



Οριζόντιες Διαιρούμενου  
Κέλυφους Αντλίες  
Horizontal  
Split-Case Pumps



### Fields of Application

- Water supply and booster stations
- Irrigation, overhead irrigation
- Drainage stations
- Industrial water supply systems
- Fire fighting systems
- Marine applications
- General applications in refineries.

### Pumped Liquids

Thin, clean, non – aggressive and non explosive liquids free from large solid particles or fibers.

### Design

Single or double stage, axially split case pumps with double suction, radial impeller. Bigger sizes are double volute construction. Double suction, closed impeller is hydraulically thrust compensated. Lower casing is in-line design, suction and discharge nozzles are on the same line. Upper casing is self-aligning and therefore easy to mount. Thanks to double suction impeller, the NPSH values are reduced and the high suction lifts are possible. Two different designs can be applied:

- 1- Long shaft design: For soft packing stuffing box the length of the pump shaft is longer. It is also possible to use mechanical seal on this design.
- 2- Short shaft design: For mechanical seal applications, shaft length can be reduced. Pump and motor are separate components, connected to each other via flexible coupling and mounting on a base plate. As well as the electric motor it is also available coupled to diesel engine.

### Bearings

At the drive end a cylindrical roller bearing, and on the dead end a deep groove ball bearing are installed. Both of them are grease lubricated.

### Shaft Seal

Un-cooled soft packed stuffing box with lantern ring is essential for the long shaft design. There is a leakage setting device on the washing water line of packing. Different types of mechanical seals are available on long or short shaft design pumps.

### Technical Data

- Suction	:	DN 80-DN 500
- Discharge	:	DN 65-DN 500
- Pressure	:	16-20 Bar.
- Capacity	:	up to 4000 m <sup>3</sup> /h
- Total Head	:	up to 160m.

### Pump Flanges

- Discharge flanges : DIN 2533 -PN 16
  - Suction flanges : DIN 2533- PN 16
- ANSI, BS or other flanges are also available on demand.

### Identification Code

	<b>HSC 100 – 250A</b>
HSC: cast iron impeller	_____
HSB: bronze impeller	_____
HST: stainless steel impeller	_____
DN: Discharge nozzle	_____
Rated impeller diameter	_____

### Materials

#### Volute casing

Cast iron (GG-25)  
 Ductile iron (GGG -40)  
 Cast Steel (G5-45)  
 Stainless steel (AISI 304-AISI 316)  
 Cast bronze (G-CuSn 10)

#### Impeller

Cast iron (GG25)  
 Bronze, or stainless steel (AISI304-AISI316)

#### Shaft

Carbon steel (C60)  
 Chromium steel (AISI420)  
 Stainless Steel (AISI304-AISI316)

#### Casing wear Ring

Bronze, Chromium steel or Stainless steel

## Design Advantages

### Innovative Casing

- In-line design.
- Short distance between bearings and also short shaft.
- Leak-free thanks to compact casing split flange with long prestressed bolts.
- Change of the direction of rotation.
- Easy mounting of self aligning upper casing.

