SIGMA GROUP a. s.

INDUSTRIAL PUMP DIVISION

GFPP, GFPT, GFVP, GFVT, GFRP, GFJP, GFAP, NFPU, NFVU, NFPT, NFVT, NFPM, NFVM, NFAU

SLUDGE PUMPS

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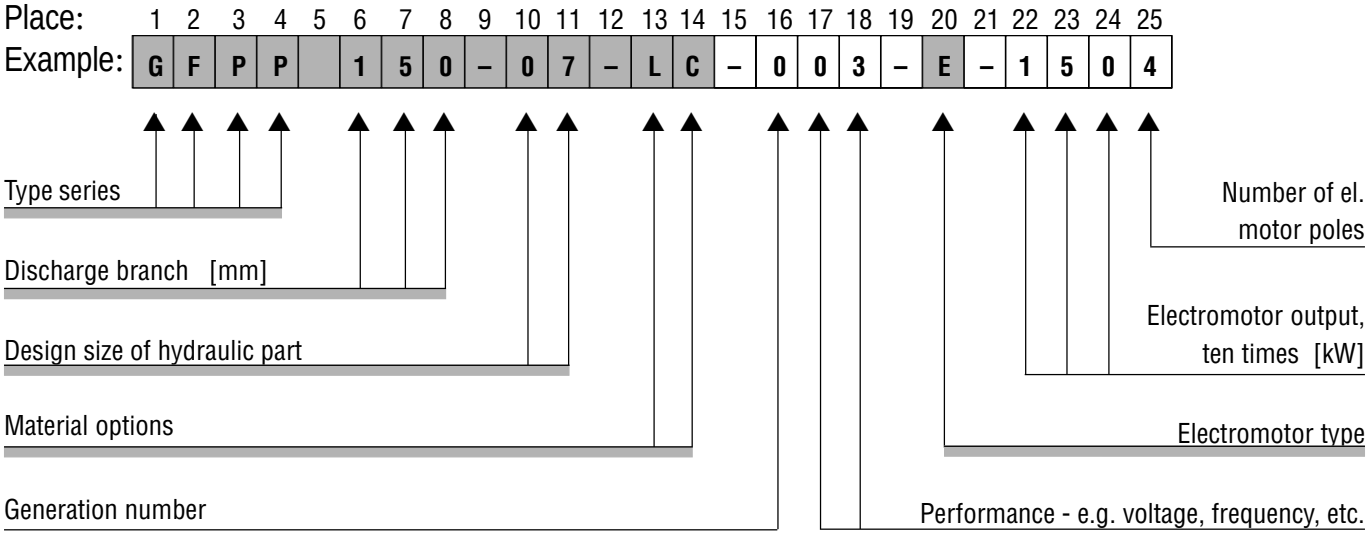
SYSTEM OF SUBMERSIBLE SLUDGE PUMPS DESIGNATION

General designation of pumps consists of the type series designation, the nominal inside diameter of discharge branch and the technical data. Type series designation is a combination of four capital letters. Meaning of the capital letters and technical data coding is stated hereinafter. In business documentation, the abbreviated designation is used there which consists of underlined characters only.



TYPE SERIES

1st place - basic design feature

G – Submersible volute pumps, also in dry sump with a possibility of submersion

N – Volute pumps for dry sump installation

2nd place – kind of pumped medium

F – sewage/sludge pump

3rd place – impeller form

A – axial flow impeller

J – single channel shrouded impeller

P – double channel shrouded impeller

R – vortex impeller

V – multichannel shrouded impeller

4th place – service location

P – stationary built-in wet sump pump with guide lowering mechanism

T – stationary built-in dry sump pump on foundation plate of the spiral

U – stationary built-in dry sump pump on foot bend

M – stationary built-in dry sump pump in horizontal close coupled design

MATERIAL OPTIONS

13th and 14th places

	Part	Material
LC	Stator parts, suction or discharge bend	Grey cast iron
	Shaft and connecting material in contact with pumped liquid	Corrosion-proof steel
	Impeller	Grey cast iron
	Wear rings	Chrome cast steel
LU	Stator parts, suction or discharge bend	Grey cast iron
	Shaft and connecting material in contact with pumped liquid	Corrosion-proof steel
	Impeller	Chrome cast steel
	Wear rings	Chrome cast steel
JU	Stator parts	Special treatment (e.g. ceramic coated grey cast iron)
	Other parts equal with version LU	

ELECTROMOTOR TYPE

20th place

E – Explosion-proof type, may be used in explosion hazard area

N – Basic type is not intended for application in explosion hazard area

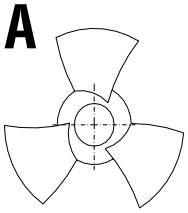
APPLICATION

Sludge pumps are intended for pumping of sewages, faeces and raw sludges containing non-abrasive little solids and fibrous matters, such as paper, rags, bandage cloth, odds and ends, as well as various street wastes, or slight amount of sand, ash, lump wood and other materials coming into sewerage system.

Max. density of pumped liquid	1050 kg/m^3	
Max. temperature of pumped liquid	40˚C	for wet sump pumps
Max. temperature of pumped liquid	60˚C	for dry sump pumps
Max. temperature of working area	40˚C	
Allowed range of pumped liquid pH-value	6,5-9 pH	

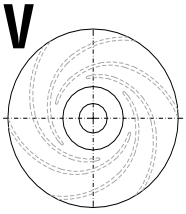
Other more unfavourable limiting factors and criteria by agreement with the manufacturer after judging by particular service conditions.

A



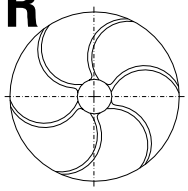
Pumps with the **axial flow impeller** are used for high capacities and low delivery heads. They are intended for mixing and pumping of sewage water, faeces and raw sludge containing no fibrous matter.

V



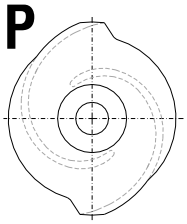
Pump versions with **multichannel** impeller are intended for pumping of slightly contamined water with content of non-abrasive solids up to 2 vol. percent. **They have the highest efficiency.**

R



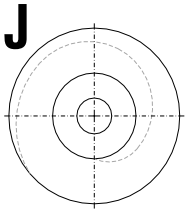
With the sludge pumps provided with the **vortex impeller**, no heavy abrasive wear occurs due to solid admixtures. They are cuccessfully used when pumping gassy and fibrous sewage and sludge.

P



Due to sufficient passing diameter, the sludge pumps with **double channel impeller** can be used for pumping of sludges and hydro-mixtures containing smaller solids. Compared with single channel impeller, it reaches **higher efficiency** and superior dynamic characteristics.

J



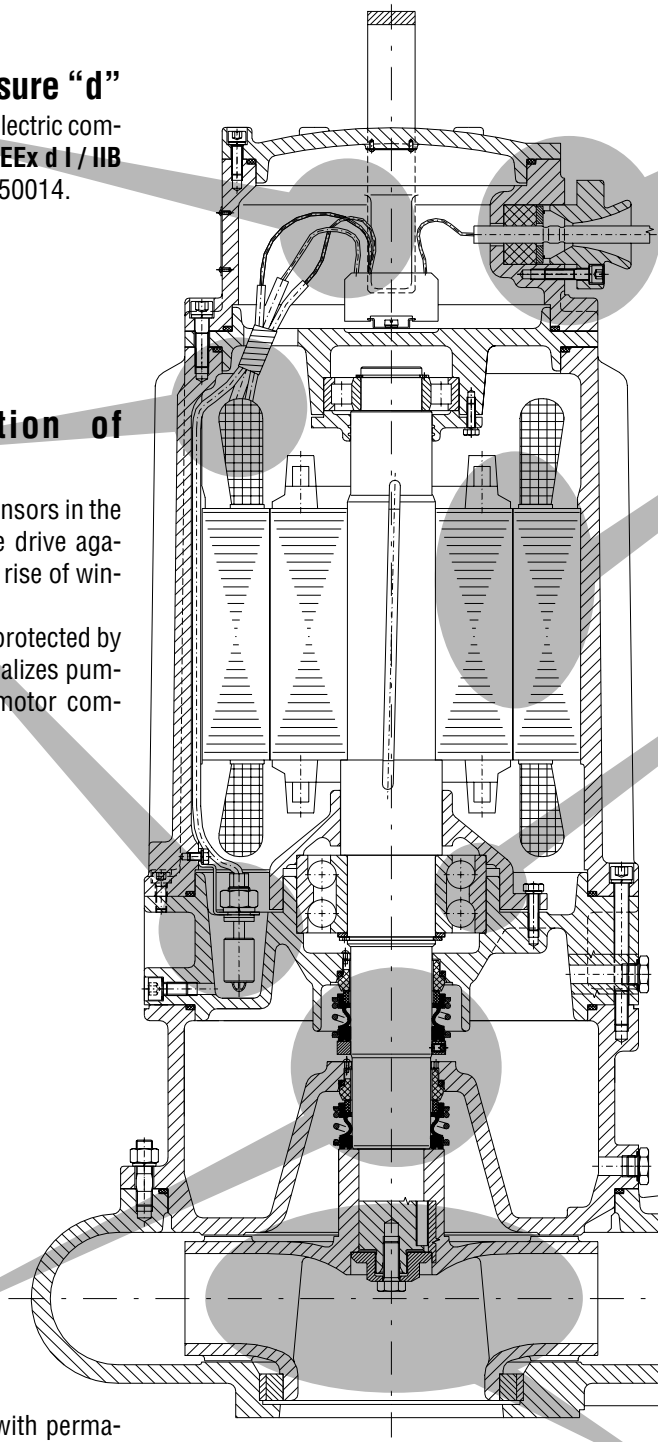
Pump versions with the **single channel impeller** are characterized by good-sized passing diameter for soft lump and fibrous contaminants.

CASCADE CONNECTION

Pump application is extended by possibility to connect two pumps in series for so-called cascade pumping. There are such situations, when one pump is not able to overcome higher delivery heads. Therefore, it is favourable to connect two equivalent pumps by means of which considerably higher delivery head can be obtained - practically double head with given capacity (flow rate).

DESIGN OF SUBMERSIBLE PUMPS

Submersible sludge pump is designed with built-in electromotor as a close coupled pump set.
It is intended for wet sump installation with guide lowering mechanism.
The pump is single stage, volute centrifugal pump with optional impeller type.



Flameproof enclosure “d”

With **E** design, the pump electric compartment is protected by **EEx d I / IIB T4** according to ČSN EN 50014.

Double protection of electromotor

Bimetallic temperature sensors in the motor winding guard the drive against damage at excessive rise of winding temperature.
The electromotor is also protected by leakage sensor what signalizes pumped liquid entering the motor compartment.

Seals

Two mechanical seals with permanent oil enclosure and lubrication from oil bath are used to prevent pumped liquid from hydraulic part entering the motor compartment.

Cables

Supply cables are resistant to oily liquids and sewages containing hydrocarbons.

Electromotor

The electric motor is three-phase induction motor for direct starting - D. The electromotor with the output 23 kW and higher can be supplied with wye-delta (Y/D) connection, too.

Bearings temperature guarding

As standard, the pumps with output above 50 kW are supplied with sensors for upper and lower bearings temperature.

Guide lowering mechanism - SZ

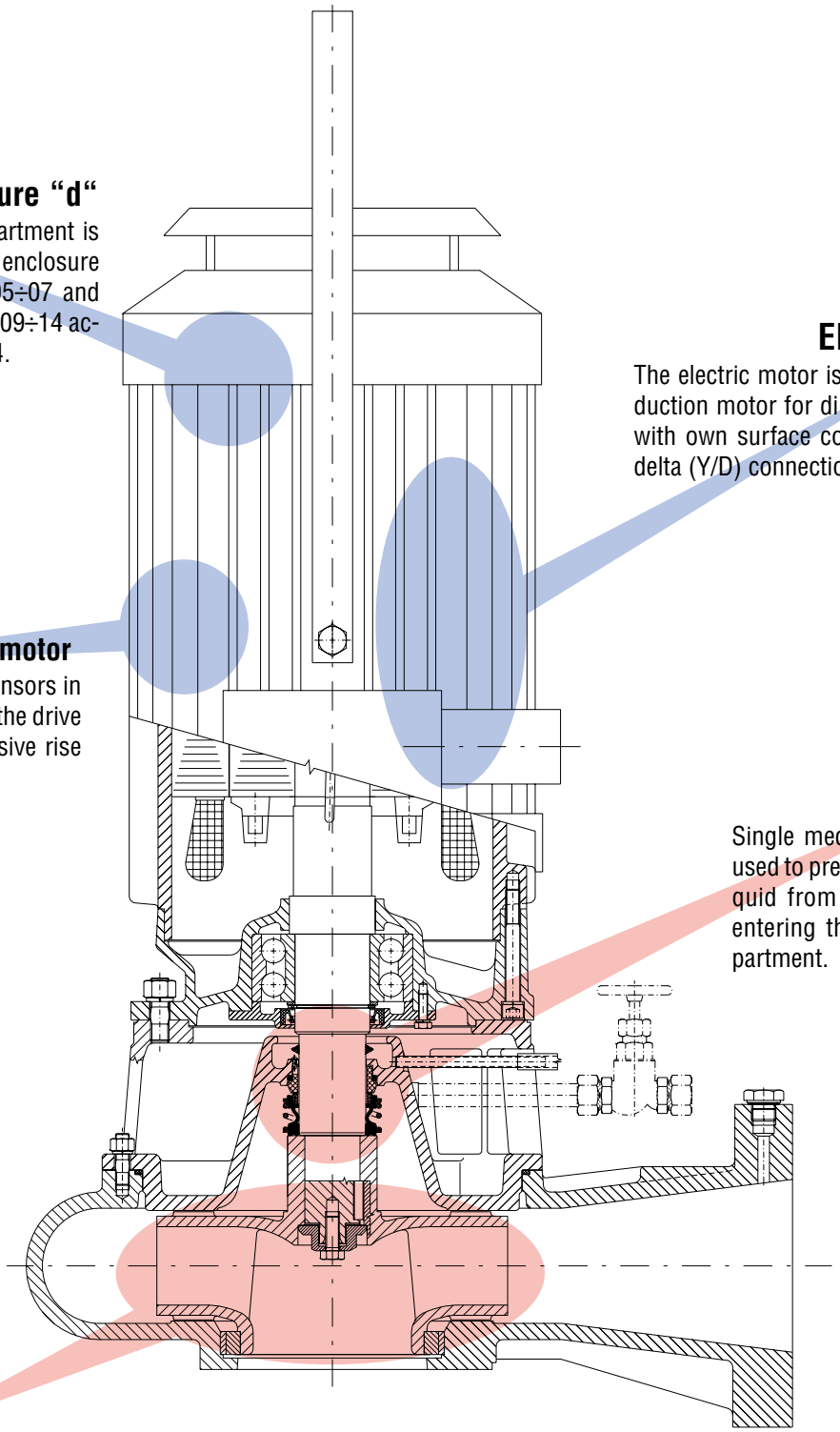
Lowered the pump into the sump, the specially arranged flanged joint will be tightened by dead-weight of the pump without any mounting. Similarly, the pump can be lifted from the sump for revision, repair or exchange.

Impeller

Optional impeller type according to liquid to be pumped.

DESIGN OF PUMPS FOR DRY SUMP INSTALLATION

The sludge pump is designed with built-in electromotor as a close coupled pump set.
It is intended for dry sump installation.
The pump is single stage, volute, centrifugal pump with optional impeller type.



Flameproof enclosure “d“

The motor electric compartment is protected by flameproof enclosure **EEx d I/IIC T4** for size 05÷07 and **EEx d I/IIB+H_2 T4** for size 09÷14 according to ČSN EN 50014.

Electromotor

The electric motor is three-phase induction motor for direct “D“ starting with own surface cooling. The wye-delta (Y/D) connection on demand.

Protection of electromotor

Bimetallic temperature sensors in the motor winding guard the drive against damage at excessive rise of winding temperature.

