

# IDROSAND 6"



# Electric submersible pumps IDROSAND

for 6" boreholes



## APPLICATION

To pump water from boreholes

To pressurize civil, agricultural, industrial and fire-fighting plants

Irrigation

## CONSTRUCTION

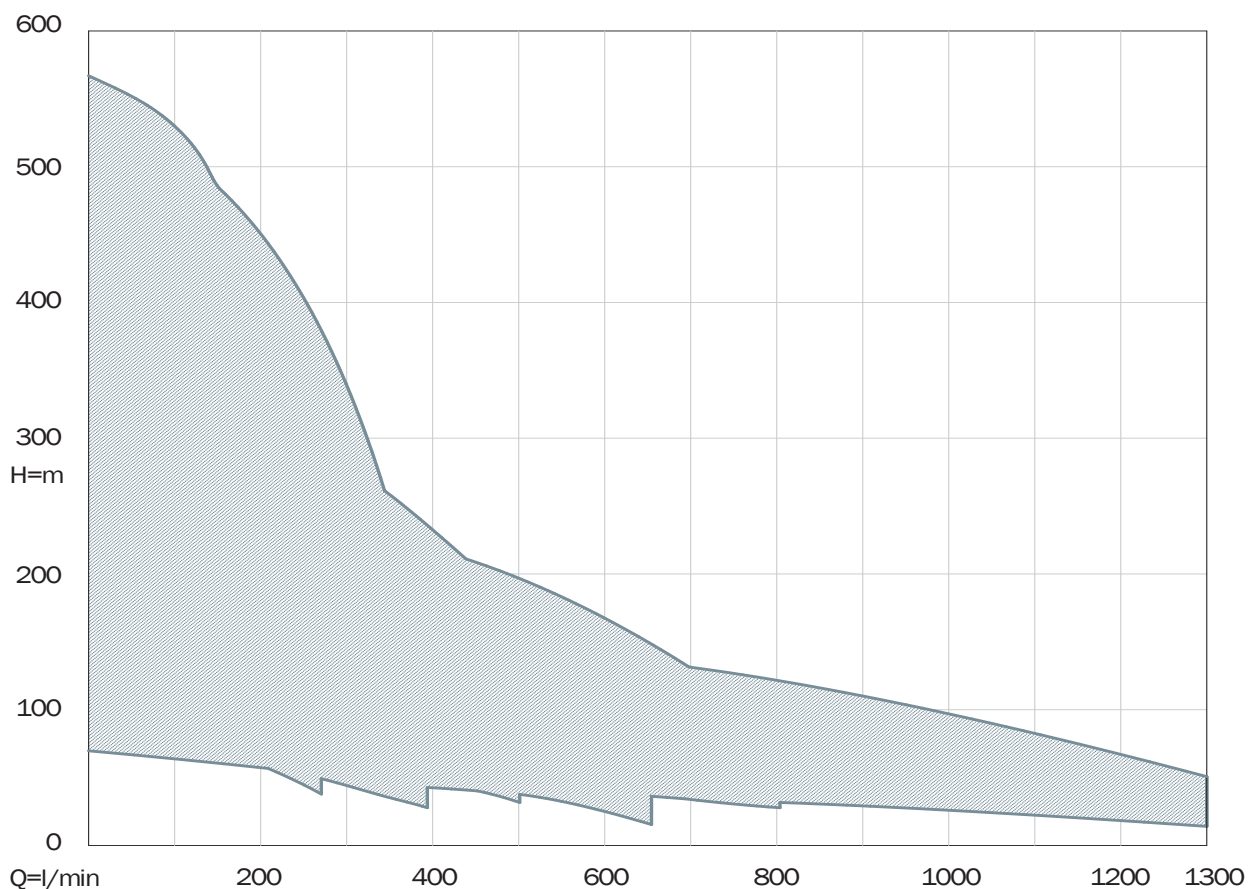
Pumps designed to operate in the most arduous conditions, offering reliability even in applications with high sand content (IDROSAND+ up to 450 g/m<sup>3</sup>)

Coolant filled, asynchronous, rewindable electric AC motor with short circuit rotor. Insulation Class F. (4" motors).  
Water filled, asynchronous, rewindable electric AC motor with short circuit rotor. Insulation Class Y. (6" motors).

Shafts machined on support bushes and mechanical seals location

Both shaft and coupling meet NEMA standards

## APPLICATION RANGE



# Electric submersible pumps IDROSAND

for 6" boreholes



The electric pumps **IDROSAND** are designed to operate in the most arduous conditions, offering reliability even in applications with high sand content (**IDROSAND+** up to 450 g/m<sup>3</sup>).



## APPLICATION FEATURES - PUMP END

	IDROSAND			IDROSAND+		
	/230	/330	/530	/400	/700	/900
Minimum depth of the liquid to be pumped (m)	0,8					
Maximum temperature of the water to be pumped (°C)	60					
PH of the liquid pumped	6 - 10					
Maximum sand content (g/m <sup>3</sup> )	200			300		450
Suitable to operate horizontally (included)	24/230	23/330	17/530	15/400	13/700	8/900

## MATERIALS - PUMP END

	IDROSAND			IDROSAND+		
	/230	/330	/530	/400	/700	/900
Head and suction body	Mechanical cast iron EN GJL-200					
Casing / Diffuser body	Stainless steel AISI304		Mechanical cast iron EN GJL-200	Stainless steel AISI304		
Tie-rods	Stainless steel AISI304		Steel	Stainless steel AISI304		
Shaft	Stainless steel AISI420B					
Coupling	Stainless steel AISI416B					
Impellers and diffusers	Noryl® reinforced with fibre-glass, certified for drinking water and AISI 304 stainless steel wear rings					
Diffuser bush				Anti-sand rubber		
Top bush	Desmopan® with rotating element in chromium-plated brass					
Check valve	Stainless steel AISI304					

