Pumping happiness across the Globe

Tormac PUMPS

THE TOUGH ONE

Rugged construction coupled with optimal design parameters make the Bore Hole Submersible Pump a star performer.

CAST IRON
SUBMERSIBLE PUMPS - **50Hz**

● **Products from an ISO 9001 COMPANY**

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CS SERIES - CAST IRON SUBMERSIBLE PUMPS

GENERAL DATA

CAST IRON SUBMERSIBLE PUMPS > **CB** SERIES

Construction Tormac cast iron submersible pumps are ingeniously designed and developed employing latest engineering softwares, high-tech machinery, tools and cutting edge of pumping technology to deliver the best possible hydraulic efficiency. The integrated and most modern quality assurance systems used at every stage of the production and flawless workmanship ensure sustained and consistent operation.

All these submersible pumps are multistage single suction centrifugal type and provided with integral check-valve and NEMA standard coupling. These pumps are available with impellers made of bronze, diffusers made up of cast iron and the shaft is made of AISI 410/431. The integral check valve prevents back flow, up thrust and reduces the risk of water hammer which paves the way for trouble free performance. The suction screen is designed with utmost care so as not to reduce the inflow of water and at the same time to prevent damage to the pump and clogging due to the entry of sand and other foreign particles.

Applications	Features
Public water supply	Tried and trusted
Fountains	Highly efficient
Irrigation	Wide head and flow range with numerous models
Pressure boosting systems	Good sand resistance capacity, integral check valve
Industrial & Private water supply systems	Corrosion free parts for hygiene
Air-conditioning equipments	Low wear and tear, perfectly and aesthetically designed
Sprinkler systems and Mining	Easily serviceable.
Farming	
Water plants	
Laboratories	

GENERAL DATA

Pumped Liquids

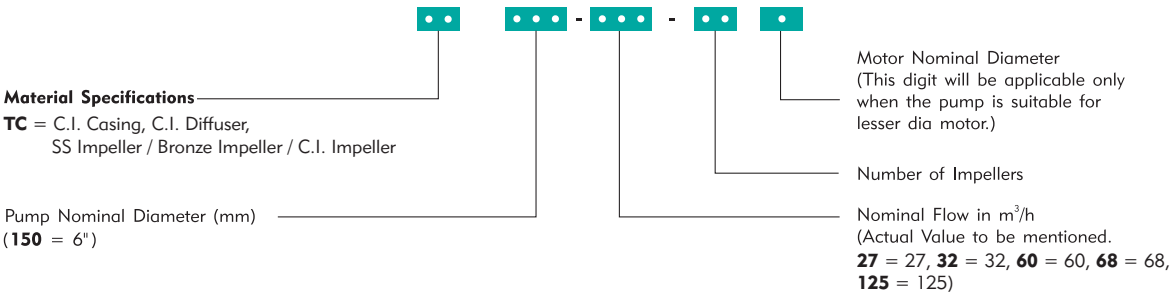
Clean, thin, non-aggressive, non explosive, pure, cold, fresh water without abrasives solid particles or fibre having the following characteristics.

a) pH	6.5 to 8.5
b) Turbidity	50 ppm silica scale (max.)
c) Viscosity	1.75 x $10^{6}m^{2}$ / sec (max.)
d) Hardness (Drinking Water)	300 (max.)
e) Specific gravity	1.004 (max.)
f) Allowable solids	3000 ppm (max.)
g) Chlorine ion density	500 ppm (max.)
h) Permissible amount of sand	50g / m^{3} (max.)
i) Temperature	38°C (max.)

Pump Operating Limitations

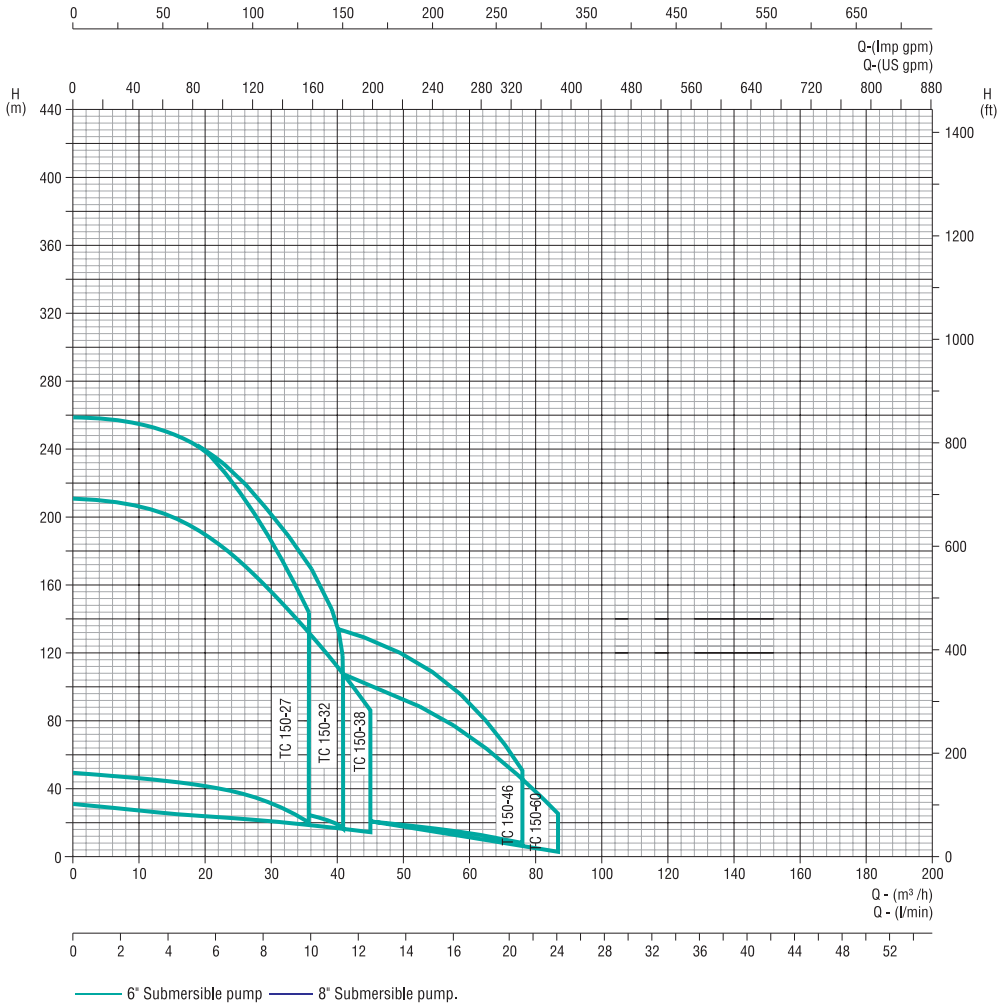
Nominal Diameter		**6"**
Power Range		3.7kW - 26kW
Speed		2900 rpm
Flow Range	lpm	150 - 1383.3
	m^{3}/h	9 - 83
Max. Recommended Head	ft	6.5 - 902
	m	2 - 272
Delivery size in mm		80 & 100
Max. Operating Pressure		2.75 Mpa (27.5 bar)
Horizontal Installation		Minimum - 30° angle

Model Classification BOREHOLE SUBMERSIBLE PUMPS



GENERAL DATA

Quick Selection › CB Series › Version TC › 6"