### High Performance Impeller

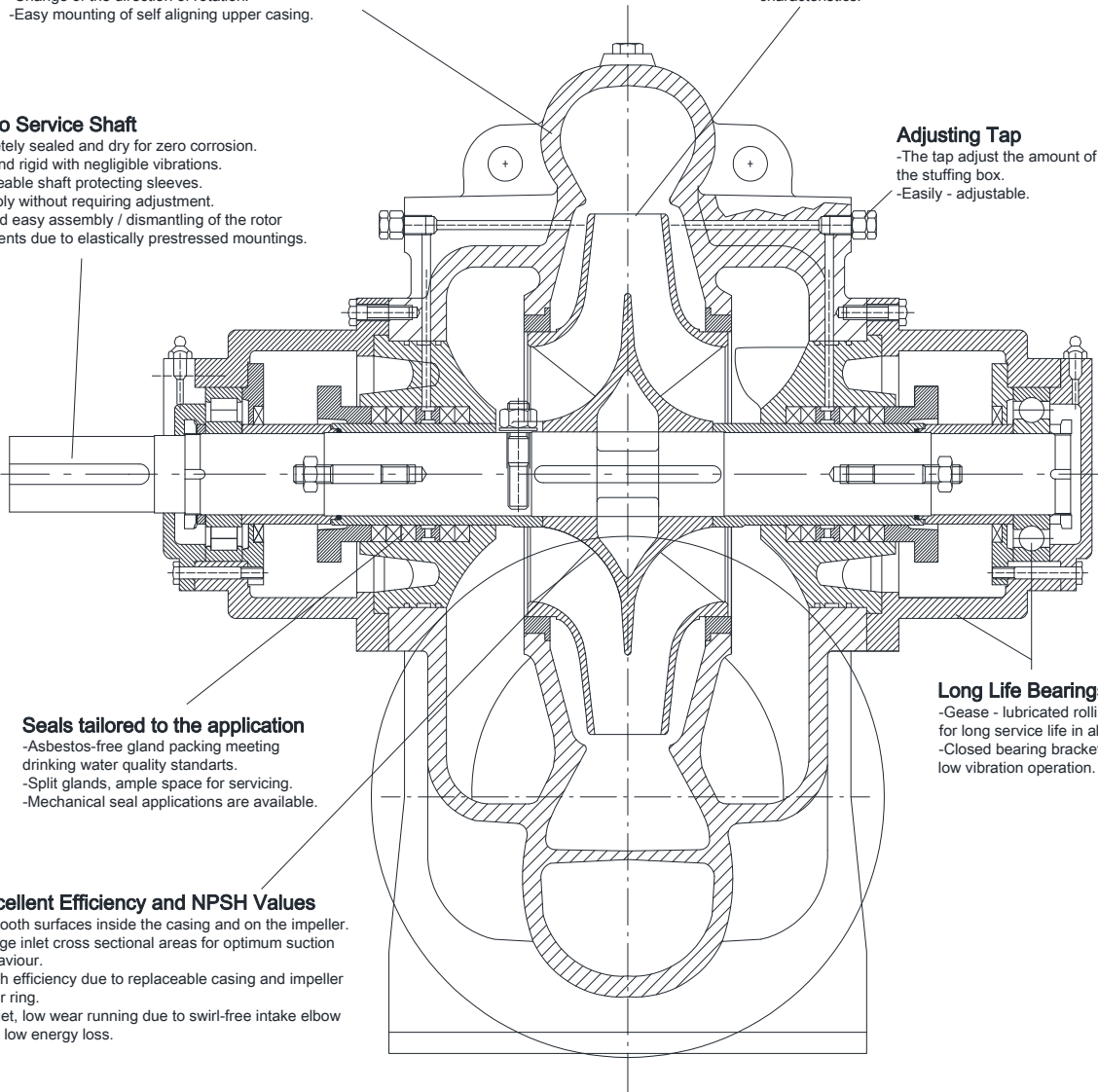
- Minimum axial thrust because of double suction impeller.
- Optional impeller wear rings.
- Impeller passage with excellent hydraulic characteristics.

### Easy to Service Shaft

- Completely sealed and dry for zero corrosion.
- Short and rigid with negligible vibrations.
- Replaceable shaft protecting sleeves.
- Assembly without requiring adjustment.
- Fast and easy assembly / dismantling of the rotor components due to elastically prestressed mountings.

### Adjusting Tap

- The tap adjust the amount of water going to the stuffing box.
- Easily - adjustable.



### Seals tailored to the application

- Asbestos-free gland packing meeting drinking water quality standards.
- Split glands, ample space for servicing.
- Mechanical seal applications are available.

