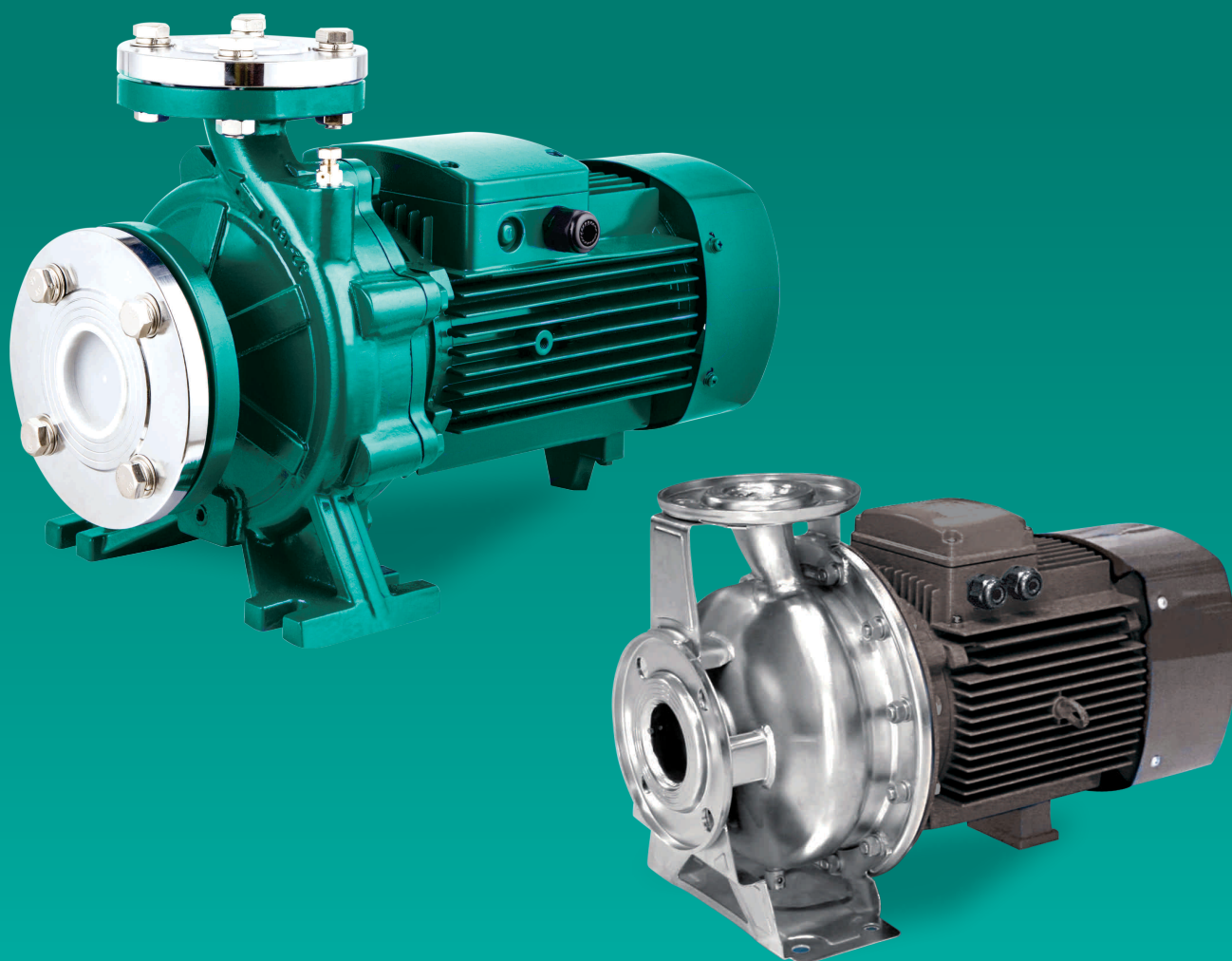




THE HARD WORKING PUMP

The result of superior technology and expertise that has stood the test of time.



CENTRIFUGAL PUMPS

50 Hz

I N D E X

Model Designation	3
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CENTRIFUGAL PUMPS - **TM** SERIES

