



OSWAL

STAR

Stainless Steel 4" Submersible Pumps for 4" Motor

OSP-2, OSP-3, OSP-5, OSP-8 & OSP-14





Stainless Steel Pump

OSWAL submersible pumps & motors are well known for its quality, Reliability & excellent for all type of service purpose. **OSWAL** submersible pumps & motors are manufactured under supervision of highly qualified technical team with a stage wise rigid inspection procedure under TQM concepts.

OSWAL team are well known for their excellent services after sales.

The company has also obtained BIS certificate for ISI mark and through continuous process improvements & streamlining the quality system at par with the international standards has now acquired ISO 9001:2000 certifications.

Application of Bore well submersible pumps are Hospitals, Water circulation systems, Water supply systems of Government, Irrigation, Farms, Drip & sprinkler irrigation, Gardening, Nurseries, Domestic water supply, Multi-storeyed Building & Industrial water supply systems & Hotels.

OSWAL has successfully developed its energy efficient and cost efficient pump manufacturing of fully fabricated S.S.-304 with a quality level as per international standard. The company has offering quality product at a lowest price .the company has exporting pump sets to developed countries and the same quality is supply in domestic market.

OSWAL Submersible Pumpsets of modular design suitable for under-water operation for universal fit, all mounting dimensions of pumps and motors are in accordance with NEMA standards. **OSWAL** submersible pumpset are of completely S.S.-304 construction with fabricated technology, light weight easy for handling, life longevity, pump shaft using Duplex steel for high wear resistance.

OSWAL WATER FILLED AND WATER COOLED SUBMERSIBLE MOTORS confirm to IS : 9283.& Pump set confirm to IS : 8034.

GENERAL DATA

- * Duty Dish : 30 to 235 LPM.
- * Pumped liquid : Clean water free from solid, Chemically Natural & Close the characteristics of water.
- * Max. liquid temperature : 35°C.
- * Max. Quantity of sand : 40gm/m³.
- * Minimum Suction head required : 1.5 meter.
- * Starts/hours : max. 15 to 20

GENERAL DATA

PUMP MODEL TYPE KEY
EXAMPLE

- * Model type _____ OSP 14
- * Nominal flow rate *16.67 lpm _____

PUMPED LIQUIDS

- * Clean, thin, non-aggressive liquids without solid particles.

OPERATING CONDITIONS

- * Flow Rate (min. to max.) - 1-18 M³/h
- * Total Head, H : Maximum 350 m.

Maximum Liquid Temperature:

Motor	Installation		
	Flow velocity-past motor	Vertical	Horizontal
4"	0.15 m/s	40°C	40°C

Operating pressure: Maximum 67 bar.

CURVE CONDITIONS

- * The conditions below apply to the curves shown on the following pages :

CURVES

- * **Q/H** : The curves are inclusive of losses such as NRV losses at the actual speed. Operation without non-return valve will increase the actual head at nominal performance by 0.5 to 1.0 m.
- * **Power Curve** : (BPKW) For Particular Stage shows pump power.
- * **Efficiency Curve** : Efficiency shows pump stage efficiency.

FEATURES AND BENEFITS

A Wide Pump Range

- * We offers submersible pumps with energy-efficient duty points ranging from 2 to 14 m³/h. The pump range consist of many pump sizes (Stages) to match any duty point.

High Pumps Efficiency

- * Often pump efficiency is a neglected factor compared to the price variations are without importance of pump and motor efficiencies.

Example

- * Pumping water-14m³/h with a head of 60 meter.
- * When choosen stainless steel energy efficient pump, be saved (than other pumps) 4unit (kwh) per hour.
- * It save Rs. 4,60,000 in 10 year for 8 hours / day running)

Applications

- * We offers a complete range of pumps and motors with as a standard are made completely as stainless steel - 304. This provides for good wear resistance and a reduced risk of corrosion when pumping ordinary cold water with a minor content of chloride.

Low Installation Cost

- * These pumps have low weight facilitating the handling of pumps and resulting in low equipment costs and reduced installation and service time. In addition pumps will be as new after service due to the high wear resistance of stainless steel.

