

novax
PUMPS & MOTORS



STAINLESS STEEL CENTRIFUGAL PUMPS
SELF PRIMING PUMPS



APPLICATIONS

The CMH series pumps consists of a single centrifugal impeller; These pumps have an essential form and are the result of precise design choices, are made to obtain specific performance characteristics. The impeller, mounted on the end of the motor shaft, faces directly the suction opening machined in the pump. The shape of the impeller transmit a radial motion to the fluid from the center outwards, with minimum hydraulic loss. The blades inside the impeller channel transfer energy to the fluid both in the form of pressure and increase speed. After leaving the fluid passes to the volute and tapered diffuser which transform part of the kinetic energy into pressure energy..

MATERIAL

- Casing in CI/Impeller in Bronze, Stainless steel (optional)
- Shaft in SS 303
- Mechanical seal in Carbon/Ceramic/NBR

TECHNICAL DATA

- TEFC 2 pole motor
- Insulation Class F
- Protection degree IP54/IP55
- I-230V+/- 10% 50HZ, 3-230/400V+/- 10% 50HZ
- Permanent split capacitor and automatic thermal overload for single phase version
- Thermal protection to be provided by the user for three phase version

PERFORMANCE RANGE

- Flow rate up to 160/min (3.6 m³/h)
- Dynamic head up to 46m

OPERATING LIMITS

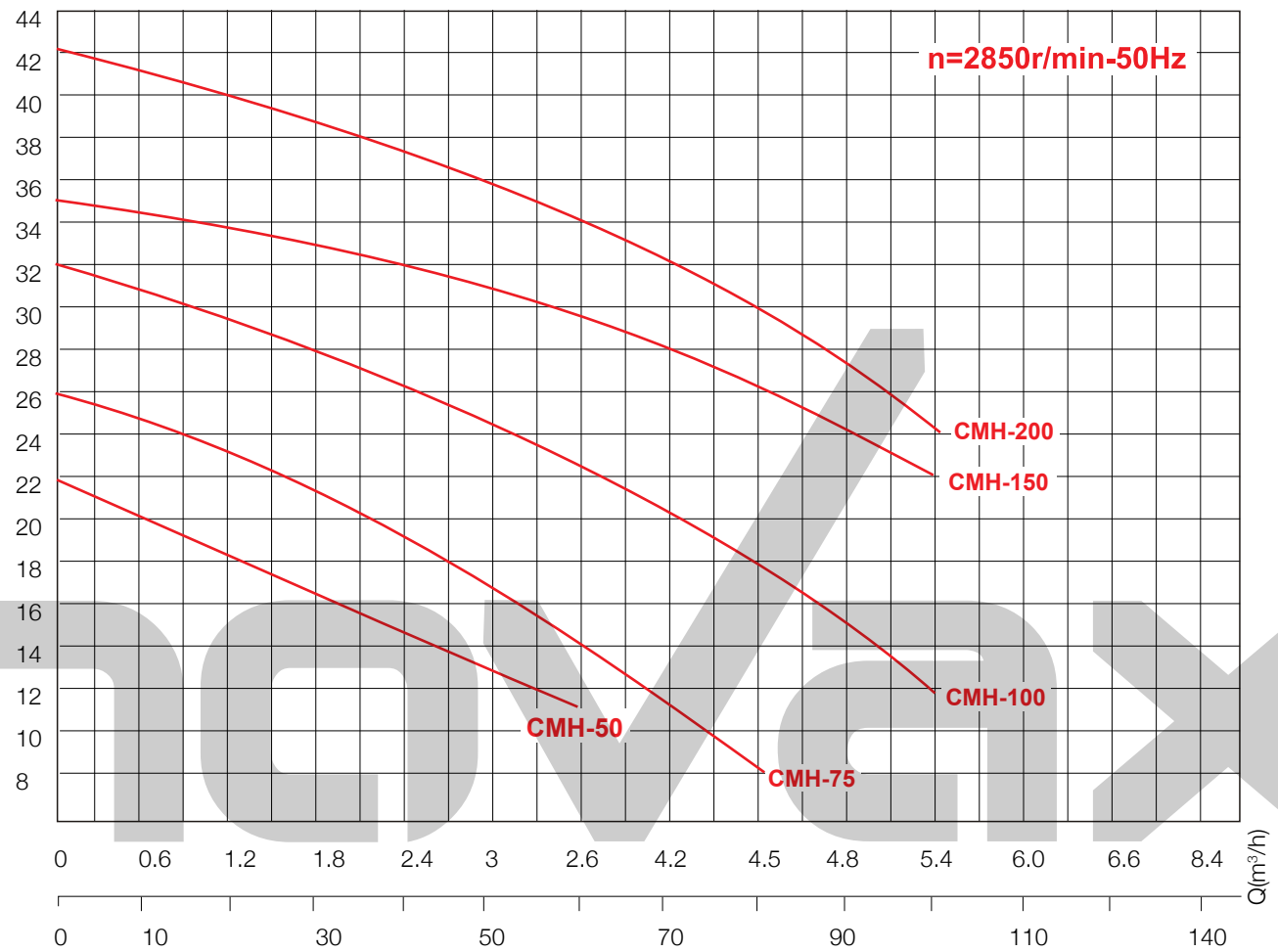
- Suction lift up to 7m
- Fluid temperature up to +60°C
- Maximum ambient temperature +40°C