Performance Curve Conditions

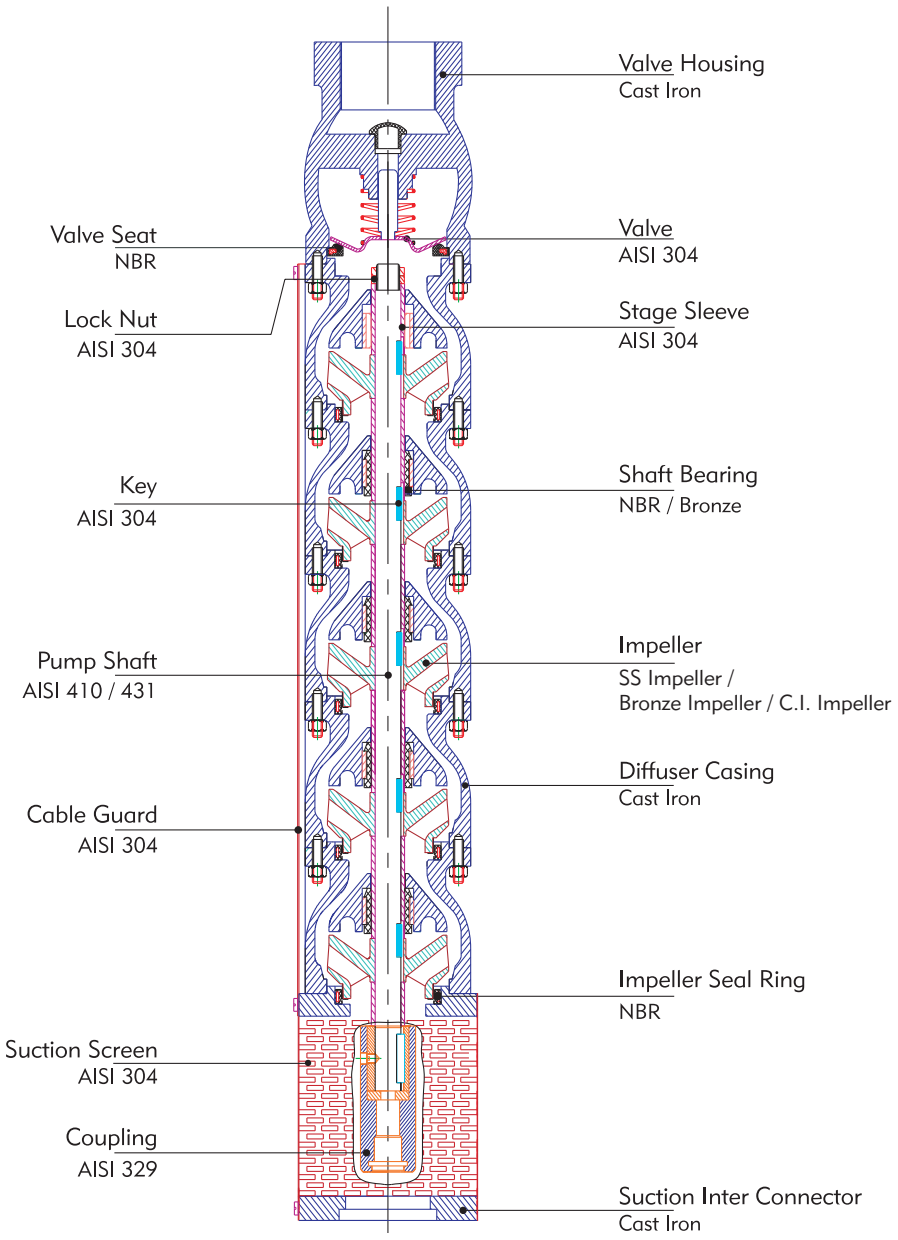
a.	The Performance curves show performance of the pump at rated speed and voltage. (2900 rpm)	e.	The head and discharge curves are inclusive of check valve and suction inter-connector losses at the actual speed.
b.	The measurements were made with airless water at 20°C. For pumping liquids with a density higher than that of water, motors with correspondingly higher outputs must be used.	f.	Efficiency curve: "EFF%" shows pump stage efficiency.
		g.	Curve tolerance according to ISO : 9906, Annex-A.
c.	Pipe friction losses have not been included in the performance curves and performance data.	h.	The performance are at rated voltage and are only Indicative. Actual discharge depends on availability of water in well, based on strength of water source, height of water column, submergence of pump, etc.,
d.	The bold curves indicate the recommended performance range.	i.	The given performance are for a specific materials of construction of pumps.

Available types of materials of construction : TC

CONSTRUCTIONAL DATA

27 - 60 m^3/h

6" › **CB** Series › **Version TC** › Constructional Data of Semi - Axial Flow Pump

