

# Vertical „in-line” pumps type OPA, OPB



ISO 9001  
ISO 14001  
PN-N 18001



1862

**HYDRO-VACUUM<sup>®</sup> S.A.**

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## Introduction

Vertical pumps type OPA, OPB are designed for pumping and increasing pressure of potable, treated water that doesn't contain abrasive and long-fibrous admixtures (maximum sand content 100 g/m<sup>3</sup>). Pumps type OPA, OPB could be also used for pumping liquids other than water, which viscosity doesn't exceed 200 mm<sup>2</sup>/s with aggressiveness in corrosive resistance limits of applied materials of construction.

## Basic technical parameters and application

Capacity:  $Q = 1,2 \div 75,0 \text{ m}^3/\text{h}$ ,

Delivery head:  $H = \text{up to } 270 \text{ m}$ ,

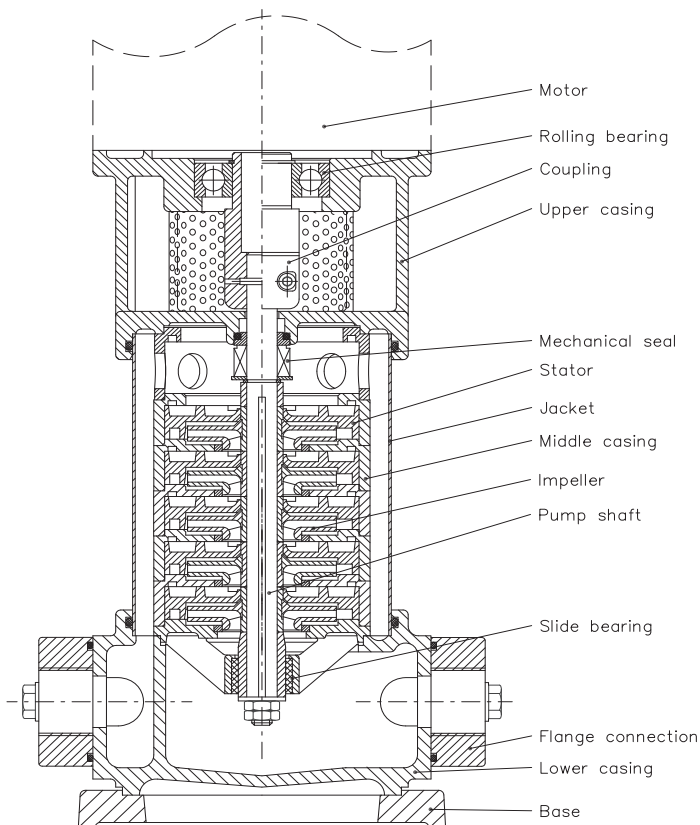
Maximum temperature of pumped liquid:  $t = \text{up to } +40^\circ\text{C}$  (for OPA.0  $\div$  OPB.3),  
 $t = \text{up to } +120^\circ\text{C}$  (for OPA.4  $\div$  OPA.7),

Viscosity of pumped liquid: 200 mm<sup>2</sup>/s.

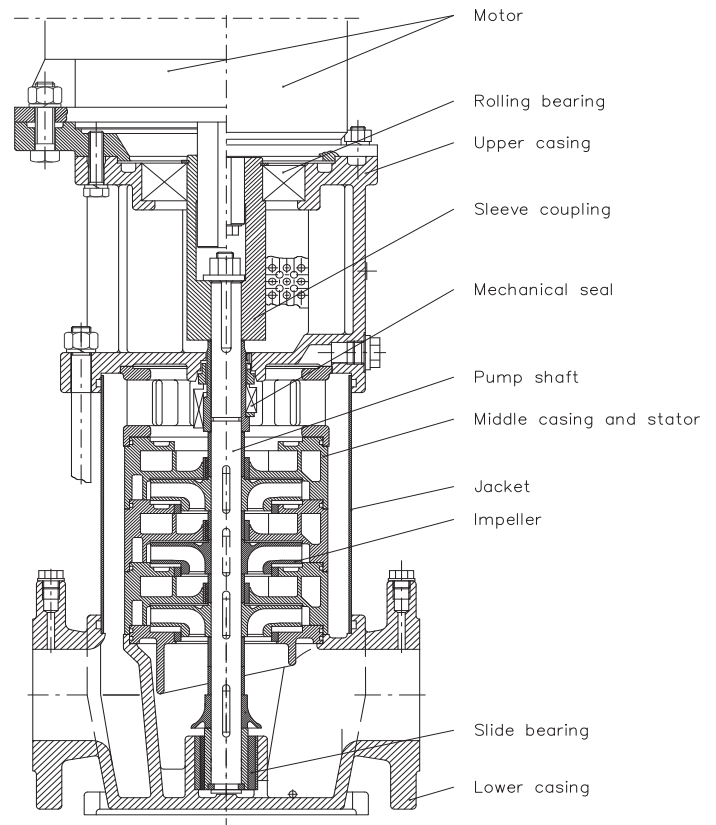
### Pumps type OPA, OPB are used in:

- Potable and usable water supply systems (water supply companies, pump stations, pressure boosting and hydrophore systems)
- High-pressure, circulation systems
- Irrigation systems
- Boilers feeding
- Cooling systems
- Fire-fighting systems
- Laundries
- Industrial washing stands
- Car washes
- Flushing systems
- Condensate pumping stations (OPA.4 – OPA.7. only)

*Cross-section of pump OPA.0 - OPA.3, OPB.2, OPB.3*



*Cross-section of pump OPA.4 - OPA.7*



## Marking and index structure

O	P	A	4	0	5	1	1	1	2	0	5	0	0	0	1
a	a	a <sub>1</sub>	b	c	c	d	e	e <sub>1</sub>	e <sub>1</sub>	e <sub>2</sub>	h	i	i	i	k

**aa** Pump type (OP-52)

**a<sub>1</sub>** Constructional version of pressure boosting systems

a <sub>1</sub>	Type of applied pump
0	OPA vertical, multistage pumps
1	OPB vertical, multistage pumps

**b** Pump type-size – indicates next rated size of the pump ( 0-7 )

**cc** Pump type-dimension

CC	Pump type-dimension
02 ÷ 16	for b = 0 - OPA.0 pump
02 ÷ 16	for b = 1 - OPA.1 pump
02 ÷ 15	for b = 2 - OPA.2 pump for b = 2 - OPB.2 pump
02 ÷ 16	for b = 3 - OPA.3 pump for b = 3 - OPB.3 pump
01 ÷ 12 A2 ÷ A9 B2 ÷ B9	for b = 4 - OPA.4 pump
01 ÷ 10 A2 ÷ A9 B2 ÷ B9	for b = 5 - OPA.5 pump
01 ÷ 10 A2 ÷ A9 B2 ÷ B9	for b = 6 - OPA.6 pump
01 ÷ 06 A2 ÷ A7 B2 ÷ B7	for b = 7 - OPA.7 pump

**d** Material execution always marked with digit “1”

Part name	PUMP	
	OPA.0, OPA.1, OPA.2, OPA.3, OPB.2, OPB.3	OPA.4, OPA.5, OPA.6, OPA.7 *
Lower casing	Gray cast iron	
Upper casing	Gray cast iron	
Middle casing	Noryle	Gray cast iron
Impeller	Polycarbonate	Brass **
Stator	Noryle	Gray cast iron
Shaft	Stainless steel	
Jacket	Stainless steel	

\*) It is possible to replace gray cast iron with tin bronze.

\*\*\*) In OPA.4, OPA.5 pumps impellers can be made of Noryl (for water with temp. up to +40°C).

### Constructional execution

e	Temperature of pumped liquid
1	For liquids with temp. -30°C ÷ +40°C
2	For liquids with temp. +40°C ÷ +120°C

# VERTICAL PUMPS TYPE OPA, OPB

$e_1 e_1$	$e_1 e_1$	Shaft seal type
	10	With single, front seal of A1 type (Anga) or adequate with similar parameters
	11	With single, front seal of V type (Anga) or adequate with similar parameters
	12	With single, front seal of MG1 type (Burgmann) or adequate with similar parameters
	13	With single, front seal of 2100 type (Crane) or adequate with similar parameters
	14	With single, front seal of VB type (Anga) or adequate with similar parameters
	15	With single, front seal of A41 type (Anga) or adequate with similar parameters

$e_2$  Reserve is always marked with "0"

**h** Pump supply completeness

<b>h</b>	Supply completeness
2	Pump with coupling
5	Pump with coupling and el. motor

**iii** Pumping unit selection, encoded acc. to the producer's internal documentation

**k** Product cosmetics

<b>k</b>	Type of painting coating
1	Standard
2	Special
3	Marine
4	Export – dry tropic (TA)
5	Export – wet tropic (TH)

## Data of motors applied in pumps OPA, OPB

Motor mechanical size	Rated power	Rated current	Power factor	Efficiency	Starting current multiplication factor
	[kW]	[A]	----	[%]	---
71-2A	0,37	1,0	0,77	71	4,4
71-2B	0,55	1,35	0,82	75	4,0
80-2A	0,75	1,9	0,80	74	4,5
80-2B	1,1	2,5	0,84	77	5,1
80x-2C	1,5	3,4	0,84	79	5,0
80x-2D	2,2	5,2	0,75	81	5,3
90L-2PC	3,0	6,5	0,84	79	6,3
100L- 2	3,0	6,0	0,87	83,5	7,0
112M-2	4,0	7,8	0,87	85	7,4
132S-2A	5,5	10,4	0,88	87	7,0
112M-2PC	6,0	12,0	0,83	86,7	7,6
132S-2B	7,5	13,9	0,88	87	7,5
132M-2	9,2	16,8	0,89	88,5	7,8
132S-2PC	11,0	21,2	0,86	87	8,2
160M – 2B	15,0	26,2	0,91	90,5	6,2
160L- 2	18,5	32,1	0,91	91	6,5
180M-2	22,0	40,4	0,88	90,6	6,0

