



EBARA

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SPECIFICATIONS

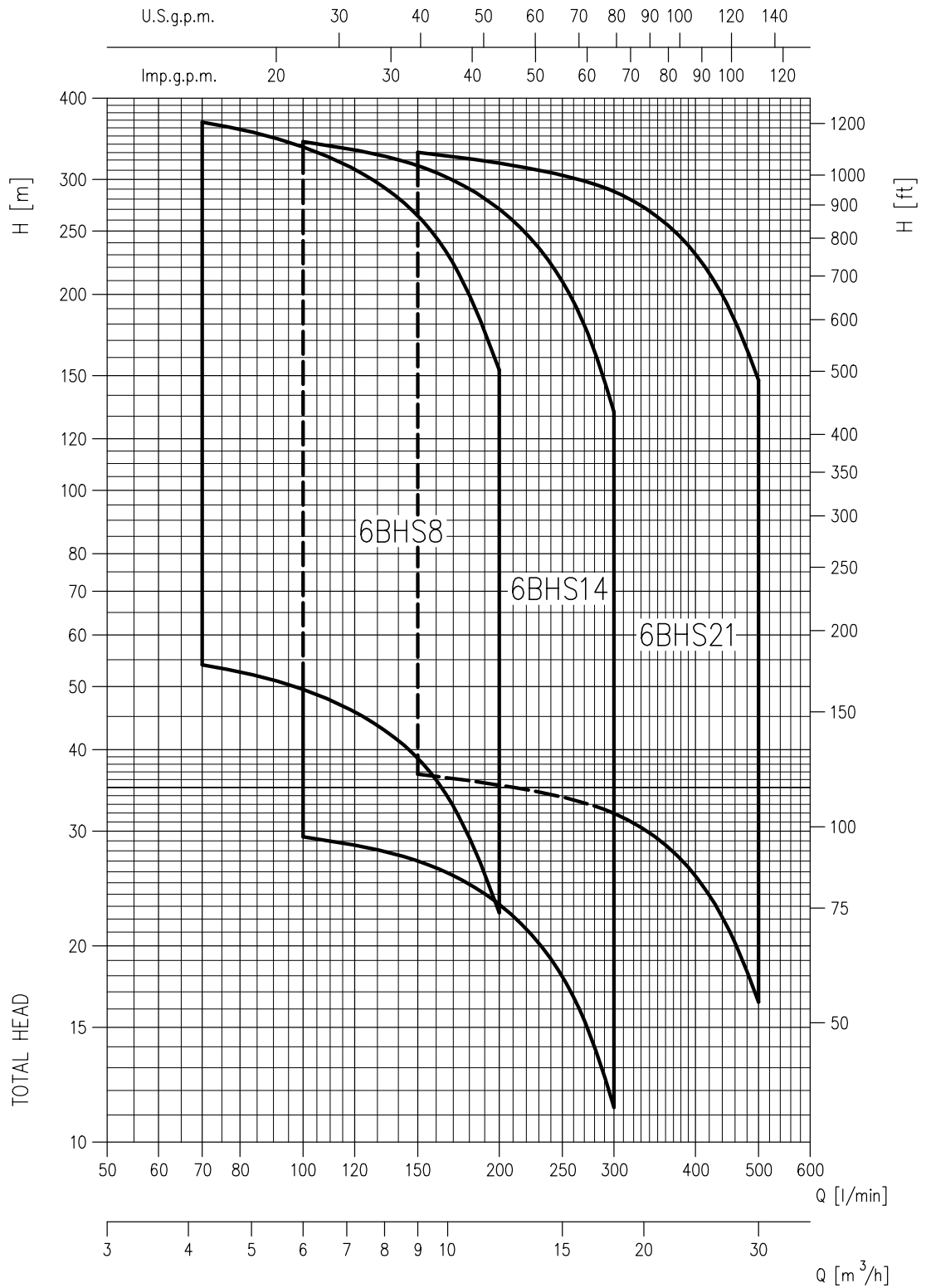
50Hz

PUMP		
Liquid Handled	Type of liquid	Clean water
	Temperature [°C]	Maximum 30
	Sand content	Maximum : 50 parts per million
	Chlorine ion density	Maximum : 500 parts per million
Construction	Impeller	Closed centrifugal type
	Bearing	Sleeve type - tungsten carbide
Pipe connection	Suction	N/A
	Discharge	G 2 (6BHS8) - G 2 1/2 (6BHS14 - 6BHS21) UNI ISO 228
Material	Impeller	AISI 304
	Intermediate casing	AISI 304
	Suction casing	AISI 304 microcasting
	Discharge casing	AISI 304 microcasting
	Shaft	AISI 316
	Liner ring	EPDM / AISI 304
	Valve	EPDM / AISI 304
"O" ring	NBR	
Applicable standard of test		ISO 9906 Grade 2

MOTOR				
Type	Submersible oil motor filled (type O)		Submersible water filled type (type W)	
Size	4"	6"	4"	6"
Power rating [kW]	1.5÷5.5	4÷22	1.5÷5.5	4÷22
No. of Poles	Three phase			
Rated speed	2			
Insulation class	Refer to each characteristic performance rotation speed as rated speed			
Protection degree	F	B	F	F
Maximum immersion [m]	IP 58	IP 68	IP 58	IP 58
Starts / hours	100	350	100	350
Start type	25	20	Direct on line (Motor with start/delta start are available for than 5,5 kW)	
Frequency [Hz]	50 Hz			
Voltage [V]	380/400	400 (+6%-10%)		
Over load protection	User to provide			
Motor bracket	Brass	Cast iron with nickel plate	AISI 304	Cast iron with epoxy painted
Casing material	AISI 304			
Flange mount	NEMA			

