900	1000	1200	1400	
	m ³ /h				H=Head [m]					
	12	21	30	36	42	54	60	72	84	
EVMG 32 3-0F5/5,5	61,0	54,5	45,0	36,1	24,1	-	-	-	-	
EVMG 32 4-3F5/7,5	72,5	63,5	48,5	35,6	-	-	-	-	-	
EVMG 32 4-0F5/7,5	81,5	73,0	61,0	49,0	33,3	-	-	-	-	
EVMG 32 5-3F5/11	93,0	82,0	64,0	48,5	30,5	-	-	-	-	
EVMG 32 5-0F5/11	102,0	91,5	76,5	62,0	42,5	-	-	-	-	
EVMG 32 6-3F5/11	114,0	100,0	79,5	61,5	39,7	-	-	-	-	
EVMG 32 6-0F5/11	123,0	110,0	92,0	75,0	51,5	-	-	-	-	
EVMG 32 7-3F5/15	134,0	119,0	95,5	74,5	49,0	-	-	-	-	
EVMG 45 3-2F5/11	-	64,0	61,0	58,0	53,0	37,3	-	-	-	
EVMG 45 3-0F5/11	-	77,5	75,0	72,5	68,0	54,0	45,0	-	-	
EVMG 45 4-2F5/15	-	90,0	86,0	82,0	76,0	56,0	43,0	-	-	
EVMG 45 4-0F5/15	-	103,0	100,0	96,5	91,0	73,0	60,5	-	-	
EVMG 45 5-2F5/18,5	-	116,0	111,0	107,0	99,0	74,5	58,5	-	-	
EVMG 45 5-0F5/18,5	-	129,0	125,0	121,0	114,0	91,5	76,5	-	-	
EVMG 45 6-2F5/22	-	142,0	137,0	131,0	122,0	93,5	74,5	-	-	
EVMG 64 3-3F5/15	-	-	64,0	62,5	61,0	55,5	51,0	39,3	-	
EVMG 64 3-2F5/15	-	-	69,5	68,0	66,5	61,5	57,5	46,5	32,5	
EVMG 64 3-1F5/15	-	-	75,0	74,0	72,5	68,0	64,0	53,5	40,0	
EVMG 64 3-0F5/18,5	-	-	80,5	79,5	78,0	74,0	70,5	60,5	47,5	
EVMG 64 4-3F5/18,5	-	-	91,0	89,0	87,0	80,5	75,5	60,5	42,0	
EVMG 64 4-2F5/18,5	-	-	96,5	95,0	93,0	87,0	81,5	67,5	49,5	
EVMG 64 4-1F5/22	-	-	102,0	101,0	98,5	93,0	88,0	74,5	57,0	
EVMG 64 4-0F5/22	-	-	108,0	106,0	104,0	99,0	94,5	81,5	64,5	
EVMG 64 5-3F5/30	-	-	118,0	116,0	114,0	106,0	99,5	81,5	59,0	
EVMG 64 5-2F5/30	-	-	124,0	122,0	119,0	112,0	106,0	88,5	66,5	
EVMG 64 5-1F5/30	-	-	129,0	127,0	125,0	118,0	112,0	95,5	74,0	
EVMG 64 5-0F5/30	-	-	135,0	133,0	131,0	124,0	119,0	103,0	81,5	

EVMG 3 (JOCKEY) PERFORMANCE TABLE

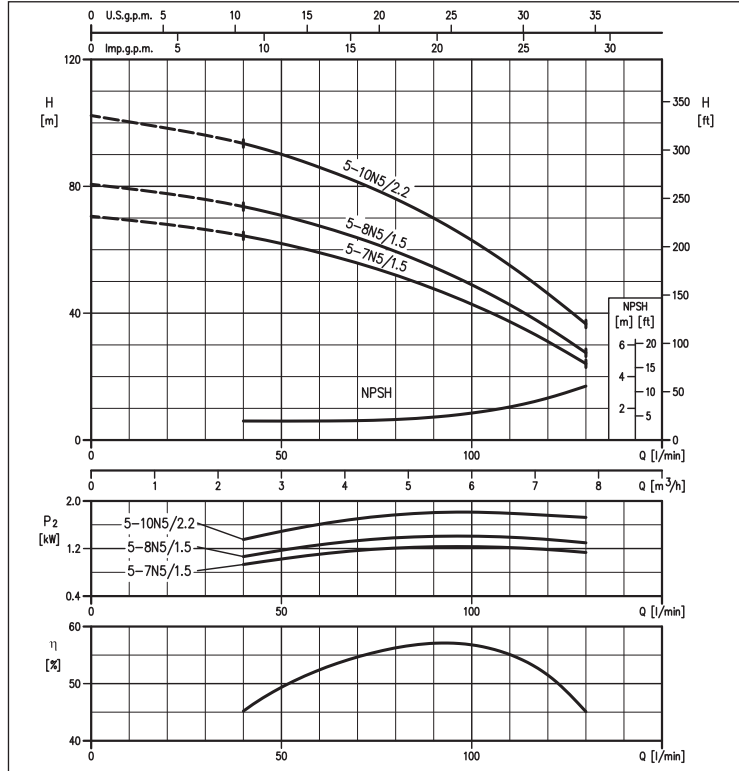
Model	P ₂		Q=Flow rate			
	[HP]	[kW]	l/min 20	40	60	75
			H=Head [m]			
			m ³ /h 1,2	2,4	3,6	4,5
EVMG 3 11N5/1,1	1,5	1,1	92,0	77,0	56,5	36,3
EVMG 3 13N5/1,5	2	1,5	109,0	90,5	67,0	43,0
EVMG 3 15N5/1,5	2	1,5	125,0	105,0	77,5	49,5
EVMG 3 18F5/2,2	3	2,2	151,0	126,0	92,5	59,5

HVM 3 (JOCKEY) PERFORMANCE TABLE

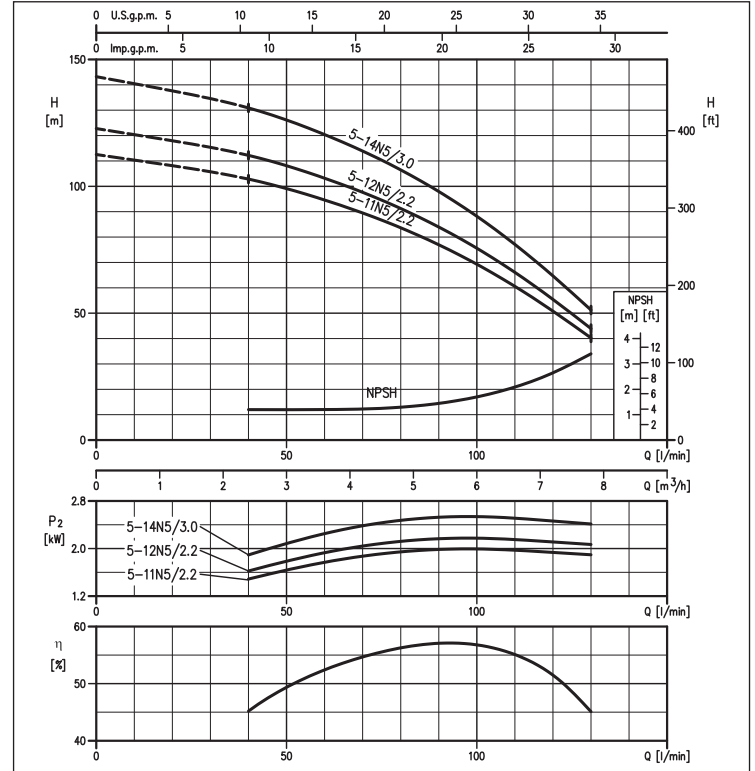
Model	P ₂		Q=Flow rate				
	[HP]	[kW]	l/min 20	30	45	60	80
			H=Head [m]				
			m ³ /h 1,2	1,8	2,7	3,6	4,8
HVM 3-8N/1,5	2,2	1,5	83,5	78,0	68,0	54,5	32,0
HVM 3-9N/1,5	2,2	1,5	94,0	88,0	76,5	61,0	36,0

