



# APEC-SUN

## Horizontal Split-Case Pump



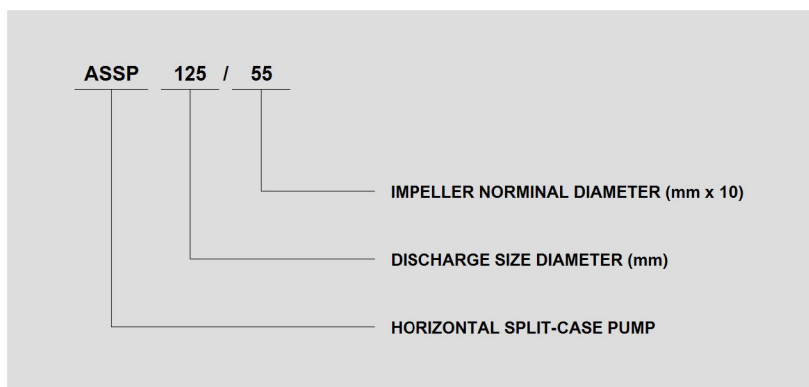
## APPLICATIONS:

- Industrial and Municipal water supply.
- Cooling water and hot water circulating.
- Air conditioning.
- Irrigation.
- Fire fighting and sprinkler.
- Refrigerating.
- Pressure Booster.
- etc.

## FEATURES:

ASSP designed the top half of the casing is easily removed, the complete pump rotating assembly can be withdrawn without disturbing suction and discharge pipe work.

## TYPE DESCRIPTION:



## MATERIALS:

NAME	MATERIAL
Casing	Cast Iron
Impeller	Bronze
Wear Ring	Cast Iron / Bronze*
Shaft	Stainless Steel
Shaft Nut	Bronze
Shaft Sleeve	Stainless Steel
Lantern Ring	Cast Iron / Bronze*
Gland	Cast Iron

\* Bronze available on request.

MATERIAL	NEAREST EQUIVALENT STANDARD			
	DIN	AMERICAN	BRITISH	AUSTRALIAN
Cast Iron	DIN 1691	ASTM A48	BS 1452	AS 1830
	GG-25	Class 30	Gr 260	T 260
Bronze	DIN 1714	ASTM B148	BS 1400	AS 1565
	G-CuAl 10Fe3	C952	AB 1	C952
Stainless Steel	DIN 17440	AISI 420	BS 970	AS 1444
	X20CR13		Gr 420S37	Gr 420

## SPECIFICATIONS:

<b>Capacity</b>	: up to 320 m <sup>3</sup> /hr., 2P : up to 1,0000 m <sup>3</sup> /hr., 4P
<b>Head</b>	: up to 120 m., 2P : up to 1000 m., 4P
<b>Pump Size</b>	: DN 50 - DN 250
<b>Speed</b>	: up to 3,500 rpm.
<b>Operating Pressure</b>	: up to 16 bar.
<b>Operating Temperature</b>	: -10 °C to 85 °C.

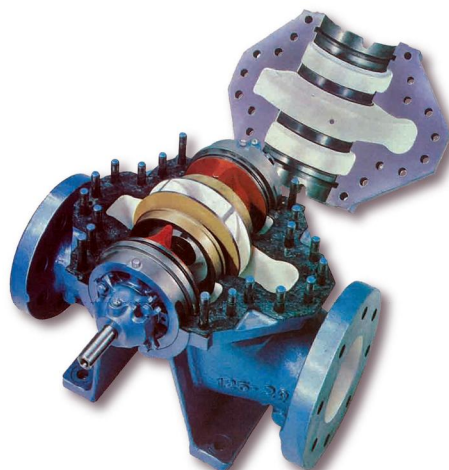
**Mechanical Seal made of Carbon/Ceramic/NBR** : according to DIN 24960 Standard. Alternative materials are available on application.

**Grease Lubricated Ball Bearings** : are fitted adjacent to the inserts and retained by bearing housings. Ensure long bearing life.

**Two Rotation Options** : Clockwise viewed at the drive end (Suction right hand side). Alternative counter clockwise viewed at drive end (Suction left hand side).