SELECTION CHART

50 Hz



SELECTION CHART

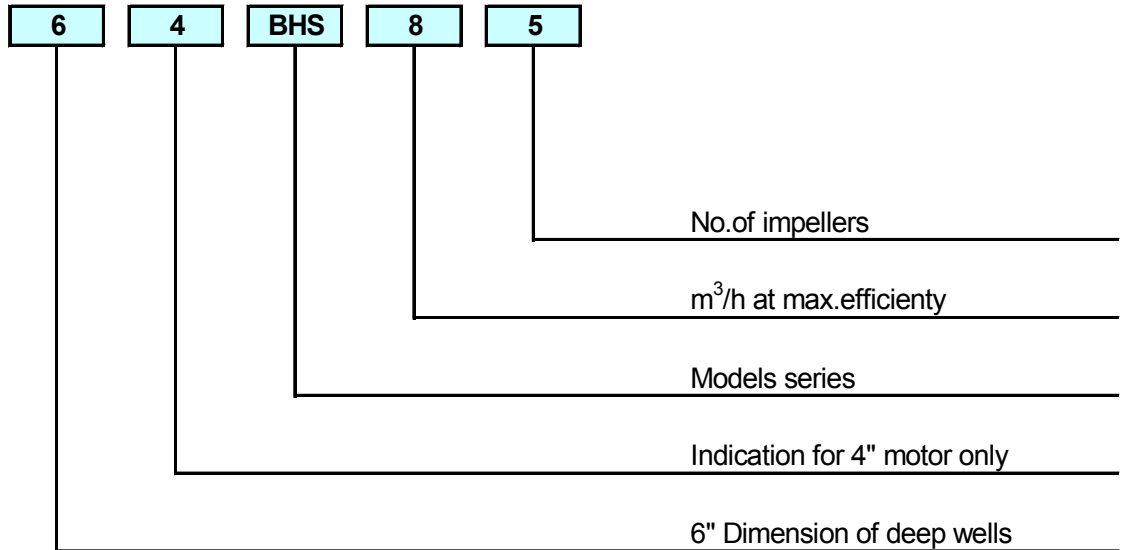
50 Hz

Pump Type 6BHS	Motor size	Kw	HP	Q=Capacity											
				l/min.	70	100	150	200	250	300	375	450	500		
				m ³ /h	4.20	6.0	9.0	12.0	15.0	18	22.5	27.0	30		
H=Total manometric head in meters															
64BHS8 5	4"	1,5	2	-	54	49,5	39	22,5	-	-	-	-	-		
64BHS8 7		2,2	3	-	75.5	69,5	54,5	31,5	-	-	-	-	-		
64BHS8 10		3	4	-	108	99	77,5	45	-	-	-	-	-		
64BHS8 13		4	5,5	-	140	129	101	58,5	-	-	-	-	-		
6BHS8 13	6"														
64BHS8 15	4"	5,5	7,5	-	162	149	116	67,5	-	-	-	-	-		
6BHS8 15	6"														
64BHS8 18	4"			-	194	178	140	81	-	-	-	-	-	-	
6BHS8 18															
6BHS8 21	6"	7,5	10	-	227	208	163	94,5	-	-	-	-	-		
6BHS8 25				-	270	248	194	113	-	-	-	-	-		
6BHS8 29				9,2	12,5	-	313	287	225	131	-	-	-	-	
6BHS8 34				11	15	-	367	337	264	153	-	-	-	-	
64BHS14 3	4"	1,5	2	-	-	29.5	27	23	18	11,5	-	-	-		
64BHS14 5		2,2	3	-	-	49	45	38,5	30	19	-	-	-		
64BHS14 7		3	4	-	-	68,5	63	54	42	26,5	-	-	-		
64BHS14 9		4	5,5	-	-	88	81	69,5	54	34	-	-	-		
6BHS14 9	6"														
64BHS14 13	4"	5,5	7,5	-	-	127	117	100	78	49	-	-	-		
6BHS14 13															
6BHS14 15	7,5			10	-	-	147	135	116	90	56,5	-	-	-	
6BHS14 18	-			-	-	-	176	162	139	108	68	-	-	-	
6BHS14 22	6"	9,2	12,5	-	-	216	198	170	132	83	-	-	-		
6BHS14 26				11	15	-	-	255	234	201	156	98	-	-	-
6BHS14 31				15	20	-	-	304	279	239	185	117	-	-	-
6BHS14 35				15	20	-	-	343	315	270	209	132	-	-	-
64BHS21 4	4"	3	4	-	-	-	36,5	35,5	34	32	27,5	21	16,5		
64BHS21 6		4	5,5	-	-	-	55	53	51	48	41,5	32	24,5		
6BHS21 6	6"														
64BHS21 8	4"	5,5	7,5	-	-	-	73.5	71	67,5	64	55	42	33		
6BHS21 8															
6BHS21 12	6"	7,5	10	-	-	-	110	106	102	96	83	64	49		
6BHS21 14		9,2	12,5	-	-	-	128	124	118	112	96	74	57,5		
6BHS21 17		11	15	-	-	-	156	150	144	136	117	90	69,5		
6BHS21 22		15	20	-	-	-	202	194	186	176	151	117	90		
6BHS21 25				-	-	-	229	221	212	200	172	133	103		
6BHS21 29				18,5	25	-	-	-	266	256	245	232	200	154	119
6BHS21 34				22	30	-	-	-	312	300	288	272	234	180	139
6BHS21 36		-	-			-	330	318	305	288	248	191	148		

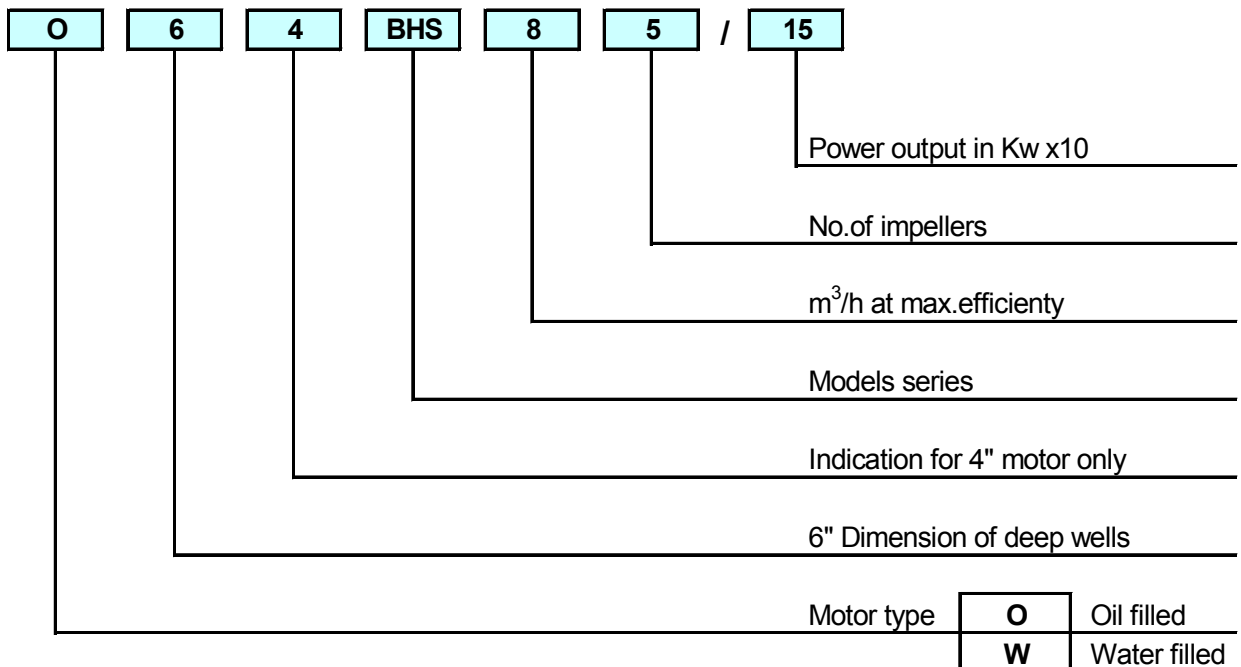
SELECTION CHART

50 Hz

EXAMPLE (pump without motor) :

