



# WINNER 4N

## SUBMERSIBLE CENTRIFUGAL ELECTRIC PUMPS, 4"

in AISI 304 stainless steel



Submersible centrifugal electric pumps, 4", in AISI 304 with floating impellers and front wear ring.

### APPLICATIONS

- Handling clear water in wells
- Pressurising clean water for agricultural, domestic and industrial applications
- Irrigation
- Handling water in general

### TECHNICAL FEATURES

- The front wear ring and floating impellers provide outstanding resistance to abrasion
- Easy to install
- Vertical or horizontal installation

### PUMP TECHNICAL DATA

- Maximum fluid temperature: 40°C (depends on maximum motor temperature)
  - Maximum amount of sand: 50 ppm
  - Maximum amount of chlorine: 500 ppm
  - Delivery connection:
    - G1¼ for models 4N1 - 4N2 - 4N4
    - G2 for models 4N7 - 4N10 - 4N15
  - MEI > 0.4
- For further information, refer to our Data Book on [www.ebaraurope.com](http://www.ebaraurope.com)

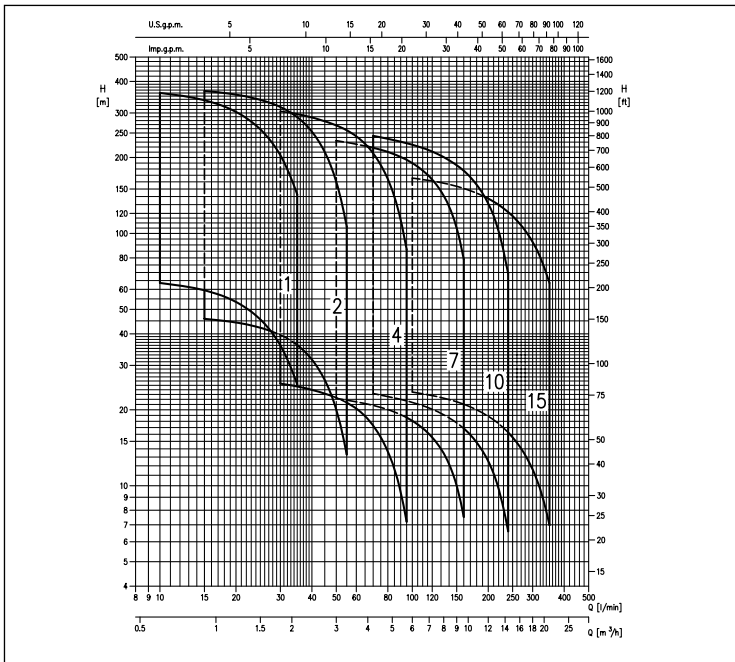
### MOTOR TECHNICAL DATA

- Single-phase voltage 230V (±10%) 50Hz (OYM), three-phase voltage 380-415V (±10%) 50Hz (OY)
- Single-phase voltage 230V (-10%+6%) 50Hz (WYM), three-phase voltage 380-415V (-10%+6%) 50Hz (WY)
- For dimensioning the cables, see page 60 or refer to our Data Books on [www.ebaraurope.com](http://www.ebaraurope.com)

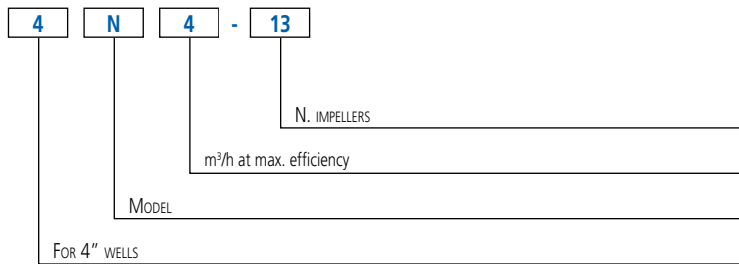
### MATERIALS

- External jacket, shaft and valve in AISI 304
- Delivery port in EN 1.4308 (ASTM CF8)
- Impeller in: Ixef® for models 4N1 - 4N2 - 4N4 - 4N7  
- Glass fibre reinforced polycarbonate for models 4N10, 4N15
- Diffuser in PPE + PS reinforced with glass fibre

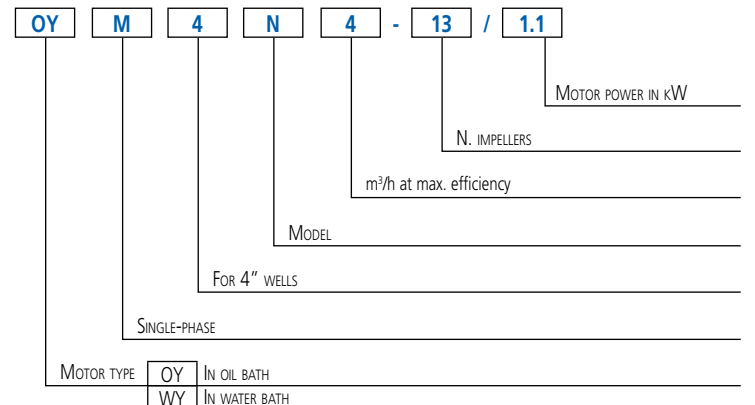
### PERFORMANCE RANGE (per ISO 9906 Annex A)



### IDENTIFYING CODE - Pump without motor



### IDENTIFYING CODE - Pump with motor



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## SUBMERSIBLE CENTRIFUGAL ELECTRIC PUMPS, 4"

