

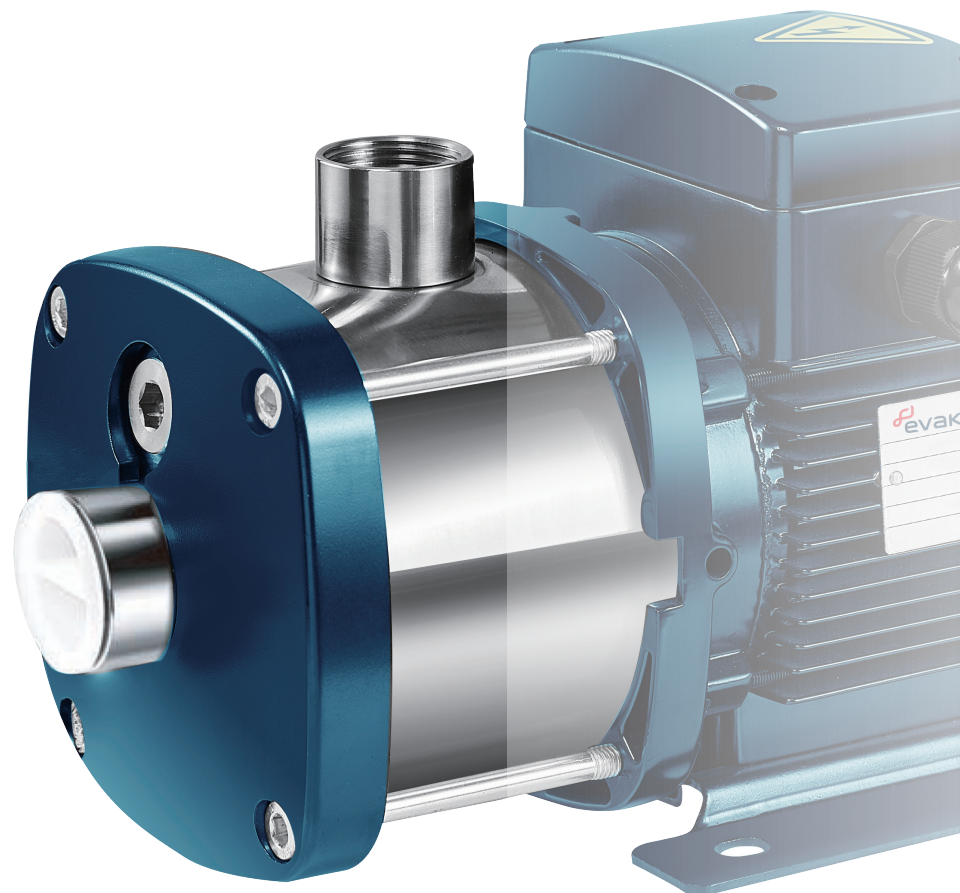
BUFFALO

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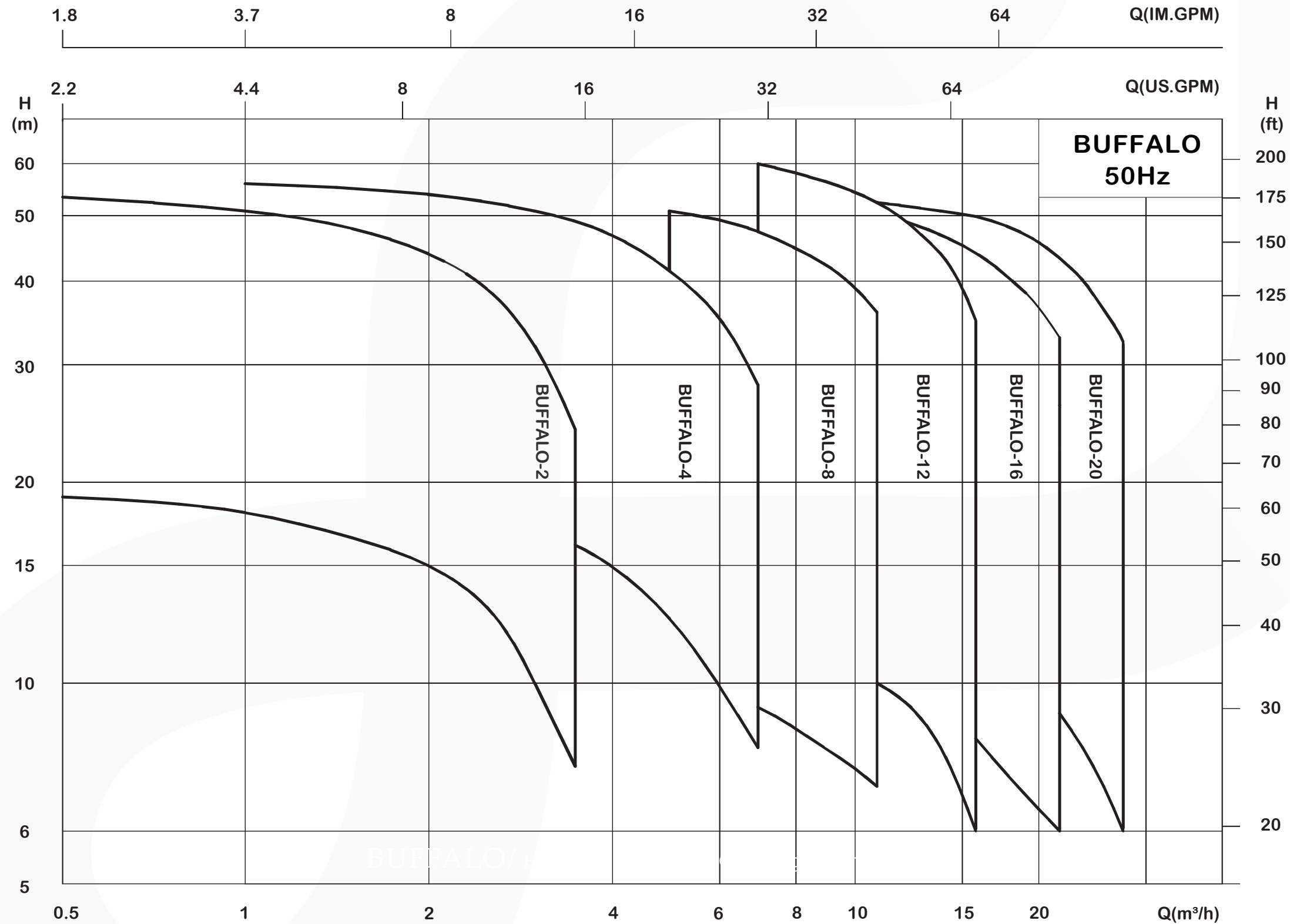
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PUMP PARTNERS

WITH THE EXPERIENCE AT THE HELM

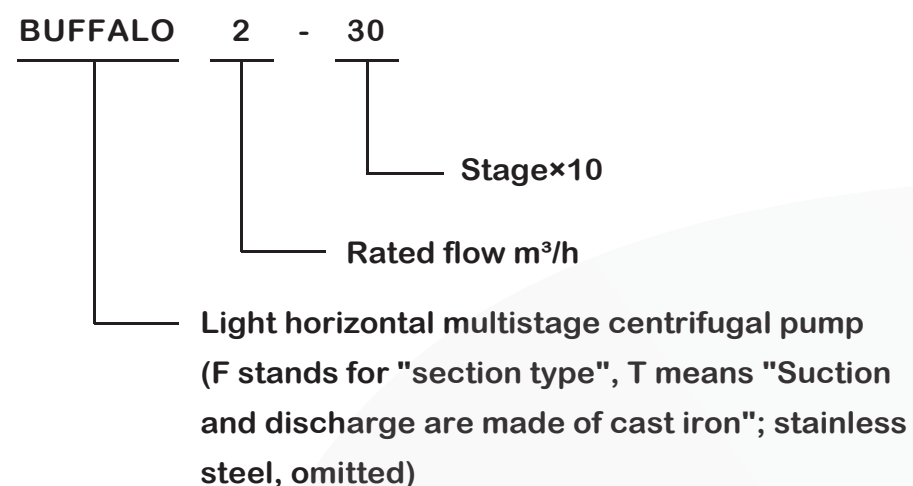


Application

Buffalo pump are mainly used in industrial field:

- Air-conditioning system
- Cooling system
- Industrial cleaning
- Water treatment (Water purification)
- Aquiculture
- Fertilizing / metering system
- Environmental application
- Other special applications
- Booster system in domestic, residential and building

Model No. Definition :



Operation condition

- Liquid temperature: Normal temperature type:-15°C~+70°C
Hot water type:-15°C~+110°C
- Ambient temperature: up to +40°C
- Max.operation pressure:10 bar
- Max.inlet pressure is limited by max. Operation pressure

Applicable medium

- Thin and clean non-flammable and non-explosive without solid granules and fibers.
- Mineral water, soft water, pure water, edible vegetable oil and other light chemical mediums
- When the density or viscosity of to-be-conveyed liquid is larger than that of water, it is necessary to select a driving motor of high-power.
- Whether a specific liquid is suitable for the pump depends on many factors, among which the most important ones are chlorine content, PH value,temperature, solvent and oil content.

Curve conditions

Following conditions are suitable for the performance curves shown above.

- All curves are based on the measured values of 50Hz:
- Constant motor speed 2900r/min;
- Curve tolerance in conformity with ISO9906Annex A.
- Measurement is done with 20°C air-free water, kinematic viscosity of 1mm²scc.
- The operation of pump shall refer to the performance region described by the thickened curve to prevent over heating due to too small flow rate or overload of motor due to too large flow rate.