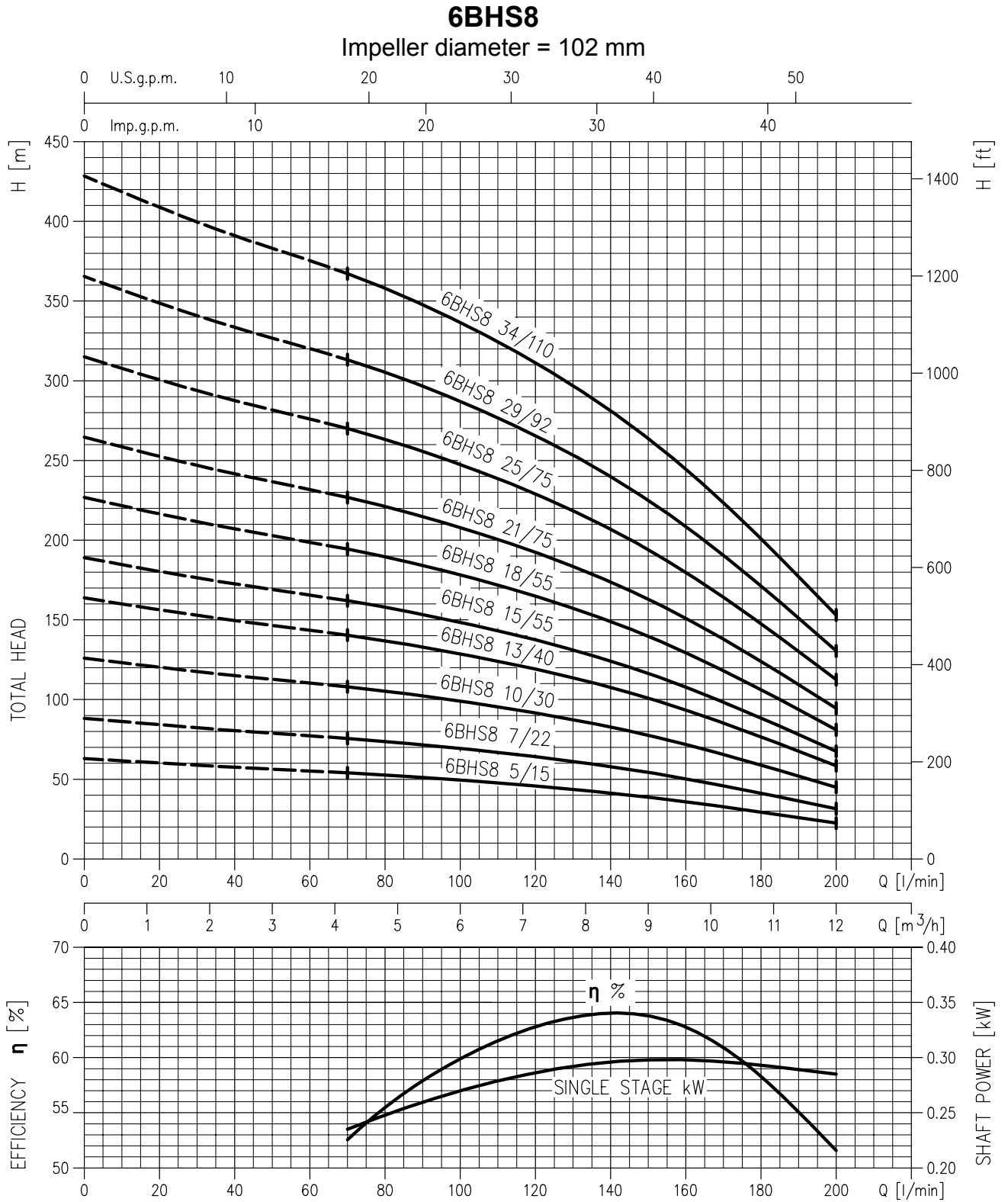


EXAMPLE (pump with motor) :