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### PERFORMANCE TABLES

Model	P <sub>2</sub>		Q=Flow rate										
	[HP]	[kW]	l/min	10	15	20	25	30	35	45	55	75	95
			m <sup>3</sup> /h	0.6	0.9	1.2	1.5	1.8	2.1	2.7	3.3	4.5	5.7
			H=Head [m]										
WINNER 4N1- 12	0.5	0.37	-	63.5	59.5	53.5	45.5	36.0	25.2	-	-	-	-
WINNER 4N1- 18	0.7	0.55	-	95.5	89.5	80.5	68.5	54.0	37.8	-	-	-	-
WINNER 4N1- 24	1	0.75	-	127.0	119.0	107.0	91.0	72.0	50.5	-	-	-	-
WINNER 4N1- 34	1.5	1.1	-	180.0	169.0	152.0	129.0	102.0	71.5	-	-	-	-
WINNER 4N1- 48	2	1.5	-	254.0	238.0	214.0	182.0	144.0	101.0	-	-	-	-
WINNER 4N1- 68	3	2.2	-	360.0	337.0	303.0	258.0	204.0	142.0	-	-	-	-
WINNER 4N2- 7	0.5	0.37	-	-	46.0	44.5	42.5	39.6	36.1	26.2	13.3	-	-
WINNER 4N2- 10	0.7	0.55	-	-	65.5	63.5	60.5	56.5	51.5	37.5	19.0	-	-
WINNER 4N2- 14	1	0.75	-	-	91.5	89.0	84.5	79.0	72.0	52.5	26.6	-	-
WINNER 4N2- 20	1.5	1.1	-	-	131.0	127.0	121.0	113.0	103.0	75.0	38.0	-	-
WINNER 4N2- 28	2	1.5	-	-	183.0	178.0	169.0	158.0	144.0	105.0	53.0	-	-
WINNER 4N2- 40	3	2.2	-	-	262.0	254.0	242.0	226.0	206.0	150.0	76.0	-	-
WINNER 4N2- 56	4	3	-	-	367.0	355.0	338.0	317.0	289.0	210.0	106.0	-	-
WINNER 4N4- 4	0.5	0.37	-	-	-	-	-	25.4	24.8	23.2	21.4	15.5	7.2
WINNER 4N4- 7	0.7	0.55	-	-	-	-	-	44.45	43.33	40.6	37.38	27.23	12.6
WINNER 4N4- 9	1	0.75	-	-	-	-	-	57.0	55.5	52.0	48.0	35.0	16.2
WINNER 4N4- 13	1.5	1.1	-	-	-	-	-	82.5	80.5	75.5	69.5	50.5	23.4
WINNER 4N4- 18	2	1.5	-	-	-	-	-	114.0	111.0	104.0	96.0	70.0	32.4
WINNER 4N4- 27	3	2.2	-	-	-	-	-	171.0	167.0	157.0	144.0	105.0	48.5
WINNER 4N4- 36	4	3	-	-	-	-	-	229.0	223.0	209.0	192.0	140.0	65.0
WINNER 4N4- 48	5.5	4	-	-	-	-	-	305.0	297.0	278.0	256.0	187.0	86.5

Model	P <sub>2</sub>		Q=Flow rate										
	[HP]	[kW]	l/min	50	70	100	130	160	200	240	280	320	350
			m <sup>3</sup> /h	3	4.2	6	7.8	9.6	12	14.4	16.8	19.2	21
			H=Head [m]										
WINNER 4N7- 4	0.75	0.55	-	22.2	20.8	18.1	14.0	7.5	-	-	-	-	-
WINNER 4N7- 6	1	0.75	-	33.3	31.2	27.1	21.0	11.3	-	-	-	-	-
WINNER 4N7- 8	1.5	1.1	-	44.5	41.5	36.2	28.0	15.0	-	-	-	-	-
WINNER 4N7- 12	2	1.5	-	66.5	62.5	54.5	42.0	22.6	-	-	-	-	-
WINNER 4N7- 17	3	2.2	-	94.5	88.5	77.0	59.5	32.0	-	-	-	-	-
WINNER 4N7- 23	4	3	-	128.0	120.0	104.0	80.5	43.5	-	-	-	-	-
WINNER 4N7- 30	5.5	4	-	166.0	156.0	136.0	105.0	56.5	-	-	-	-	-
WINNER 4N7- 42	7.5	5.5	-	233.0	219.0	190.0	147.0	79.0	-	-	-	-	-
WINNER 4N10- 4	1	0.75	-	23.1	21.2	18.8	16.0	11.5	6.2	-	-	-	-
WINNER 4N10- 6	1.5	1.1	-	34.6	31.8	28.2	24.0	17.3	9.4	-	-	-	-
WINNER 4N10- 8	2	1.5	-	46.2	42.5	37.7	32.0	23.1	12.5	-	-	-	-
WINNER 4N10- 13	3	2.2	-	75.0	69.0	61.0	52.0	37.5	20.3	-	-	-	-
WINNER 4N10- 17	4	3	-	98.0	90.0	80.0	68.0	49.0	26.5	-	-	-	-
WINNER 4N10- 23	5.5	4	-	133.0	122.0	108.0	92.0	66.5	35.8	-	-	-	-
WINNER 4N10- 32	7.5	5.5	-	185.0	170.0	151.0	128.0	92.0	50.0	-	-	-	-
WINNER 4N10- 44	10	7.5	-	254.0	233.0	207.0	176.0	127	68.5	-	-	-	-
WINNER 4N15- 4	1.5	1.1	-	-	23.5	22.4	21.0	18.9	16.3	13.3	9.8	7.0	-
WINNER 4N15- 6	2	1.5	-	-	35.3	33.6	31.5	28.3	24.4	19.9	14.7	10.5	-
WINNER 4N15- 8	3	2.2	-	-	47.0	45.0	42.0	37.7	32.5	26.5	19.6	14.0	-
WINNER 4N15- 11	4	3	-	-	67.5	65.0	61.5	56.0	49.5	41.9	33.2	25.9	-
WINNER 4N15- 14	5.5	4	-	-	86.0	82.5	78.0	71.5	63.0	53.5	42.0	33.0	-
WINNER 4N15- 20	7.5	5.5	-	-	123.0	118.0	112.0	102.0	90.0	76.0	60.5	47.0	-
WINNER 4N15- 27	10	7.5	-	-	166.0	159.0	151.0	137.0	121.0	103.0	81.5	63.5	-