### Excellent Efficiency and NPSH Values

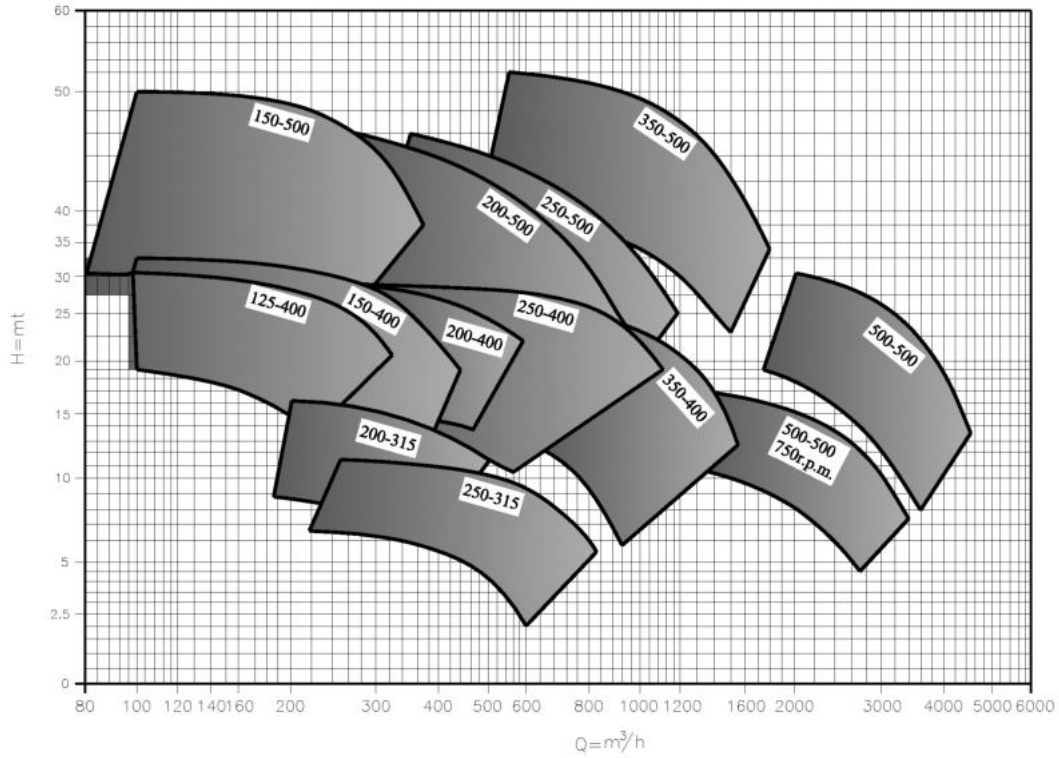
- Smooth surfaces inside the casing and on the impeller.
- Large inlet cross sectional areas for optimum suction behaviour.
- High efficiency due to replaceable casing and impeller wear ring.
- Quiet, low wear running due to swirl-free intake elbow with low energy loss.

### Long Life Bearings

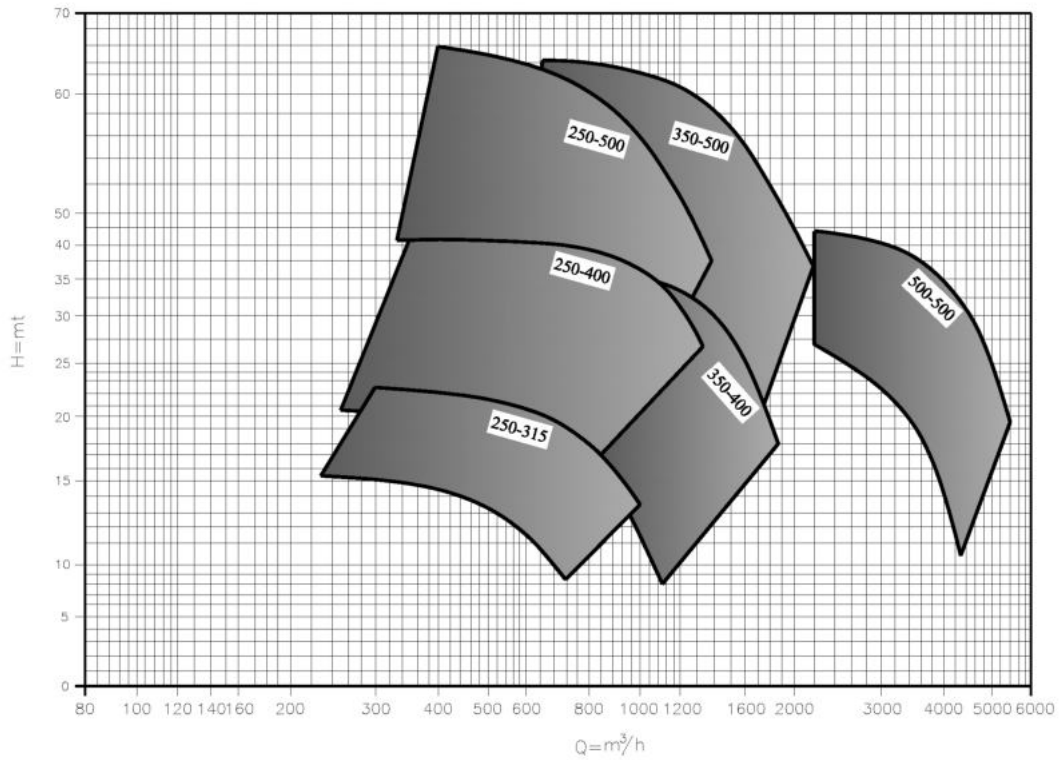
- Grease - lubricated rolling element bearings for long service life in all operating range.
- Closed bearing brackets for low - noise and low vibration operation.