PERFORMANCE CURVE

50 Hz



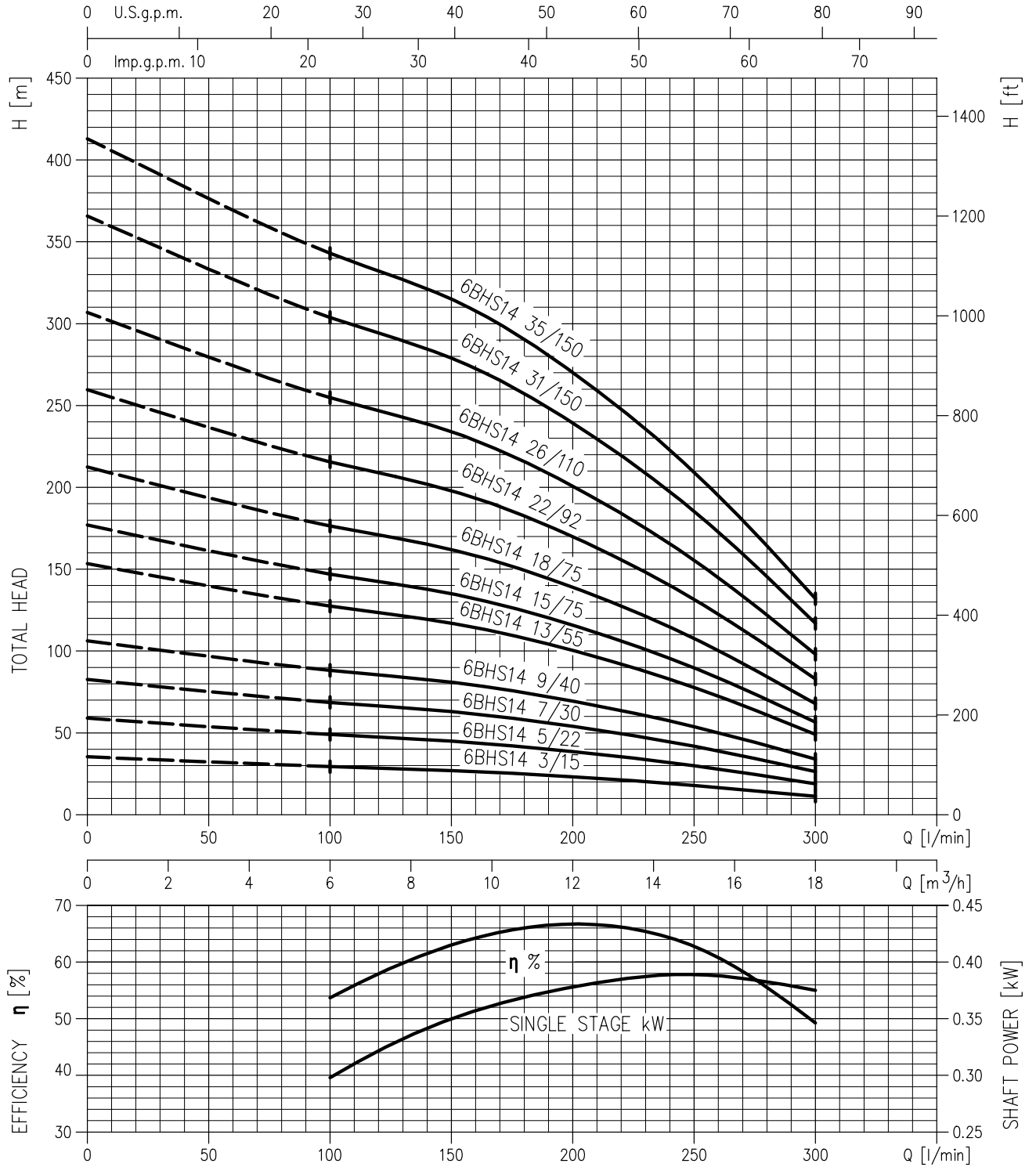
Rotation speed \approx 2850 min⁻¹
 Test fluid : clean water at 20°C
 Applicable standard of test : ISO 9906 grade 2

PERFORMANCE CURVE

50 Hz

6BHS14

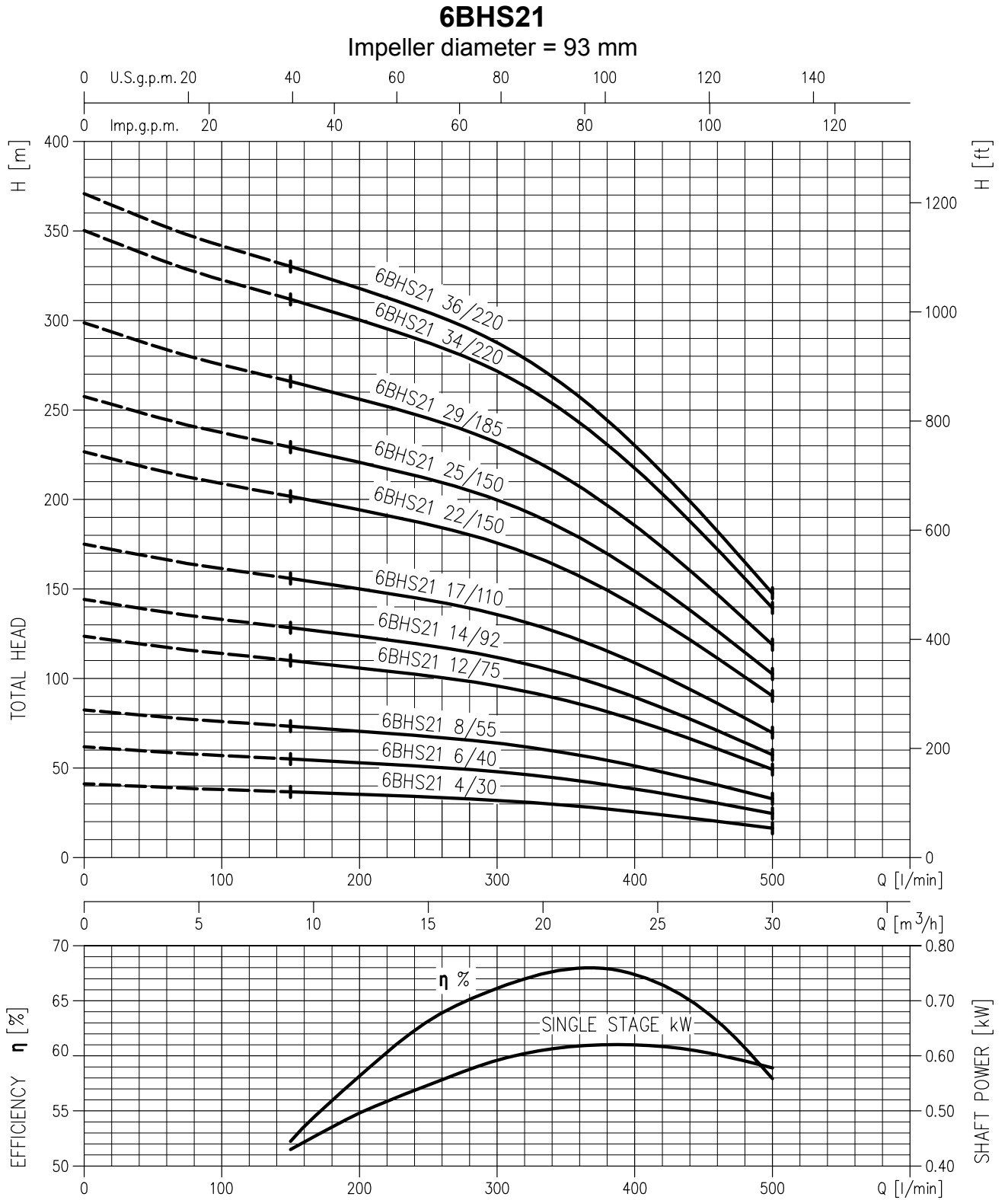
Impeller diameter = 97 mm



Rotation speed ≈ 2850 min⁻¹
 Test fluid : clean water at 20°C
 Applicable standard of test : ISO 9906 grade 2