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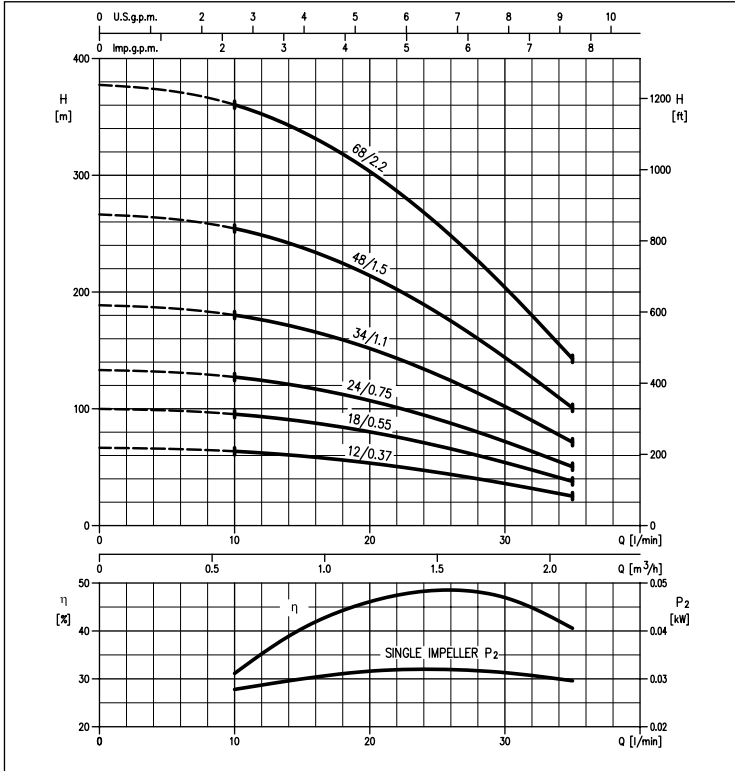


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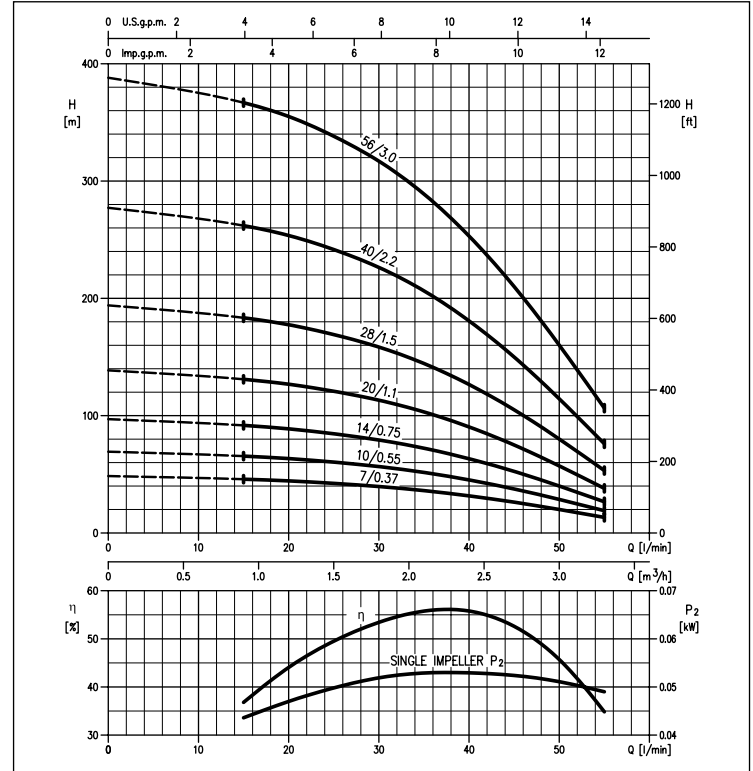
## PERFORMANCE CURVES WINNER 4N1

