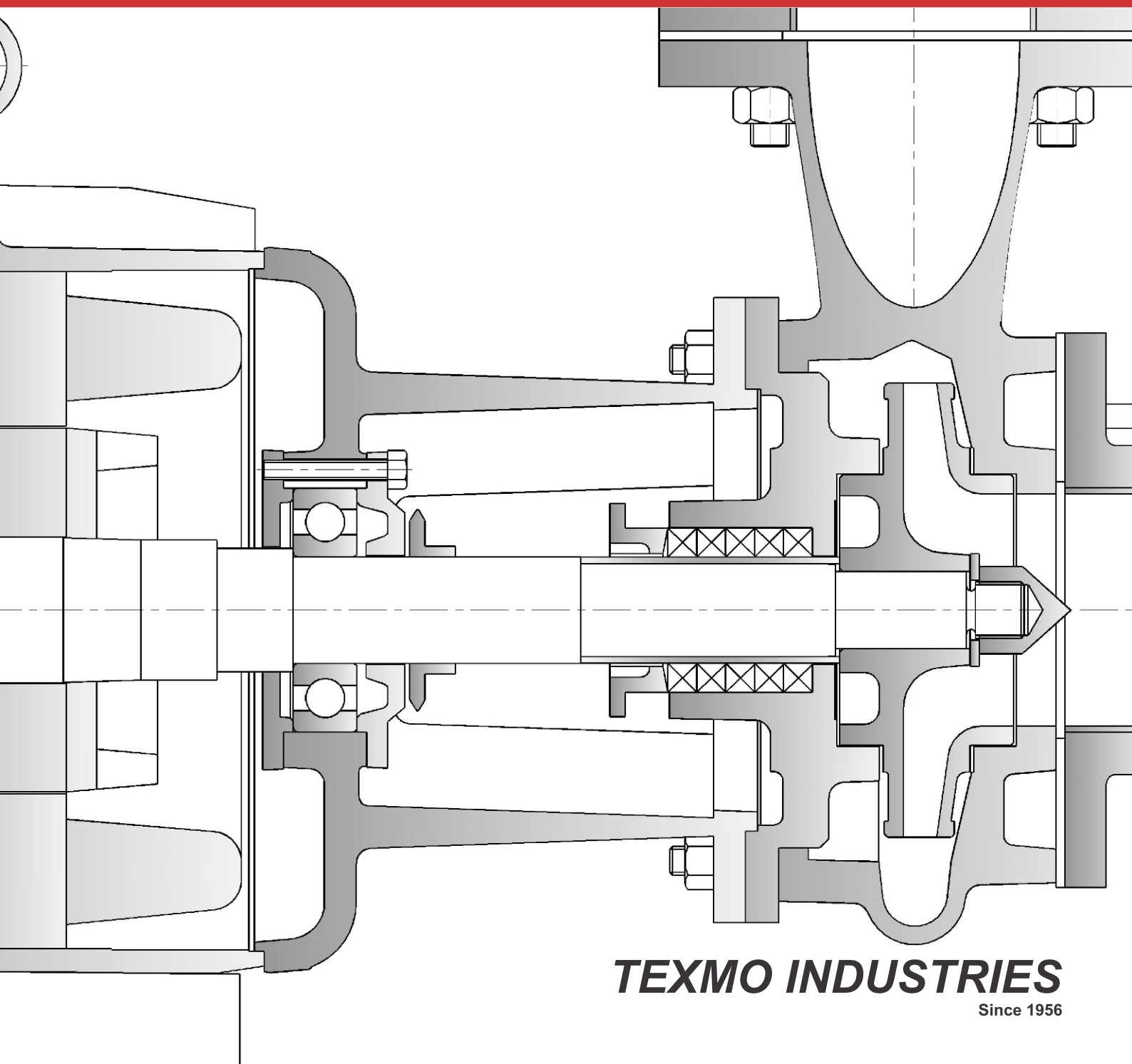


150 mm BOREWELL SUBMERSIBLE PUMPSET
PERFORMANCE CHART



TEXMO INDUSTRIES

Since 1956

GENERAL INFORMATION

PERFORMANCE RELATED SPECIFICATIONS

- Recommended voltage range :
(At motor terminal)

Single Phase	Three Phase
180 - 240 V	350 - 440 V
150 - 200 V (L-Series)	250 - 380 V (L-Series)

- Electric power supply : 415 / 220 V, 50 Hz, AC power supply

- Connection :

Group	DOL	SD
BWS	Up to 7.5 HP	7.5 HP & above

- Suitable overload relay for three phase and MCB for single phase products are to be provided as an electrical safety measure for the machine.
- Advisable to operate in the pump set in the recommended range for trouble free operation and to ensure a long life.
- Time interval between subsequent starts : 5 minutes (minimum)
- Pump sets are suitable for pumping clear, cold, non-aggressive water without any abrasive solid particles with the following characteristics

Temperature : 33°C Maximum

Allowable sand content : 50 mg / lit Maximum

Total Dissolved Solids : 3000 mg / lit Maximum

Hardness : 300 Maximum

pH value : 6.5 - 8.5

Direction of rotation : Anti clockwise when viewed from the delivery side of the pump

Others

- Performance values given are subject to change in accordance with prevailing voltage and frequency conditions.
- Head values given in the performance charts are exclusive of pipe friction and fitting losses. These losses need to be taken into account while calculating the actual total head before selecting a suitable pump set.
- In view of continuous improvements on existing products, information and performance values given in the catalogue are subject to change without notice.

Note : Shaded figures in the chart indicate the recommended operating range.



PUMP SELECTION

Irrigation wells and pumps are costly installations, which require efficient utilization. A major part of the energy used in agriculture is in pumping water. Hence efficient utilization of the limited energy resources calls for the selection of the most suitable pump, keeping in view the requirements of irrigation, characteristics of the well / water source, kind of power available, economic conditions of the farmer and other factors. It is a process of matching of well and pump characteristics for optimum water output.

CRITERIA FOR SELECTION

The main factors influencing the selection of pumping sets are :

- i. Peak water requirement
- ii. Yield of well or water source
- iii. Availability of energy

WATER REQUIREMENT, V IN L/D

It is the maximum quantity of water required in litres / day to meet out the daily crop water requirement and pumping rate in l/s is calculated by $V / (T \times 3600)$ where, T – Average pumping hours.

Relevant Details

1. Daily crop water requirement in litres or cm for different stages
2. Cropped area in m^2 ($m^2 \times cm \times 10$ will give water requirement in litres)

YIELD OF WELL OR WATER SOURCE, Y IN L/S

It is the recuperation rate at which water recharges into the well and it is the maximum rate at which water can be pumped out under steady draw down conditions. This can be assessed directly from pump testing results or converted from inch to lit./s referring to discharge table.

Relevant Details

1. Type of water source (Open well / Borewell / River / Sump)
2. Size of Borewell
3. Static water level below ground level (Water level when pump is switched off)
4. Dynamic water level below ground level (Expected level when pump is switched on)
5. Expected maximum low water level during summer
6. Proposed pump set erection depth
7. Existing / proposed pipe details (Sizes and lengths)
8. Vertical elevation from water source to discharge point
9. Number of fittings like (Tee, Bends, Valves etc..)

ENERGY AVAILABLE, HP

It is the quantitative and qualitative data on the power available for pumping out the water from the water source. This includes phase, sanctioned HP, frequency, voltage fluctuation and three and two phase power supply and time of which power is available.

Relevant Details

1. Main line to starter distance
2. Starter to pump set distance



Selection Procedure

Step 1 - Discharge calculation, Q

V – Maximum crop water requirement in litres, D in case of irrigation depth in cm for peak demand of water for the selected cropping pattern

A – Cropped area in m²

T – Allowed water filling time or pumping time in sec (considering power availability hrs)

Required pumping rate, $Q = V/T$ or $(D \times A \times 10) / T$

[In case of trying out maximum possible discharge, Q is to be assumed]

Step 2 – Comparison of discharge, Q with yield, Y

As indicated earlier, discharge rate has to be limited to 80% of the safe yield for trouble free performance and better pump life avoiding any dry running

Step 3 – Selection of pump size or series

Based on the calculated discharge rate, Q the suitable pump size is to be selected. In case of borewell submersibles, suitable pump series is to be selected considering borewell size also.