## HSC Performance Range

1000 r.p.m.

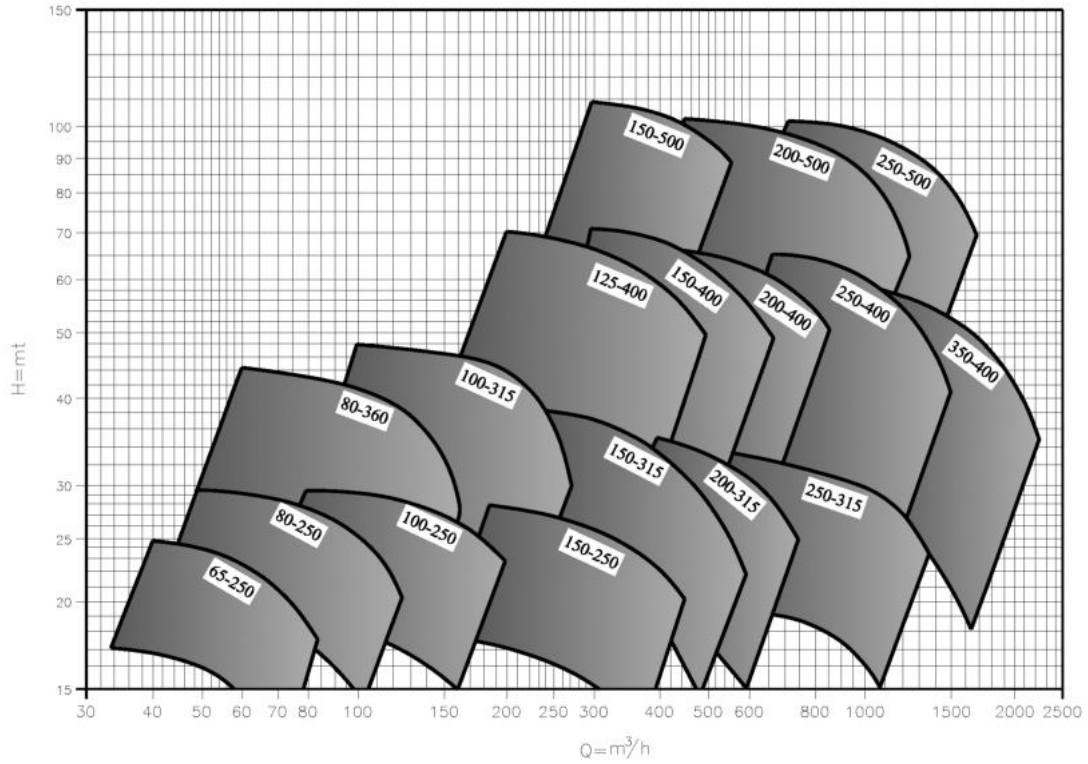


1200 r.p.m.