FIRE-FIGHTING UNITS FFS EVMG

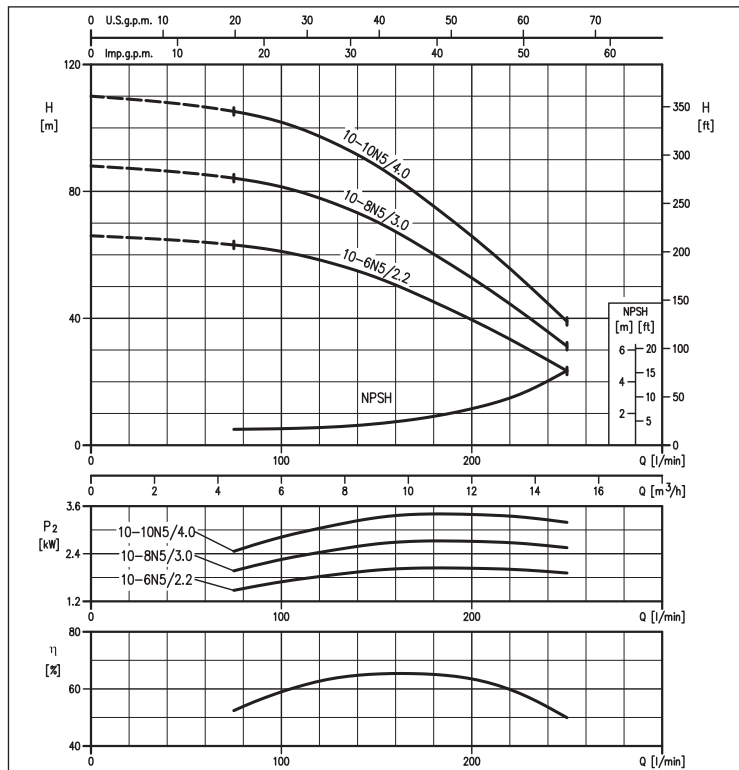
EVMG 5 range PERFORMANCE CURVES (impeller diameter 95 mm)
(according to ISO 9906 Attachment A)



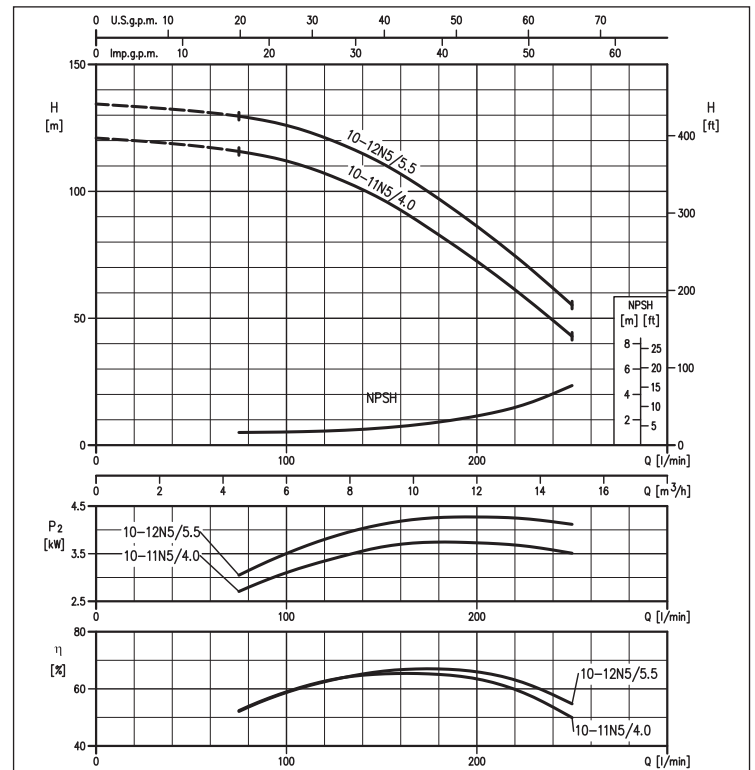
EVMG 5 range PERFORMANCE CURVES (impeller diameter 95 mm)
(according to ISO 9906 Attachment A)



EVMG 10 range PERFORMANCE CURVES (impeller diameter 96 mm)
(according to ISO 9906 Attachment A)



EVMG 10 range PERFORMANCE CURVES (impeller diameter 96 mm)
(according to ISO 9906 Attachment A)