### APPLICATION FEATURES - MOTOR

	MOTOR	
	4" S series	6"
IP rating	IP68	
Duty	Continuous S1	
Maximum immersion depth (m)	150	200
Maximum number of starts per hour	30	20
Maximum temperature of the water pumped (°C)	35	30
PH of the liquid pumped	6 - 10	
Suitable for inverter drive	All	
Suitable to operate horizontally (Included)	5,5 hp	All

### MATERIALS - MOTOR


	MOTOR	
	4" S series	6"
Casing	Stainless Steel AISI304	
Shaft Terminal	Stainless Steel AISI303	Stainless Steel AISI420B
Upper body	Brass OT58	Mechanical cast iron with electrophoresis paint EN GJL-250 or brass OT58
Elastomers	NBR rubber	
Mechanical seal	Graphite and alumina	
Foot		ABS
Cable	PVC ACS AD8 (for permanent immersion in drinking water)	



# Electric submersible pumps IDROSAND


for 6" boreholes

## PERFORMANCE DATA - PUMP ENDS - 2 poles 60 Hz

Radial impeller 	P2		DNM	Q	Flow														
	hp	kW		m <sup>3</sup> /h	0	5,4	7,2	9	12	15	16,2	18	21	23,4	27	30	33	36	39
				l/min	0	90	120	150	200	250	270	300	350	390	450	500	550	600	650
<b>SERIES 230</b>																			
IDROSAND 6/230	4	3	2"	H (m)	82	77	74	67	53	39	30								
IDROSAND 8/230	5,5	4	2"		112	106	101	91	71	52	39								
IDROSAND 9/230	5,5	4	2"		124	117	112	100	78	57	44								
IDROSAND 11/230	7,5	5,5	2"		152	144	137	122	94	69	54								
IDROSAND 14/230	10	7,5	2"		190	177	168	150	112	81	64								
IDROSAND 17/230	12,5	9,2	2"		239	225	215	194	147	108	85								
IDROSAND 20/230	12,5	9,2	2"		282	267	256	231	174	128	100								
IDROSAND 24/230	20	15	2"		337	317	303	274	211	155	120								
IDROSAND 28/230	20	15	2"		393	374	360	328	252	184	140								
IDROSAND 34/230	25	18,5	2"		481	454	435	396	304	219	166								
<b>SERIES 330</b>																			
IDROSAND 4/330	4	3	2"	H (m)	58			51	47	41	39	35	27	20					
IDROSAND 5/330	5,5	4	2"		73			65	59	53	51	46	34	25					
IDROSAND 6/330	5,5	4	2"		87			73	67	61	59	53	39	30					
IDROSAND 7/330	7,5	5,5	2"		100			87	80	72	69	62	46	35					
IDROSAND 9/330	10	7,5	2"		130			112	102	91	87	77	56	43					
IDROSAND 10/330	10	7,5	2"		146			125	114	100	95	85	62	48					
IDROSAND 12/330	12,5	9,2	2"		174			153	138	120	102	100	71	55					
IDROSAND 14/330	12,5	9,2	2"		200			168	153	135	126	113	82	65					
IDROSAND 16/330	20	15	2"		230			203	183	162	152	137	100	76					
IDROSAND 19/330	20	15	2"		274			243	218	197	185	164	116	88					
IDROSAND 23/330	25	18,5	2"		336			300	272	242	230	205	147	111					
IDROSAND 28/330	25	18,5	2"		397			353	321	285	270	238	175	138					
IDROSAND 32/330	40	30	2"		469			430	392	351	330	295	215	166					
<b>SERIES 400</b>																			
IDROSAND+ 4/400	7,5	5,5	3"	H (m)	74			66	61	59	56	54	48	42	33	24			
IDROSAND+ 5/400	10	7,5	3"		94			81	76	74	70	68	61	55	44	34			
IDROSAND+ 6/400	10	7,5	3"		110			95	91	90	85	82	74	67	55	44			
IDROSAND+ 7/400	12,5	9,2	3"		133			117	110	104	102	96	87	78	65	53			
IDROSAND+ 8/400	20	15	3"		151			133	127	121	117	112	102	94	78	64			
IDROSAND+ 10/400	25	18,5	3"		187			167	159	147	144	136	123	111	94	78			
IDROSAND+ 12/400	25	18,5	3"		219			200	190	181	175	168	153	140	116	94			
IDROSAND+ 15/400	30	22	3"		285			250	240	233	225	217	198	180	152	124			
IDROSAND+ 20/400	40	30	3"		366			334	318	295	290	275	253	231	196	161			
<b>SERIES 530</b>																			
IDROSAND 4/530	7,5	5,5	3"	H (m)	58			54	53	52	51	50	47	44	37	30	23	16	8
IDROSAND 6/530	10	7,5	3"		87			81	79	76	75	72	68	64	57	49	40	30	18
IDROSAND 8/530	12,5	9,2	3"		115			108	104	99	97	95	90	84	75	65	53	39	25
IDROSAND 11/530	20	15	3"		156			148	144	138	136	132	124	116	101	87	70	50	31
IDROSAND 14/530	25	18,5	3"		200			189	182	174	171	166	157	147	128	109	89	65	39
IDROSAND 17/530	30	22	3"		237			229	216	202	198	191	179	170	153	134	111	82	49
IDROSAND 22/530	40	30	3"		315			297	285	271	266	259	244	230	199	170	136	99	60