Seal

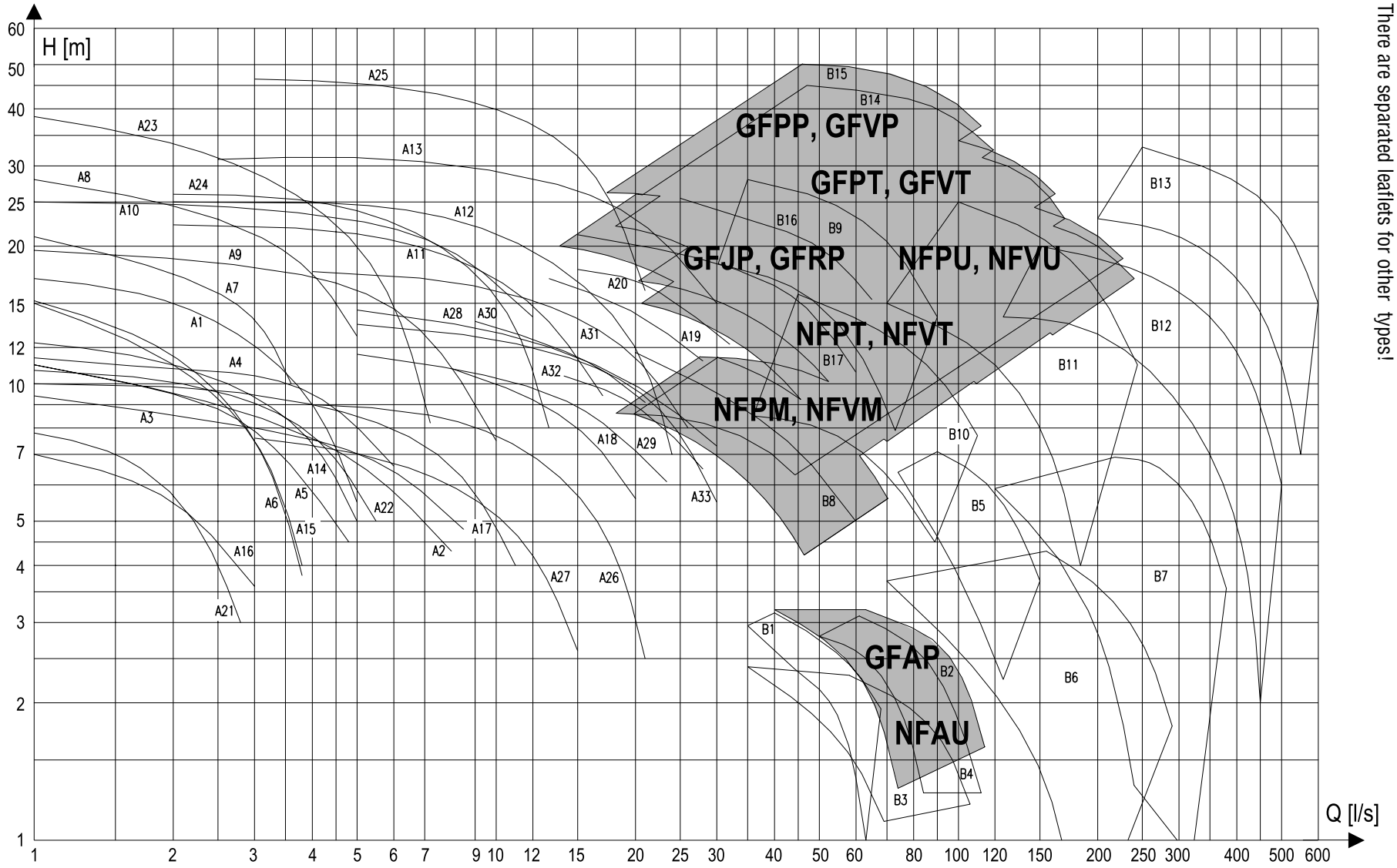
Single mechanical seal is used to prevent pumped liquid from hydraulic part entering the motor compartment.

Impeller

Optional impeller types according to liquid to be pumped.

AREA COVERED BY SLUDGE PUMPS

This document shows detail data for marked pumps only.
There are separated leaflets for other types!



The pumps A1 to A33 are manufactured and delivered by Divize spotřební čerpadla

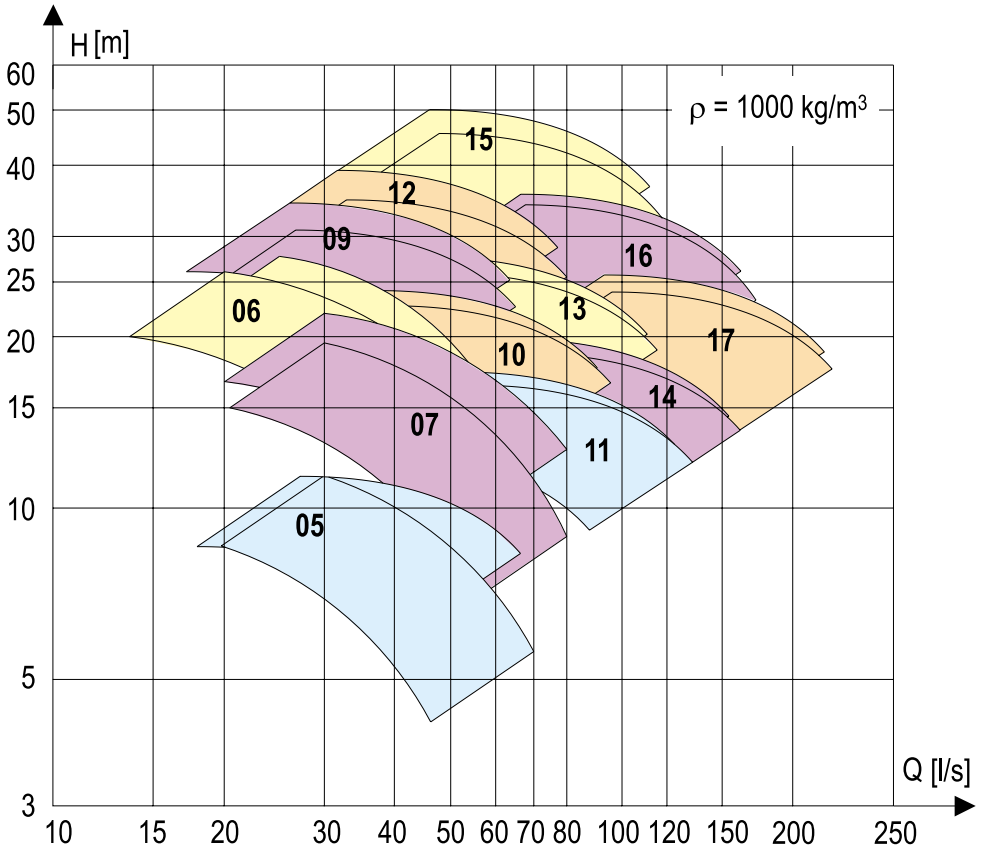
A1	40/50-GFDU	A10	80-KDFU-150-9,5	A19	100-GFHU-250-60	A28	GFJP 080-04-E
A2	50-GFEU	A11	80-KDFU-130-13	A20	100-GFHU-270-60	A29	GFRP 080-04-E
A3	50-GFLU	A12	100-KDFU-150-13,5	A21	GFRF-032-41	A30	GFPP/NFPU 065-01-E
A4	50-GFRU	A13	125-KDFU-170-17	A22	32-GFTU-95-11	A31	GFVP/NFVU 065-01-E
A5	50-GFSU	A14	40-GFPU-105-15	A23	KDDF 050-51	A32	GFPP/NFPU 100-02-E
A6	40/50-GFZU	A15	40-GFPU-105-8-2	A24	KDDF 080-01-E	A33	GFVP/NFVU 100-02-E
A7	GFZP-050-02	A16	40-GFPU-105-8	A25	KDDF 080-02-N		
A8	GFZP-050-03	A17	50-GFHU-105-70	A26	GFJP 080-02		
A9	65-KDFU-130-10	A18	80-GFHU-220-60	A27	GFRP 080-02		

The pumps B1 to B17 are manufactured and delivered by Divize průmyslová čerpadla

B1	**150-AFHU**	**B10**	**200-GFBU**
B2	**GFAP/NFAU 200-02**	**B11**	**250-GFBU**
B3	**200-AFG-120**	**B12**	**400-GDVU (744 rpm)**
B4	**200-AFG-67,5 (980 ot/min)**	**B13**	**400-GDVU (985 rpm)**
B5	**200-AFG-67,5 (1455 ot/min)**	**B14**	**GFPP/GFPT/NFPU/NFPT/NFPM (pump series)**
B6	**300-AFG-58,5 (740 ot/min)**	**B15**	**GFVP/GFVT/NFVU/NFVT/NFVM (pump series)**
B7	**300-AFG-58,5 (980 ot/min)**	**B16**	**GFJP**
B8	**150-GFHU-320 (6,5 kW)**	**B17**	**GFRP**
B9	**150-GFHU-315 (23 kW)**		

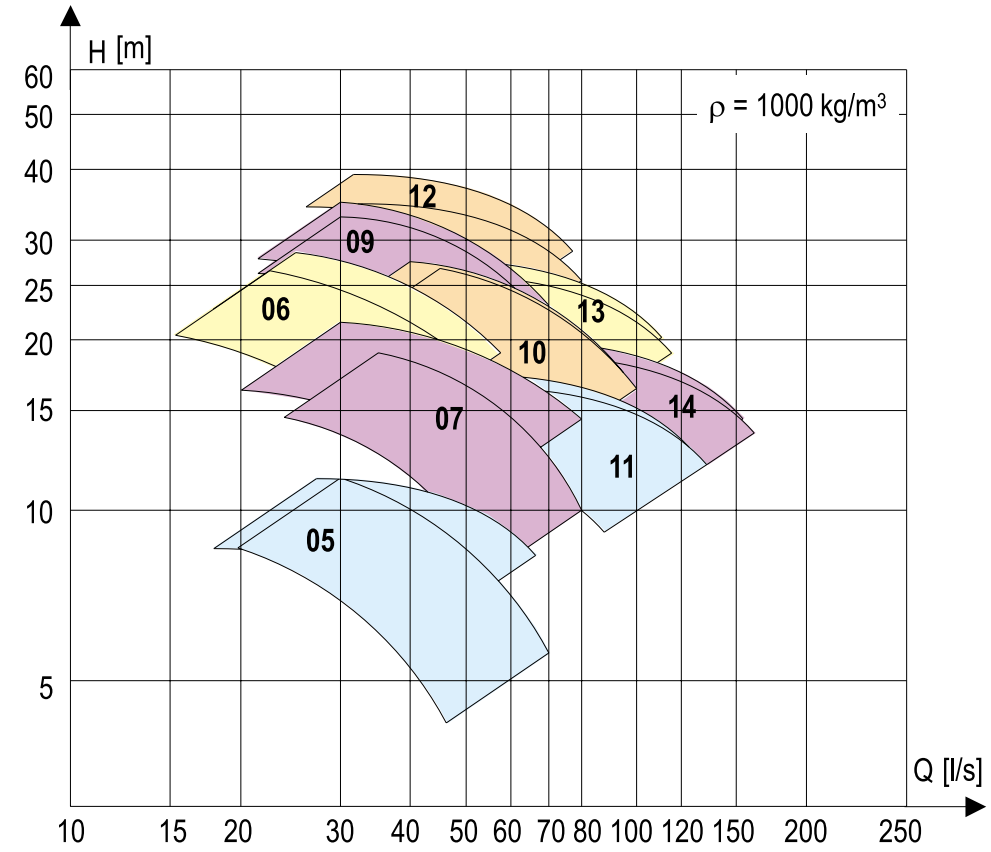
FIELD CHARTS FOR PUMP SERIES GFPP, GFVP, GFPT, GFVT

05	GFPP 150-05 GFVP 150-05
06	GFPP 100-06 GFVP 100-06
07	GFPP 150-07 GFVP 150-07
09	GFPP 125-09 GFVP 125-09
10	GFPP 150-10 GFVP 150-10
11	GFPP 200-11 GFVP 200-11
12	GFPP 125-12 GFVP 125-12
13	GFPP 150-13 GFVP 150-13
14	GFPP 200-14 GFVP 200-14
15	GFP^{P}_{T} 150-15 GFV^{P}_{T} 150-15
16	GFP^{P}_{T} 200-16 GFV^{P}_{T} 200-16
17	GFP^{P}_{T} 250-17 GFV^{P}_{T} 250-17



FIELD CHARTS FOR PUMP SERIES NFP^{U}_{M}, NFP^{T}_{M}, NFV^{U}_{M}, NFV^{T}_{M}

05	NFP^{U}_{M} 150-05 NFV^{U}_{M} 150-05
06	NFP^{U}_{M} 100-06 NFV^{U}_{M} 100-06
07	NFP^{U}_{M} 150-07 NFV^{U}_{M} 150-07
09	NFP^{T}_{M} 125-09 NFV^{T}_{M} 125-09
10	NFP^{T}_{M} 150-10 NFV^{T}_{M} 150-10
11	NFP^{T}_{M} 200-11 NFV^{T}_{M} 200-11
12	NFP^{T}_{M} 125-12 NFV^{T}_{M} 125-12
13	NFP^{T}_{M} 150-13 NFV^{T}_{M} 150-13
14	NFP^{T}_{M} 200-14 NFV^{T}_{M} 200-14

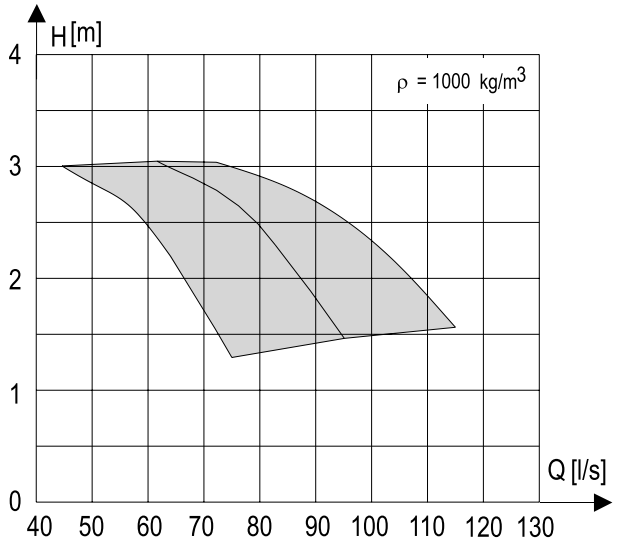


	axial flow impeller			application area		
02	A	GFAP 200–02–	LU	–E	SNM 2 ZONA 1	Ex I M2 II 2G	02
hydraulic size			material version		inexplosiveness category	

TECHNICAL DATA

Capacity	Q	l/s	45 ÷ 115
Delivery head	H	m	1,3 ÷ 3,1
Max. diameter of solids		mm	40x50
Discharge branch	DNv	mm	200
Electromotor			Special-purpose
Output	P	kW	7,5
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	rpm	1435
Current	I	A	15,2
Insulating protection			IP 68
Max. submersion depth		m	10

Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is 230 kg, weight of guide lowering mechanism is 162 kg.

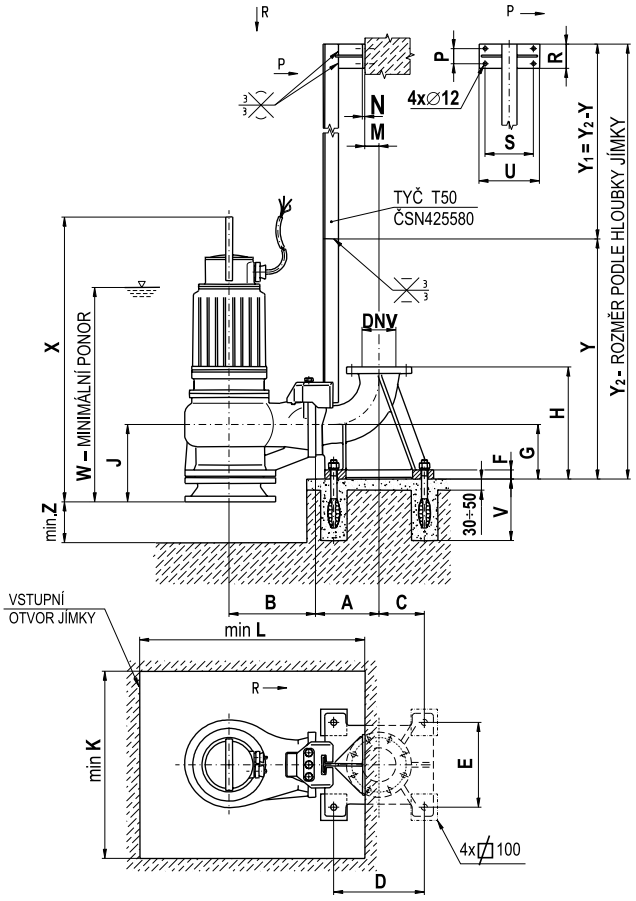


DIMENSIONAL DRAWING

DNv	A	B	C	D	E	F	G	H	J	K
200	350	285	225	450	400	30	300	590	320	1000

L	M	N	P	R	S	U	V	W	X	Y	Z
1100	184	8	45	75	160	200	290	800	1100	1830	300

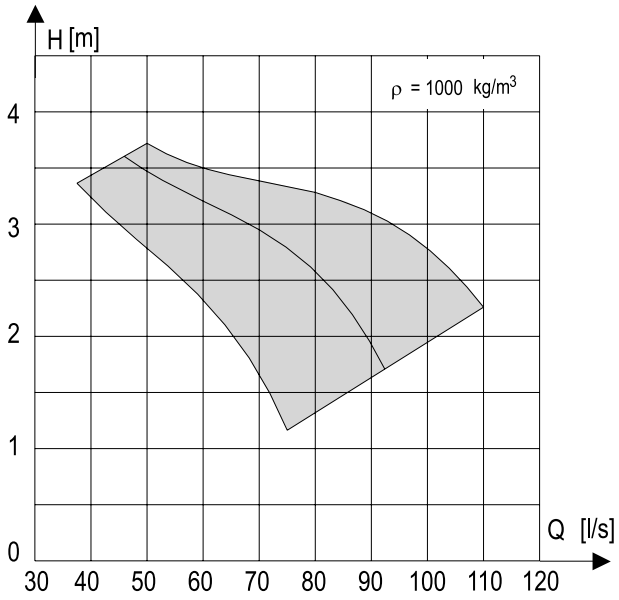
Flange of discharge bend branch DNv is designed with raised face for PN10 according to ČSN 13 1160.



	axial flow impeller			application area		
02	A	NFAU 200–02–	LU	–E	SNM 2 ZONA 1	Ex I M2 II 2G	02
hydraulic size			material version		inexplosiveness category	