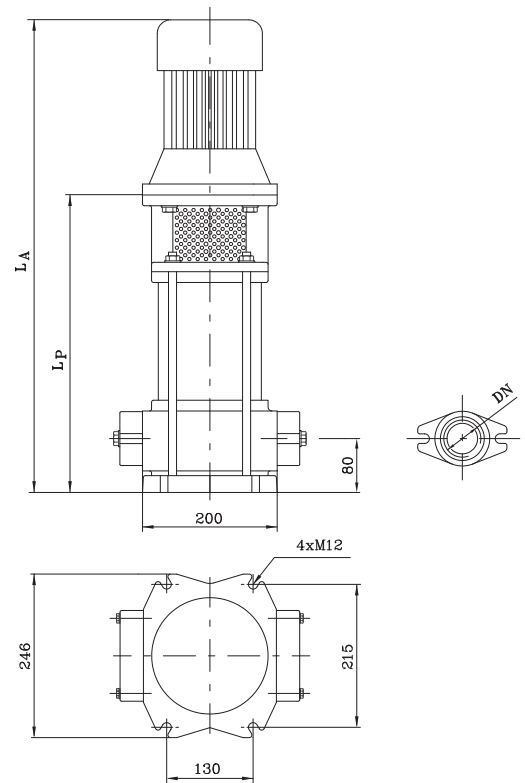
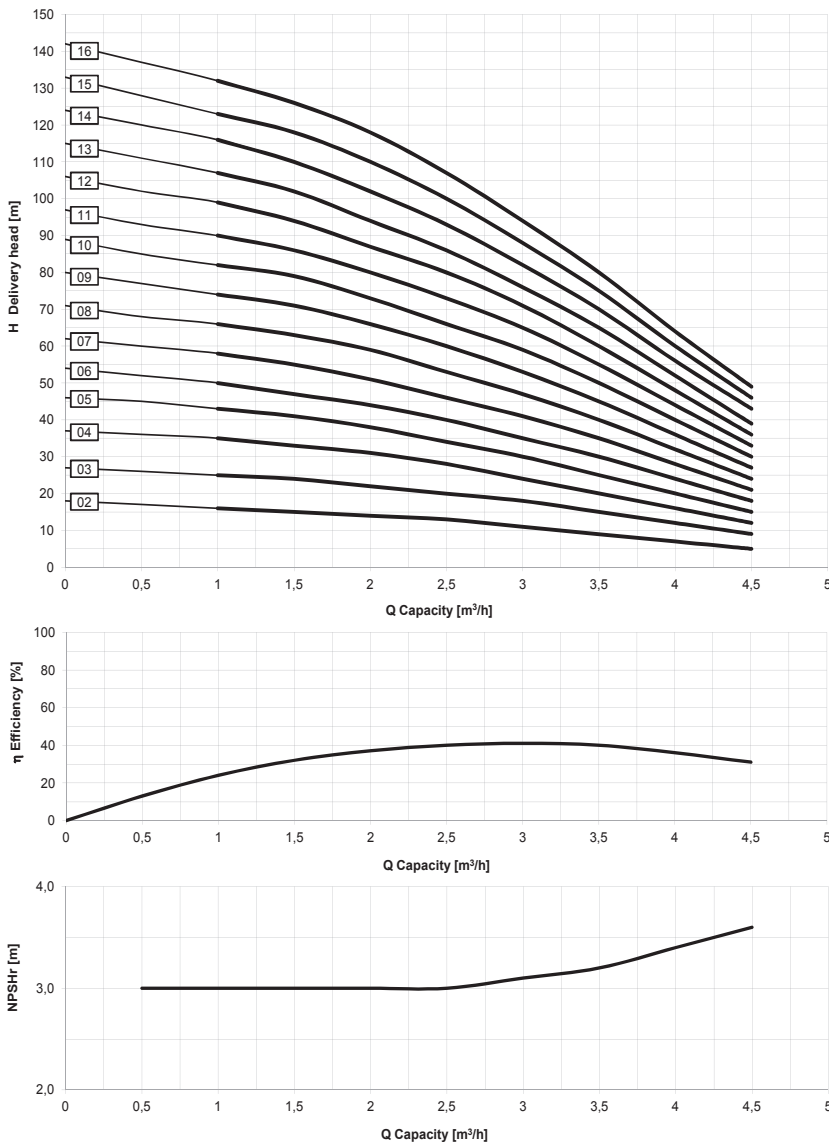
Motors in IP54 protection degree  
Insulation class F  
Operation mode S1

Producer reserves the possibility to introduce modification of electrical parameters of assembled drive units

# VERTICAL PUMPS TYPE OPA, OPB

## OPA.0

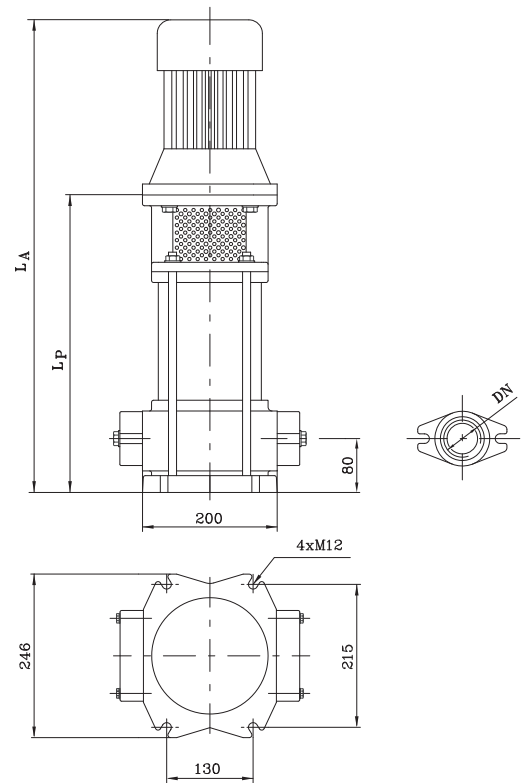
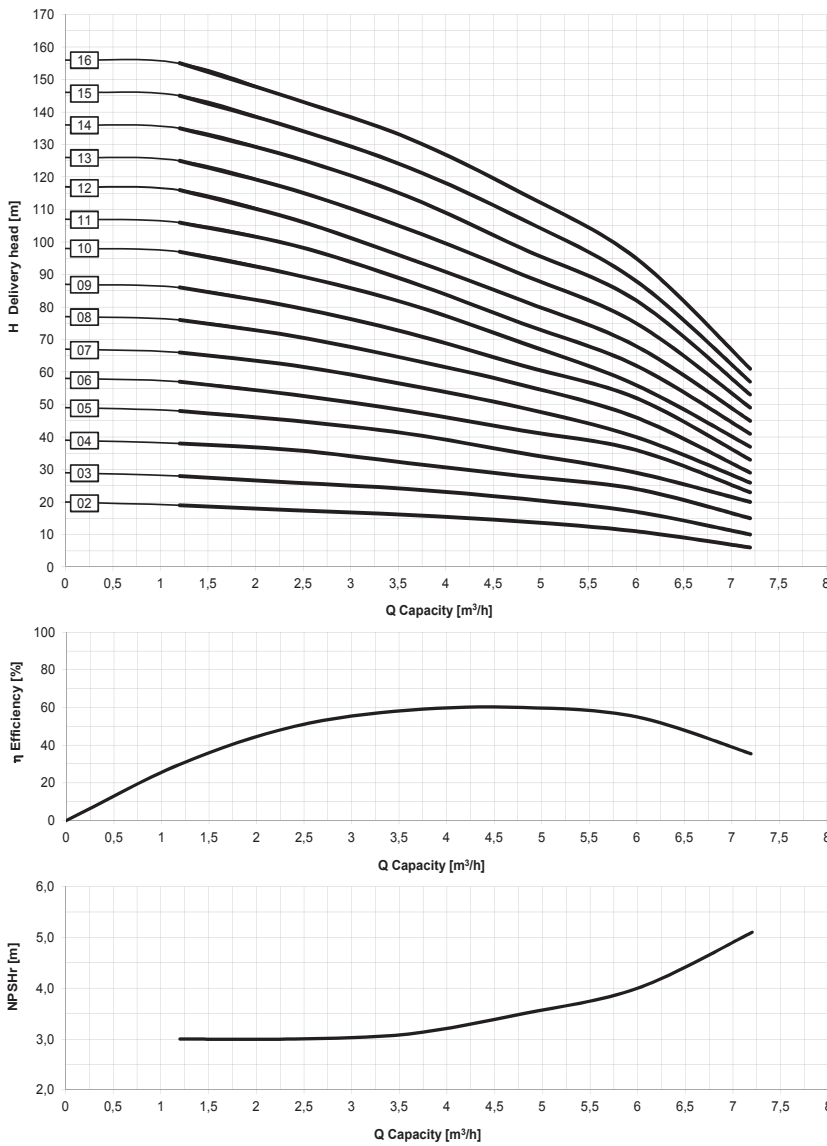
Characteristics  
OPA.0



Marking of pump and motor type-size	Power (kW)		Dimensions (mm)			Weight (kg)	
	Max. Pump	Motor	$L_A$	$L_P$	DN	Pump	Pumping unit
OPA.0.02	0,23	0,37	531	338	G 1 1/4	23	29
OPA.0.03	0,36	0,55	581	366	G 1 1/4	25	32
OPA.0.04	0,54	0,75	609	394	G 1 1/4	27	35
OPA.0.05	0,64	0,75	637	422	G 1 1/4	29	37
OPA.0.06	0,73	1,1	682	450	G 1 1/4	31	41
OPA.0.07	0,84	1,1	710	478	G 1 1/4	33	43
OPA.0.08	0,96	1,1	738	506	G 1 1/4	35	45
OPA.0.09	1,08	1,5	793	534	G 1 1/4	37	49
OPA.0.10	1,20	1,5	821	562	G 1 1/4	39	51
OPA.0.11	1,32	1,5	849	590	G 1 1/4	41	53
OPA.0.12	1,44	1,5	877	618	G 1 1/4	43	55
OPA.0.13	1,56	2,2	923	646	G 1 1/4	45	59
OPA.0.14	1,69	2,2	951	674	G 1 1/4	47	61
OPA.0.15	1,82	2,2	979	702	G 1 1/4	49	63
OPA.0.16	1,95	2,2	1007	730	G 1 1/4	51	65