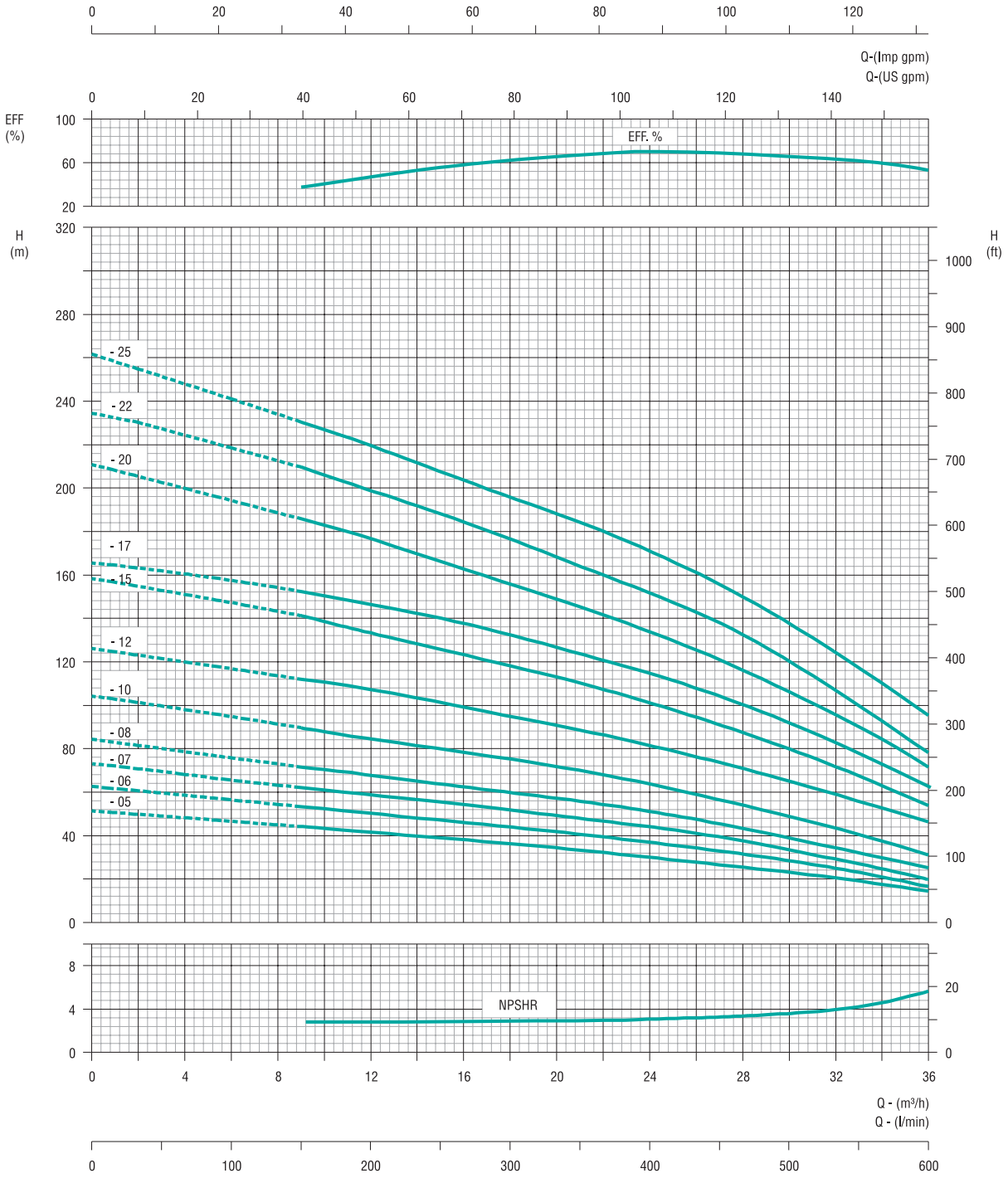


NEMA mounting dimensions.

PERFORMANCE CURVES

CB SERIES › **6"** › **27 m³/h**

Model : **TC 150 - 27** Outlet Size : **2½" / 3"** **2900 rpm**



Curve tolerance as per ISO : 9906, Annex - A. * Performance @ 3m minimum submergence.

PERFORMANCE DATA

CB SERIES › 6" › 27 m^3/h

Model : **TC 150 - 27** Outlet Size : **2½" / 3"** **2900 rpm**

Pump Model	Power		lpm	0	133.3	200	266.7	333.3	400.0	450	466.7	533.3	600
	kW	HP	m^3/h	0	8	12	16	20	24	27	28	32	36
TC150-27-05	3.7	5.0	TOTAL DYNAMIC HEAD IN METRES	51	45	42	38	34	30	27	25	20	14
TC150-27-06	4.5	6.0		62	54	50	47	42	37	33	31	25	17
TC150-27-07	5.5	7.5		72	63	59	54	49	43	39	38	29	20
TC150-27-08	5.5	7.5		86	73	68	62	58	52	45	43	34	26
TC150-27-10	7.5	10		104	92	85	78	72	63	57	54	43	31
TC150-27-12	9.3	12.5		126	114	107	99	90	82	73	71	59	47
TC150-27-15	11	15		158	144	133	123	113	101	91	88	72	54
TC150-27-17	13	17.5		165	154	147	138	128	115	103	100	82	62
TC150-27-20	15	20		211	189	177	163	149	134	120	117	95	72
TC150-27-22	18.5	25		234	212	199	184	168	152	138	132	108	79
TC150-27-25	18.5	25		262	234	220	204	189	171	155	150	124	96

Nett Weights & Dimensions

Pump Model	Power		Dimensions in mm		Nett Weight (kg)
	kW	HP	D	H	
TC150-27-05	3.7	5.0	144	806	32.60
TC150-27-06	4.5	6.0	144	896	37.30
TC150-27-07	5.5	7.5	144	986	42.00
TC150-27-08	5.5	7.5	144	1076	48.00
TC150-27-10	7.5	10	144	1256	56.00
TC150-27-12	9.3	12.5	144	1436	62.00
TC150-27-15	11	15	144	1706	74.00
TC150-27-17	13	17.5	144	1886	83.40
TC150-27-20	15	20	144	2156	100.00
TC150-27-22	18.5	25	144	2336	109.40
TC150-27-25	18.5	25	144	2606	115.00

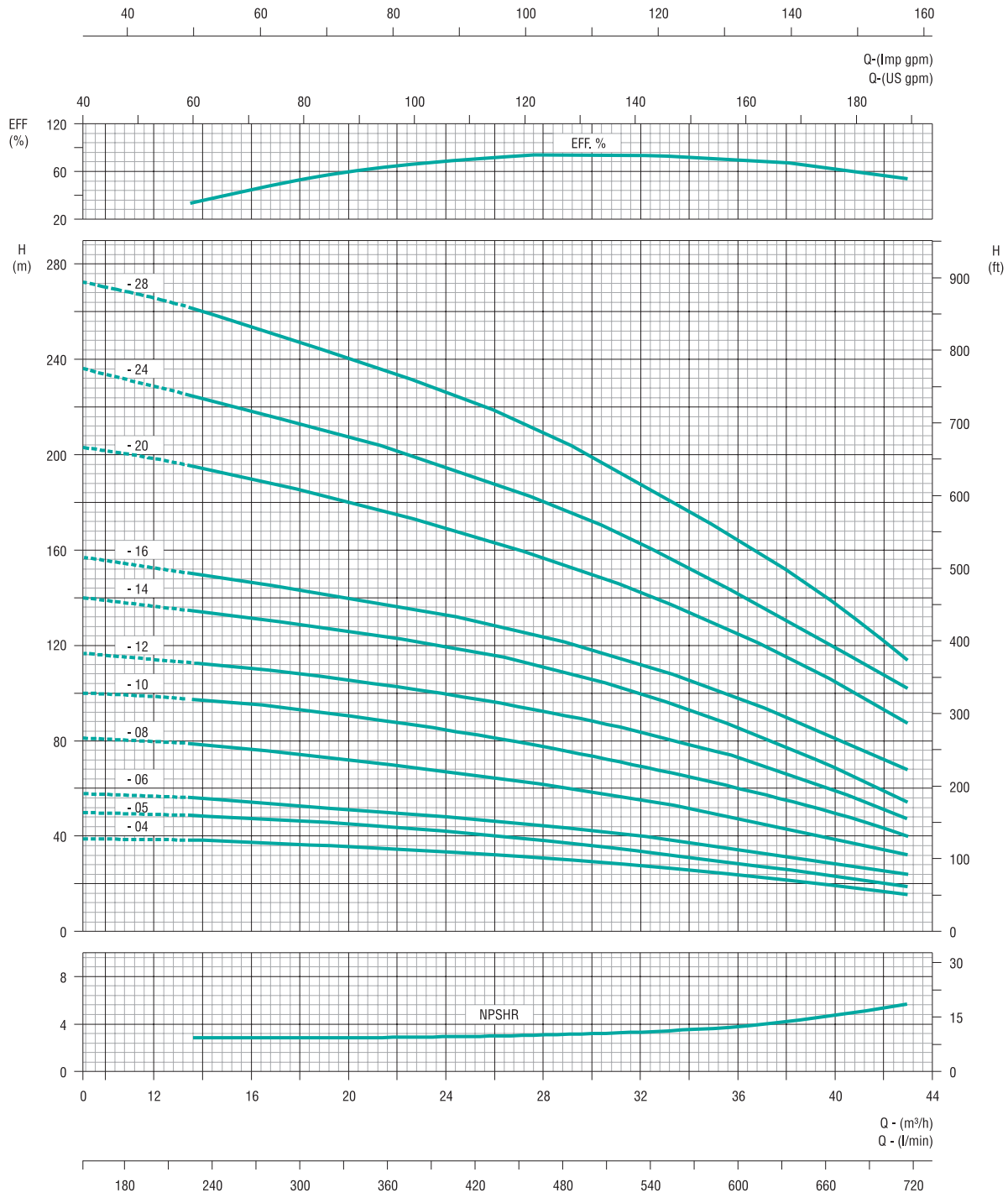
Pump Height(H) and Weight(Kg) are approximate.