(per ISO 9906 Annex A) - Impeller dia.: 67.6 mm



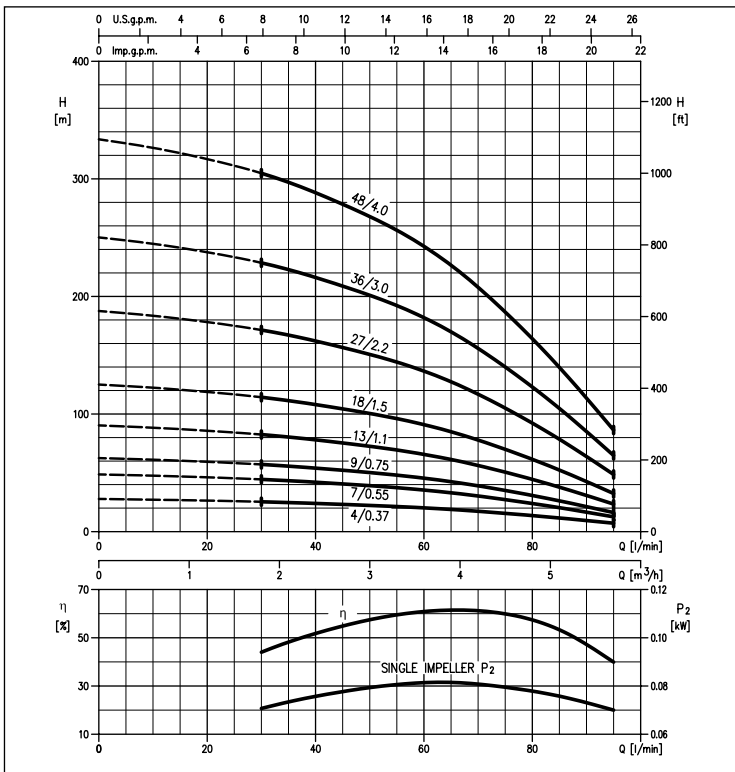
## PERFORMANCE CURVES WINNER 4N2

(per ISO 9906 Annex A) - Impeller dia.: 76 mm



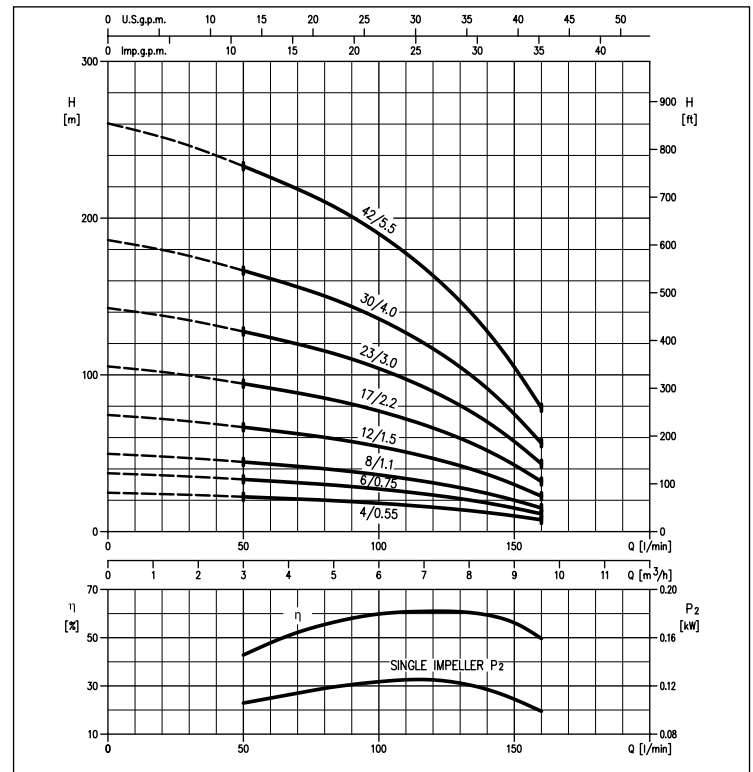
## PERFORMANCE CURVES WINNER 4N4

(per ISO 9906 Annex A) - Impeller dia.: 76 mm