Pump

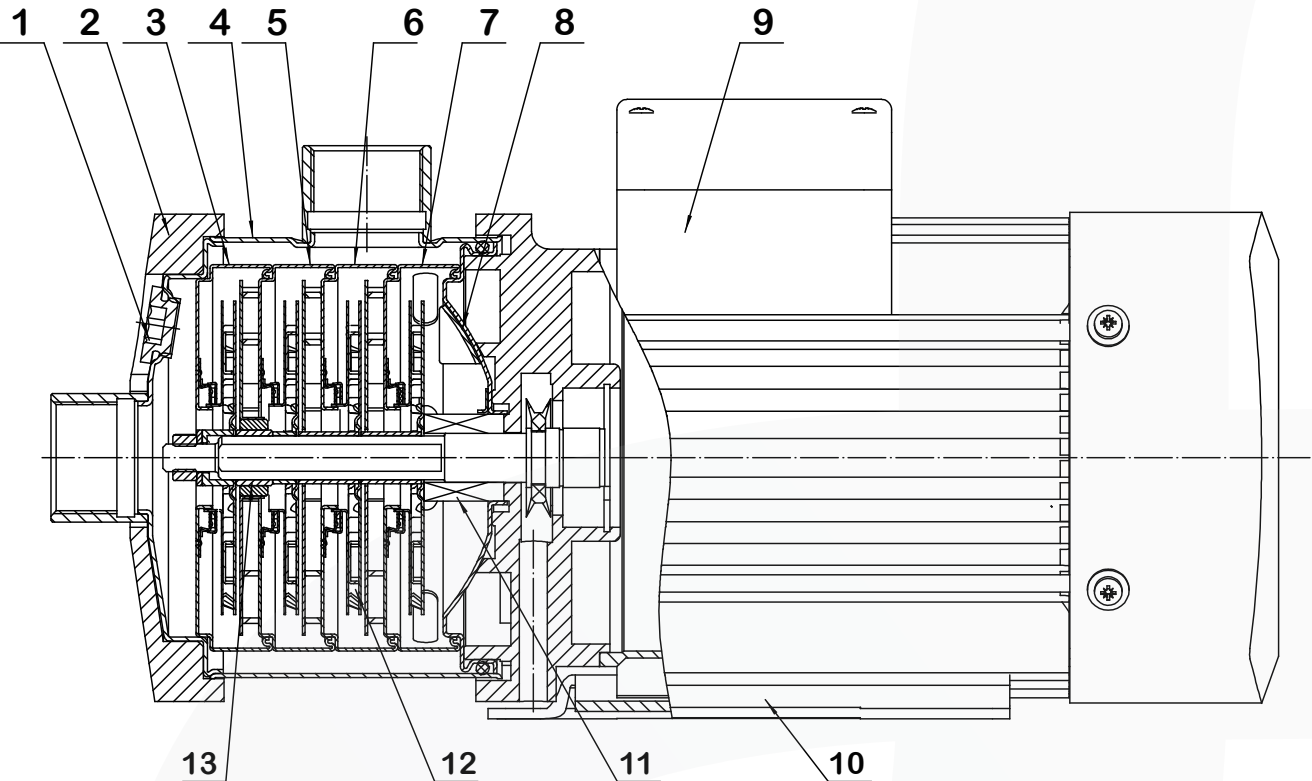
- Horizontal multistage non-self-priming centrifugal pump, attached with long shaft electric motor.
Compact structure renders small size of pump; axial inlet and radial outlet.

Motor

- Full-enclosed air-blast two-pole standard motor
- Protection class:IP55
- Insulation class:F
- Standard voltage: 50HZ: 1 ×220-240V
3 × 220-240V/380-415V

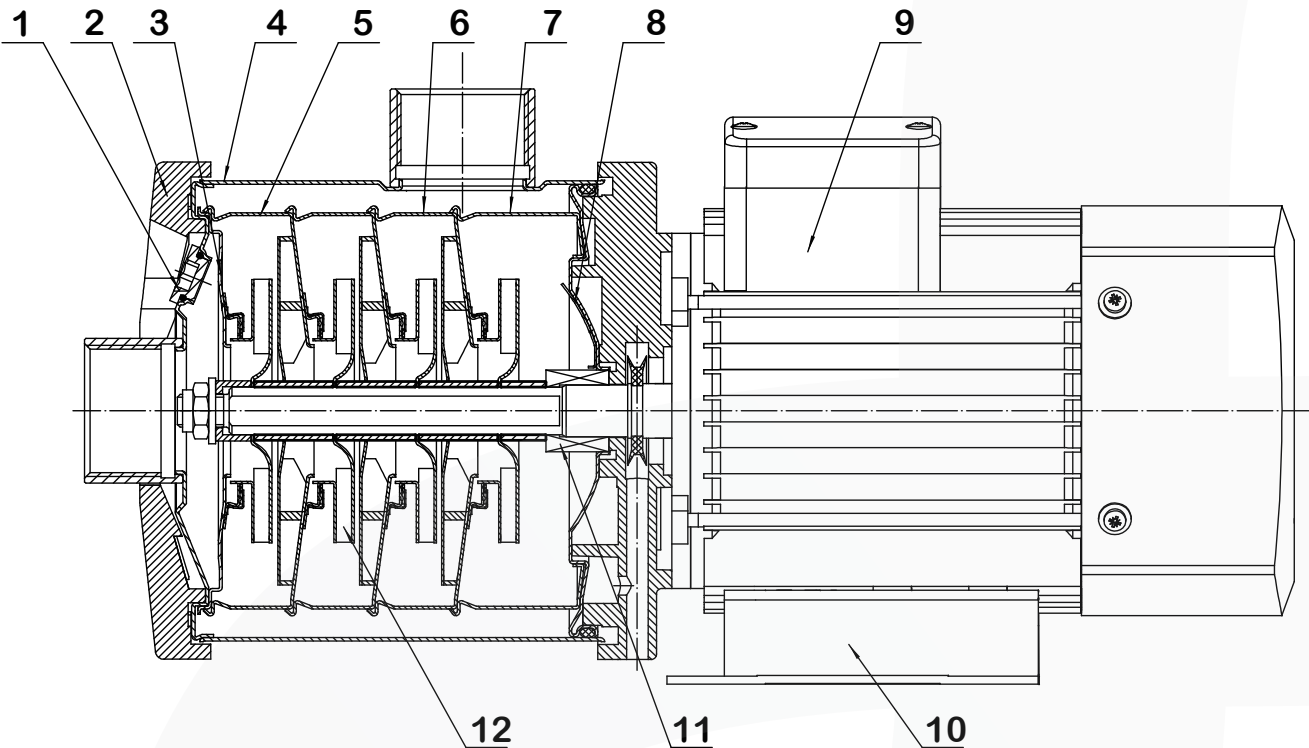
The maximum power of single-phase motor is 2.4kW.

Sectional view



NO.	Name	Material
1	Plug	Stainless steel
2	Clamp plate	Die-cast aluminum
3	Inducer	Stainless steel
4	Inlet and outlet chamber	Stainless steel
5	Support diffuser	Stainless steel
6	Diffuser	Stainless steel
7	Top diffuser	Stainless steel
8	Back seat	Stainless steel
9	Motor	-
10	Base plate	Steel plate
11	Mechanical seal	Graphite/Silicon carbide
12	Impeller	Stainless steel
13	Bearing	Tungsten carbide