All performance data is based on rated input.

PERFORMANCE CURVES

CB SERIES › **6"** › **32 m³/h**

Model : **TC 150 - 32** Outlet Size : **2½" / 3"** **2900 rpm**



Curve tolerance as per ISO : 9906, Annex - A. * Performance @ 3m minimum submergence.

PERFORMANCE DATA

CB SERIES › 6" › 32 m^3/h

Model : **TC 150 - 32** Outlet Size : **2½" / 3"** **2900 rpm**

Pump Model	Power		lpm	0	200.0	266.6	333.3	400.0	450	466.7	600	666.6	716.4
	kW	HP	m^3/h	0	12	16	20	24	27	28	36	40	43
TC150-32-04	3.7	5.0	TOTAL DYNAMIC HEAD IN METRES	39	38	37	36	32	31	32	23	19	15
TC150-32-05	4.5	6.0		51	49	48	45	41	38	36.5	29	22	19
TC150-32-06	5.5	7.5		58	56	54	51	48	45	44	35	28	25
TC150-32-08	7.5	10		81	78	76	72	67	63	62.5	49	39	32
TC150-32-10	9.3	12.5		100	97	95	90	85	78	76	60	50	40
TC150-32-12	11	15		118	112	110	105	100	92	94	73	59	48
TC150-32-14	13	17.5		140	134	131	127	120	111	112	85	67	52
TC150-32-16	15	20		158	153	147	140	132	123	124	98	80	67
TC150-32-20	18.5	25		202	198	190	180	170	157	156	125	105	89
TC150-32-24	22	30		236	230	218	210	195	180	180	141	119	101
TC150-32-28	26	35		272	268	253	240	227	210	208	164	138	112

Nett Weights & Dimensions

Pump Model	Power		Dimensions in mm		Nett Weight (kg)
	kW	HP	D	H	
TC150-32-04	3.7	5.0	144	716	28.40
TC150-32-05	4.5	6.0	144	806	32.60
TC150-32-06	5.5	7.5	144	896	37.30
TC150-32-08	7.5	10	144	1076	48.00
TC150-32-10	9.3	12.5	144	1256	56.00
TC150-32-12	11	15	144	1436	62.00
TC150-32-14	13	17.5	144	1616	68.00
TC150-32-16	15	20	144	1796	78.00
TC150-32-20	18.5	25	144	2156	100.00
TC150-32-24	22	30	144	2516	122.00
TC150-32-28	26	35	144	2876	144.00

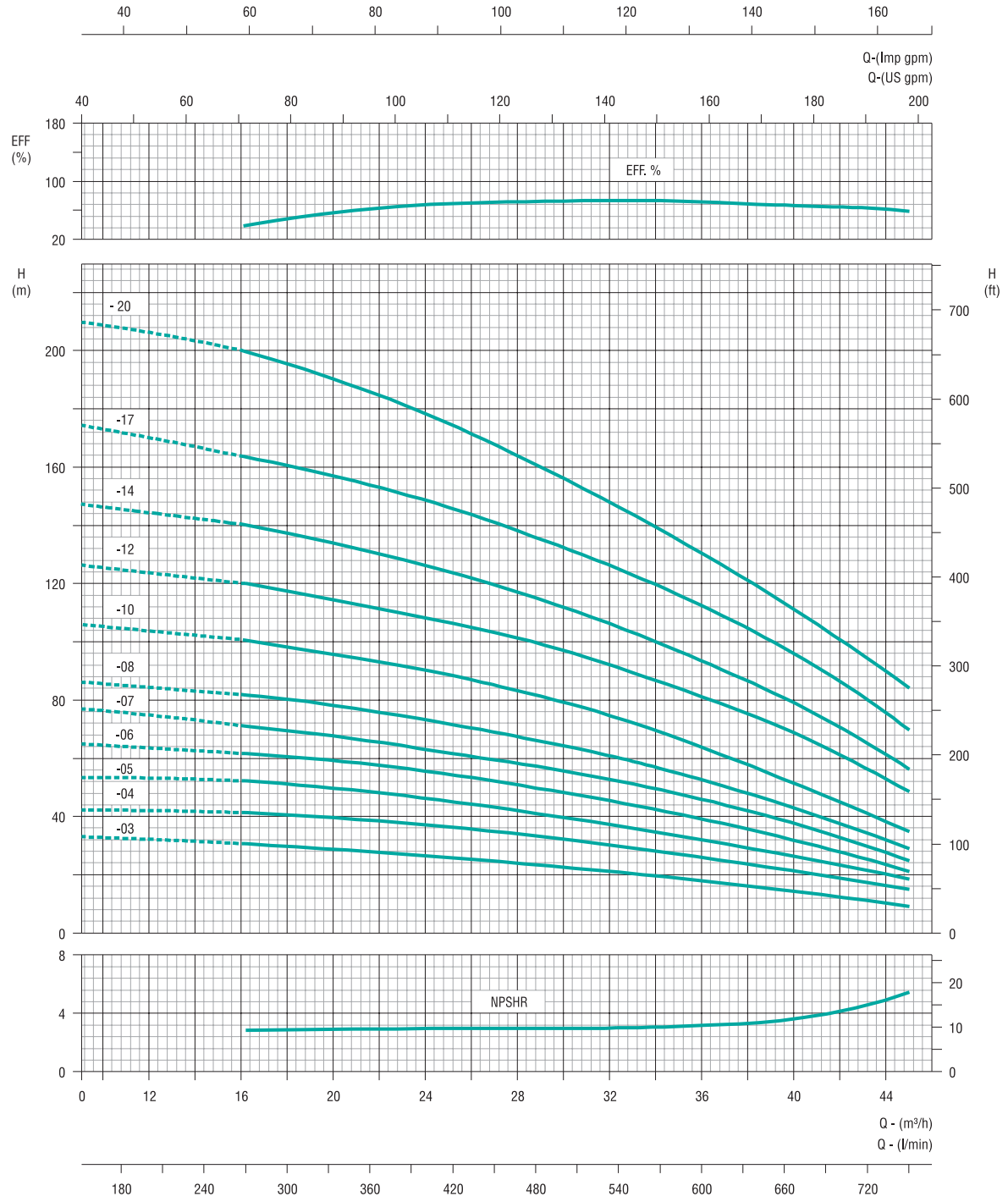
Pump Height(H) and Weight(Kg) are approximate.

All performance data is based on rated input.

PERFORMANCE CURVES

CB SERIES › **6"** › **38 m³/h**

Model : **TC 150 - 38** Outlet Size : **3"** **2900 rpm**



Curve tolerance as per ISO : 9906, Annex - A. * Performance @ 3m minimum submergence.