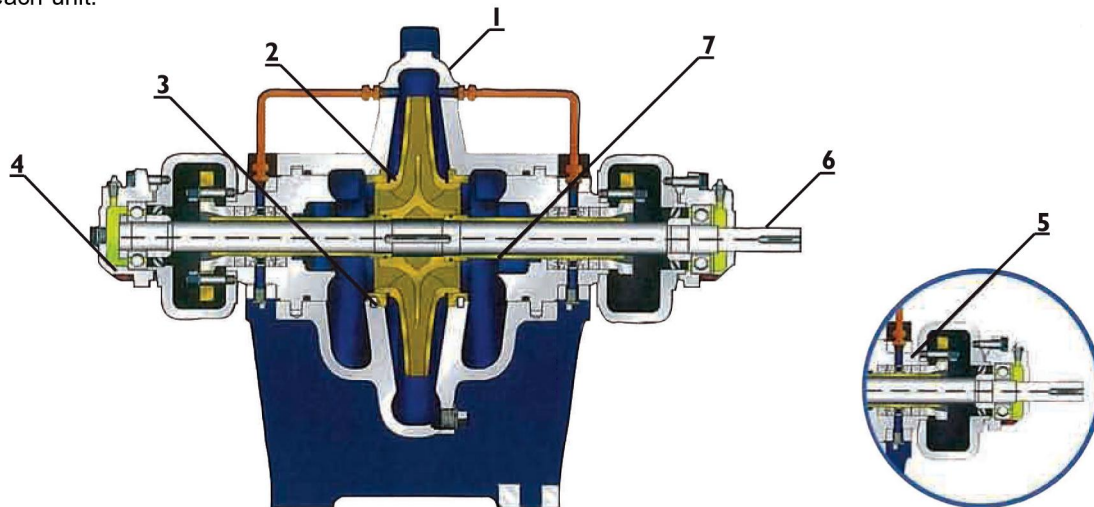
## BENEFITS:

1. Rugged casing design permits working pressures up to 20 bar.
2. Construction gives quick access for service and maintenance. Top half of casing is easily removed to allow removal of rotating unit without disturbing pipe work. Positive location feature of rotating element permits quick replacement.
3. Impellers, designed to ensure minimum NPSH and maximum efficiency while maintaining a stable curve are cast from segmenstal shell moulded cores, assuring accuracy in production and repeat ability of pump performance.
4. Mechanical seal option permits compact arrangement reducing deflection to ensure increased seal and bearing life.
5. Double suction design virtually eliminates end thrust and reduces bearing loading. Bearings are heavy - duty ball type, grease lubricated.
6. Case wear rings are fitted as standard. Impeller wear rings are optional on all models.



## CONSTRUCTIONS:

ASSP, Horizontal Split-Case Pumps have been designed to utilize the latest hydraulic techniques. All pumps are manufactured to high standards of quality in the material, construction, and workmanship of each unit.



### 1. Casing

The casings are of a high quality **Cast Iron**, Cast in our modern foundry. The casing is a split case design simplifying inspection and disassembly.

### 2. Impeller

The impellers are **Bronze**, enclosed design, keyed to the shaft, and secured by adjustable shaft sleeves. All impeller are dynamically balances out hydraulic thrust loads, Impeller wear rings are not provided by available.

### 3. Casing Wear Rings

**Cast Iron** wear rings provide the sealing between the suction and discharge areas of the casing. The rings are staked by stainless steel pins to prevent their rotation, The wear rings saddled in a spherical groove making it impossible to dislodge.

### 4. Bearings

**Grease Lubricated Ball Bearings** are provided. The outboard bearing is a duplex angular contact ball thrust bearing. The inboard bearing is a single row radial bearing. The bearings are enclosed in a regreasable housing.

### 5. Stuffing Boxes

Stuffing boxes are extra deep for proper sealing. Split packing reings and an optional or **Cast Iron** lantern ring for each side provide the sealing. Split packing glands simplify maintenance.