## PERFORMANCE CURVES WINNER 4N7

(per ISO 9906 Annex A) - Impeller dia.: 74.2 mm

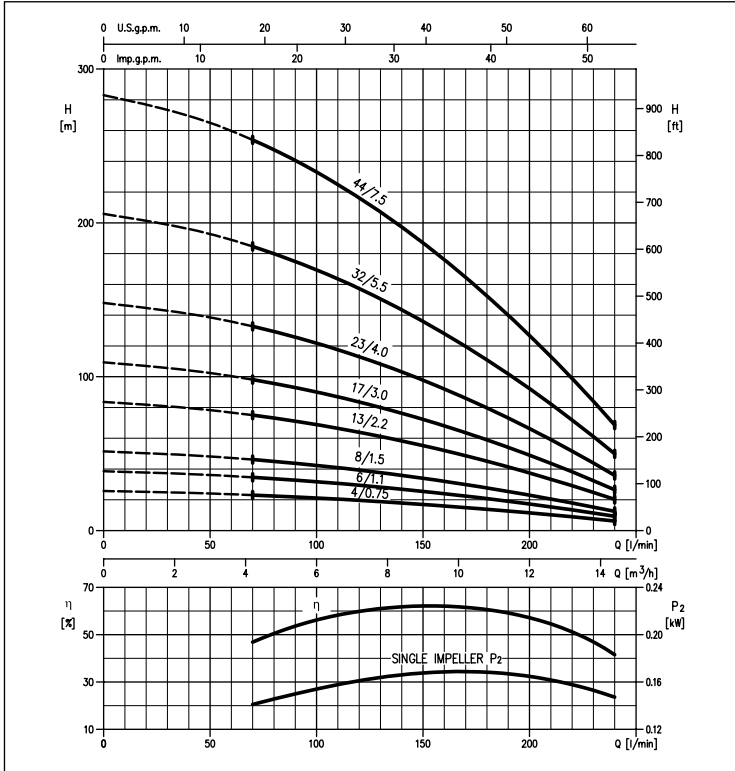




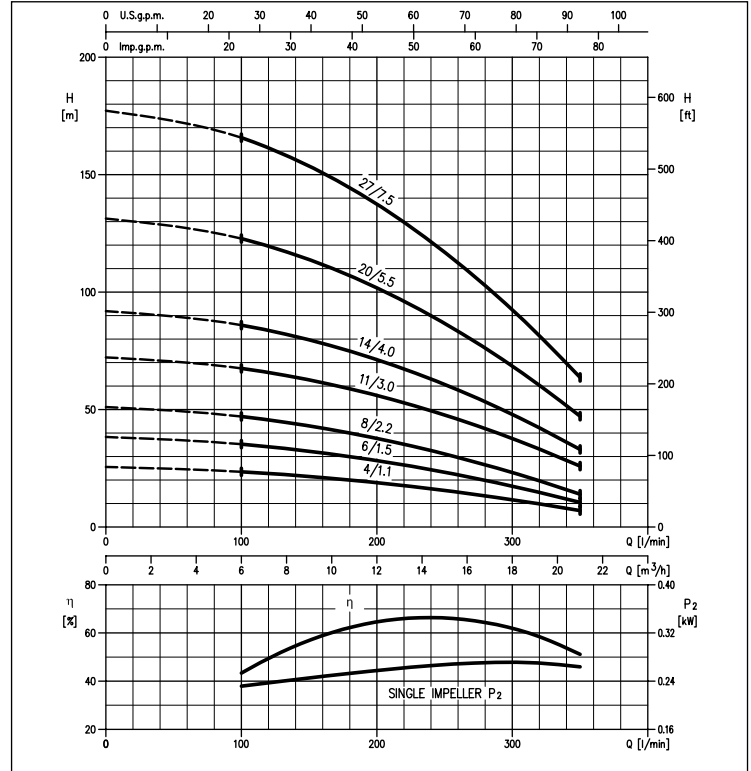
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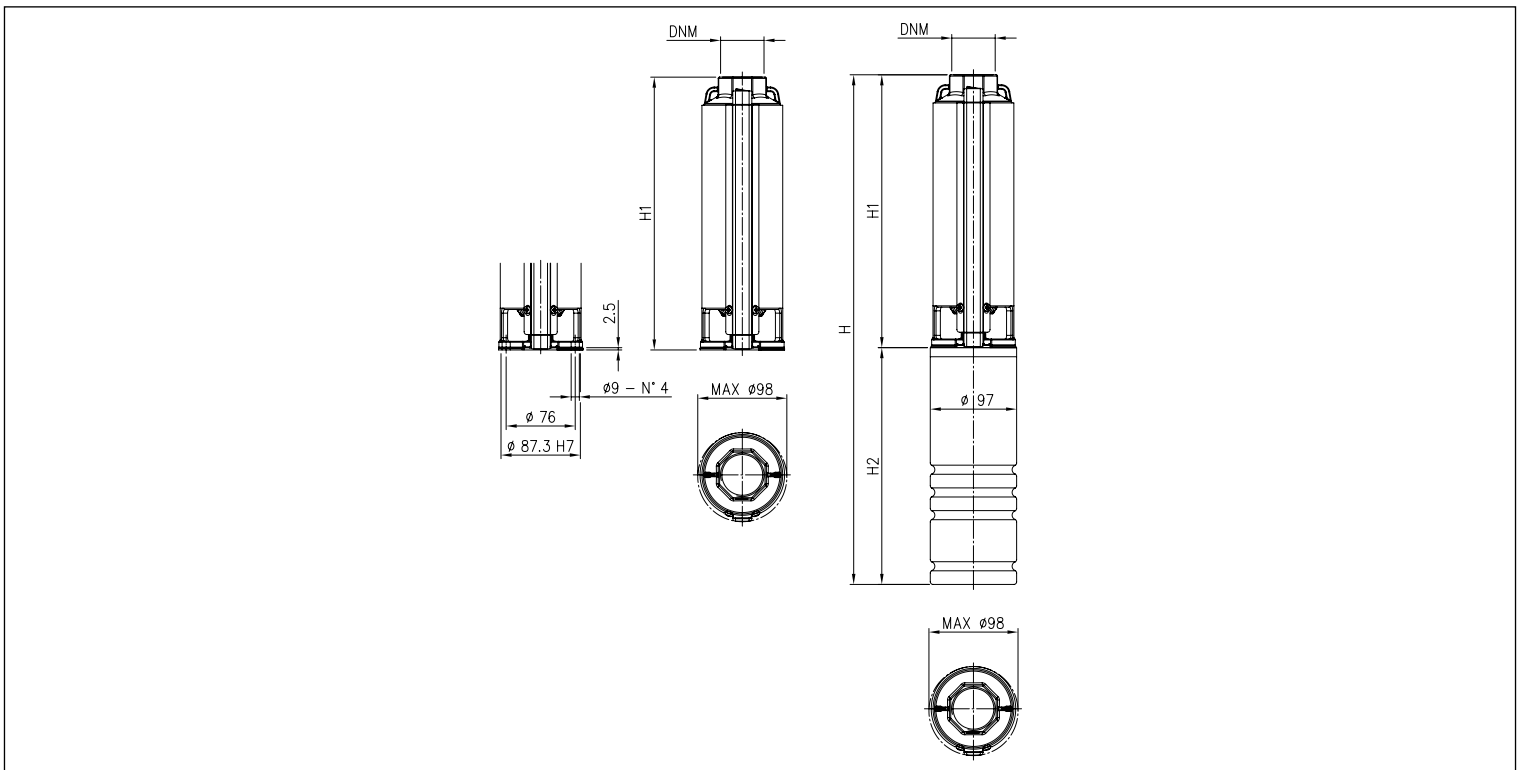
**PERFORMANCE CURVES WINNER 4N10**  
(per ISO 9906 Annex A) - Impeller dia.: 76.4 mm