## OPA.1

**Characteristics  
OPA.1**

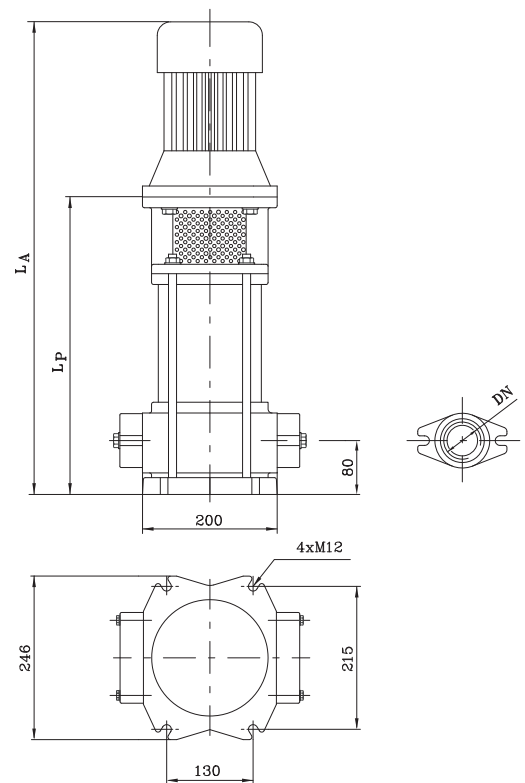
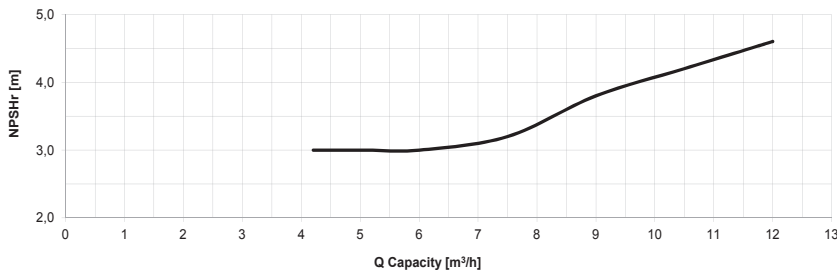
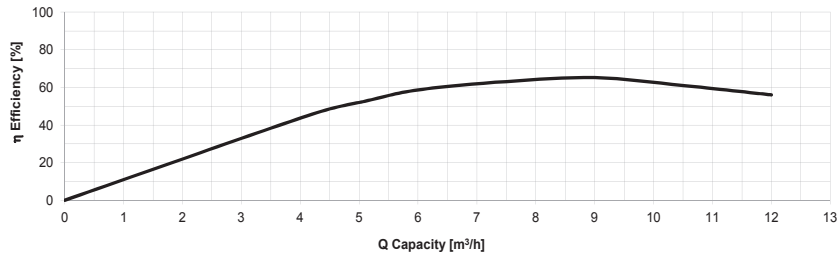
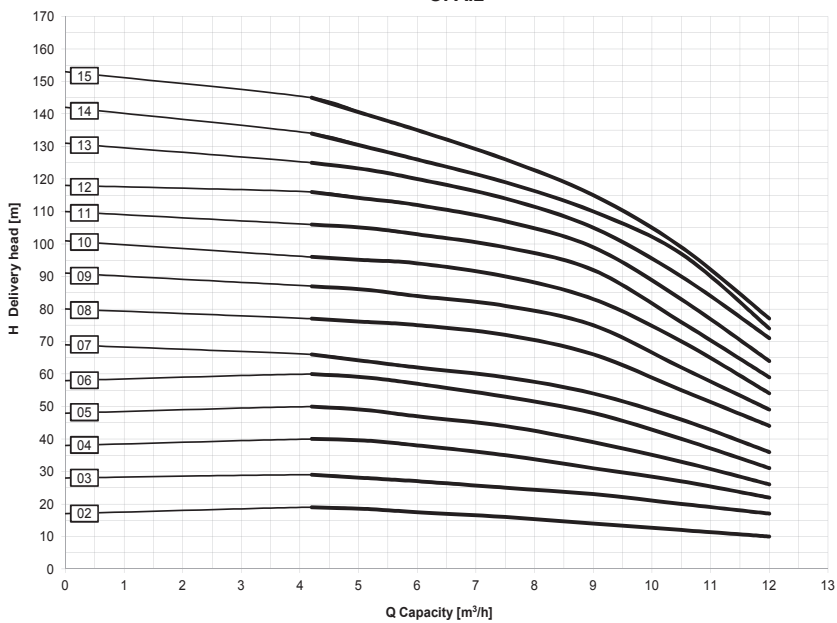


Marking of pump and motor type-size	Power (kW)		Dimensions (mm)			Weight (kg)	
	Max. Pump	Motor	$L_A$	$L_P$	DN	Pump	Pumping unit
OPA.1.02	0,36	0,55	553	338	G 1 1/4	23	30
OPA.1.03	0,54	0,75	581	366	G 1 1/4	25	33
OPA.1.04	0,72	1,10	626	394	G 1 1/4	27	37
OPA.1.05	0,90	1,10	654	422	G 1 1/4	29	39
OPA.1.06	1,08	1,50	709	450	G 1 1/4	31	43
OPA.1.07	1,26	1,50	737	478	G 1 1/4	33	45
OPA.1.08	1,44	1,50	765	506	G 1 1/4	35	47
OPA.1.09	1,62	2,20	811	534	G 1 1/4	37	50
OPA.1.10	1,80	2,20	839	562	G 1 1/4	39	52
OPA.1.11	1,98	2,20	867	590	G 1 1/4	41	54
OPA.1.12	2,16	2,20	895	618	G 1 1/4	43	56
OPA.1.13	2,34	3,00	946	646	G 1 1/4	45	63
OPA.1.14	2,52	3,00	974	674	G 1 1/4	47	65
OPA.1.15	2,70	3,00	1002	702	G 1 1/4	49	67
OPA.1.16	2,88	3,00	1030	730	G 1 1/4	51	69

# VERTICAL PUMPS TYPE OPA, OPB

## OPA.2

Characteristics  
OPA.2



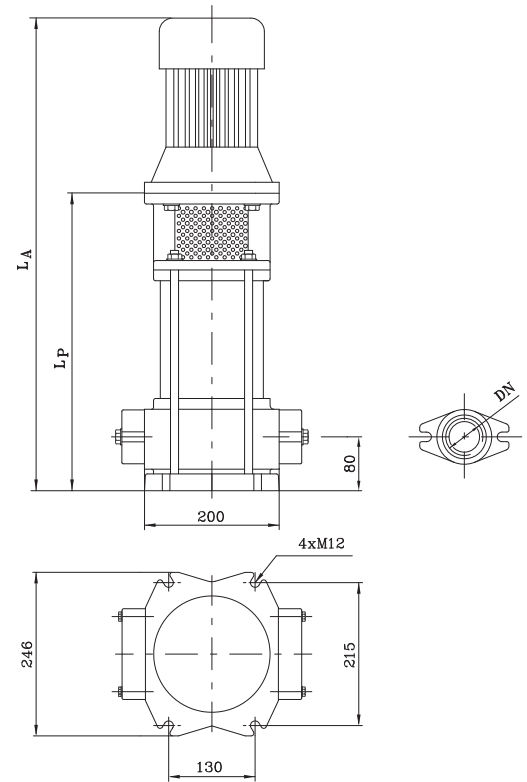
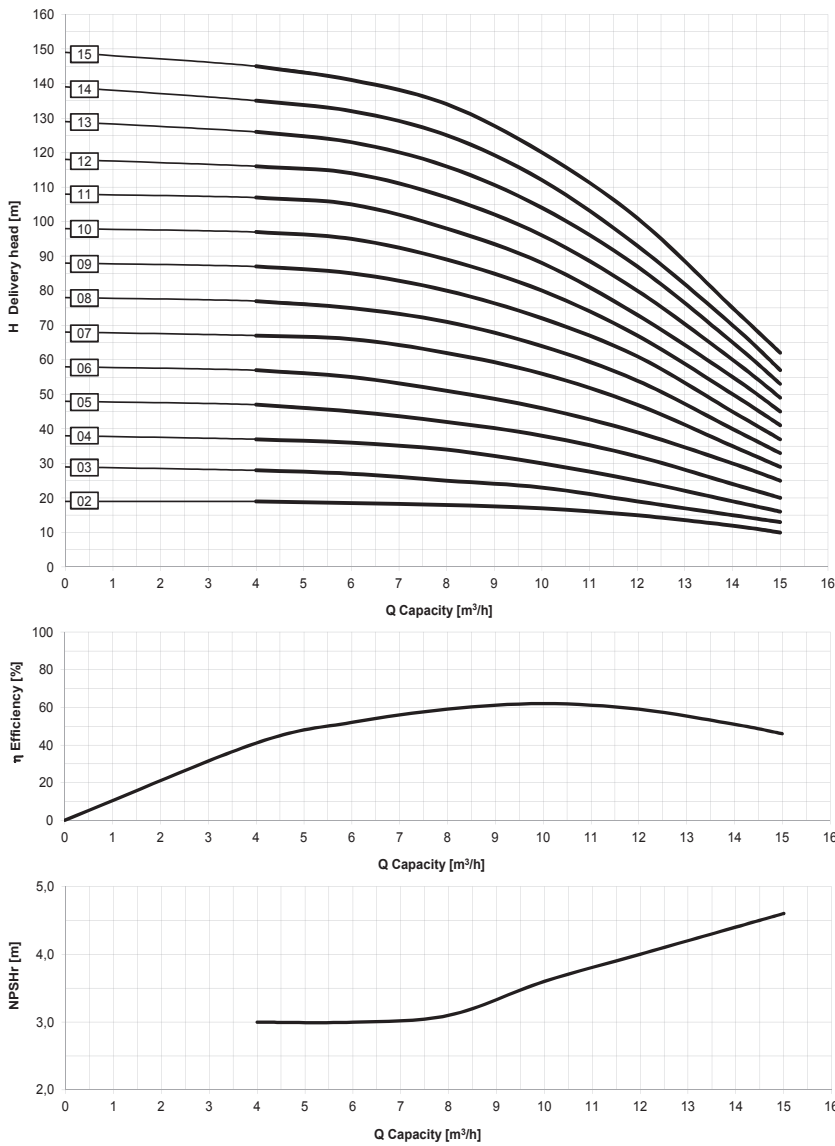
Marking of pump and motor type-size	Power (kW)		Dimensions (mm)			Weight (kg)	
	Max. Pump	Motor	L <sub>A</sub>	L <sub>P</sub>	DN	Pump	Pumping unit
OPA.2.02	0,60	0,75	561	346	G 1 1/2	23	31
OPA.2.03	1,08	1,10	610	378	G 1 1/2	25	35
OPA.2.04	1,44	1,50	669	410	G 1 1/2	27	39
OPA.2.05	1,80	2,20	701	442	G 1 1/2	29	42
OPA.2.06	2,16	2,20	751	474	G 1 1/2	31	44
OPA.2.07	2,52	3,00	806	506	G 1 1/2	33	51
OPA.2.08	2,88	3,00	838	538	G 1 1/2	35	53
OPA.2.09	3,24	4,00	894	570	G 1 1/2	37	70
OPA.2.10	3,60	4,00	926	602	G 1 1/2	39	72
OPA.2.11	3,95	5,50	958	634	G 1 1/2	41	75
OPA.2.12	4,32	5,50	990	666	G 1 1/2	43	77
OPA.2.13	4,62	5,50	1022	698	G 1 1/2	45	79
OPA.2.14	5,04	5,50	1054	730	G 1 1/2	47	81
OPA.2.15	5,34	5,50	1086	762	G 1 1/2	49	83