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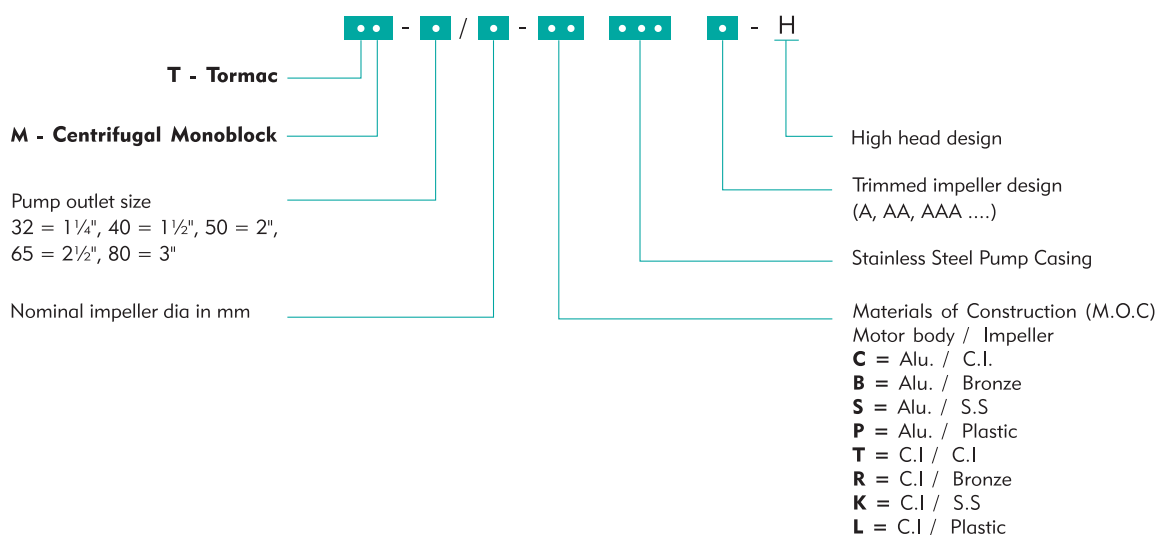
CENTRIFUGAL PUMPS - **TMS** SERIES

General Data	10
Performance Table	11
Dimensions and Weight	12

GENERAL DATA

CENTRIFUGAL PUMPS (TM Series - 3 Phase)

Model Designation > CENTRIFUGAL PUMPS - DIN Standard - Single Shaft



CENTRIFUGAL PUMPS > TM - Series (3 Phase)

Tormac Centrifugal pump's volute chamber and impellers are carefully designed to give the best possible hydraulic and suction lift characteristics. All dimensions and performances are according to EN733- DIN 24255 standards. Most modern and highly sophisticated machinery and technology are employed in the manufacture of these pumps using quality raw material, dynamically balanced impellers, seals and ball bearings to ensure long life. Dynamically balanced rotor ensures vibration and noise free operation. Shaft is made of quality steel, precision ground of ample size for transmitting the rated Horse Power.

Specifications

Non-aggressive, Non explosive, Pure, Cold, Fresh water without abrasive particles having the following characteristics.

pH	6.5 to 8.5
Turbidity	50 ppm silica scale (max.)
Viscosity	$1.75 \times 10^6 \text{ m}^2/\text{sec}$ (max.)
Hardness (Drinking Water)	300 ppm (max.)
Specific gravity	1.004 (max.)
Allowable solids	3000 ppm (max.)
Chlorine ion density	500 ppm (max.)
Temperature	91.4° F (max)

Pump Operating Limits

Maximum Head	141 m
Maximum Suction lift	7 m
Operating Temperature	-10°C to 120°C
Maximum Ambient Temperature	50°C



Material Specification

Power Range (kW)	2.2 kW to 30 kW
Speed	2900 rpm
Degree of Protection	IP 55
Class of insulation	"F"
Versions	Three Phase, 380-415V, 50Hz A.C Supply
Type of Duty	S1 (Continuous)
Direction of Rotation	Clock wise viewed from driving end
Nominal Suc. & Del. Size (Inches)	2 x 1 1/4 2 1/2 x 1 1/2 2 1/2 x 2 3 x 2 1/2 4 x 3

Applications

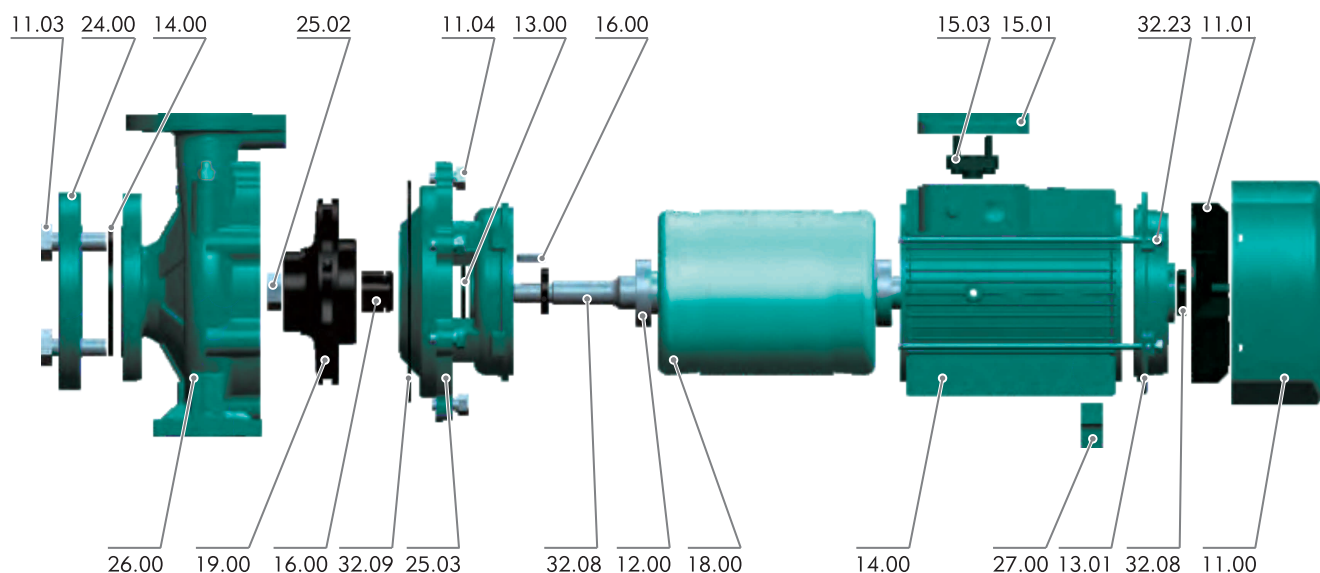
Irrigation
Farms
Industrial Water Supply
General Water Supply
Drip and Sprinkler Systems
Water Treatment Plants
Residential