**PERFORMANCE CURVES WINNER 4N15**  
(per ISO 9906 Annex A) - Impeller dia.: 78 mm



## DIMENSIONS





# WINNER 4N

## SUBMERSIBLE CENTRIFUGAL ELECTRIC PUMPS, 4"

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### DIMENSIONS CHART

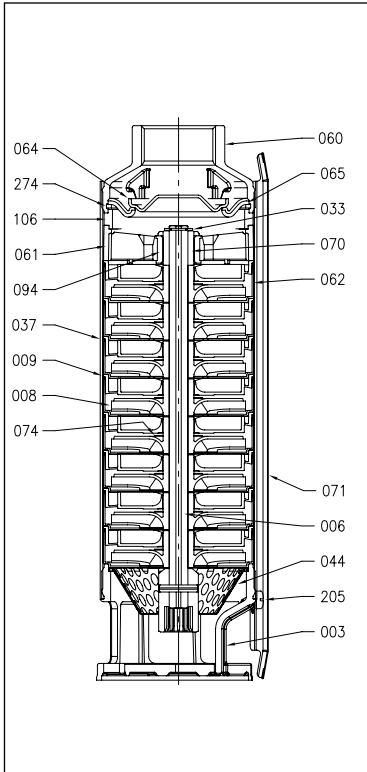
Model	P <sub>2</sub>		Pump without motor		Pump with motor in oil bath				Pump with motor in water bath			
	[HP]	[kW]	H1 [mm]	DNM	Single-phase		Three-phase		Single-phase		Three-phase	
					H2 [mm]	H [mm]	H2 [mm]	H [mm]	H2 [mm]	H [mm]	H2 [mm]	H [mm]
WINNER 4N1- 12	0.5	0.37	353	G 1¼	325	678	304	657	228	581	214	567
WINNER 4N1- 18	0.75	0.55	458	G1¼	325	783	325	783	253	711	228	686
WINNER 4N1- 24	1	0.75	563	G1¼	350	913	325	888	283	846	248	811
WINNER 4N1- 34	1.5	1.1	738	G1¼	385	1123	350	1088	307	1045	283	1021
WINNER 4N1- 48	2	1.5	1049	G1¼	420	1469	385	1434	339	1388	307	1356
WINNER 4N1- 68	3	2.2	1399	G1¼	470	1869	420	1819	437	1836	339	1738
WINNER 4N2- 7	0.5	0.37	265	G1¼	325	590	304	569	228	493	214	479
WINNER 4N2- 10	0.75	0.55	318	G1¼	325	643	325	643	253	571	228	546
WINNER 4N2- 14	1	0.75	388	G1¼	350	738	325	713	283	671	248	636
WINNER 4N2- 20	1.5	1.1	493	G1¼	385	878	350	843	307	800	283	776
WINNER 4N2- 28	2	1.5	633	G1¼	420	1053	385	1018	339	972	307	940
WINNER 4N2- 40	3	2.2	909	G1¼	470	1379	420	1329	437	1346	339	1248
WINNER 4N2- 56	4	3	1189	G1¼	-	-	544	1733	-	-	394	1583
WINNER 4N4- 4	0.5	0.37	229	G1¼	325	554	304	533	228	457	214	443
WINNER 4N4- 7	0.75	0.55	293	G1¼	325	618	325	618	253	546	228	521
WINNER 4N4- 9	1	0.75	336	G1¼	350	686	325	661	283	619	248	584
WINNER 4N4- 13	1.5	1.1	422	G1¼	385	807	350	772	307	729	283	705
WINNER 4N4- 18	2	1.5	530	G1¼	420	950	385	915	339	869	307	837
WINNER 4N4- 27	3	2.2	723	G1¼	470	1193	420	1143	437	1160	339	1062
WINNER 4N4- 36	4	3	983	G1¼	-	-	544	1527	-	-	394	1377
WINNER 4N4- 48	5.5	4	1241	G1¼	-	-	574	1815	-	-	543	1784
WINNER 4N7- 4	0.75	0.55	285	G2	325	610	325	610	253	538	228	513
WINNER 4N7- 6	1	0.75	356	G2	350	706	325	681	283	639	248	604
WINNER 4N7- 8	1.5	1.1	427	G2	385	812	350	777	307	734	283	710
WINNER 4N7- 12	2	1.5	569	G2	420	989	385	954	339	908	307	876
WINNER 4N7- 17	3	2.2	746	G2	470	1216	420	1166	437	1183	339	1085
WINNER 4N7- 23	4	3	959	G2	-	-	544	1503	-	-	477	1436
WINNER 4N7- 30	5.5	4	1274	G2	-	-	574	1848	-	-	543	1817
WINNER 4N7- 42	7.5	5.5	1700	G2	-	-	644	2344	-	-	653	2353
WINNER 4N10- 4	1	0.75	325	G2	350	675	325	650	283	608	248	573
WINNER 4N10- 6	1.5	1.1	412	G2	385	797	350	762	307	719	283	695
WINNER 4N10- 8	2	1.5	500	G2	420	920	385	885	339	839	307	807
WINNER 4N10- 13	3	2.2	722	G2	470	1192	420	1142	437	1159	339	1060
WINNER 4N10- 17	4	3	900	G2	-	-	544	1444	-	-	477	1377
WINNER 4N10- 23	5.5	4	1165	G2	-	-	574	1739	-	-	543	1708
WINNER 4N10- 32	7.5	5.5	1675	G2	-	-	644	2319	-	-	653	2328
WINNER 4N10- 44	10	7.5	2250	G2	-	-	805	3055	-	-	731	2981
WINNER 4N15- 4	1.5	1.1	425	G2	385	810	350	775	307	732	283	708
WINNER 4N15- 6	2	1.5	562	G2	420	982	385	947	339	901	307	869
WINNER 4N15- 8	3	2.2	702	G2	470	1172	420	1122	437	1139	339	1041
WINNER 4N15- 11	4	3	908	G2	-	-	544	1452	-	-	477	1385
WINNER 4N15- 14	5.5	4	1120	G2	-	-	574	1694	-	-	543	1663
WINNER 4N15- 20	7.5	5.5	1600	G2	-	-	644	2244	-	-	653	2253
WINNER 4N15- 27	10	7.5	2158	G2	-	-	805	2963	-	-	731	2889

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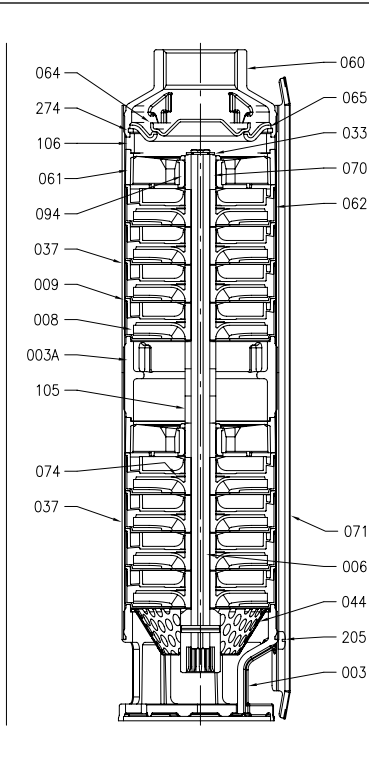
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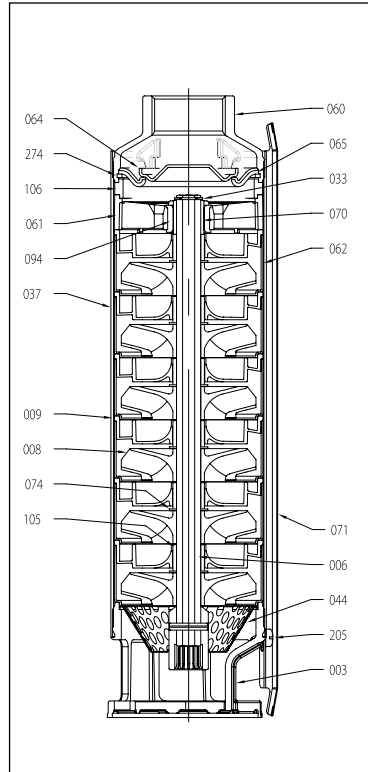
**SECTIONAL VIEW WINNER 4N1-4N2-4N4**  
Single pump body



