



# OSWAL

STAR

# OSWAL

*Ushering in Prosperity*

STAINLESS STEEL SUBMERSIBLE PUMPS  
OSP- 9, 12, 17, 30, 46, 60, 77, 95, 125, 160

Agricultural & Industrial Range....



An ISO 9001:2000 Certified Company



## SUBMERSIBLE PUMPS

**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.

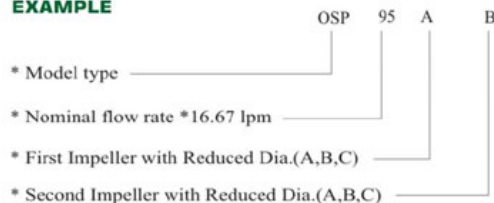
**OSWAL** Submersible Pumpsets of modular design suitable for under-water operation for universal fit, all mounting dimensions of pumps and motors are in accordance with NEMA standards. **OSWAL** submersible pumpset are of completely S.S.-304 construction with fabricated technology, light weight easy 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 : 150 to 2700 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/m<sup>3</sup>.
- \* Minimum Suction head required : 1.5 meter.
- \* Starts/hours : max. 15 to 20

### PUMP MODEL TYPE KEY EXAMPLE



TYPE		OSP 9	OSP 12	OSP 17	OSP 30	OSP 46	OSP 60	OSP 77	OSP 95	OSP 125	OSP 160
Steel : S.S.-304		+	+	+	+	+	+	+	+	+	+
Connection: Rp (Inches)	BSP Thread	2"	2.5"	2.5"	3"	4"	4"	5"	5"	6"	6"
	NPT Thread	2"	2.5"	2.5"	3"	4"	4"	5"	5"	6"	6"

### PUMPED LIQUIDS

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

### OPERATING CONDITIONS

- \* Flow Range (min. to max.) - 6-204 M<sup>3</sup>/h
- \* Head, H : Maximum 670 m.

### Maximum Liquid Temperature:

Motor	Flow velocity- past motor	Installation	
		Vertical	Horizontal
6"	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.





## SUBMERSIBLE PUMPS

### FEATURES AND BENEFITS

#### A Wide Pump Range

\* We offers submersible pumps with energy-efficient duty points ranging from 9 to 160 m<sup>3</sup>/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-30m<sup>3</sup>/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.

#### Bearing with Sand Channels

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



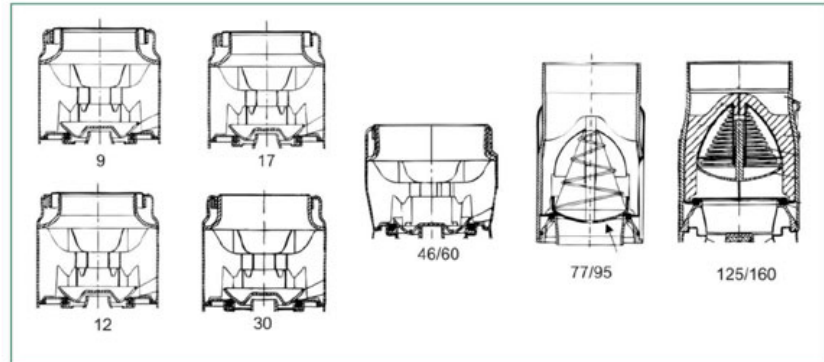
#### Inlet Strainer

\* 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.