Performance & Specifications

Overall dimensions and performances are according to EN733-DIN 24255 standards.
High operating efficiency resulting in lower power consumption.
Good suction lift characteristics.
Dynamically balanced rotating parts including rotor and impeller.
Balanced and rigid construction.

Note: The company reserves the right to modify the technical specification and the illustrations without notice.

TM - SERIES > Exploded View



Liquids Pumped

Part No.	Part Name	MOC
11.00	Cooling Fan Cover	Rubber
11.01	Cooling Fan	Aluminium
11.03	Bolt	Steel
12.00	Bearing (Rear)	Ball Bearing
13.00	Shaft	SS304 / 45# Steel
13.01	Back Cover	Cast Iron
14.00	Wound Stator	Aluminium
15.01	Terminal Box	Plastic
15.03	Terminal Board	Steel

Part No.	Part Name	MOC
16.00	Mechanical Seal	SiC / Carbon / SS304
19.00	Impeller	SS304 / Cast Iron
20.00	Deflector	Rubber
23.00	Gasket	Rubber
24.00	Counter Flange	Galvanized Cast Iron
25.01	Impeller Key	Iron
25.02	Impeller Nut	Iron
25.03	Bracket	Cast Iron
26.00	Pump Case	Cast Iron

Part No.	Part Name	MOC
27.00	Support Piece	Plastic
32.08	Oil Seal	Rubber
32.09	O-Ring	Rubber
32.23	Tie-Rod	Steel