Electric pumps supplied with 4" 'S' series motors up to 7,5 kW

**PERFORMANCE DATA - PUMP ENDS - 2 poles 60 Hz**

Semi-axial impeller 	P2		DNM	Q	Flow											
	hp	kW		m <sup>3</sup> /h	0	18	21	24	30	39	42	48	54	60	69	78
				l/min	0	300	350	400	500	650	700	800	900	1000	1150	1300
<b>SERIES 700</b>																
IDROSAND+ 3/700	10	7,5	3"	H (m)	60	50	48	46	41	31	27	17				
IDROSAND+ 5/700	12,5	9,2	3"		101	83	80	77	69	51	44	28				
IDROSAND+ 6/700	20	15	3"		121	100	96	93	82	62	53	34				
IDROSAND+ 8/700	25	18,5	3"		161	133	129	123	110	82	71	45				
IDROSAND+ 10/700	25	18,5	3"		201	166	161	154	137	103	88	56				
IDROSAND+ 13/700	40	30	3"		262	216	209	201	178	133	115	73				
IDROSAND+ 16/700	50	37	3"		322	266	257	247	219	164	141	90				
<b>SERIES 900</b>																
IDROSAND+ 2/900	10	7,5	3"	H (m)	41			35	32	29	27	25	21	18	12	5
IDROSAND+ 3/900	15	11	3"		59			52	50	45	43	39	34	29	20	9
IDROSAND+ 4/900	20	15	3"		79			73	70	64	61	56	49	42	29	14
IDROSAND+ 5/900	25	18,5	3"		100			92	89	81	78	71	63	54	39	21
IDROSAND+ 6/900	25	18,5	3"		120			109	105	96	92	84	75	65	48	30
IDROSAND+ 8/900	40	30	3"		162			150	143	130	125	115	103	90	68	42
IDROSAND+ 10/900	50	37	3"		202			187	179	162	156	144	129	112	85	52

Electric pumps supplied with 4" 'S' series motors up to 7,5 kW


**PERFORMANCE DATA - MOTORS - 2 poles 60 Hz**

Code	Voltage	Number of phases	P2		Axial load	Rotation	Nominal current	Start current	Start Torque	Efficiency %	Power factor	Size of cable	Length of cable	
			hp	kW	F	$n_N$	$I_N$	$I_A$	$M_A$	$\eta_N$	cos $\phi$			
			V	N	min <sup>-1</sup>	A	A	Nm	mm <sup>2</sup>			m		
<b>WATER FILLED SUBMERSIBLE MOTORS for 6" boreholes</b>														
6TA125	M6TA125/2	400	3	12,5	9,2	8000	3410	20	84	450	80	0,83	4 x 4	3
6TA15	M6TA15GH/2	400	3	15	11	8000	3420	22,7	98	440	85	0,83	4 x 4	3
6TA20	M6TA20/2	400	3	20	15	18000	3460	29,5	118	504	85	0,86	4 x 4	3
6TA25	M6TA25/2	400	3	25	18,5	18000	3450	37,7	113	720	84	0,86	4 x 6	3
6TA30	M6TA30/2	400	3	30	22	18000	3480	44	127	900	86	0,85	4 x 6	3
6TA35	M6TA35/2	400	3	35	26	18000	3480	51	193	1000	88	0,82	4 x 6	3
6TA40	M6TA40/2	400	3	40	30	18000	3450	58,5	193	1000	87	0,86	4 x 6	3
6TA50	M6TA50/2	400	3	50	37	18000	3490	74	244	1220	89	0,88	4 x 6	3

# Electric submersible pumps IDROSAND series 230

for 6" boreholes

## PERFORMANCE DATA - 2 poles 60 Hz

Radial impeller 	Pump Code	Motor Code	Version		P2		A	Flow		DNM	Dimensions (mm)			Cable m	Weight kg
					hp	kW		l/min	m		A	B	C		
					IDROSAND 6/230	P230/06		M4T40	400 V		3-phase	4	3		
IDROSAND 8/230	P230/08	M4T55	400 V	3-phase	5,5	4	9,4	90 - 150 - 270	106 - 91 - 39	2"	1345	587	146	2	38,3
IDROSAND 9/230	P230/09	M4T55	400 V	3-phase	5,5	4	9,4	90 - 150 - 270	117 - 100 - 44	2"	1381	587	146	3	38,9
IDROSAND 11/230	P230/11	M4T75	400 V	3-phase	7,5	5,5	12	90 - 150 - 270	144 - 122 - 54	2"	1538	672	146	3	61,5
IDROSAND 14/230	P230/14	M4T100	400 V	3-phase	10	7,5	16	90 - 150 - 270	177 - 150 - 64	2"	1671	697	146	3	66
IDROSAND 17/230	P230/17	M6TA125/2	400 V	3-phase	12,5	9,2	20	90 - 150 - 270	225 - 194 - 85	2"	1804	722	146	3	71,3
IDROSAND 20/230	P230/20	M6TA125/2	400 V	3-phase	12,5	9,2	20	90 - 150 - 270	267 - 231 - 100	2"	1912	722	146	3	73
IDROSAND 24/230	P230/24	M6TA20/2	400 V	3-phase	20	15	29,5	90 - 150 - 270	317 - 274 - 120	2"	2191	857	146	3	91,8
IDROSAND 28/230	P230/28	M6TA20/2	400 V	3-phase	20	15	29,5	90 - 150 - 270	374 - 328 - 140	2"	2335	857	146	3	94,4
IDROSAND 34/230	P230/34	M6TA25/2	400 V	3-phase	25	18,5	37,7	90 - 150 - 270	454 - 396 - 166	2"	2663	897	146	3	103,4