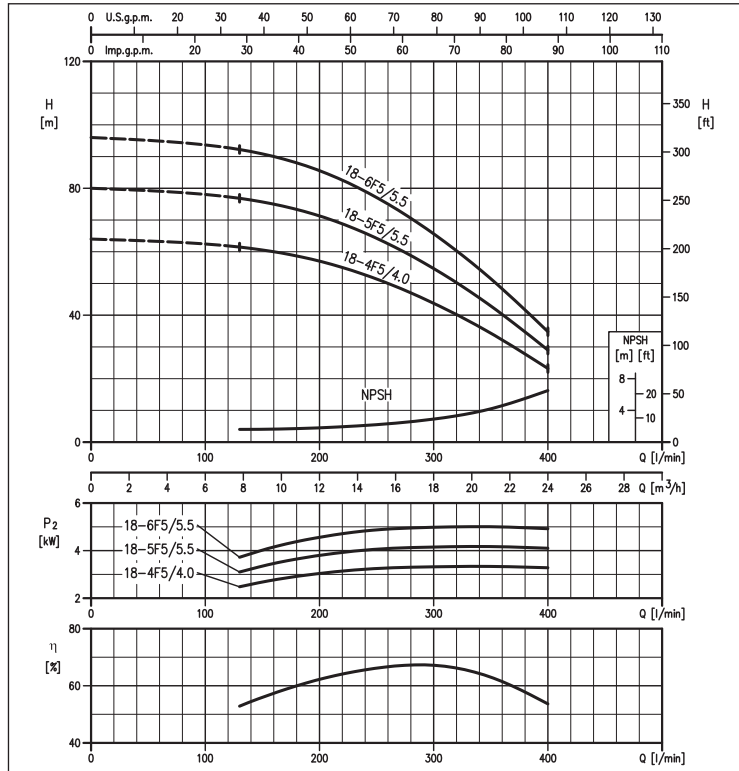




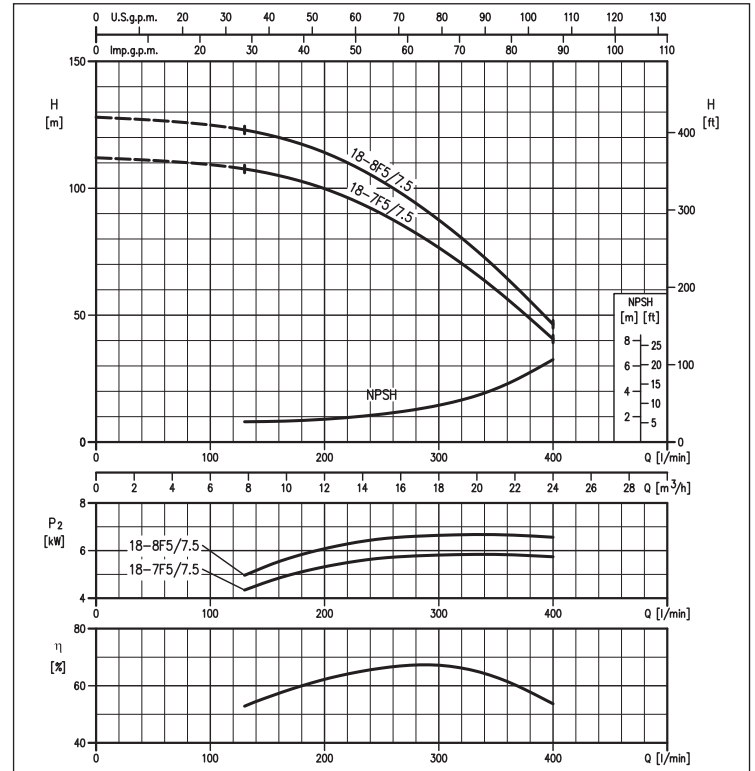
FFS-FFB

FIRE-FIGHTING UNITS FFS EVMG

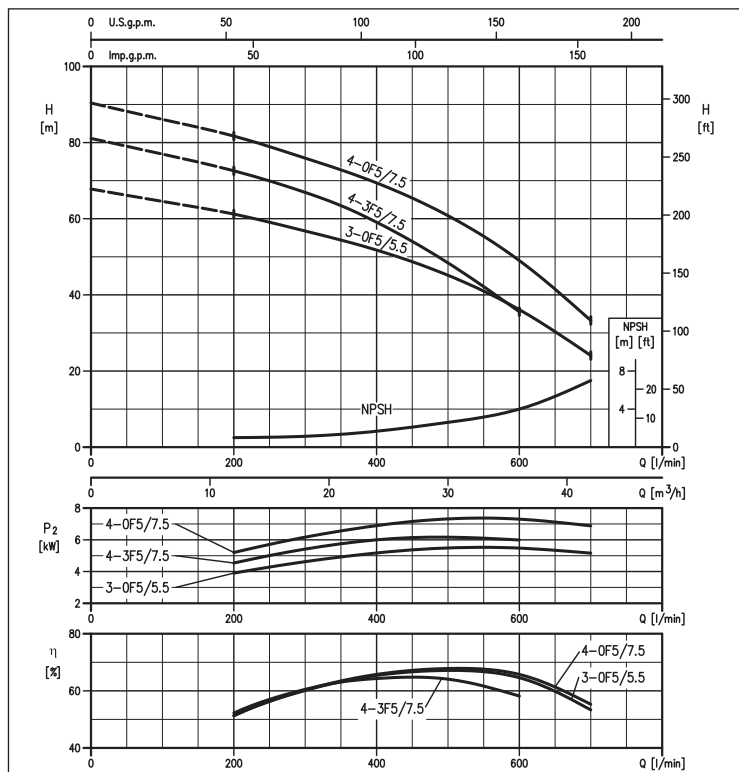
EVMG 18 range PERFORMANCE CURVES (impeller diameter 115 mm)
(according to ISO 9906 Attachment A)



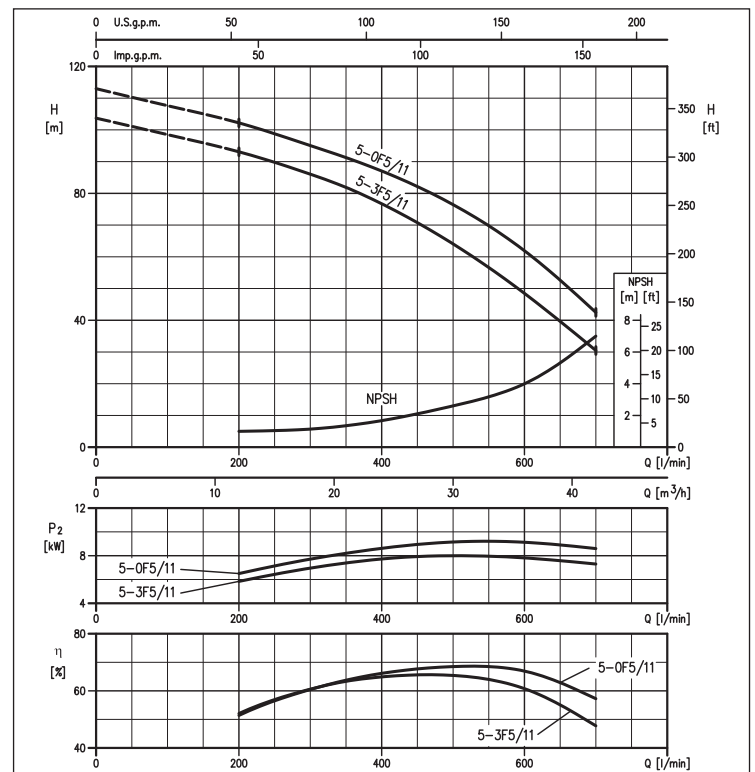
EVMG 18 range PERFORMANCE CURVES (impeller diameter 115 mm)
(according to ISO 9906 Attachment A)



EVMG 32 range PERFORMANCE CURVES (impeller diameter 125/136 mm)
(according to ISO 9906 Attachment A)



EVMG 32 range PERFORMANCE CURVES (impeller diameter 125/136 mm)
(according to ISO 9906 Attachment A)



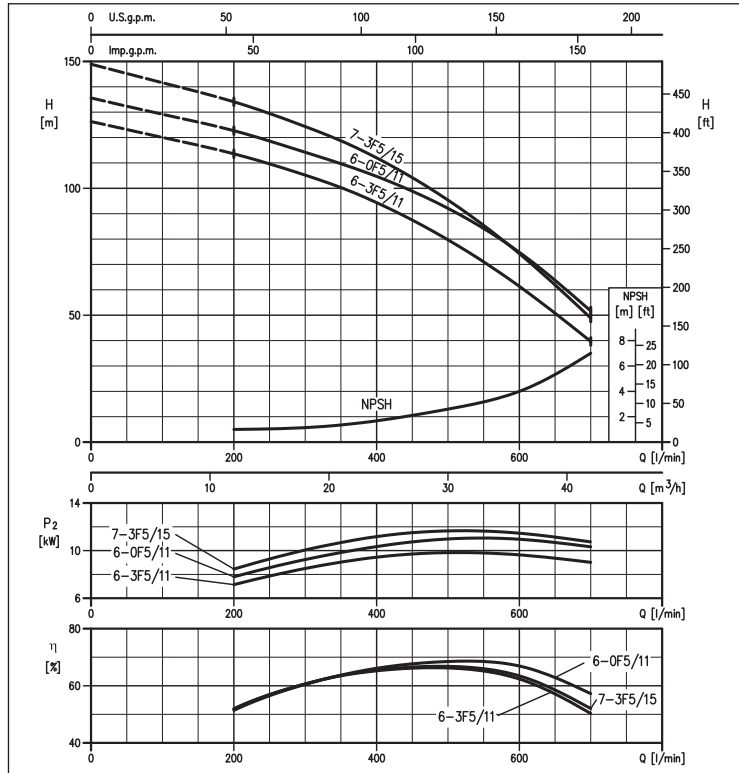
Data under revision. For more information please contact our sales network.