#### 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 - 30



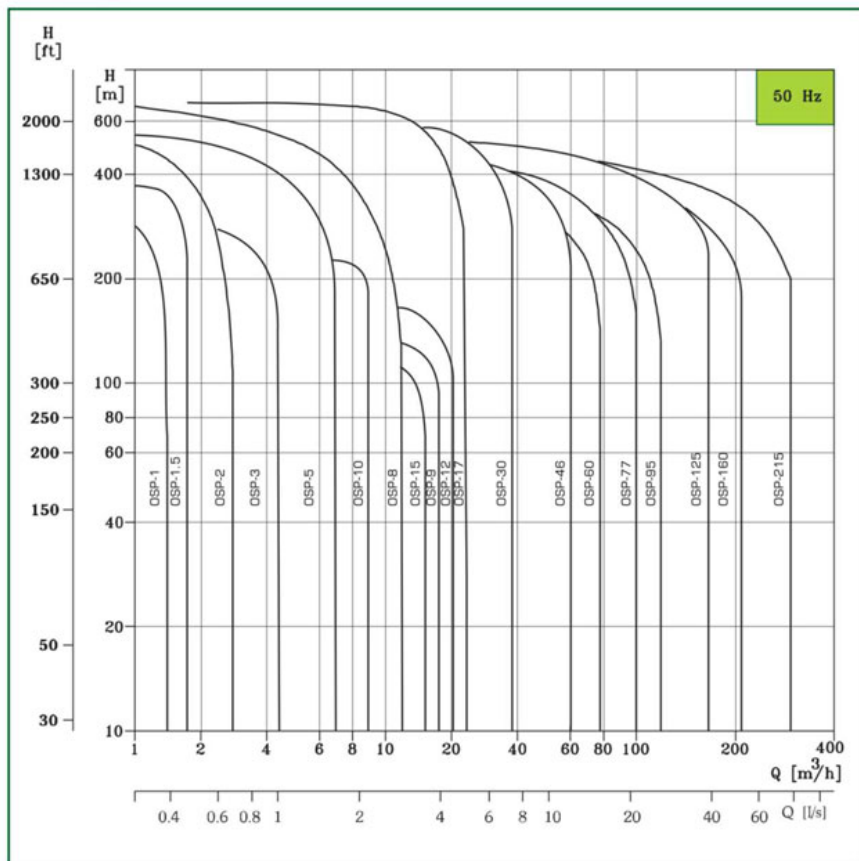
### GENERAL

- \* 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:  
N=2850 min<sup>-1</sup>
- \* The measurements were made with airless water at a temperature of 20°C. The curves apply to a kinematic viscosity of 1mm<sup>2</sup>/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.



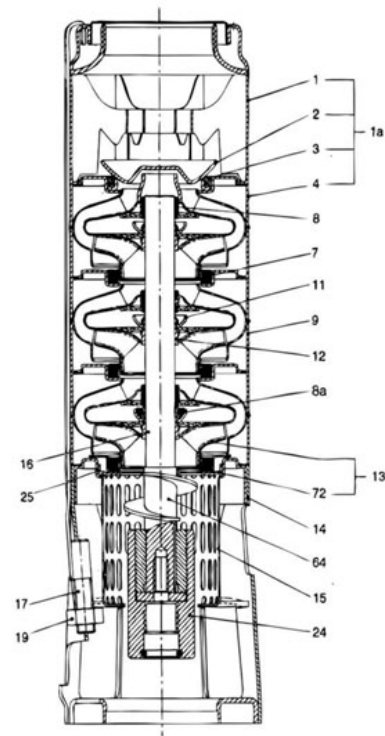
## SUBMERSIBLE PUMPS

### Curve Range



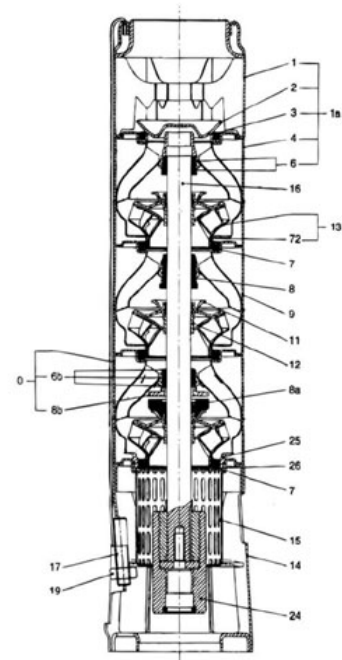
### MATERIAL SPECIFICATION OSP-9/12/17

S.No.	Components	Material	Standard
1	Valve casing	Stainless steel	304
1a	Discharge chamber complete	Stainless steel	304
2	Valve cup	Stainless steel	304
3	Valve seat	Stainless steel	
4	Top intermediate chamber	Stainless steel	304
6	Top bearing	NBR	
7	Neck ring	NBR/PPS	
8	Intermediate bearing	NBR	
9	Spacing washer	Cabron /graphite Hy 22 in PTFE mass	
8a	Intermediate chamber	Stainless steel	304
11	Split cone nut	Stainless steel	304
12	Split cone	Stainless steel	304
13	Impeller	Stainless steel	304
14	Suction interconnector	Stainless steel	304
15	Strainer	Stainless steel	304
16	Pump shaft	Stainless steel	431
17	Strap	Stainless steel	304
18	Cable guard	Stainless steel	304
19	Nut	Stainless steel	304
19a	Nut	Stainless steel	304
23	Rubber guard	Rubber	
25	Neck ring retainer	Stainless steel	304
SQ	Priming screw	Stainless steel	304
72	Wear ring	Stainless steel	304
75	Spacer ring	Stainless steel	304
78	Nameplate	Stainless steel	304