Electric pumps supplied with 4" 'S' series motors up to 7,5 kW



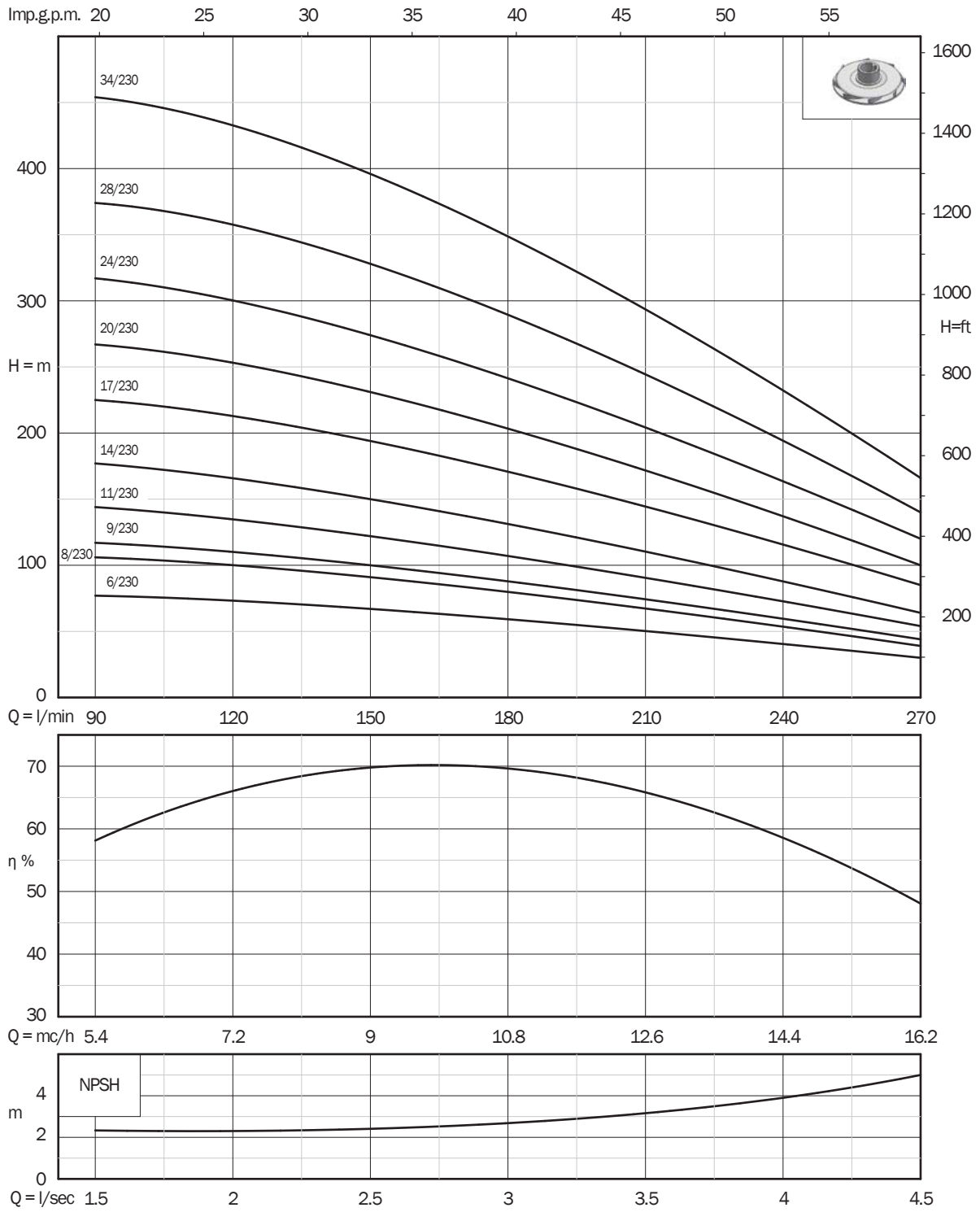
### OPTIONS FOR 6" MOTORS

Version for star-delta motors 400/690 V

Version with brass motor body



**PERFORMANCE CURVES - 2 poles 60 Hz**






# Electric submersible pumps IDROSAND series 330

for 6" boreholes

## PERFORMANCE DATA - 2 poles 60 Hz

Radial impeller 	Pump Code	Motor Code	Version		P2		A	Flow		DNM	Dimensions (mm)			Cable m	Weight kg
					hp	kW		l/min	m		A	B	C		
					IDROSAND 4/330	P330/04		M4T40	400 V		3-phase	4	3		
IDROSAND 5/330	P330/05	M4T55	400 V	3-phase	5,5	4	9,4	150 - 270 - 390	65 - 51 - 25	2"	1237	587	146	2	35,7
IDROSAND 6/330	P330/06	M4T55	400 V	3-phase	5,5	4	9,4	150 - 270 - 390	73 - 59 - 30	2"	1273	587	146	2	36,3
IDROSAND 7/330	P330/07	M4T75	400 V	3-phase	7,5	5,5	12	150 - 270 - 390	87 - 69 - 35	2"	1394	672	146	3	58,6
IDROSAND 9/330	P330/09	M4T100	400 V	3-phase	10	7,5	16	150 - 270 - 390	112 - 87 - 43	2"	1491	697	146	3	62,9
IDROSAND 10/330	P330/10	M4T100	400 V	3-phase	10	7,5	16	150 - 270 - 390	125 - 95 - 48	2"	1527	697	146	3	63,3
IDROSAND 12/330	P330/12	M6TA125/2	400 V	3-phase	12,5	9,2	20	150 - 270 - 390	153 - 102 - 55	2"	1624	722	146	3	67,3
IDROSAND 14/330	P330/14	M6TA125/2	400 V	3-phase	12,5	9,2	20	150 - 270 - 390	168 - 126 - 65	2"	1696	722	146	3	68,4
IDROSAND 16/330	P330/16	M6TA20/2	400 V	3-phase	20	15	29,5	150 - 270 - 390	203 - 152 - 76	2"	1903	857	146	3	85,7
IDROSAND 19/330	P330/19	M6TA20/2	400 V	3-phase	20	15	29,5	150 - 270 - 390	243 - 185 - 88	2"	2011	857	146	3	87
IDROSAND 23/330	P330/23	M6TA25/2	400 V	3-phase	25	18,5	37,7	150 - 270 - 390	300 - 230 - 111	2"	2195	897	146	3	95,7
IDROSAND 28/330	P330/28	M6TA25/2	400 V	3-phase	25	18,5	37,7	150 - 270 - 390	353 - 270 - 138	2"	2375	897	146	3	97,8
IDROSAND 32/330	P330/32	M6TA40/2	400 V	3-phase	40	30	58,5	150 - 270 - 390	430 - 330 - 166	2"	2821	1127	146	3	125,9