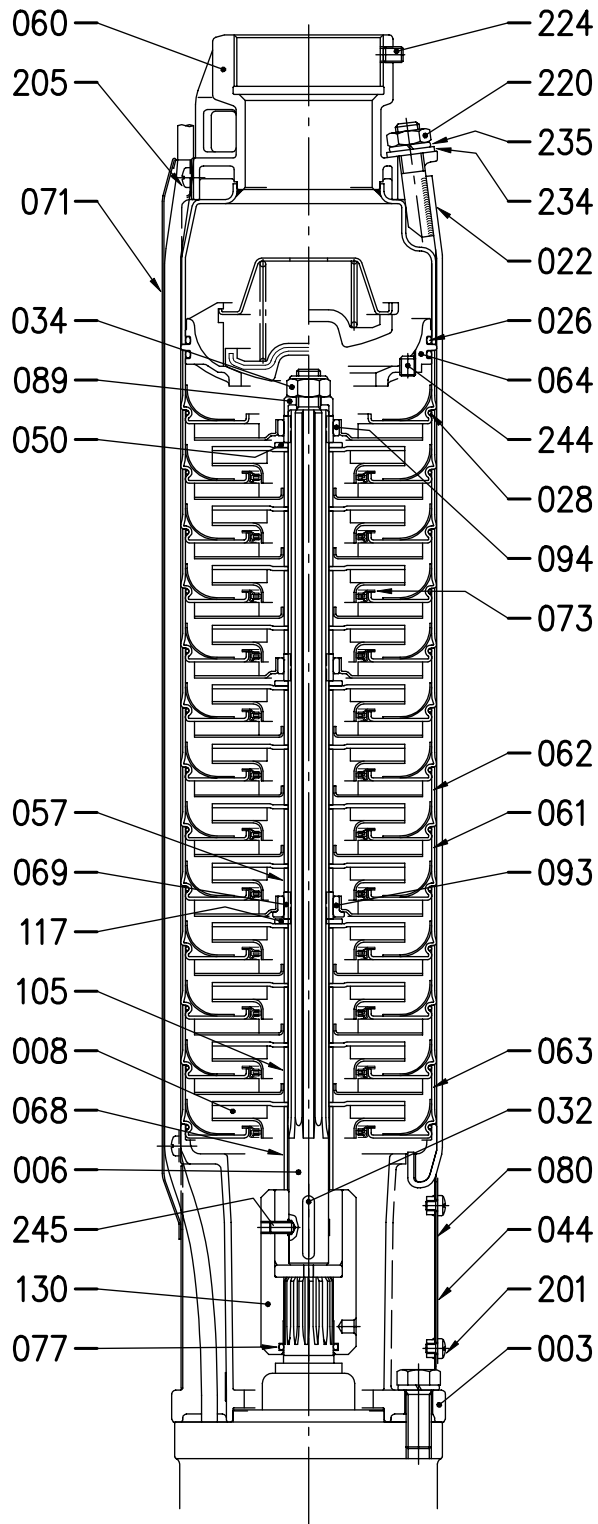
PERFORMANCE CURVE

50 Hz



Rotation speed $\approx 2850 \text{ min}^{-1}$
 Test fluid : clean water at 20°C
 Applicable standard of test : ISO 9906 grade 2

SECTIONAL VIEW



CONSTRUCTIONS

50 Hz

Pos.	PART.NAME	DIMENSIONS	MATERIAL	No.FOR 1 UNIT
003	Bracket		AISI 304 microcasting	1
006	Pump shaft		AISI 316	1
008	Impeller		AISI 304	[*]
022	Strap		AISI 304	4
026	"O" ring	3x118	NBR	2
028	"O" ring	1.85x120	NBR	[*]
032	Key	A 5x5x32 (6BHS8) UNI 6604	AISI 304	1
		A 6x6x32 UNI 6604		
034	Impeller nut self locking	M10 (6BHS8) M12	AISI 304	1
044	Strainer		AISI 304	1
050	Washer		AISI 304	[*]
057	Bearing spacer		AISI 304	[*]
060	Discharge casing		AISI 304+AISI 304 microcasting	1
061	Intermediate casing bearing		AISI 304	[*]
062	Intermediate casing		AISI 304	[*]
063	Intermediate casing suction		AISI 304	1
064	Valve		AISI 304+EPDM rubber	1
068	Spacer		AISI 304	1
069	Shaft sleeve		Tungsten carbide	[*]
071	Cable cover		AISI 304	1 [2]
073	Liner ring		AISI 304+EPDM rubber	[*]
077	"O" ring	2.62x25.07	NBR	[*]
080	Label		AISI304	1
089	Washer		AISI 304	1
093	Axial bearing		Tungsten carbide	1
094	Radial bearing		Tungsten carbide	[*]
105	Spacer		AISI 304	[*]
117	Friction ring		Tungsten carbide	1
130	Coupling		AISI 304	1
201	Screw	M5x6 UNI 7687	AISI 304	2
205	Screw	M5x6 UNI 7687	AISI 304	4 [8]
220	Nut	M12 UNI 5589	AISI 304	4
224	Set screw	M8x10 UNI 5929	AISI 304	1
234	Washer	13x24 UNI 6592	AISI 304	4
235	Washer	13 UNI 1751	AISI 304	4
244	Set screw	M8x10 UNI 5929	AISI 304	1
245	Set screw	M6x12 UNI 5923	AISI 304	1