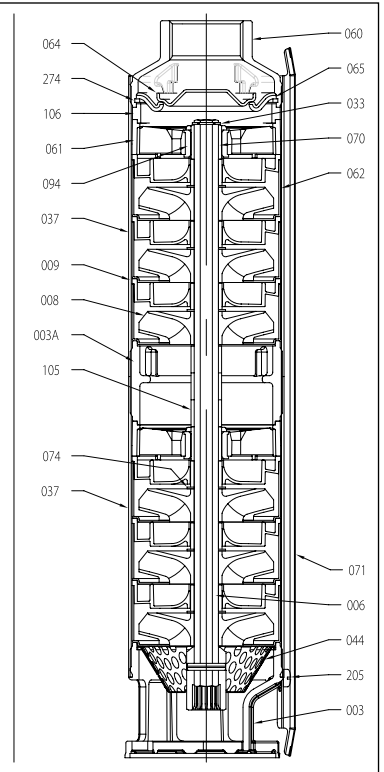
**Tandem pump body**



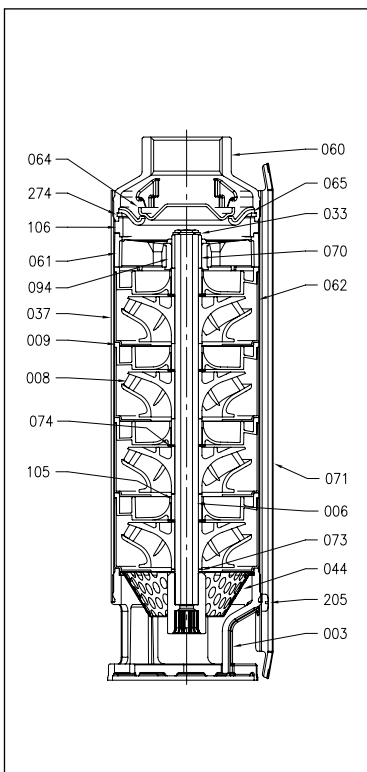
**SECTIONAL VIEW WINNER 4N7**  
Single pump body



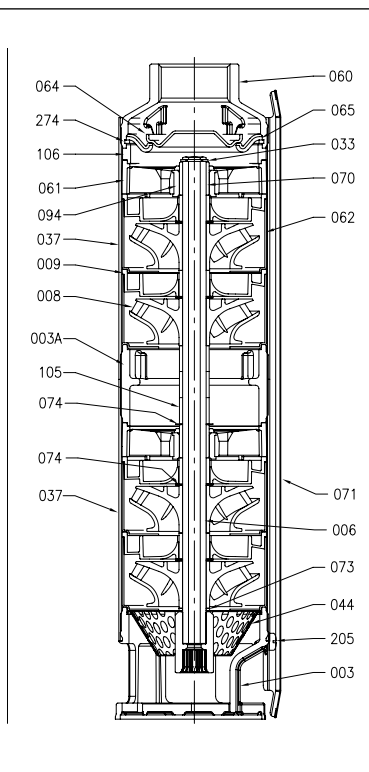
**Tandem pump body**



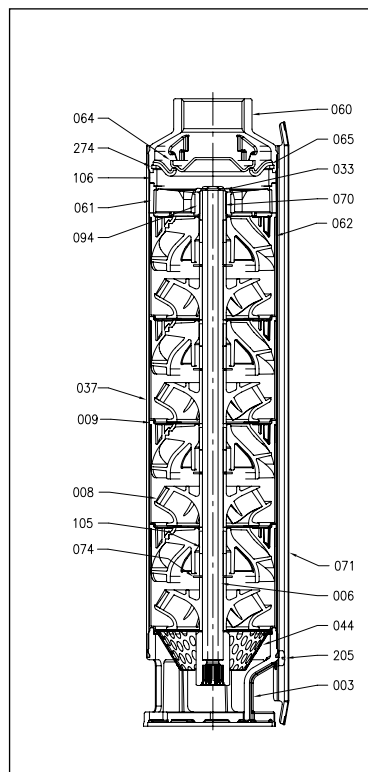
**SECTIONAL VIEW WINNER 4N10**  
Single pump body



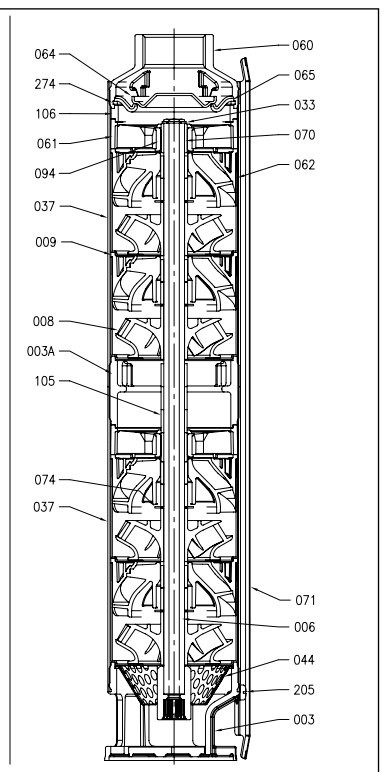
**Tandem pump body**



**SECTIONAL VIEW WINNER 4N15**  
Single pump body



**Tandem pump body**



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## SUBMERSIBLE CENTRIFUGAL ELECTRIC PUMPS, 4" in AISI 304 stainless steel