# VERTICAL PUMPS TYPE OPA, OPB

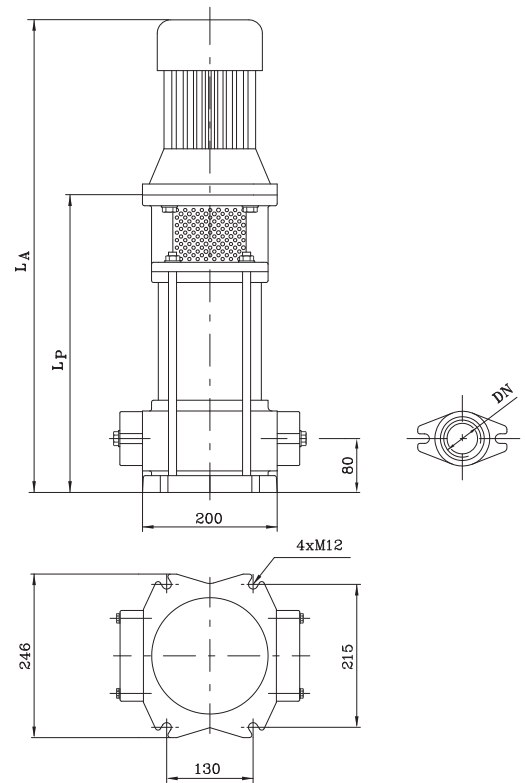
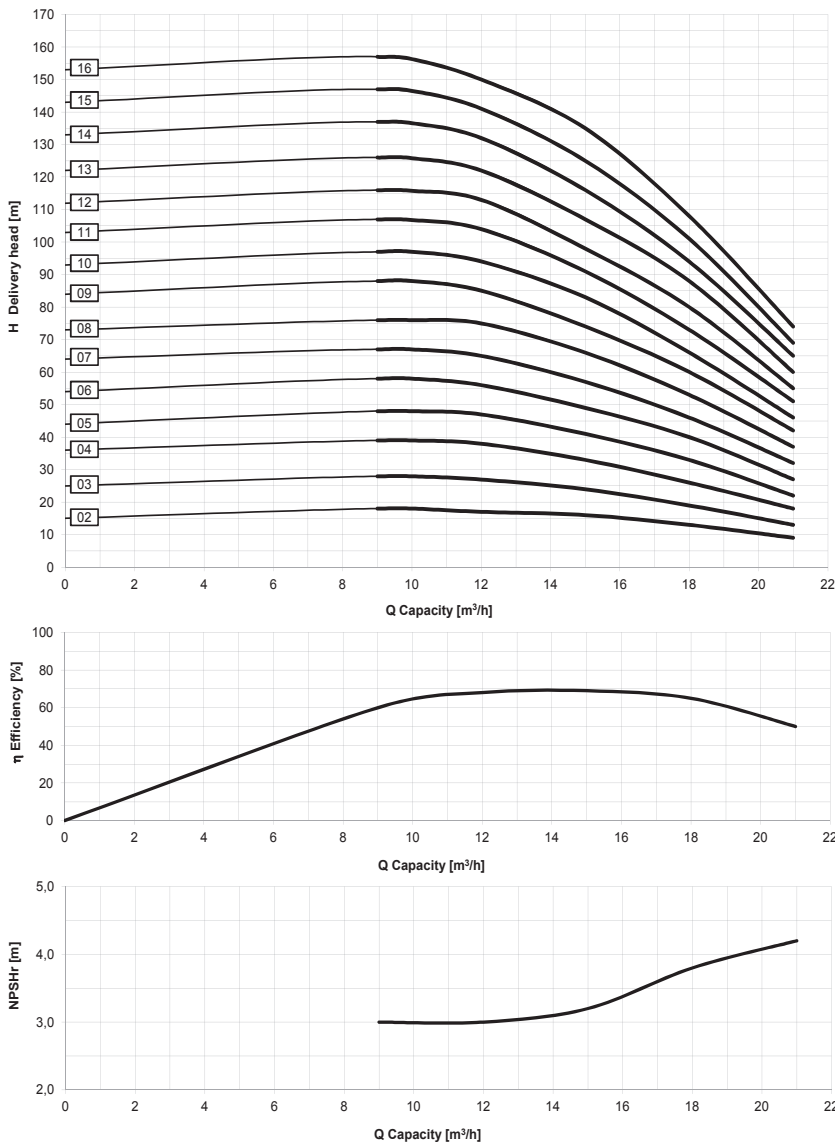
## OPB.2

Characteristics  
OPB.2



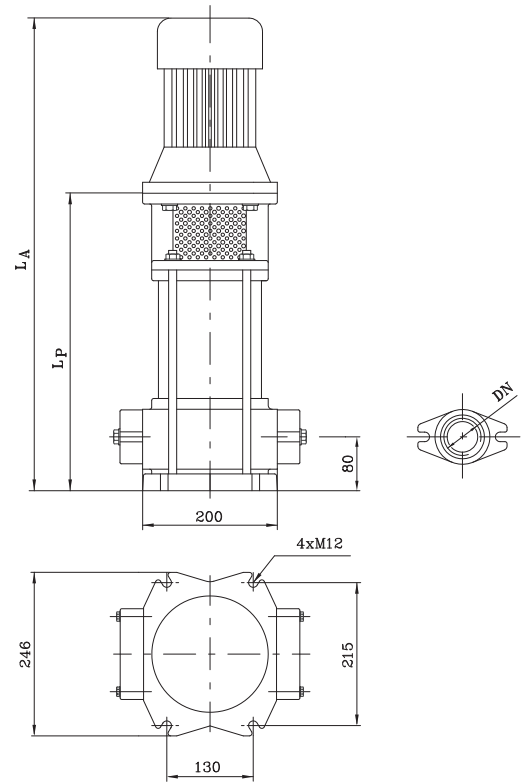
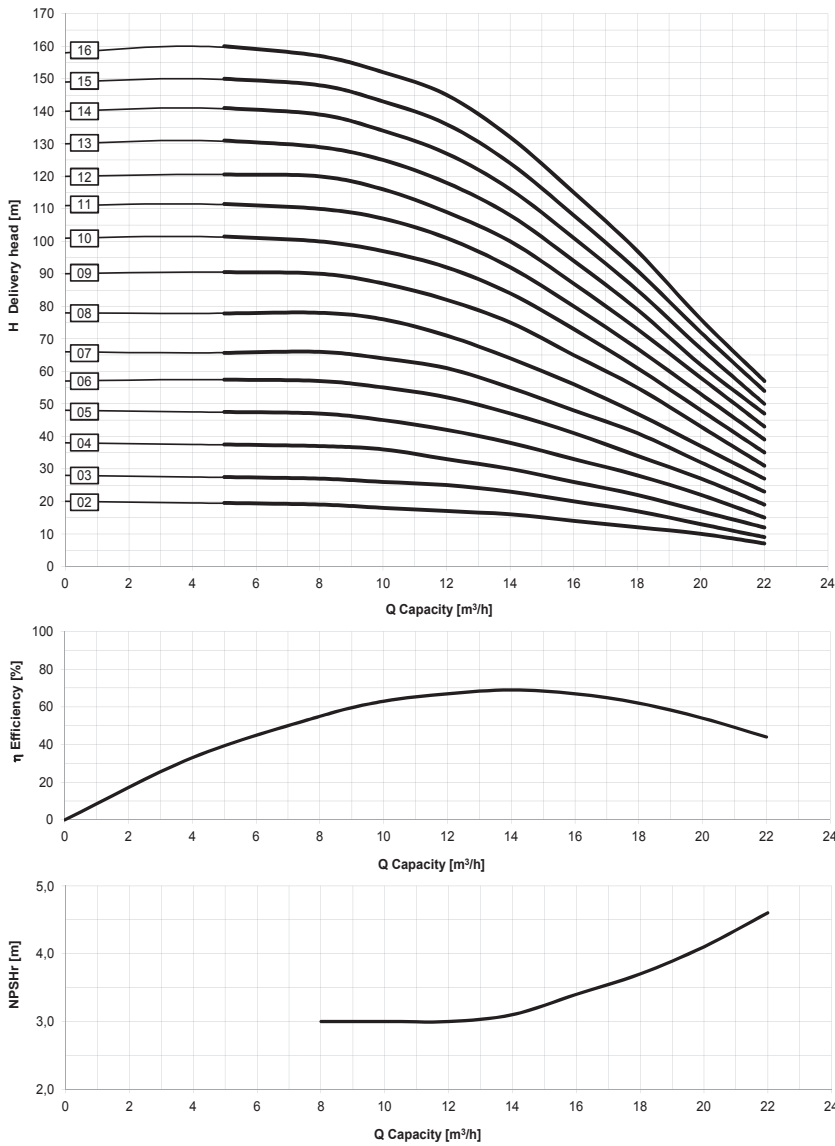
Marking of pump and motor type-size	Power (kW)		Dimensions (mm)			Weight (kg)	
	Max. Pump	Motor	L <sub>A</sub>	L <sub>P</sub>	DN	Pump	Pumping unit
OPB.2.02	0,94	1,10	596	364	G 1 1/2	23	33
OPB.2.03	1,16	1,50	664	405	G 1 1/2	25	37
OPB.2.04	1,42	1,50	705	446	G 1 1/2	27	39
OPB.2.05	1,85	2,20	764	487	G 1 1/2	29	42
OPB.2.06	2,22	3,00	828	528	G 1 1/2	31	49
OPB.2.07	2,64	3,00	869	569	G 1 1/2	33	51
OPB.2.08	3,06	4,00	934	610	G 1 1/2	35	68
OPB.2.09	3,42	4,00	975	651	G 1 1/2	37	70
OPB.2.10	3,80	4,00	1016	692	G 1 1/2	39	72
OPB.2.11	4,14	5,50	1057	733	G 1 1/2	41	75
OPB.2.12	4,51	5,50	1098	774	G 1 1/2	43	77
OPB.2.13	4,89	5,50	1139	815	G 1 1/2	45	79
OPB.2.14	5,26	5,50	1179	856	G 1 1/2	47	83
OPB.2.15	5,64	6,00	1220	897	G 1 1/2	49	85

**Characteristics  
OPA.3**



Marking of pump and motor type-size	Power (kW)		Dimensions (mm)			Weight (kg)	
	Max. Pump	Motor	$L_A$	$L_P$	DN	Pump	Pumping unit
OPA.3.02	1,00	1,10	596	364	G 2	23	31
OPA.3.03	1,50	1,50	664	405	G 2	25	35
OPA.3.04	2,00	2,20	723	446	G 2	27	39
OPA.3.05	2,50	3,00	810	487	G 2	29	42
OPA.3.06	3,00	4,00	852	528	G 2	31	44
OPA.3.07	3,50	4,00	893	569	G 2	33	46
OPA.3.08	4,00	5,50	934	610	G 2	35	69
OPA.3.09	4,50	5,50	975	651	G 2	37	71
OPA.3.10	5,00	5,50	1016	692	G 2	39	73
OPA.3.11	5,50	6,00	1078	733	G 2	41	75
OPA.3.12	6,00	7,50	1194	774	G 2	43	82
OPA.3.13	6,50	7,50	1235	815	G 2	45	84
OPA.3.14	7,00	7,50	1276	856	G 2	47	86
OPA.3.15	7,50	9,20	1317	897	G 2	49	88
OPA.3.16	8,00	9,20	1358	938	G 2	51	90