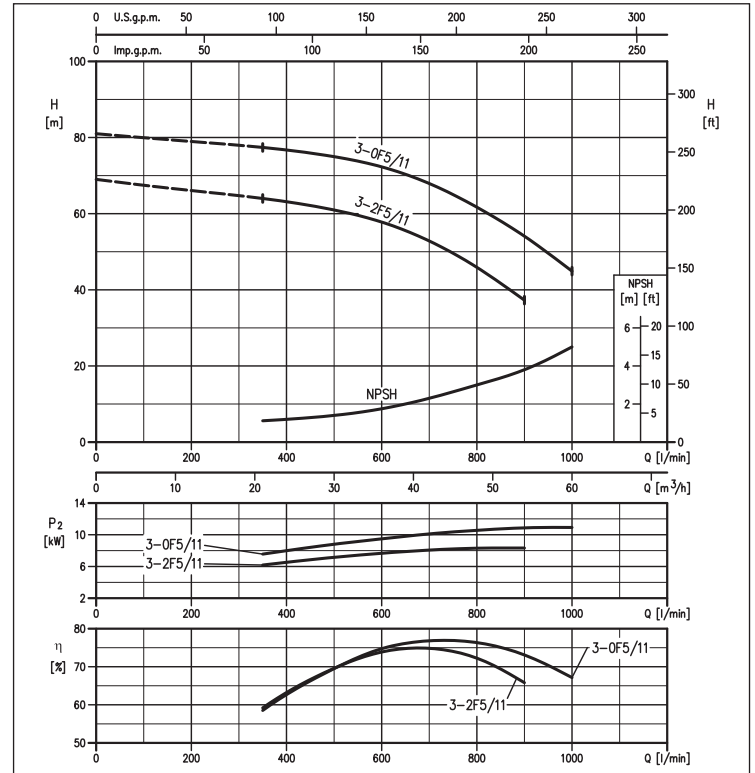
FFS-FFB

FIRE-FIGHTING UNITS FFS EVMG

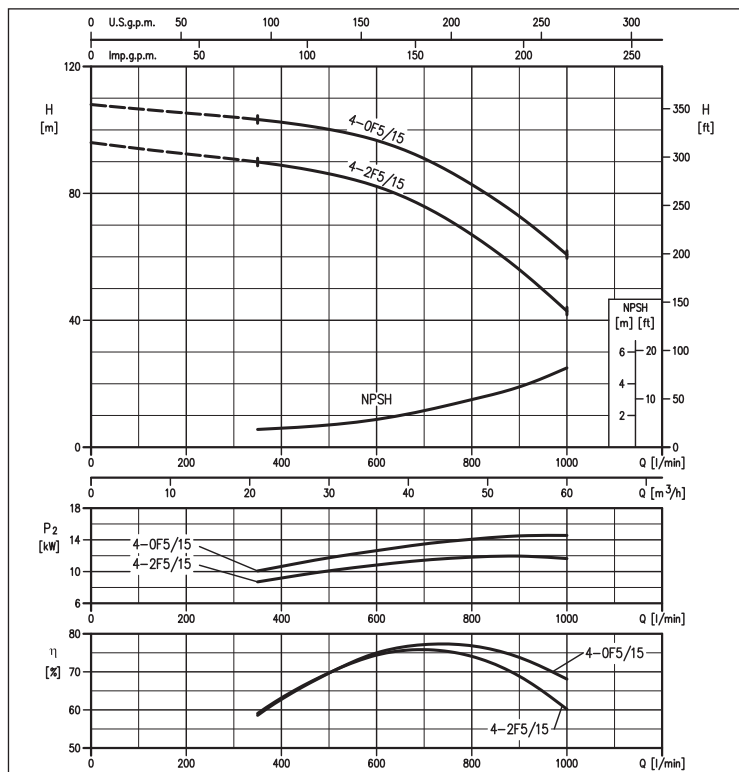
EVMG 32 range PERFORMANCE CURVES (impeller diameter 125/136 mm)
(according to ISO 9906 Attachment A)



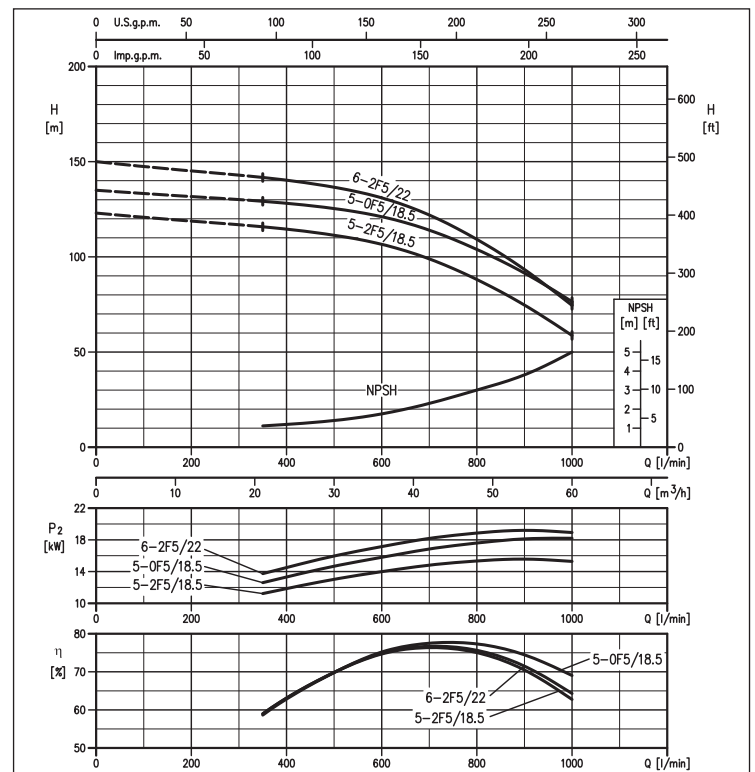
EVMG 45 range PERFORMANCE CURVES (impeller diameter 127/143 mm)
(according to ISO 9906 Attachment A)



EVMG 45 range PERFORMANCE CURVES (impeller diameter 127/143 mm)
(according to ISO 9906 Attachment A)



EVMG 45 range PERFORMANCE CURVES (impeller diameter 127/143 mm)
(according to ISO 9906 Attachment A)