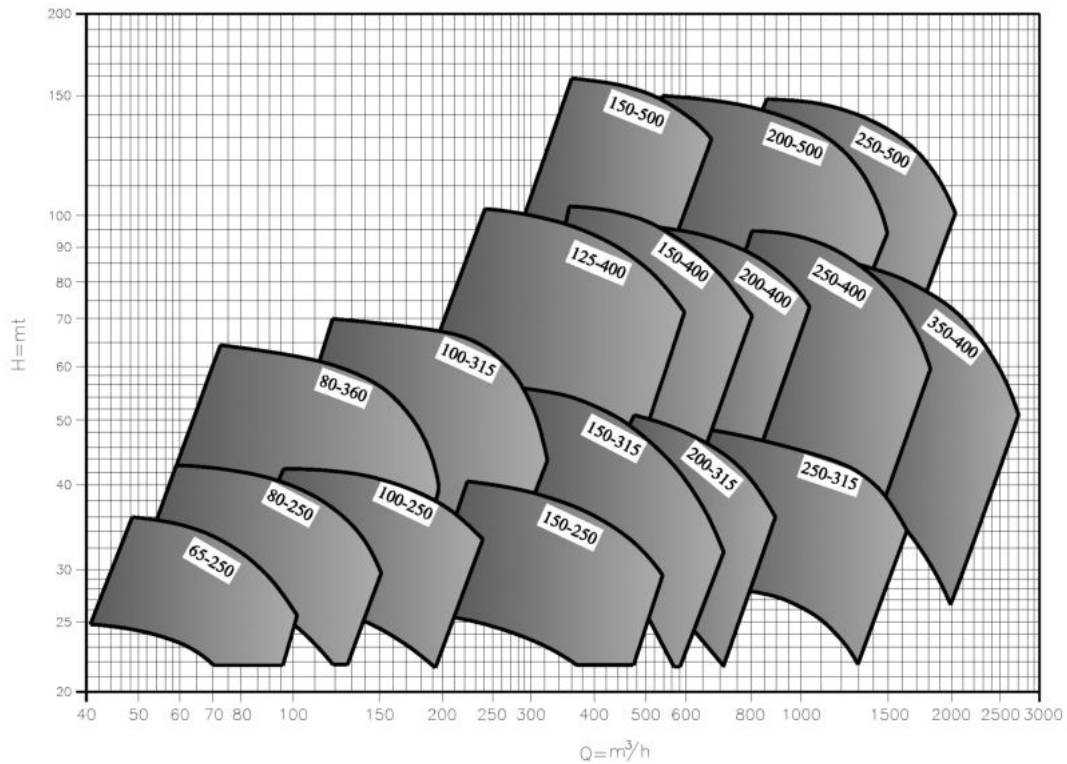


## HSC Performance Range

1450 r.p.m.

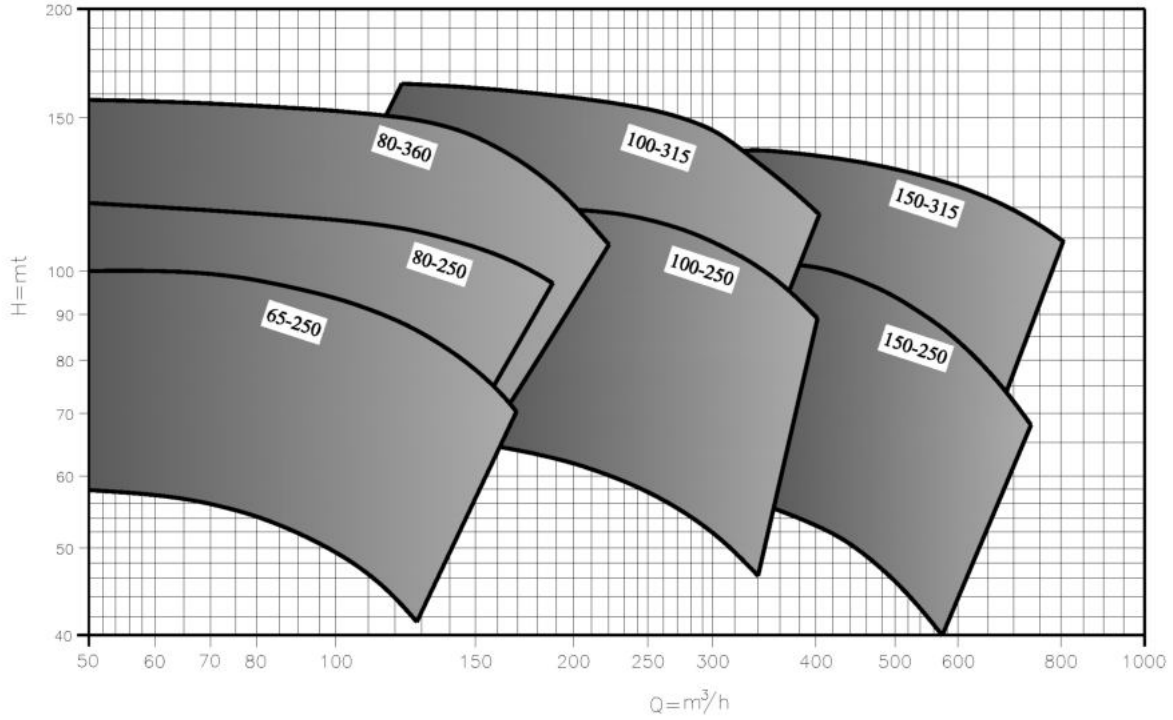


1750 r.p.m.