CMH

Quiet running single-stage centrifugal pumps



PERFORMANCE CHART AT n=2850 r/min



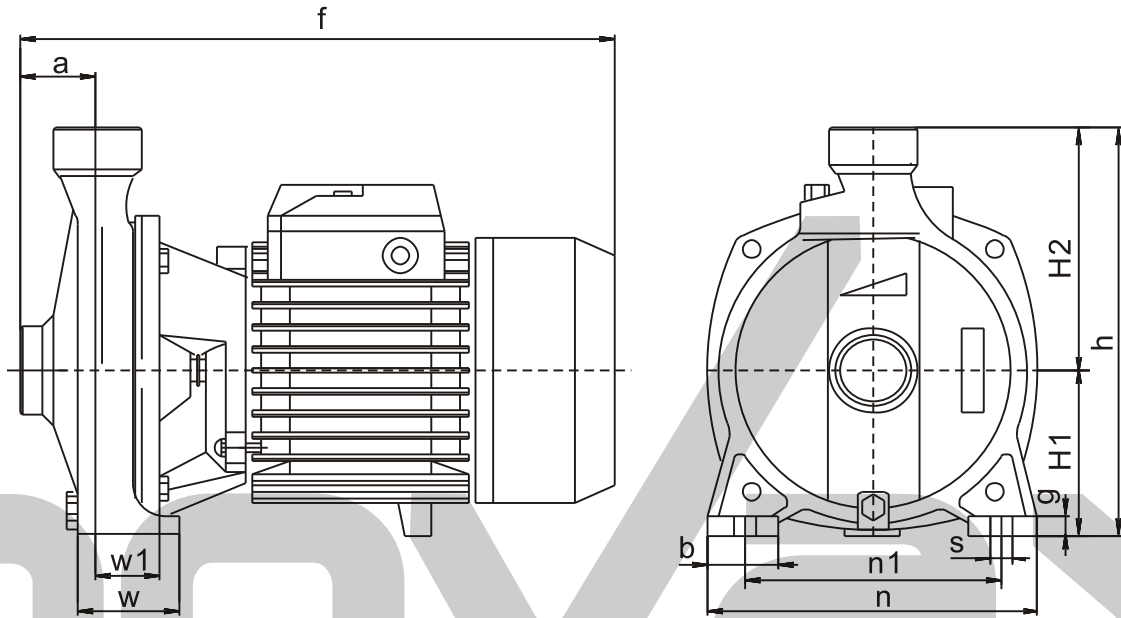
TECHNICAL DATA AT 220V/50Hz

n=2850rpm

PUMP MODEL	POWER		Q m³/h	0	0.6	1.2	1.8	2.4	3	3.6	4.2	4.5	4.8	5.4	6.0	6.6	8.4
	KW	HP	L/min	0	10	20	30	40	50	60	70	75	80	90	100	110	140
CMH-50	0.37	0.50	H (m)	22	20	17.5	15	13.5	12	11	10.5						
CMH-75	0.55	0.75		26	22.5	22	21.5	20	17	14.5	11	8					
CMH-100	0.75	1		32	30	29	27	26	24.5	22.5	20	18	17.5	12			
CMH-150	1.1	1.5		35	33.5	32	31	29.5	29	28.5	27.5	26.5	26	22			
CMH-200	1.5	2		42	39	37	35	33.5	33	32.5	32	31	30	24			



DIMENSIONAL DETAILS OF CMH SERIES



TECHNICAL DATA AT 220V/50Hz

PUMPMODEL	DNI	DN2	DIMENSIONS mm											
			a	f	h	H1	H2	n	n1	w	w1	b	g	S
CMH-50	1"	1"	42	259	259	82	129	165	135	52	41	32	10	10
CMH-75	1"	1"	44	298	298	97	145	190	160	58	42.5	33	10	10
CMH-100	1"	1"	44	298	298	97	145	190	160	58	42.5	33	10	10
CMH-150	1"	1"	51	341	341	110	150	206	165	66	44.5	40	12	11
CMH-200	1"	1"	51.5	358	358	115	175	242	206	56	32.5	36	10	11

WORKING PRINCIPLE

The 2CMH series consists of CENTRIFUGAL PUMPS with two BACK-TO-BACK IMPELLERS, working in series.

The first impeller directly faces the suction opening machined in suction body. The second impeller is housed back-to-back to the first in the delivery body. The shape of the impellers transmits a radial motion to the fluid from of pressure and an increase in speed. After leaving the first impeller the fluid passes to the volute in the suction body connected to the second impeller suction chamber where it receives an equal energy increase. After leaving the second impeller the fluid enters the volute of the delivery body and the tapered diffuser which transform part of the kinetic into pressure energy. The axial hydraulic thrusts are perfectly balanced by the back-to-back installation of the two impellers on the same shaft, thus avoiding any overload on the motor bearings.

MATERIAL

- Casing in CI/Impeller in/Bronze, Stainless steel (optional)
- Shaft in SS 303
- Mechanical seal in Carbon/Ceramic/NBR closed and externally ventilated, suitable for continuous duty.
- Insulation class FB (up to 0.75kw)

TECHNICAL DATA

- TEFC 2 pole motor
- Insulation Class F
- Protection degree IP54/IP55
- 1-230V+/-10% 50HZ, 3-230/400V+/-10% 50HZ
- Permanent split capacitor and automatic thermal overload for single phase version
- Thermal protection to be provided by the user for three phase version