TECHNICAL DATA

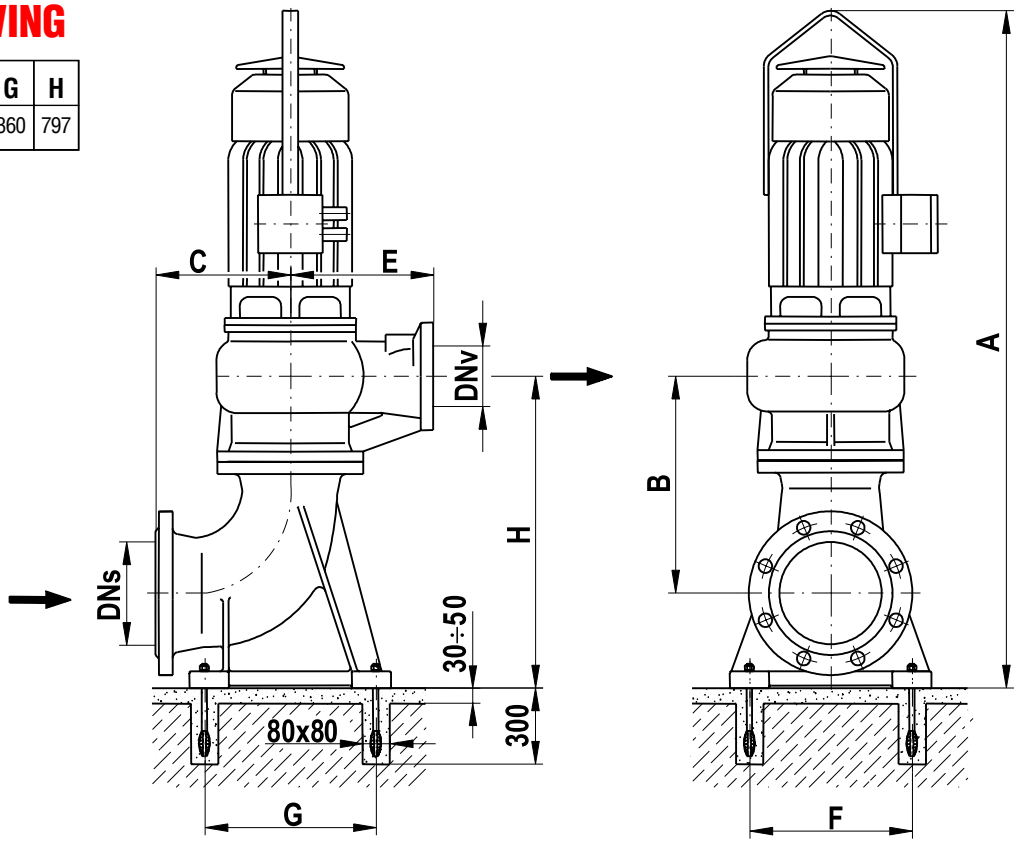
Capacity	Q	l/s	38 ÷ 110
Delivery head	H	m	1,2 ÷ 3,7
Max. diameter of solids		mm	40x50
Suction branch	DNs	mm	300
Discharge branch	DNv	mm	200
Elektromotor			Special-purpose
Output	P	kW	7,5
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1455
Current	I	A	16
Insulating protection			IP 55
Max. elevation above sea-level		m	1000



As standard, the supply cables **are not delivered** with the pump. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight including the suction bend is 327,5kg.

DIMENSIONAL DRAWING

DNs	DNv	A	B	C	E	F	G	H
300	200	1786	548	290	285	360	360	797



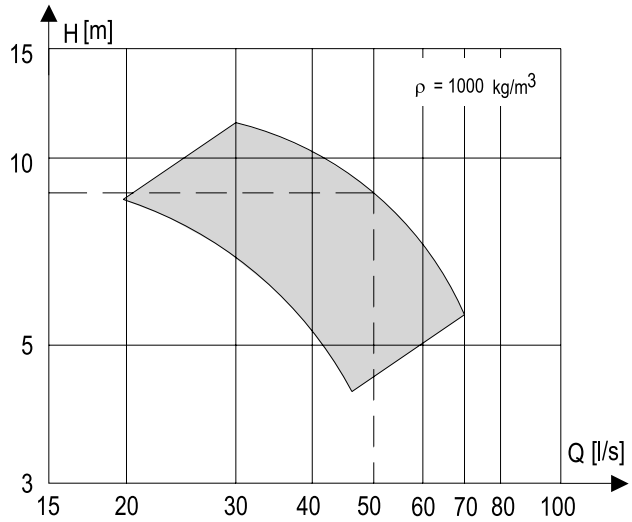
Flange of suction branch DNs is designed with raised face for PN6 and flange of discharge branch DNv is designed with raised face for PN10 according to ČSN 13 1160.

double channel impeller — application area

05	P	GFPP 150–05–	LC LU JU	–N E	SNM 2 ZONA 1	Ex I M2 II 2G	05
hydraulic size			material version			inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	50,0
Delivery head	H_{opt}	m	8,8
Input	P_C	kW	7,4
Max. diameter of solids		mm	71x67
Discharge branch	DN	mm	150
Elektromotor			Special-purpose
Output	P	kW	7,5
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1435
Current	I	A	15,2
Insulating protection			IP 68
Max. submersion depth		m	10



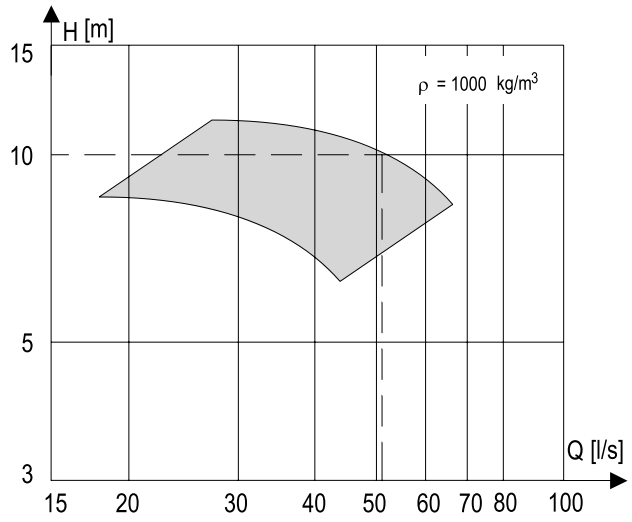
Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

multichannel impeller — application area

05	V	GFVP 150–05–	LC LU JU	–N E	SNM 2 ZONA 1	Ex I M2 II 2G	05
hydraulic size			material version			inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	51,0
Delivery head	H_{opt}	m	10,1
Input	P_C	kW	7,4
Max. diameter of solids		mm	20x53
Discharge branch	DN	mm	150
Elektromotor			Special-purpose
Output	P	kW	7,5
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1435
Current	I	A	15,2
Insulating protection			IP 68
Max. submersion depth		m	10



Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

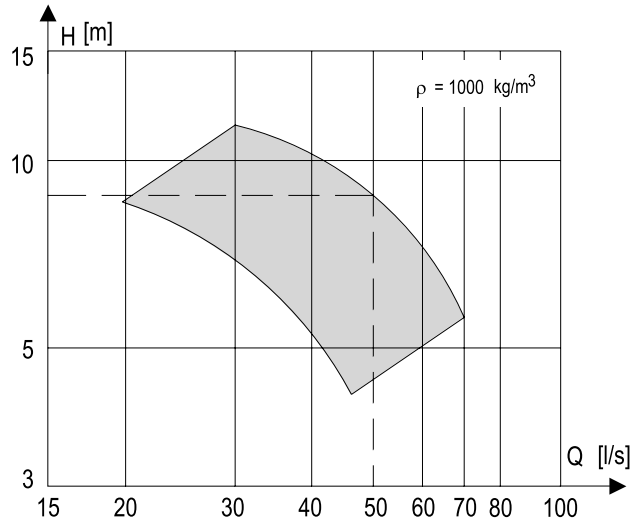
double channel impeller — application area

05	P	NFP U/M 150–05–	LC LU JU	–E	SNM 2 ZONA 1	Ex I M2 II 2G	05

hydraulic size — material version — inexplosiveness category

TECHNICAL DATA

Capacity	Q_{opt}	l/s	50,0
Delivery head	H_{opt}	m	8,8
Input	P_C	kW	7,4
Max. diameter of solids		mm	71x67
Suction branch	DNs	mm	150
Discharge branch	DNv	mm	150
Elektromotor			Special-purpose
Output	P	kW	7,5
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	965
Current	I	A	16,2
Insulating protection			IP 55
Max. elevation above sea-level		m	1000



As standard, the supply cables **are not delivered** with the pump.
There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

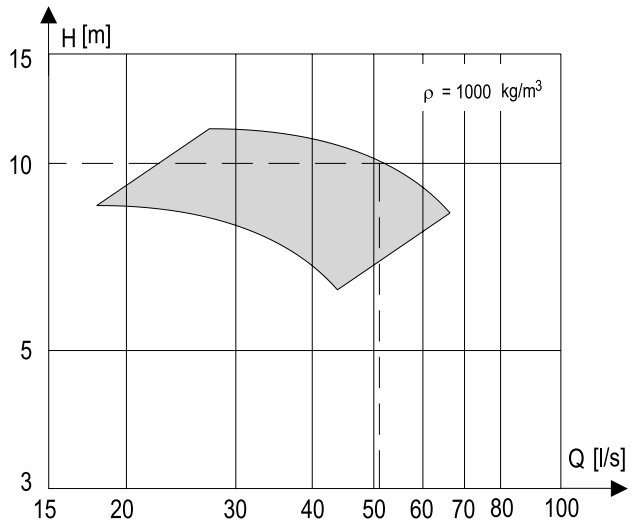
multichannel impeller — application area

05	V	NFV U/M 150–05–	LC LU JU	–E	SNM 2 ZONA 1	Ex I M2 II 2G	05

hydraulic size — material version — inexplosiveness category

TECHNICAL DATA

Capacity	Q_{opt}	l/s	51,0
Delivery head	H_{opt}	m	10,1
Input	P_C	kW	7,5
Max. diameter of solids		mm	20x53
Suction branch	DNs	mm	200
Discharge branch	DNv	mm	150
Elektromotor			Special-purpose
Output	P	kW	7,5
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	965
Current	I	A	16,2
Insulating protection			IP 55
Max. elevation above sea-level		m	1000

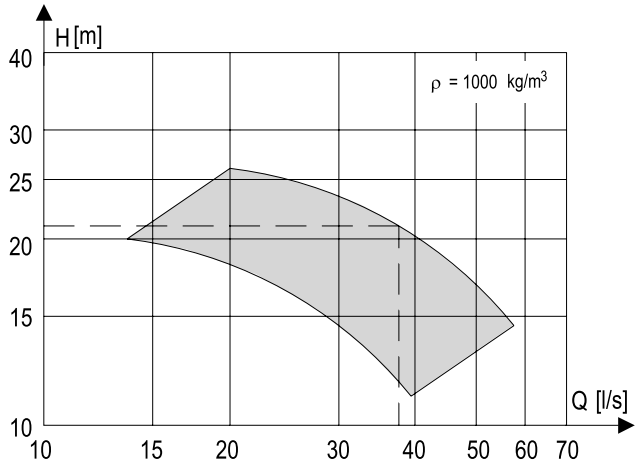


As standard, the supply cables **are not delivered** with the pump.
There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

	double channel impeller			application area		
06	P	GFPP 100–06–	LC LU JU – N E	SNM 2 ZONA 1	Ex I M2 II 2G	06
hydraulic size			material version		inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	37,5
Delivery head	H_{opt}	m	21,0
Input	P_c	kW	13,7
Max. diameter of solids		mm	62x49
Discharge branch	DNv	mm	100
Elektromotor			Special-purpose
Output	P	kW	15
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1460
Current	I	A	28,0
Insulating protection			IP 68
Max. submersion depth		m	10

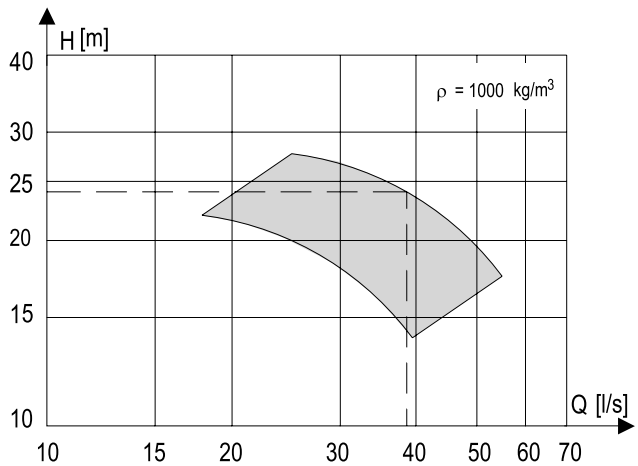


Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Hmotnost čerpadla je uvedena na rozměrovém náčrtu

	multichannel impeller			application area		
06	V	GFVP 100–06–	LC LU JU – N E	SNM 2 ZONA 1	Ex I M2 II 2G	06
hydraulic size			material version		inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	38,5
Delivery head	H_{opt}	m	24
Input	P_c	kW	13,8
Max. diameter of solids		mm	14x10
Discharge branch	DNv	mm	100
Elektromotor			Special-purpose
Output	P	kW	15
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1460
Current	I	A	28,0
Insulating protection			IP 68
Max. submersion depth		m	10



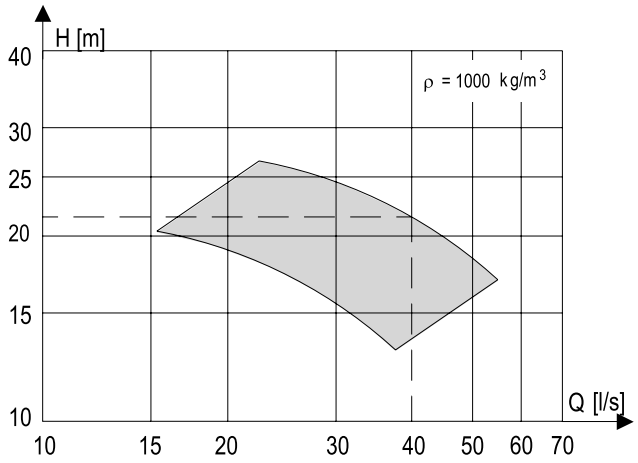
Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

double channel impeller — application area

06	P	NFP U/M 100–06–	LC LU JU	–E	SNM 2 ZONA 1	Ex I M2 II 2G	06
hydraulic size			material version		inexplosiveness category		

TECHNICAL DATA

Capacity	Q_{opt}	l/s	40,0
Delivery head	H_{opt}	m	21,5
Input	P_C	kW	13,7
Max. diameter of solids		mm	62x49
Suction branch	DNs	mm	125
Discharge branch	DNv	mm	100
Elektromotor			Special-purpose
Output	P	kW	15
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1460
Current	I	A	29,5
Insulating protection			IP 55
Max. elevation above sea-level		m	1000



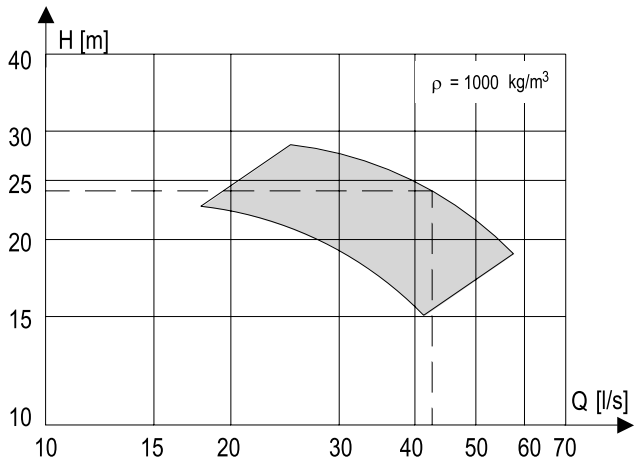
As standard, the supply cables **are not delivered** with the pump.
There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

multichannel impeller — application area

06	V	NFV U/M 100–06–	LC LU JU	–E	SNM 2 ZONA 1	Ex I M2 II 2G	06
hydraulic size			material version		inexplosiveness category		

TECHNICAL DATA

Capacity	Q_{opt}	l/s	42,5
Delivery head	H_{opt}	m	24,0
Input	P_C	kW	15
Max. diameter of solids		mm	14x10
Suction branch	DNs	mm	150
Discharge branch	DNv	mm	100
Elektromotor			Special-purpose
Output	P	kW	15
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1460
Current	I	A	29,5
Insulating protection			IP 55
Max. elevation above sea-level		m	1000



As standard, the supply cables **are not delivered** with the pump.
There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

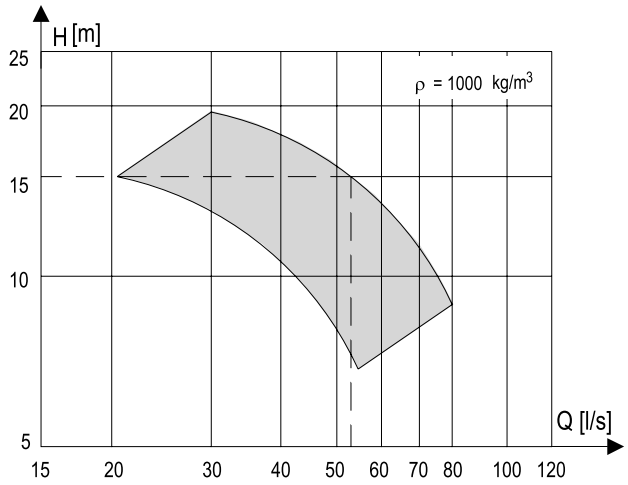
double channel impeller — application area