Electric pumps supplied with 4" 'S' series motors up to 7,5 kW



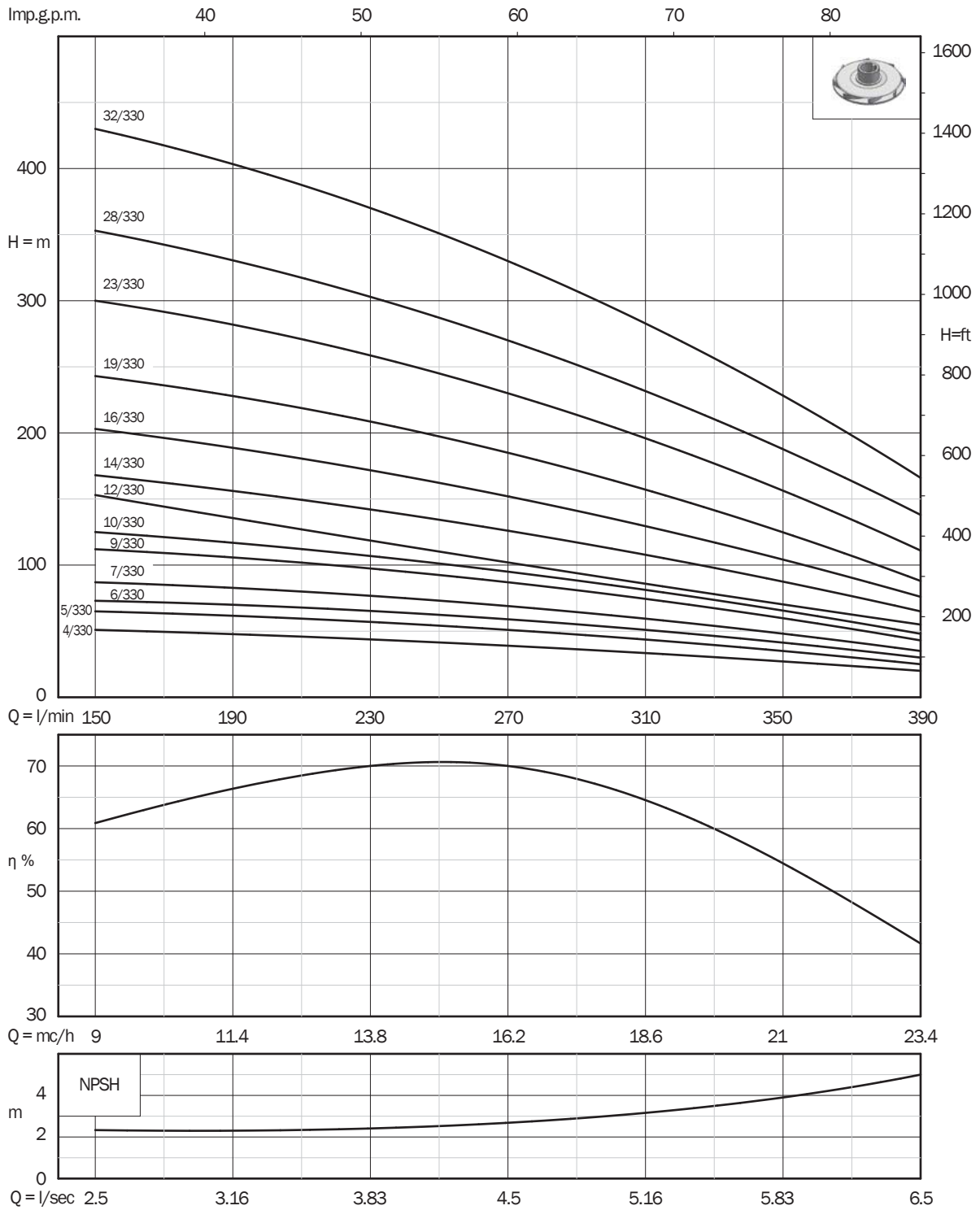
### OPTIONS FOR 6" MOTORS

Version for star-delta motors 400/690 V

Version with brass motor body




**PERFORMANCE CURVES - 2 poles 60 Hz**



# Electric submersible pumps IDROSAND+ series 400

for 6" boreholes

## PERFORMANCE DATA - 2 poles 60 Hz

Radial impeller 	Pump Code	Motor Code	Version		P2		A	Flow		DNM	Dimensions (mm)			Cable m	Weight kg
					hp	kW		l/min	m		A	B	C		
					IDROSAND+ 4/400	P400/04		M4T75	400 V		3-phase	7,5	5,5		
IDROSAND+ 5/400	P400/05	M4T100	400 V	3-phase	10	7,5	16	150 - 350 - 500	81 - 61 - 34	3"	1352	697	146	3	66,5
IDROSAND+ 6/400	P400/06	M4T100	400 V	3-phase	10	7,5	16	150 - 350 - 500	95 - 74 - 44	3"	1402	697	146	3	67,9
IDROSAND+ 7/400	P400/07	M6TA125/2	400 V	3-phase	12,5	9,2	20	150 - 350 - 500	117 - 87 - 53	3"	1477	722	146	3	71,8
IDROSAND+ 8/400	P400/08	M6TA20/2	400 V	3-phase	20	15	29,5	150 - 350 - 500	133 - 102 - 64	3"	1662	857	146	3	89,5
IDROSAND+ 10/400	P400/10	M6TA25/2	400 V	3-phase	25	18,5	37,7	150 - 350 - 500	167 - 123 - 78	3"	1802	897	146	3	96,8
IDROSAND+ 12/400	P400/12	M6TA25/2	400 V	3-phase	25	18,5	37,7	150 - 350 - 500	200 - 153 - 94	3"	1902	897	146	3	100,2
IDROSAND+ 15/400	P400/15	M6TA30/2	400 V	3-phase	30	22	44	150 - 350 - 500	250 - 198 - 124	3"	2152	997	146	3	115,6
IDROSAND+ 20/400	P400/20	M6TA40/2	400 V	3-phase	40	30	58,5	150 - 350 - 500	334 - 253 - 161	3"	2532	1127	146	3	140,3