PERFORMANCE RANGE

- Flow rate up to 180 l/min (10.4m³/h)
- Dynamic head up to 65m

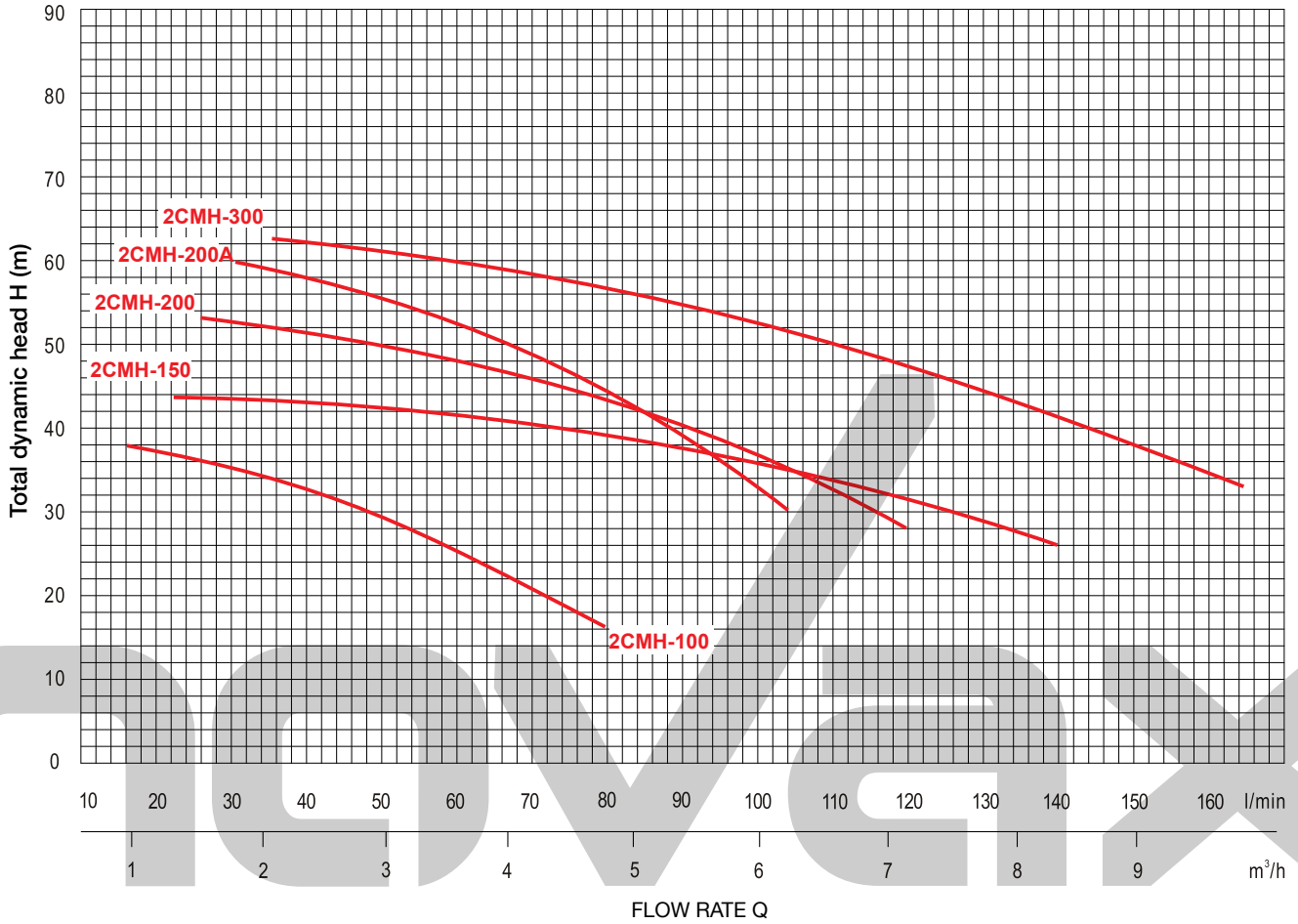
OPERATING LIMITS

- Suction life up to 7m
- Fluid temperature up to +60°C
- Maximum ambient temperature +40°C