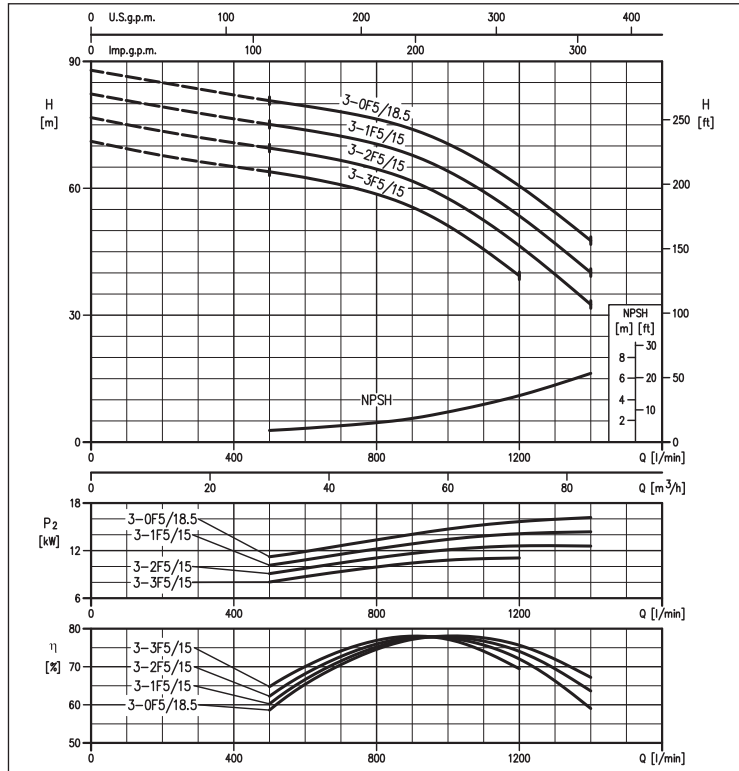




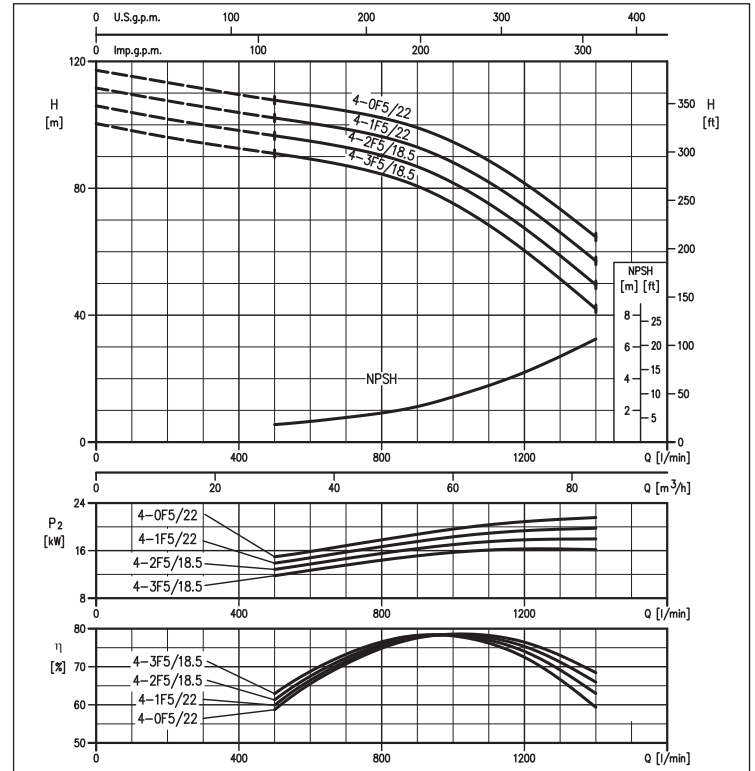
FFS-FFB

FIRE-FIGHTING UNITS FFS EVMG

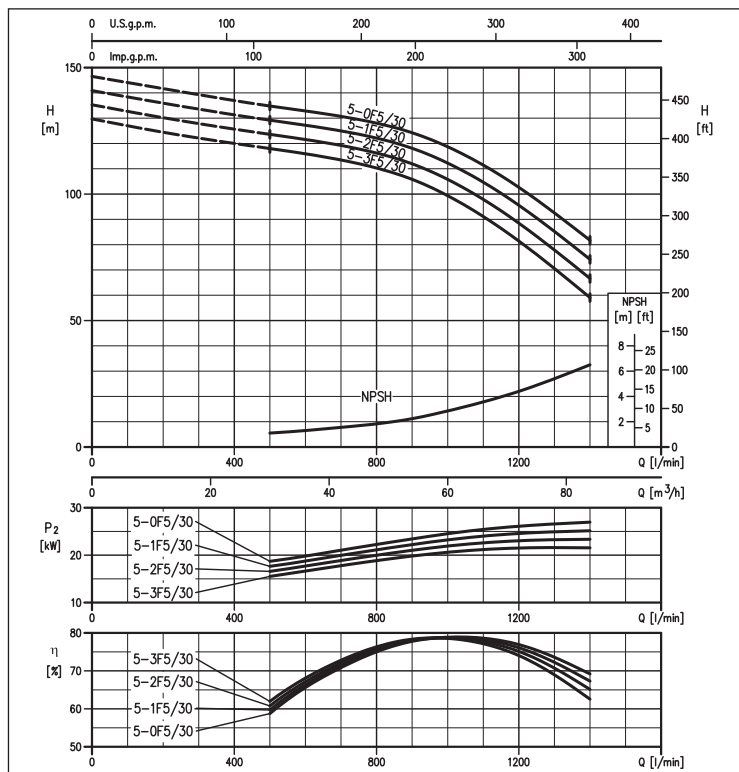
EVMG 64 range PERFORMANCE CURVES (impeller diameter 131/143 mm)
(according to ISO 9906 Attachment A)



EVMG 64 range PERFORMANCE CURVES (impeller diameter 131/143 mm)
(according to ISO 9906 Attachment A)

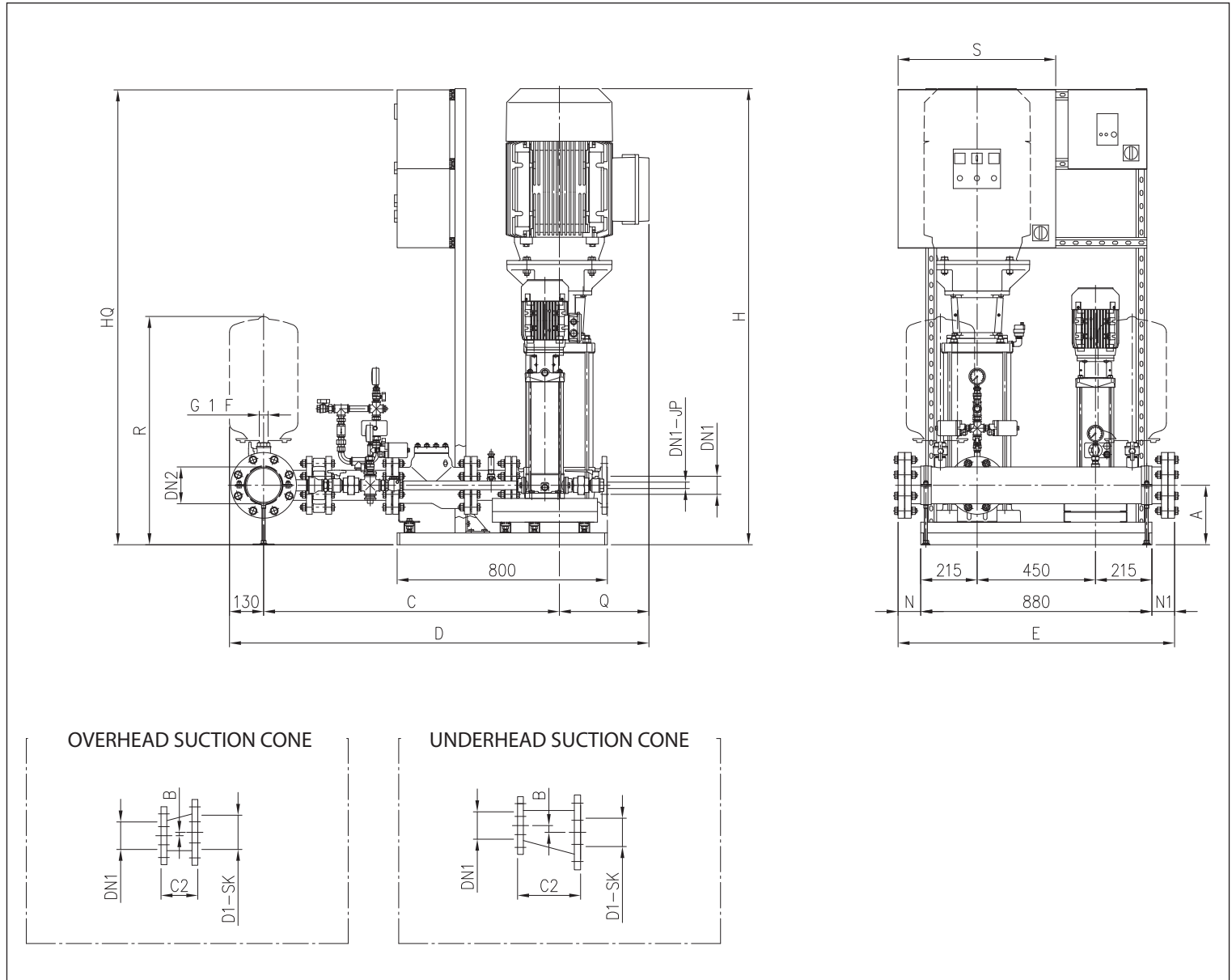


EVMG 64 range PERFORMANCE CURVES (impeller diameter 131/143 mm)
(according to ISO 9906 Attachment A)