TYPE		OSP 2	OSP 3	OSP 5	OSP 8	OSP 14
Steel : S.S.-304		+	+	+	+	+
Connection: Rp (Inches)	BSP Thread	1¼"	1½"	1½"	2"	2"
	NPT Thread	1¼"	1½"	1½"	2"	2"



Bearing with Sand Channels

* All bearing are water-Lubricated and have a octagone shape enabling sand particles.



Inlet Strainer

* The inlet strainer prevents particles over a certain size from entering the pump.

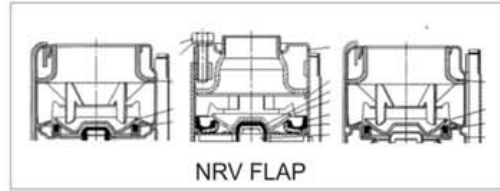


Non-Return Valve

* All pumps are equipped with a non-return valve in the valve casing preventing back flow in connection with pump stoppage.

* Furthermore, the short closing time of the non-return valve means that the risk of destructive water hammer is reduced to the minimum.

* The valve casing is designed for optimum hydraulic properties, to minimize the pressure loss across the valve and thus contributes to the high efficiency of the pump.



NRV FLAP

Stop Ring

* The stop ring prevents damage to the pump during transport and in case of up-thrust in connection with start-up.

* The stop ring, which is designed as a thrust bearing limits axial movements of the pump shaft.

* Example : OSP-14



GENERAL

* Curve tolerance according to ISO 9906, Annex A&B.

* The performance curves show pump performance at actual speed of standard motor range.

* The speed of the motors is approximately:

6" motors : $n=2850 \text{ min}^{-1}$

* The measurements were made with airless water at a temperature of 20°C. The curves apply to a kinematic viscosity of $1 \text{ mm}^2/\text{s}$.

When pumping liquids with a density higher than that a water, motors with correspondingly higher outputs must be used.

* The bold curves indicate the performance range.

Construction

- Submersible motor and pumps for deep wells of 4" (100 mm)
- All sizes of pumps according to the NEMA standard
- OSP series pumps are completely made out of AISI 304 stainless steel material .
- Radial flow Model : OSP-2 , OSP-3,OSP-5,
- Mixed flow Model : OSP-8 , OSP-14

Application

- For water supply
- For irrigation
- For civil and industrial applications.
- For fire fighting application

General Data

- Head rang up to 350 meters
- Flow range up to 18 M³/ hr.