Step 4 – Total head calculation, H

Suction head, H_s

D_s – Size of suction pipe in mm

L_s – Length of suction pipe in m including equivalent length of pipe for the fittings

V_s – Vertical distance of pump set from working water level in m

Refer to pipe friction loss chart or table and read friction value, F_s% in m / 100 m length of suction pipe against discharge, Q and existing or selected pipe size, D_s.

Pipe friction in suction pipe, $F_s = (L_s \times F_s\%) / 100$

Suction head, $H_s = V_s + F_s$

Note: For Submersible pump sets the suction head value is zero

Delivery head, H_d

D_d – Size of delivery pipe in mm

L_d – Length of delivery pipe in m including equivalent length of pipe for the fittings

V_d – Vertical distance of discharge point from pump set level in m including ground elevation

Refer to pipe friction loss chart or table and read friction value, F_d% in m per 100 m length of delivery pipe, against discharge, Q and existing or selected pipe size, D_d.

Pipe friction in delivery pipe, $F_d = (L_d \times F_d\%) / 100$

Delivery head, $H_d = V_d + F_d$

Step 5 – Total head

Total head, $H = H_s + H_d + H_f + H_e$

H_f – Fitting loss in the entire pipeline system (Refer to fitting loss table)

H_e – Exit pressure head at discharge point as required



Step 6 – Energy requirement

Approx. energy requirement, $HP = (Q \times H) / (75 \times Ep)$

Ep – Pump efficiency value in fraction, which varies with product HP and pipe size

Select an appropriate pump model or stage for the given total head, H and discharge, Q referring to the product performance chart. Best efficiency point (declared duty point) is always preferred. If the HP of the selected pump model is less than the sanctioned HP, then we may proceed with the same. If not, assumed or calculated Q has to be reduced and above steps are to be repeated.

In case of borewell submersible pump sets, correct product series is to be decided based on the required pumping rate Q before selecting a suitable pump model and number of stages.

SELECTION OF PUMPS FOR PARALLEL CONNECTIONS

Requirement of parallel connections arises when the required discharge rate is not met with the available pump models. In this case two or more pumps with almost matching pressure head should be selected. Following factors are to be considered for parallel operations.

- a. Pumps of similar head characteristics are to be selected
- b. No pump should operate at its shut off head or above maximum permissible head
- c. No pump should operate below recommended head range as this leads to cavitation

SELECTION OF PUMPS FOR SERIES CONNECTIONS

Requirement of series connections arises when the required total head is not met with the available pump models. In this case two or more pumps with almost matching discharge rate should be selected. Series installations of pumps are to be spaced in such a way that neither the pump gets overloaded or ends up with discharge cavitation.

OTHER FACTORS AFFECTING THE PUMP PERFORMANCE (after installation)

1. Suction head variation
2. Dynamic water level i.e., draw down variation
3. Condition of existing pipe line including inner roughness / amount of sedimentation and the life
4. Recharge rate of water source
5. Frequency and voltage conditions

Cable selection

V_a – Actual voltage available in the field (Volts)

V_r – Rated voltage of the motor (Volts)

L_a – Actual cable length from starter to motor terminal (metre)

HP – Power of the selected motor

I – Full load current of the selected motor [For SD motors, it is $1/\sqrt{3}$ times the FL current] (Amperes)

L_c – Calculated equivalent cable length $(V_r \times L_a) / V_a$ (metre)

Refer to cable selection chart and select appropriate cable size for the given I and L_c values.

Follow the same procedure for selecting suitable wire / cable size for mail line to starter.



150 mm Borewell Submersibles (TRS / TRS-L)



PRODUCT FEATURES

- Available in radial flow impeller designs.
- High quality dynamically balanced LTB impellers.
- Special LTB and nitrile rubber bearing bushes for high wear resistance and longer life.
- Diffusers of gunmetal and housings of high grade cast iron to ensure long life.
- Easily rewindable Squirrel cage motor of water-cooled, designed for 350 - 440 V, (TRS) 280-380V (TRS-L) 50 Hz, AC power supply.
- Built in NRV with minimum friction.
- Stainless steel stator shell to prevent rust formation.
- Specially designed carbon thrust bearing.
- High quality seal rings and sand guards to protect motor from sand entry.
- High quality water-resistant polymer insulated wires for longer life even under adverse voltage conditions.
- Pressure diaphragm to compensate excess pressure due to heating up of filled water.

MATERIAL OF CONSTRUCTION

Part Name	Material	Part Name	Material
Impeller	LTB-2	Motor body	AISI 304
Diffuser	Gunmetal	Bearing housing	CI FG 200
Pump shaft	AISI 410 / 431	Motor shaft	55C8 / AISI 431
Sleeve	AISI 410	Journal bush	LTB-4 / Carbon
Bearing bush	NBR	Thrust bearing	AISI 420 / Carbon
Non return valve	AISI 304 / NBR	Winding wire	Polywrapped copper

APPLICATIONS





Domestic and community water supply | Water supply to high rise buildings, housing complexes, bungalows and industries | Cattle and poultry farms | Irrigation of farms | Dairies | Cooling water circulating systems | Fire fighting systems | Fountains



PERFORMANCE CHART

TARO "TRS 30 SERIES" - THREE PHASE RADIAL FLOW SUBMERSIBLE PUMPSETS FOR 150 mm (6") BOREWELLS

Approximate performance values of TRS 30 series at 415 V (-15% to +6%), 2880 rpm, 50 Hz AC power supply

Model Name		Connection	Motor Rating		Stages	Pipe Size (mm)	CAPACITY								FL Current (A)	
			kW	HP			Gpm	0.0	9.2	13.2	19.8	23.8	29.0	33.0		37.0
Pump	Motor						l/m	0.0	42.0	60.0	90.0	108.0	132.0	150.0	168	
							M ³ /hr	0.0	2.5	3.6	5.4	6.5	7.9	9.0	10.1	
								l/s	0.0	0.7	1.0	1.5	1.8	2.2	2.5	2.8
TRS 3009 @ 	TS 022	DOL	2.2	3	9	40	↑ HEAD VALUES IN METRES ↓	86.4	81.0	78.3	72.4	67.5	60.1	52.9	43.9	6.5
TRS 3015 F 	TS 037	DOL	3.7	5	15			144.0	135.0	130.5	120.6	112.5	100.2	88.2	73.2	10.0
TRS 3015 Q 	TS 037	DOL	3.7	5	15			144.0	135.0	130.5	120.6	112.5	100.2	88.2	73.2	10.0
TRS 3018 Q	TS 045	DOL	4.5	6	18			172.8	162.0	156.6	144.7	135.0	120.2	105.8	87.8	12.0
TRS 3020 F 	TS056	DOL	5.5	7.5	20			192.0	180.0	174.0	160.8	150.0	133.6	117.6	97.6	14.5
TRS 3020 Q	TS056	DOL	5.5	7.5	20			192.0	180.0	174.0	160.8	150.0	133.6	117.6	97.6	14.5
TRS 3023 Q	TS056	DOL	5.5	7.5	23			220.8	207.0	200.1	184.9	172.5	153.6	135.2	112.2	14.5
TRS 3030 Q	TS 075	SD	7.5	10	30			288.0	270.0	261.0	241.2	225.0	200.4	176.4	146.4	19.5

TARO "TRS 30 SERIES" - SINGLE PHASE RADIAL FLOW SUBMERSIBLE PUMPSETS FOR 150 mm (6") BOREWELLS

Approximate performance values of TRS 30 series at 220 V (-15% to +6%), 2880 rpm, 50 Hz AC power supply

Model Name		Connection	Motor Rating		Stages	Pipe Size (mm)	CAPACITY								FL Current (A)	
			kW	HP			Gpm	0.0	9.2	13.2	19.8	23.8	29.0	33.0		37.0
Pump	Motor						l/m	0.0	42.0	60.0	90.0	108.0	132.0	150.0	168	
							M ³ /hr	0.0	2.5	3.6	5.4	6.5	7.9	9.0	10.1	
								l/s	0.0	0.7	1.0	1.5	1.8	2.2	2.5	2.8
TRS 3022	SS056	DOL	5.5	7.5	22	40	HEAD VALUES IN METRES	211.2	198.0	191.4	176.9	165.0	147.0	129.4	107.4	40.0