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FFS11 DIMENSIONS - VERTICAL MULTISTAGE ELECTRIC PUMP (EVMG) + JOCKEY



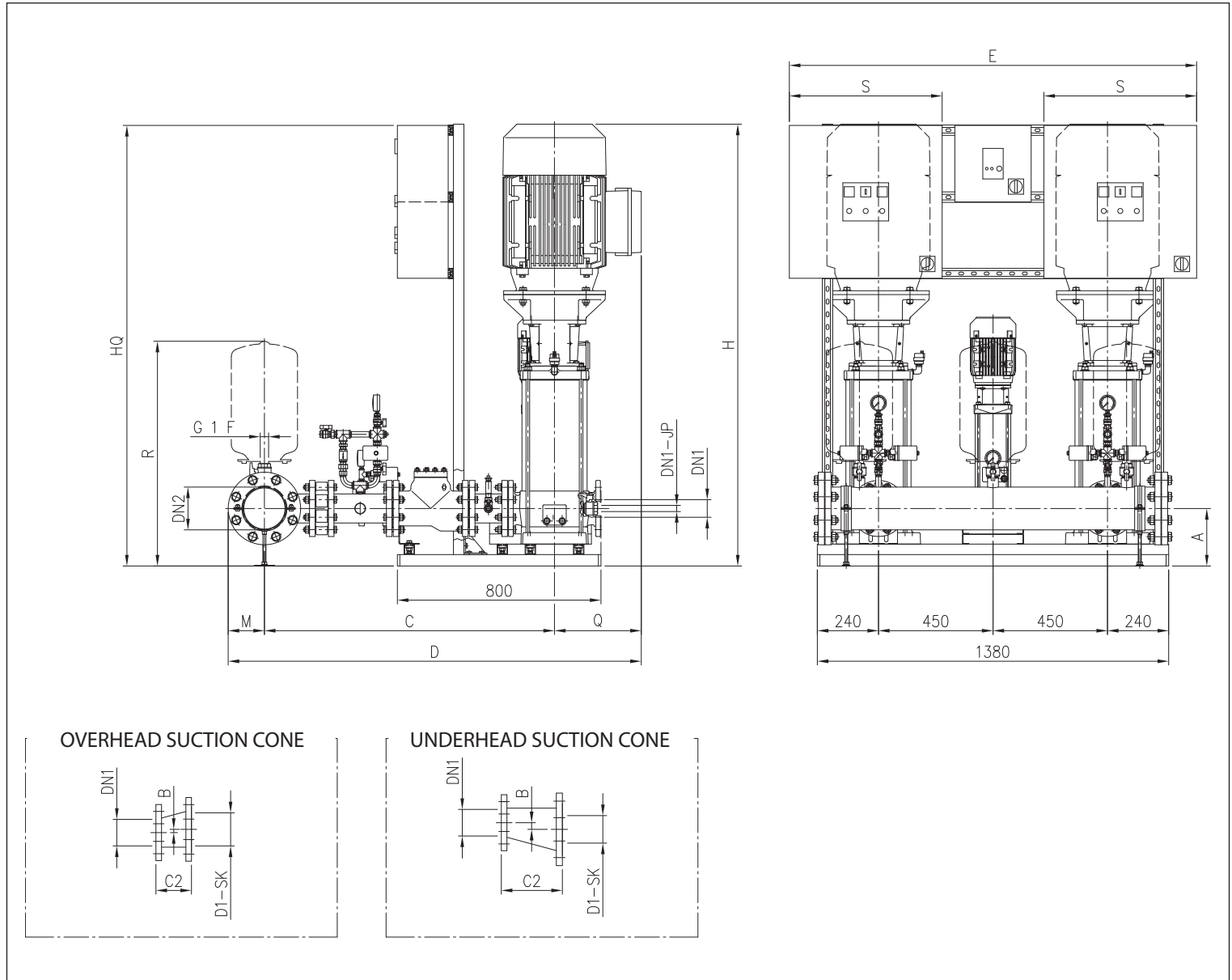
FIRE-FIGHTING UNITS FFS EVMG

FFS11 EVMG DIMENSIONS TABLE

Model	Jockey pump	Dimensions [mm]																			Weight [kg]	
		A	C	D	E	H	DN1	DN1-JP	DN2	R	N	N1	Q	HQ	S	DN1-SK [1]	[2]	B2 [1]	[2]	C2 [1]		[2]
FFS 11 EVM5 7N5/1.5	HVM 3-8N/1.5	135	715	985	1020	770	G1¼	G1	G2	740	80	60	140	1020	400	65	65	15	15	205	205	145,0
FFS 11 EVM5 8N5/1.5	HVM 3-8N/1.5	135	715	985	1020	795	G1¼	G1	G2	740	80	60	140	1020	400	65	65	15	15	205	205	145,0
FFS 11 EVM5 10N5/2.2	EVM 3 11N5/1.1	135	715	985	1020	860	G1¼	G1	G2	740	80	60	140	1020	400	65	65	15	15	205	205	149,0
FFS 11 EVM5 11N5/2.2	EVM 3 13N5/1.5	135	715	985	1020	890	G1¼	G1	G2	740	80	60	140	1020	400	65	65	15	15	205	205	154,0
FFS 11 EVM5 12N5/2.2	EVM 3 13N5/1.5	135	715	985	1020	920	G1¼	G1	G2	740	80	60	140	1020	400	65	65	15	15	205	205	155,0
FFS 11 EVM5 14N5/3.0	EVM 3 15N5/1.5	135	715	990	1020	1025	G1¼	G1	G2	740	80	60	140	1020	400	65	65	15	15	205	205	162,0
FFS 11 EVM10 6N5/2.2	HVM 3-8N/1.5	165	755	1055	1020	825	G1½	G1	G2	770	80	60	170	1030	400	65	65	15	15	185	185	158,0
FFS 11 EVM10 8N5/3.0	HVM 3-9N/1.5	165	755	1055	1020	935	G1½	G1	G2	770	80	60	170	1030	400	65	65	15	15	185	185	168,0
FFS 11 EVM10 10N5/4.0	EVM 3 13N5/1.5	165	755	1055	1020	995	G1½	G1	G2	770	80	60	170	1030	400	65	65	15	15	185	185	179,0
FFS 11 EVM10 11N5/4.0	EVM 3 13N5/1.5	165	755	1055	1020	1025	G1½	G1	G2	770	80	60	170	1030	400	65	65	15	15	185	185	181,0
FFS 11 EVM10 12N5/5.5	EVM 3 15N5/1.5	165	755	1085	1020	1130	G1½	G1	G2	770	80	60	200	1030	400	65	65	15	15	185	185	201,0
FFS 11 EVM18 4F5/4.0	HVM 3-8N/1.5	175	805	1085	1040	865	DN 50	G1	DN65	790	80	80	150	1100	400	65	80	10	15	155	190	194,0
FFS 11 EVM18 5F5/5.5	HVM 3-8N/1.5	175	805	1135	1040	980	DN 50	G1	DN65	790	80	80	200	1100	400	65	80	10	15	155	190	213,0
FFS 11 EVM18 6F5/5.5	HVM 3-9N/1.5	175	805	1135	1040	1020	DN 50	G1	DN65	790	80	80	200	1100	400	65	80	10	15	155	190	216,0
FFS 11 EVM18 7F5/7.5	EVM 3 13N5/1.5	175	805	1135	1040	1060	DN 50	G1	DN65	790	80	80	200	1100	400	65	80	10	15	155	190	226,0
FFS 11 EVM18 8F5/7.5	EVM 3 15N5/1.5	175	805	1135	1040	1100	DN 50	G1	DN65	790	80	80	200	1100	400	65	80	10	15	155	190	228,0
FFS 11 EVM32 3-0F5/5.5	HVM 3-8N/1.5	190	1010	1340	1045	1030	DN65	G1	DN80	810	80	80	200	1180	400	100	100	20	20	240	240	277,0
FFS 11 EVM32 4-3F5/7.5	HVM 3-8N/1.5	190	1010	1340	1045	1075	DN65	G1	DN80	810	80	80	200	1180	400	100	100	20	20	240	240	285,0
FFS 11 EVM32 4-0F5/7.5	HVM 3-9N/1.5	190	1010	1340	1045	1075	DN65	G1	DN80	810	80	80	200	1180	400	100	100	20	20	240	240	285,0
FFS 11 EVM32 5-3F5/11	EVM 3 11N5/1.1	190	1010	1385	1045	1390	DN65	G1	DN80	810	80	80	245	1280	500	100	100	20	20	240	240	343,0
FFS 11 EVM32 5-0F5/11	EVM 3 13N5/1.5	190	1010	1385	1045	1390	DN65	G1	DN80	810	80	80	245	1280	500	100	100	20	20	240	240	347,0