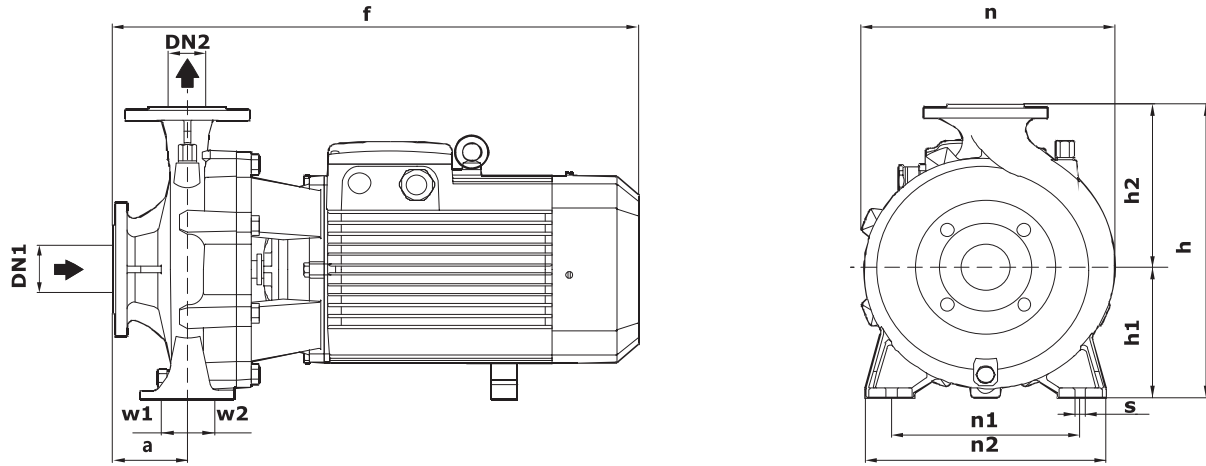
TM - SERIES > Performance Table

Pump Model	Suc. x Del. in Inches	Power		Flow (Q)														
				l/min	0	100	150	250	300	400	450	600	700	800	900	1200	1400	1500
		m³/h	0		6	9	15	18	24	27	36	42	48	54	72	84	90	
TM-32/125CA	2x1¼	0.75	1	Head (m)	17	16	14.5	10	7									
TM-32/125C	2x1¼	1.1	1.5		22	20	19.7	16	13	7								
TM-32/160CAA	2x1¼	1.5	2		25	22.5	20.5	16.5	13									
TM-32/160CA	2x1¼	2.2	3		31	29.5	28.5	23	20	12								
TM-32/160C	2x1¼	3	4		35	34.3	33	28.5	25.5	19	15							
TM-32/200CA	2x1¼	3	4		44.2	42	39.8	35	31	22	16							
TM-32/200C	2x1¼	4	5.5		52	49	48	44.5	41	34	29.5							
TM-32/250CA	2x1¼	5.5	7.5		58	56	54	46	40	29								
TM-32/250CAA	2x1¼	7.5	10		69.5	69	68	62	58	47								
TM-32/250C	2x1¼	11	15		90	89	87	78	75	59								
TM-32/250CA-H	2x1¼	5.5	7.5		79	73	70	61	54	36.5								
TM-32/250CAA-H	2x1¼	7.5	10		95	93	89	78	70	53.5								
TM-40/125CAA	2½ x 1½	1.1	1.5		15				12	10	9	4						
TM-40/125CA	2½ x 1½	1.5	2		18.1				15	13	11	7	4					
TM-40/125C	2½ x 1½	2.2	3		24				21.5	19	17	14	10	6				
TM-40/160CA	2½ x 1½	3	4		31.8				28	26	24.5	18.5	13					
TM-40/160C	2½ x 1½	4	5.5		37				33	31	29	23	20	15				
TM-40/200CA	2½ x 1½	5.5	7.5		46				43	40	38	31	25					
TM-40/200C	2½ x 1½	7.5	10		56				51.5	47	45	39	34	29				
TM-40/250CAA	2½ x 1½	9.2	12.5		64				61	57	55	47	38	29				
TM-40/250CA	2½ x 1½	11	15		72				67.5	65	63.5	54.5	47	38				
TM-40/250C	2½ x 1½	15	20		84.5				84	77.3	75.2	70	64	54.5				
TM-50/150CAA	2½ x 2	2.2	3		17							14	12	10	8	4.5		
TM-50/150CA	2½ x 2	3	4		20							17	15	12.5	10.2	7		
TM-50/150C	2½ x 2	4	5.5		24							19	17	15	12	7		
TM-50/160CA	2½ x 2	5.5	7.5		32							30	29	26	25	17	10	
TM-50/160C	2½ x 2	7.5	10		39							36	34	32	29	19	15	
TM-50/200CAA	2½ x 2	9.2	12.5		50.5							46	43.5	41.5	38.5	27.5	20	
TM-50/200CA	2½ x 2	11	15		57							51.5	49	47	43	35	29	
TM-50/200C	2½ x 2	15	20		61							55	53	52	50	39	30	

TM - SERIES > Performance Table

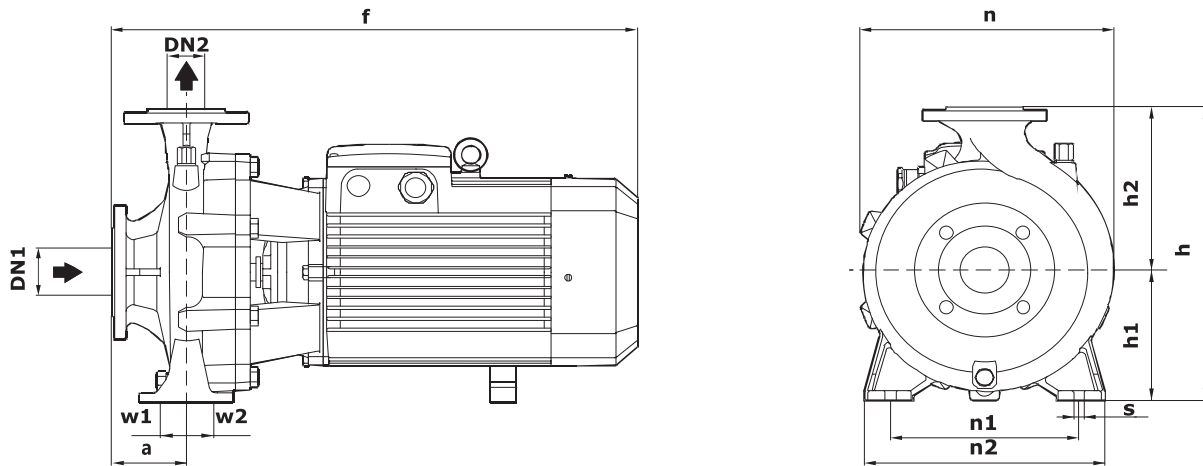
Pump Model	Suc. x Del. in Inches	Power		Flow (Q)														
				l/min	0	600	700	800	900	1200	1400	1500	1800	2000	2300	3000	3333	3500
		m³/h	0		36	42	48	54	72	84	90	108	120	138	180	200	210	
TM-50/250CAA	2½ x 2	15	20	Head (m)	70	67	65	62.3	58.6	40	32.8							
TM-50/250CA	2½ x 2	18.5	25		79	75.8	74.8	74	71.5	63.5	52	37.6						
TM-50/250C	2½ x 2	22	30		89.5	86	85.3	84	81.5	71.3	53	45.6						
TM-65/125CAA	3 x 2½	4	5.5		19			16.1	15.5	14.5	11.7	10.6						
TM-65/125CA	3 x 2½	5.5	7.5		23			19.2	18.7	17.5	16.7	14	11					
TM-65/125C	3 x 2½	7.5	10		27			24	23.3	22.1	20.7	20	16	14.4				
TM-65/160CAA	3 x 2½	9.2	12.5		33				31	30	28	27.1	21.6	19.4				
TM-65/160CA	3 x 2½	11	15		36				34.5	33.4	32	30.8	28	24				
TM-65/160C	3 x 2½	15	20		42				42.5	39	37.8	36	33	29.5	26.7			
TM-65/200CAA	3 x 2½	15	20		45				46.7	45	43	41	36.5	33				
TM-65/200CA	3 x 2½	18.5	25		52				49.3	47.6	46	45.4	40.1	34.6				
TM-65/200C	3 x 2½	22	30		59				58	56	52	50	46.5	44.5	41			
TM-65/250TAA	3 x 2½	22	30		64.8				64.7	62	60	58.5	53	50				
TM-65/250TA	3 x 2½	30	40		80				79.8	77.5	75.5	74.5	70	66	57			
TM-65/250C	3 x 2½	37	50		92				89.2	87	85	81.7	80.5	77	62			
TM-65/315C	3 x 2½	37	50		102				99.2	97	95	94.5	92.4	90	83			
TM-65/315CAA	3 x 2½	45	60		112				109.2	107.7	105.8	104.5	102.5	100	93	66		
TM-65/315CA	3 x 2½	55	75		122				120.6	120	119.7	118	116	110	93	70		
TM-65/315C	3 x 2½	75	100		141				139.8	137.3	135.6	134.5	133	123	112	90	77	50
TM-80/125CAA	4 x 3	4	5.5		17			16.5	15.9	14.3	13.5	11.6	10	7.5				
TM-80/125CA	4 x 3	5.5	7.5		21			20.5	20	19	18	16.5	15	12.5	9.5			
TM-80/125C	4 x 3	7.5	10		26			25	24.5	24	23.8	22.5	21.5	18	15			
TM-80/160C	4 x 3	11	15		27							25	24	23.2	20	15		
TM-80/160CAA	4 x 3	15	20		32.8							32.5	30	28	25	17	15	14
TM-80/160CA	4 x 3	18.5	25		39							38	37	36.7	30	26	21	18
TM-80/160C	4 x 3	22	30		44							43	42	41.7	37	32	28.5	26
TM-80/200TA	4 x 3	22	30		48							47.5	43.5	40	33	32.5	22	20
TM-80/200T	4 x 3	30	40		60							59.5	57	56	52	42.7	34	31