Performance conforming to IS : 8034 and 9283

'F series' is available in 50mm delivery

Note : All 6" motors are ISI marked

DOL - Direct On Line

 - Star rated pumpsets

SD - Star Delta

Q - SS Tie bar

Maximum outer diameter : 142 mm

 - Against batch order

@ - Series also available in 50mm delivery

PRODUCT TYPE KEY

TRS 30 15 - Taro Radial flow Six inch 30 series 15 Stages

TS 037 - Three phase, Six inch motor (037 - Power code)



PERFORMANCE CHART

TARO "TRS 40 SERIES" - THREE PHASE RADIAL FLOW SUBMERSIBLE PUMPSETS FOR 150 mm (6") BOREWELLS

Approximate performance values of TRS 40 series at 415 V (-15% to +6%), 2880 rpm, 50 Hz AC power supply

Model Name		Connection	Motor Rating		Stages	Pipe Size (mm)	CAPACITY													FL Current (A)
			kW	HP			Gpm	0.0	15.8	19.8	23.8	29.0	33.0	35.6	39.6	43.6	46.2	52.8		
Pump	Motor						l/m	0.0	72	90	108	132.0	150.0	162	180.0	198.0	210.0	240		
							M ³ /hr	0.0	4.3	5.4	6.5	7.9	9.0	9.7	10.8	11.9	12.6	14.4		
								l/s	0.0	1.2	1.5	1.8	2.2	2.5	2.7	3.0	3.3	3.5	4.0	
TRS 4010	TS 037	DOL	3.7	5	10	50	↑ HEAD VALUES IN METRES ↓	94.0	92.0	90.3	87.0	82.3	78.3	75.0	71.3	66.5	62.0	52.5	10.0	
TRS 4012	TS 045	DOL	4.5	6	12			112.8	110.4	108.3	104.4	98.7	93.9	90.0	85.5	79.8	74.4	63.0	12.0	
TRS 4015	TS 056	DOL	5.5	7.5	15			141.0	138.0	135.4	130.5	123.4	117.4	112.5	106.9	99.8	93.0	78.8	14.5	
TRS 4015 Q	TS 056	DOL/SD	5.5	7.5	15			141.0	138.0	135.4	130.5	123.4	117.4	112.5	106.9	99.8	93.0	78.8	14.5	
TRS 4020	TS 075	SD	7.5	10	20			188.0	184.0	180.5	174.0	164.5	156.5	150.0	142.5	133.0	124.0	105.0	19.5	
TRS 4025	TS 093	SD	9.3	12.5	25			235.0	230.0	225.6	217.5	205.6	195.6	187.5	178.1	166.3	155.0	131.3	25.0	
TRS 4030	TS112	SD	11.0	15	30			282.0	276.0	270.8	261.0	246.8	234.8	225.0	213.8	199.5	186.0	157.5	29.0	
TRS 4036	TS 130H	SD	13	17.5	36			338.4	331.2	324.9	313.2	296.1	281.7	270.0	256.5	239.4	223.2	189.0	34.0	
TRS 4040	TS 150H	SD	15	20	40			376.0	368.0	361.0	348.0	329.0	313.0	300.0	285.0	266.0	248.0	210.0	39.0	

TARO "TRS 40 UH SERIES" - SINGLE PHASE RADIAL FLOW SUBMERSIBLE PUMPSETS FOR 150 mm (6") BOREWELLS

Approximate performance values of TRS 40 series at 415 V (-15% to +6%), 2880 rpm, 50 Hz AC power supply

Model Name		Connection	Motor Rating		Stages	Pipe Size (mm)	CAPACITY													FL Current (A)		
			kW	HP			Gpm	0.0	6.6	13.2	19.8	26.4	29.0	33.0	35.6	39.6	43.6	46.2	52.8		59.4	66.0
Pump	Motor						l/m	0.0	30	60	90	120	132	150	162	180	198	210	240	270	300	
							M ³ /hr	0.0	1.8	3.6	5.4	7.2	7.9	9.0	9.7	10.8	11.9	12.6	14.4	16.2	18.0	
								l/s	0.0	0.5	1.0	1.5	2.0	2.2	2.5	2.7	3.0	3.3	3.5	4.0	4.5	5.0
TRS 4006 UH	TS 037	DOL	3.7	5	6	50	↑ HEAD VALUES IN METRES ↓	102	100	97.7	94.1	88.3	85.5	80.7	77.3	72.0	66.5	62.7	52.7	40.9	26.5	10.0
TRS 4007 UH	TS 045	DOL	4.5	6	7			119	117	114	110	103	99.8	94.2	90.2	84.0	77.6	73.2	61.4	47.8	30.9	12.0
TRS 4010 UH	TS 056	DOL/SD	5.5	7.5	10			169	167	163	157	147	143	135	129	120	111	105	87.8	68.2	44.2	14.5
TRS 4012 UH	TS 075	SD	7.5	10	12			203	200	195	188	177	171	161	155	144	133	125	105	81.9	53.0	19.5
TRS 4015 UH	TS 093	SD	9.3	12.5	15			254	250	244	235	221	214	202	193	180	166	157	132	102	66.3	25.0
TRS 4018 UH	TS 112	SD	11.0	15	18			305	300	293	282	265	257	242	232	216	199	188	158	123	79.5	29.0
TRS 4021 UH	TS 130H	SD	13.0	17.5	21			356	350	342	329	309	299	283	271	252	233	219	184	143	92.8	34.0
TRS 4024 UH	TS 150H	SD	15.0	20	24			407	400	391	376	353	342	323	309	288	266	251	211	164	106	39.0

Performance conforming to IS : 8034 and 9283

Note : All 6" motors are ISI marked

D O L - Direct On Line

- Star rated pumpsets

S D - Star Delta

Q - SS Tie bar

Maximum outer diameter : 142 mm

⌘ - Single phase also available

PRODUCT TYPE KEY

TRS 40 10 - Taro Radial flow Six inch 40 series 10 Stages

TRS 40 20 - Taro Radial flow Six inch 40 series 20 Stages

TRS 40 12 UH - Taro Radial flow Six inch 40 series 12 Stages, Ultra Head

TS 037 - Three phase, Six inch motor (037 - Power code)

TS 075 - Three phase, Six inch motor (075 - Power code)

TS 075 - Three phase, Six inch motor (075 - Power code)



PERFORMANCE CHART

TARO "TRS 43 SERIES" - THREE PHASE RADIAL FLOW SUBMERSIBLE PUMPSETS FOR 150 mm (6") BOREWELLS

Approximate performance values of TRS 43 series at 415 V (-15% to +6%), 2880 rpm, 50 Hz AC power supply

Model Name		Connection	Motor Rating		Stages	Pipe Size (mm)	CAPACITY										FL Current (A)		
			kW	HP			Gpm	0.0	23.8	29.0	33.0	35.6	39.6	42.9	46.2	52.8		55.4	59.4
Pump	Motor						I/m	0.0	108	132	150	162.0	180.0	195.0	210.0	240.0	252	270	
							M ³ /hr	0.0	6.5	7.9	9.0	9.7	10.8	11.7	12.6	14.4	15.1	16.2	
								I/s	0.0	1.8	2.2	2.5	2.7	3.0	3.3	3.5	4.0	4.2	4.5
TRS 4310	TS 045	DOL	4.5	6	10	50	HEAD VALUES IN METRES	102.0	97.3	96.0	94.0	91.0	85.7	80.0	73.7	62.0	57.0	49.3	12
TRS 4312	TS 056	DOL	5.5	7.5	12			122.4	116.8	115.2	112.8	109.2	102.8	96.0	88.4	74.4	68.4	59.2	14.5
TRS 4312	TS 056	SD	5.5	7.5	12			122.4	116.8	115.2	112.8	109.2	102.8	96.0	88.4	74.4	68.4	59.2	14.5
TRS 4313	TS 056	DOL	5.5	7.5	13			132.6	126.5	124.8	122.2	118.3	111.4	104.0	95.8	80.6	74.1	64.1	14.5
TRS 4316	TS 075	SD	7.5	10	16			163.2	155.7	153.6	150.4	145.6	137.1	128.0	117.9	99.2	91.2	78.9	19.5
TRS 4320	TS 093	SD	9.3	12.5	20			204.0	194.7	192.0	188.0	182.0	171.3	160.0	147.3	124.0	114.0	98.7	25
TRS 4325	TS 112	SD	11	15	25			255.0	243.3	240.0	235.0	227.5	214.2	200.0	184.2	155.0	142.5	123.3	29
TRS 4330	TS 130	SD	13	17.5	30			306.0	292.0	288.0	282.0	273.0	257.0	240.0	221.0	186.0	171.0	148.0	34
TRS 4330	TS 150	SD	15	20	30			306.0	292.0	288.0	282.0	273.0	257.0	240.0	221.0	186.0	171.0	148.0	39
TRS 4332	TS 150H	SD	15	20	32			326.4	311.5	307.2	300.8	291.2	274.1	256.0	235.7	198.4	182.4	157.9	39