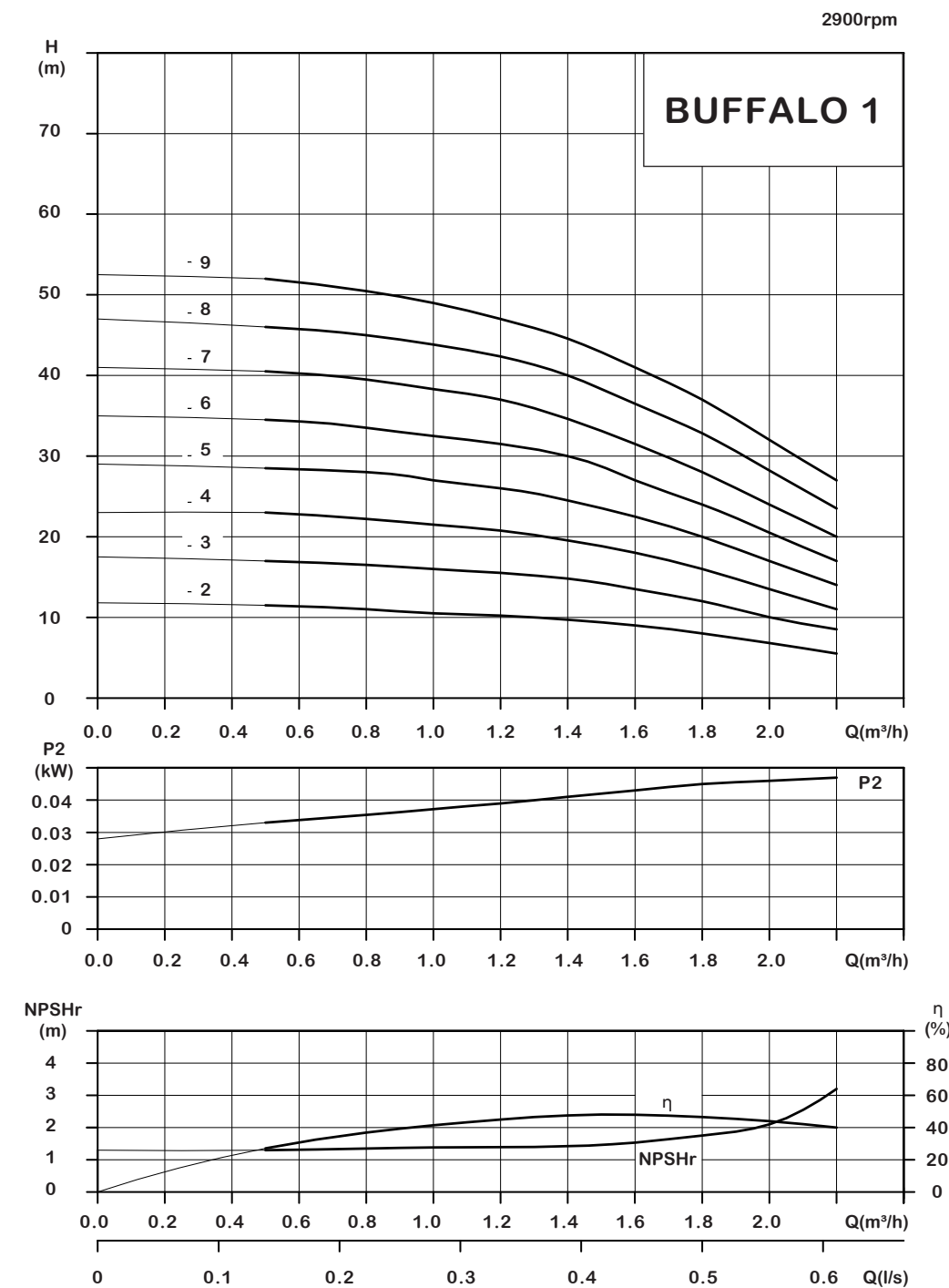
Sectional view



NO.	Name	Material
1	Plug	Stainless steel
2	Clamp plate	Die-cast aluminum
3	Inducer	Stainless steel
4	Inlet and outlet chamber	Stainless steel
5	Diffuser	Stainless steel
6	Top diffuser	Stainless steel
7	Discharge	Stainless steel
8	Back seat	Steel plate
9	Motor	-
10	Base plate	Graphite/Silicon carbide
11	Mechanical seal	Stainless steel
12	Impeller	Stainless steel

Data chart - BUFFALO - 1

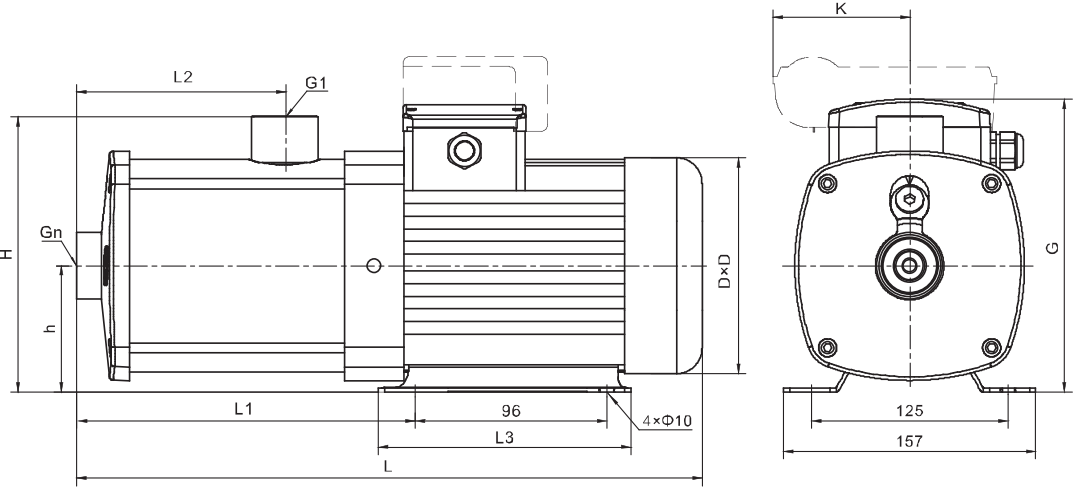
Performance curve



Performance table

Model	Driving motor (kW)	Q(m³/h)	0.5	0.8	1	1.2	1.4	1.6	1.8	2	2.2
BUFFALO 1-20	0.37	H (m)	11.5	11	10.5	10.2	9.7	9	8	6.8	5.5
BUFFALO 1-30	0.37		17	16.5	16	15.5	14.8	13.5	12	10	8.5
BUFFALO 1-40	0.37		23	22.5	21.5	21	19.8	18	16	13.5	11
BUFFALO 1-50	0.37		28.5	28	27	26	24.5	22.5	20	17	14
BUFFALO 1-60	0.37		34.5	33.5	32.5	31.5	30	27	24	20.5	17
BUFFALO 1-70	0.37		40.5	39.5	38	37	35	31.5	28	24	20
BUFFALO 1-80	0.55		46	45	43.5	42	40	36.5	33	27.5	23.5
BUFFALO 1-90	0.55		52	51	49	47	45	41	37	32	27

Installation sketch

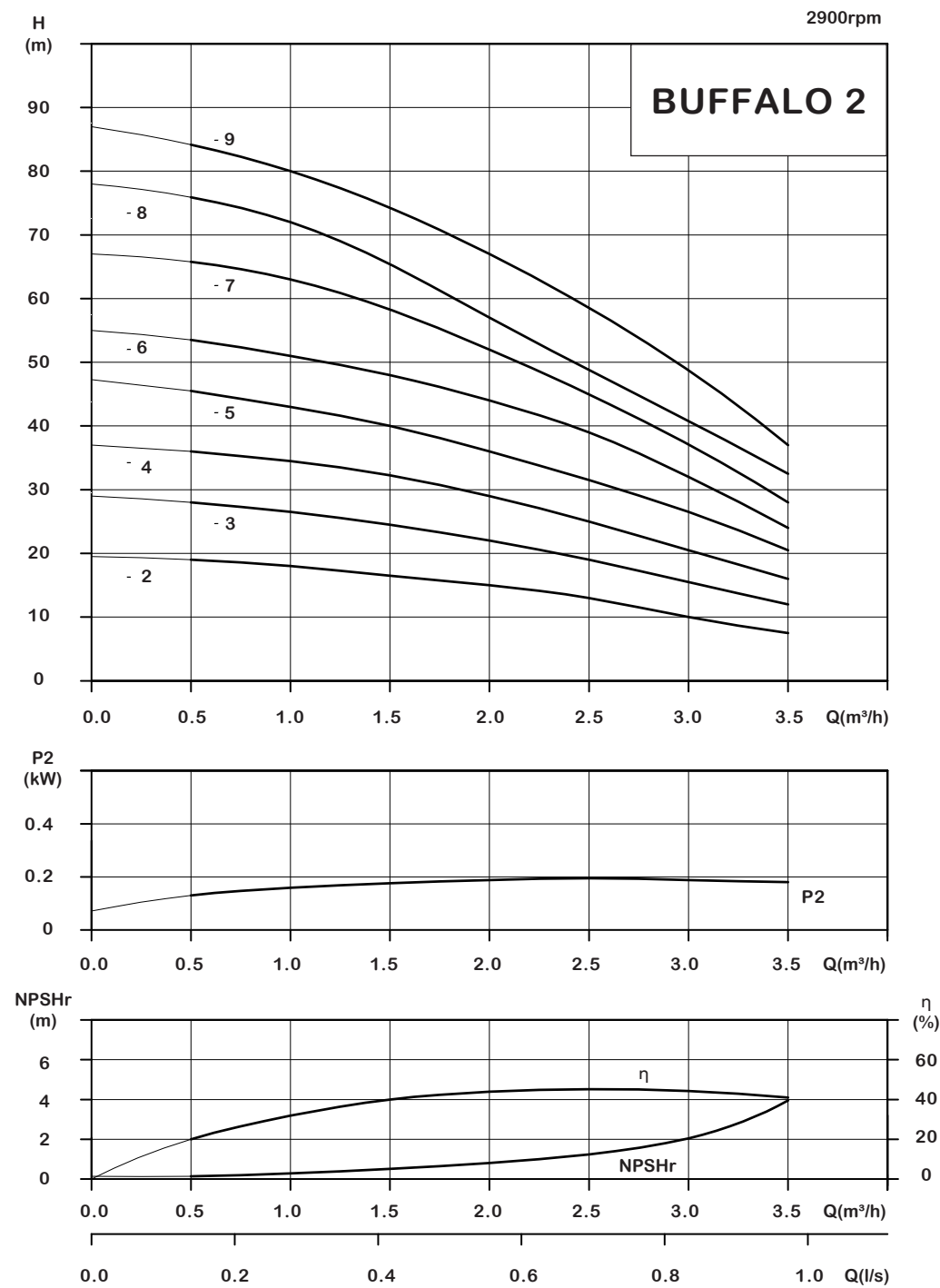


Size and weight

Motor	Model	Size(mm)										Weight (kg)
		L	L1	L2	L3	n	h	H	D	G	K	
Three phase/ single phase	BUFFALO 1-20	323	131	72	150	1	75	165	141	178/212	62	12
	BUFFALO 1-30	323	131	72	150	1	75	165	141	178/212	62	13
	BUFFALO 1-40	341	149	90	150	1	75	165	141	178/212	62	14
	BUFFALO 1-50	359	167	108	150	1	75	165	141	178/212	62	15
	BUFFALO 1-60	377	185	126	150	1	75	165	141	178/212	62	16
	BUFFALO 1-70	395	203	144	150	1	75	165	141	178/212	62	17
	BUFFALO 1-80	413	221	162	150	1	75	165	141	178/212	62	18
	BUFFALO 1-90	431	239	180	150	1	75	165	141	178/212	62	19