TM - SERIES > Dimensions and Weight



Pump Model		DIMENSIONS													kg	
Single Phase	Three Phase	DN1	DN2	a	f	h	h1	h2	n	n1	n2	w1	w2	s	1~	3~
TM-32/125CA	TM-32/125CA	50	32	80	435	255	114	141	202	140	190	35	35	15	27	24
TM-32/125C	TM-32/125C														28	25
TM-32/160CAA	TM-32/160CAA			83	470	295	133	162	245	190	245	35	35	15	38	34
TM-32/160CA	TM-32/160CA														43	39
TM-32/160C	TM-32/160C														54	50
TM-32/200CA	TM-32/200CA			82	490	342	161	181	265		240	35	35	15	56	52
-	TM-32/200C														-	53
-	TM-32/250CA			88	590	405	186	219	333	250	328	49	49	16	-	66
-	TM-32/250CAA														-	73
-	TM-32/250C														-	95
-	TM-32/250CA-H	65	40	160	610	362	162	200	330	216	280	37	37	14	-	73
-	TM-32/250CAA-H														-	80
TM-40/125CA	TM-40/125CAA			82	440	260	116	144	220	160	212	37	37	15	30	27
TM-40/125CA	TM-40/125CA														33	29
TM-40/125C	TM-40/125C			80	490	305	135	170	250	190	241	37	37	15	38	34
TM-40/160CA	TM-40/160CA														52	48
-	TM-40/160C			102	560	345	162	193	282	214	267	37	37	15	-	50
-	TM-40/200CA														-	66
-	TM-40/200C			94	712	415	186	229	327	250	327	49	49	15	-	73
-	TM-40/250CAA														-	100
-	TM-40/250CA			102	525	305	135	170	263	190	245	37	37	15	-	116
-	TM-40/250C														-	146
TM-50/150CAA	TM-50/150CAA	65	50	102	525	305	135	170	263	190	245	37	37	15	45	41
TM-50/150CA	TM-50/150CA														54	50
-	TM-50/150C			110	560	348	164	193	270	212	262	37	37	15	-	52
-	TM-50/160CA														-	64
-	TM-50/160C			104	722	392	186	206	307	232	310	37	37	15	-	71
-	TM-50/200CA														-	90
-	TM-50/200C			102	720	416	186	230	330	250	327	37	37	15	-	106
-	TM-50/250CAA														-	145
-	TM-50/250CA			102	720	416	186	230	330	250	327	37	37	15	-	153
-	TM-50/250C														-	183