FFS 11 EVM32 6-3F5/11	EVM 3 13N5/1.5	190	1010	1385	1045	1435	DN65	G1	DN80	810	80	80	245	1280	500	100	100	20	20	240	240	350,0
FFS 11 EVM32 6-0F5/11	EVM 3 13N5/1.5	190	1010	1385	1045	1435	DN65	G1	DN80	810	80	80	245	1280	500	100	100	20	20	240	240	352,0
FFS 11 EVM32 7-3F5/15	EVM 3 18F5/2.2	190	1010	1385	1045	1485	DN65	G1	DN80	810	80	80	245	1280	500	100	100	20	20	240	240	376,0
FFS 11 EVM45 3-2F5/11	HVM 3-8N/1.5	225	1065	1440	1050	1410	DN80	G1	DN100	855	85	85	245	1280	500	125	125	25	25	290	290	365,0
FFS 11 EVM45 3-0F5/11	HVM 3-8N/1.5	225	1065	1440	1050	1410	DN81	G2	DN101	855	85	85	245	1280	500	125	125	25	25	290	290	365,0
FFS 11 EVM45 4-2F5/15	HVM 3-9N/1.5	225	1065	1440	1050	1480	DN82	G3	DN102	855	85	85	245	1280	500	125	125	25	25	290	290	374,0
FFS 11 EVM45 4-0F5/15	EVM 3 13N5/1.5	225	1065	1440	1050	1480	DN83	G4	DN103	855	85	85	245	1280	500	125	125	25	25	290	290	376,0
FFS 11 EVM45 5-2F5/18.5	EVM 3 15N5/1.5	225	1065	1440	1050	1600	DN84	G5	DN104	855	85	85	245	1280	500	125	125	25	25	290	290	418,0
FFS 11 EVM45 5-0F5/18.5	EVM 3 15N5/1.5	225	1065	1440	1050	1600	DN85	G6	DN105	855	85	85	245	1280	500	125	125	25	25	290	290	418,0
FFS 11 EVM45 6-2F5/22	EVM 3 18F5/2.2	225	1065	1460	1050	1725	DN85	G6	DN105	855	85	85	265	1380	600	125	125	25	25	290	290	469,0
FFS 11 EVM64 3-3F5/15	HVM 3-8N/1.5	225	1125	1500	1050	1410	DN100	G1	DN125	870	85	85	245	1400	500	125	150	15	25	195	295	405,0
FFS 11 EVM64 3-2F5/15	HVM 3-8N/1.5	225	1125	1500	1050	1410	DN100	G1	DN125	870	85	85	245	1400	500	125	150	15	25	195	295	405,0
FFS 11 EVM64 3-1F5/15	HVM 3-8N/1.5	225	1125	1500	1050	1410	DN100	G1	DN125	870	85	85	245	1400	500	125	150	15	25	195	295	405,0
FFS 11 EVM64 3-0F5/18.5	HVM 3-9N/1.5	225	1125	1500	1050	1455	DN100	G1	DN125	870	85	85	245	1400	500	125	150	15	25	195	295	413,0
FFS 11 EVM64 4-3F5/18.5	EVM 3 11N5/1.1	225	1125	1500	1050	1525	DN100	G1	DN125	870	85	85	245	1400	500	125	150	15	25	195	295	420,0
FFS 11 EVM64 4-2F5/18.5	EVM 3 13N5/1.5	225	1125	1500	1050	1525	DN100	G1	DN125	870	85	85	245	1400	500	125	150	15	25	195	295	424,0
FFS 11 EVM64 4-1F5/22	EVM 3 13N5/1.5	225	1125	1520	1050	1580	DN100	G1	DN125	870	85	85	265	1500	600	125	150	15	25	195	295	468,0
FFS 11 EVM64 4-0F5/22	EVM 3 13N5/1.5	225	1125	1520	1050	1580	DN100	G1	DN125	870	85	85	265	1500	600	125	150	15	25	195	295	468,0
FFS 11 EVM64 5-3F5/30	EVM 3 15N5/1.5	225	1125	1595	1050	1735	DN100	G1	DN125	870	85	85	340	1500	600	125	150	15	25	195	295	524,0
FFS 11 EVM64 5-2F5/30	EVM 3 15N5/1.5	225	1125	1595	1050	1735	DN100	G1	DN125	870	85	85	340	1500	600	125	150	15	25	195	295	524,0
FFS 11 EVM64 5-1F5/30	EVM 3 15N5/1.5	225	1125	1595	1050	1735	DN100	G1	DN125	870	85	85	340	1500	600	125	150	15	25	195	295	524,0
FFS 11 EVM64 5-0F5/30	EVM 3 18F5/2.2	225	1125	1595	1050	1735	DN100	G1	DN125	870	85	85	340	1500	600	125	150	15	25	195	295	533,0

[1]= Underhead
[2]= Overhead

FFS21 DIMENSIONS - VERTICAL MULTISTAGE ELECTRIC PUMP (EVMG) + JOCKEY



Data under revision. For more information please contact our sales network.