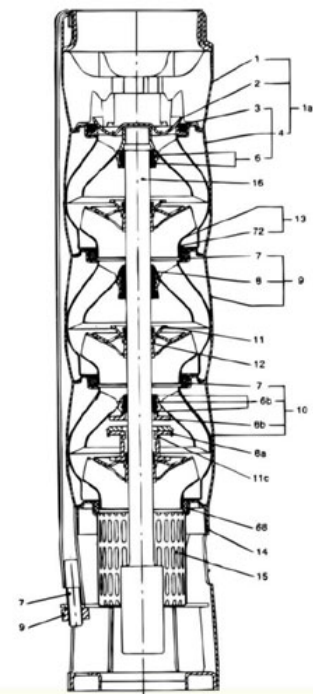
**MATERIAL SPECIFICATION OSP - 30**

S.No.	Components	Material	Standard
1	Valve casing	Stainless steel	304
1a	Discharge chamber complete	Stainless steel	304
2	Valve cup	Stainless steel	304
3	Valve seat	Stainless steel +NBR	
4	Top intermediate chamber	Stainless steel	304
6	Upper bearing	NBR	
	Cap	Stainless steel	304
6b	Lower bearing	NBR	
	Cap	Stainless steel	304
7	Neck ring	NBR+Stainless steel	
8	Intermediate bearing.	NBR	
8a	Spacing washer for stop ring	Carbon/graphite Hy 22 in PTFE mass	
8b	Stop ring	Stainless steel	304
9	Intermediate chamber	Stainless steel	304
10	Bottom intermediate chamber	Stainless steel	304
11	Split cone nut	Stainless steel	304
12	Split cone	Stainless steel	304
13	Impeller	Stainless steel	304
14	Suction interconnector	Stainless steel	304
15	Strainer	Stainless steel	304
16	Pump shaft	Stainless steel	431
17	Strap	Stainless steel	304
18	Cable guard	Stainless steel	304
19	Nut	Stainless steel	304
19a	Nut	Stainless steel	304
23	Rubber guard	Rubber	
25	Neck ring retainer	Stainless steel	304
72	Wear ring	Stainless steel	304
78	Nameplate	Stainless steel	304



**MATERIAL SPECIFICATION - OSP -46/60**

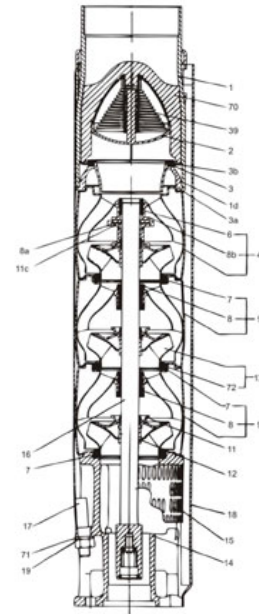
S.No.	Components	Material	Standard
1	Valve casing	Stainless steel	304
1a	Discharge chamber complete	Stainless steel	304
2	Valve cup	Stainless steel	304
3	Valve seat	Stainless steel +NBR	
4	Top chamber	Stainless steel	304
6	Upper bearing	NBR	
	Cap	Stainless steel	304
6b	Lower bearing	NBR	
	Cap	Stainless steel	304
7	Neck ring	NBR+Stainless steel	
8	Bearing.	NBR	
8a	Washer for stop ring	Carbon/graphite hy 22 in ptf mass	
8b	Stop ring	Stainless steel	304
9	Inter meditate Chamber	Stainless steel	304
10	Bottom chamber complete	Stainless steel	304
11	Split cone nut	Stainless steel	304
11c	Nut for stop ring	Stainless steel	304
12	Split cone	Stainless steel	304
13	Impeller	Stainless steel	304
14	Suction interconnector	Stainless steel	304
15	Strainer	Stainless steel	304
16	Pump shaft	Stainless steel	431
17	Strap	Stainless steel	304
18	Cable guard	Stainless steel	304
18a	Cheese-screw for cable guard	Stainless steel	304
19	Nut	Stainless steel	304
19a	Nut	Stainless steel	304
23	Rubber guard	Rubber	
68	Bottom neck ring	NBR/Stainless steel	304
72	Wear ring	Stainless steel	304
78	Nameplate	Stainless steel	304