TM - SERIES > Dimensions and Weight

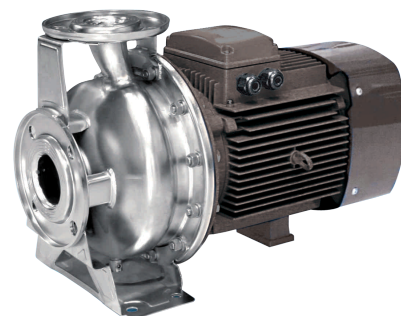


Pump Model	DIMENSIONS													kg
Three Phase	DN1	DN2	a	f	h	h1	h2	n	n1	n2	w1	w2	s	3~
TM-50/250CAA	65	50	102	720	416	186	230	330	250	327	49	49	15	145
TM-50/250CA			104	580	345	162	193	275	212	280				153
TM-50/250C			110	730	425	186	239	330	232	309				183
TM-65/125CAA	80	65	104	580	345	162	193	275	212	280	49	49	15	56
TM-65/125CA			110	730	425	186	239	330	232	309				68
TM-65/125C			111	740	425	186	240	330	232	309				74
TM-65/160CAA	80	65	110	730	425	186	239	330	232	309	49	49	15	90
TM-65/160CA			110	730	425	186	239	330	232	309				106
TM-65/160C			111	740	425	186	240	330	232	309				134
TM-65/200CAA	80	65	110	730	425	186	239	330	232	309	49	49	15	140
TM-65/200CA			111	740	425	186	240	330	232	309				145
TM-65/200C			111	740	425	186	240	330	232	309				185
TM-80/125CAA	100	80	117	750	357	163	194	330	212	280	49	49	15	56
TM-80/125CA			117	750	357	163	194	330	212	280				68
TM-80/125C			117	750	357	163	194	330	212	280				74
TM-80/160CC	100	80	117	750	357	163	194	330	212	280	49	49	15	113
TM-80/160CAA			88	750	435	186	250	330	255	332				143
TM-80/160CA			88	750	435	186	250	330	255	332				150

Pump Model	DIMENSIONS															kg
Three Phase	DN1	DN2	a	f	h	h1	n	n1	n1'	n2	b	w	m	s1	s1'	3~
TM-65/250TAA	80	65	116	870	420	180	369	260	279	320	70	246	241	18	15	210
TM-65/250TA				990	456	195		250	318	327		293	305		19	230
TM-65/250T				990	456	195		250	318	327		293	305		19	240
TM-80/200TA	100	80	118	880	460	250	360	310	279	260	95	258	241	20	15	212
TM-80/200T				950	460	250		310	318	260		246	241		15	222

CENTRIFUGAL PUMPS DIN Standard - Single Shaft > TMS - Series (3 Phase)

Tormac Centrifugal pump's volute chamber and impellers are carefully designed to give the best possible hydraulic and suction lift characteristics. All dimensions are according to DIN 24255 standards. Most modern and highly sophisticated machinery and technology are employed in the manufacture of these pumps using quality raw material, dynamically balanced impellers, seals and ball bearings to ensure long life. Dynamically balanced rotor ensures vibration and noise free operation. Shaft is made of quality steel, precision ground of ample size for transmitting the rated Horse Power. The pump portion is made of complete stainless steel construction which are more suitable for potable water.



Specifications

Non-aggressive, Non explosive, Pure, Cold, Fresh water without abrasive particles having the following characteristics.

Power Range (kW)	1.1 kW to 18.5 kW
Speed	2900 rpm
Degree of Protection	IP 55
Class of insulation	"F"
Versions	1Ph, 230V & 3 Ph, 380-415V - 50Hz A.C Supply
Type of Duty	S1 (Continuous)
Direction of Rotation	Clock wise viewed from driving end
Nominal Suc. & Del. Size(Inches)	2 x 2¼ 2½ x 1½ 2½ x 2

Pump Operating Limits

Maximum Head	73 m / 239 ft
Maximum Suction lift	7 m
Operating Temperature	0°C to 70°C
Maximum Ambient Temperature	40°C
Maximum Working Pressure	10 Bar

Material Specification

Pump Casing	S.S 304 / S.S 316
Motor Frame	Aluminum (upto 15kW) Cast Iron (18.5kW)
Impeller	S.S 304 / S.S 316
Shaft	S.S 304
Mechanical Seal	Carbon & Ceramic

Applications

Industrial water supply
Food processing industries
Pressure boosting units
HVAC
Washing systems
Irrigation etc.,

Performance & Specifications

All wetted components are made of corrosion resistance stainless steel.

Designed to give best hydraulic efficiency and suction lift characteristics.

Wear resistant bearing ensure noiseless operation.

Back pull out design facilitates dismantling the pump without disconnecting the pipe lines.

DIN Standard flange connections.