07	P	GFPP 150–07–	LC LU JU	–N E	SNM 2 ZONA 1	Ex I M2 II 2G	07

hydraulic size — material version — inexplosiveness category

TECHNICAL DATA

Capacity	Q_{opt}	l/s	53,0
Delivery head	H_{opt}	m	15,0
Input	P_c	kW	13,5
Max. diameter of solids		mm	66x61
Discharge branch	DNv	mm	150
Elektromotor			Special-purpose
Output	P	kW	15
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1460
Current	I	A	28,0
Insulating protection			IP 68
Max. submersion depth		m	10



Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

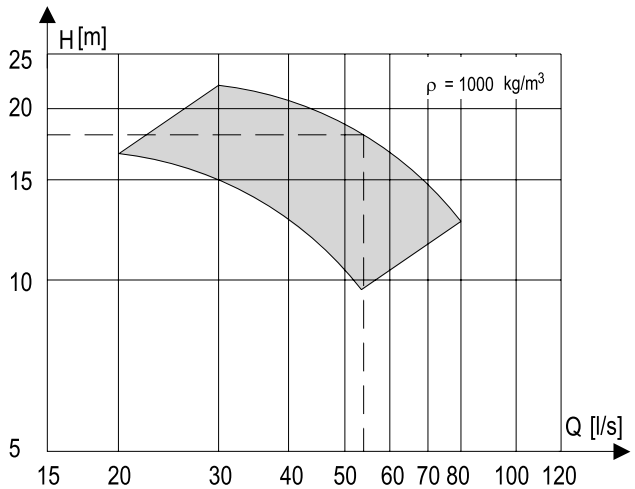
multichannel impeller — application area

07	V	GFVP 150–07–	LC LU JU	–N E	SNM 2 ZONA 1	Ex I M2 II 2G	07

hydraulic size — material version — inexplosiveness category

TECHNICAL DATA

Capacity	Q_{opt}	l/s	54,0
Delivery head	H_{opt}	m	18,0
Input	P_c	kW	14,5
Max. diameter of solids		mm	17x48
Discharge branch	DNv	mm	150
Elektromotor			Special-purpose
Output	P	kW	15
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1460
Current	I	A	28,0
Insulating protection			IP 68
Max. submersion depth		m	10



Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

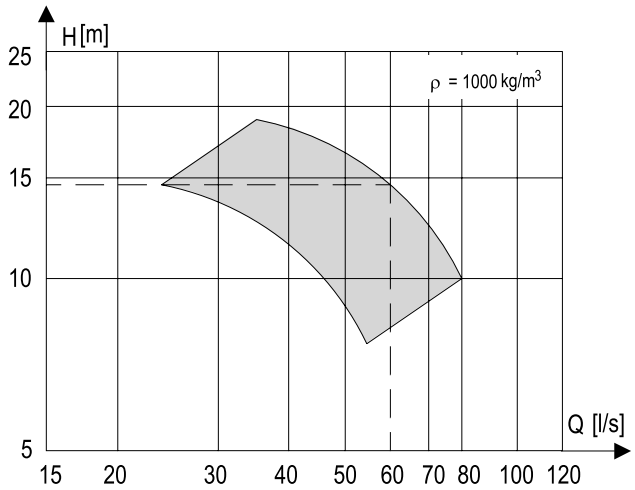
double channel impeller — application area

07	P	NFP U/M 150–07–	LC LU JU	–E	SNM 2 ZONA 1	Ex I M2 II 2G	07

hydraulic size — material version — inexplosiveness category

TECHNICAL DATA

Capacity	Q_{opt}	l/s	60,0
Delivery head	H_{opt}	m	14,6
Input	P_C	kW	14,5
Max. diameter of solids		mm	66x61
Suction branch	DNs	mm	150
Discharge branch	DNv	mm	150
Elektromotor			Special-purpose
Output	P	kW	15
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1460
Current	I	A	29,5
Insulating protection			IP 55
Max. elevation above sea-level		m	1000



As standard, the supply cables **are not delivered** with the pump. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

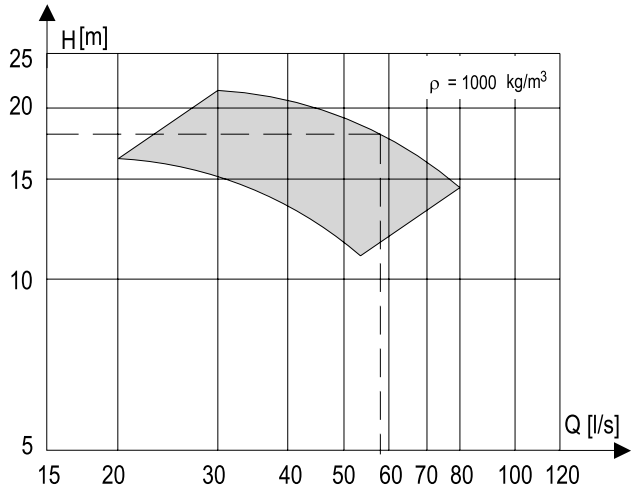
multichannel impeller — application area

07	V	NFV U/M 150–07–	LC LU JU	–E	SNM 2 ZONA 1	Ex I M2 II 2G	07

hydraulic size — material version — inexplosiveness category

TECHNICAL DATA

Capacity	Q_{opt}	l/s	58,0
Delivery head	H_{opt}	m	18,0
Input	P_C	kW	15,2
Max. diameter of solids		mm	17x48
Suction branch	DNs	mm	200
Discharge branch	DNv	mm	150
Elektromotor			Special-purpose
Output	P	kW	15
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1460
Current	I	A	29,5
Insulating protection			IP 55
Max. elevation above sea-level		m	1000

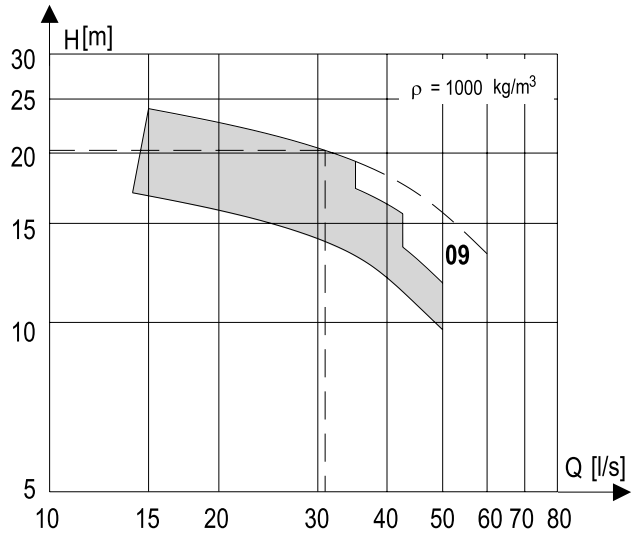


As standard, the supply cables **are not delivered** with the pump. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

	vortex impeller			application area		
08	R	GFRP 100–08–	LC LU JU	–N E SNM 2 ZONA 1	Ex I M2 II 2G	08
hydraulic size			material version		inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	31,0
Delivery head	H_{opt}	m	20,2
Input	P_c	kW	15,0
Max. diameter of solids		mm	∅73
Discharge branch	DNv	mm	100
Elektromotor			Special-purpose
Output	P	kW	15
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1460
Current	I	A	28,0
Insulating protection			IP 68
Max. submersion depth		m	10

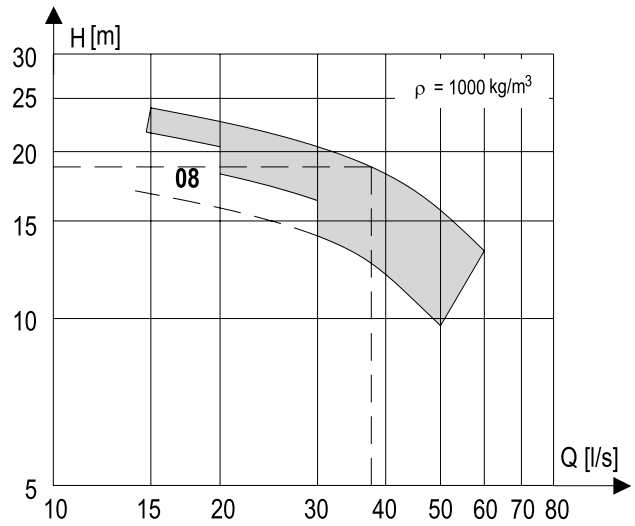


Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

	vortex impeller			application area		
09	R	GFRP 100–09–	LC LU JU	–N E SNM 2 ZONA 1	Ex I M2 II 2G	09
hydraulic size			material version		inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	37,5
Delivery head	H_{opt}	m	18,7
Input	P_c	kW	17,0
Max. diameter of solids		mm	∅73
Discharge branch	DNv	mm	100
Elektromotor			Special-purpose
Output	P	kW	23
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1450
Current	I	A	44,6
Insulating protection			IP 68
Max. submersion depth		m	10

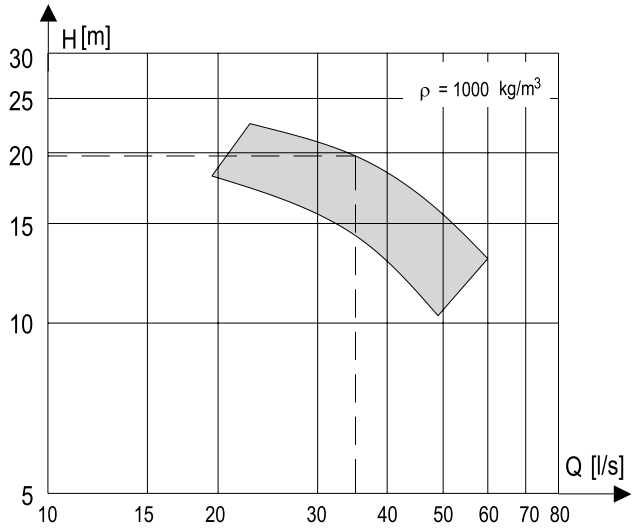


Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

	single channel impeller			application area		
08	J	GFJP 100–08–	LC LU JU – N E	SNM 2 ZONA 1	Ex I M2 II 2G	08
hydraulic size			material version		inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	35,0
Delivery head	H_{opt}	m	19,7
Input	P_c	kW	13,0
Max. diameter of solids		mm	∅86
Discharge branch	DNv	mm	100
Elektromotor			Special-purpose
Output	P	kW	15
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1460
Current	I	A	28,0
Insulating protection			IP 68
Max. submersion depth		m	10

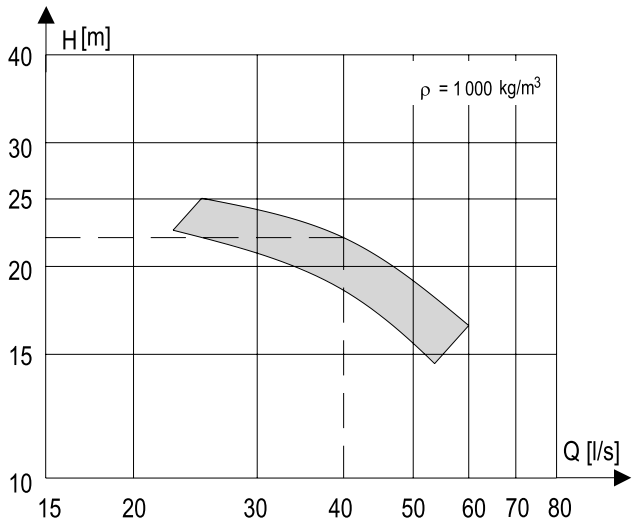


Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

	single channel impeller			application area		
09	J	GFJP 100–09–	LC LU JU – N E	SNM 2 ZONA 1	Ex I M2 II 2G	09
hydraulic size			material version		inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	40,0
Delivery head	H_{opt}	m	22,0
Input	P_c	kW	16,5
Max. diameter of solids		mm	∅86
Discharge branch	DNv	mm	100
Elektromotor			Special-purpose
Output	P	kW	23
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1450
Current	I	A	44,6
Insulating protection			IP 68
Max. submersion depth		m	10



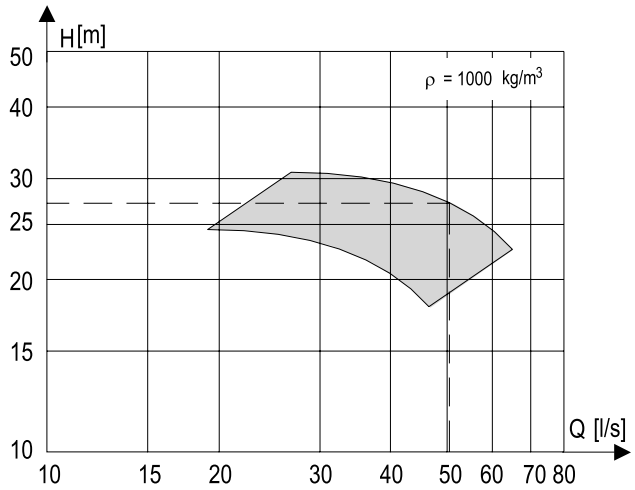
Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

double channel impeller — application area

09	P	GFPP 125–09–	LC LU JU	–N E	SNM 2 ZONA 1	Ex I M2 II 2G	09
hydraulic size			material version			inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	50,5
Delivery head	H_{opt}	m	27,2
Input	P_c	kW	22,1
Max. diameter of solids		mm	66x52
Discharge branch	DNv	mm	125
Elektromotor			Special-purpose
Output	P	kW	23
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1450
Current	I	A	44,6
Insulating protection			IP 68
Max. submersion depth		m	10



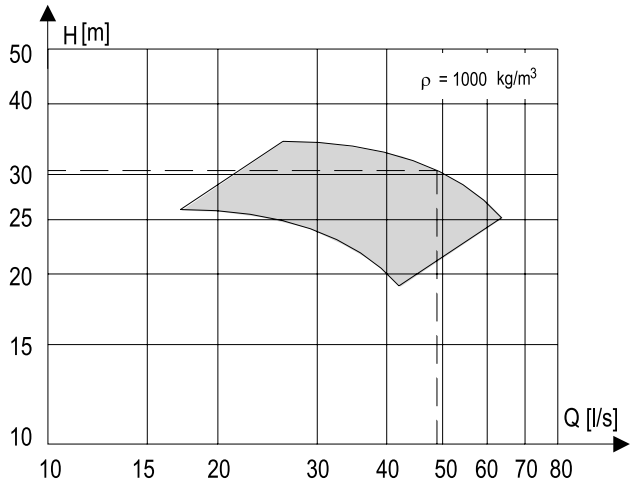
Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

multichannel impeller — application area

09	V	GFVP 125–09–	LC LU JU	–N E	SNM 2 ZONA 1	Ex I M2 II 2G	09
hydraulic size			material version			inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	48,9
Delivery head	H_{opt}	m	30,5
Input	P_c	kW	22,1
Max. diameter of solids		mm	17x43
Discharge branch	DNv	mm	125
Elektromotor			Special-purpose
Output	P	kW	23
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1450
Current	I	A	44,6
Insulating protection			IP 68
Max. submersion depth		m	10



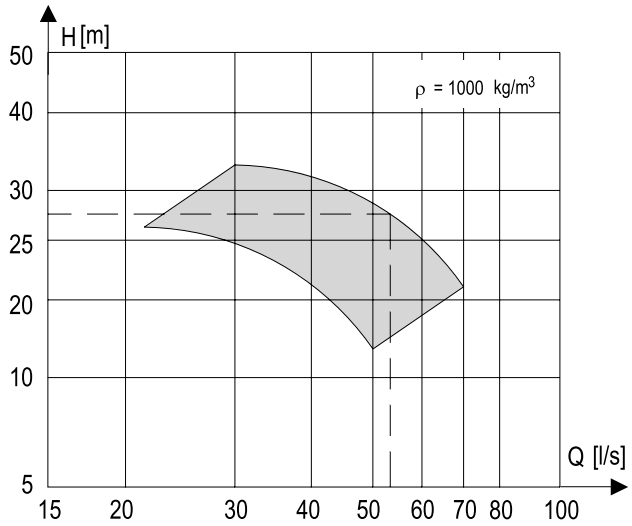
Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

double channel impeller — application area

09	P	NFP$^{T}_{M}$ 125–09–	LC LU JU	–E	SNM 2 ZONA 1	Ex I M2 II 2G	09
hydraulic size			material version			inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	53,4
Delivery head	H_{opt}	m	27,5
Input	P_C	kW	22,0
Max. diameter of solids		mm	66x52
Suction branch	DNs	mm	125
Discharge branch	DNv	mm	125
Elektromotor			Special-purpose
Output	P	kW	22
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1460
Current	I	A	40,4
Insulating protection			IP 55
Max. elevation above sea-level		m	1000



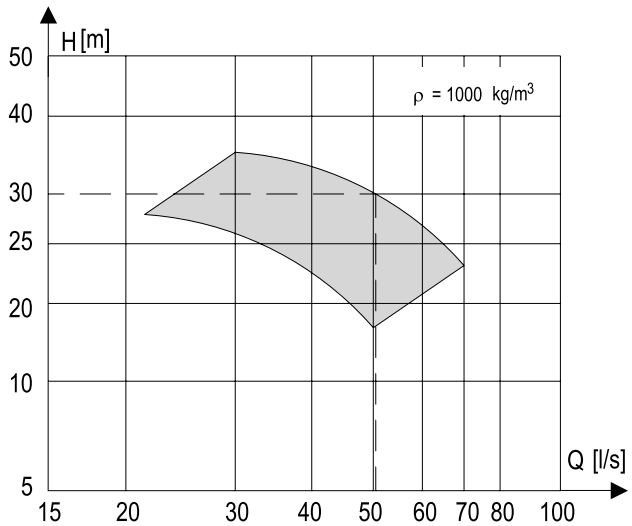
As standard, the supply cables **are not delivered** with the pump.
There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

multichannel impeller — application area

09	V	NFV$^{T}_{M}$ 125–09–	LC LU JU	–E	SNM 2 ZONA 1	Ex I M2 II 2G	09
hydraulic size			material version			inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	50,5
Delivery head	H_{opt}	m	30,0
Input	P_C	kW	21,0
Max. diameter of solids		mm	17x43
Suction branch	DNs	mm	150
Discharge branch	DNv	mm	125
Elektromotor			Special-purpose
Output	P	kW	22
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1460
Current	I	A	40,4
Insulating protection			IP 55
Max. elevation above sea-level		m	1000