Data chart - BUFFALO - 2

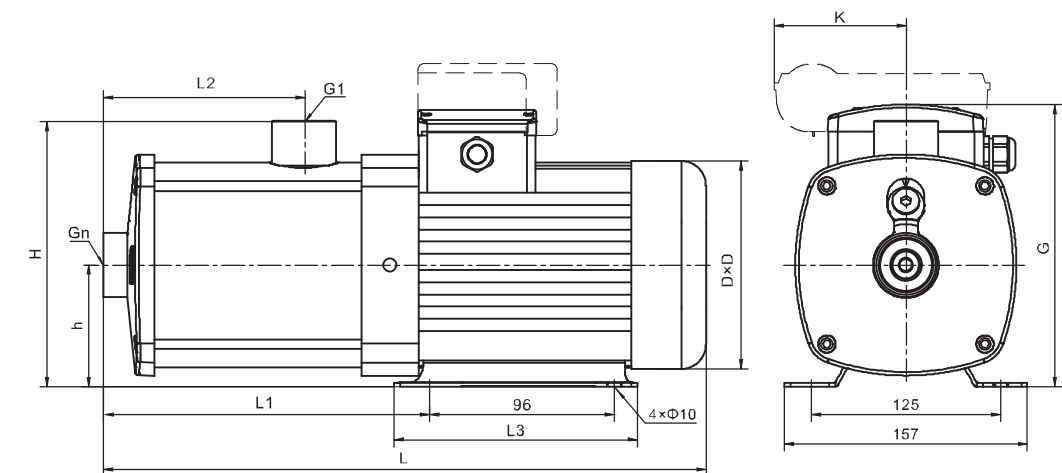
Performance curve



Performance table

Model	Driving motor (kW)	Q(m³/h)	0.5	1	1.5	2	2.5	3	3.5
BUFFALO 2-20	0.37	H (m)	19	18	16.5	15	13	10	7.5
BUFFALO 2-30	0.37		28	26.5	24.5	22	19	15.5	12
BUFFALO 2-40	0.55		36	34.5	33	29	25	20.5	16
BUFFALO 2-50	0.55		45.5	43	40	36	31.5	26.5	20.5
BUFFALO 2-60	0.75		53.5	51	48	44	39	32	24
BUFFALO 2-70	0.75		63.5	63	57	52	46	38	28
BUFFALO 2-80	1.1		71.5	71	65	60	52	44	32
BUFFALO 2-90	1.1		80.5	80	73	67	60	50	37

Installation sketch

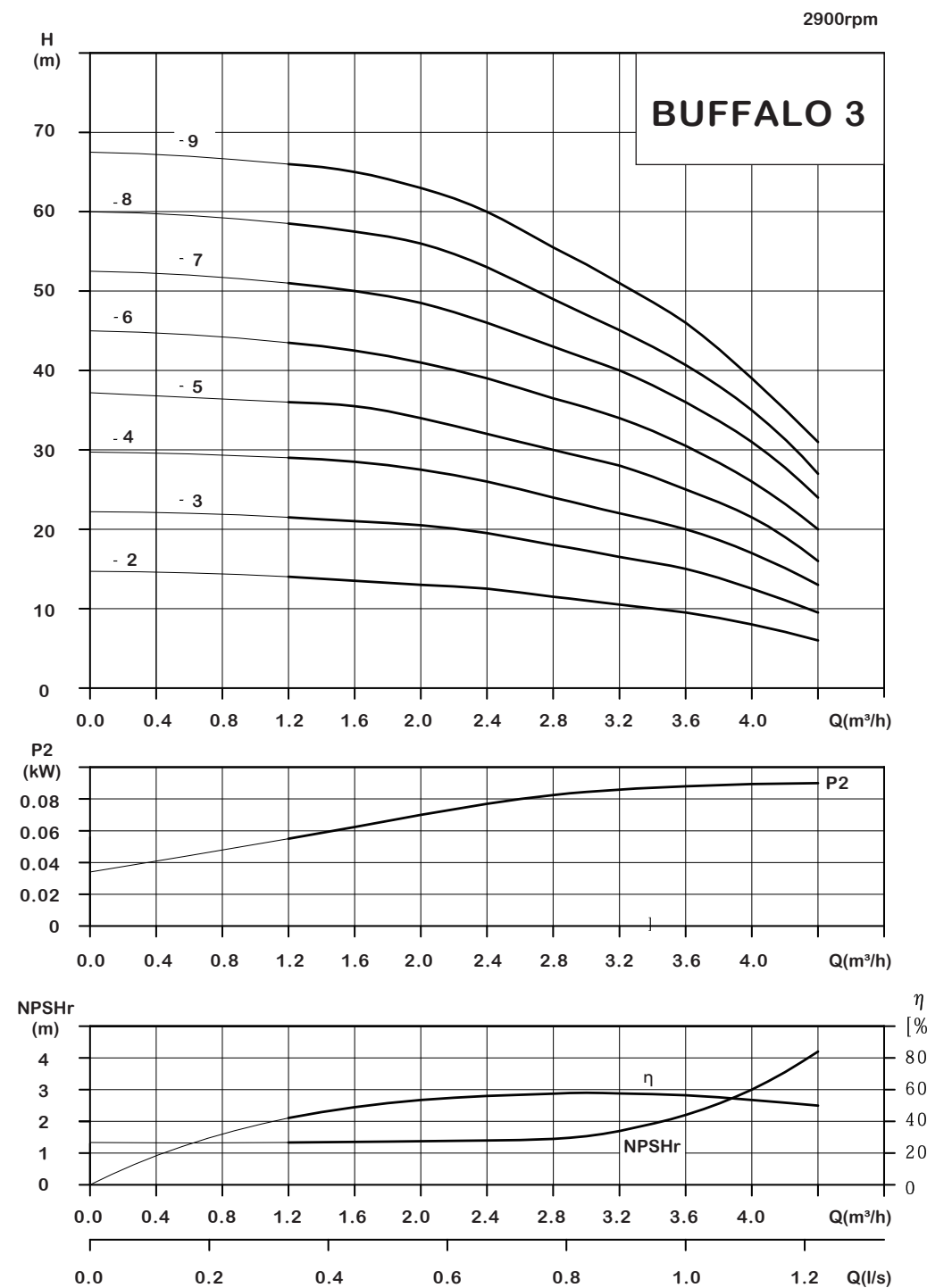


Size and weight

Motor	Model	Size(mm)										Weight (kg)
		L	L1	L2	L3	n	h	H	D	G	K	
Three phase/ single phase	BUFFALO 2-20	323	131	72	150	1	75	165	141	178/212	62	12
	BUFFALO 2-30	323	131	72	150	1	75	165	141	178/212	62	13
	BUFFALO 2-40	341	149	90	150	1	75	165	141	178/212	62	14
	BUFFALO 2-50	359	167	108	150	1	75	165	141	178/212	62	15
	BUFFALO 2-60	400	185	126	160	1	85	175	151/161	195/230	91	17
	BUFFALO 2-70	418	203	144	160	1	85	175	151/161	195/230	91	18
	BUFFALO 2-80	436	221	162	160	1	85	175	151/161	195/230	91	19
	BUFFALO 2-90	454	239	180	160	1	85	175	151/161	195/230	91	20

Data chart - BUFFALO - 3

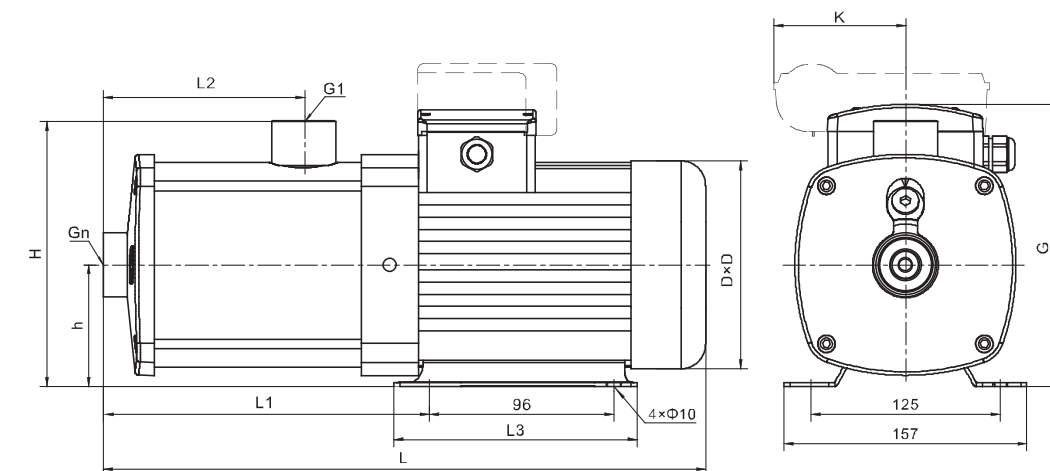
Performance curve



Performance table

Model	Driving motor (kW)	Q(m³/h)	1.2	1.6	2	2.4	2.8	3	3.2	3.6	4	4.4
BUFFALO 3-20	0.37	H (m)	14	13.5	13	12.5	11.5	11	10.5	9.5	8	6
BUFFALO 3-30	0.37		21.5	21	20.5	19.5	18	17	16.5	15	12.5	9.5
BUFFALO 3-40	0.37		29	28.5	27.5	26	24	23	22	20.5	17	13
BUFFALO 3-50	0.55		36	35.5	34	32	30	29	28	25.5	21.5	16
BUFFALO 3-60	0.55		43.5	42.5	41	39	36.5	35	34	30.5	26	20
BUFFALO 3-70	0.75		51	50	49	46	43	41	40	36	31	24
BUFFALO 3-80	0.75		58.5	57.5	56	53	49	47	45.5	41	35	27
BUFFALO 3-90	1.1		66	65	63	60	55	53	51.5	46	39	31