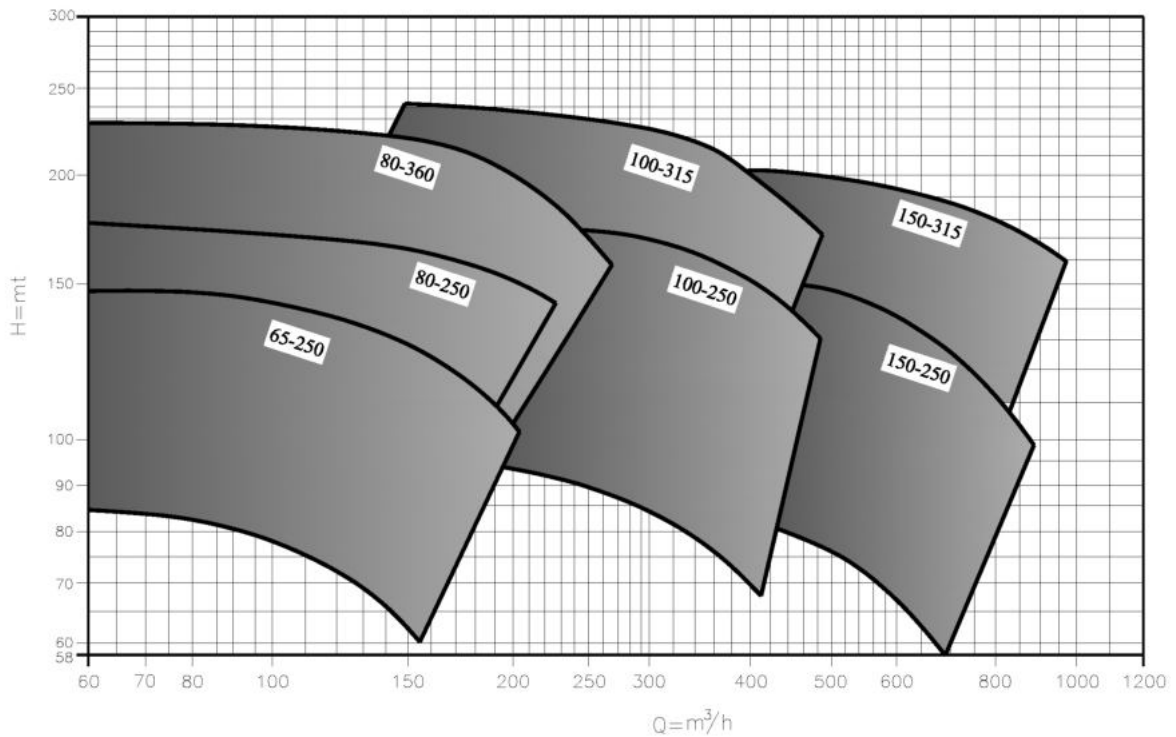


## HSC Performance Range

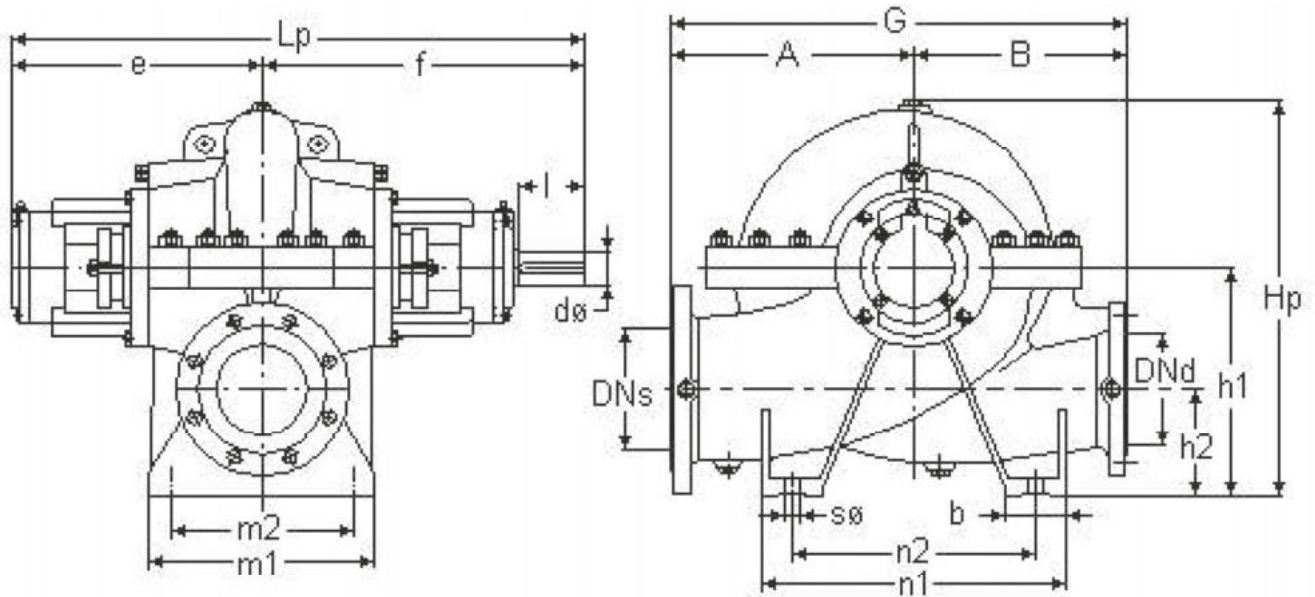
**2900 r.p.m.**



**3500 r.p.m.**



## HSC Bare-shaft Pump Dimensions



No	PUMP SIZE	FLANGES		$L_p$	$e$	$f$	$h_1$	$h_2$	$H_p$	$A$	$B$	$G$	$b$	$m_1$	$m_2$	$n_1$	$n_2$	$s\phi$	$l$	$d\phi$	Group	Ball Bea.		Mec. Seal
		$DN_s$	$DN_d$																			Drive	Dead	
1	65-250	100	65	585	260	325	250	115	425	285	225	510	70	240	190	350	275	18	60	28	A	6307	6307	
2	80-250	125	80	680	300	380	280	140	485	300	275	575	80	234	190	400	330	18	80	35	B	NU 308	6308	$\phi$ 55
3	80-360	125	80					135	550	325	275	600												
4	100-250	150	100	715	315	400	315	155	585	360	320	680	90	290	230	435	350	23	110	45	C	NU 310	6310	$\phi$ 65
5	100-315	150	100	820	350	470	355	145	585	360	320	680	90	290	230	435	350							
6	150-250	200	150	870	375	495	375	175	635	400	325	725	100	340	270	500	400	23	110	55	D	NU 312	6312	$\phi$ 75
7	125-400	150	125	945	415	530	375	175	700	450	400	850	100	370	300	500	400							
8	150-315	200	150				375	175	645	400	350	750												
9	150-400	200	150	975	430	545	400	200	730	475	400	875	100	430	360	500	400	23	110	55	D	NU 312	6312	$\phi$ 75