PERFORMANCE DATA

CB SERIES › 6" › 38 m^3/h

Model : **TC 150 - 38** Outlet Size : **3"** **2900 rpm**

Pump Model	Power		lpm	0	266.6	333.3	400.0	466.7	533.3	600.0	666.6	733.3
	kW	HP	m^3/h	0	16	20	24	28	32	36	40	44
TC150-38-03	3.7	5.0	TOTAL DYNAMIC HEAD IN METRES	32.5	31	29	26.5	24	21.5	18	14.5	10
TC150-38-04	4.5	6.0		42.5	41.5	39.8	37	34	30	26	21.5	16.5
TC150-38-05	5.5	7.5		53.5	52	50	46	42	37.5	32	26.5	18
TC150-38-06	7.5	10		65	61.5	59	55.5	51	45	39.5	32	22
TC150-38-07	7.5	10		77	71.5	68	63	58	53	45.5	38	25
TC150-38-08	9.3	12.5		86	82	78	73.5	67.5	61	52.5	43	29
TC150-38-10	11	15		106	100.5	95.5	90	83.5	75	63.5	51.5	35
TC150-38-12	13	17.5		126	120	114.5	103.5	101.5	92.5	81.5	64	49
TC150-38-14	15	20		147	140	134	126	117	106	94	79	56
TC150-38-17	18.5	25		174	164	156.5	148	138.5	126	113	95.5	70
TC150-38-20	22	30		210	200	190	178	164	148	130	111	85

Nett Weights & Dimensions

Pump Model	Power		Dimensions in mm		Nett Weight (kg)
	kW	HP	D	H	
TC150-38-03	3.7	5.0	144	666	31.20
TC150-38-04	4.5	6.0	144	766	37.00
TC150-38-05	5.5	7.5	144	866	42.80
TC150-38-06	7.5	10	144	966	48.60
TC150-38-07	7.5	10	144	1066	53.00
TC150-38-08	9.3	12.5	144	1166	58.80
TC150-38-10	11	15	144	1366	70.40
TC150-38-12	13	17.5	144	1566	82.00
TC150-38-14	15	20	144	1766	93.60
TC150-38-17	18.5	25	144	2066	111.00
TC150-38-20	22	30	144	2366	128.00

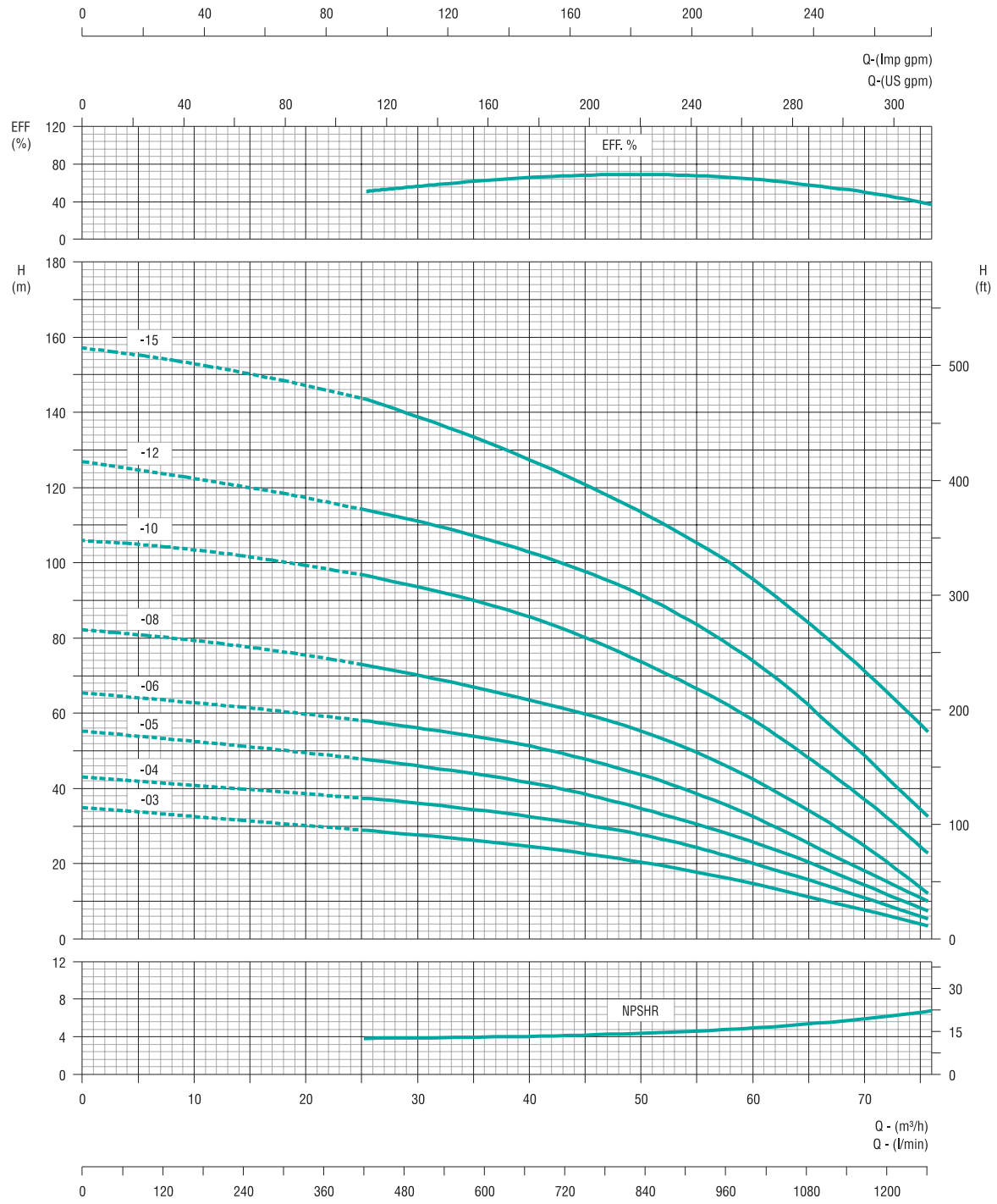
Pump Height(H) and Weight(Kg) are approximate.

All performance data is based on rated input.

PERFORMANCE CURVES

CB SERIES › **6"** › **46 m³/h**

Model : **TC 150 - 46** Outlet Size : **3" / 4"** **2900 rpm**



Curve tolerance as per ISO : 9906, Annex - A. * Performance @ 3m minimum submergence.

PERFORMANCE DATA

CB SERIES › 6" › 46 m^3/h

Model : **TC 150 - 46** Outlet Size : **3" / 4"** **2900 rpm**

Pump Model	Power		lpm	0	333.3	500.0	666.6	833.4	1000.0	1116.6
	kW	HP	m^3/h	0	25	30	40	50	60	70
TC150-46-03	4.5	6.0	TOTAL DYNAMIC HEAD IN METRES	35	29	27.5	24.8	20.5	14.8	7.5
TC150-46-04	5.5	7.5		43	37	36	32.5	28	20	11
TC150-46-05	7.5	10		55	47	46	41.5	35	25.5	14
TC150-46-06	9.3	12.5		65	58	56	51.5	43.5	32.5	18
TC150-46-08	11	15		82	73	70	63.5	55	42	24.5
TC150-46-10	15	20		106	97	93.5	86	73.5	58.5	37
TC150-46-12	18.5	25		126	114	111.5	103	92	74	48.5
TC150-46-15	22	30		157	144	138.5	127	113.5	95	71

Nett Weights & Dimensions

Pump Model	Power		Dimensions in mm		Nett Weight (kg)
	kW	HP	D	H	
TC150-46-03	4.5	6.0	144	698	34.50
TC150-46-04	5.5	7.5	144	808	38.50
TC150-46-05	7.5	10	144	918	42.50
TC150-46-06	9.3	12.5	144	1028	47.00
TC150-46-08	11	15	144	1248	56.00
TC150-46-10	15	20	144	1468	65.00
TC150-46-12	18.5	25	144	1688	74.00
TC150-46-15	22	30	144	2018	87.50