Operating condition

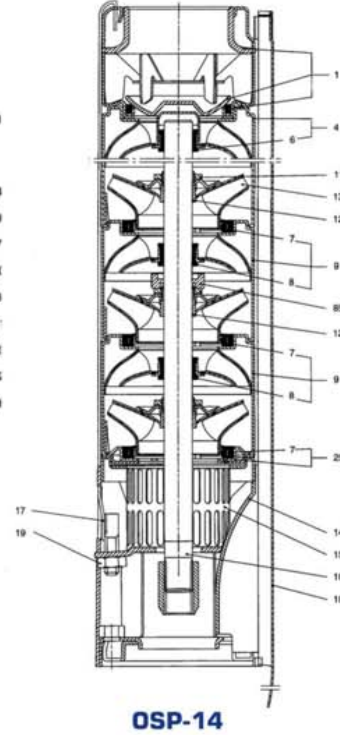
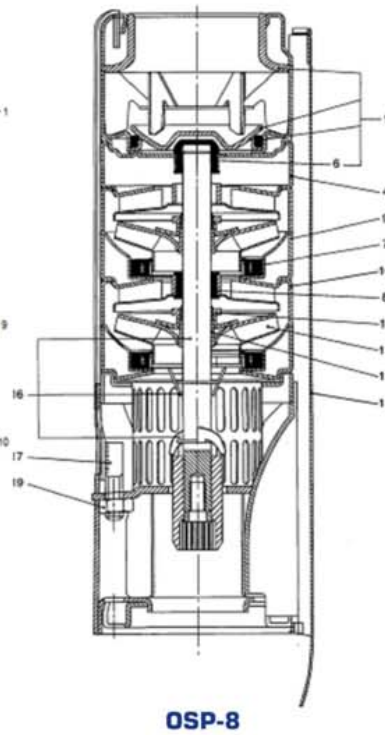
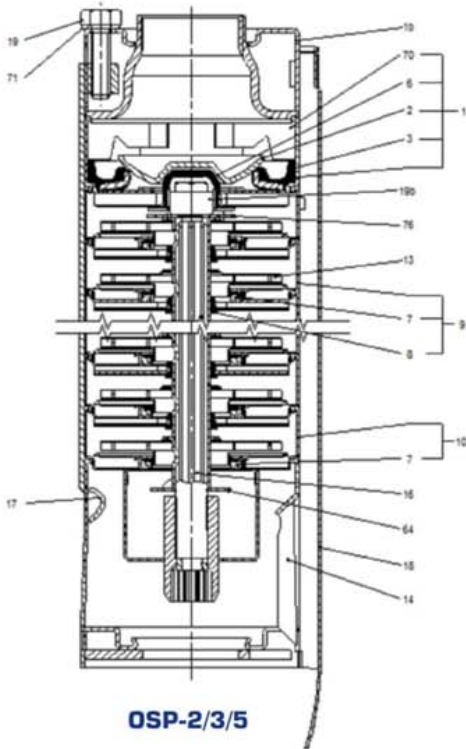
- Maximum liquid temperature : 45°C
- Maximum quantity of sand 50 gm / m³
- Minimum suction head required : 1.5 meter.
- Max. start per hour 30 at regular intervals.
- Direction of rotation : clockwise as seen from the pump coupling side.

Special construction on request

- Also available in NPT connection.

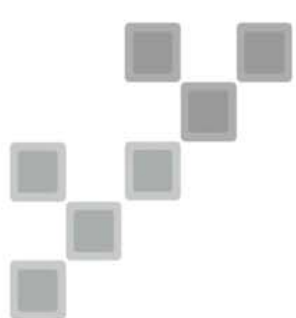
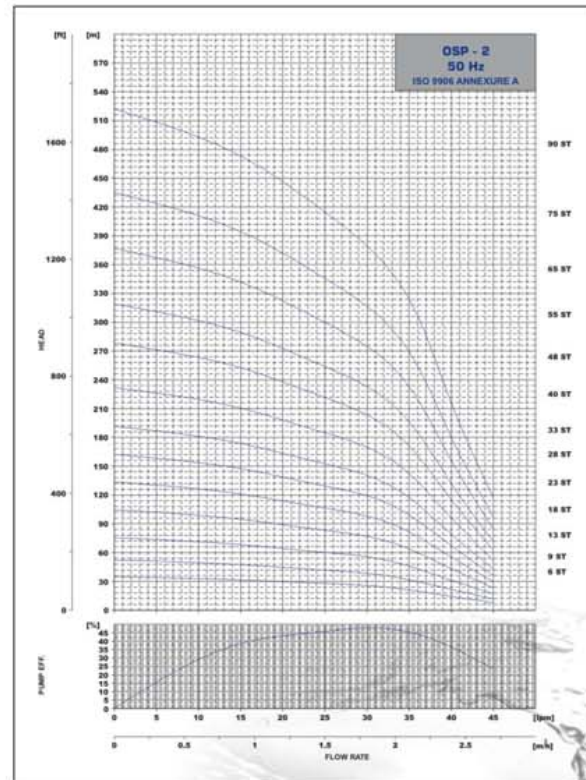
MATERIAL SPECIFICATION OF OSP -2, OSP -3, OSP -5,OSP -8,OSP -14		
S.NO.	COMPONENTS	MATERIAL GRADE
1	Valve casing	SS-304
4	Top diffuser cup	SS-304
6	Top bearing bush	NBR
7	Neckring	NBR + SS-304
8	Stage bearing bush	NBR
9	Diffuser cup	SS-304
10	Ist stage cup	SS-304
11	Split cone nut	SS-304
12	Split cone	SS-304
13	Impeller	SS-304
14	Suc.case	SS-304
15	Strainer	SS-304
16	Pump Shaft Comp.	SS-304
17	Strap	SS-304
18	Cable guard	SS-304
19	Nut	SS-304
19a	Nut	SS-304