TARO "TRS 43 SERIES" - SINGLE PHASE RADIAL FLOW SUBMERSIBLE PUMPSETS FOR 150 mm (6") BOREWELLS

Approximate performance values of TRS 43 series at 220 V (-15% to +6%), 2880 rpm, 50 Hz AC power supply

Model Name		Connection	Motor Rating		Stages	Pipe Size (mm)	CAPACITY										FL Current (A)		
			kW	HP			Gpm	0.0	23.8	29.0	33.0	35.6	39.6	42.9	46.2	52.8		55.4	59.4
Pump	Motor						I/m	0.0	108	132	150	162.0	180.0	195.0	210.0	240.0	252	270	
							M ³ /hr	0.0	6.5	7.9	9.0	9.7	10.8	11.7	12.6	14.4	15.1	16.2	
								I/s	0.0	1.8	2.2	2.5	2.7	3.0	3.3	3.5	4.0	4.2	4.5
TRS 4308	SS 037	DOL	3.7	5	8	50	HEAD VALUES IN METRES	81.6	77.9	76.8	75.2	72.8	68.5	64.0	58.9	49.6	45.6	39.5	28

Performance conforming to IS : 8034 and 9283

DOL - Direct On Line

SD - Star Delta

Maximum outer diameter : 142 mm

 - Star rated pumpsets

 - Against batch order

 - ISI marked sets

Note : All 6" motors are ISI marked

PRODUCT TYPE KEY

TRS 43 08 - Taro Radial flow Six inch 43 series 08 Stages

TS 037 - Three phase, Six inch motor (037 - Power code)

TRS 43 12 - Taro Radial flow Six inch 43 series 12 Stages

TS 056 - Three phase, Six inch motor (056 - Power code)



PERFORMANCE CHART

TARO "TRS 45 / 45 UH SERIES" - THREE PHASE RADIAL FLOW SUBMERSIBLE PUMPSETS FOR 150 mm (6") BOREWELLS

Approximate performance values of TRS 45 / 45 UH series at 415 V (-15% to +6%), 2880 rpm, 50 Hz AC power supply

Model Name		Connection	Motor Rating		Stages	Pipe Size (mm)	CAPACITY										FL Current (A)		
			kW	HP			Gpm	0.0	29.0	33.0	39.6	46.2	52.8	59.4	66.0	72.6			
Pump	Motor						l/m	0.0	132	150	180	210	240	270	300	330			
							M ³ /hr	0.0	7.9	9.0	10.8	12.6	14.4	16.2	18.0	19.8			
								l/s	0.0	2.2	2.5	3.0	3.5	4.0	4.5	5.0	5.5		
TRS 4507	TS 037	DOL	3.7	5	7	50	↑ HEAD VALUES IN METRES ↓	81.2	68.6	67.2	63.7	59.5	56.0	50.4	44.1	37.1	10.0		
TRS 4508 S	TS 037	DOL	3.7	5	8			92.8	78.4	76.8	72.8	68.0	64.0	57.6	50.4	42.4	10.0		
TRS 4510	TS 056	DOL/SD	5.5	7.5	10			116.0	98.0	96.0	91.0	85.0	80.0	72.0	63.0	53.0	14.5		
TRS 4513	TS 075	SD	7.5	10	13			150.8	127.4	124.8	118.3	110.5	104.0	93.6	81.9	68.9	19.5		
TRS 4516	TS 093	SD	9.3	12.5	16			185.6	156.8	153.6	145.6	136.0	128.0	115.2	100.8	84.8	25		
TRS 4520	TS 112	SD	11	15	20			232.0	196.0	192.0	182.0	170.0	160.0	144.0	126.0	106.0	29		
TRS 4530	TS 150	SD	15	20	30			348.0	294.0	288.0	273.0	255.0	240.0	216.0	189.0	159.0	39		
TRS 4505 UH	TS037	DOL	3.7	5	5	65	↑ HEAD VALUES IN METRES ↓	83.4	72.7	70.9	67.8	64.2	60.0	54.9	48.8	41.4	10.0		
TRS 4506 UH	TS045	DOL	4.5	6	6			100.1	87.2	85.1	81.3	77.0	72.0	65.9	58.5	49.6	12.0		
TRS 4508 UH	TS056	DOL	5.5	7.5	8			133.4	116.3	113.4	108.4	102.7	96.0	87.9	78.0	66.2	14.5		
TRS 4508 UH	TS056	SD	5.5	7.5	8			133.4	116.3	113.4	108.4	102.7	96.0	87.9	78.0	66.2	14.5		
TRS 4510 UH	TS075	SD	7.5	10	10			166.8	145.3	141.8	135.5	128.4	120.0	109.9	97.5	82.7	19.5		
TRS 4512 UH	TS093	SD	9.3	12.5	12			200.2	174.4	170.2	162.6	154.1	144.0	131.8	117.0	99.3	25.0		
TRS 4515 UH	TS112	SD	11	15	15			250.2	218.0	212.7	203.3	192.6	180.0	164.8	146.3	124.1	29.0		

TARO "TRS 45 SERIES" - THREE PHASE RADIAL FLOW SUBMERSIBLE PUMPSETS FOR 150 mm (6") BOREWELLS

Approximate performance values of TRS 45 series at 220 V (-15% to +6%), 2880 rpm, 50 Hz AC power supply

Model Name		Connection	Motor Rating		Stages	Pipe Size (mm)	CAPACITY										FL Current (A)		
			kW	HP			Gpm	0.0	29.0	33.0	39.6	46.2	52.8	59.4	66.0	72.6			
Pump	Motor						l/m	0.0	132	150	180	210	240	270	300	330			
							M ³ /hr	0.0	7.9	9.0	10.8	12.6	14.4	16.2	18.0	19.8			
								l/s	0.0	2.2	2.5	3.0	3.5	4.0	4.5	5.0	5.5		
TRS 4507	SS 037	DOL	3.7	5	7	50	↑ HEAD VALUES IN METRES ↓	81.2	68.6	67.2	63.7	59.5	56.0	50.4	44.1	37.1	28.0		

Performance conforming to IS : 8034 and 9283

Note : All 6" motors are ISI marked

'UH' series pumpsets are suitable for 6½" borewells

DOL - Direct On Line

- HO use temporary

SD - Star Delta

- Star rated pumpsets

Maximum outer diameter : 142 mm

- ISI marked sets

PRODUCT TYPE KEY

TRS 45 10 - Taro Radial flow Six inch 45 series 10 Stages

TS 056 - Three phase, Six inch motor (056 - Power code)



PERFORMANCE CHART

TARO "TRS 50 / 50 UH SERIES" - THREE PHASE RADIAL FLOW SUBMERSIBLE PUMPSETS FOR 150 mm (6") BOREWELLS

Approximate performance values of TRS 50 / 50 UH series at 415 V (-15% to +6), 2880 rpm, 50 Hz AC power supply