10	150-500	200	150				450	250	870	550	500	1050												
11	200-315	250	200	975	430	545	430	205	730	450	375	825	100	430	360	500	400	23	110	55	D	NU 312	6312	$\phi$ 75
12	200-400	250	200				790	525	425	950	600	500												
13	200-500	250	200	1042	447	595	475	220	870	550	500	1050	100	460	390	650	550	28	140	65	E	NU 314	6314	$\phi$ 85
14	250-315	300	250	1062	457	605	500	225	860	525	450	975												
15	250-400	300	250	1042	447	595	500	225	865	550	450	1000	100	460	390	650	550	28	140	65	E	NU 314	6314	$\phi$ 85
16	250-500	300	250	1062	457	605	525	240	945	600	500	1100												
17	350-400	400	350	1290	570	720	610	295	1010	600	500	1100	150	600	500	750	600	28	140	75	F	NU 316	6316	$\phi$ 100

Submersible & Axial Pumps Industry  
**FLINOS BROS - K. MARINAKIS S.A.**

7th klm. Argos 212 00 ARGOS - GREECE  
Tel. +30 27510 91498, 91490 - Fax. 91009

E-mail: [info@anavalos.gr](mailto:info@anavalos.gr), web site: [www.anavalos.gr](http://www.anavalos.gr)



Βιομηχανία Αντλιών  
**ΑΦΟΙ ΦΛΙΝΟΥ - Κ. ΜΑΡΙΝΑΚΗΣ Α.Β.Ε.Ε.**

7ο χλμ. Άργους - Κορίνθου 21 200 Άργους -  
Τηλ. 27510 91498, 91490 - Fax. 91009