2CMH

Quiet running single-stage centrifugal pumps





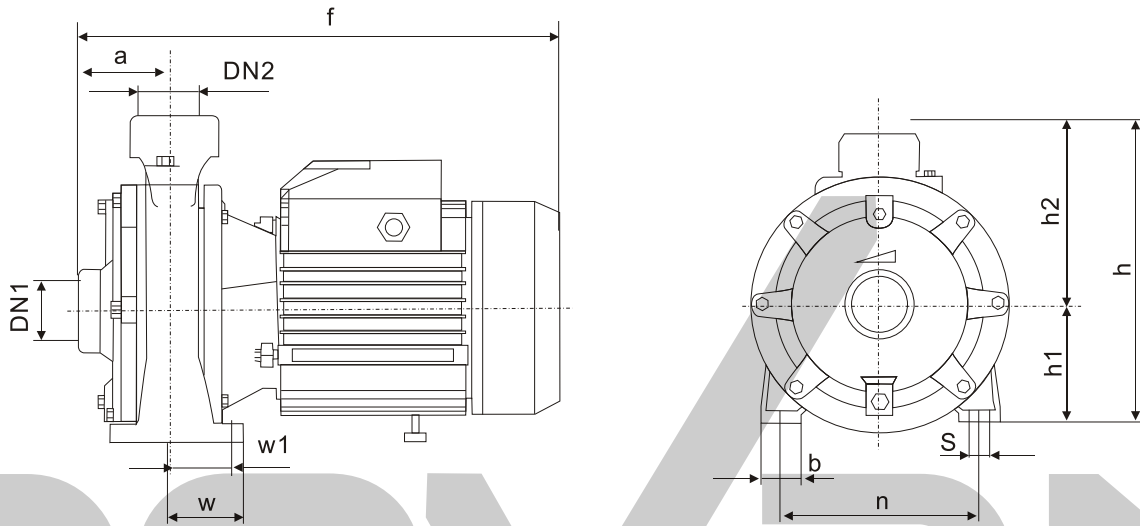
PERFORMANCE DATA at n=2900 l/min

n=2850rpm

PUMP MODEL		POWER		Q m³/h	0	0.96	1.32	1.56	1.8	2.1	3.0	3.6	4.2	4.8	5.4	6.3	7.2	8.4	9.9		
Single phase	Three phase	KW	HP	L/min	0	16	22	26	30	35	50	60	70	80	90	105	120	140	165		
2CMH-100M	2CMH-100	0.75	1	H (m)	40	38	33.5	31	28.5	26	20	17.5	16.5	16							
2CMH-150M	2CMH-150	1.1	1.5		46	--	44	43	42	40.5	37	35	33.5	32	31	29	28				
2CMH-200M	2CMH-200	1.5	2		56	--	--	55	51	49	43.5	40	37	33.5	32	29.5	27.5	26			
2CMH-200MA	2CMH-200A	1.5	2		64	--	--	--	60	57	50	45.5	41	38	34.5	30					
2CMH-300M	2CMH-300	2.2	3		66	--	--	--	--	63	56	52	48.5	45	42.5	39	36	34	33		

H=TOTAL DYNAMIC HEAD IN METERS. Q=FLOW RATE

DIMENSIONAL DETAILS OF 2CMH SERIES



PUMP MODEL		DN1	DN2	DIMENSIONS mm											
Single phase	Three phase			a	f	h	h1	h2	n	n1	w	w1	b	g	s
--	2CMH-100	1½"	1¼"	86	381	263	110	153	225	185	78	32	26	40	11
2CMH-100	--	1½"	1¼"	86	401	263	110	153	225	185	78	32	26	40	11
2CMH-150	2CMH-150	1½"	1¼"	86	381	263	110	153	225	185	78	32	26	40	11
2CMH-200	--	1¼"	1"	84	399	263	110	153	225	185	78	32	26	40	11
--	2CMH-200	1¼"	1"	84	379	263	110	153	225	185	78	32	26	40	11
2CMH-200A	2CMH-200A	1¼"	1"	84	379	263	110	153	225	185	78	32	26	40	11
2CMH-300	2CMH-300	1¼"	1"	78	335	213	89	124	180	145	60	28	15	35	10



LOAD LOSSES TABLE

LOAD LOSSES (Pc) in meters (column of water) Flow rate (V m/s)