Model Name		Connection	Motor Rating		Stages	Pipe Size (mm)	CAPACITY										FL Current (A)
			kW	HP			Gpm	0.0	46.2	52.8	59.4	66.0	72.6	85.8	92.4	99.0	
Pump	Motor						l/m	0.0	210	240	270.0	300	330.0	390.0	420	450	
							M ³ /hr	0.0	12.6	14.4	16.2	18.0	19.8	23.4	25.2	27.0	
								l/s	0.0	3.5	4.0	4.5	5.0	5.5	6.5	7.0	7.5
TRS 5005 ▲	TS 037	DOL	3.7	5	5	50	HEAD VALUES IN METRES	52.5	47.0	45.0	42.8	40.0	36.3	28.8	24.3	20.0	10
TRS 5008 ▲	TS 056	DOL	5.5	7.5	8			84.0	75.2	72.0	68.4	64.0	58.0	46.0	38.8	32.0	14.5
TRS 5010 ▲	TS 075	SD	7.5	10	10			105.0	94.0	90.0	85.5	80.0	72.5	57.5	48.5	40.0	19.5
TRS 5012 ▲	TS 093	SD	9.3	12.5	12			126.0	112.8	108.0	102.6	96.0	87.0	69.0	58.2	48.0	25
TRS 5015 ▲	TS 112	SD	11	15	15			157.5	141.0	135.0	128.3	120.0	108.8	86.3	72.8	60.0	29
TRS 5020 ▲	TS 150	SD	15	20	20			210.0	188.0	180.0	171.0	160.0	145.0	115.0	97.0	80.0	39
TRS 5004 UH	TS037	DOL	3.7	5	4	65	HEAD VALUES IN METRES	68.0	57.5	54.0	51.5	48.0	44.3	35.4	30.3	24.8	10
TRS 5005 UH	TS045	DOL	4.5	6	5			85.0	71.9	67.5	64.4	60.0	55.3	44.2	37.9	30.9	12
TRS 5006 UH	TS056	DOL	5.5	7.5	6			102	86.3	81.0	77.3	72.0	66.4	53.0	45.5	37.1	14.5
TRS 5006 UH ☒	TS056	SD	5.5	7.5	6			102	86.3	81.0	77.3	72.0	66.4	53.0	45.5	37.1	14.5
TRS 5008 UH	TS075	SD	7.5	10	8			136	115	108	103	96.0	88.5	70.7	60.6	49.5	19.5
TRS 5010 UH	TS093	SD	9.3	12.5	10			170	144	135	129	120	111	88.4	75.8	61.9	25
TRS 5012 UH	TS112	SD	11	15	12	204	173	162	155	144	133	106	90.9	74.3	29		

Performance conforming to IS : 8034 and 9283

Note : All 6" motors are ISI marked

'UH' series pumpsets are suitable for 6½" borewells

D O L - Direct On Line

☒ - Against batch order

S D - Star Delta

Maximum outer diameter : 142 mm

▲ - ISI marked sets

PRODUCT TYPE KEY

TR S 50 05 - Taro Radial flow Six inch 50 series 05 Stages

TR S 50 04 UH - Taro Radial flow Six inch 50 series 04 Stages (Ultra Head)

T S 037 - Three phase, Six inch motor (037 - Power code)

T S 037 - Three phase, Six inch motor (037 - Power code)



150 mm Borewell Submersibles (TRS-R)



PRODUCT FEATURES

- Available in radial flow impeller designs.
- Dynamically balanced impellers of gunmetal (radial) and cast iron (mixed) with SS Clads.
- Special LTB and nitrile rubber bearing bushes for high wear resistance and longer life.
- Easily rewindable Squirrel cage motor of water-cooled, designed for 280-380V (TRS-L) 50 Hz, AC power supply.
- Diffusers and housings of high grade cast iron
- Stainless steel stator shell to prevent rust formation.
- Specially designed carbon thrust bearing.
- High quality seal rings and sand guards to protect motor from sand entry.
- High quality water-resistant polymer insulated wires for longer life even under adverse voltage conditions.
- Pressure diaphragm to compensate excess pressure due to heating up of filled water.

MATERIAL OF CONSTRUCTION

Part Name	Material	Part Name	Material
Impeller	Gun metal	Motor body	AISI 304
Diffuser	FG 200	Bearing housing	CI - FG 200
Pump shaft	AISI 410	Motor shaft	AISI 410 / 55C8
Sleeve	AISI 410	Journal bush	LTB-4 / Carbon
Bearing bush	NBR	Thrust bearing	SS / Carbon
Non return valve	-	Winding wire	Polywrapped copper

APPLICATIONS

Domestic and community water supply | Water supply to high rise buildings, housing complexes, bungalows and industries | Cattle and poultry farms | Irrigation of farms | Dairies | Cooling water circulating systems | Fire fighting systems | Fountains



PERFORMANCE CHART

TARO "TRS 30 R - 40 R SERIES" - THREE PHASE RADIAL FLOW SUBMERSIBLE PUMPSETS FOR 150 mm (6") BOREWELLS

Approximate performance values of TRS 30 R - 40 R series at 350 V (-15% to +6%), 2880 rpm, 50 Hz AC power supply

Model Name		Connection	Motor Rating		Stages	Pipe Size (mm)	CAPACITY										FL Current (A)			
			kW	HP			Gpm	0.0	9.2	13.2	19.8	26.4	30.4	33.0	35.6	39.6		46.2	52.8	
Pump	Motor						l/m	0	42	60	90.0	120	138	150.0	162	180	210	240		
							M ³ /hr	0.0	2.5	3.6	5.4	7.2	8.3	9.0	9.7	10.8	12.6	14.4		
								l/s	0.0	0.7	1.0	1.5	2.0	2.3	2.5	2.7	3.0	3.5	4.0	
TRS 3009 RF	TS 022 R	DOL	2.2	3.0	9	50	HEAD VALUES IN METRES	83.6	77.5	74.3	67.5	57.7	50.3	44.5						7.0
TRS 3015 RF	TS 037 R	DOL	3.7	5.0	15			139	129	124	113	96.2	83.8	74.1						
TRS 3020 RF	TS 045 R	DOL	4.5	6.0	20	186		172	165	150	128	112	98.9							13.0
TRS 3020 RF	TS 056 R	DOL	5.5	7.5	20	186		172	165	150	128	112	98.9							15.5
TRS 3023 R	TS 056 R	DOL	5.5	7.5	23	40		214	198	190	173	148	128	114						15.5
TRS 3518 R	TS056 R	DOL	5.5	7.5	18	175			166	161	151	137	126	118	108	92.3	60.2			15.5
TRS 4006 R	TS 022 R	DOL	2.2	3.0	6	50		55.8		52.5	50.4	47.5	45.4	43.8	42.0	38.9	32.6	26.5		7.0
TRS 4010 R ▲	TS 037 R	DOL	3.7	5.0	10	93.0			87.5	83.9	79.2	75.7	73.0	70.0	64.9	54.3	44.2			11.5
TRS 4012 R ▲	TS 045 R	DOL	4.5	6.0	12	112			105	101	95.0	90.8	87.6	84.0	77.8	65.1	53.0			13
TRS 4015 R	TS 056 R	DOL/SD	5.5	7.5	15	140			131	126	119	114	109	105	97.3	81.4	66.3			15.5

Performance confirming to IS : 8034 and 9283

DOL - Direct On Line

SD - Star Delta

Maximum outer diameter : 142 mm

▲ - ISI marked sets

PRODUCT TYPE KEY

TRS 30 15 R F - Taro Radial flow Six inch 30 series 15 Stages R - Series, Flange

TRS 40 15 R - Taro Radial flow Six inch 40 series 15 Stages R - Series

TS 037 R - Three phase, Six inch motor (037 - Power code) R - Series

TS 056 R - Three phase, Six inch motor (056 - Power code) R - Series



PERFORMANCE CHART

TARO "TRS 43 R / 45 R SERIES" - THREE PHASE RADIAL FLOW SUBMERSIBLE PUMPSETS FOR 150 mm (6") BOREWELLS

Approximate performance values of TRS 43 R / 45 R series at 350 V (-15% to +6%), 2880 rpm, 50 Hz AC power supply