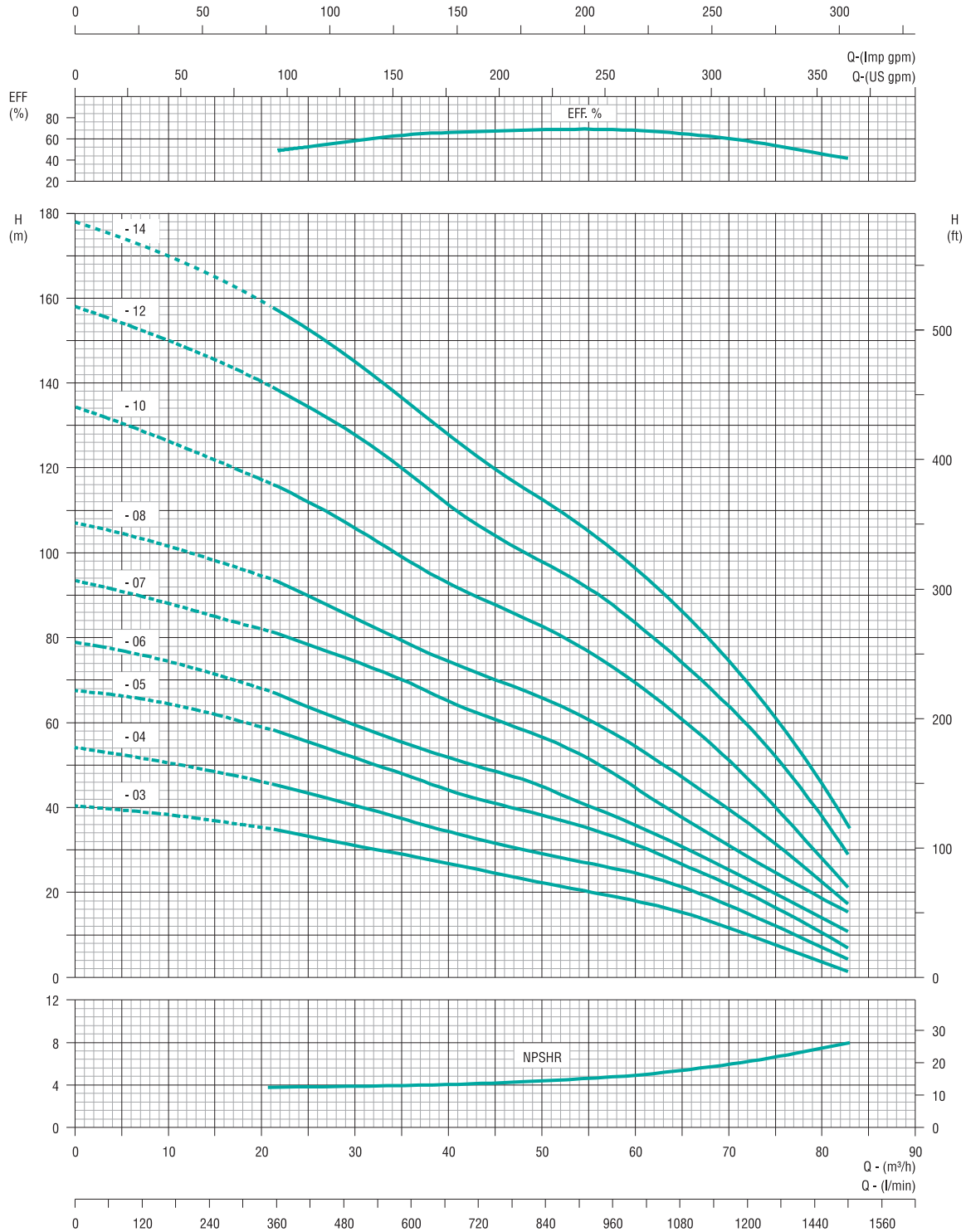
Pump Height(H) and Weight(Kg) are approximate.

All performance data is based on rated input.

PERFORMANCE CURVES

CB SERIES › **6"** › **60 m³/h**

Model : **TC 150 - 60** Outlet Size : **3" / 4"** **2900 rpm**



Curve tolerance as per ISO : 9906, Annex - A. * Performance @ 3m minimum submergence.

PERFORMANCE DATA

CB SERIES › 6" › 60 m^3/h

Model : **TC 150 - 60** Outlet Size : **3" / 4"** **2900 rpm**

Pump Model	Power		lpm	0	333.3	500.0	666.7	833.4	1000.0	1166.7	1378.0
	kW	HP	m^3/h	0	20	30	40	50	60	70	83
TC150-60-03	5.5	7.5	TOTAL DYNAMIC HEAD IN METRES	40	35.5	31.5	27	22.5	18	12	3.5
TC150-60-04	7.5	10		54	46.5	40.5	34.5	29	24.8	16	5
TC150-60-05	9.3	12.5		67	59	52	44	38	31.5	22	7.5
TC150-60-06	11	15		79	68	59	52	45	36	25	11
TC150-60-07	13	17.5		93	82	74.5	65	57	45	31	16
TC150-60-08	15	20		107	94.5	84.8	74.5	66	54.8	39.8	18
TC150-60-10	18.5	25		134	117	106	92.5	82.5	69.8	51.5	21
TC150-60-12	22	30		158	140	127.5	111.5	97.5	83.5	64	29
TC150-60-14	26	35		178	159	146	127	112	96	74	35

Nett Weights & Dimensions

Pump Model	Power		Dimensions in mm		Nett Weight (kg)
	kW	HP	D	H	
TC150-60-03	5.5	7.5	144	698	35.00
TC150-60-04	7.5	10	144	808	40.00
TC150-60-05	9.3	12.5	144	918	45.50
TC150-60-06	11	15	144	1028	51.00
TC150-60-07	13	17.5	144	1138	56.50
TC150-60-08	15	20	144	1248	63.20
TC150-60-10	18.5	25	144	1468	74.10
TC150-60-12	22	30	144	1688	87.00
TC150-60-14	26	35	144	1900	99.00

Pump Height(H) and Weight(Kg) are approximate.

All performance data is based on rated input.