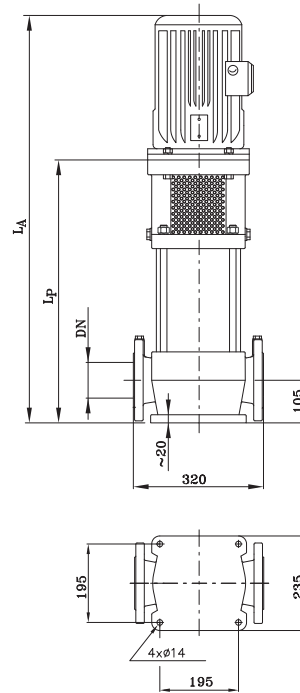
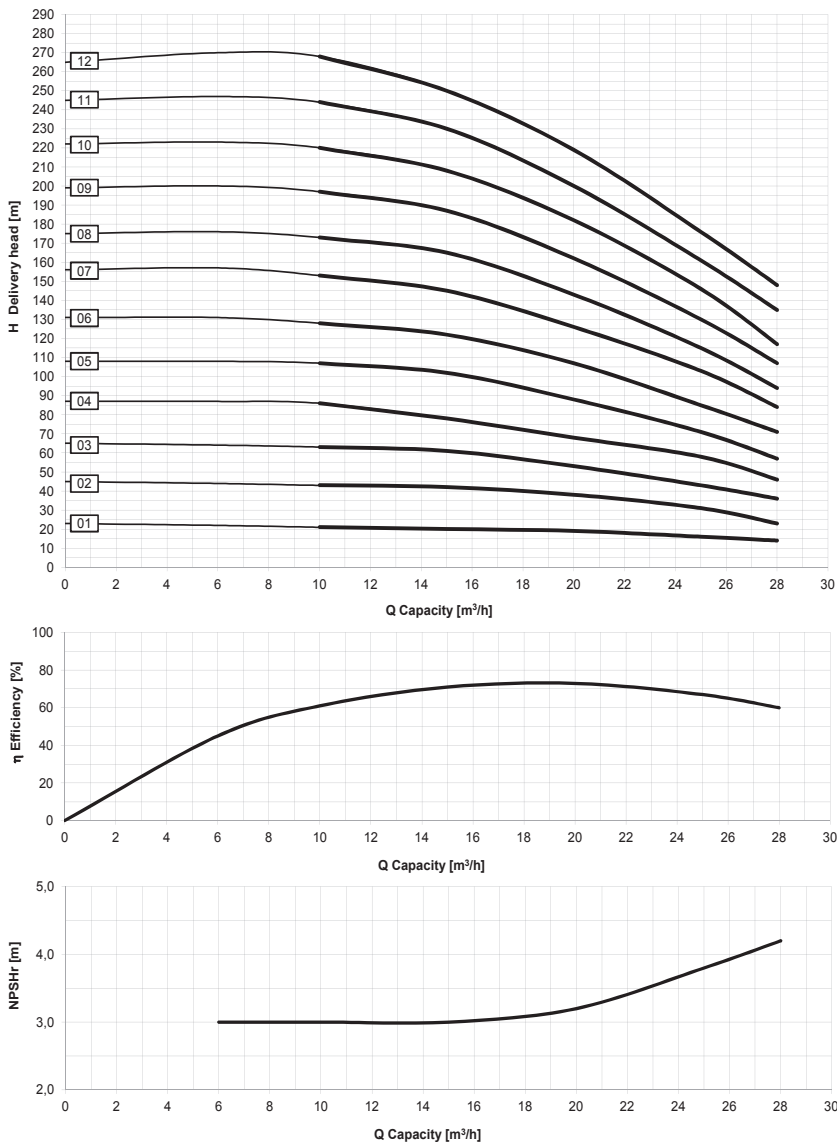
**Characteristics  
OPB.3**



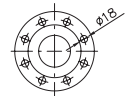
Marking of pump and motor type-size	Power (kW)		Dimensions (mm)			Weight (kg)	
	Max. Pump	Motor	$L_A$	$L_P$	DN	Pump	Pumping unit
OPB.3.02	1,09	1,10	569	364	G 2	23	31
OPB.3.03	1,49	1,50	664	405	G 2	25	35
OPB.3.04	1,89	2,20	723	446	G 2	27	39
OPB.3.05	2,32	3,00	810	487	G 2	29	42
OPB.3.06	2,91	4,00	852	528	G 2	31	44
OPB.3.07	3,40	4,00	893	569	G 2	33	46
OPB.3.08	3,90	5,50	934	610	G 2	35	69
OPB.3.09	4,50	5,50	975	651	G 2	37	71
OPB.3.10	5,00	5,50	1016	692	G 2	39	73
OPB.3.11	5,50	6,00	1078	733	G 2	41	75
OPB.3.12	6,00	7,50	1194	774	G 2	43	82
OPB.3.13	6,50	7,50	1235	815	G 2	45	84
OPB.3.14	6,90	7,50	1276	856	G 2	47	86
OPB.3.15	7,40	9,20	1317	897	G 2	49	88
OPB.3.16	7,86	9,20	1358	938	G 2	51	90

## OPA.4

**Characteristics  
OPA.4**



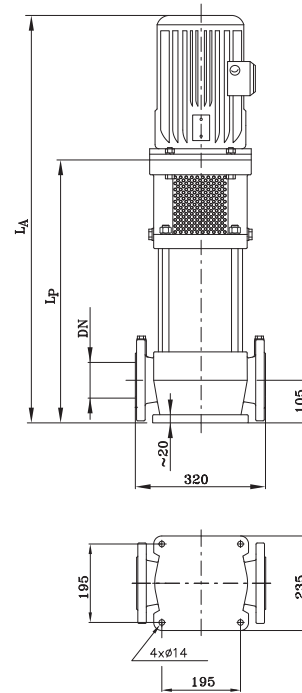
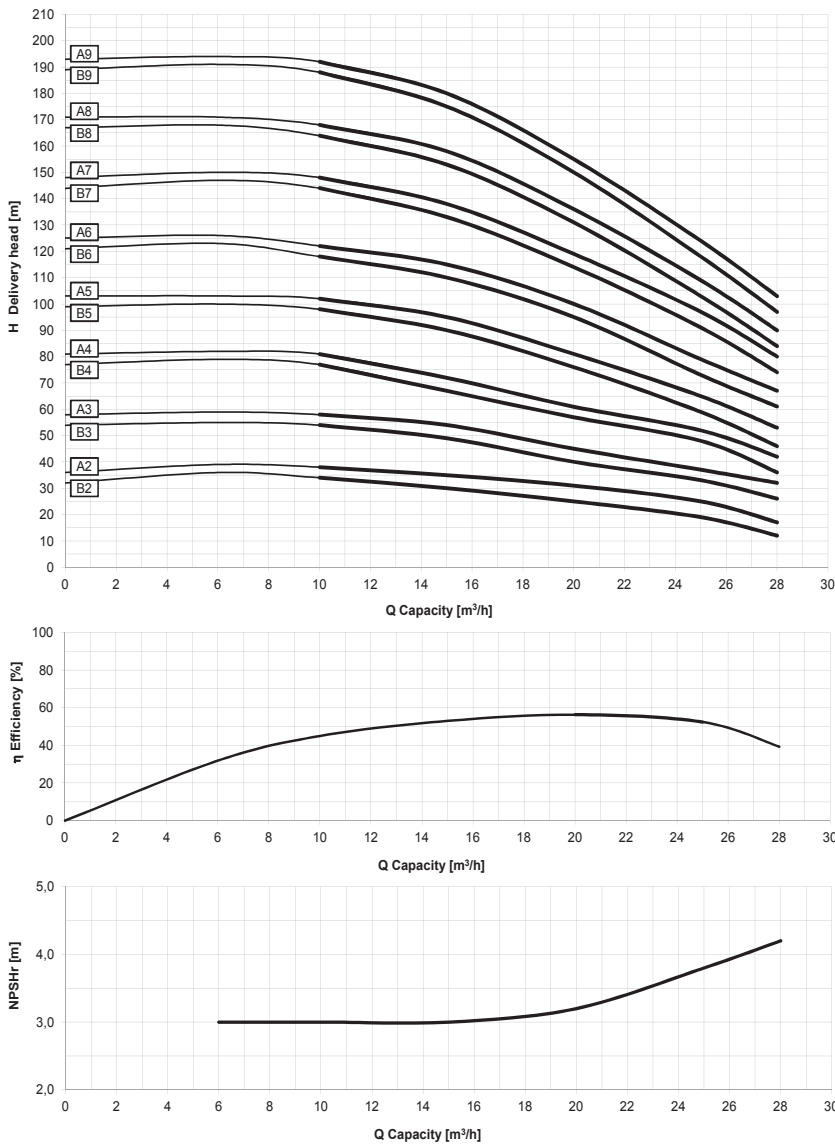
For working pressure over 1,0 MPa



Marking of pump and motor type-size	Power (kW)		Dimensions (mm)			Weight (kg)	
	Max. Pump	Motor	$L_A$	$L_P$	DN	Pump	Pumping unit
OPA.4.01	1,9	3,0	809	459	80	58,3	89,8
OPA.4.02	3,9	4,0	869	506	80	62,8	103,8
OPA.4.03	5,6	6,0	898	553	80	67,3	106,3
OPA.4.04	7,3	7,5	1000	600	80	71,8	132,8
OPA.4.05	9,1	11,0	1047	647	80	76,3	146,3
OPA.4.06	10,8	11,0	1094	694	80	80,8	150,8
OPA.4.07	12,4	15,0	1291	771	80	96,4	216,4
OPA.4.08	14,1	15,0	1338	818	80	100,9	220,9
OPA.4.09	15,8	18,5	1429	865	80	105,4	240,4
OPA.4.10	17,5	18,5	1476	912	80	109,9	244,9
OPA.4.11	19,1	22,0	1554	959	80	114,4	279,4
OPA.4.12	20,8	22,0	1601	1006	80	118,9	283,9

## OPA.4

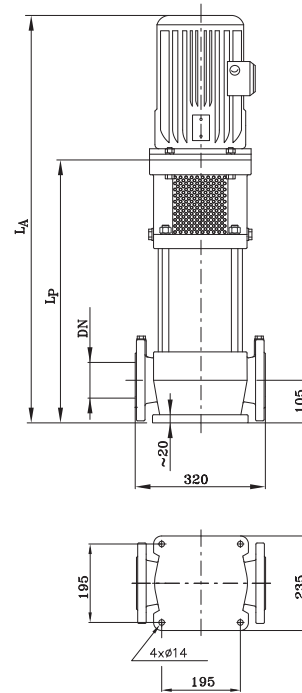
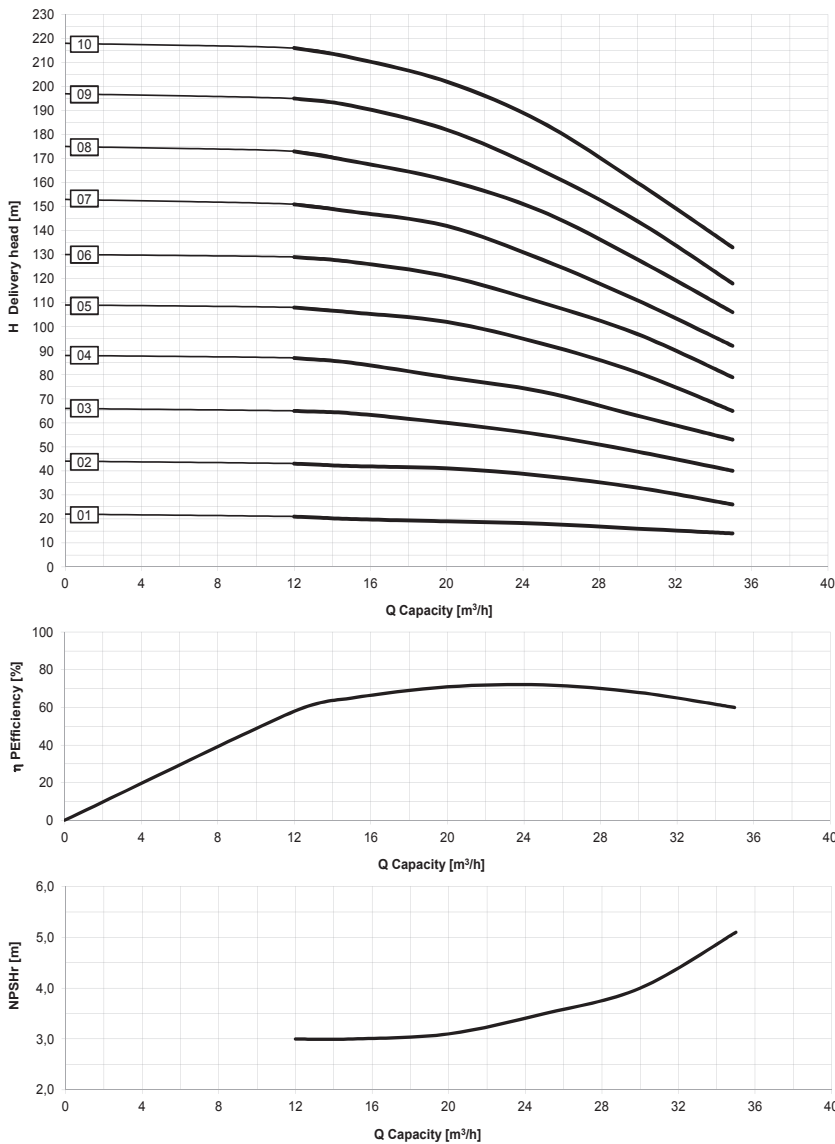
**Characteristics  
OPA.4**