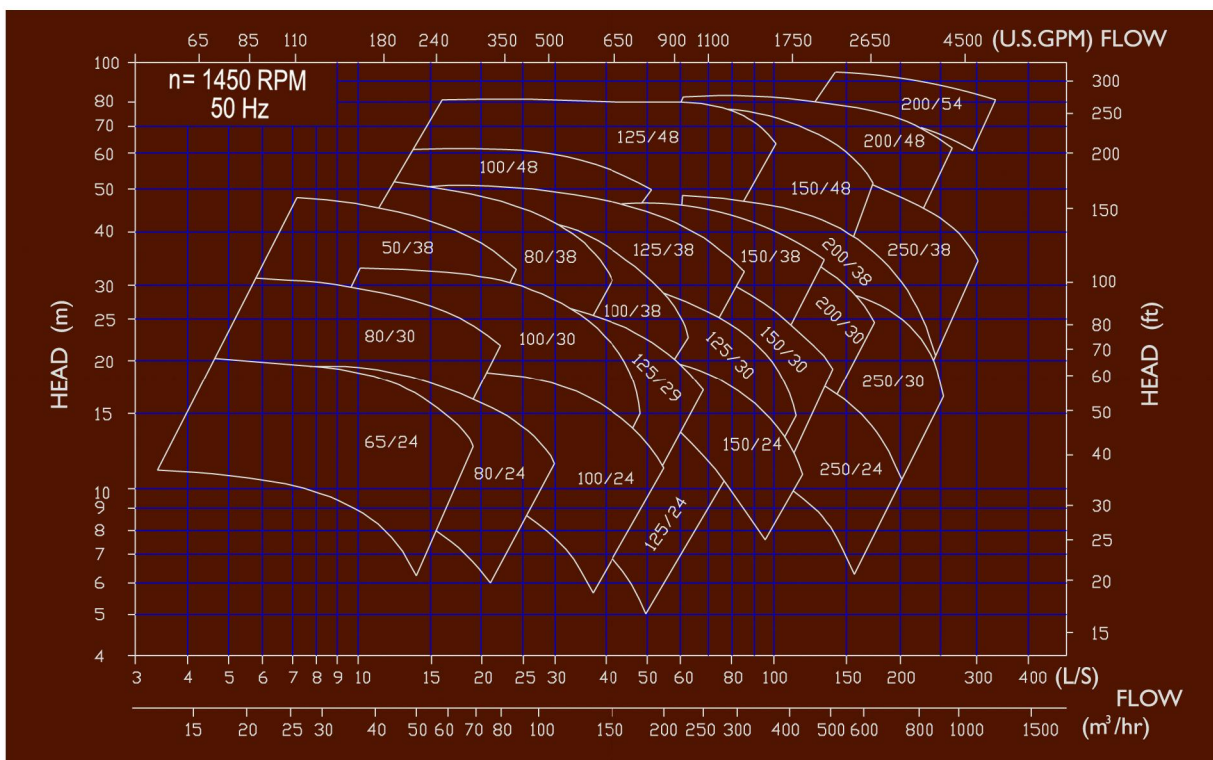
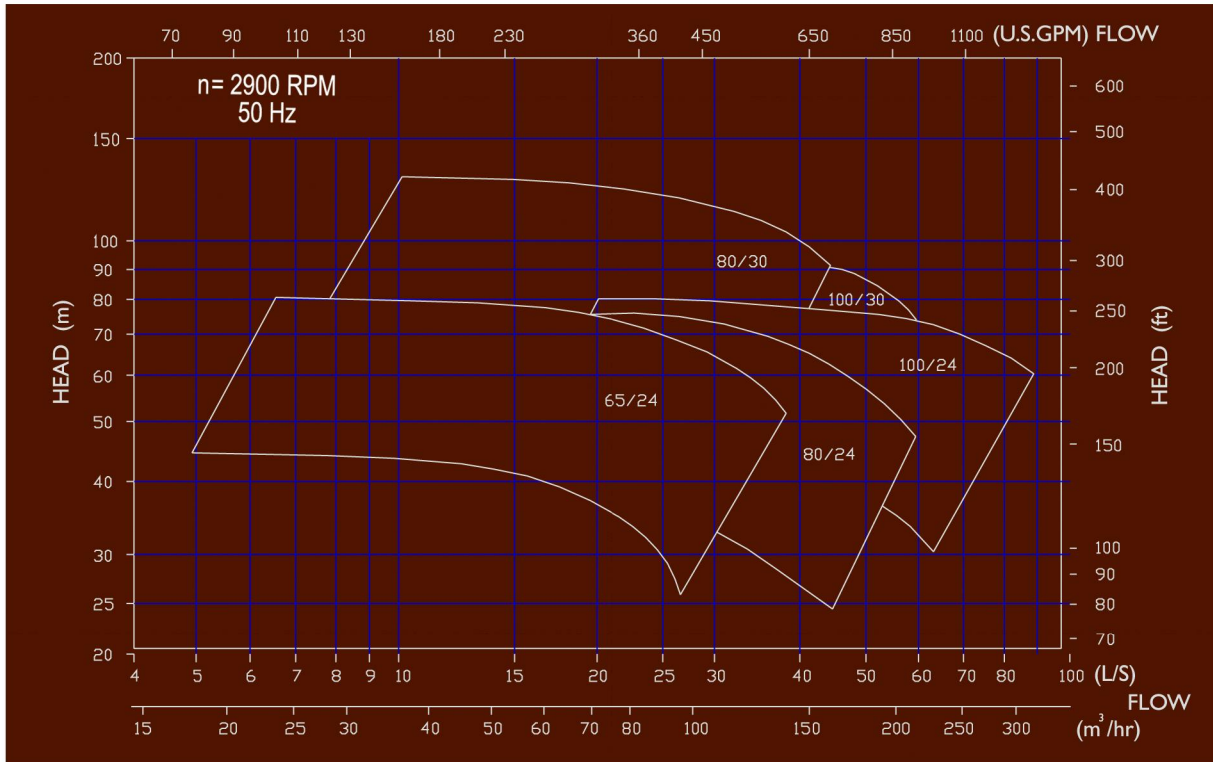
### 6. Shaft