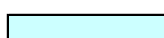
[*] See table pag.302

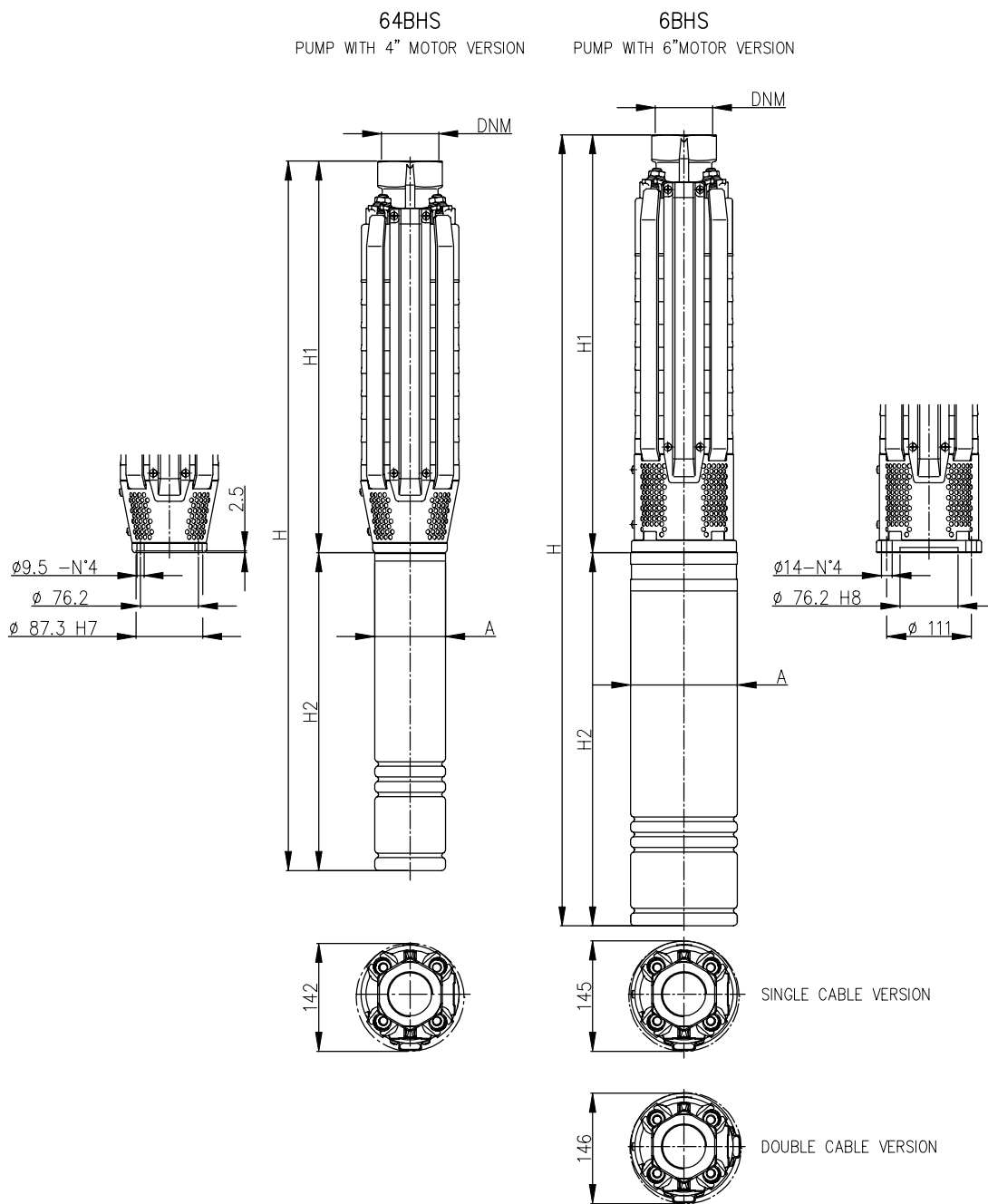
[...] Numbers inside brackets refer to the pump with double cable version

Pump type	Quantity for model										
	N°008	N°028	N°050	N°057	N°061	N°062	N°069	N°073	N°077	N°094	N°105
64BHS8 5	5	6				4		5			4
64BHS8 7	7	8	/	/	1	6	1	7		/	6
64BHS8 10	10	11				9		10	/		9
64BHS8 13	13	14				11		13			11
64BHS8 15	15	16				13		15			13
64BHS8 18	18	19				16		18			16
6BHS8 13	13	14	1	1	2	11	2	13		1	11
6BHS8 15	15	16				13		15			13
6BHS8 18	18	19				16		18			16
6BHS8 21	21	22				19		21	1		19
6BHS8 25	25	26				22		25			22
6BHS8 29	29	30	2	2	3	26	3	29		2	26
6BHS8 34	34	35				31		34			31
64BHS14 3	3	4				2		3			2
64BHS14 5	5	6	/	/	1	4	1	5		/	4
64BHS14 7	7	8				6		7	/		6
64BHS14 9	9	10				8		9			8
64BHS14 13	13	14	1	1	2	11	2	13		1	11
6BHS14 9	9	10	/	/	1	8	1	9		/	8
6BHS14 13	13	14				11		13			11
6BHS14 15	15	16	1	1	2	13	2	15		1	13
6BHS14 18	18	19				16		18	1		16
6BHS14 22	22	23				20		22			20
6BHS14 26	26	27				23		26			23
6BHS14 31	31	32	2	2	3	28	3	31		2	28
6BHS14 35	35	36				32		35			32
64BHS21 4	4	5				3		4			3
64BHS21 6	6	7				5		6	/		5
64BHS21 8	8	9	/	/	1	7	1	8		/	7
6BHS21 6	6	7				5		6			5
6BHS21 8	8	9				7		8			7
6BHS21 12	12	13				10		12			10
6BHS21 14	14	15	1	1	2	12	2	14		1	12
6BHS21 17	17	18				15		17			15
6BHS21 22	22	23				19		22	1		19
6BHS21 25	25	26	2	2	3	22	3	25		2	22
6BHS21 29	29	30				25		29			25
6BHS21 34	34	35	3	3	4	30	4	34		3	30
6BHS21 36	36	37				32		36			32

Pump type	N° impeller	Intermediate casing with bearing						
		Quantity for model		Position *				
		axial	radial					
64BHS8 5	5		/				6th	
64BHS8 7	7		/				8th	
64BHS8 10	10		/				11th	
64BHS8 13	13		1	5th			14th	
6BHS8 13								
64BHS8 15	15	1	1				16th	
6BHS8 15								
64BHS8 18	18		1				19th	
6BHS8 18								
6BHS8 21	21		1				22th	
6BHS8 25	25		2				26th	
6BHS8 29	29		2			20th	30th	
6BHS8 34	34		2				35th	
64BHS14 3	3		/					4th
64BHS14 5	5		/				6th	
64BHS14 7	7		/				8th	
64BHS14 9	9		/				10th	
6BHS14 9								
64BHS14 13	13		1	5th			14th	
6BHS14 13								
6BHS14 15	15		1				16th	
6BHS14 18	18		1				19th	
6BHS14 22	22		1				23th	
6BHS14 26	26		2				27th	
6BHS14 31	31		2				32th	
6BHS14 35	35		2			20th	36th	
64BHS21 4	4		/					5th
64BHS21 6	6		/					7th
6BHS21 6								
64BHS21 8	8		1	4th			9th	
6BHS21 8								
6BHS21 12	12		1				13th	
6BHS21 14	14		1				15th	
6BHS21 17	17		1				18th	
6BHS21 22	22		2				23th	
6BHS21 25	25		2				26th	
6BHS21 29	29		3			16th	30th	
6BHS21 34	34		3				28th	35th
6BHS21 36	36		3					37th

* the first intermediate suction casing is used as reference for the position of the bearing