Model Name		Connection	Motor Rating		Stages	Pipe Size (mm)	CAPACITY										FL Current (A)					
			kW	HP			Gpm	0.0	19.8	26.4	30.4	33.0	35.6	39.6	46.2	52.8		59.4	66.0	72.6		
Pump	Motor					50	HEAD VALUES IN METRES	M ³ /hr	0.0	5.4	7.2	8.3	9.0	9.7	10.8	12.6	14.4	16.2	18.0	19.8		
								l/s	0.0	1.5	2.0	2.3	2.5	2.7	3.0	3.5	4.0	4.5	5.0	5.5		
TRS 4305 R	TS 022	DOL	2.2	3	5	50	↑	50.0	47.1	45.0	43.3	41.9	40.3	37.5	32.1	25.3	16.4				7	
TRS 4308 R ▲	TS 037	DOL	3.7	5	8			80.0	75.4	72.1	69.3	67.1	64.4	60.0	51.4	40.5	26.2					10.5
TRS 4310 R ▲	TS 045	DOL	4.5	6	10			100	94.2	90.1	86.6	83.8	80.6	75.0	64.2	50.6	32.8					13
TRS 4312 R	TS 056	DOL/SD	5.5	7.5	12			120	113	108	104	100	96.7	90.0	77.0	60.7	39.4					15.5
TRS 4313 R ∑	TS 056	DOL	5.5	7.5	13			130	122	117	112	109	104	97.5	83.5	65.8	42.6					15.5
TRS 4504 R	TS 022	DOL	2.2	3	4			39.0		34.8	34.0	33.5	32.9	31.9	30.0	27.5	24.7	21.4	18.4			7.0
TRS 4506 R ▲	TS 037	DOL	3.7	5	6			58.5		52.2	51.0	50.3	49.4	47.9	45.0	41.3	37.1	32.1	27.6			11.5
TRS 4508 R ▲ #	TS 037	DOL	3.7	5	8			78.0		69.6	68.0	67.0	65.8	63.8	60.0	55.0	49.4	42.8	36.8			13.0
TRS 4510 R ▲ ∑	TS 056	DOL/SD	5.5	7.5	10			97.5		87.0	85.0	83.8	82.3	79.8	75.0	68.8	61.8	53.5	46.0			15.5

Performance conforming to IS : 8034 and 9283

- Pumps combined with "RL" (350V)

DOL - Direct On Line

∑ - Single phase also available

SD - Star Delta

Maximum outer diameter : 142 mm

▲ - ISI marked sets

PRODUCT TYPE KEY

TRS 43 10 R - Taro Radial flow Six inch 43 series 10 Stages R - Series

TRS 45 08 R - Taro Radial flow Six inch 45 series 08 Stages R - Series

TS 045 R - Three phase, Six inch motor (045 - Power code) R - Series

TS 037 R - Three phase, Six inch motor (037 - Power code) R - Series



PERFORMANCE CHART

TARO "TRS 50 R SERIES" - THREE PHASE RADIAL FLOW SUBMERSIBLE PUMPSETS FOR 150 mm (6") BOREWELLS

Approximate performance values of TRS 50 R series at 350 V (-15% to +6%), 2880 rpm, 50 Hz AC power supply

Model Name		Connection	Motor Rating		Stages	Pipe Size (mm)	CAPACITY										FL Current (A)		
			kW	HP			Gpm	0.0	35.6	39.2	46.2	52.8	59.4	66	79.2	92.4			
Pump	Motor					50	HEAD VALUES IN METRES												
							M ³ /hr	0.0	9.7	10.7	12.6	14.4	16.2	18	21.6	25.2			
								l/s	0.0	2.7	3.0	3.5	4.0	4.5	5.0	6.0	7.0		
TRS 5005 R ▲ #	TS 037 R	DOL	3.7	5	5	↑	50.0	44.7	43.7	41.9	39.85	37.5	34.83	28.43	20.4	11.5			
TRS 5006 R # ☒	TS 045 R	DOL	4.5	6	6	↓	60.0	53.6	52.5	50.3	47.82	45.0	41.796	34.116	24.4	13			
TRS 5008 R ☒	TS 056 R	DOL	5.5	7.5	8	↓	80.0	71.4	69.9	67.1	63.76	60.0	55.728	45.488	32.6	15.5			

Performance conforming to IS : 8034 and 9283

DOL - Direct On Line

SD - Star Delta

Maximum outer diameter : 142 mm

- Pumps combined with "RL" (350V)

☒ - Against batch order

☒ - Single phase also available

▲ - ISI marked sets

PRODUCT TYPE KEY

TRS 50 05 R - Taro Radial flow Six inch 50 series 05 Stages R - Series

TS 037 R - Three phase, Six inch motor (037 - Power code) R - Series



150 mm Stainless Steel Borewell Submersibles (TSS)



PRODUCT FEATURES

- Light weight, compact design and easy to install
- AISI 304 graded impellers and stage housings for corrosion resistance.
- Efficient hydraulic design with less power consumption.
- Built in NRV with minimum friction.
- Inside strainer construction and water lubricated rubber bushes.
- Easily rewindable Squirrel cage motor of water-cooled, designed for 350 - 440 V, 50 Hz, AC power supply.
- Stainless steel stator shell to prevent rust formation.
- Specially designed carbon thrust bearing.
- High quality seal rings and sand guards to protect motor from sand entry.
- High quality water-resistant polymer insulated wires for longer life even under adverse voltage conditions.
- Pressure diaphragm to compensate excess pressure due to heating up of filled water.

MATERIAL OF CONSTRUCTION

Part Name	Material	Part Name	Material
Impeller	AISI 304	Motor body	AISI 304
Bowl	AISI 304	Bearing housing	CI FG 200
Pump shaft	AISI 304 / 431	Motor shaft	55C8
Sleeve	AISI 410	Journal bush	LTB-4
Bearing bush	NBR	Thrust bearing	AISI 420-Carbon
Non return valve	AISI 304	Winding wire	Polywrap insulated copper

APPLICATIONS

Irrigation (Drip / Sprinkler) | Municipal water supply | Dewatering of mine | Industrial water supply | Cooling water circulating systems | Water treatment | Fire fighting | Aqua culture | Salt fields



PERFORMANCE CHART

TARO "TSS 47 SERIES" - THREE PHASE RADIAL FLOW STAINLESS STEEL SUBMERSIBLES FOR 150 mm BOREWELLS

Approximate performance values of TSS 47 series at 415V (-15% to +6%), 2880 rpm, 50 Hz AC power supply

Model Name		Connection	Motor Rating		Stages	Pipe Size (mm)	CAPACITY										FL Current (A)
			kW	HP			Gpm	0.0	39.6	46.2	52.8	59.4	66.0	72.6	85.8	99.0	
Pump	Motor						l/m	0.0	180	210	240	270	300	330	390	450	
							M ³ /hr	0.0	10.8	12.6	14.4	16.2	18.0	19.8	23.4	27.0	
								l/s	0.0	3.0	3.5	4.0	4.5	5.0	5.5	6.5	7.5
TSS 4703	TS 022	DOL	2.2	3	3	50	HEAD VALUES IN METRES	34.0	31.5	30.7	29.7	28.5	27.0	24.5	18.2	10.3	6.5
TSS 4703 T	TS 022	DOL	2.2	3	3			34.0	31.5	30.7	29.7	28.5	27.0	24.5	18.2	10.3	6.5
TSS 4704 T	TS030	DOL	3	4	4			45.3	42.0	40.9	39.6	38.0	36.0	32.7	24.3	13.8	
TSS 4705	TS 037	DOL	3.7	5	5			56.7	52.5	51.2	49.5	47.6	45.0	40.8	30.4	17.2	10
TSS 4705 T	TS 037	DOL	3.7	5	5			56.7	52.5	51.2	49.5	47.6	45.0	40.8	30.4	17.2	10

Performance confirming to IS : 8034 and 9283

Note : All 6" motors are ISI marked

DOL - Direct On Line

☒ - Against batch order

SD - Star Delta

Maximum outer diameter : 146 mm

T - Turbo set also available

PRODUCT TYPE KEY

TSS 4705 - Taro Stainless steel(Radial flow), Six inch 47 series 05 Stages

TS 037 - Three phase, Six inch motor (037 - Power code)



150 mm Mixed Flow Borewell Submersibles (TMS)



PRODUCT FEATURES

- Available in mixed flow impeller designs.
- Dynamically balanced LTB impellers with SS clads.
- Special LTB and nitrile rubber bearing bushes for high wear resistance and longer life.
- Bowls of high-grade cast iron.
- Easily rewindable Squirrel cage motor of water-cooled, designed for 350 - 440 V, (TMS) 280-380V (TMS-L) 50 Hz, AC power supply.
- Built in NRV with minimum friction.
- Stainless steel stator shell to prevent rust formation.
- Specially designed carbon thrust bearing.
- High quality seal rings and sand guards to protect motor from sand entry.
- High quality water-resistant polymer insulated wires for longer life even under adverse voltage conditions.
- Pressure diaphragm to compensate excess pressure due to heating up of filled water.