CABLE SELECTION CHART

For Single Phase 3 wire (D.O.L.) Motor Maximum Length of Copper Cable

Motor Rating			CABLE SIZE IN SQUARE MILLIMETRES											
VOLTS	kW	HP	1.5	2.5	4	6	10	16	25	35	50	70	95	
230 VOLT 50Hz	0.37	0.5	120	200	320	480	810	1260	1900	2590	3580	4770	5920	**MAXIMUM LENGTH IN METRES**
	0.55	0.75	80	1030	220	320	550	850	1290	1760	2430	3230	4000	
	0.75	1.0	60	100	170	250	430	670	1010	1380	1910	2550	3460	
	1.1	1.5	40	70	120	180	300	470	710	980	1360	1850	2320	
	1.5	2.0	30	60	90	130	230	360	550	760	1060	1440	1820	
	2.2	3.0		40	60	90	150	230	350	490	680	920	1160	

For Three Phase 3 wire (D.O.L.) Motor Maximum Length of Copper Cable

Motor Rating			CABLE SIZE IN SQUARE MILLIMETRES																		
VOLTS	kW	HP	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	300	400	500	630
380 - 415 VOLT 50Hz	0.37	0.5	473	788	1260																
	0.55	0.75	398	660	1050																
	0.75	1	311	518	825																
	1.1	1.5	203	338	533	795															
	1.5	2	161	270	428	638															
	2.2	3	113	188	300	450	731														
	3	4	86	143	233	345	566	885													
	3.7	5	71	120	188	285	465	735													
	4	5.5	67	113	176	263	435	683	1043												
	4.5	6	64	105	169	255	420	653	998	1358											
	5.5	7.5	53	83	135	203	330	518	795	1088											
	7.5	10	38	60	98	150	233	375	563	773											
	9.3	12.5		53	83	128	210	330	503	683	938										
	11	15		45	75	105	173	278	413	563	795	1058									
	13	17.5			60	83	150	233	353	488	668	885									
	15	20			53	75	128	203	308	428	593	788	1005								
	18.5	25				60	105	158	248	338	461	615	788	938							
	22	30					90	135	210	285	398	533	675	810	953						
	26	35					75	113	173	233	330	458	578	705	825	953					
	30	40					68	98	158	210	300	390	503	585	698	803	938				
	37	50						83	128	173	240	315	405	480	563	645	758	863			
	45	60							105	143	195	270	345	420	503	585	698	795			
	55	75								120	165	218	285	353	413	480	570	656			
	63	85								109	150	173	255	315	368	428	503	578			
	75	100									120	165	218	263	308	353	420	480	563		
	93	125										135	173	210	248	285	338	383	450		
	110	150											150	180	218	248	300	345	405	454	
	130	175											128	154	188	218	255	300	345	398	439
	150	200												135	161	188	225	263	311	349	386
	166	225													135	165	195	225	263	300	334
	185	250														150	180	210	248	278	311
	220	300															143	165	191	215	237
	260	350																143	165	188	206
	300	400																124	143	158	180

MAXIMUM LENGTH IN METRES

The given cable lengths are the maximum one from POWER TO MOTOR, Exceeding the lengths mentioned will void warranty.

CABLE SELECTION CHART

For Three Phase 6 wire (S.D.) Motor Maximum Length of Copper Cable

Motor Rating			CABLE SIZE IN SQUARE MILLIMETRES																		
VOLTS	kW	HP	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	300	400	500	630
380 - 415 VOLT 50Hz	5.5	7.5	91	143	234	351	572	896	1377	1884											
	7.5	10	65	104	169	260	403	650	974	1338											
	9.3	12.5		91	143	221	364	572	870	1182	1624										
	11	15		78	130	182	299	481	714	974	1377	1832									
	13	17.5			104	143	260	403	611	844	1156	1533									
	15	20			91	130	221	351	533	740	1026	1364	1741								
	18.5	25				104	182	273	429	585	799	1065	1364	1624							
	22	30					156	234	364	494	688	922	1169	1403	1650						
	26	35					130	195	299	403	572	792	1000	1221	1429	1650					
	30	40					117	169	273	364	520	675	870	1013	1208	1390	1624				
	37	50						143	221	299	416	546	701	831	974	1117	1312	1494			
	45	60							182	247	338	468	598	727	870	1013	1208	1377			
	55	75								208	286	377	494	611	714	831	987	1137			
	63	85								188	260	299	442	546	637	740	870	1000			
	75	100									208	286	377	455	533	611	727	831	974		
	93	125										234	299	364	429	494	585	662	779		
	110	150											260	312	377	429	520	598	701	786	
	130	175											221	266	325	377	442	520	598	688	760
	150	200												234	279	325	390	455	539	604	669
	166	225													234	286	338	390	455	520	578
	185	250														260	312	364	429	481	539
	220	300															247	286	331	372	410
	260	350																247	286	325	357
	300	400																214	247	273	312

MAXIMUM LENGTH IN METRES

The given cable lengths are the maximum one from POWER TO MOTOR, Exceeding the lengths mentioned will void warranty.

FRICTION LOSS CHART

Friction loss in metres for 10 metres long new steel galvanized pipe (C=140)

Nominal Pipe Outer dia in mm / inches Volume rate of flow lps	25/ 1"	32/ 1¼"	40/ 1½"	50/ 2"	65/ 2½"	80/ 3"	100/ 4"	125/ 5"	150/ 6"
0.50	0.364								
1.00	1.315	0.341							
1.25	1.988	0.516	0.246						
1.60	3.140	0.814	0.388						
2.00		1.231	0.587						
2.50		1.861	0.888	0.282					
3.2		2.940	1.402	0.446	0.126				
4.0			2.120	0.674	0.190				
5.0			3.205	1.019	0.288				
8.0				2.433	0.887	0.313			
10.0				3.678	1.038	0.474	0.131		
12.5					1.570	0.716	0.198		
16					2.479	1.131	0.312	0.111	
20					3.747	1.710	0.472	0.167	
25						2.585	0.713	0.253	0.106
32						4.033	1.127	0.400	0.157
40							1.704	0.605	0.252
50							2.576	0.914	0.351
60								1.281	0.534
80								0.182	0.910
100								3.299	1.376
125									0.051

Friction loss in metres for 10 metres long new RPVC pipe (C=150)

Nominal Pipe Outer dia in mm / inches Volume rate of flow lps	40/ 1½"	50/ 2"	63/ 2½"	75/ 3"	90/ 3½"	110/ 4¼"	125/ 5"	140/ 5½"	160/ 6¼"
0.50	0.074								
1.00	0.268								
1.25	0.405	0.131							
1.60	0.640	0.211							
2.00	0.967	0.310							
2.50	1.462	0.483	0.150						
3.20	2.309	0.762	0.250	0.106					
4.0	3.491	1.153	0.377	0.160					
5.0		1.742	0.571	0.242					
8.0		4.161	1.363	0.577	0.237				
10.0			2.060	0.873	0.358	0.133			
12.5			3.114	1.319	0.542	0.201			
16			4.919	2.084	0.856	0.317	0.172		
20				3.151	1.293	0.479	0.260		
25					1.955	0.725	0.362	0.225	0.117
32					3.089	1.145	0.020	0.355	0.184
40						1.731	0.937	0.537	0.279
50						2.617	1.416	0.812	0.421
60						3.008	1.985	1.138	0.590
80							3.382	1.939	1.006
100								2.931	1.521
125									2.299

FRICTION LOSS CHART

Permissible ranges of volume rates of flow in l/s through Galvanized Steel Pipe to limit Friction Losses to 10 Percent of the Pipe Length.

Grade →	Light	Medium	Heavy
Nominal pipe dia in mm ↓	Rate of flow in lps	Rate of flow in lps	Rate of flow in lps
40	1.90 - 2.74	1.79 - 2.67	1.59 - 2.41
50	2.74 - 5.24	2.67 - 4.95	2.41 - 4.54
65	5.24 - 9.97	4.95 - 9.80	4.54 - 9.17
80	9.97 - 15.54	9.80 - 14.97	9.17 - 14.20
100	15.54 - 30.84	14.97 - 30.0	14.20 - 28.67
125	-	30.0 - 52.50	28.67 - 51.37
150	-	52.50 - 84.18	51.37 - 82.63

Permissible ranges of volume rates of flow in l/s through RPVC Pipe to limit Friction Losses to 10 Percent of the Pipe Length.