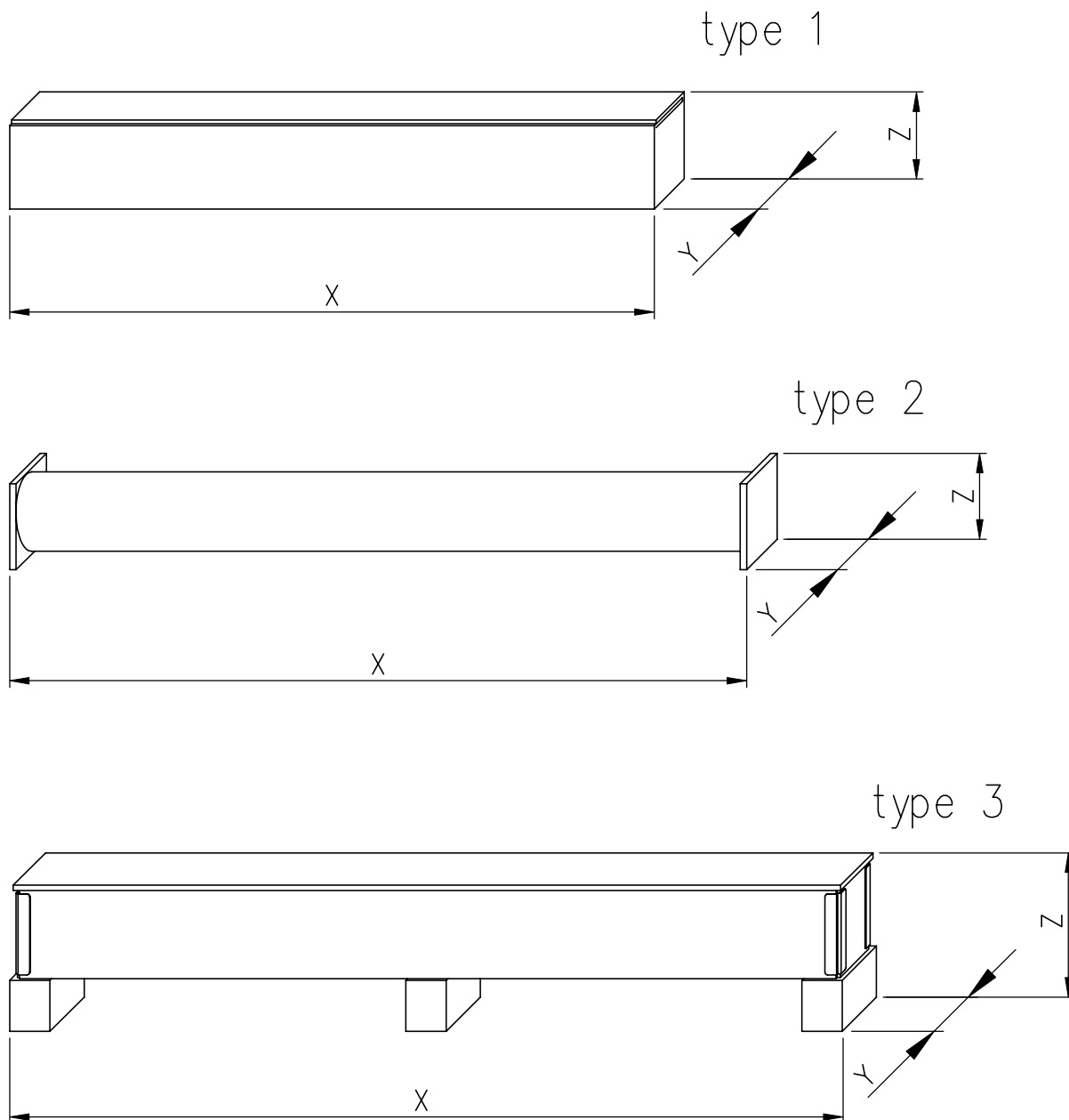
 axial bearing



DIMENSIONS

50 Hz

Pump type	POWER		Pump without motor		Motor size	Pump with water motor filled			Pump with oil motor filled						
	kW	HP	DNM	H1 [mm]		A [mm]	H2 [mm]	H [mm]	A [mm]	H2 [mm]	H [mm]				
64BHS8 5/15	1.5	2	G 2	454.5	4"	95.3	324.5	779	93	382.5	837				
64BHS8 7/22	2.2	3		514.5			353.5	868		417.5	932				
64BHS8 10/30	3	4		604.5			420.5	1025		577.5	1182				
64BHS8 13/40	4	5.5		694.5			580.5	1275		1272					
64BHS8 15/55	5.5	7.5		754.5			695.5	1450		647.5	1402				
64BHS8 18/55				844.5			1540	1492							
6BHS8 13/40	4	5.5	G 2	729	6"	136.7	582	1311	140	540	1269				
6BHS8 15/55	5.5	7.5	789	615			1404	570		1359					
6BHS8 18/55			879	647			1494	1449							
6BHS8 21/75	7.5	10	969	647			1616	600		1569					
6BHS8 25/75			1089				1736			1689					
6BHS8 29/92	9.2	12.5	1209	679			1888	1809							
6BHS8 34/110	11	15	1359	712	2071	700	2059								
64BHS14 3/15	1.5	2	G 2 1/2	394.5	4"	95.3	324.5	719	93	382.5	777				
64BHS14 5/22	2.2	3		454.5			353.5	808		417.5	872				
64BHS14 7/30	3	4		514.5			420.5	935		577.5	1092				
64BHS14 9/40	4	5.5		574.5			580.5	1155		1152					
64BHS14 13/55	5.5	7.5		694.5			695.5	1390		647.5	1342				
6BHS14 9/40	4	5.5		G 2 1/2			609	6"		136.7	582	1191	140	540	1149
6BHS14 13/55	5.5	7.5	729	615	1344	570	1299								
6BHS14 15/75			7.5	10	789	647	1436		600		1389				
6BHS14 18/75	879	647			1526	1479									
6BHS14 22/92	9.2	12.5	999	679	1678	1599									
6BHS14 26/110	11	15	1119	712	1831	700	1819								
6BHS14 31/150	15	20	1269	777	2046	760	2029								
6BHS14 35/150			1389		2166		2149								
64BHS21 4/30	3	4	G 2 1/2	474.5	4"	95.3	420.5	895	93	577.5	1052				
64BHS21 6/40	4	5.5		554.5			580.5	1135		1132					
64BHS21 8/55	5.5	7.5		634.5			695.5	1330		647.5	1282				
6BHS21 6/40	4	5.5		G 2 1/2			589	6"		136.7	582	1171	140	540	1129
6BHS21 8/55	5.5	7.5		669			615				1284	570		1239	
6BHS21 12/75				7.5			10				829	647		1476	600
6BHS21 14/92	9.2	12.5	909		679	1588			1509						
6BHS21 17/110			11	15	1029	712	1741		700		1729				
6BHS21 22/150	15	20			1229	777	2006		760		1989				
6BHS21 25/150			1349	2126	2109										
6BHS21 29/185	18.5	25	1509	842	2351	830	2339								
6BHS21 34/220	22	30	1709	907	2616	890	2599								
6BHS21 36/220			1789		2696		2679								