Installation sketch

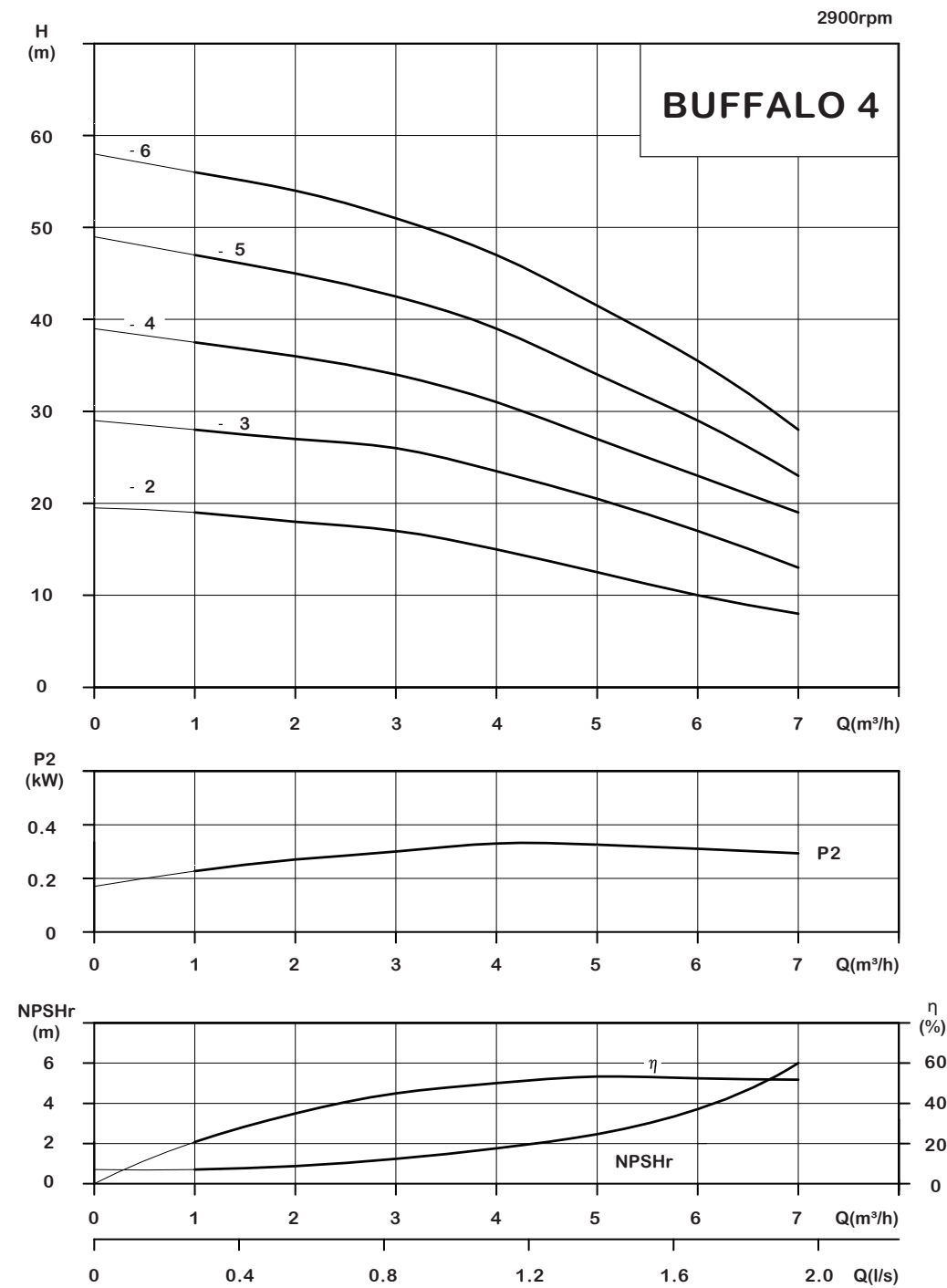


Size and weight

Motor	Model	Size(mm)										Weight (kg)
		L	L1	L2	L3	n	h	H	D	G	K	
Three phase/ single phase	BUFFALO 3-20	323	131	72	150	1	75	165	141	178/212	62	12
	BUFFALO 3-30	323	131	72	150	1	75	165	141	178/212	62	13
	BUFFALO 3-40	341	149	90	150	1	75	165	141	178/212	62	14
	BUFFALO 3-50	359	167	108	150	1	75	165	141	178/212	62	15
	BUFFALO 3-60	377	185	126	150	1	75	165	141	178/212	62	16
	BUFFALO 3-70	395	203	144	150	1	75	165	141	178/212	62	17
	BUFFALO 3-80	436	221	162	160	1	85	175	151/161	195/230	91	19
	BUFFALO 3-90	454	239	180	160	1	85	175	151/161	195/230	91	20

Data chart - BUFFALO - 4

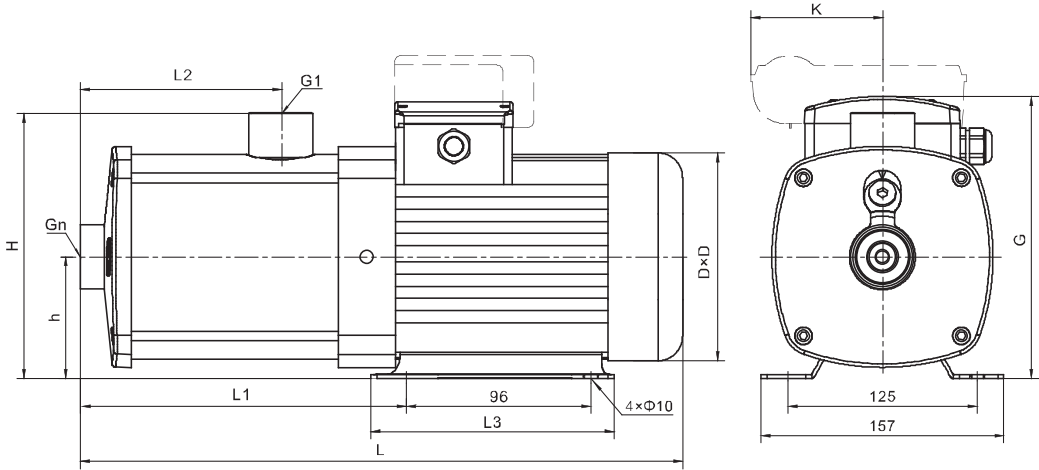
Performance curve



Performance table

Model	Driving motor (kW)	Q(m³/h)	1	2	3	4	5	6	7
BUFFALO 4-20	0.37	H (m)	19	18	17	15	12.5	10	8
BUFFALO 4-30	0.55		28	27	26	23.5	20.5	17	13
BUFFALO 4-40	0.75		37.5	36	34	31	27	23	19
BUFFALO 4-50	1.1		47	45	42.5	39	34	29	23
BUFFALO 4-60	1.1		56	54	51	47	41.5	35.5	28

Installation sketch

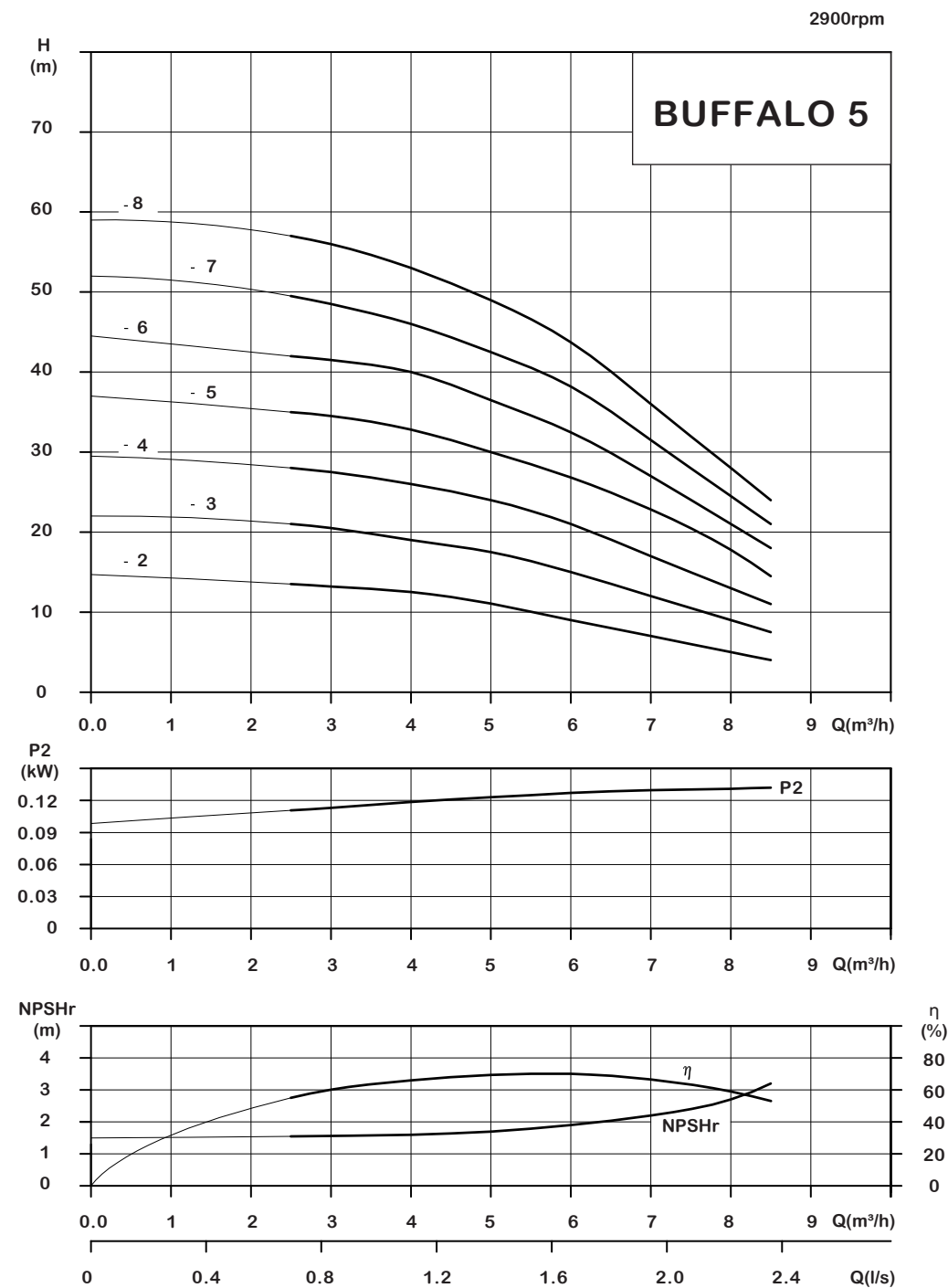


Size and weight

Motor	Model	Size(mm)										Weight (kg)
		L	L1	L2	L3	n	h	H	D	G	K	
Three phase/ single phase	BUFFALO 4-20	323	131	72	150	1¼	75	165	141	178/212	62	13
	BUFFALO 4-30	377	185	126	150	1¼	75	165	141	178/212	62	14
	BUFFALO 4-40	400	185	126	160	1¼	85	175	151/161	195/230	91	16
	BUFFALO 4-50	427/442	212	153	160	1¼	85	175	151/161	195/230	91	17
	BUFFALO 4-60	454/469	239	180	160	1¼	85	175	151/161	195/230	91	18