Grade →	Class (0.25Mpa)	Class (0.4Mpa)	Class (0.6Mpa)
Nominal pipe dia in mm ↓	Rate of flow in lps	Rate of flow in lps	Rate of flow in lps
40	-	-	Up to 2.04
50	-	-	2.04 - 3.70
63	-	3.80 - 7.24	3.70 - 6.77
75	-	7.24 - 11.47	6.77 - 10.76
90	1.50 - 19.58	11.47 - 18.50	10.76 - 17.41
110	19.58 - 33.25	18.59 - 31.71	17.41 - 29.75
125	33.25 - 46.63	31.71 - 44.33	29.75 - 41.44
140	46.63 - 62.92	44.33 - 59.79	41.44 - 55.97
160	62.92 - 89.28	59.79 - 84.95	55.97 - 79.76

CONVERSION CHART

FLOW RATE

litre per second l/s	litre per minute l/min	cubic meter per hour m^3/h	cubic foot per hour ft^3/h	cubic foot per minute ft^3/min	Imp.gallon per minute Imp.gal./min	US gallon per minute Us gal./min	Us barrel per day Is barrel/d (Petroleum)
1	60	3.6	127.133	2.1189	13.2	15.85	543.439
0.017	1	0.06	2.1189	0.0353	0.22	0.264	9.057
0.278	16.667	1	35.3147	0.5886	3.666	4.403	150.955
0.008	0.472	0.0283	1	0.0167	0.104	0.125	4.275
0.472	28.317	1.6990	60	1	6.229	7.480	256.475
0.076	4.546	0.2728	9.6326	0.1605	1	1.201	41.175
0.063	3.785	0.2271	8.0209	0.1337	0.833	1	34.286
0.002	0.110	0.0066	0.2339	0.0039	0.024	0.029	1

LIQUID

Cubic meter m^3	litre l	Milli litre ml	Imp. gallon Imp. Gal	US gallon US gal	cubic foot ft^3
1	1000	1×10^6	220	264.2	35.3147
0.001	1	1000	0.22	0.2642	0.0353
1×10^{-6}	0.001	1	2.2×10^{-4}	2.642×10^{-4}	3.53×10^{-5}
0.00455	4.546	4546	1	1.201	0.1605
0.00378	3.785	3785	0.8327	1	0.1337
0.0283	28.317	28317	6.2288	7.4805	1

LIQUID HEAD AND PRESSURE

newton per square meter N/m^2 (Pa)	kilo pascal kPa	bar bar	kilogram force per square centimeter Kgf/cm2	pound force per square inch psi	foot for water ft HO	meter of water m HO	millimeter of mercury mm Hg	inch of mercury in Hg
1	0.001	1×10^{-5}	1.02×10^{-5}	1.45×10^{-4}	3.35×10^{-4}	1.02×10^{-4}	0.0075	2.95×10^{-4}
1000	1	0.01	0.0102	0.145	0.335	0.102	7.5	0.295
1×10^{-5}	100	1	1.02	14.5	33.52	10.2	750.1	29.53
98,067	98.07	0.981	1	14.22	32.81	10	735.6	28.96
6895	6.895	0.069	0.0703	1	2.31	0.703	51.72	2.036
2984	2.984	0.03	0.0305	0.433	1	0.305	22.42	0.882
9789	9.789	0.098	0.1	1.42	3.28	1	73.42	2.891
133.3	0.133	0.0013	0.0014	0.019	0.045	0.014	1	0.039
3386	3.386	0.0338	0.0345	0.491	1.133	0.0345	25.4	1

LENGTH

millimeter mm	centimeter cm	meter m	inch in	foot ft	yard yd
1	0.1	0.001	0.0394	0.0033	0.0011
10	1	0.01	0.3937	0.0328	0.0109
1000	100	1	39.3701	3.2808	1.0936
25.4	2.54	0.0254	1	0.0833	0.0278
304.8	30.48	0.3048	12	1	0.3333
914.4	91.44	0.9144	36	3	1

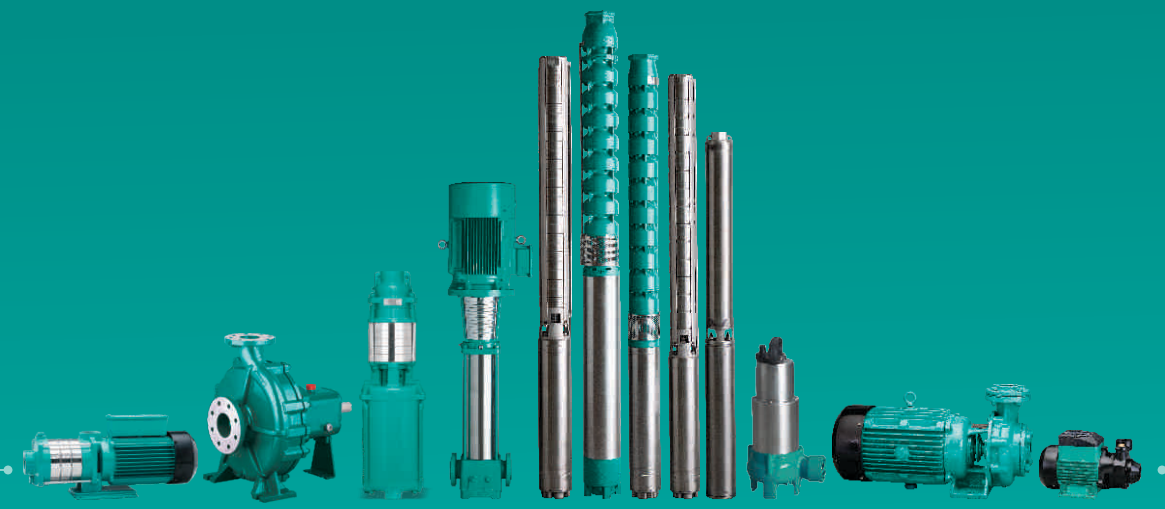
1 Kilometer = 1000 metres = 0.62137 miles 1 mile = 1609.37 metres =- 1.60934 kilometers

MASS

kilogram kg	pound lb	hundred weight (cwt)	tonne t	ton long tn	short ton sh tn
1	2.205	0.0197	0.001	9.84×10^{-4}	0.0011
0.454	1	0.0089	4.54×10^{-4}	4.46×10^{-4}	5.0×10^{-4}
50.802	112	1	0.0508	0.05	0.056
1000	2204.6	19.684	1	0.9842	1.1023
1016	2240	20	1.0161	1	1.102
907.2	2000	17.857	0.9072	0.8929	1

TEMPERATURE

To Convert From	To	Use Formula
Temperature Celsius, tc	Temperature Kelvin, tk	K = tc + 273.15
Temperature Fahrenheit, tf	Temperature Kelvin, tk	K = (tF + 459.67 / 1.8)
Temperature Celsius, tc	Temperature Fahrenheit, tf	F = 1.8 tc + 32
Temperature Fahrenheit, tf	Temperature Celsius, tc	C = (tF - 32) / 1.8
Temperature Kelvin, tk	Temperature Celsius, tc	C = tk - 273.15
Temperature Kelvin, tk	Temperature Fahrenheit, tf	F = 1.8tk - 459.67



THE POWER BEHIND THE FORCE

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 and Controls, Centrifugal Pumps, Inline Booster Pumps, Jet Self-priming 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 PUMPS