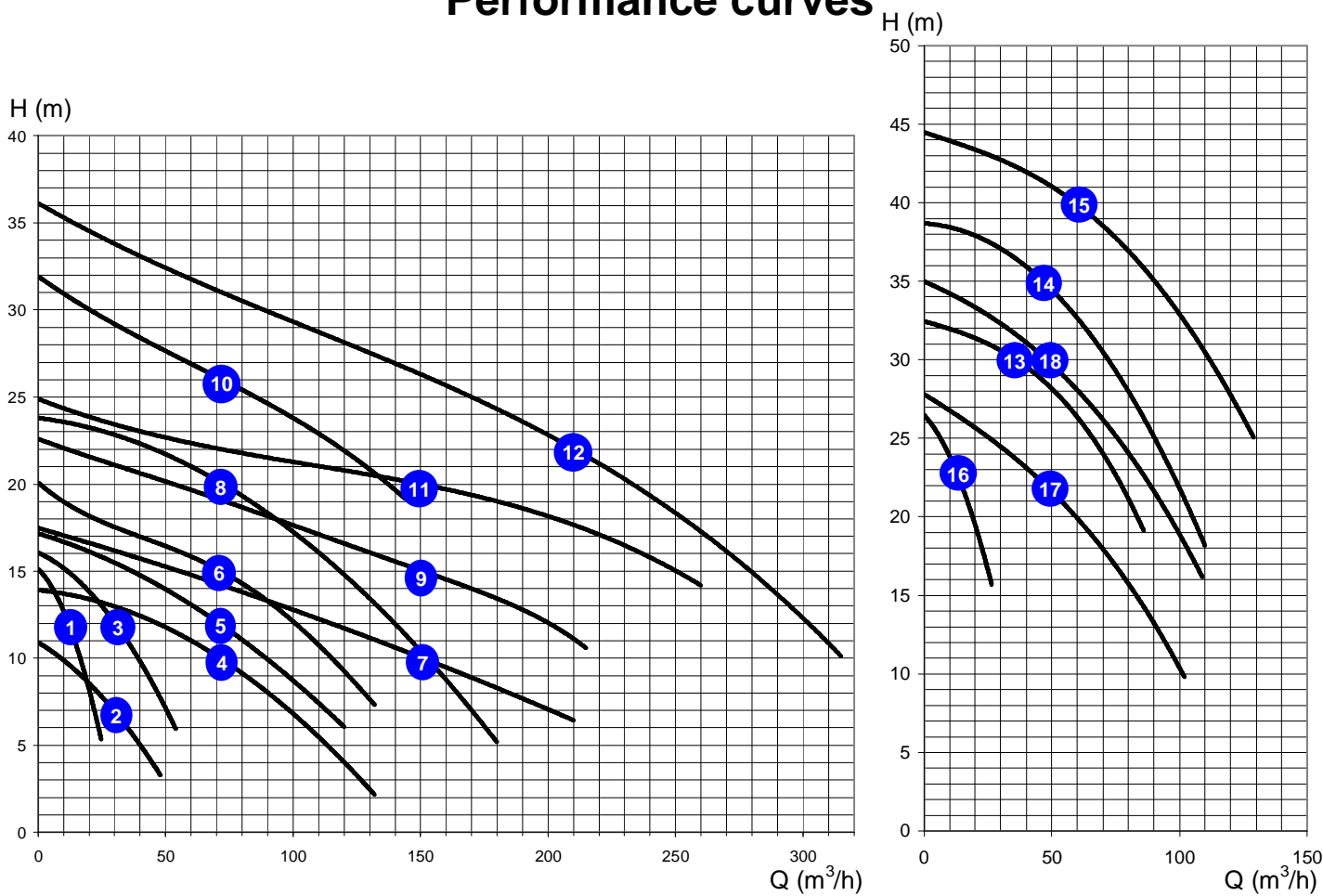


Toyo

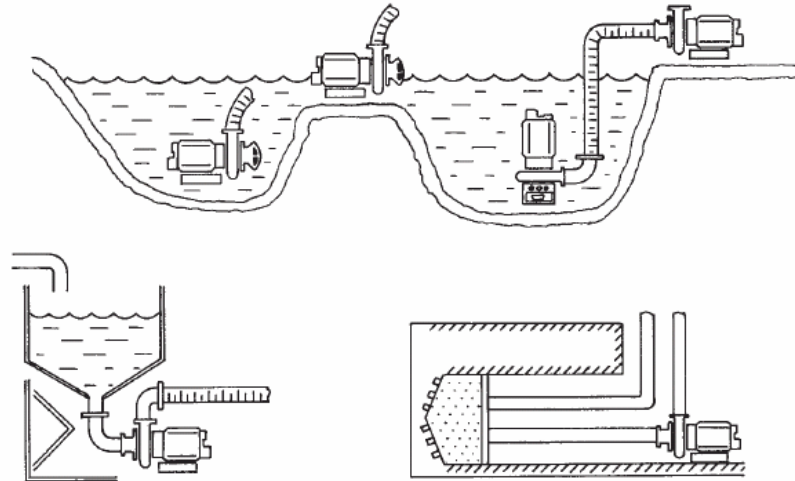
Wear resistant pumps with agitator

**TECHNICAL SPECIFICATIONS
VH PUMPS**

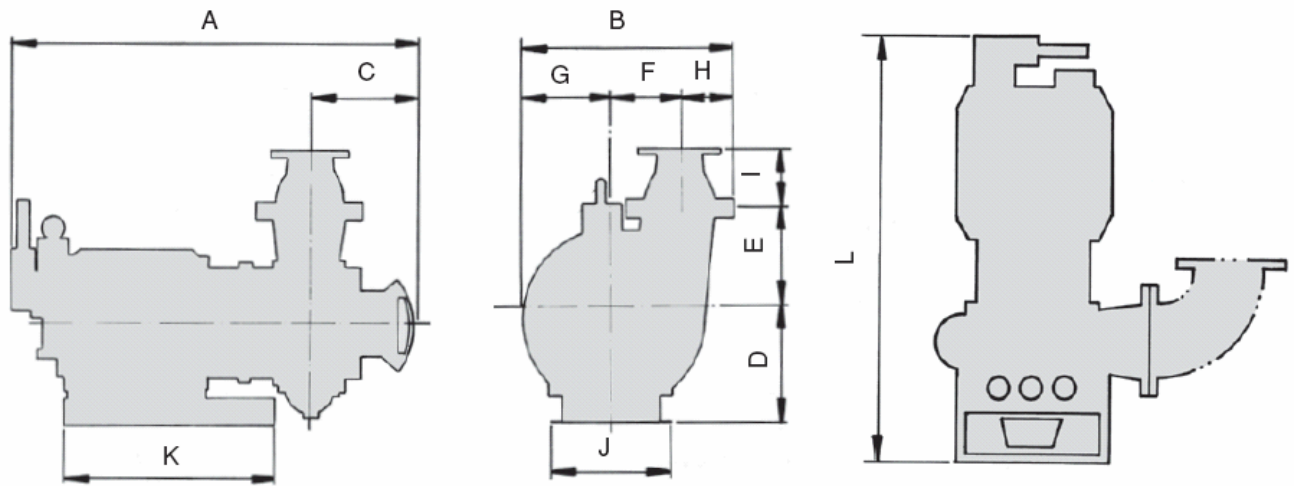
Performance curves



Nr	Type	Outlet		Capacity (m³/h)	Manom. head (m)	Particle size (mm)		Power (kW)	Revolution (1/min) 50Hz	Current (A) 400V	Electr. cable	Weight (kg)
		(inch)	(mm)			Horizontal	Vertical					
1	VH 2	2	50	12	12	20	16	1.5	1400	3.0	4X6mm ²	110
2	VH 3	3	80	30	7	30	25	2.2	1465	4.4	4X6mm ²	120
3	VH 5	3	80	30	12	30	25	3.7	1460	7.3	4X6mm ²	130
4	VH 7.5	4	100	72	10	60	30	5.5	1480	11.0	4X10mm ²	165
5	VH 10	4	100	72	12	60	30	7.5	1450	14.5	4X10mm ²	180
6	VHG 15	4	100	72	15	60	45	11.0	1480	22.0	4X10mm ²	320
7	VHG 15B	6	150	150	10	60	45	11.0	1480	22.0	4X10mm ²	320
8	VHG 20	4	100	72	20	60	45	15.0	1480	28.0	4X10mm ²	340
9	VHG 20B	6	150	150	15	60	45	15.0	1480	28.0	4X10mm ²	330
10	VHG 30	4	100	72	26	70	45	22.0	1470	40.5	4X16mm ²	440
11	VHG 30B	6	150	150	20	80	45	22.0	1470	40.5	4X16mm ²	420
12	VHG 40B	6	150	210	22	70	-	30.0	1470	53.0	4X16mm ²	650
13	VH 15H	3	80	36	30	25	20	11.0	1480	22.0	4X10mm ²	300
14	VH 20H	3	80	48	35	25	20	15.0	1480	28.0	4X10mm ²	320
15	VH 30H	4	100	60	40	25	25	22.0	1470	40.5	4X16mm ²	400
16	VH 7.5HU	2	50	12	23	50	25	5.5	1480	11.0	4X10mm ²	165
17	VH 15HU	3	80	48	22	50	-	11.0	1480	22.0	4X10mm ²	300
18	VH 20HU	3	80	48	30	50	-	15.0	1480	28.0	4X10mm ²	320