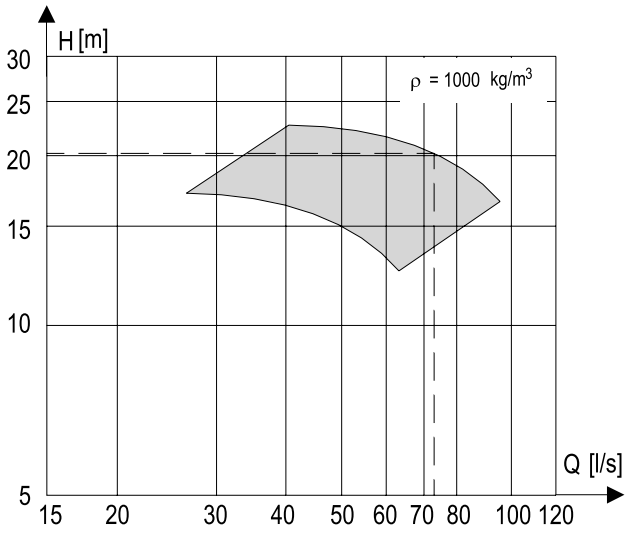
As standard, the supply cables **are not delivered** with the pump.
There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

double channel impeller — application area

10	P	GFPP 150–10–	LC LU JU	–N E	SNM 2 ZONA 1	Ex I M2 II 2G	10
hydraulic size			material version			inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	73,0
Delivery head	H_{opt}	m	20,2
Input	P_c	kW	22,5
Max. diameter of solids		mm	71x67
Discharge branch	DNv	mm	150
Elektromotor			Special-purpose
Output	P	kW	23
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1450
Current	I	A	44,6
Insulating protection			IP 68
Max. submersion depth		m	10



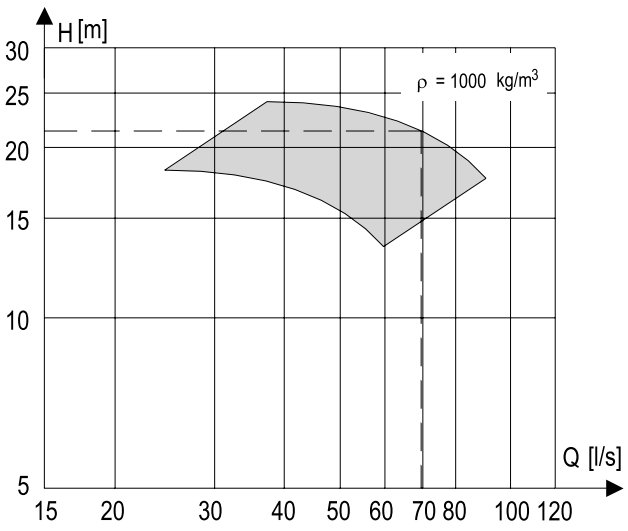
Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

multichannel impeller — application area

10	V	GFVP 150–10–	LC LU JU	–N E	SNM 2 ZONA 1	Ex I M2 II 2G	10
hydraulic size			material version			inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	69,6
Delivery head	H_{opt}	m	21,4
Input	P_c	kW	21,5
Max. diameter of solids		mm	20x53
Discharge branch	DNv	mm	150
Elektromotor			Special-purpose
Output	P	kW	23
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1450
Current	I	A	44,6
Insulating protection			IP 68
Max. submersion depth		m	10



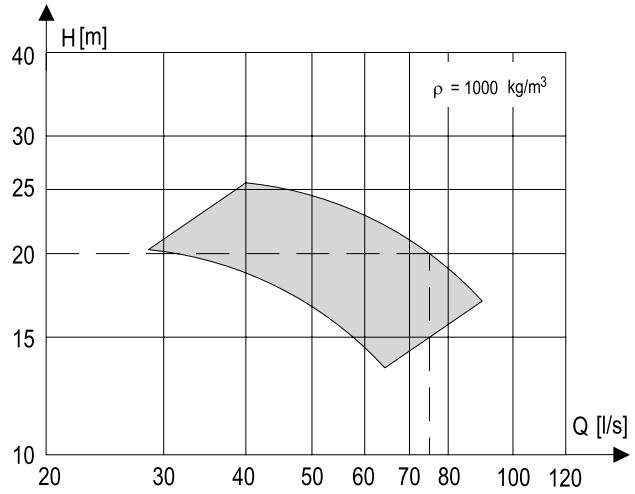
Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

double channel impeller — application area

10	P	NFP U/M 150–10–	LC LU JU	–E	SNM 2 ZONA 1	Ex I M2 II 2G	10
hydraulic size			material version			inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	75,0
Delivery head	H_{opt}	m	20,0
Input	P_c	kW	22,1
Max. diameter of solids		mm	71x67
Suction branch	DNs	mm	150
Discharge branch	DNv	mm	150
Elektromotor			Special-purpose
Output	P	kW	22
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1460
Current	I	A	40,4
Insulating protection			IP 55
Max. elevation above sea-level		m	1000



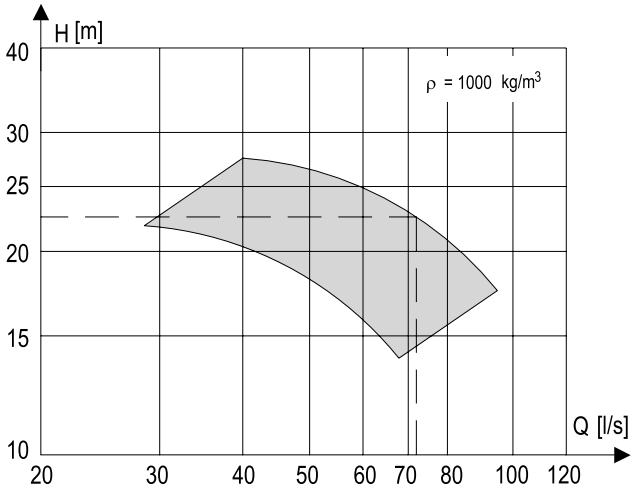
As standard, the supply cables **are not delivered** with the pump.
There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

multichannel impeller — application area

10	V	NFV U/M 150–10–	LC LU JU	–E	SNM 2 ZONA 1	Ex I M2 II 2G	10
hydraulic size			material version			inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	72,0
Delivery head	H_{opt}	m	22,5
Input	P_c	kW	22,0
Max. diameter of solids		mm	17x48
Suction branch	DNs	mm	200
Discharge branch	DNv	mm	150
Elektromotor			Special-purpose
Output	P	kW	22
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1460
Current	I	A	40,4
Insulating protection			IP 55
Max. elevation above sea-level		m	1000

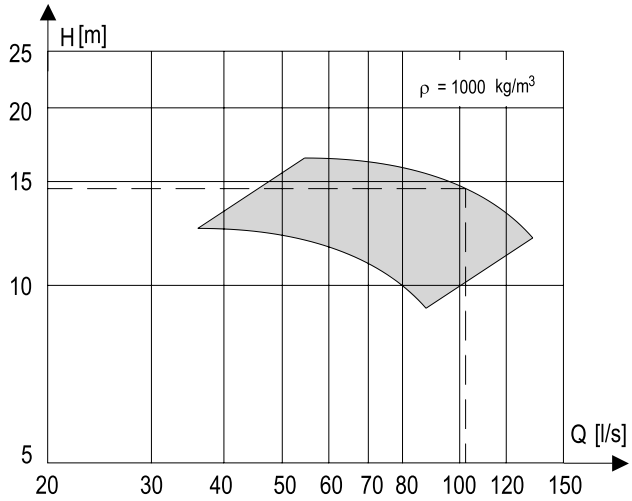


As standard, the supply cables **are not delivered** with the pump.
There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

	double channel impeller			application area		
11	P	GFPP 200–11–	LC LU JU	–N E	SNM 2 ZONA 1	I M2 II 2G	11
hydraulic size			material version		inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	102,3
Delivery head	H_{opt}	m	14,6
Input	P_c	kW	21,4
Max. diameter of solids		mm	90x87
Discharge branch	DNv	mm	200
Elektromotor			Special-purpose
Output	P	kW	23
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1450
Current	I	A	44,6
Insulating protection			IP 68
Max. submersion depth		m	10

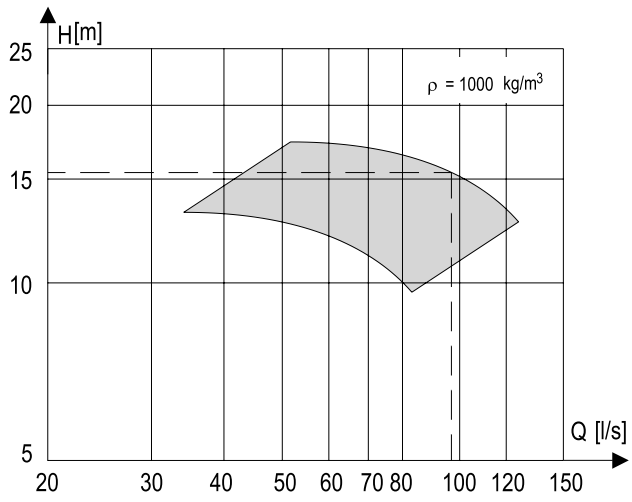


Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

	multichannel impeller			application area		
11	V	GFVP 200–11–	LC LU JU	–N E	SNM 2 ZONA 1	I M2 II 2G	11
hydraulic size			material version		inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	96,8
Delivery head	H_{opt}	m	15,4
Input	P_c	kW	21,4
Max. diameter of solids		mm	25x67
Discharge branch	DNv	mm	200
Elektromotor			Special-purpose
Output	P	kW	23
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1450
Current	I	A	44,6
Insulating protection			IP 68
Max. submersion depth		m	10



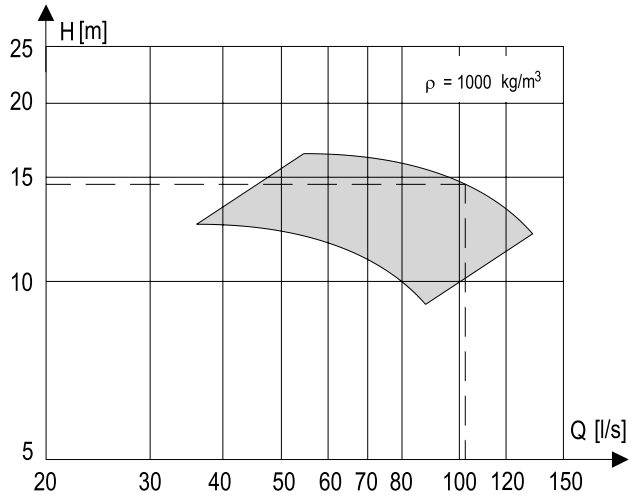
Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

double channel impeller — application area

11	P	NFP$^{T}_{M}$ 200–11–	LC LU JU	–E	SNM 2 ZONA 1	Ex I M2 II 2G	11
hydraulic size			material version			inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	102,0
Delivery head	H_{opt}	m	14,5
Input	P_c	kW	21,8
Max. diameter of solids		mm	90x87
Suction branch	DNs	mm	200
Discharge branch	DNv	mm	200
Elektromotor			Special-purpose
Output	P	kW	22
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	975
Current	I	A	42,7
Insulating protection			IP 55
Max. elevation above sea-level		m	1000



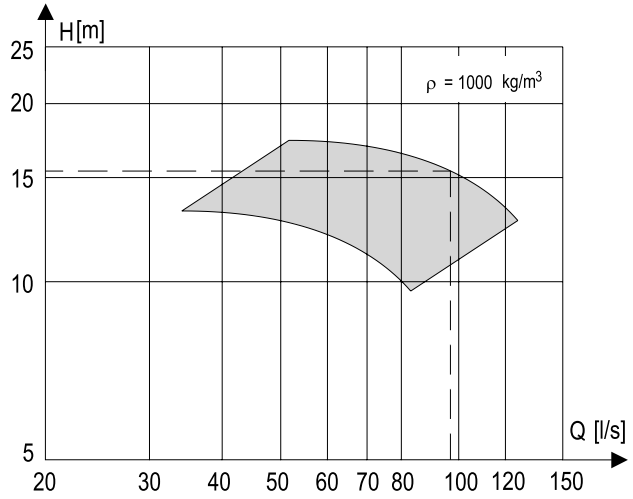
As standard, the supply cables **are not delivered** with the pump.
There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

multichannel impeller — application area

11	V	NFV$^{T}_{M}$ 200–11–	LC LU JU	–E	SNM 2 ZONA 1	Ex I M2 II 2G	11
hydraulic size			material version			inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	96,8
Delivery head	H_{opt}	m	15,4
Input	P_c	kW	21,9
Max. diameter of solids		mm	25x67
Suction branch	DNs	mm	250
Discharge branch	DNv	mm	200
Elektromotor			Special-purpose
Output	P	kW	22
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	975
Current	I	A	42,7
Insulating protection			IP 55
Max. elevation above sea-level		m	1000



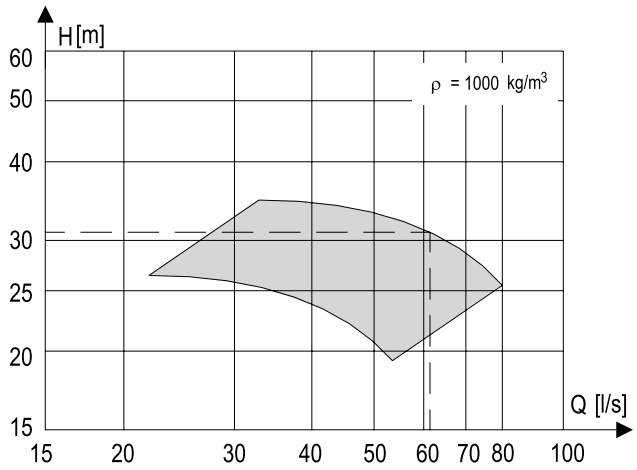
As standard, the supply cables **are not delivered** with the pump.
There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

double channel impeller — application area

12	P	GFPP 125–12–	LC LU JU	–N E	SNM 2 ZONA 1	Ex I M2 II 2G	12
hydraulic size			material version			inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	61,4
Delivery head	H_{opt}	m	30,9
Input	P_c	kW	29,8
Max. diameter of solids		mm	71x57
Discharge branch	DNv	mm	125
Elektromotor			Special-purpose
Output	P	kW	37
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1455
Current	I	A	65,5
Insulating protection			IP 68
Max. submersion depth		m	10



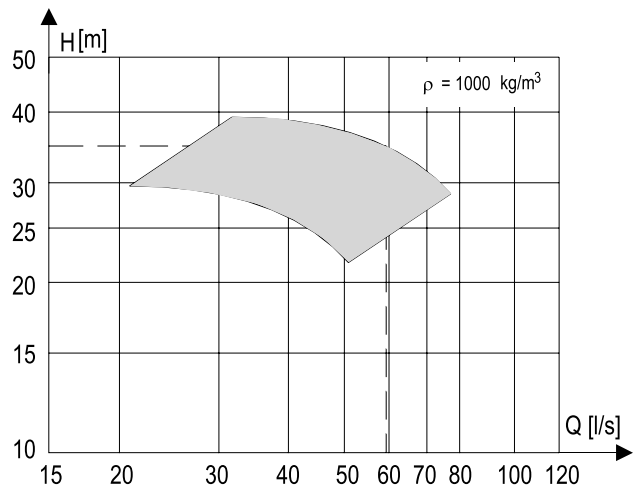
Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

multichannel impeller — application area

12	V	GFVP 125–12–	LC LU JU	–N E	SNM 2 ZONA 1	Ex I M2 II 2G	12
hydraulic size			material version			inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	59,3
Delivery head	H_{opt}	m	34,8
Input	P_c	kW	29,8
Max. diameter of solids		mm	27x46
Discharge branch	DNv	mm	125
Elektromotor			Special-purpose
Output	P	kW	37
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1455
Current	I	A	65,5
Insulating protection			IP 68
Max. submersion depth		m	10



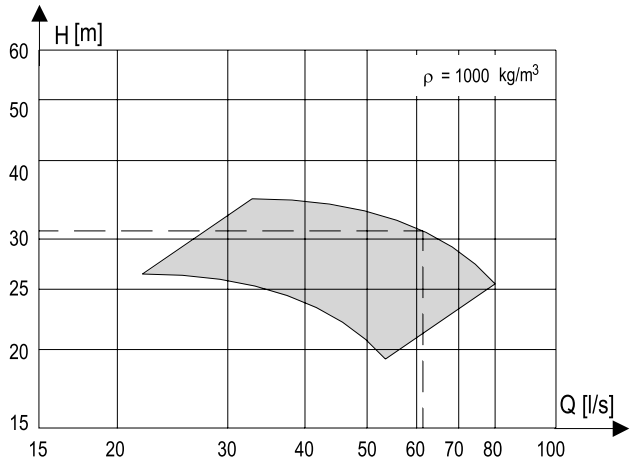
Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

double channel impeller — application area

12	P	NFP$^{T}_{M}$ 125–12–	LC LU JU	–E	SNM 2 ZONA 1	Ex I M2 II 2G	12
hydraulic size			material version			inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	61,5
Delivery head	H_{opt}	m	31,0
Input	P_c	kW	29,6
Max. diameter of solids		mm	71x57
Suction branch	DNs	mm	150
Discharge branch	DNv	mm	125
Elektromotor			Special-purpose
Output	P	kW	30
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1465
Current	I	A	53,2
Insulating protection			IP 55
Max. elevation above sea-level		m	1000