Electric pumps supplied with 4" 'S' series motors up to 7,5 kW



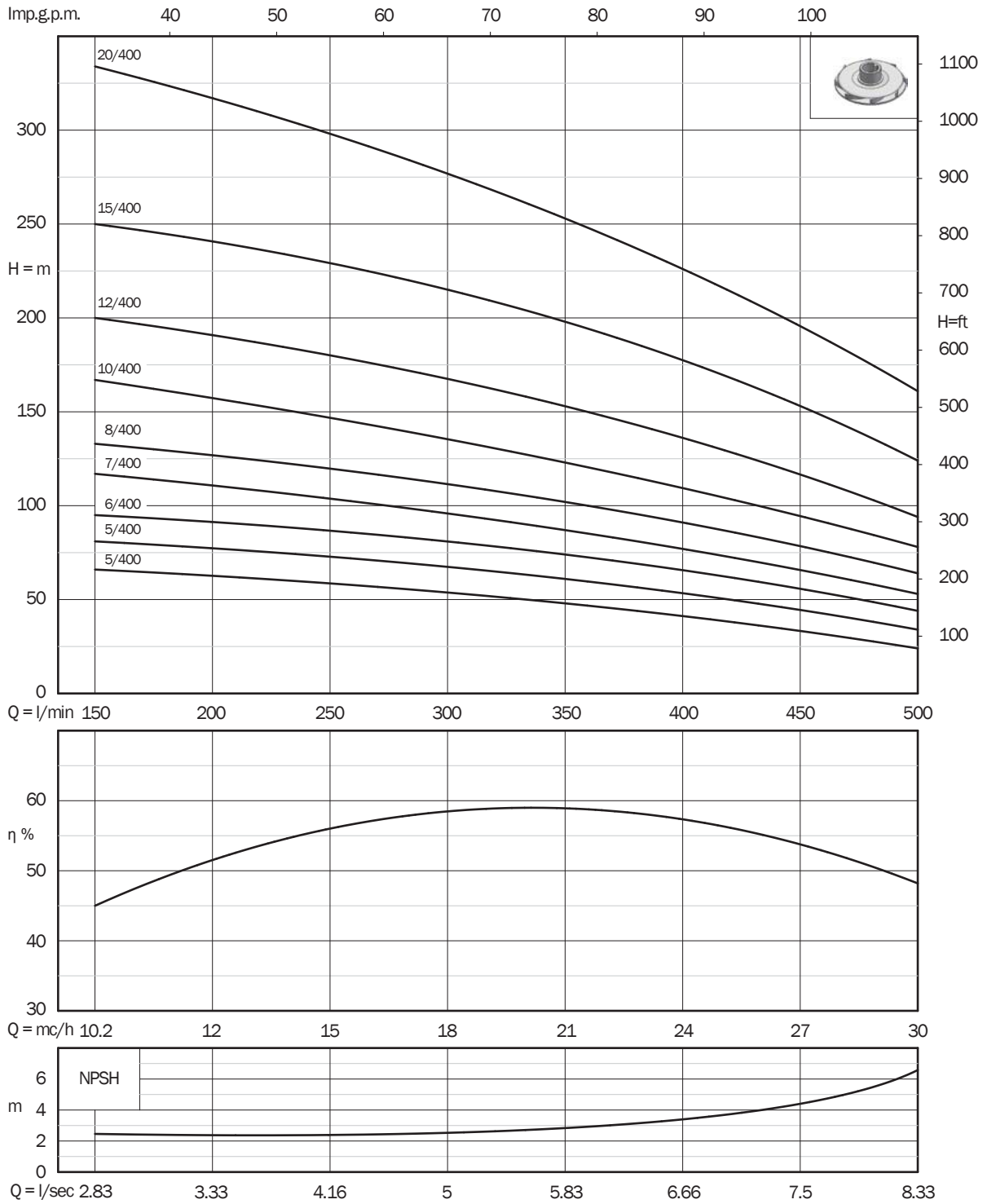
### OPTIONS FOR 6" MOTORS

Version for star-delta motors 400/690 V

Version with brass motor body




**PERFORMANCE CURVES - 2 poles 60 Hz**



# Electric submersible pumps IDROSAND series 530

for 6" boreholes

## PERFORMANCE DATA - 2 poles 60 Hz

Radial impeller 	Pump Code	Motor Code	Version		P2		A	Flow		DNM	Dimensions (mm)			Cable m	Weight kg
					hp	kW		l/min	m		A	B	C		
					IDROSAND 4/530	P530/04		M4T75	400 V		3-phase	7,5	5,5		
IDROSAND 6/530	P530/06	M4T100	400 V	3-phase	10	7,5	16	150 - 500 - 650	81 - 49 - 18	3"	1486	697	146	3	62,6
IDROSAND 8/530	P530/08	M6TA125/2	400 V	3-phase	12,5	9,2	20	150 - 500 - 650	108 - 65 - 25	3"	1629	722	146	3	66,5
IDROSAND 11/530	P530/11	M6TA20/2	400 V	3-phase	20	15	29,5	150 - 500 - 650	148 - 87 - 31	3"	1896	857	146	3	84,9
IDROSAND 14/530	P530/14	M6TA25/2	400 V	3-phase	25	18,5	37,7	150 - 500 - 650	189 - 109 - 39	3"	2086	897	146	3	91,5
IDROSAND 17/530	P530/17	M6TA30/2	400 V	3-phase	30	22	44	150 - 500 - 650	229 - 134 - 49	3"	2336	997	146	3	104,7
IDROSAND 22/530	P530/22	M6TA40/2	400 V	3-phase	40	30	58,5	150 - 500 - 650	297 - 170 - 60	3"	2716	1127	146	3	123,3