DIMENSIONS



DIMENSIONS		A	B	C	D	E	F	G	H	I	J	K	L
1	VH 2	661	351.5	209	180	180	130	144	77.5	-	270	260	594
2	VH 3	700	394.5	205.5	215	205	135	167	92.5	-	250	360	676
3	VH 5	720	394.5	205.5	215	205	135	167	92.5	-	250	360	696
4	VH 7.5	817	457	233	215	250	145	207	105	-	275	360	792
5	VH 10	871	457	233	215	250	145	207	105	-	275	360	846
6	VHG 15	1055	538	295	264	280	175	223	140	153	310	540	995
7	VHG 15B	1055	538	295	264	280	175	223	140	-	310	540	995
8	VHG 20	1124	538	295	264	280	175	223	140	153	310	540	1064
9	VHG 20B	1124	538	295	264	280	175	223	140	-	310	540	1064
10	VHG 30	1233.5	596	297	304	330	180	276	140	153	330	550	1252
11	VHG 30B	1233.5	596	297	304	330	180	276	140	-	330	550	1252
12	VHG 40B	1531	682	280	355	310	250	292	140	-	400	840	-
13	VH 15H	989	505.5	254	264	260	185	228	92.5	-	310	540	935
14	VH 20H	1058	505.5	254	264	260	185	228	92.5	-	310	540	1004
15	VH 30H	1143	518	254	304	260	185	228	105	153	330	550	1089
16	VH 7.5HU	807	464.5	228	215	250	160	212	92.5	153	275	360	782
17	VH 15HU	1049	565	269	264	270	215	245	105	153	310	540	-
18	VH 20HU	1118	565	269	264	270	215	245	105	153	310	540	-

• **Concept :**

The TOYO VH range of amphibious pumps have been specially designed to handle very heavy and abrasive slurries in surface applications or in applications where the pump may be partially or totally submerged. These pumps are available in both horizontal and vertical versions with a single outlet.

These centrifugal pumps with semi-open impeller, feature a unique agitator design. This agitator lifts sediments into suspension, creating a slurry mixture. This enables continuous pumping of media with a high concentration of solids.

Robust construction, careful selection of materials and unique contour components have produced a pump with excellent abrasion resistance. These characteristics ensure long service life and economical operation.

The impeller, the wear plate(s) and the agitator are manufactured in cast chrome iron (24 to 28 % Cr).

A strong short shaft, supported by a series of carefully selected bearings and the double mechanical seal, operating in an oil bath, ensure perfect tightness in the hardest of conditions.

The design of the pump associated with a powerful SP electric motor (F class) allows the pump to be both air and water cooled.

Models VH3 to VH10 dispose of one adjustable wear plate, models VHG15 to VHG40 have two wear plates of which the bottom one is adjustable. This allows simple adjustment to maintain long lasting high performance, even in the case of wear of impeller and wear plates.

VH pumps can be used in horizontal or vertical position (conversion kit available in option). The horizontal models are supplied fixed on a frame with strainer or fixing cone, with or without agitator.

They are available in different metallurgies as well as in special versions for high temperatures and in very compact sledge version.

• **Operating conditions :**

VH pumps can handle slurries with solid content of up to 60 % by weight, particle sizes up to 80 mm and liquid temperatures up to 60°C with pH levels between 4 and 9.5. Special versions are available for liquid temperatures up to 80°C. The maximum operating depth is 30 m.



• **Electric power requirements* :**

Pump type	Power kVA	Amp. 400 V
VH 2	5	3.0
VH 3	6	4.4
VH 5	12	7.3
VH 7.5/HU	15	11.1
VH 10/H	20	14.5
VHG 15/B/H/HU	30	22.0
VHG 20/B/H/HU	40	28.0
VHG 30/B/H	50	40.5
VHG 40B	65	53.0

*These figures are given as an indication.

• **Electric cable :**

The standard cable type to be used for connecting the pump is HO7RN-F and its specifications should correspond to the following :

Pump type	Section	Outer diam. mm	Max. length m/400V
VH 2	4 x 6 mm ²	19	800
VH 3	4 x 6 mm ²	19	500
VH 5	4 x 6 mm ²	19	380
VH 7.5/HU	4 x 10 mm ²	23	350
VH 10/H	4 x 10 mm ²	23	280
VHG 15/B/H/HU	4 x 10 mm ²	23	190
VHG 20/B/H/HU	4 x 10 mm ²	23	130
VHG 30/B/H	4 x 16 mm ²	27	180
VHG 40B	4 x 16 mm ²	27	130

• **Starter :**

A reactor starter must be used to start from VHG15/B/H/HU pumps on.

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