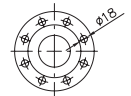
Marking of pump and motor type-size	Power (kW)		Dimensions (mm)			Weight (kg)	
	Max. Pump	Motor	$L_A$	$L_P$	DN	Pump	Pumping unit
OPA.4.A2	3,3	4,0	869	506	80	62,8	103,8
OPA.4.A3	5,1	5,5	913	553	80	67,3	120,3
OPA.4.A4	6,7	7,5	1000	600	80	71,8	132,8
OPA.4.A5	8,6	9,2	1047	647	80	76,3	146,3
OPA.4.A6	10,3	11,0	1094	694	80	80,8	150,8
OPA.4.A7	11,9	15,0	1291	771	80	96,4	216,4
OPA.4.A8	13,6	15,0	1338	818	80	100,9	220,9
OPA.4.A9	15,3	18,5	1429	865	80	105,4	240,4
OPA.4.B2	2,7	3,0	856	506	80	62,8	93,8
OPA.4.B3	4,4	5,5	913	553	80	67,3	120,3
OPA.4.B4	6,2	7,5	1000	600	80	71,8	132,8
OPA.4.B5	8,1	9,2	1047	647	80	76,3	146,3
OPA.4.B6	9,8	11,0	1094	694	80	80,8	150,8
OPA.4.B7	11,3	15,0	1291	771	80	96,4	216,4
OPA.4.B8	13,2	15,0	1338	818	80	100,9	220,9
OPA.4.B9	14,6	15,0	1385	865	80	105,4	225,4

## OPA.5

**Characteristics  
OPA.5**

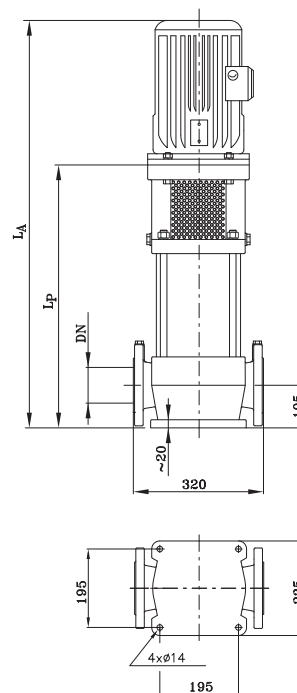
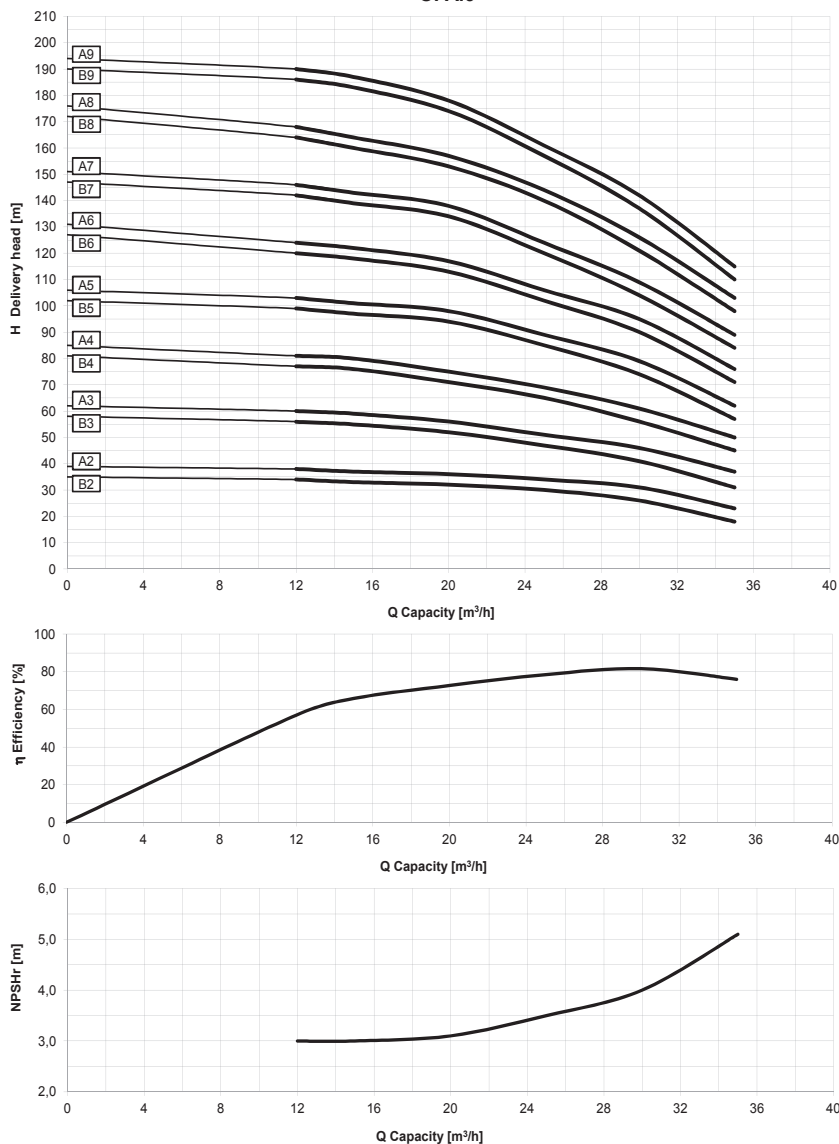


For working pressure over 1,0 MPa

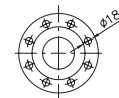


Marking of pump and motor type-size	Power (kW)		Dimensions (mm)			Weight (kg)	
	Max. Pump	Motor	$L_A$	$L_P$	DN	Pump	Pumping unit
OPA.5.01	2,1	3,0	817	467	80	58,6	90,1
OPA.5.02	4,2	5,5	882	522	80	63,4	116,4
OPA.5.03	6,3	7,5	977	577	80	67,9	128,9
OPA.5.04	8,3	9,2	1032	632	80	72,4	142,4
OPA.5.05	10,2	11,0	1087	687	80	77,2	147,2
OPA.5.06	12,4	15,0	1292	772	80	93,1	213,1
OPA.5.07	14,3	18,5	1391	827	80	97,9	232,9
OPA.5.08	16,5	18,5	1446	882	80	102,7	237,7
OPA.5.09	18,5	22,0	1532	937	80	107,5	272,5
OPA.5.10	20,4	22,0	1587	992	80	112,3	277,3

**Characteristics  
OPA.5**



For working pressure over 1,0 MPa

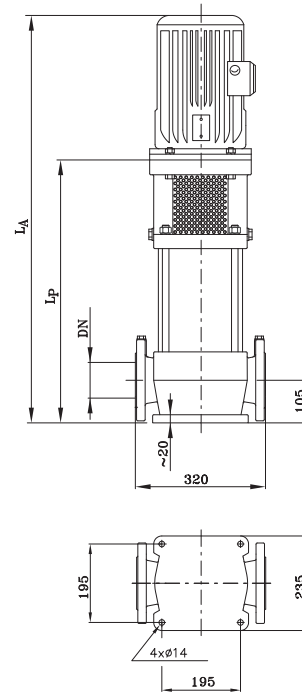
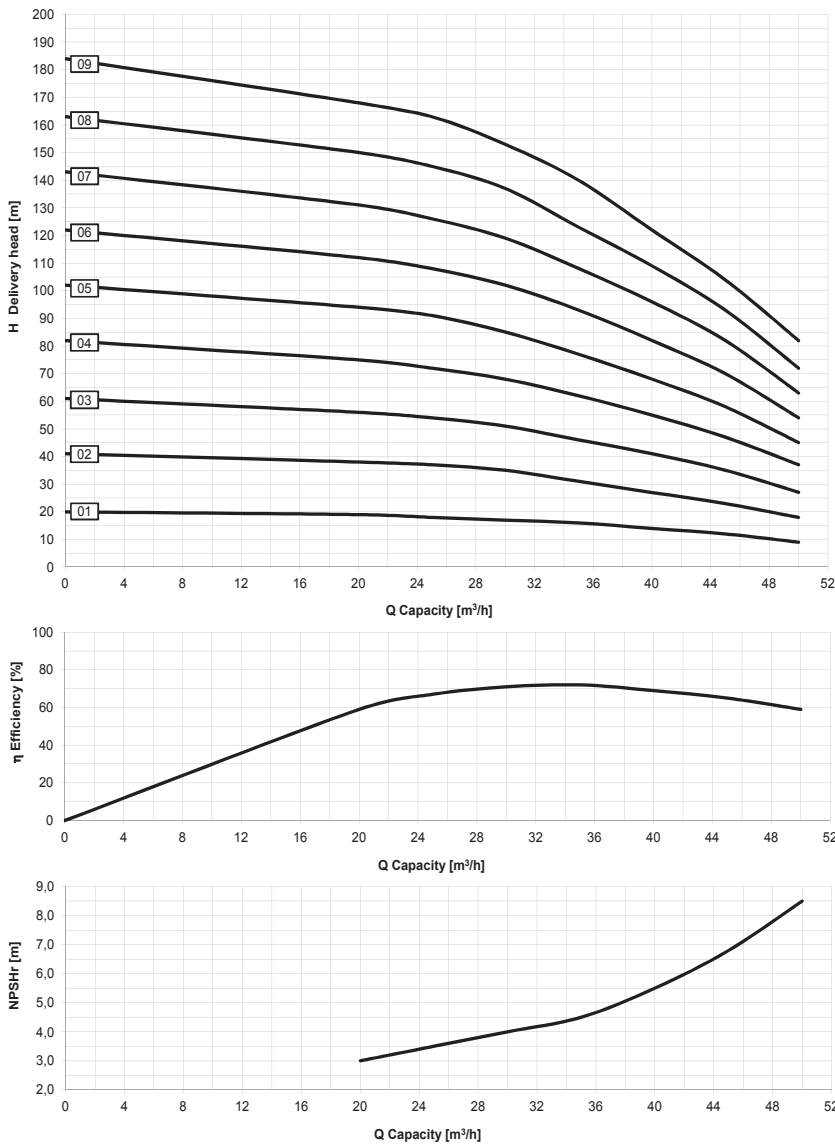