The shafts are **Stainless Steel**, machined and ground to close tolerances. They are sized to transmit the torque and handle the imposed hydraulic loads, all the while maintaining a minimum amount of deflection under any flow condition.

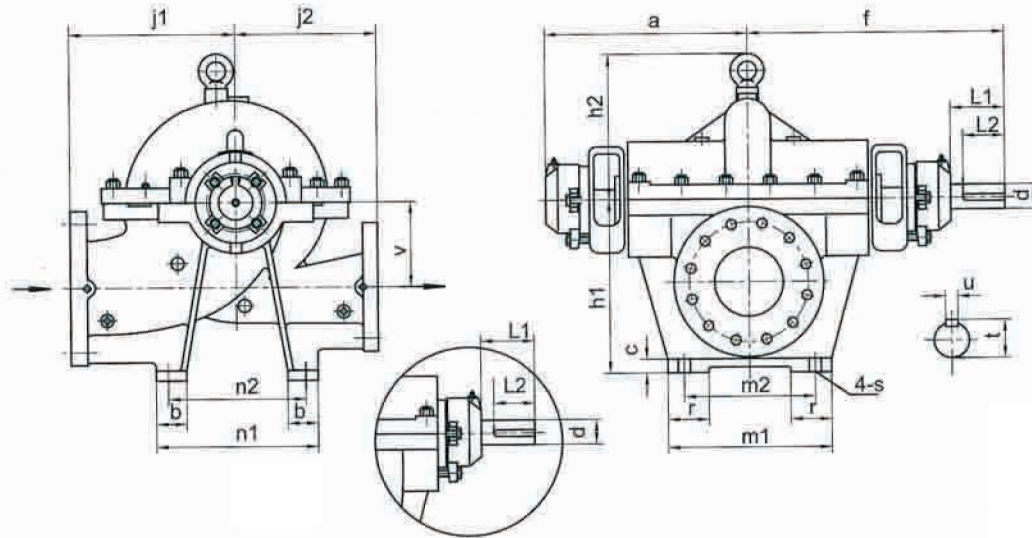
### 7. Shaft Sleeves

To protect the shaft against wear and corrosion, **Stainless Steel** shaft sleeves are provided. The shaft sleeves are threaded to position and hold the impeller in place The sleeves are double set screwed and key locked to prevent their rotation in either direction. They extend from the impeller to slightly beyond the seal box area.