Stainless Steel Pump



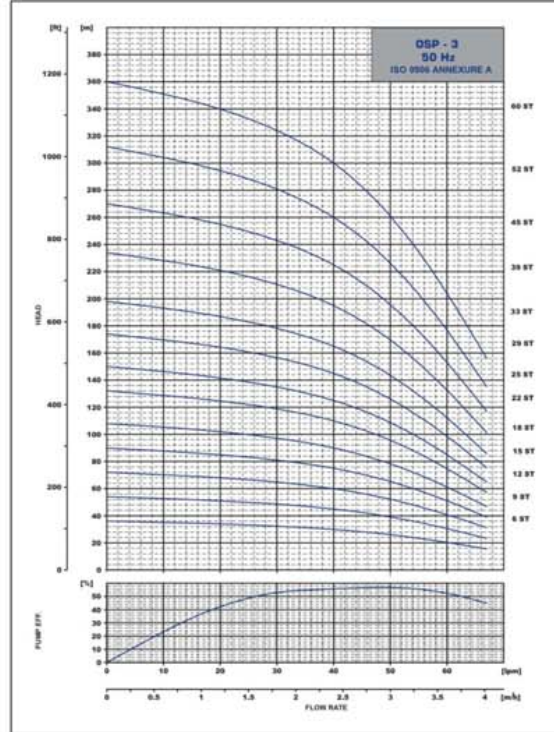
PERFORMANCE TABLE OSP 2

MODEL	MOTOR POWER (KW)	HP	STAGE	DEL. SIZE IN INCH	DISCHARGE						
					M ³ /H (L.P.M.)	0	1	1.4	2	2.4	2.7
OSP 2	0.37	0.5	6	1 1/2"	HEAD (METERS)	0	17	23	33	40	45
						35	31	29	23	14	8
			9	1 1/2"		52	46	43	35	22	12
						75	67	62	51	31	17
			13	1 1/2"		104	93	86	70	43	23
						133	118	109	90	55	30
			23	1 1/2"		162	144	133	109	67	36
						191	170	157	129	79	43
			28	1 1/2"		232	206	190	156	96	52
						278	247	228	187	115	62
			33	1 1/2"		319	283	261	215	132	72
						377	335	309	254	156	85
			40	1 1/2"		435	386	356	293	180	98
						522	464	428	351	216	117



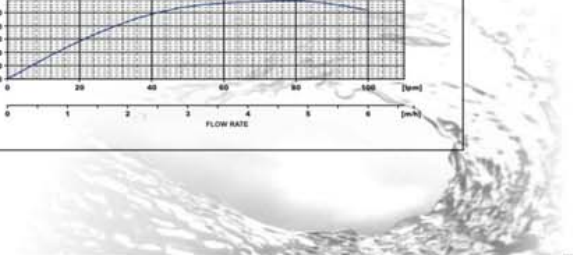
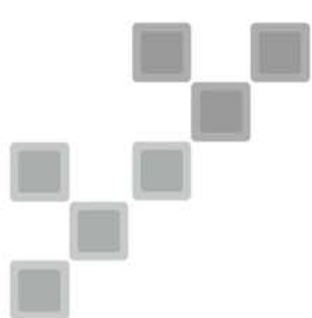
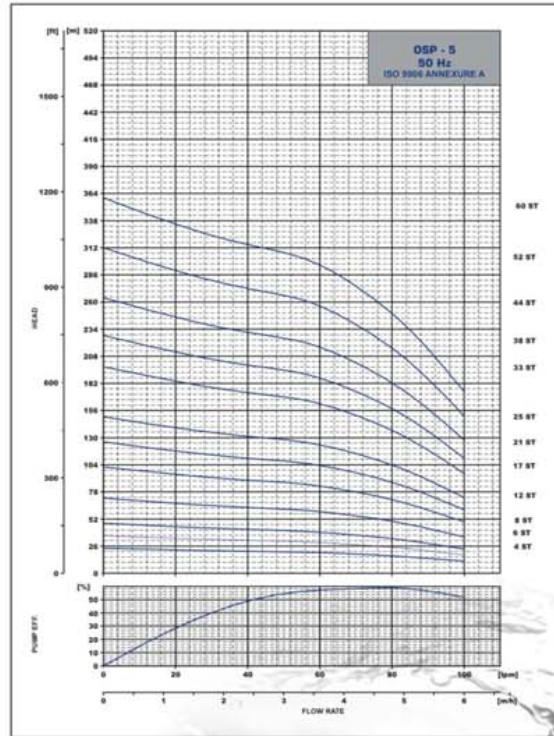
PERFORMANCE TABLE OSP 3