### MATERIALS TABLE

Ref.	Name	Material	Ref.	Name	Material
003	Mount	EN 1.4308 (ASTM CF8)	064	Valve	EN 1.4301 (AISI 304)
003A	Connecting ring	EN 1.4308 (ASTM CF8)	065	Valve seat	1.4301 (AISI 304) + EPDM rubber
006	Shaft w/ coupling	EN 1.4301 (AISI 304)	070	Friction bearing	Alumina (Ceramic)
008	Impeller	I <sub>ref</sub> @ (4N1, 4N2, 4N4, 4N7)	071	Cable cover	EN 1.4301 (AISI 304)
		Glass fibre reinforced polycarbonate PC (4N10, 4N15)	073	First impeller anti-friction washer	EN 1.4301 (AISI 304)
009	Diffuser	PPE + PS reinforced with glass fibre	074	Anti-friction washer	EN 1.4301 (AISI 304)
033	Circlip	EN 1.4301 (AISI 304)	094	Bearing	EPDM rubber
037	External jacket	EN 1.4301 (AISI 304)	105	Spacer	PPE + PS reinforced with glass fibre
044	Filter	EN 1.4301 (AISI 304)	106	Spacer	NORYL+GF20%
060	Delivery port	EN 1.4308 (ASTM CF8)	205	Bolts (M4 x 6 UNI 7687)	EN 1.4301 (AISI 304)
061	Upper/intermediate mount	PPE + PS reinforced with glass fibre	274	Circlip	EN 1.4310 (AISI 302)
062	Stage housing	EN 1.4301 (AISI 304)			

### ELECTRICAL DATA TABLE WINNER 4N WITH MOTOR IN OIL BATH (SUMOTO MOTORS)

P <sub>i</sub>		Thrust [N]	Single-phase 230V				Three-phase 380V				Three-phase 415V			
[HP]	[kW]		P <sub>i</sub> [kW]	I <sub>n</sub> [A]	I <sub>a</sub> [A]	Power factor	P <sub>i</sub> [kW]	I <sub>n</sub> [A]	I <sub>a</sub> [A]	Power factor	P <sub>i</sub> [kW]	I <sub>n</sub> [A]	I <sub>a</sub> [A]	Power factor
0.5	0.37	1500	0.78	3.6	10.2	0.94	0.66	1.4	5.0	0.72	0.83	1.6	5.0	0.72
0.75	0.55	1500	0.97	4.5	13.6	0.94	0.94	1.9	7.0	0.75	1.08	2.0	7.0	0.75
1	0.75	1500	1.32	6.0	18.5	0.96	1.17	2.4	10.0	0.74	1.38	2.6	10.0	0.74
1.5	1.1	1500	1.83	8.2	26.0	0.97	1.56	3.2	14.0	0.74	1.81	3.4	14.0	0.74
2	1.5	1500	2.48	11.0	34.0	0.98	2.09	4.4	17.0	0.72	2.38	4.6	17.0	0.72
3	2.2	4400	3.27	14.8	48.0	0.96	-	-	-	-	-	-	-	-
3	2.2	1500	-	-	-	-	3.00	6.0	24.0	0.76	3.39	6.2	24.0	0.76
3	2.2	5000	-	-	-	-	3.02	5.6	23.0	0.82	3.42	5.8	23.0	0.82
4	3	5000	-	-	-	-	4.05	7.7	30.0	0.80	4.49	7.8	30.0	0.80
5.5	4	5000	-	-	-	-	5.24	9.7	45.0	0.82	5.78	9.8	45.0	0.82
7.5	5.5	5000	-	-	-	-	7.37	13.5	55.0	0.83	8.23	13.8	55.0	0.83
10	7.5	4400	-	-	-	-	9.75	19.0	72.0	0.78	10.93	19.5	72.0	0.78

### ELECTRICAL DATA TABLE WINNER 4N WITH MOTOR IN WATER BATH (FRANKLIN MOTORS)

P <sub>i</sub>		Thrust [N]	Single-phase 230V				Three-phase 380V				Three-phase 415V			
[HP]	[kW]		P <sub>i</sub> [kW]	I <sub>n</sub> [A]	I <sub>a</sub> [A]	Power factor	P <sub>i</sub> [kW]	I <sub>n</sub> [A]	I <sub>a</sub> [A]	Power factor	P <sub>i</sub> [kW]	I <sub>n</sub> [A]	I <sub>a</sub> [A]	Power factor
0.5	0.37	3000	0.69	3.3	12.6	0.91	0.57	1.1	5.1	0.79	0.58	1.14	5.61	0.71
0.75	0.55	3000	0.93	4.3	17.7	0.94	0.83	1.6	7.0	0.79	0.86	1.7	7.7	0.70
1	0.75	3000	1.28	5.7	22.7	0.98	1.07	2.0	10.1	0.81	1.10	2.1	10.9	0.73
1.5	1.1	3000	1.78	8.4	33.9	0.92	1.51	2.8	15.3	0.82	1.54	2.9	16.7	0.74
2	1.5	3000	2.34	10.7	41.7	0.95	2.13	3.9	19.7	0.83	2.10	4.0	21.5	0.73
3	2.2	4000	3.28	14.7	61.8	0.97	2.91	5.4	28.3	0.82	3.00	5.8	30.9	0.72
4	3	4000	-	-	-	-	3.99	7.4	39.9	0.82	4.09	7.9	43.6	0.72
5.5	4	6500	-	-	-	-	5.24	9.7	54.1	0.82	5.38	10.4	59.1	0.72
7.5	5.5	6500	-	-	-	-	7.05	12.6	73.3	0.85	7.08	12.8	80.1	0.77
10	7.5	6500	-	-	-	-	9.74	17.2	94.3	0.86	9.74	17.6	103	0.77

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