Data chart - BUFFALO - 5

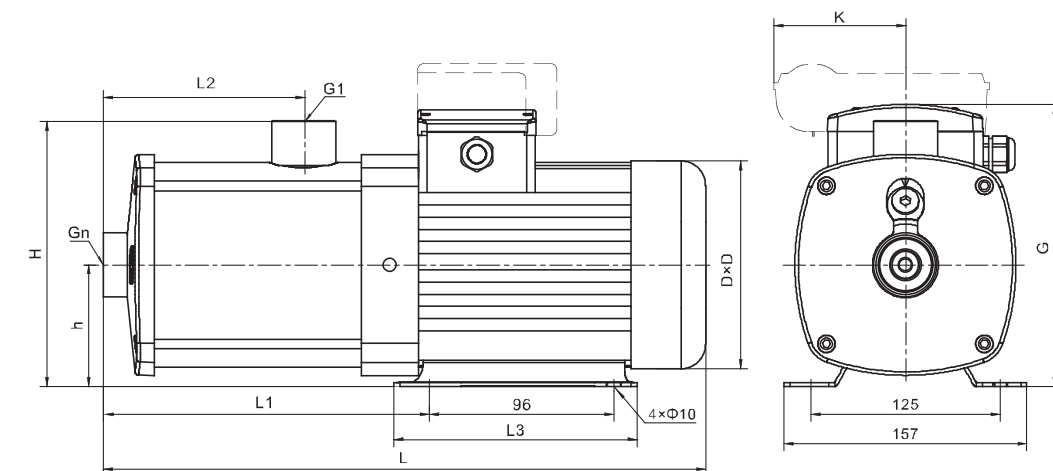
Performance curve



Performance table

Model	Driving motor (kW)	Q(m³/h)	2.5	3	4	5	6	7	8	8.5
BUFFALO 5-20	0.37	H (m)	13.5	13.2	12.5	11.5	9	7	5	4
BUFFALO 5-30	0.55		21	20.5	19	17.5	15	12	9	7.5
BUFFALO 5-40	0.55		28	27.5	26	24	21	17	13	11
BUFFALO 5-50	0.75		35	34.5	33	30	27	23	18	14.5
BUFFALO 5-60	1.1		42	41.5	40	36.5	33	27	21	18
BUFFALO 5-70	1.1		49.5	48.5	46	42.5	38.5	31.5	24.5	21
BUFFALO 5-80	1.1		57	56	53	49	44	36	28	24

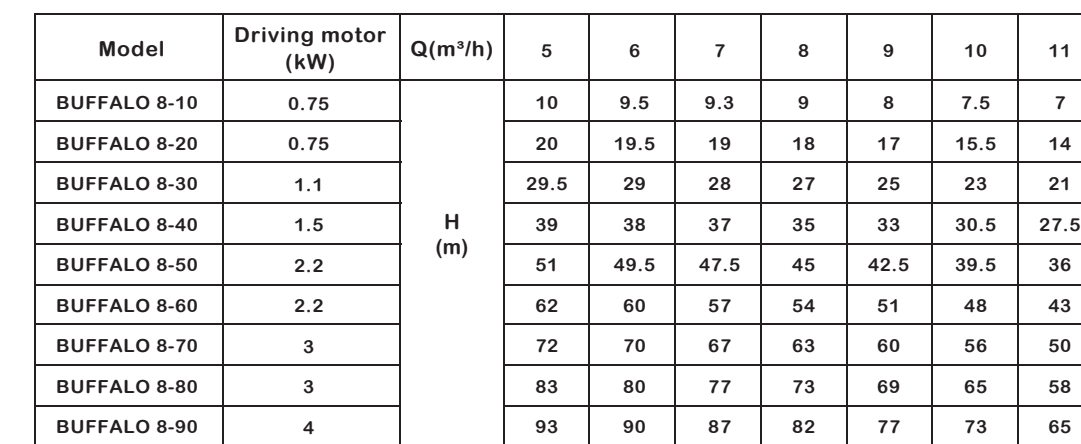
Installation sketch



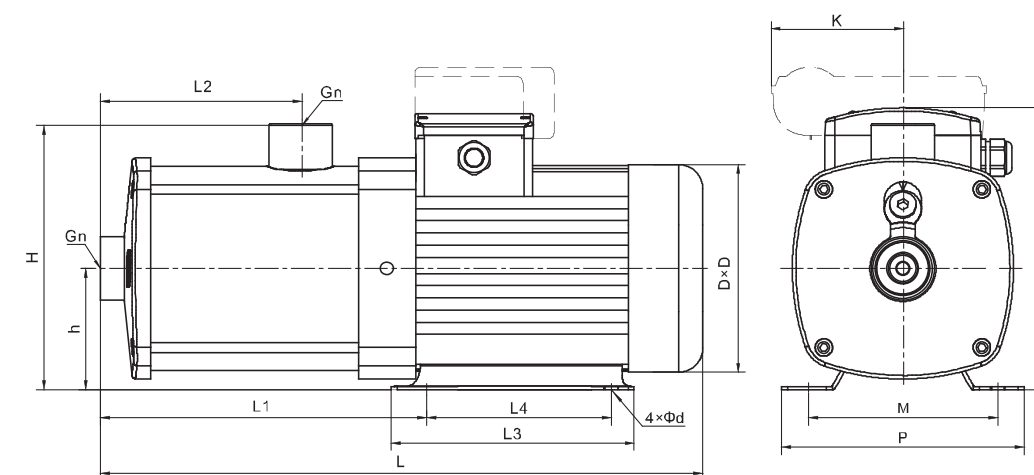
Size and weight

Motor	Model	Size(mm)										Weight (kg)
		L	L1	L2	L3	n	h	H	D	G	K	
Three phase/ single phase	BUFFALO 5-20	323	131	72	150	1 ¼	75	165	141	178/212	62	13
	BUFFALO 5-30	375	185	126	150	1 ¼	75	165	141	178/212	62	14
	BUFFALO 5-40	375	185	126	150	1 ¼	75	165	141	178/212	62	16
	BUFFALO 5-50	425	212	153	160	1 ¼	85	175	151/161	195/230	91	17
	BUFFALO 5-60	452/467	239	180	160	1 ¼	85	175	151/161	195/230	91	18
	BUFFALO 5-70	479/494	266	207	160	1 ¼	85	175	151/161	195/230	91	19
	BUFFALO 5-80	506/521	293	234	160	1 ¼	85	175	151/161	195/230	91	20