Capacity	Internal diameter in mm																											
	m ³ /h	25	32	40	50	60	70	80	90	100	125	150	175	200	225	250	275	300	350	400	450	500	600	700	800	900	1000	
3	Pc% Vm/s	17 1.70	6 1.03	1.6 0.67	0.54 0.43	0.25 0.22	0.13 0.16	0.06 0.13	0.03 0.13	0.02 0.10																		
6	Pc% Vm/s		24 2.06	6 1.34	2 0.85	0.9 0.58	0.43 0.44	0.21 0.32	0.13 0.26	0.20 0.20	0.026 0.13																	
9	Pc% Vm/s			12.5 2.08	4.3 1.32	1.8 0.89	0.9 0.65	0.46 0.5	0.25 0.39	0.32 0.20	0.06 0.20																	
12	Pc% Vm/s			20 2.76	7 0.76	32 1.19	1.5 0.88	0.75 0.67	0.44 0.53	0.25 0.43	0.09 0.27	0.03 0.18																
15	Pc% Vm/s			12 2.2	5.2 1.49	2.4 1.1	1.25 0.87	0.7 0.66	0.42 0.54	0.15 0.34	0.06 0.24																	
18	Pc% Vm/s			17 2.64	7 1.78	3.5 1.3	1.7 1	1 0.78	0.6 0.64	0.2 0.4	0.08 0.28																	
21	Pc% Vm/s			22 3.35	8.8 2.08	4.2 1.54	2.2 1.17	1.3 0.93	0.75 0.75	0.26 0.48	0.1 0.32	0.05 0.24																
24	Pc% Vm/s			12 2.38	5.7 1.76	3 1.34	1.7 1.06	1 0.86	0.36 0.54	0.14 0.36	0.07 0.28																	
27	Pc% Vm/s			14 2.7	7 1.97	3.5 1.45	2 1.17	1.25 0.96	0.42 0.6	0.17 0.42	0.08 0.31																	
30	Pc% Vm/s			17 2.98	8.2 2.2	4.2 1.74	2.5 1.32	1.5 1.08	0.5 0.68	0.2 0.48	0.09 0.34																	
36	Pc% Vm/s			25 3.58	12 2.63	6.3 2	3.5 1.58	2 1.28	0.75 0.52	0.3 0.57	0.14 0.42	0.07 0.32																
42	Pc% Vm/s			16 3.07	8.5 2.34	4.5 1.85	2.7 1.5	0.85 0.96	0.33 0.66	0.18 0.48	0.08 0.37																	
48	Pc% Vm/s			21 3.51	10 2.68	6 2.12	3.6 1.75	1.2 0.84	0.45 0.72	0.22 0.56	0.12 0.43	0.06 0.37																
54	Pc% Vm/s			25 3.94	13.5 3	7.6 2.34	4.5 1.92	1.5 1.2	0.55 0.84	0.28 0.63	0.14 0.48	0.08 0.38																
60	Pc% Vm/s			16 3.32	9 2.64	5.5 2.16	1.8 1.36	0.7 0.96	0.33 0.68	0.17 0.53	0.1 0.42																	
75	Pc% Vm/s			24 4.17	14 3.31	8 2.68	2.76 1.72	1 0.87	0.48 0.67	0.24 0.53	0.14 0.43																	
90	Pc% Vm/s			20 3.97	12.5 3.24	3.8 2.04	1.45 1.02	0.74 0.8	0.36 0.63	0.2 0.51	0.08 0.42																	
105	Pc% Vm/s			26 4.6	16.5 3.74	5.3 2.41	1.95 1.66	0.9 1.22	0.47 0.93	0.27 0.74	0.16 0.59	0.1 0.49																
120	Pc% Vm/s			21.5 4.31	6.9 4.72	2.6 1.93	1.2 1.35	0.61 1.06	0.36 0.84	0.2 0.68	0.14 0.56	0.08 0.47																
135	Pc% Vm/s			26 4.81	9 4.81	3.3 2.43	1.5 1.56	0.76 1.19	0.45 0.95	0.25 0.76	0.17 0.53	0.1 0.53																
150	Pc% Vm/s			11 3.44	4 2.36	1.9 1.74	0.95 1.34	0.3 1.05	0.3 0.86	0.21 0.70	0.12 0.59	0.06 0.43																
165	Pc% Vm/s			13 3.75	4.7 2.61	2.2 1.94	1.13 1.46	0.65 1.15	0.37 0.94	0.24 0.77	0.15 0.65	0.08 0.48																