FIRE-FIGHTING UNITS FFS EVMG

DIMENSIONS TABLE FFS21 EVMG

Model	Jockey pump	Dimensions [mm]																Weight [kg]			
		A	C	D	E	H	DN1	DN1-JP	DN2	R	M	Q	HQ	S	DN1-SK [1]	DN1-SK [2]	B2 [1]		B2 [2]	C2 [1]	C2 [2]
FFS 21 EVM5 7N5/1.5	HVM 3-8N/1.5	135	715	985	1380	770	G1 1/4	G1	G2	740	130	140	1020	400	65	65	15	15	205	205	208,0
FFS 21 EVM5 8N5/1.5	HVM 3-8N/1.5	135	715	985	1380	795	G1 1/4	G1	G2	740	130	140	1020	400	65	65	15	15	205	205	208,0
FFS 21 EVM5 10N5/2.2	EVM 3 11N5/1.1	135	715	985	1380	860	G1 1/4	G1	G2	740	130	140	1020	400	65	65	15	15	205	205	218,0
FFS 21 EVM5 11N5/2.2	EVM 3 13N5/1.5	135	715	985	1380	890	G1 1/4	G1	G2	740	130	140	1020	400	65	65	15	15	205	205	224,0
FFS 21 EVM5 12N5/2.2	EVM 3 13N5/1.5	135	715	985	1380	920	G1 1/4	G1	G2	740	130	140	1020	400	65	65	15	15	205	205	226,0
FFS 21 EVM5 14N5/3.0	EVM 3 15N5/1.5	135	715	990	1380	1025	G1 1/4	G1	G2	740	130	145	1020	400	65	65	15	15	205	205	238,0
FFS 21 EVM10 6N5/2.2	HVM 3-8N/1.5	165	765	1035	1380	825	G1 1/2	G1	DN65	780	130	140	1030	400	65	65	15	15	185	185	249,0
FFS 21 EVM10 8N5/3.0	HVM 3-9N/1.5	165	765	1040	1380	935	G1 1/2	G1	DN65	780	130	145	1030	400	65	65	15	15	185	185	269,0
FFS 21 EVM10 10N5/4.0	EVM 3 13N5/1.5	165	765	1040	1380	995	G1 1/2	G1	DN65	780	130	145	1030	400	65	65	15	15	185	185	289,0
FFS 21 EVM10 11N5/4.0	EVM 3 13N5/1.5	165	765	1040	1380	1025	G1 1/2	G1	DN65	780	130	145	1030	400	65	65	15	15	185	185	293,0
FFS 21 EVM10 12N5/5.5	EVM 3 15N5/1.5	165	765	1095	1380	1130	G1 1/2	G1	DN65	780	130	200	1030	400	65	65	15	15	185	185	331,0
FFS 21 EVM18 4F5/4.0	HVM 3-8N/1.5	175	815	1090	1380	865	DN 50	G1	DN80	795	130	145	1100	400	65	80	10	15	155	190	298,0
FFS 21 EVM18 5F5/5.5	HVM 3-8N/1.5	175	815	1145	1380	980	DN 50	G1	DN80	795	130	200	1100	400	65	80	10	15	155	190	336,0
FFS 21 EVM18 6F5/5.5	HVM 3-9N/1.5	175	815	1145	1380	1020	DN 50	G1	DN80	795	130	200	1100	400	65	80	10	15	155	190	343,0
FFS 21 EVM18 7F5/7.5	EVM 3 13N5/1.5	175	815	1145	1380	1060	DN 50	G1	DN80	795	130	200	1100	400	65	80	10	15	155	190	360,0
FFS 21 EVM18 8F5/7.5	EVM 3 15N5/1.5	175	815	1145	1380	1100	DN 50	G1	DN80	795	130	200	1100	400	65	80	10	15	155	190	362,0
FFS 21 EVM32 3-0F5/5.5	HVM 3-8N/1.5	190	1025	1355	1380	1030	DN65	G1	DN100	820	130	200	1180	400	100	100	20	20	240	240	464,0
FFS 21 EVM32 4-3F5/7.5	HVM 3-8N/1.5	190	1025	1355	1380	1075	DN65	G1	DN100	820	130	200	1180	400	100	100	20	20	240	240	479,0
FFS 21 EVM32 4-0F5/7.5	HVM 3-9N/1.5	190	1025	1355	1380	1075	DN65	G1	DN100	820	130	200	1180	400	100	100	20	20	240	240	479,0
FFS 21 EVM32 5-3F5/11	EVM 3 11N5/1.1	190	1025	1400	1400	1390	DN65	G1	DN100	820	130	245	1280	500	100	100	20	20	240	240	598,0
FFS 21 EVM32 5-0F5/11	EVM 3 13N5/1.5	190	1025	1400	1400	1390	DN65	G1	DN100	820	130	245	1280	500	100	100	20	20	240	240	602,0
FFS 21 EVM32 6-3F5/11	EVM 3 13N5/1.5	190	1025	1400	1400	1435	DN65	G1	DN100	820	130	245	1280	500	100	100	20	20	240	240	608,0
FFS 21 EVM32 6-0F5/11	EVM 3 15N5/1.5	190	1025	1400	1400	1435	DN65	G1	DN100	820	130	245	1280	500	100	100	20	20	240	240	610,0
FFS 21 EVM32 7-3F5/15	EVM 3 18F5/2.2	190	1025	1400	1400	1485	DN65	G1	DN100	820	130	245	1280	500	100	100	20	20	240	240	649,0
FFS 21 EVM45 3-2F5/11	HVM 3-8N/1.5	225	1080	1455	1400	1410	DN80	G1	DN125	870	130	245	1280	500	125	125	25	25	290	290	639,0
FFS 21 EVM45 3-0F5/11	HVM 3-8N/1.5	225	1080	1455	1400	1410	DN80	G1	DN125	870	130	245	1280	500	125	125	25	25	290	290	639,0
FFS 21 EVM45 4-2F5/15	HVM 3-9N/1.5	225	1080	1455	1400	1480	DN80	G1	DN125	870	130	245	1280	500	125	125	25	25	290	290	657,0
FFS 21 EVM45 4-0F5/15	EVM 3 13N5/1.5	225	1080	1455	1400	1480	DN80	G1	DN125	870	130	245	1280	500	125	125	25	25	290	290	659,0
FFS 21 EVM45 5-2F5/18.5	EVM 3 15N5/1.5	225	1080	1455	1400	1600	DN80	G1	DN125	870	130	245	1280	500	125	125	25	25	290	290	741,0
FFS 21 EVM45 5-0F5/18.5	EVM 3 15N5/1.5	225	1080	1455	1400	1600	DN80	G1	DN125	870	130	245	1280	500	125	125	25	25	290	290	741,0
FFS 21 EVM45 6-2F5/22	EVM 3 18F5/2.2	225	1080	1475	1600	1725	DN80	G1	DN125	870	130	265	1380	600	125	125	25	25	290	290	833,0
FFS 21 EVM64 3-3F5/15	HVM 3-8N/1.5	225	1140	1530	1400	1410	DN100	G1	DN150	885	145	245	1400	500	125	150	15	25	195	295	702,0
FFS 21 EVM64 3-2F5/15	HVM 3-8N/1.5	225	1140	1530	1400	1410	DN100	G1	DN150	885	145	245	1400	500	125	150	15	25	195	295	702,0
FFS 21 EVM64 3-1F5/15	HVM 3-8N/1.5	225	1140	1530	1400	1410	DN100	G1	DN150	885	145	245	1400	500	125	150	15	25	195	295	702,0
FFS 21 EVM64 3-0F5/18.5	HVM 3-9N/1.5	225	1140	1530	1400	1455	DN100	G1	DN150	885	145	245	1400	500	125	150	15	25	195	295	718,0
FFS 21 EVM64 4-3F5/18.5	EVM 3 11N5/1.1	225	1140	1530	1400	1525	DN100	G1	DN150	885	145	245	1400	500	125	150	15	25	195	295	734,0
FFS 21 EVM64 4-2F5/18.5	EVM 3 13N5/1.5	225	1140	1530	1400	1525	DN100	G1	DN150	885	145	245	1400	500	125	150	15	25	195	295	738,0
FFS 21 EVM64 4-1F5/22	EVM 3 13N5/1.5	225	1140	1550	1600	1580	DN100	G1	DN150	885	145	265	1500	600	125	150	15	25	195	295	828,0
FFS 21 EVM64 4-0F5/22	EVM 3 13N5/1.5	225	1140	1550	1600	1580	DN100	G1	DN150	885	145	265	1500	600	125	150	15	25	195	295	828,0
FFS 21 EVM64 5-3F5/30	EVM 3 15N5/1.5	225	1140	1625	1600	1735	DN100	G1	DN150	885	145	340	1500	600	125	150	15	25	195	295	938,0
FFS 21 EVM64 5-2F5/30	EVM 3 15N5/1.5	225	1140	1625	1600	1735	DN100	G1	DN150	885	145	340	1500	600	125	150	15	25	195	295	938,0
FFS 21 EVM64 5-1F5/30	EVM 3 15N5/1.5	225	1140	1625	1600	1735	DN100	G1	DN150	885	145	340	1500	600	125	150	15	25	195	295	938,0
FFS 21 EVM64 5-0F5/30	EVM 3 18F5/2.2	225	1140	1625	1600	1735	DN100	G1	DN150	885	145	340	1500	600	125	150	15	25	195	295	947,0

[1]= Underhead
[2]= Overhead