Performance table



Installation sketch

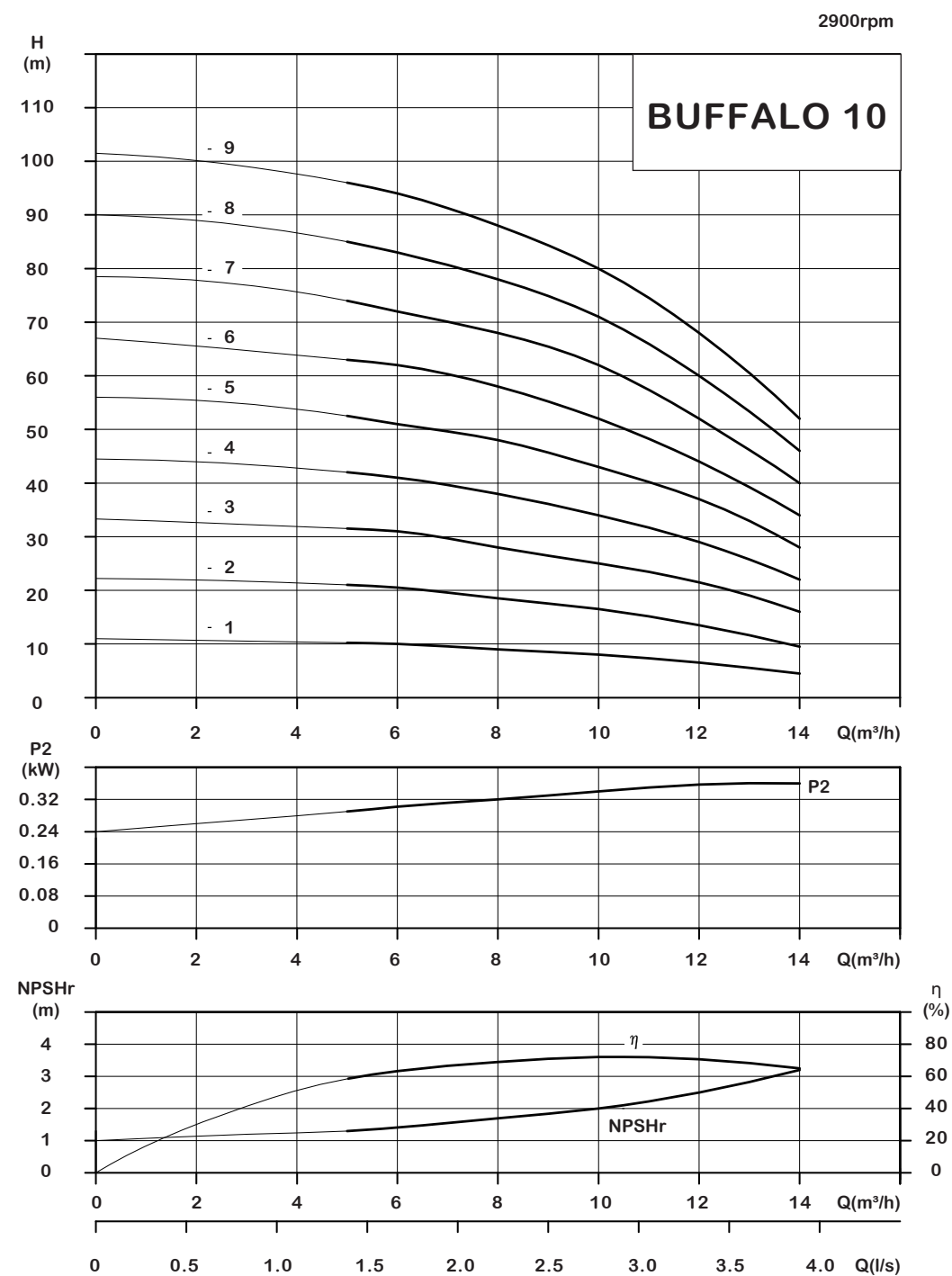


Size and weight

Motor	Model	Size(mm)														Weight (kg)
		L	L1	L2	L3	L4	n	h	H	d	D	G	K	P	M	
Three phase/ single phase	BUFFALO 8-10	366/368	172/190	78	140	96	1	100	218	10	151/161	210/246	91	158	125	14
	BUFFALO 8-20	366/368	172/190	78	140	96	1	100	218	10	151/161	210/246	91	158	125	15
	BUFFALO 8-30	411/418	202/222	108	140	96	1	100	218	10	151/161	210/246	91	158	125	17
	BUFFALO 8-40	467/479	249/269	138	200	140	1	100	218	10	171/175	220/256	91	200	160	21
	BUFFALO 8-50	497/809	279/299	168	200	140	1	100	218	10	171/175	220/256	91	200	160	24
	BUFFALO 8-60	527/539	309/329	198	200	140	1	100	218	10	171/175	220/256	91	200	160	25
	BUFFALO 8-70	608/	338/	228	180	140	1	100	218	10	196/	232	/	200	160	35
	BUFFALO 8-80	638/	368/	258	180	140	1	100	218	10	196/	232	/	200	160	35
	BUFFALO 8-90	678/	417/	288	180	140	1	112	230	10	214/	232	/	230	190	40.5

Data chart - BUFFALO - 10

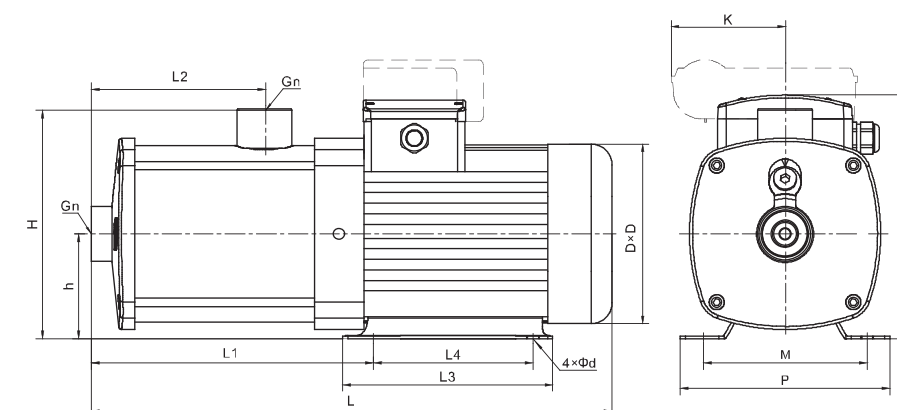
Performance curve



Performance table

Model	Driving motor (kW)	Q(m³/h)	5	6	8	10	12	14
BUFFALO 10-1	0.75	H (m)	10.2	10	9	8	6.5	4.5
BUFFALO 10-2	0.75		21	20.5	18.5	16.5	13.5	9.5
BUFFALO 10-3	1.1		31.5	31	28	25	21.5	16
BUFFALO 10-4	1.5		42	41	38	34	29	22
BUFFALO 10-5	2.2		52.5	51	48	43	37	28
BUFFALO 10-6	2.2		63	62	58	52	44	34
BUFFALO 10-7	3		74	72	68	62	52	40
BUFFALO 10-8	3		85	83	78	71	60	46
BUFFALO 10-9	4		96	94	88	80	68	52

Installation sketch



Size and weight

Motor	Model	Size(mm)														Weight (kg)
		L	L1	L2	L3	L4	n	h	H	d	D	G	K	P	M	
Three phase/ single phase	BUFFALO 10-1	366/368	172/190	78	140	96	1	100	218	10	151/161	210/246	91	158	125	14
	BUFFALO 10-2	366/368	172/190	78	140	96	1	100	218	10	151/161	210/246	91	158	125	15
	BUFFALO 10-3	411/418	202/222	108	140	96	1	100	218	10	151/161	210/246	91	158	125	17
	BUFFALO 10-4	467/479	249/269	138	200	140	1	100	218	10	171/175	220/256	91	200	160	21
	BUFFALO 10-5	497/509	279/299	168	200	140	1	100	218	10	171/175	220/256	91	200	160	24
	BUFFALO 10-6	527/539	309/329	198	200	140	1	100	218	10	171/175	220/256	91	200	160	25
	BUFFALO 10-7	608/	338/	228	180	140	1	100	218	10	196/	232/	/	200	160	35
	BUFFALO 10-8	638/	368	258	180	140	1	100	218	10	196/	232/	/	200	160	35
	BUFFALO 10-9	678/	417/	288	180	140	1	112	230	10	214/	262/	/	230	190	40.5

devak
PUMP PARTNERS

BUFFALO 12
2900rpm

Head (H) vs. Flow Rate (Q)

Q (m³/h)	H (-1)	H (-2)	H (-3)	H (-4)	H (-5)	H (-6)
0	10	25	38	50	64	75
1	10	25	38	50	64	75
2	10	25	38	50	64	75
3	10	25	38	50	64	75
4	10	25	38	50	64	75
5	10	25	38	50	64	75
6	10	25	38	50	64	75
7	10	25	38	50	64	75
8	10	25	38	50	64	75
9	10	25	38	50	64	75
10	10	25	38	50	64	75
11	10	25	38	50	64	75
12	10	25	38	50	64	75
13	10	25	38	50	64	75
14	10	25	38	50	64	75
15	10	25	38	50	64	75

Power (P2) vs. Flow Rate (Q)

Q (m³/h)	P2 (kW)
0	0.2
1	0.2
2	0.2
3	0.2
4	0.2
5	0.2
6	0.2
7	0.2
8	0.2
9	0.2
10	0.2
11	0.2
12	0.2
13	0.2
14	0.2
15	0.2

NPSHr and Efficiency (η) vs. Flow Rate (Q)

Q (m³/h)	Q (l/s)	NPSHr (m)	η (%)
0	0	0	0
1	0.2	0	0
2	1.0	0	0
3	1.5	0	0
4	2.0	0	0
5	2.5	0	0
6	3.0	0	0
7	3.5	0	0
8	4.0	0	0
9	4.5	0	0
10	5.0	0	0
11	5.5	0	0
12	6.0	0	0
13	6.5	0	0
14	7.0	0	0
15	7.5	0	0

Model	Driving motor (kW)	Q(m³/h)	7	8	9	10	11	12	13	14	15	16
BUFFALO 12-10	0.75	H (m)	11.5	11.2	11	10.5	10	9.5	9	8	7	6
BUFFALO 12-20	1.2		23	22.5	22	21.5	20.5	19.5	18.5	17	15.5	13
BUFFALO 12-30	1.8		35	34.5	33.5	32.5	31	29.5	28	26	23.5	20
BUFFALO 12-40	2.4		47	46	45	43.5	41.5	39.5	37.5	35	31.5	27.5
BUFFALO 12-50	3		60	58	56.5	55	52.5	50	47	44	40	35
BUFFALO 12-60	4		71.5	70	68	66	63	60	56	52	47	42