180	Pc% Vm/s			15.2 4.09	5.5 2.83	2.6 2.08	1.3 1.59	0.76 1.26	0.43 1.02	0.29 0.84	0.18 0.71	0.09 0.52																
210	Pc% Vm/s			21 4.70	7.4 3.32	3.5 2.43	1.8 1.86	1.1 1.49	0.6 1.19	0.37 0.98	0.24 0.82	0.12 0.61	0.06 0.47															
240	Pc% Vm/s			9.4 3.78	4.3 2.77	2.3 1.68	1.3 1.36	0.75 1.12	0.48 0.95	0.3 0.76	0.15 0.69	0.08 0.53																
270	Pc% Vm/s			12 4.26	5.5 3.13	2.8 2.39	1.62 1.90	0.9 1.53	0.58 1.26	0.35 1.07	0.18 0.78	0.09 0.59																
300	Pc% Vm/s			14 4.75	7.5 3.47	3.4 2.66	2 2.10	1.1 1.71	0.74 1.40	0.46 0.86	0.22 0.67	0.07 0.53																
360	Pc% Vm/s			9 4.15	4.7 3.17	2.8 2.53	1.6 2.04	1 1.68	0.65 1.41	0.32 1.04	0.16 0.79	0.09 0.63																
420	Pc% Vm/s			11.6 4.86	6.2 3.72	3.5 2.94	2 2.37	1.3 1.96	0.82 1.64	0.41 1.22	0.21 0.94	0.12 0.76	0.07 0.59	0.03 0.41														
480	Pc% Vm/s			8.5 4.24	4.9 3.36	2.9 2.72	1.9 2.24	1.2 1.90	0.6 1.36	0.3 1.06	0.17 0.84	0.09 0.69	0.04 0.47															
540	Pc% Vm/s			14 4.78	6.5 3.80	3.7 3.06	2.35 2.13	1.56 1.56	0.38 1.19	0.22 0.94	0.12 0.76	0.05 0.53																
600	Pc% Vm/s			12.2 5.30	7.4 4.20	4.3 3.40	2.7 2.36	1.7 1.73	0.9 1.34	0.45 1.06	0.13 0.86	0.055 0.61	0.024 0.44															
660	Pc% Vm/s			9 4.61	5.2 3.76	3.3 3.07	2.1 1.89	1.1 1.46	0.3 0.93	0.16 0.65	0.06 0.48	0.03 0.48																
720	Pc% Vm/s			10 5.05	6 4.08	3.8 3.37	2.5 2.08	1.3 2.08	0.62 1.65	0.35 1.26	0.19 0.71	0.075 0.52	0.035 0.52															
780	Pc% Vm/s			7.3 4.43	4.5 3.65	3 3.08	1.5 2.26	0.75 1.73	0.42 1.36	0.23 1.11	0.08 0.77	0.04 0.56																
840	Pc% Vm/s			8 4.76	5.4 3.95	3.4 3.31	1.7 2.43	0.85 1.86	0.48 1.47	0.26 1.19	0.1 0.83	0.047 0.61																
900	Pc% Vm/s			9 5.1	5.8 4.22	3.75 3.54	1.9 2.60	0.96 2.00	0.53 1.57	0.29 1.27	0.11 0.88	0.053 0.65																
960	Pc% Vm/s			6.5 4.49	4.3 3.78	2.1 2.77	1.1 1.68	0.6 1.36	0.32 1.06	0.12 0.76	0.06 0.47																	
1020	Pc% Vm/s			7.2 4.76	4.6 4.01	2.45 2.94	1.2 2.26	0.67 1.78	0.35 1.44	0.14 1.00	0.065 0.77	0.033 0.54																
1080	Pc% Vm/s			5.4 4.26	2.8 3.12	1.4 2.38	0.78 1.86	0.43 1.53	0.16 1.06	0.073 0.78	0.043 0.57																	
1140	Pc% Vm/s			6 4.49	3.2 3.29	1.53 1.99	0.86 1.99	0.45 1.65	0.175 1.12	0.08 0.84	0.043 0.61	0.037 0.52																
1200	Pc% Vm/s			6.5 4.72	3.4 3.45	1.7 2.68	0.93 2.12	0.5 1.72	0.19 1.23	0.09 0.98	0.046 0.63	0.025 0.4																

■ Discharge diameter
■ Suction diameter

novax

novax
PUMPS & MOTORS

NOVAX PUMPE SRL

Via Giovanni Zaniol,
188, Pieve di Soligo, Italy.

Tel: (+39) 043 881 143

Email: tony@novaxeurope.com

www.novaxeurope.com