## SUBMERSIBLE PUMPS

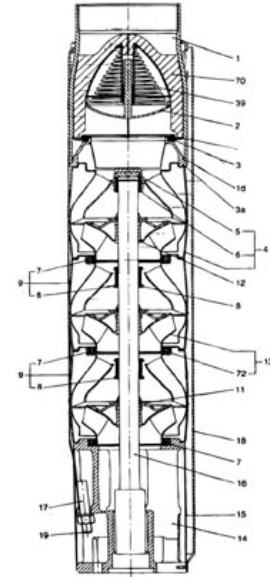
### MATERIAL SPECIFICATION OSP - 77/95

S.No.	Components	Material	Standard
1	Valve Casing	Stainless Steel	304
2	O-Ring	NBR	
3	Valve Cup	Stainless Steel	304
4	Valve Seat	Stainless Steel	304
5	Lower Valve Seat Strainer	Stainless Steel	304
6	Upper Valve Seat Strainer	Stainless Steel	304
7	Top Chamber	Stainless Steel	304
8	Upper Bearing	Stainless Steel NBR	304
9	Neck Ring	NBR / S.S - 304 Ring	
10	Bearing	NBR	
11	Washer for Stop Ring	Carbon/graphite Hy22 in PTFE mass	304
12	Stop Ring	Stainless Steel	
13	Chamber	Stainless Steel	
14	Split Cone Nut	Stainless Steel	304
15	Nut for Stop Ring	Stainless Steel	304
16	Split Cone	Stainless Steel	304
17	Impeller	Stainless Steel	304
18	Suction Interconnector	Stainless Steel	304
19	Strainer	Stainless Steel	304
20	Shaft Complete	Stainless Steel	431
21	Strap	Stainless Steel	304
22	Cable Guard	Stainless Steel	304
23	Nut for Strap	Stainless Steel	304
24	Spring for Valve Cup	Stainless Steel	304
25	Valve Guide	Stainless Steel	304
26	Washer	Stainless Steel	304
27	Wear Ring	Stainless Steel	304



### MATERIAL SPECIFICATION - OSP -125/160

S.No.	Components	Material	Standard
1	Valve complete	Stainless steel	304
1d	O-ring	NBR	
2	Valve cup	Stainless steel	304
3	Valve seat	Stainless steel + NBR	
3a	Lower valve seat retainer	Stainless steel	304
4	Top chamber	Stainless steel	304
5	Stop disc	Zinc less bronze	
6	Upper bearing	Stainless steel + NBR	
7	Neck ring	NBR + Stainless Steel	
8	Bearing	NBR	
9	Inter Chamber	Stainless steel	304
11	Split cone nut	Stainless steel	304
12	Split cone	Stainless steel	304
13	Impeller	Stainless steel	304
14	Suction interconnector	Stainless steel	304
15	Strainer	Stainless steel	304
16	Pump shaft	Stainless steel	431
17	Strap	Stainless steel	304
18	Cable guard	Stainless steel	304
18a	Cheese-head screw for cable guard	Stainless steel	304
19	Nut	Stainless steel	304
19a	Nut	Stainless steel	304
22	H H bolt	Stainless steel	304
22a	Nut	Stainless steel	304
23	Rubber guard	Rubber	304
28	Lock for strainer	Stainless steel	
39	Spring for valve cup	Stainless steel	304
70	Valve guide complete	Stainless steel	304
71	Washer	Stainless steel	304
72	Wear ring	Stainless steel	304
77	Cover plate for suction interconnector	Stainless steel	304
77a	Screw for cable guard holder	Stainless steel	304
78	Nameplate	Stainless steel	304
79	Rivet	Stainless steel	304



**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.

Exclusively manufactured by :

## Oswal Pumps Ltd.

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### Other Ranges :