Marking of pump and motor type-size	Power (kW)		Dimensions (mm)			Weight (kg)	
	Max. Pump	Motor	$L_A$	$L_P$	DN	Pump	Pumping unit
OPA.5.A2	3,2	4,0	885	522	80	63,4	104,4
OPA.5.A3	5,3	6,0	928	577	80	67,9	108,9
OPA.5.A4	7,3	9,2	1032	632	80	72,4	142,4
OPA.5.A5	9,2	11,0	1087	687	80	77,2	147,2
OPA.5.A6	11,4	15,0	1292	772	80	93,1	213,1
OPA.5.A7	13,3	15,0	1347	827	80	97,9	217,9
OPA.5.A8	15,5	18,5	1446	882	80	102,7	237,7
OPA.5.A9	17,5	18,5	1501	937	80	107,5	334,5
OPA.5.B2	2,8	4,0	885	522	80	63,4	104,4
OPA.5.B3	4,7	5,5	937	577	80	67,9	120,9
OPA.5.B4	6,7	7,5	1032	632	80	72,4	133,4
OPA.5.B5	8,6	9,2	1087	687	80	77,2	147,2
OPA.5.B6	10,8	15,0	1292	772	80	93,1	213,1
OPA.5.B7	12,7	15,0	1347	827	80	97,9	217,9
OPA.5.B8	14,9	18,5	1446	882	80	102,7	237,7
OPA.5.B9	16,9	18,5	1501	937	80	107,5	334,5

# VERTICAL PUMPS TYPE OPA, OPB

## OPA.6

Characteristics  
OPA.6



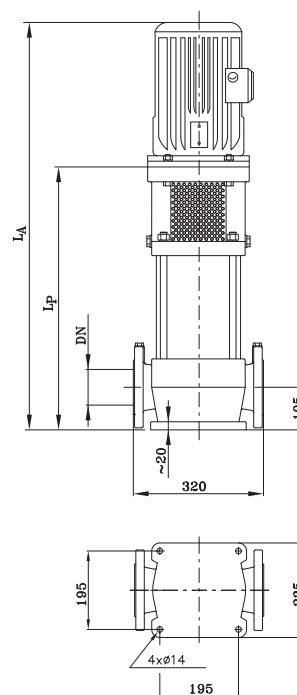
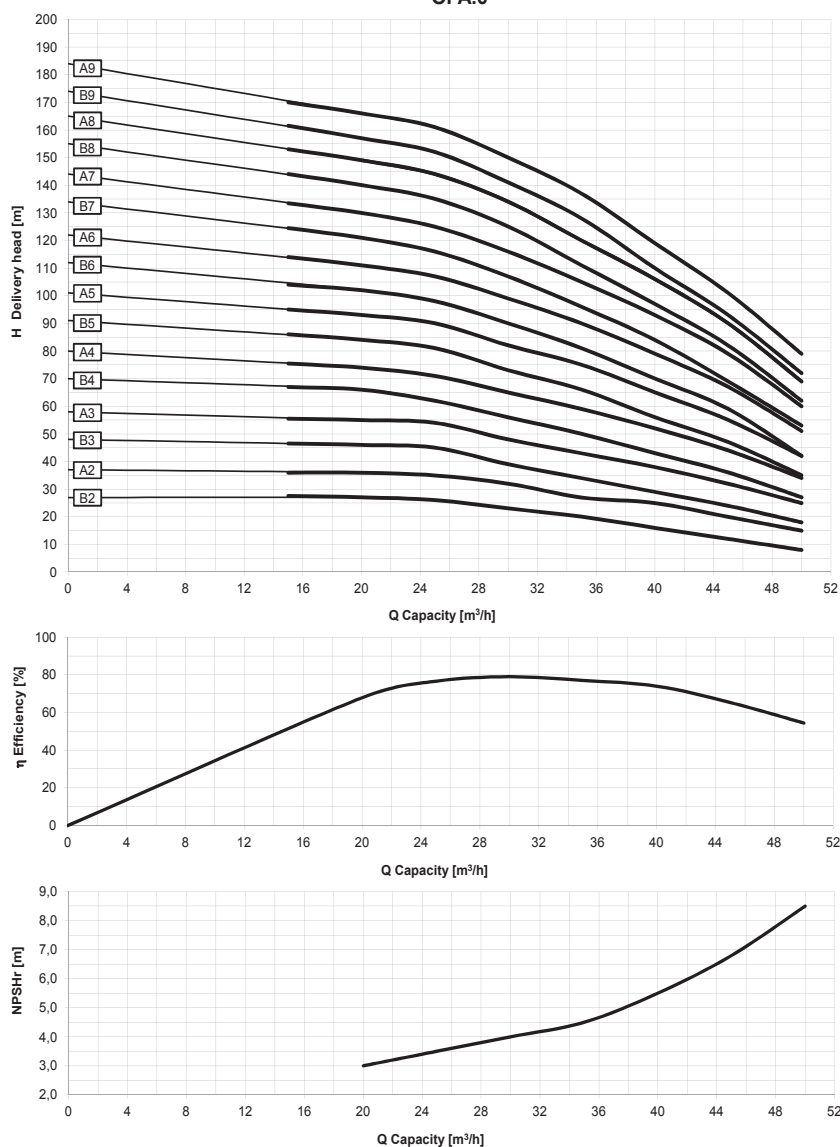
For working pressure  
over 1,0 MPa



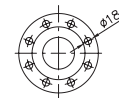
Marking of pump and motor type-size	Power (kW)		Dimensions (mm)			Weight (kg)	
	Max. Pump	Motor	$L_A$	$L_P$	DN	Pump	Pumping unit
OPA.6.01	2,2	3,0	817	467	80	58,6	90,1
OPA.6.02	4,5	5,5	882	522	80	63,4	116,4
OPA.6.03	6,6	7,5	977	577	80	67,9	128,9
OPA.6.04	8,8	11,0	1032	632	80	72,4	142,4
OPA.6.05	11,0	15,0	1237	717	80	88,3	208,3
OPA.6.06	13,2	15,0	1292	772	80	93,1	213,1
OPA.6.07	15,4	18,5	1391	827	80	97,9	232,9
OPA.6.08	17,6	18,5	1446	882	80	102,7	237,7
OPA.6.09	19,8	22,0	1532	937	80	107,5	272,5



**Characteristics  
OPA.6**

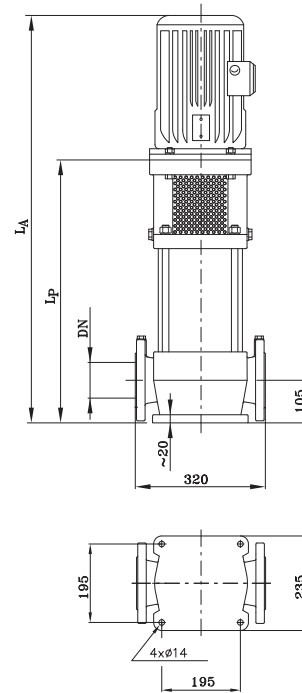
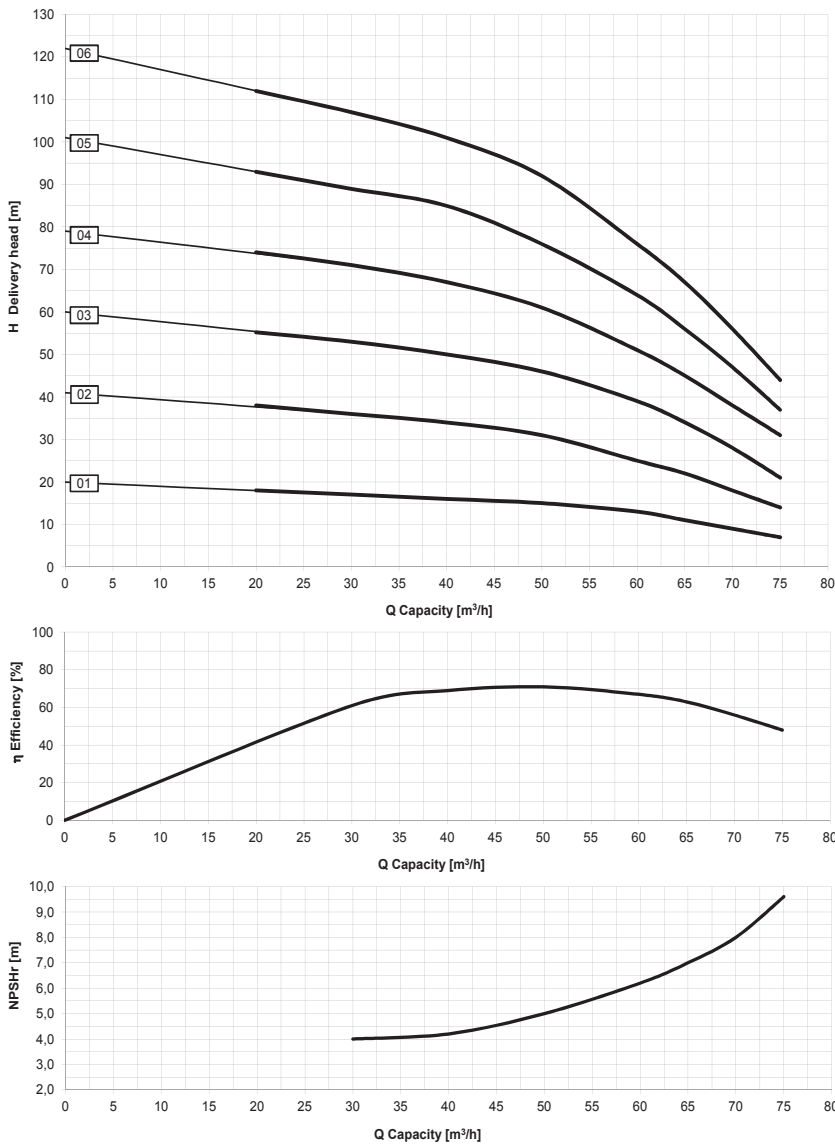