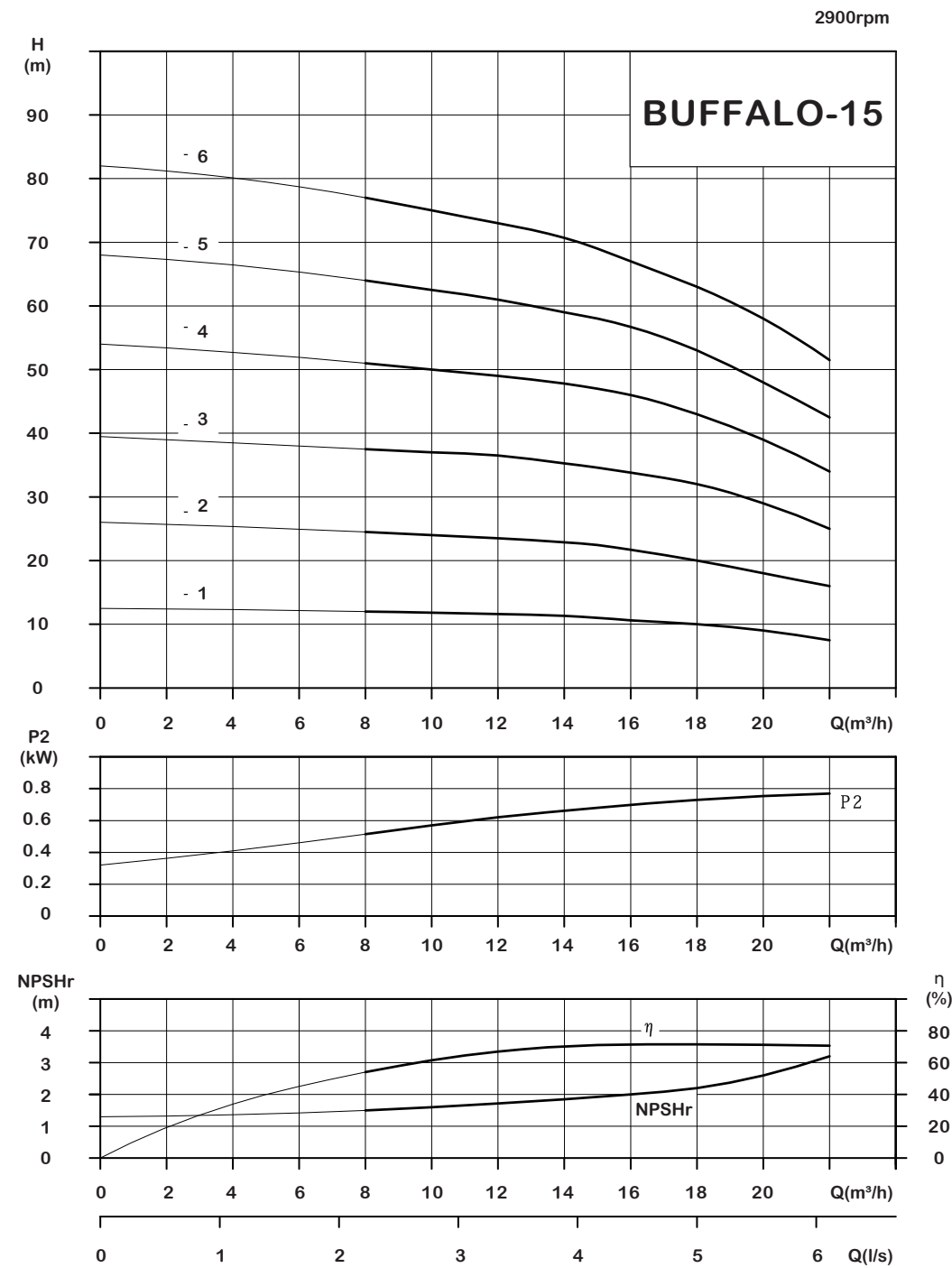
The technical drawing illustrates the dimensions of the motor from two perspectives:

- Side View (Left):** Shows the overall length L , mounting bracket height H , flange diameter G_n , distance between mounting points L_2 , base length L_1 , cooling fin width L_4 , total base length L_3 , and terminal box depth $4 \times \Phi d$.
- Front View (Right):** Shows the motor's profile with dimensions K (top clearance), M (base width), and P (total base width).

Motor	Model	Size(mm)														Weight (kg)
		L	L1	L2	L3	L4	n	h	H	d	D	G	K	P	M	
Three phase/ single phase	BUFFALO 12-10	366/368	172/190	78	140	96	1½	100	218	10	151/161	210/246	91	158	125	14
	BUFFALO 12-20	381/368	172/190	78	140	96	1½	100	218	10	151/161	210/246	91	158	125	16
	BUFFALO 12-30	437/449	219/239	108	200	140	1½	100	218	10	171/175	220/256	91	200	160	22
	BUFFALO 12-40	467/479	249/269	138	200	140	1½	100	218	10	171/175	220/256	91	200	160	21
	BUFFALO 12-50	548 /	277	168	200	140	1½	100	218	10	196	232	/	200	160	31
	BUFFALO 12-60	589 /	327 /	198	180	140	1½	112	230	10	214	262	/	200	190	35

Data chart - BUFFALO - 15

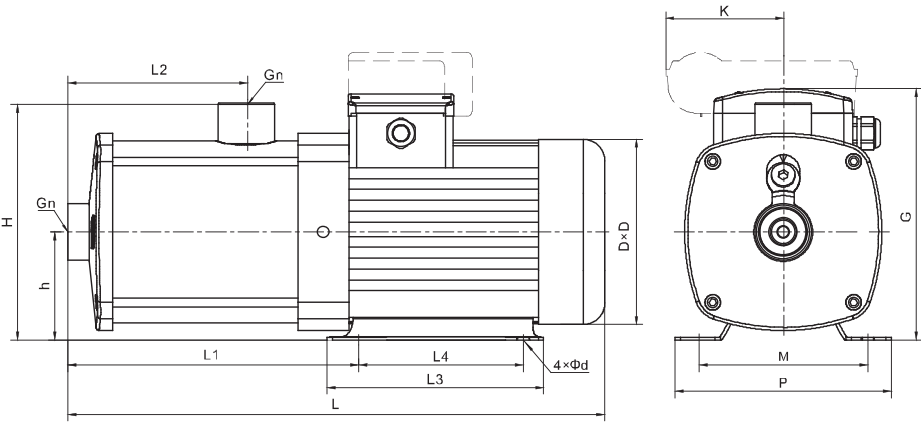
Performance curve



Performance table

Model	Driving motor (kW)	Q(m³/h)	8	10	12	14	15	16	18	20	22
BUFFALO 15-10	1.1	H (m)	12	11.8	11.6	11.4	11	10.5	10	9	7.5
BUFFALO 15-20	2.2		24.5	24	23.5	23	22.5	21.5	20	18	16
BUFFALO 15-30	3		37.5	37	36.5	35.5	34.5	34	32	29	25
BUFFALO 15-40	4		51	50	49	47.5	47	46	43	39	34
BUFFALO 15-50	4		64	60	61	59	58	57	53	48	42.5
BUFFALO 15-60	4.8		77	75	73	71	69	67	63	58	51.5

Installation sketch



Size and weight

Motor	Model	Size(mm)														Weight (kg)
		L	L1	L2	L3	L4	n	h	H	d	D	G	K	P	M	
Three phase/ single phase	BUFFALO 15-10	394/401	187/207	93	140	96	2	100	218	10	151/161	210/246	91	158	125	16
	BUFFALO 15-20	420/432	203/200	93	200	140	2	100	218	10	171/175	220/256	91	200	160	22
	BUFFALO 15-30	516/	247/	138	180	140	2	100	218	12	196/	232/	/	200	160	29
	BUFFALO 15-40	572/	311/	183	180	140	2	112	230	12	214/	262/	/	230	190	37
	BUFFALO 15-50	617/	356/	228	180	140	2	112	230	12	214/	262/	/	230	190	41
	BUFFALO 15-60	691/	401/	273	180	140	2	112	230	12	214/	262/	/	230	190	45

BUFFALO 20

2900rpm

The top graph shows the head (H) in meters on the y-axis (0 to 90) versus the flow rate (Q) in m³/h on the x-axis (0 to 28). Six curves are plotted, labeled -1 to -6, representing different pump configurations. The head decreases as the flow rate increases for all configurations.

The middle graph shows the power (P2) in kW on the y-axis (0 to 1.2) versus the flow rate (Q) in m³/h on the x-axis (0 to 28). A single curve labeled P2 shows the power consumption increasing with flow rate.

The bottom graph shows the Net Positive Suction Head required (NPSHr) in meters on the left y-axis (0 to 4) and the efficiency (η) in % on the right y-axis (0 to 80) versus the flow rate (Q) in m³/h on the x-axis (0 to 28). The NPSHr curve increases with flow rate, while the efficiency curve increases and then slightly decreases at higher flow rates.

Model	Driving motor (kW)	Q(m³/h)	10	12	14	16	18	20	22	24	26	28
BUFFALO 20-10	1.1	H (m)	12.5	12.3	12	11.5	11	10.5	10	9.5	9	8
BUFFALO 20-20	2.2		26	25	24.5	24	23.5	23	22	20	18	16
BUFFALO 20-30	4		39.5	39	38	37	36	35	33	30.5	28	25
BUFFALO 20-40	4.8		53	51	50	49	48	47	45	41.5	37	33
BUFFALO 20-50	5.5		66	65	64	62	60	58	55	51	47	42
BUFFALO 20-60	7.5		80	78	77	75	73	70	66	62	57	52

Technical drawing of the 2000 series pump, showing side and front views with dimensions.

Side View Dimensions:

- H : Total height
- h : Height of the base
- L_1 : Length of the main body
- L_2 : Length of the top flange
- L_3 : Length of the base
- L_4 : Length of the base flange
- L : Total length
- G_n : Nut
- $D \times D$: Diameter of the main body
- $4 \times \Phi d$: Four mounting holes of diameter d

Front View Dimensions:

- K : Height of the top flange
- G : Height of the main body
- M : Width of the base
- P : Total width

Motor	Model	Size(mm)														Weight (kg)
		L	L1	L2	L3	L4	n	h	H	d	D	G	K	P	M	
Three phase/ single phase	BUFFALO 20-10	394/401	187/207	93	140	96	2	100	218	10	151/161	210/246	91	158	125	16
	BUFFALO 20-20	420/432	203/200	93	200	140	2	100	218	10	171/175	220/256	91	200	160	22
	BUFFALO 20-30	527/	266/	138	180	140	2	112	230	12	214/	262/	/	200	160	39
	BUFFALO 20-40	601/	311/	183	180	140	2	112	230	12	214/	262/	/	230	190	43
	BUFFALO 20-50	663/	370/	228	184	140	2	132	250	12	257/	300/	/	248	216	58
	BUFFALO 20-60	708/	415/	273	184	140	2	132	250	12	257/	300/	/	248	216	66



Evak's manufacturing happens in Taiwan. As a result we are able to provide complete solutions at competitive prices and outstanding quality, in line with our high quality, high value strategy.

Furthermore, Evak applies "dam management" by ensuring that it has dedicated resources ready to deal with any crisis, at any time. In addition, Evak partners share a big part of the pump market worldwide, which includes developing and distributing products to many large international brands.

Being a one-stop shop, Evak distributes a wide range of pumps with a particular focus on sewage pumps, dewatering pumps and some unique IOT accessories such as the smart digital control DPC that allows online remote monitoring and control of pumps.