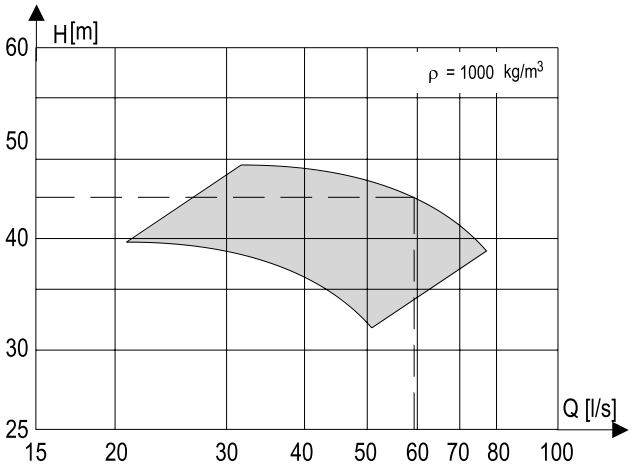
As standard, the supply cables **are not delivered** with the pump.
There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

multichannel impeller — application area

12	V	NFV$^{T}_{M}$ 125–12–	LC LU JU	–E	SNM 2 ZONA 1	Ex I M2 II 2G	12
hydraulic size			material version			inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	59,0
Delivery head	H_{opt}	m	34,5
Input	P_c	kW	29,1
Max. diameter of solids		mm	27x46
Suction branch	DNs	mm	200
Discharge branch	DNv	mm	125
Elektromotor			Special-purpose
Output	P	kW	30
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1465
Current	I	A	53,2
Insulating protection			IP 55
Max. elevation above sea-level		m	1000

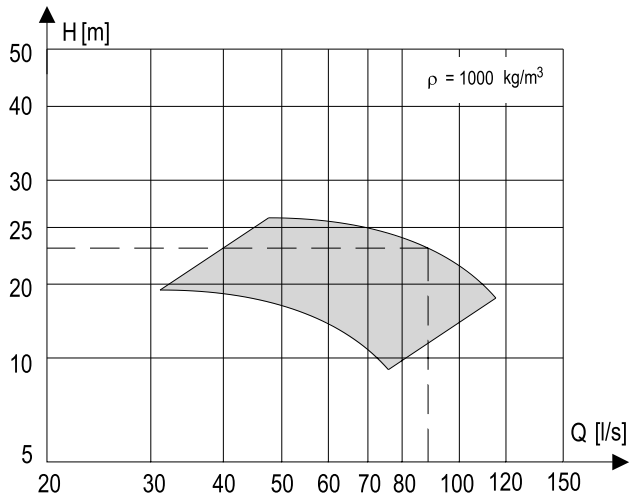


As standard, the supply cables **are not delivered** with the pump.
There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

	double channel impeller			application area		
13	P	GFPP 150–13–	LC LU JU	–N E	SNM 2 ZONA 1	I M2 II 2G	13
hydraulic size			material version		inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	88,6
Delivery head	H_{opt}	m	23,0
Input	P_c	kW	30,4
Max. diameter of solids		mm	74x69
Discharge branch	DNv	mm	150
Elektromotor			Special-purpose
Output	P	kW	37
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1455
Current	I	A	65,5
Insulating protection			IP 68
Max. submersion depth		m	10

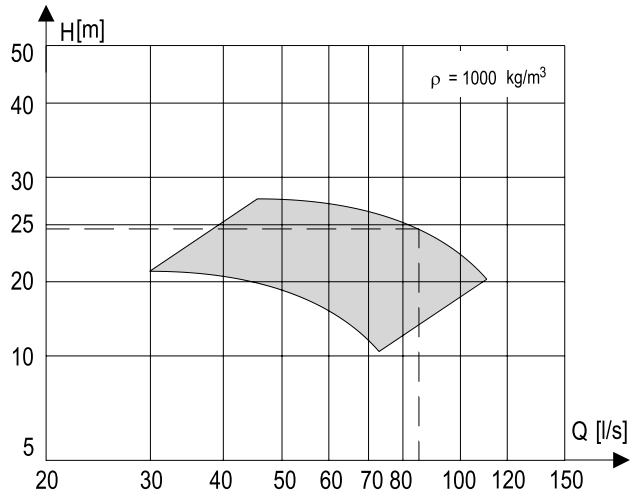


Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

	multichannel impeller			application area		
13	V	GFVP 150–13–	LC LU JU	–N E	SNM 2 ZONA 1	I M2 II 2G	13
hydraulic size			material version		inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	85,2
Delivery head	H_{opt}	m	24,5
Input	P_c	kW	29,8
Max. diameter of solids		mm	20x53
Discharge branch	DNv	mm	150
Elektromotor			Special-purpose
Output	P	kW	37
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1455
Current	I	A	65,5
Insulating protection			IP 68
Max. submersion depth		m	10



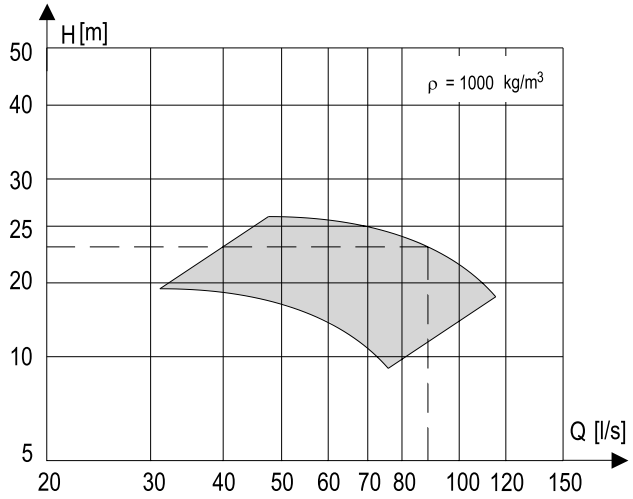
Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

double channel impeller — application area

13	P	NFP$^{T}_{M}$ 150–13–	LC LU JU	–E	SNM 2 ZONA 1	Ex I M2 II 2G	13
hydraulic size			material version			inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	88,5
Delivery head	H_{opt}	m	23,0
Input	P_c	kW	30,4
Max. diameter of solids		mm	74x69
Suction branch	DNs	mm	150
Discharge branch	DNv	mm	150
Elektromotor			Special-purpose
Output	P	kW	30
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1465
Current	I	A	53,2
Insulating protection			IP 55
Max. elevation above sea-level		m	1000



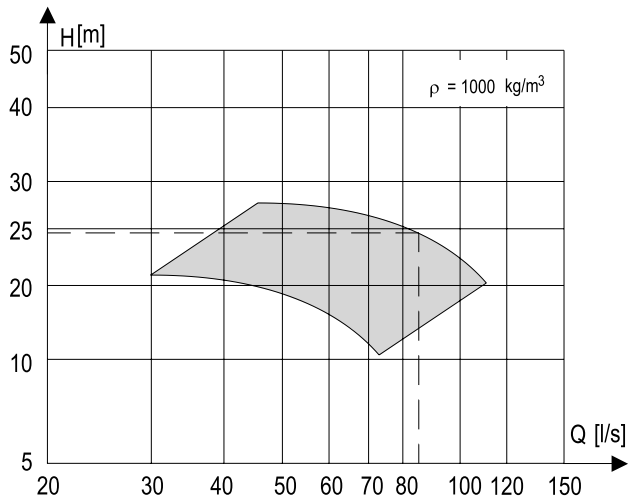
As standard, the supply cables **are not delivered** with the pump.
There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

multichannel impeller — application area

13	V	NFV$^{T}_{M}$ 150–13–	LC LU JU	–E	SNM 2 ZONA 1	Ex I M2 II 2G	13
hydraulic size			material version			inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	85,0
Delivery head	H_{opt}	m	24,5
Input	P_c	kW	29,8
Max. diameter of solids		mm	20x53
Suction branch	DNs	mm	200
Discharge branch	DNv	mm	150
Elektromotor			Special-purpose
Output	P	kW	30
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1465
Current	I	A	53,2
Insulating protection			IP 55
Max. elevation above sea-level		m	1000

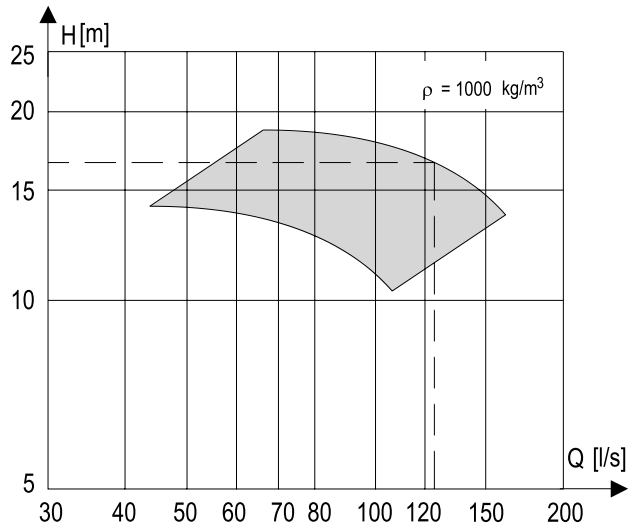


As standard, the supply cables **are not delivered** with the pump.
There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

	double channel impeller			application area		
14	P	GFPP 200–14–	LC LU JU	–N E SNM 2 ZONA 1	Ex I M2 II 2G	14
hydraulic size			material version		inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	124,2
Delivery head	H_{opt}	m	16,6
Input	P_c	kW	29,2
Max. diameter of solids		mm	∅85
Discharge branch	DNv	mm	200
Elektromotor			Special-purpose
Output	P	kW	37
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1455
Current	I	A	65,5
Insulating protection			IP 68
Max. submersion depth		m	10

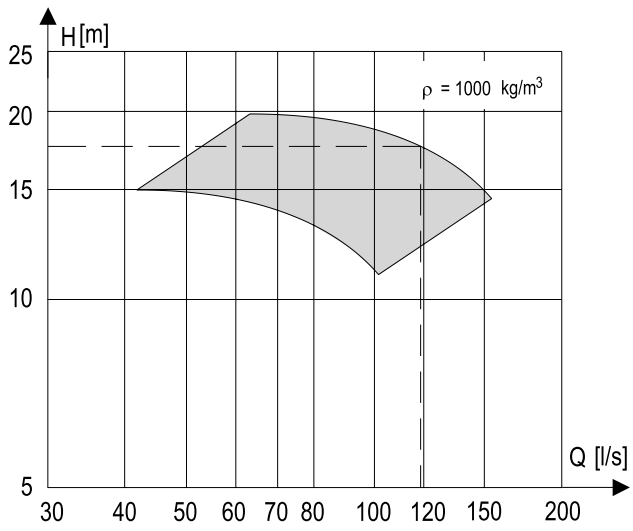


Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

	multichannel impeller			application area		
14	V	GFVP 200–14–	LC LU JU	–N E SNM 2 ZONA 1	Ex I M2 II 2G	14
hydraulic size			material version		inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	118,5
Delivery head	H_{opt}	m	17,6
Input	P_c	kW	29,5
Max. diameter of solids		mm	∅41
Discharge branch	DNv	mm	200
Elektromotor			Special-purpose
Output	P	kW	37
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1455
Current	I	A	65,5
Insulating protection			IP 68
Max. submersion depth		m	10



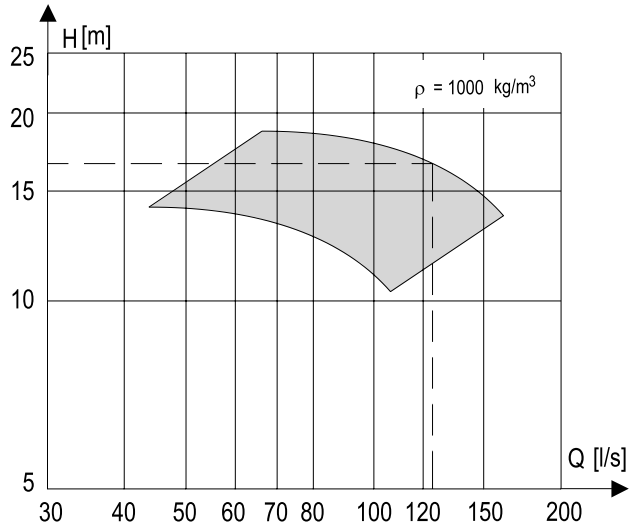
Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

double channel impeller — application area

14	P	NFP$^{T}_{M}$ 200–14–	LC LU JU	–E	SNM 2 ZONA 1	Ex I M2 II 2G	14
hydraulic size			material version			inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	124,2
Delivery head	H_{opt}	m	16,6
Input	P_c	kW	29,2
Max. diameter of solids		mm	∅85
Suction branch	DNs	mm	200
Discharge branch	DNv	mm	200
Elektromotor			Special-purpose
Output	P	kW	30
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1465
Current	I	A	59,0
Insulating protection			IP 55
Max. elevation above sea-level		m	1000



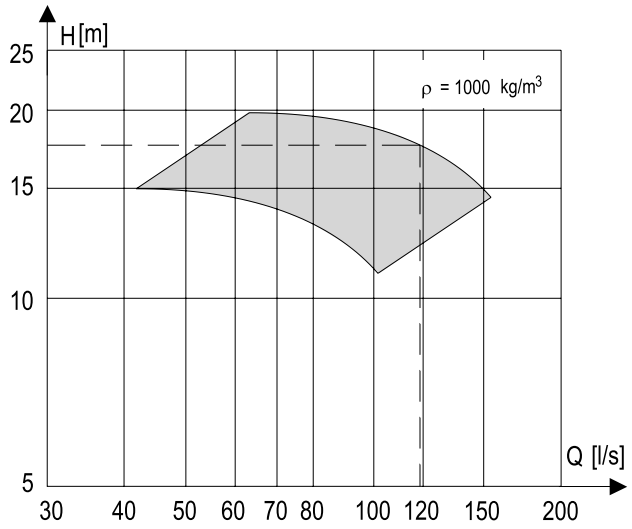
As standard, the supply cables **are not delivered** with the pump.
There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

multichannel impeller — application area

14	V	NFV$^{T}_{M}$ 200–14–	LC LU JU	–E	SNM 2 ZONA 1	Ex I M2 II 2G	14
hydraulic size			material version			inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	118,5
Delivery head	H_{opt}	m	17,6
Input	P_c	kW	29,5
Max. diameter of solids		mm	∅41
Suction branch	DNs	mm	250
Discharge branch	DNv	mm	200
Elektromotor			Special-purpose
Output	P	kW	30
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1465
Current	I	A	59,0
Insulating protection			IP 55
Max. elevation above sea-level		m	1000



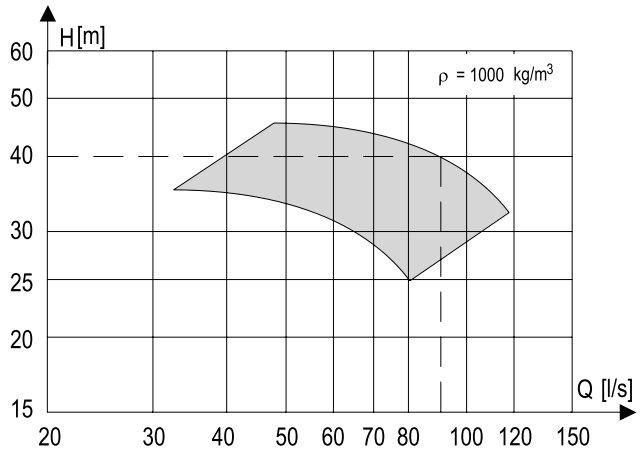
As standard, the supply cables **are not delivered** with the pump.
There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

double channel impeller — application area

15	P	GFP$^{P}_{T}$ 150–15–	LC LU JU	–N E	SNM 2 ZONA 1	Ex I M2 II 2G	15
hydraulic size			material version			inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	90,6
Delivery head	H_{opt}	m	40,1
Input	P_c	kW	53,5
Max. diameter of solids		mm	∅61
Discharge branch	DNv	mm	150
Elektromotor			Special-purpose
Output	P	kW	55
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1450
Current	I	A	110,0
Insulating protection			IP 68
Max. submersion depth		m	10



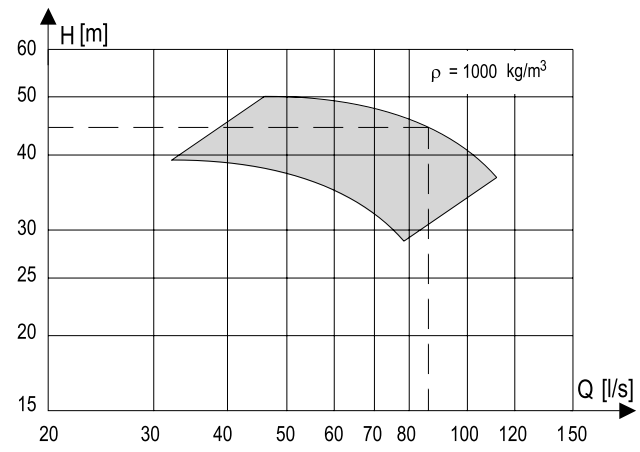
Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

multichannel impeller — application area

15	V	GFV$^{P}_{T}$ 150–15–	LC LU JU	–N E	SNM 2 ZONA 1	Ex I M2 II 2G	15
hydraulic size			material version			inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	86,1
Delivery head	H_{opt}	m	44,5
Input	P_c	kW	53,5
Max. diameter of solids		mm	∅29
Discharge branch	DNv	mm	150
Elektromotor			Special-purpose
Output	P	kW	55
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1450
Current	I	A	110,0
Insulating protection			IP 68
Max. submersion depth		m	10



Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

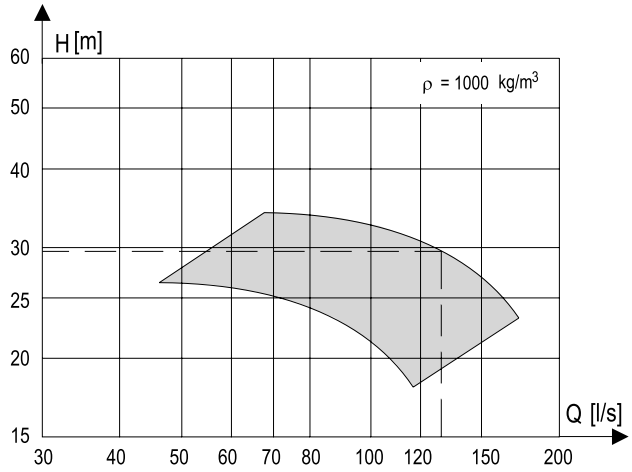
double channel impeller — application area

16	P	GFP$^{P}_{T}$ 200–16–	LC LU JU	–N E	SNM 2 ZONA 1	Ex I M2 II 2G	16

hydraulic size — material version — inexplosiveness category

TECHNICAL DATA

Capacity	Q_{opt}	l/s	129,5
Delivery head	H_{opt}	m	29,6
Input	P_c	kW	53,5
Max. diameter of solids		mm	∅77
Discharge branch	DNv	mm	200
Elektromotor			Special-purpose
Output	P	kW	55
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1450
Current	I	A	110,0
Insulating protection			IP 68
Max. submersion depth		m	10



Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

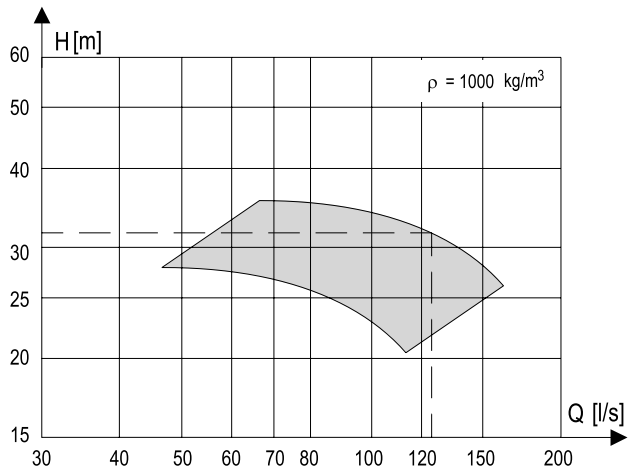
multichannel impeller — application area

16	V	GFV$^{P}_{T}$ 200–16–	LC LU JU	–N E	SNM 2 ZONA 1	Ex I M2 II 2G	16

hydraulic size — material version — inexplosiveness category

TECHNICAL DATA

Capacity	Q_{opt}	l/s	124,5
Delivery head	H_{opt}	m	31,6
Input	P_c	kW	53,5
Max. diameter of solids		mm	∅35
Discharge branch	DNv	mm	200
Elektromotor			Special-purpose
Output	P	kW	55
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1450
Current	I	A	110,0
Insulating protection			IP 68
Max. submersion depth		m	10



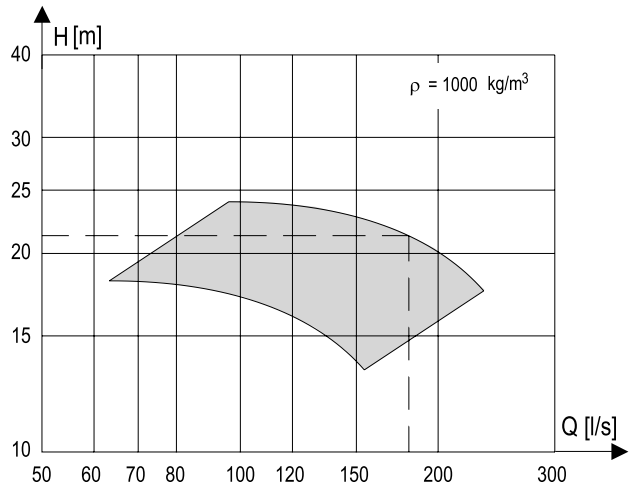
Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

double channel impeller — application area

17	P	GFP$^{P}_{T}$ 250–17–	LC LU JU	–N E	SNM 2 ZONA 1	Ex I M2 II 2G	17
hydraulic size			material version			inexplosiveness category	

TECHNICAL DATA

Capacity	Q_{opt}	l/s	180,1
Delivery head	H_{opt}	m	21,3
Input	P_c	kW	53,5
Max. diameter of solids		mm	∅95
Discharge branch	DNv	mm	250
Elektromotor			Special-purpose
Output	P	kW	55
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1450
Current	I	A	110,0
Insulating protection			IP 68
Max. submersion depth		m	10



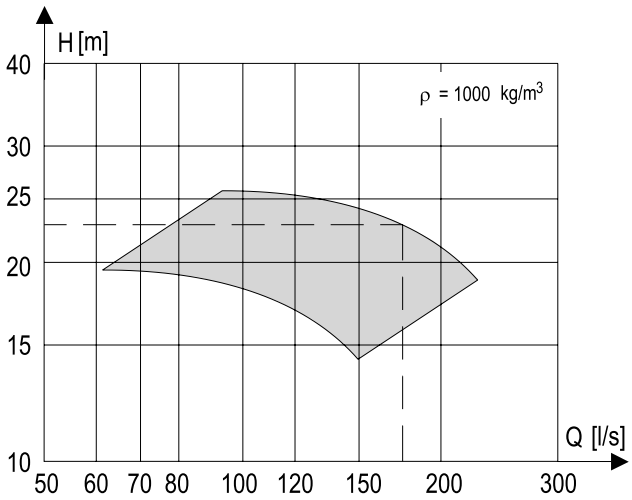
Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

multichannel impeller — application area

17	V	GFV$^{P}_{T}$ 250–17–	LC LU JU	–N E	SNM 2 ZONA 1	Ex I M2 II 2G	17
hydraulic size			material version			inexplosiveness category	

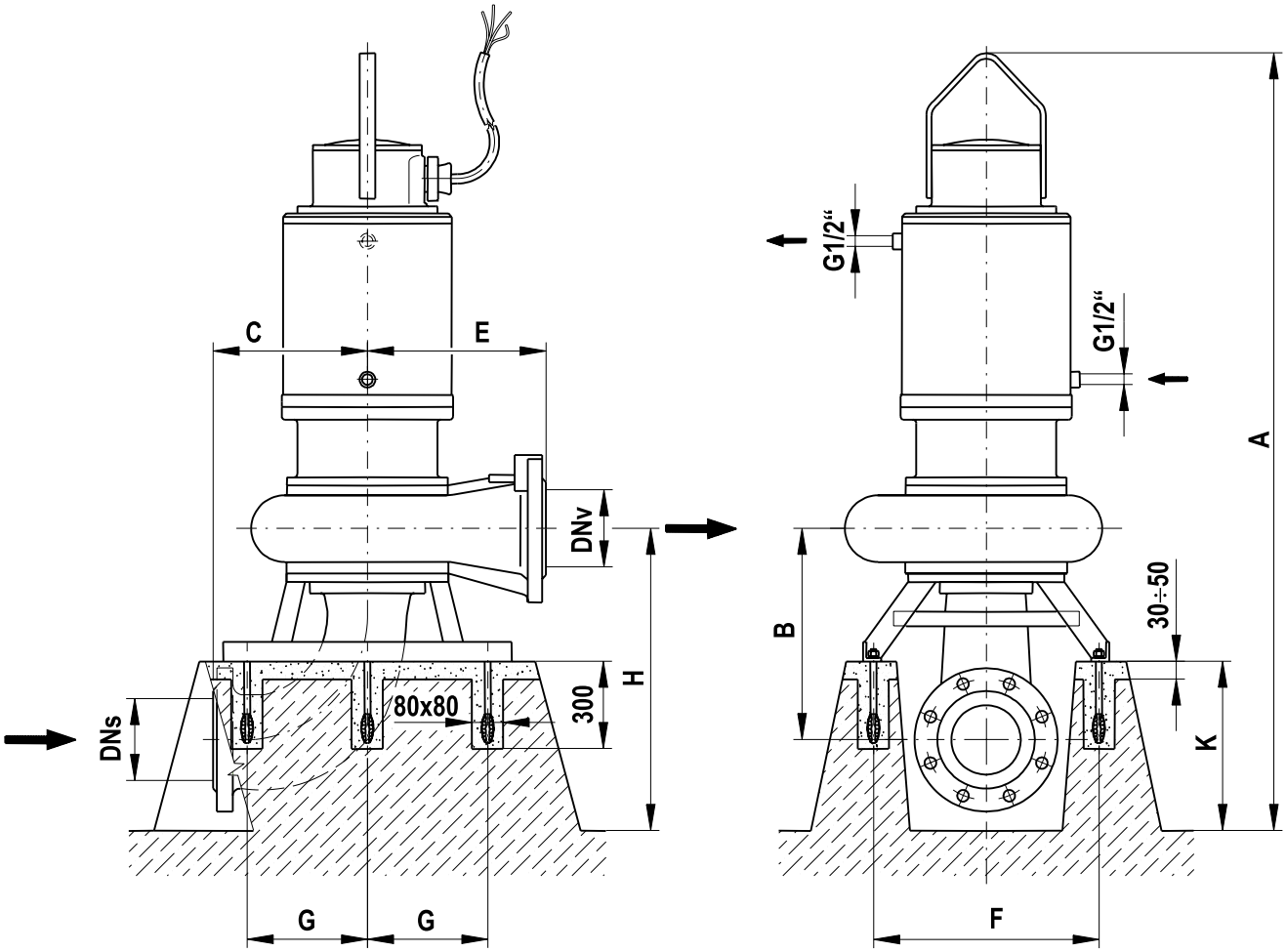
TECHNICAL DATA

Capacity	Q_{opt}	l/s	174,5
Delivery head	H_{opt}	m	22,8
Input	P_c	kW	53,5
Max. diameter of solids		mm	∅47
Discharge branch	DNv	mm	250
Elektromotor			Special-purpose
Output	P	kW	55
Voltage	U	V	400
Frequency	f	Hz	50
Speed	n	min^{-1}	1450
Current	I	A	110,0
Insulating protection			IP 68
Max. submersion depth		m	10



Standard lengths of supply cables are 10, 15, 20, 25, 30, 35 metres. There is a possibility to provide an electric motor for substandard voltage, e. g. 500 V.
Pump weight is shown in the dimensional drawing.

DIMENSIONAL DRAWING FOR PUMPS SERIES GFPT, GFVT



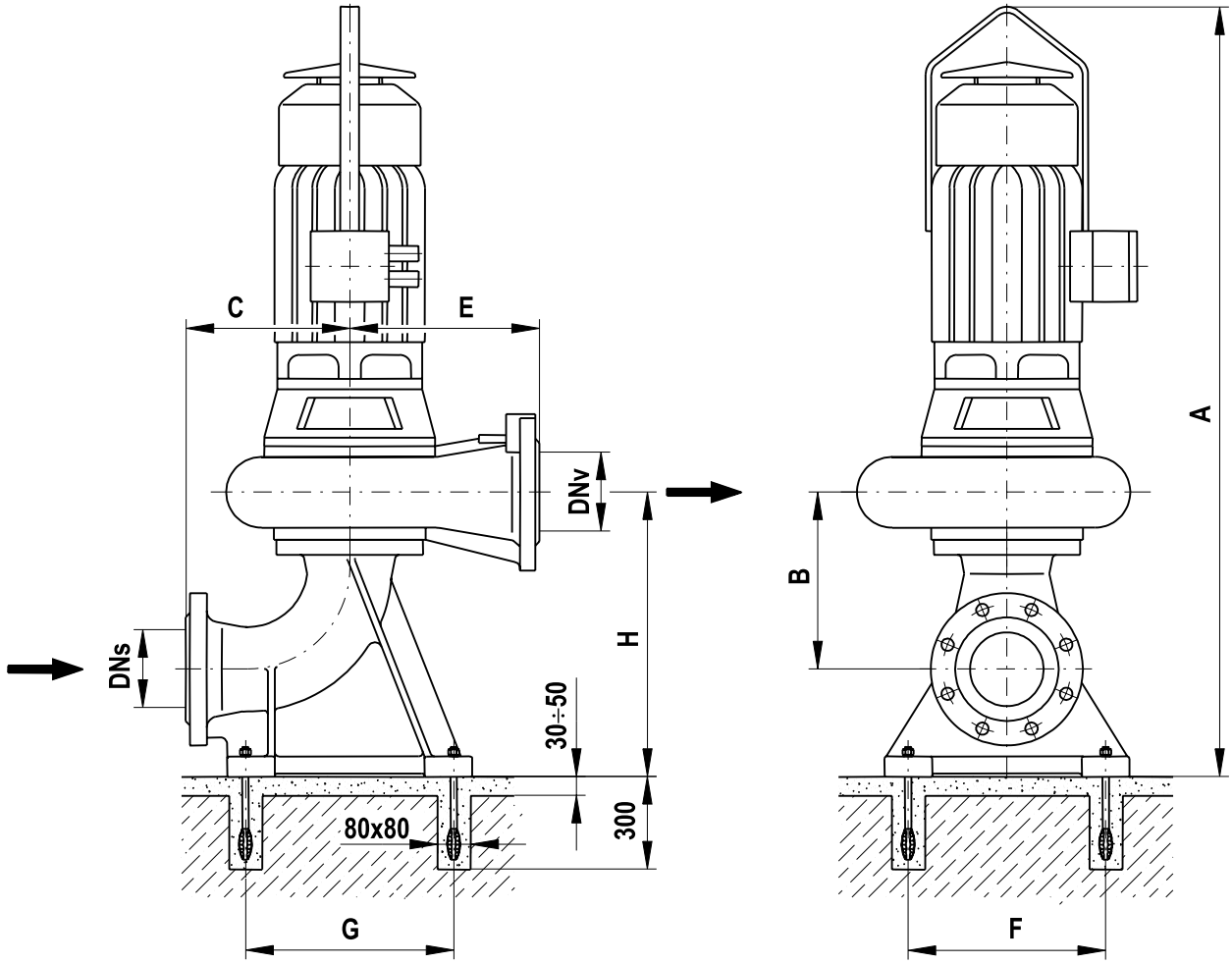
DIMENSIONS

Pump model	DNs	DNv	A	B	C	E	G	F	H	K	Total weight [kg]
GFPT 150-15	150	150	1978	396	250	440	300	550	712	350	780
GFVT 150-15	200	150	1937	451	250	440	300	550	712	350	795
GFPT 200-16	150	200	2058	541	350	480	300	550	792	450	805
GFVT 200-16	200	200	2017	566	350	480	300	550	792	450	820
GFPT 250-17	200	250	2128	572	400	570	300	600	862	500	950
GFVT 250-17	250	250	2087	597	400	570	300	600	862	500	965

Branches of both DNs and DNv flanges are designed with raised faces for PN 10 according to ČSN 13 1160.
In addition to basic position of the suction branch in relation with the discharge one (see Dimensional drawing), other positions are possible which are available turning the pump as well as the suction branch by 90°.
The weight is determined for pump set including the suction bend and the stand.

Connections G1/2” serves for cooling water line-up.