MATERIAL OF CONSTRUCTION

Part Name	Material	Part Name	Material
Impeller	LTB-2	Motor body	AISI 304
Bowl	CI FG 200 A	Bearing housing	CI FG 200
Pump shaft	AISI 410 / 431	Motor shaft	55C8 / AISI 431
Sleeve	AISI 410	Journal bush	LTB-4 / Carbon
Bearing bush	NBR	Thrust bearing	SS / Carbon
Non return valve	AISI 304 / NBR	Winding wire	Polywrapped copper

APPLICATIONS

Domestic and community water supply | Water supply to high rise buildings, housing complexes, bungalows and industries | Cattle and poultry farms | Irrigation of farms | Dairies | Cooling water circulating systems | Fire fighting systems | Fountains



PERFORMANCE CHART

TARO "TMS 55 / 60 SERIES" - THREE PHASE MIXED FLOW SUBMERSIBLE PUMPSETS FOR 150 mm (6") BOREWELLS

Approximate performance values of TMS 55 / 60 series at 415 V (-15% to +6%), 2880 rpm, 50 Hz AC power supply

Model Name		Connection	Motor Rating		Stages	Pipe Size (mm)	CAPACITY										FL Current (A)		
							Gpm	0.0	46.2	52.8	66.0	85.8	106	112	125	139		152	165
Pump	Motor		kW	HP			l/m	0.0	210	240	300	390	480	510	570	630	690	750	
							M ³ /hr	0.0	12.6	14.4	18.0	23.4	28.8	30.6	34.2	37.8	41.4	45.0	
							l/s	0.0	3.5	4.0	5.0	6.5	8.0	8.5	9.0	10.5	11.5	12.5	
TMS 5503	TS 022	DOL	2.2	3	3	65	28.5	26.4	25.8	24.6	22.5	20.0	19.1	18.0	14.0				6.5
TMS 5505 ▲	TS 037	DOL	3.7	5	5		47.5	44.0	43.0	41.0	37.5	33.3	31.8	30.0	23.3				10.0
TMS 5508	TS 056	DOL/SD	5.5	7.5	8		76.0	70.4	68.8	65.6	60.0	53.2	50.8	48.0	37.2				14.5
TMS 5510 ▲	TS 075	SD	7.5	10	10		95.0	88.0	86.0	82.0	75.0	66.5	63.5	60.0	46.5				19.5
TMS 5512 ▲	TS 093	SD	9.3	12.5	12		114.0	105.6	103.2	98.4	90.0	79.8	76.2	72.0	55.8				25.0
TMS 5515 ▲	TS 112	SD	11	15	15		142.5	132.0	129.0	123.0	112.5	99.8	95.3	90.0	69.8				29.0
TMS 5520 ▲	TS 150	SD	15	20	20		190.0	176.0	172.0	164.0	150.0	133.0	127.0	120.0	93.0				39.0
TMS 6004 ▲	TS 037	DOL	3.7	5	4	65	41.0			36.6	34.1	31.1	30.0	28.5	25.0	22.0	17.9	10	
TMS 6005 ▲	TS 045	DOL	4.5	6	5		51.3			45.8	42.6	38.9	37.5	35.6	31.3	27.5	22.4	12	
TMS 6006 ▲	TS 056	DOL/SD	5.5	7.5	6		61.5			54.9	51.2	46.7	45.0	42.8	37.5	33.0	26.9	14.5	
TMS 6008 ▲	TS 075	SD	7.5	10	8		82.0			73.2	68.2	62.2	60.0	57.0	50.0	44.0	35.8	19.5	
TMS 6010 ▲	TS 093	SD	9.3	12.5	10		102.5			91.5	85.3	77.8	75.0	71.3	62.5	55.0	44.8	25	
TMS 6012 ▲	TS 112	SD	11	15	12		123.0			109.8	102.3	93.3	90.0	85.5	75.0	66.0	53.7	29	
TMS 6014	TS 130	SD	13	17.5	14		143.5			128.1	119.4	108.9	105.0	99.8	87.5	77.0	62.7	34	
TMS 6016	TS 150	SD	15	20	16		164.0			146.4	136.4	124.4	120.0	114.0	100.0	88.0	71.6	39	
TMS 6020	TS 187	SD	18.7	25	20		205.0			183.0	170.5	155.5	150.0	142.5	125.0	110.0	89.5	45	

Performance conforming to IS : 8034 and 9283

DOL - Direct On Line

SD - Star Delta

Maximum outer diameter : 142 mm

▲ - ISI marked sets

PRODUCT TYPE KEY

TMS 55 05 - Taro Mixed flow Six inch 55 series 05 Stages

TMS 60 04 - Taro Mixed flow Six inch 60 series 04 Stages

TS 037 - Three phase, Six inch motor (037 - Power code)


TS 037 - Three phase, Six inch motor (037 - Power code)



PERFORMANCE CHART

TARO "TMS 65 / 70 SERIES" - THREE PHASE MIXED FLOW SUBMERSIBLE PUMPSETS FOR 150 mm (6") BOREWELLS

Approximate performance values of TMS 65 / 70 series at 415 V (-15% to +6%), 2880 rpm, 50 Hz AC power supply

Model Name		Connection	Motor Rating		Stages	Pipe Size (mm)	CAPACITY											FL Current (A)		
			kW	HP			Gpm	0.0	86	106	112	119	139	152	165	185	205		218	231
Pump	Motor						l/m	0.0	390	480	510	540	630	690	750	840	930	990	1050	
							M ³ /hr	0.0	23.4	28.8	30.6	32.4	37.8	41.4	45.0	50.4	55.8	59.4	63.0	
								l/s	0.0	6.5	8.0	8.5	9.0	10.5	11.5	12.5	14.0	15.5	16.5	17.5
TMS 6503 F	TS 037	DOL	3.7	5	3	65	HEAD VALUES IN METRES	31.5	27.8	26.3	25.5	24.8	22.5	20.7	19.1	16.2	13.5			10.0
TMS 6504 F	TS 045	DOL	4.5	6	4			42.0	37.1	35.1	34.0	33.1	30.0	27.6	25.5	21.6	18.0			12.0
TMS 6505 F	TS 056	DOL	5.5	7.5	5			52.5	46.3	43.8	42.5	41.3	37.5	34.5	31.8	27.0	22.5			14.5
TMS 6507	TS 075	SD	7.5	10	7			73.5	64.9	61.4	59.5	57.9	52.5	48.3	44.6	37.8	31.5			19.5
TMS 6508	TS 093	SD	9.3	12.5	8			84.0	74.1	70.1	68.0	66.1	60.0	55.2	50.9	43.2	36.0			25.0
TMS 6510 F	TS 112	SD	11	15	10			105.0	92.7	87.7	85.0	82.7	75.0	69.0	63.7	54.0	45.0			29.0
TMS 6512	TS 130	SD	13	17.5	12			126.0	111.2	105.2	102.0	99.2	90.0	82.8	76.4	64.8	54.0			34.0
TMS 6514	TS 150	SD	15	20	14			147.0	129.7	122.7	119.0	115.7	105.0	96.6	89.1	75.6	63.0			39.0
TMS 6517 F	TS 187	SD	18.7	25	17			178.5	157.5	149.0	144.5	140.5	127.5	117.3	108.2	91.8	76.5			45.0
TMS 7004 	TS 056	DOL	5.5	7.5	4	75		43.0		35.0	34.4	33.8	31.6	30.0	28.2	25.0	21.4	18.6	16.0	14.5
TMS 7004	TS 056	SD	5.5	7.5	4			43.0		35.0	34.4	33.8	31.6	30.0	28.2	25.0	21.4	18.6	16.0	14.5
TMS 7005 ▲	TS 075	SD	7.5	10	5			53.8		43.8	43.0	42.3	39.5	37.5	35.3	31.3	26.8	23.3	20.0	19.5
TMS 7006 ▲	TS 093	SD	9.3	12.5	6			64.5		52.5	51.6	50.7	47.4	45.0	42.3	37.5	32.1	27.9	24.0	25.0
TMS 7008	TS 112	SD	11	15	8			86.0		70.0	68.8	67.6	63.2	60.0	56.4	50.0	42.8	37.2	32.0	29.0
TMS 7010	TS 150	SD	15	20	10			107.5		87.5	86.0	84.5	79.0	75.0	70.5	62.5	53.5	46.5	40.0	39.0
TMS 7013	TS 187	SD	18.7	25	13			139.8		113.8	111.8	109.9	102.7	97.5	91.7	81.3	69.6	60.5	52.0	45.0
TMS 7016	TS 225	SD	22.5	30	16			172.0		140.0	137.6	135.2	126.4	120.0	112.8	100.0	85.6	74.4	64.0	52.0