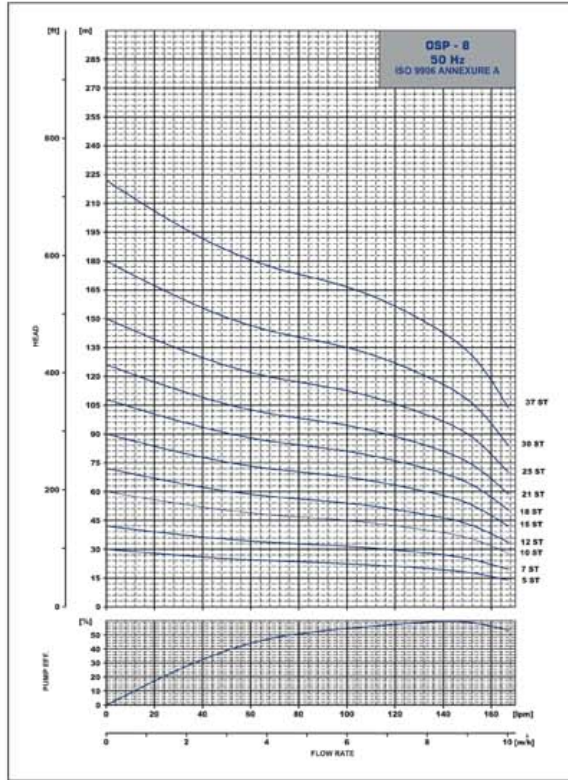
MODEL	MOTOR POWER (KW)	HP	STAGE	DEL. SIZE IN INCH	M ³ /H (L.P.M.)	DISCHARGE					
						0	1.8	2.4	3.0	3.6	4.0
OSP 3	0.37	0.5	6	½"	36	32	30	26	20	16	
OSP 3	0.55	0.75	9	½"	54	49	45	39	31	23	
OSP 3	0.75	1.0	12	½"	72	65	60	52	41	31	
OSP 3	1.1	1.5	15	½"	90	81	75	65	51	39	
OSP 3	1.1	1.5	18	½"	108	97	90	78	61	47	
OSP 3	1.5	2.0	22	½"	132	119	110	96	75	57	
OSP 3	1.5	2.0	25	½"	150	135	125	109	85	65	
OSP 3	2.2	3.0	29	½"	174	157	145	126	99	75	
OSP 3	2.2	3.0	33	½"	198	178	165	144	112	86	
OSP 3	3.0	4.0	39	½"	234	211	195	170	133	101	
OSP 3	3.0	4.0	45	½"	270	243	225	196	153	117	
OSP 3	3.7	5.0	52	½"	312	281	260	226	177	135	
OSP 3	4.5	6.0	60	½"	360	324	300	261	204	156	



PERFORMANCE TABLE OSP 5

MODEL	MOTOR POWER (KW)	HP	STAGE	DEL. SIZE IN INCH	M ³ /H (L.P.M.)	DISCHARGE				
						0	2.4	3.4	4.0	5.0
OSP 5	0.37	0.5	4	½"	24	21	20	19	16	12
OSP 5	0.55	0.75	6	½"	36	32	30	28	24	17
OSP 5	0.75	1.0	8	½"	48	42	40	38	32	23
OSP 5	1.1	1.5	12	½"	72	63	60	56	48	35
OSP 5	1.5	2.0	17	½"	102	89	85	80	68	49
OSP 5	2.2	3.0	30	½"	126	110	105	99	84	61
OSP 5	2.2	3.0	25	½"	150	131	125	118	100	73
OSP 5	3.0	4.0	33	½"	198	173	165	155	132	96
OSP 5	3.7	5.0	38	½"	228	200	190	179	152	110
OSP 5	4.5	6.0	44	½"	264	231	220	207	176	128
OSP 5	5.5	7.5	52	½"	312	273	260	244	208	151
OSP 5	5.5	7.5	60	½"	360	315	300	282	240	0