Electric pumps supplied with 4" 'S' series motors up to 7,5 kW



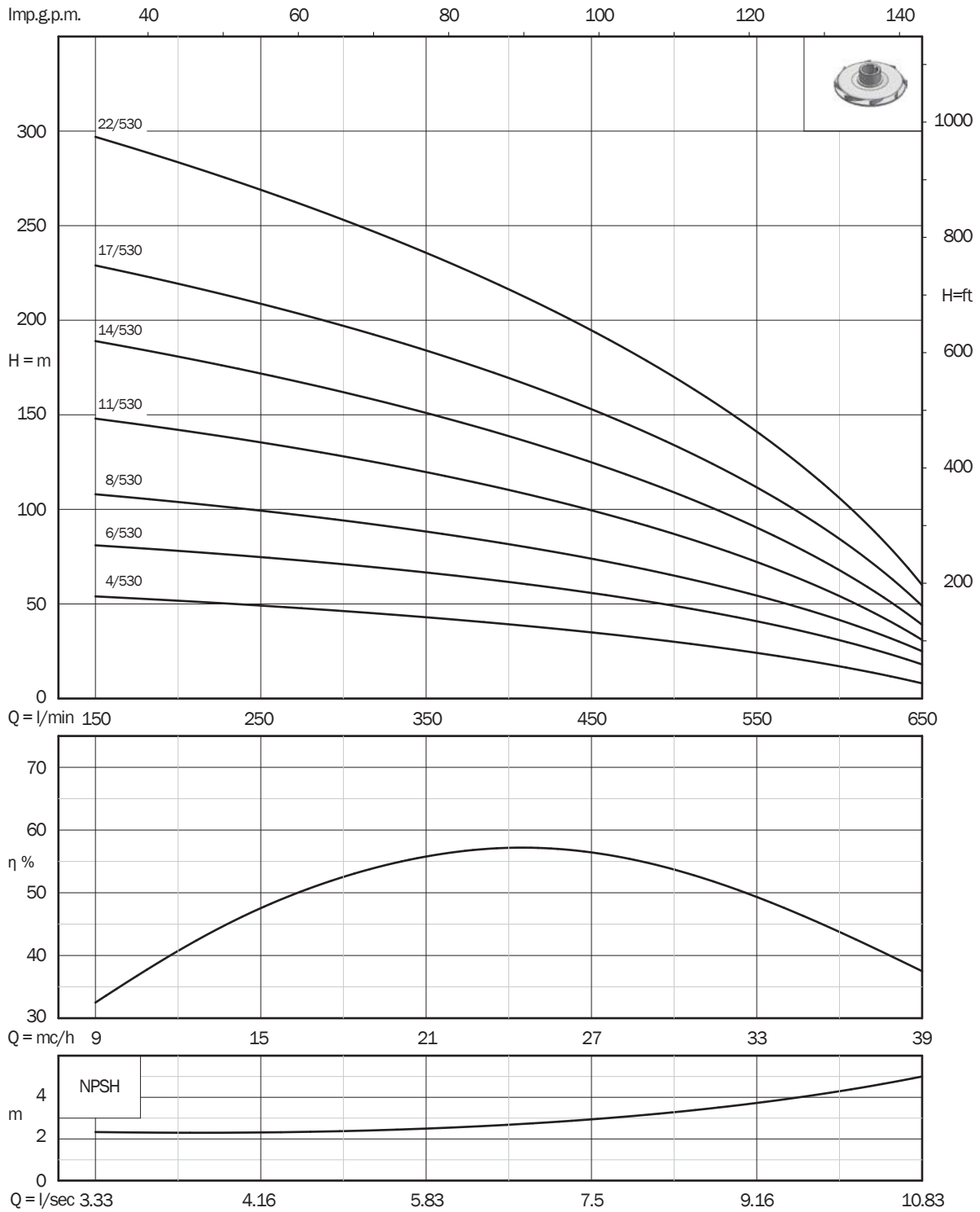
### OPTIONS FOR 6" MOTORS

Version for star-delta motors 400/690 V

Version with brass motor body




**PERFORMANCE CURVES - 2 poles 60 Hz**



# Electric submersible pumps IDROSAND+ series 700

for 6" boreholes

## PERFORMANCE DATA - 2 poles 60 Hz

Semi-axial impeller 	Pump Code	Motor Code	Version		P2		A	Flow		DNM	Dimensions (mm)			Cable m	Weight kg
					hp	kW		l/min	m		A	B	C		
IDROSAND+ 3/700	P700/03	M4T100	400 V	3-phase	10	7,5	16	300 - 500 - 800	50 - 41 - 17	3"	1422	697	146	3	62,2
IDROSAND+ 5/700	P700/05	M6TA125/2	400 V	3-phase	12,5	9,2	20	300 - 500 - 800	83 - 69 - 28	3"	1603	722	146	3	67,1
IDROSAND+ 6/700	P700/06	M6TA20/2	400 V	3-phase	20	15	29,5	300 - 500 - 800	100 - 82 - 34	3"	1816	857	146	3	84,2
IDROSAND+ 8/700	P700/08	M6TA25/2	400 V	3-phase	25	18,5	37,7	300 - 500 - 800	133 - 110 - 45	3"	2012	897	146	3	90,9
IDROSAND+ 10/700	P700/10	M6TA25/2	400 V	3-phase	25	18,5	37,7	300 - 500 - 800	166 - 137 - 56	3"	2168	897	146	3	93,3
IDROSAND+ 13/700	P700/13	M6TA40/2	400 V	3-phase	40	30	58,5	300 - 500 - 800	216 - 178 - 73	3"	2632	1127	146	3	122,8
IDROSAND+ 16/700	P700/16	M6TA50/2	400 V	Trifase	50	37	74	300 - 500 - 800	266 - 219 - 90	3"	3006	1267	146	3	141,3