For working pressure over 1,0 MPa

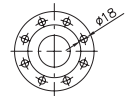


Marking of pump and motor type-size	Power (kW)		Dimensions (mm)			Weight (kg)	
	Max. Pump	Motor	$L_A$	$L_P$	DN	Pump	Pumping unit
OPA.6.A2	3,8	5,5	882	522	80	63,4	116,4
OPA.6.A3	5,8	7,5	977	577	80	67,9	128,9
OPA.6.A4	8,0	9,2	1032	632	80	72,4	142,4
OPA.6.A5	10,5	11,0	1117	717	80	88,3	158,3
OPA.6.A6	12,4	15,0	1292	772	80	93,1	213,1
OPA.6.A7	14,5	15,0	1347	827	80	97,9	217,9
OPA.6.A8	16,8	18,5	1446	882	80	102,7	237,7
OPA.6.A9	19,1	22,0	1532	937	80	107,5	272,5
OPA.6.B2	2,9	4,0	885	522	80	63,4	104,4
OPA.6.B3	5,0	5,5	937	577	80	67,9	120,9
OPA.6.B4	7,4	9,2	1032	632	80	72,4	142,4
OPA.6.B5	9,6	11,0	1117	717	80	88,3	158,3
OPA.6.B6	11,6	15,0	1292	772	80	93,1	213,1
OPA.6.B7	13,6	15,0	1347	827	80	97,9	217,9
OPA.6.B8	16,0	18,5	1446	882	80	102,7	237,7
OPA.6.B9	18,4	22,0	1532	937	80	107,5	272,5

**Characteristics  
OPA.7**

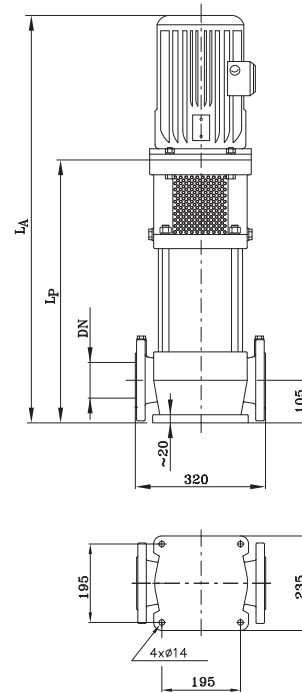
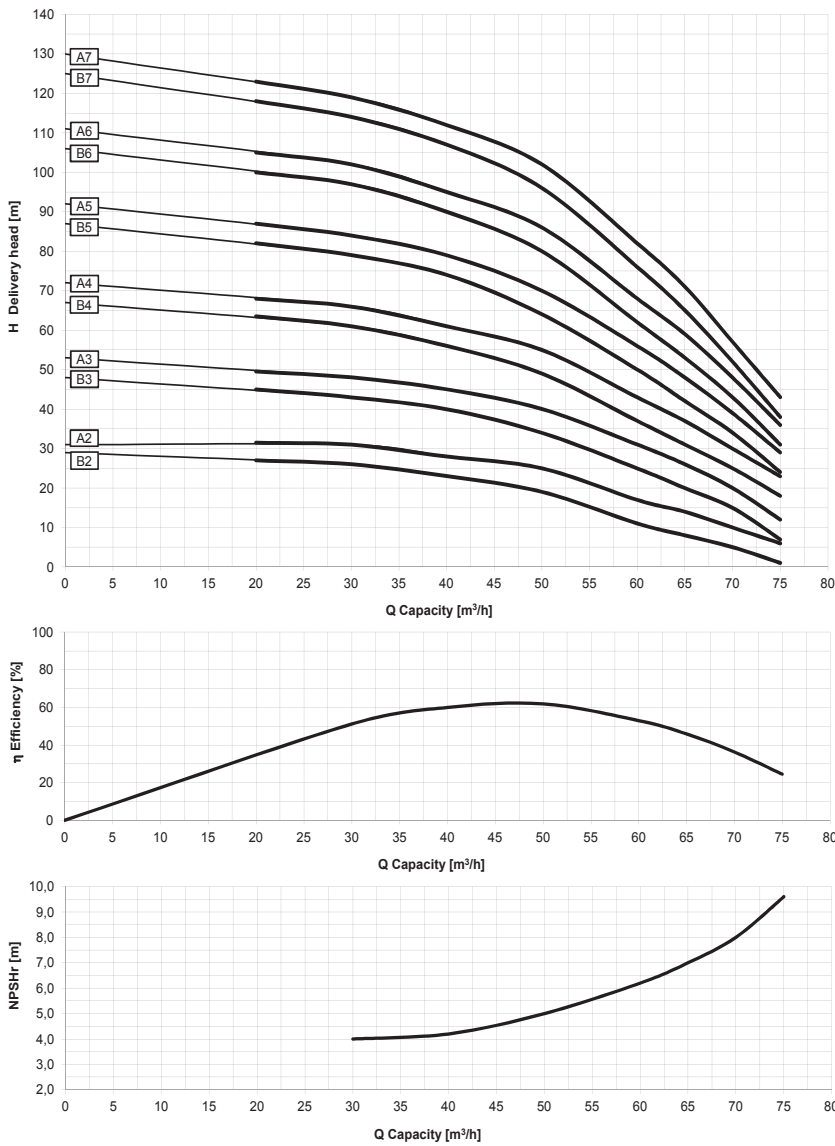


For working pressure over 1,0 MPa



Marking of pump and motor type-size	Power (kW)		Dimensions (mm)			Weight (kg)	
	Max. Pump	Motor	$L_A$	$L_P$	DN	Pump	Pumping unit
OPA.7.01	3,4	4,0	837	474	80	58,9	100,0
OPA.7.02	6,7	7,5	936	536	80	64,0	125,0
OPA.7.03	10,1	11,0	998	598	80	69,1	139,1
OPA.7.04	13,5	15,0	1210	690	80	85,3	205,3
OPA.7.05	16,9	18,5	1316	752	80	90,4	225,4
OPA.7.06	20,3	22,0	1409	814	80	95,5	260,5

**Characteristics  
OPA.7**



For working pressure over 1,0 MPa

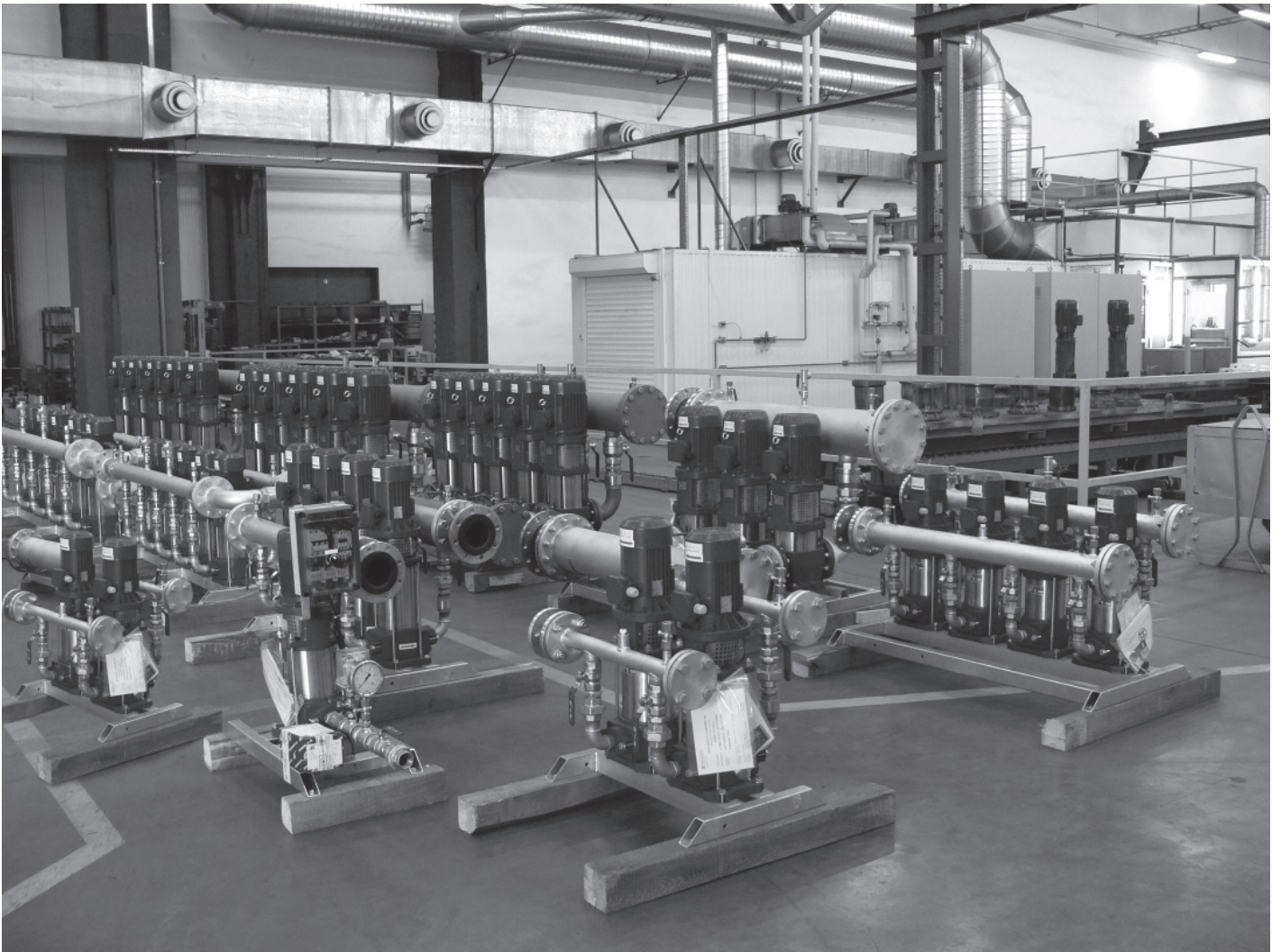
Marking of pump and motor type-size	Power (kW)		Dimensions (mm)			Weight (kg)	
	Max. Pump	Motor	$L_A$	$L_P$	DN	Pump	Pumping unit
OPA.7.A2	5,5	6,0	936	536	80	64,0	105,0
OPA.7.A3	8,9	11,0	998	598	80	69,1	139,1
OPA.7.A4	12,2	15,0	1210	690	80	85,3	205,3
OPA.7.A5	15,5	18,5	1316	752	80	90,4	225,4
OPA.7.A6	18,9	22,0	1409	814	80	95,5	260,5
OPA.7.A7	20,0	22,0	1471	876	80	100,1	265,9
OPA.7.B2	4,5	5,5	896	536	80	64,0	117,0
OPA.7.B3	7,8	9,2	998	598	80	69,1	139,1
OPA.7.B4	11,1	15,0	1210	690	80	85,3	205,3
OPA.7.B5	14,3	15,0	1272	752	80	90,4	210,4
OPA.7.B6	17,6	18,5	1378	814	80	95,5	230,5
OPA.7.B7	19,1	22,0	1471	876	80	100,1	265,9

## Pump applications

Pumping units of OPA, OPB type produced by Hydro-Vacuum S.A. are exclusively used in pressure boosting systems of ZH type.

Pressure boosting system is a system consisting of several pumps, usually of one size, parallelly connected by inflow and discharge collectors through non-return and cut-off fittings. Pumps are installed on supporting structure made of steel profiles. Supporting structure is equipped with vibro-insulators that enable placing of the system on the pumping station floor.

Detailed information regarding used pumps could be found in suitable catalogue and on the website: [www.hv.pl](http://www.hv.pl).







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