Pump type	Pump without motor					Pump with water motor filled					Pump with oil motor filled																								
	X [mm]	Y [mm]	Z [mm]	weight [kgf]	type	X [mm]	Y [mm]	Z [mm]	weight [kgf]	type	X [mm]	Y [mm]	Z [mm]	weight [kgf]	type																				
64BHS8 5/15	640	158	162	12.5	1	800	158	162	24.5	1	1040	158	162	23	1																				
64BHS8 7/22				14.5		1040			27.5		26.5																								
64BHS8 10/30				17		1200			34		39.5																								
64BHS8 13/40	800	158	162	20		1	1550	180	270		43.7	3	1550	180		270	42.5	3																	
64BHS8 15/55				21.5							1550						51		45																
64BHS8 18/55				24							1750						53.5		47.5																
6BHS8 13/40	800	158	162	21			1	1550	180		270		59	3		1550	180		270	61	3														
6BHS8 15/55	24			1550									64.5							65															
6BHS8 18/55	26.5			1750									66							67.5															
6BHS8 21/75	1040	158	162	29.5				1	1750		180		270			73.5	3		1750	180		270	72	3											
6BHS8 25/75				33.5												1750							79		77.5										
6BHS8 29/92				38.5												1950							85		84										
6BHS8 34/110	1385	160	160	45					2		2250		180			270			93	3		2250	180		270	91.5	3								
64BHS14 3/15	640			158	162					10.5					1				1550							180		270	22.5	1	1550	180	270	21	1
64BHS14 5/22										12																			1040					25.5	
64BHS14 7/30		14	1200							30.5	35.5																								
64BHS14 9/40	800	158	162	15.5	1	1550				180	270	40	3			1550		180	270			39	3												
64BHS14 13/55				19								1550										49			43										
6BHS14 9/40				17								1200										54			56.5										
6BHS14 13/55	1040	158	162	21		1	1750			180	270	62		3		1750		180	270		63	3													
6BHS14 15/75				23								1750									68				66.5										
6BHS14 18/75				25.5								1950									70.5				69										
6BHS14 22/92	1200	158	162	29.5			1	1950		180	270	76				3	1950	180	270		75.5			3											
6BHS14 26/110				33.5								1950									85				84										
6BHS14 31/150				40.5								2250									96				94.5										
6BHS14 35/150	1385	160	160	44				2	2250	180	270	99					3	2250	180	270	97.5				3										
64BHS21 4/30	640			158								162			11.5						1					1200	158	162	28.5	1	1200	158	162	33.5	1
64BHS21 6/40															13.5														1200					38.5	
64BHS21 8/55		15.5	1550						45.5	39.5																									
6BHS21 6/40	640	158	162	15	1				1200	158	162	52.3	3		1200			158	162	54.7			3												
6BHS21 8/55	17			1550								58								59															
6BHS21 12/75	21.5			1750								67								66															
6BHS21 14/92	1040	158	162	24		1			1950	180	270	72		3	1950			180	270	71		3													
6BHS21 17/110				26.5								1950								78						77									
6BHS21 22/150				34.5								2250								89						90									
6BHS21 25/150	1385	160	160	38			2		2430	180	270	94			3	2430		180	270	93				3											
6BHS21 29/185				42.5								2430								104						108									
6BHS21 34/220				48.5								2780								116						119									
6BHS21 36/220	1825	160	160	51				2	2780	180	270	118				3	2780	180	270	121					3										

OIL MOTOR FILLED

	Output [kW]	HP	Input [kW]	Volt	IN [A]	IA [A]	Efficiency [%]
4"	1.5	2	2	380 V	4.4	17	75
	2.2	3	2.82		6	24	78
	3	4	3.89		8.5	34	77
	4	5.5	5.06		10.8	47	79
	5.5	7.5	7.24		14.5	58	76
6"	4	5.5	5.12		8.7	52.2	78
	5.5	7.5	6.96		13.1	78.6	79
	7.5	10	9.62		17.5	96.3	78
	9.2	12.5	11.50		21	105	80
	11	15	13.25		24.1	123	83
	15	20	18.29		31.5	164	82
	18.5	25	22.56		41.5	208	82
	22	30	26.51		48	216	83

WATER MOTOR FILLED

	Output [kW]	HP	Input [kW]	Volt	IN [A]	IA [A]	Efficiency [%]
4"	1.5	2	2.05	380 V	3.9	18.6	73
	2.2	3	2.93		5.8	28.7	75
	3	4	3.95		7.5	39.9	76
	4	5.5	5.2		9.8	55	77
	5.5	7.5	7.23		13.5	72	76
6"	4	5.5	5.19		9.5	42	77
	5.5	7.5	7.05		12.8	60	78
	7.5	10	9.49		16.3	83	79
	9.2	12.5	11.35		21	106	81
	11	15	13.58		24	126	81
	15	20	18.29		32	164	82
	18.5	25	22.56		40	220	82
	22	30	26.83		47	255	82

EXAMPLE : MOTOR 4 kW 380 V CABLE LENGTH 70 m - 4x2,5 mm²

THREE PHASE MOTOR 380 V			CABLE TYPE AND LENGTH MAXIMUM LIMIT								
SIZE	kW	HP	4x1	4x1,5	4x2,5	4x4	4x6	4x10	4x16	4x25	4x35
4"	1.5	2	72	109	180	290	435	-	-	-	-
	2.2	3	51	78	130	207	310	516	-	-	-
	3	4	41	62	104	167	250	416	-	-	-
	4	5.5	31	46	77	124	186	310	496	-	-
	5.5	7.5	-	33	56	90	135	225	360	-	-
6"	4	5.5	-	-	110	160	250	400	-	-	-
	5.5	7.5	-	-	68	108	161	265	415	-	-
	7.5	10	-	-	53	84	126	207	325	-	-
	9.2	12.5	-	-	44	70	104	171	267	413	-
	11	15	-	-	-	59	87	144	223	347	-
	15	20	-	-	-	-	65	107	167	258	350
	18.5	25	-	-	-	-	-	87	136	210	295
22	30	-	-	-	-	-	75	117	181	246	