TMS - SERIES > Performance Table

Nominal Pump Size : **2" x 1 1/4"**

Model	kW	HP	AMPS 3P-380V	lps m ³ /h	0.83	1.67	2.5	3.47	4.17	5	5.56	6.11
					3	6	9	12.5	15	18	20	22
TM-32/160SAA	1.1	1.5	2.6	Head in metres	21	20	18.5	16.5	15	12.5	10	8
TM-32/160SA	1.5	2.0	3.01		26	24.5	22.5	20	18.5	15	12.5	9.5
TM-32/160S	2.2	3.0	4.6		30.5	29.5	27.5	26	24	22.5	20.5	18
TM-32/200SAA	3.0	4.0	6		38	37	35	34	32	30	28	26
TM-32/200SA	4.0	5.5	8.6		51.5	50	48	45	43	41	39	30
TM-32/200S	5.5	7.5	11.5		62	60	58	54	52	47	42	37

Nominal Pump Size : **2 1/2" x 1 1/2"**

Model	kW	HP	AMPS 3P-380V	lps m ³ /h	1.39	2.78	4.17	5.56	6.94	8.33	9.72	11.11
					5	10	15	20	25	30	35	40
TM-40/125SAA	1.5	2.0	3.9	Head in metres	20	19	17.5	16	13	10.5	-	-
TM-40/125SA	2.2	3.0	4.23		27	26	24	22	20	17	14	-
TM-40/125S	3.0	4.0	6.2		31	30	29	27	25	22	18	-
TM-40/160S	4.0	5.5	8.2		39	38	36.5	34	31	28	24	19
TM-40/200SAA	5.5	7.5	10.5		47	46	45.5	44	41	38	34	30
TM-40/200SA	7.5	10	12.26		52	51.5	51	50	48	45	42	38
TM-40/200S	11	15	18.5		69	69	68.5	68	68	66	64	60

Nominal Pump Size : **2 1/2" x 2"**

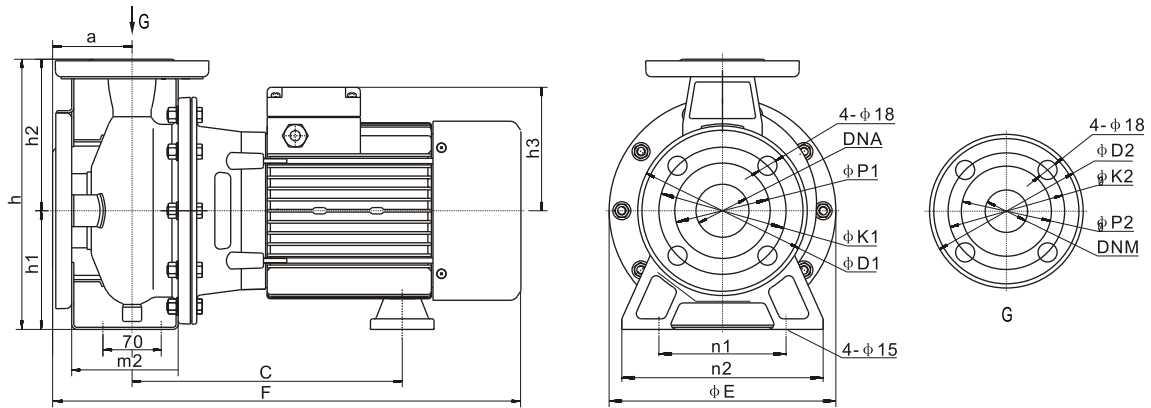
Model	kW	HP	AMPS 3P-380V	lps m ³ /h	1.39	2.78	5.56	18.33	11.11	13.89	16.67	19.44
					5	10	20	30	40	50	60	70
TM-50/125SA	3.0	4.0	5.5	Head in metres	27	26	23	20	16	10	-	-
TM-50/125S	4.0	5.5	6.87		28	27	26	24	21	16	-	-
TM-50/160S	5.5	7.5	9.5		34.5	34.5	34	31.5	28.5	24	20	-
TM-50/200SD	7.5	10	11.75		41	41	40.5	39	36	32	27.5	-
TM-50/200SC	9.2	12.5	17.03		52	52	51	49	45	41	37	-
TM-50/200SAA	11	15	19.9		57	56	55	53	51	48	42	30
TM-50/200SA	15	20	27		69	68	67	65	64	62	57	50
TM-50/200SK	18.5	25	29		73	72	71	70	69	68	65	59

Curve tolerance according to ISO 9906, Annex A.

The performance data are at rated voltage and only indicative. Actual discharge on availability of water / tank, height of water column from the suction pipe end.

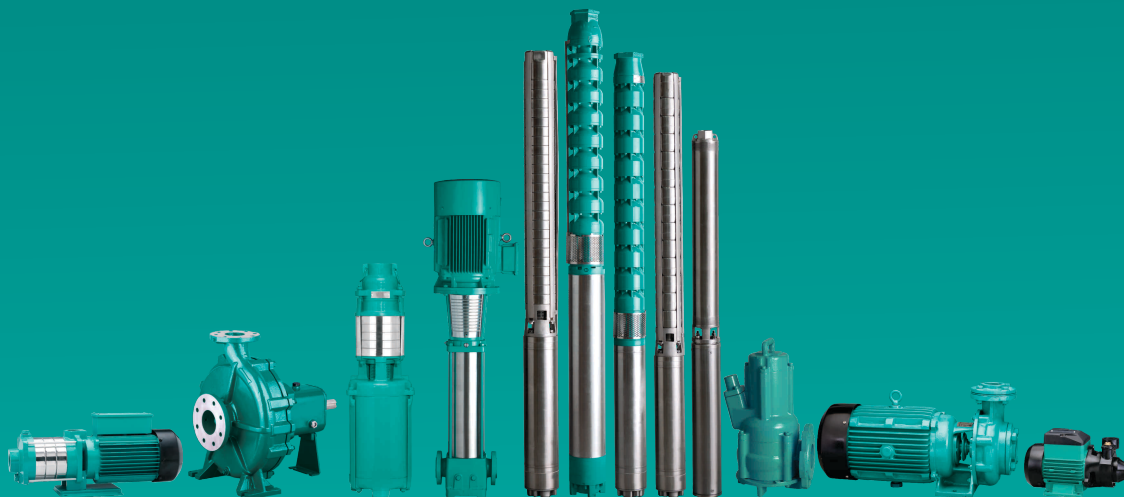
In view of continuous developments the information / performance / descriptions / specifications / illustrations are subject to without notice.