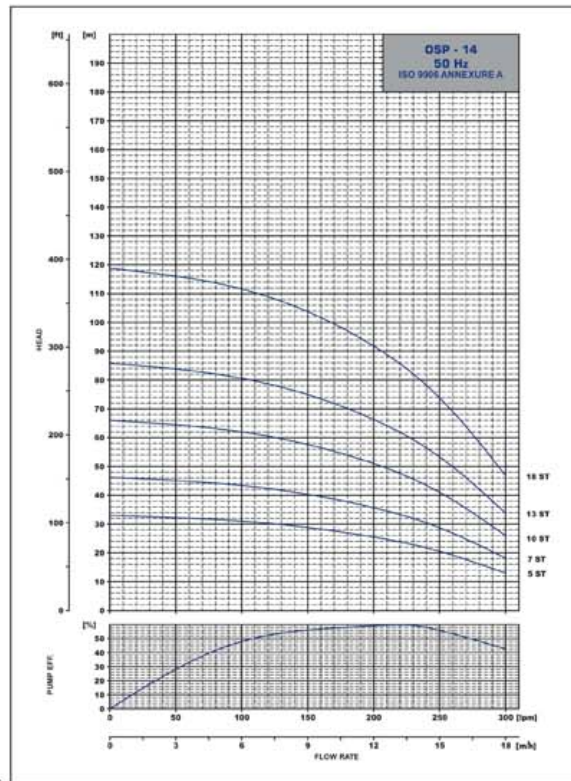


PERFORMANCE TABLE OSP 8

MODEL	MOTOR POWER (KW)	HP	STAGE	DEL SIZE IN INCH	M³/H (L.P.M.)	DISCHARGE					
						0	4.0	6.0	8.0	9.0	10.0
OSP 8	0.75	1.0	5	2"	0	67	100	133	150	167	
OSP 8	1.1	1.5	7	2"	30	24	23	20	18	14	
OSP 8	1.5	2.0	10	2"	42	34	32	28	25	20	
OSP 8	2.2	3.0	12	2"	60	48	45	40	36	28	
OSP 8	2.2	3.0	15	2"	72	58	54	48	43	34	
OSP 8	3.0	4.0	18	2"	90	72	68	60	54	42	
OSP 8	3.7	5.0	21	2"	108	86	81	72	65	50	
OSP 8	4.5	6.0	25	2"	126	101	95	84	76	59	
OSP 8	5.5	7.5	30	2"	150	120	113	100	90	70	
OSP 8	5.5	7.5	37	2"	180	144	135	120	108	84	
OSP 8					222	178	167	148	133	104	

PERFORMANCE TABLE OSP 14

MODEL	MOTOR POWER (KW)	HP	STAGE	DEL SIZE IN INCH	M³/H (L.P.M.)	DISCHARGE					
						0	6.0	12.0	14.0	15.0	18.0
OSP 14	1.5	2.0	5	2"	0	100	200	233	250	300	
OSP 14	2.2	3.0	7	2"	33	31	26	23	21	13	
OSP 14	3.0	4.0	10	2"	46	43	36	32	29	18	
OSP 14	4.5	6.0	13	2"	66	62	51	46	41	26	
OSP 14	5.5	7.5	18	2"	86	81	66	60	53	34	
OSP 14					119	112	92	83	74	47	



Warranty : We provide warranty for a period of 12 months as per our standard terms and conditions mention in quotation/offer.

* The manufacturer reserve the right to change the design, specification without prior notice.

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OTHER RANGES :