**PERFORMANCE CHARTS:**



**DIMENSIONS:**



PUMP MODEL	FLANGE		No.	a		f		h1	h2	j1	j2	v	m1	m2	n1	n2	b	c	r	s	t	u	d	L1	L2	WEIGHT (kg)	
	in	out		ME	GP	ME	GP																			ME	GP
65/24	80	65	1	246	341	314	399	250	254	280	225	130	300	240	350	290	65	25	65	22	28	8	25	70	63	129	118
80/24	100	80	1	246	341	314	399	280	249	270	230	130	300	240	350	290	65	25	65	22	28	8	25	70	63	137	126
100/24	150	100	2	301	410	401	500	340	289	310	250	170	300	240	350	290	75	25	75	22	45	12	42	100	90	224	203
125/24	150	125	1	277	372	345	430	340	278	325	250	180	330	270	400	340	75	25	75	22	28	8	25	70	63	238	226
150/24	200	150	1	277	372	345	430	390	298	365	310	200	330	270	400	340	75	25	75	22	28	8	25	70	63	265	255
250/24	250	250	2	346	470	446	546	440	375	490	340	210	420	360	400	340	75	25	75	22	45	12	42	100	90	415	390
125/29	150	125	1	246	341	314	399	340	308	310	290	160	330	240	350	290	75	25	75	22	28	8	25	70	63	196	185
80/30	100	80	1	246	341	314	399	280	274	320	275	170	300	240	350	290	65	25	65	22	28	8	25	70	63	150	135
100/30	125	100	1	246	382	341	399	320	299	320	275	170	300	240	350	290	65	25	65	22	28	8	25	70	63	166	175
125/30	150	125	1	277	372	345	430	340	309	335	290	175	330	270	400	340	75	25	75	22	28	8	25	70	63	249	238
150/30	200	150	2	301	401	401	500	440	337	365	315	235	420	360	400	340	75	25	75	22	45	12	42	100	90	336	315
200/30	250	200	2	346	470	446	545	540	381	450	385	285	500	440	510	450	75	25	75	22	45	12	42	100	90	535	515
250/30	250	250	2	346	470	446	545	540	391	430	400	250	500	440	510	450	75	25	75	22	45	12	42	100	90	489	460
50/38	80	50	1	246	341	314	399	300	315	355	280	170	330	270	400	340	65	25	65	22	28	8	25	70	63	186	175
80/38	100	80	1	246	341	314	399	320	330	340	350	175	330	270	400	340	65	25	65	22	28	8	25	70	63	205	194
100/38	125	100	2	301	410	401	500	340	346	340	350	190	330	270	450	390	75	25	75	22	45	12	42	100	90	248	227
125/38	150	125	2	301	410	401	500	390	360	400	350	210	330	270	450	390	75	25	75	22	45	12	42	100	90	331	310
150/38	200	150	2	301	410	401	500	440	349	410	350	210	420	360	400	340	75	25	75	22	45	12	42	100	90	376	355
200/38	250	200	3	385	470	496	585	460	411	480	420	225	420	350	510	440	90	28	90	28	59	16	55	127	100	530	550
250/38	300	250	3	385	470	496	585	540	466	550	420	265	500	430	560	490	90	28	90	28	59	16	55	127	100	685	660
100/48	125	100	3	301	410	401	500	390	362	400	350	210	330	270	450	390	75	25	75	22	45	12	42	100	90	330	315
125/48	200	125	3	385	470	496	585	500	425	480	450	260	450	390	560	490	90	28	90	28	59	16	55	127	100	640	615
150/48	200	150	3	385	470	496	585	540	446	510	450	270	450	390	560	490	90	28	90	28	59	16	55	127	100	595	570
200/48	250	200	3	385	470	496	585	540	445	550	450	270	450	390	560	490	90	28	90	28	59	16	55	127	100	675	647
200/54	300	200	3	385	470	496	585	550	490	564	524	290	500	380	720	560	160	35	130	28	59	16	55	127	100	845	820