TMS - SERIES > Dimensional Data



MODEL	MOTOR POWER (kW)	ØE	F	h	h1	h2	h3	a	m2	n1	n2	C	ØD1	ØK1	ØP1	ØD2	ØK2	ØP2	DNs	DNd	WEIGHT IN kg
TM-32/160SAA	1.1	210	395	255	112	143	134	80	115	160	190	215	165	125	96	140	100	76	50	32	19.7
TM-32/160SA	1.5	210	395	255	112	143	134	80	115	160	190	215	165	125	96	140	100	76	50	32	23
TM-32/160S	2.2	210	438	255	112	143	119	80	118	160	190	245	165	125	96	140	100	76	50	32	27.7
TM-32/200SAA	3.0	300	450	340	160	180	119	80	118	190	240	245	165	125	96	140	100	76	50	32	35.5
TM-32/200SA	4.0	300	498	340	160	180	142	80	118	190	240	257	165	125	96	140	100	76	50	32	56.3
TM-32/200S	5.5	300	532	340	160	180	162	80	115	190	240	272	165	125	96	140	100	76	50	32	67.4
TM-40/125SAA	1.5	210	395	255	112	143	134	80	115	160	190	215	185	145	115	150	110	80	65	40	23
TM-40/125SA	2.2	210	438	255	112	143	119	80	118	160	190	245	185	145	115	150	110	80	65	40	26.5
TM-40/125S	3.0	260	450	295	132	160	119	80	118	190	240	245	185	145	115	150	110	80	65	40	32
TM-40/160S	4.0	260	498	295	132	160	142	80	118	190	240	258	185	145	115	150	110	80	65	40	53.8
TM-40/200SAA	5.5	300	554	360	160	200	162	100	118	212	264	274	185	145	115	150	110	80	65	40	67.5
TM-40/200SA	7.5	300	595	360	160	200	162	100	118	212	264	274	185	145	115	150	110	80	65	40	78.6
TM-40/200S	11	300	623	360	160	200	179	100	118	212	264	335	185	145	115	150	110	80	65	40	96
TM-50/125SA	3.0	260	455	295	132	160	119	80	115	190	240	245	185	145	115	165	125	96	65	50	32.2
TM-50/125S	4.0	260	498	295	132	160	142	80	115	190	240	258	185	145	115	165	125	96	65	50	54
TM-50/160S	5.5	300	554	360	160	200	162	100	118	212	264	274	185	145	115	165	125	96	65	50	68
TM-50/200SD	7.5	300	595	360	160	200	162	100	118	212	264	274	185	145	115	165	125	96	65	50	78.6
TM-50/200SC	9.2	300	623	360	160	200	179	100	118	212	264	335	185	145	115	165	125	96	65	50	86.5
TM-50/200SAA	11	300	623	360	160	200	179	100	118	212	264	335	185	145	115	165	125	96	65	50	96
TM-50/200SA	15	300	665	360	160	200	179	100	118	212	264	335	185	145	115	165	125	96	65	50	115
TM-50/200SK	18.5	350	725	360	160	200	255	100	118	212	264	429	185	145	115	165	125	96	65	50	152

* All Dimensions are in mm.



T H E P O W E R B E H I N D T H E F O R C E

Naargo Industries Private Limited, one of the leading manufacturers of latest state of art, large range of pumps and motors, is managed by veterans who are in the pump industry for almost half a century. The products are employed in various applications like irrigation, domestic, civil construction, de-watering etc; The Company has a strong distribution network in India for sales & service and a strong global presence.

Quality is the key factor in Naargo's products. The expansive infrastructure and environment accredited with ISO 9001 quality certification, latest engineering softwares, high-tech machinery, futuristic pumping technology and high caliber workforce facilitate the production of flawless and efficient products on par with international standards under the brand name of "Tormac". The well equipped R & D wing stays alive to the changing global trends and comes out with viable solutions for innovative product development and upgradation.

The Products currently available include Stainless Steel Submersible Pumps, 4" Thermoplastic Submersible Pumps, 6" & 8" Cast Iron Submersible Pumps, Submersible Motors, Submersible cables, uPVC pipes, and control panels, Centrifugal Pumps, Inline Booster Pumps, Jet Self-priming Pumps Sewage pumps, Induction Pumps and Peripheral Pumps.

The power, performance and endurance of the products backed by the uncompromising teamwork and value systems will certainly propel the company's growth towards new horizons in the pump industry.

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Tormac
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