Electric pumps supplied with 4" 'S' series motors up to 7,5 kW



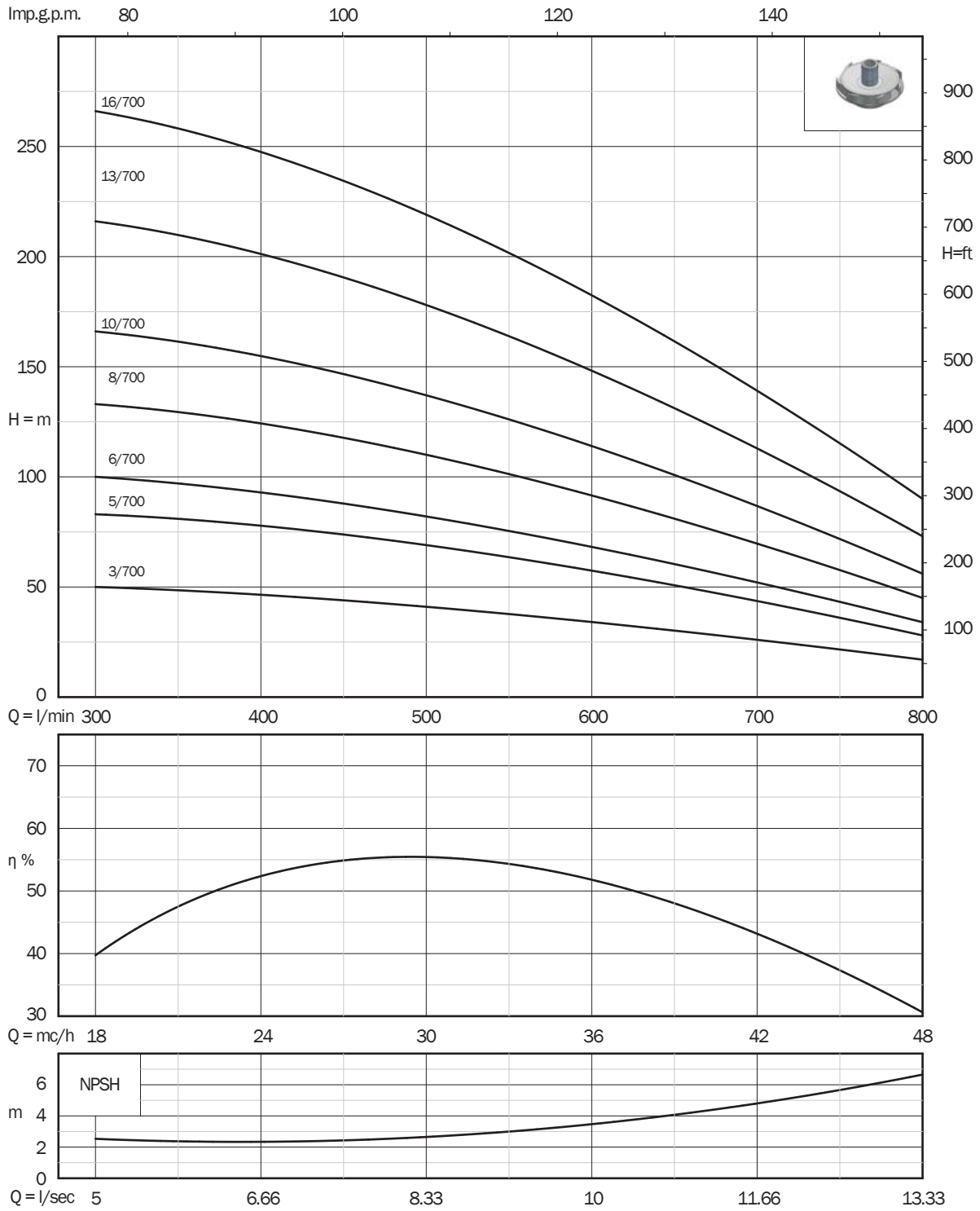
### OPTIONS FOR 6" MOTORS

Version for star-delta motors 400/690 V

Version with brass motor body



**PERFORMANCE CURVES - 2 poles 60 Hz**






# Electric submersible pumps IDROSAND+ series 900

for 6" boreholes

## PERFORMANCE DATA - 2 poles 60 Hz

Semi-axial impeller 	Pump Code	Motor Code	Version		P2		A	Flow		DNM	Dimensions (mm)			Cable m	Weight kg
					hp	kW		l/min	m		A	B	C		
					IDROSAND+ 2/900	P900/02		M4T100	400 V		3-phase	10	7,5		
IDROSAND+ 3/900	P900/03	M6TA15GH/2	400 V	3-phase	15	11	22,7	400-800-1300	52-39-9	3"	1636	817	146	3	77,2
IDROSAND+ 4/900	P900/04	M6TA20/2	400 V	3-phase	20	15	29,5	400-800-1300	73-56-14	3"	1784	857	146	3	83,4
IDROSAND+ 5/900	P900/05	M6TA25/2	400 V	3-phase	25	18,5	37,7	400-800-1300	92-71-21	3"	1932	897	146	3	89,4
IDROSAND+ 6/900	P900/06	M6TA25/2	400 V	3-phase	25	18,5	37,7	400-800-1300	109-84-30	3"	2040	897	146	3	91,1
IDROSAND+ 8/900	P900/08	M6TA40/2	400 V	3-phase	40	30	58,5	400-800-1300	150-115-42	3"	2486	1127	146	3	120,4
IDROSAND+ 10/900	P900/10	M6TA50/2	400 V	Trifase	50	37	74	400-800-1300	187-144-52	3"	2842	1267	146	3	139,1

Electric pumps supplied with 4" 'S' series motors up to 7,5 kW



### OPTIONS FOR 6" MOTORS

Version for star-delta motors 400/690 V

Version with brass motor body



**PERFORMANCE CURVES - 2 poles 60 Hz**