DIMENSIONAL DRAWING FOR PUMPS SERIES NFPU, NFVU

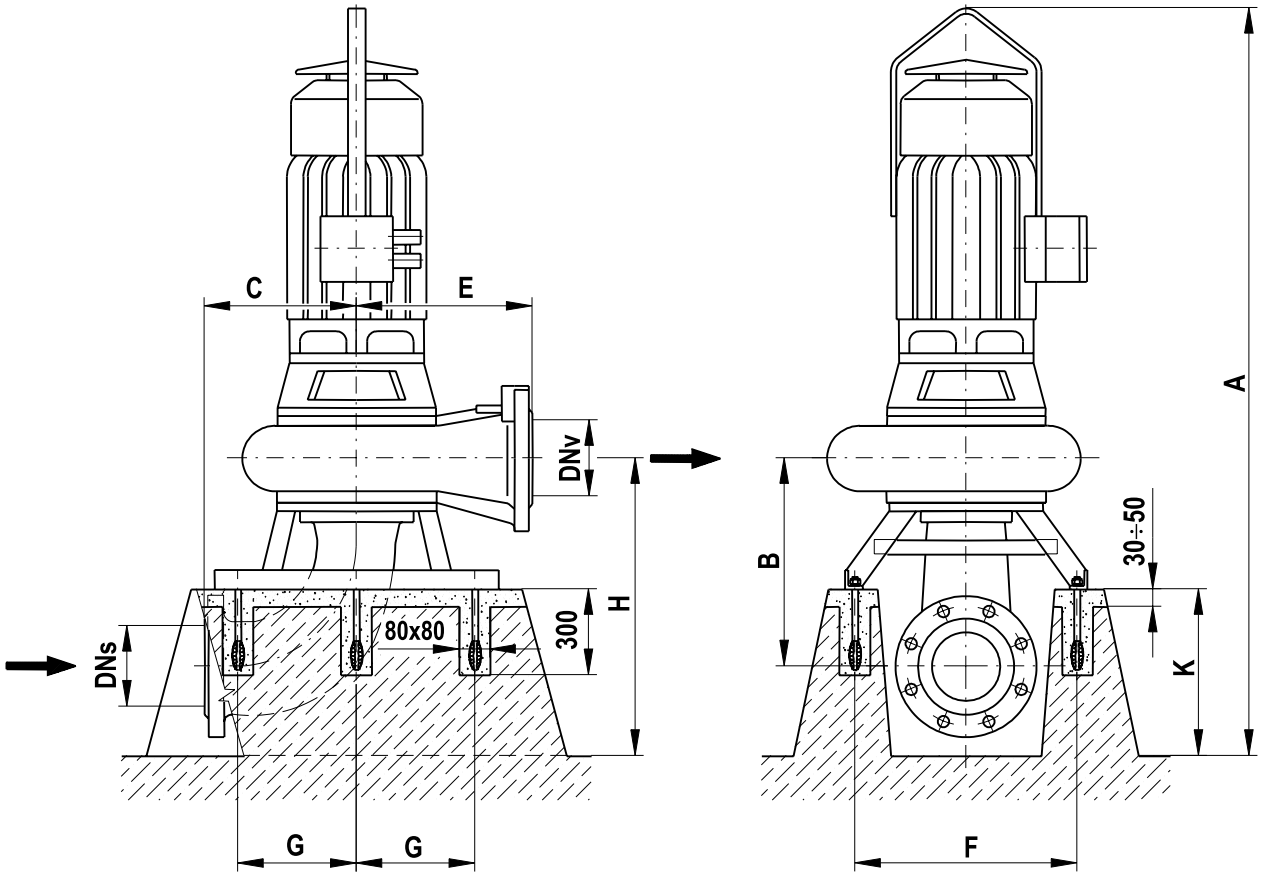


DIMENSION

Pump model	DNs	DNv	A	B	C	E	G	F	H	Total weight [kg]
NFPU 150-05-E	150	150	1430	342	250	400	400	400	522	312
NFVU 150-05-E	200	150	1395	342	250	400	400	400	537	317
NFPU 100-06-E	125	100	1400	307	225	315	340	340	457	277
NFVU 100-06-E	150	100	1405	332	250	315	340	340	512	292
NFPU 150-07-E	150	150	1470	340	250	375	400	400	520	314
NFVU 150-07-E	200	150	1435	340	250	375	400	400	535	322
NFPU 150-10-E	150	150	1610	342	250	400	400	400	522	360
NFVU 150-10-E	200	150	1580	342	250	400	400	400	537	366

Branches of both DNs and DNv flanges are designed with raised faces for PN 10 according to ČSN 13 1160.
In addition to basic position of the suction branch in relation with the discharge one (see Dimensional drawing), other positions are possible which are available turning the pump as well as the suction branch by 45°.
The weight is determined for pump set including the suction bend.

DIMENSIONAL DRAWING FOR PUMPS SERIES NFPT, NFVT

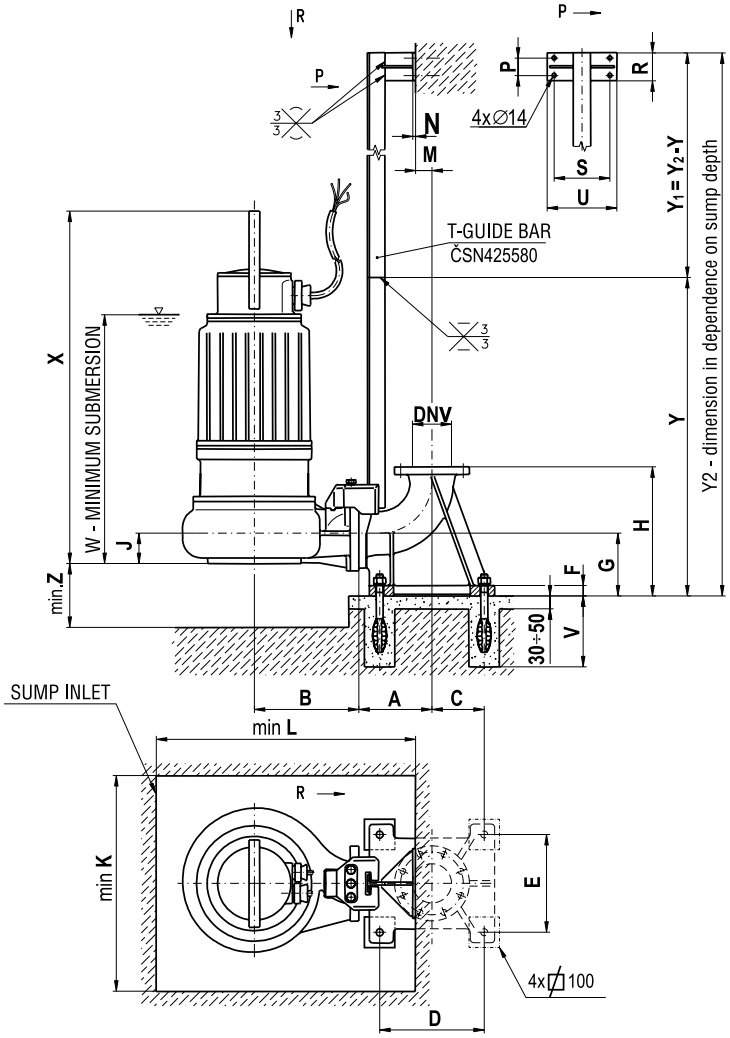


DIMENSION

Pump model	DNs	DNv	A	B	C	E	G	F	H	K	Total weight [kg]
NFPT 125-09-E	125	125	1805	346	225	370	250	470	565	480	350
NFVT 125-09-E	150	125	1670	386	250	370	250	470	635	350	355
NFPT 200-11-E	200	200	1860	466	250	530	250	600	709	380	608
NFVT 200-11-E	250	200	1840	461	350	530	250	600	759	380	635
NFPT 125-12-E	150	125	1780	386	225	390	250	470	634	350	525
NFVT 125-12-E	200	125	1790	441	250	390	250	470	684	400	522
NFPT 150-13-E	150	150	1790	395	250	400	250	470	643	350	490
NFVT 150-13-E	200	150	1805	450	300	400	250	470	693	400	482
NFPT 200-14-E	200	200	1875	466	300	550	250	600	709	380	680
NFVT 200-14-E	250	200	1890	461	350	550	250	600	759	380	695

Branches of both DNs and DNv flanges are designed with raised faces for PN 10 according to ČSN 13 1160.
In addition to basic position of the suction branch in relation with the discharge one (see Dimensional drawing), other positions are possible which are available turning the pump as well as the suction branch by 90°.
The weight is determined for pump set including the suction bend and the stand.

DIMENSIONAL DRAWING FOR PUMPS SERIES GFPP, GFVP, GFJP, GFRP



DIMENSION

Pump model	Total weight [kg] čerp.	SZ	DNv	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	W	X	Y	Z
GFPP 150-05	190	86	150	270	400	190	380	350	28	220	470	90	750	1000	78	10	60	90	200	60	240	330	710	900	1320	180
GFVP 150-05	185	86	150	270	400	190	380	350	28	220	470	90	750	1000	78	10	60	90	200	60	240	330	665	860	1320	210
GFPP 100-06	266	54	100	210	315	150	300	280	30	180	370	80	500	880	47	8	50	80	160	50	200	260	690	987	1252	140
GFVP 100-06	261	54	100	210	315	150	300	280	30	180	370	80	500	880	47	8	50	80	160	50	200	260	640	937	1252	180
GFPP 150-07	264	86	150	270	375	190	380	350	28	220	470	90	750	1000	78	10	60	90	200	60	240	260	700	1000	1320	160
GFVP 150-07	259	86	150	270	375	190	380	350	28	220	470	90	750	1000	78	10	60	90	200	60	240	260	650	950	1320	200
GFRP 100-08	219	54	100	210	300	150	300	280	30	180	370	120	500	880	47	8	50	80	160	50	200	260	740	1043	1252	150
GFJP 100-08	227	54	100	210	300	150	300	280	30	180	370	120	500	880	47	8	50	80	160	50	200	260	740	1043	1252	150
GFRP 100-09	263	54	100	210	300	150	300	280	30	180	370	120	500	880	47	8	50	80	160	50	200	260	740	1043	1252	150
GFJP 100-09	271	54	100	210	300	150	300	280	30	180	370	120	500	880	47	8	50	80	160	50	200	260	740	1043	1252	150
GFPP 125-09	301	64	125	245	370	170	440	320	30	200	425	85	750	1000	57	10	60	90	200	60	240	260	820	1167	1288	150
GFVP 125-09	293	64	125	245	370	170	440	320	30	200	425	85	750	1000	57	10	60	90	200	60	240	260	780	1123	1288	190
GFPP 150-10	294	86	150	270	400	190	380	350	28	220	470	90	750	1000	78	10	60	90	200	60	240	260	835	1180	1320	180
GFVP 150-10	286	86	150	270	400	190	380	350	28	220	470	90	750	1000	78	10	60	90	200	60	240	260	790	1136	1320	210

to be continued on next page

Flange of discharge bend branch DNv is designed with raised face for PN10 according to ČSN 13 1160.

DIMENSIONAL DRAWING FOR PUMPS SERIES GFPP, GFVP, GFJP, GFRP

DIMENSION

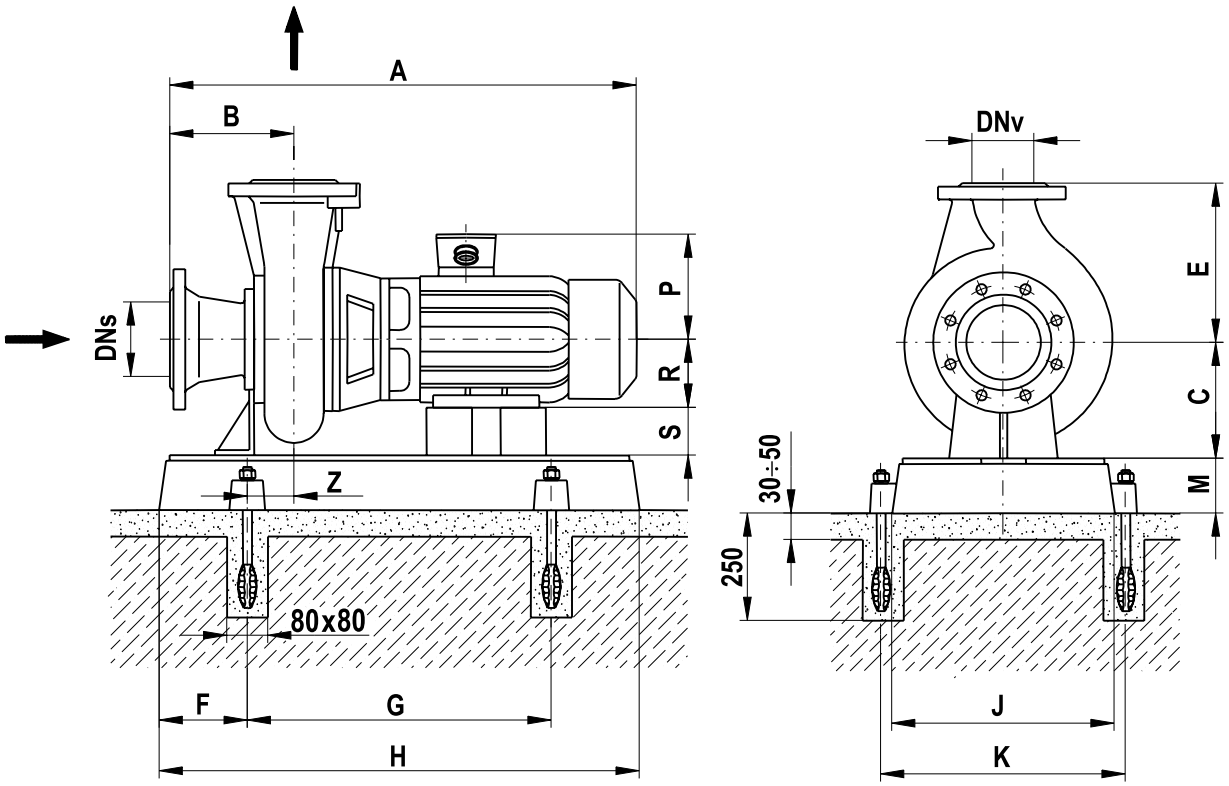
continuing of previous page

Pump model	Total weight [kg] čerp.	SZ	DNv	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	W	X	Y	Z
GFPP 200-11	537 80	200	300	530	225	450	400	32	300	590	95	900	1200	104	10	60	90	200	60	240	330	845	1180	1827	220	
GFVP 200-11	550 80	200	300	530	225	450	400	32	300	590	95	900	1200	104	10	60	90	200	60	240	330	800	1125	1827	250	
GFPP 125-12	476 64	125	245	390	170	340	320	30	200	425	84	750	1000	57	10	60	90	200	60	240	330	904	1226	1288	170	
GFVP 125-12	466 64	125	245	390	170	340	320	30	200	425	84	750	1000	57	10	60	90	200	60	240	330	863	1184	1288	210	
GFPP 150-13	424 86	150	270	400	190	380	350	28	220	470	93	750	1000	78	10	60	90	200	60	240	330	924	1244	1320	190	
GFVP 150-13	414 86	150	270	400	190	380	350	28	220	470	93	750	1000	78	10	60	90	200	60	240	330	863	1192	1320	230	
GFPP 200-14	622 80	200	300	550	225	450	400	32	300	590	90	900	1200	104	10	60	90	200	60	240	330	920	1250	1450	220	
GFVP 200-14	648 80	200	300	550	225	450	400	32	300	590	90	900	1200	104	10	60	90	200	60	240	330	860	1200	1450	250	
GFPP 150-15	726 86	150	270	440	190	380	350	28	220	470	94	900	1200	78	10	60	90	200	60	240	330	976	1360	1320	180	
GFVP 150-15	734 86	150	270	440	190	380	350	28	220	470	94	900	1200	78	10	60	90	200	60	240	330	935	1319	1320	230	
GFPP 200-16	745 80	200	350	480	225	450	400	30	300	590	104	900	1200	104	12	80	120	260	80	320	330	986	1370	1827	210	
GFVP 200-16	758 80	200	350	480	225	450	400	30	300	590	104	900	1200	104	12	80	120	260	80	320	330	945	1329	1827	250	
GFPP 250-17	816 170	250	400	650	280	500	440	30	360	700	95	1100	1400	155	12	80	120	260	80	320	400	996	1380	1500	230	
GFVP 250-17	833 170	250	400	650	280	500	440	30	360	700	95	1100	1400	155	12	80	120	260	80	320	400	955	1339	1500	280	

Flange of discharge bend branch DNv is designed with raised face for PN10 according to ČSN 13 1160.

DIMENSIONAL DRAWING FOR PUMPS SERIES NFPM, NFVM

Horizontal version for dry pit (M) installation can be supplied by agreement with the manufacturer



DIMENSIONS

Pump model	DNs	DNv	A	B	C	E	F	G	H	J	K	M	P	R	S	Z	Total weight [kg]
NFPM 150-05-E	150	150	946	242	280	400	170	660	1000	340	400	80	245	132	148	100	301
NFVM 150-05-E	200	150	946	292	280	400	170	660	1000	340	400	80	245	132	148	150	295
NFPM 100-06-E	125	100	972	232	280	315	170	660	1000	340	400	80	295	160	120	80	305
NFVM 100-06-E	150	100	922	232	280	315	170	660	1000	340	400	80	295	160	120	100	299
NFPM 150-07-E	150	150	987	242	280	375	170	660	1000	340	400	80	295	160	120	80	326
NFVM 150-07-E	200	150	987	292	280	375	170	660	1000	340	400	80	295	160	120	130	333
NFPM 125-09-E	125	125	1040	237	280	370	190	740	1120	380	440	80	306	180	100	80	388
NFVM 125-09-E	200	125	1039	287	280	370	190	740	1120	380	440	80	306	180	100	140	389
NFPM 150-10-E	150	150	1050	242	280	400	190	740	1120	380	440	80	306	180	100	80	395
NFVM 150-10-E	200	150	1050	292	280	400	190	740	1120	380	440	80	306	180	100	140	398
NFPM 200-11-E	200	200	1110	297	355	530	190	740	1120	380	440	80	306	180	175	110	590
NFVM 200-11-E	250	200	1060	297	355	530	190	740	1120	380	440	80	306	180	175	140	620
NFPM 125-12-E	150	125	1126	236	280	390	205	840	1250	430	490	80	336	200	80	90	579
NFVM 125-12-E	200	125	1134	286	280	390	205	840	1250	430	490	80	336	200	80	140	575
NFPM 150-13-E	150	150	1144	245	280	400	205	840	1250	430	490	80	336	200	80	90	570
NFVM 150-13-E	200	150	1142	295	280	400	205	840	1250	430	490	80	336	200	80	140	565
NFPM 200-14-E	200	200	1193	292	400	550	205	840	1250	430	490	80	336	200	200	110	702
NFVM 200-14-E	250	200	1151	292	400	550	205	840	1250	430	490	80	336	200	200	140	697

Flanges of both Dns, Dnv branches are designed with raised faces for PN 10 according to ČSN 13 1160.
Dimensions of the foundation plate are designed according to ČSN EN 23661.
The weight is determined for the pump set.