Performance conforming to IS : 8034 and 9283

Note : All 6" motors are ISI marked

'F' series is also available in 75 mm delivery

DOL - Direct On Line

▲ - ISI marked sets

SD - Star Delta

Maximum outer diameter : 142 mm

 - Star rated pumpsets

PRODUCT TYPE KEY

TMS 65 03 - Taro Mixed flow Six inch 65 series 03 Stages

TMS 70 04 - Taro Mixed flow Six inch 70 series 04 Stages

TS 037 - Three phase, Six inch motor (037 - Power code)

TS 056 - Three phase, Six inch motor (056 - Power code)



PERFORMANCE CHART

TARO "TMS 75 / 100 SERIES" - THREE PHASE MIXED FLOW SUBMERSIBLE PUMPSETS FOR 150 mm (6") BOREWELLS

Approximate performance values of TMS 75 / 100 series at 415 V (-15% to +6%), 2880 rpm, 50 Hz AC power supply

Model Name		Connection	Motor Rating		Stages	Pipe Size (mm)	CAPACITY																			FL Current (A)	
			kW	HP			Gpm	0.0	112	119	139	152	165	185	205	218	231	244	257	271	284	297	317	356	396		
Pump	Motor						l/m	0.0	510	540	630	690	750	840	930	990	1050	1110	1170	1230	1290	1350	1440	1620	1800		
							M ³ /hr	0.0	30.6	32.4	37.8	41.4	45.0	50.4	55.8	59.4	63.0	66.6	70	73.8	77.4	81.0	86.4	97.2	108		
								l/s	0.0	8.5	9.0	10.5	11.5	12.5	14.0	15.5	16.5	17.5	18.5	20	20.5	21.5	22.5	24.0	27.0	30.0	
TMS 7505	TS 093	SD	9.3	12.5	5	75	↑	55.0	44.3	43.5	41.3	39.5	37.5	34.5	31.0	28.3	25.5	22.5	19.5								25.0
TMS 7506	TS 112	SD	11	15	6		↓	66.0	53.1	52.2	49.5	47.4	45.0	41.4	37.2	33.9	30.6	27.0	23.4								
TMS 10004 D ⚡	TS 056	DOL	5.5	7.5	4	100	↑ HEAD VALUES IN METRES ↓	44.0				36.4	35.6	34.2	32.8	31.7	30.6	29.4	28.2	26.9	25.6	24.1	21.7	16.6	11.3	17.2	
TMS 10005 D ⚡	TS 075	SD	7.5	10	5			55.0				45.5	44.5	42.8	41.0	39.6	38.2	36.8	35.2	33.7	32.0	30.1	27.2	20.7	14.2	22.5	
TMS 10006 D ⚡	TS 112	SD	11	15	6			66.0				54.5	53.3	51.3	49.1	47.5	45.8	44.1	42.2	40.4	38.3	36.1	32.6	24.8	17.0	29.0	
TMS 10007 D ⚡	TS 130	SD	13	17.5	7			77.0				63.6	62.2	59.9	57.3	55.4	53.5	51.5	49.3	47.1	44.7	42.1	38.0	29.0	19.8	34.0	
TMS 10008 D ⚡	TS 150	SD	15	20	8			88.0				72.7	71.1	68.4	65.5	63.4	61.1	58.8	56.3	53.8	51.1	48.2	43.4	33.1	22.6	39.0	

Performance conforming to IS : 8034 and 9283

DOL - Direct On Line

SD - Star Delta

Maximum outer diameter : 142 mm

Note : All 6" motors are ISI marked

⚡ - R series only available

PRODUCT TYPE KEY

TMS 75 05 - Taro Mixed flow Six inch 75 series 05 Stages

TS 093 - Three phase, Six inch motor (093 - Power code)

TMS 100 03 - Taro Mixed flow Six inch 100 series 03 Stages

TS 056 - Three phase, Six inch motor (056 - Power code)



PERFORMANCE CHART

TARO "TMS 55 R / 60 R SERIES" - THREE PHASE MIXED FLOW SUBMERSIBLE PUMPSETS FOR 150 mm (6") BOREWELLS

Approximate performance values of TMS 55 R / 60 R series at 415 V (-15% to +6%), 2880 rpm, 50 Hz AC power supply

Model Name		Connection	Motor Rating		Stages	Pipe Size (mm)	CAPACITY													FL Current (A)
			kW	HP			Gpm	0.0	39.6	52.8	66.0	79.2	92.4	99.0	105.6	118.8	132.0	145.2	158.4	
Pump	Motor						l/m	0.0	180.0	240.0	300.0	360.0	420.0	450.0	480.0	540.0	600.0	660.0	720.0	
							M ³ /hr	0.0	10.8	14.4	18.0	21.6	25.2	27.0	28.8	32.4	36.0	39.6	43.2	
							l/s	0.0	3.0	4.0	5.0	6.0	7.0	7.5	8.0	9.0	10.0	11.0	12.0	
TMS 5505 R	TS 037 R	DOL	3.7	5	5	↑ 65 ↓	↑ HEAD VALUES IN METRES ↓	49.0	42.7	40.4	37.9	35.0	31.6	29.7	27.7	23.3	18.3			11.5
TMS 5506 R	TS 045 R	DOL	4.5	6	6			58.8	51.2	48.5	45.5	42.0	37.9	35.6	33.2	28.0	22.0			13.0
TMS 5508 R	TS 056 R	DOL/SD	5.5	7.5	8			78.4	68.3	64.6	60.6	56.0	50.6	47.5	44.3	37.3	29.3			15.5
TMS 6004 R	TS 037 R	DOL	3.7	5	4	↑ 65 ↓	↑ HEAD VALUES IN METRES ↓	40.0		35.0	33.3	31.3	29.2	28.0	26.7	23.9	20.6	16.9	12.9	11.5
TMS 6005 R	TS 045 R	DOL	4.5	6	5			50.0		43.8	41.6	39.1	36.5	35.0	33.4	29.9	25.8	21.1	16.1	13.0
TMS 6006 R	TS 056 R	DOL	5.5	7.5	6			60.0		52.5	50.0	47.0	43.8	42.0	40.1	35.9	30.9	25.4	19.4	15.5
TMS 6006 R	TS 056 R	SD	5.5	7.5	6			60.0		52.5	50.0	47.0	43.8	42.0	40.1	35.9	30.9	25.4	19.4	15.5
TMS 6008 R	TS 056 R	SD	5.5	7.5	8			80.0		70.0	66.6	62.6	58.4	56.0	53.4	47.8	41.2	33.8	25.8	21.5

Performance conforming to IS : 8034 and 9283

@ - 'F series' is also available in 75 mm delivery

Note : All 6" motors are ISI marked

DOL - Direct On Line

⊠ - Against batch order

SD - Star Delta

⌚ - Single phase also available

Maximum outer diameter : 142 mm

⊕ - SI Impeller also available

PRODUCT TYPE KEY

TMS 55 05 R - Taro Mixed flow Six inch 55 series 05 Stages, R - series

TMS 60 06 R - Taro Mixed flow Six inch 60 series 06 Stages, R - series

TS 037 R - Three phase, Six inch motor (037 - Power code), R - series

TS 056 R - Three phase, Six inch motor (056 - Power code), R - series



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