DR. PUMP Split Casing Pumps

Single-Stage Double Suction

SSCA 80 - 600

Technical Data

Flow:	max. 7.200 m³/h
Head:	max. 170m
Discharge diameter:	80 - 600mm
Working pressure:	up to 16 bar (25 bar optional)
Speed:	max. 3600 rpm
Material:	Cast Iron, Ductile Iron
Temperature:	max. 105 ºC
Flange connections:	DIN 2501 RF (std) ANSI B16.5B (optional)
Mounting:	Bare Shaft Engine Driven

Applications

Pumps of the SSC range meet the specific requirements of many applications including:

- HVAC and Cooling Tower
- Municipal Water Supply
- Marine and Ship Building
- Power / Biomass Plant
- Irrigation and agriculture
- Fire Fighting

A range of materials is available to meet the specific needs of customers.

Description

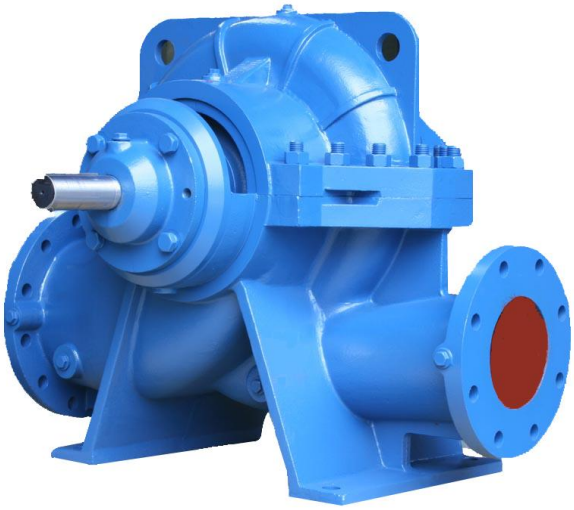
SSC series are Horizontal Split casing, Single stage, Double suction impeller with in-between bearing design, allows pumps run quietly and with minimal vibration.

Coupled with dynamically balanced impeller the pumps life is greatly prolonged and therefore, increase MTBF (Mean Time Between Failure). This allows the pump to be mounted horizontally and also, vertically to save space. Both Horizontal and vertical mounting is possible.

The design allows for change of rotation and position of the motor to suit installation requirement at site without extra or changed of components to the existing pump.

Construction

Casing
Heavy Duty construction with high inner wall finishes increasing efficiency and reducing turbulences. The integrated foot on the suction allow for rigidity and absorb external forces, yet allows user with ease of removing the rotating assembly without disconnecting the pipes and motor for maintenances and routine inspection of Seals and wear rings.



Impeller
The double suction design allow for balanced operation, low NPSH (required) and reduces radial loan that helps to prolong bearing seals and shaft life.

Shaft
Machined with large shaft diameter to resist deflection and grounded to size for consistency enables smooth installation of seals and bearing without damage and adjustment. Carbon steel (C45) material is standard with option for Stainless steel upon request.

Shaft Sleeve
Replaceable sleeve enable different material for different applications and avoid replacing shaft due to erosion and wear.

Wear ring
Eliminate casing wear and permit easy maintenance of proper running clearances for maximum efficiency through out pumps operation.

Sealing
Designed with large cavity for excellent heat dissipation and “no dead ends” to remove debris that may jam the seals, coupled with abilities to have different flushing plans, to further enhances cooling and dirt removal. SSC series is available, with packing or mechanical seal.

Bearing housing
Designed for maximum heat dissipation, it allows operation up to 130°C without extra cooling. The machined registered housing gives rigidity and accurate alignment during dismantling and assembly for maintenance. Coupled with double deep grooved ball bearing for horizontal mounting and Double Angular Contact bearing for vertical mounting on the driver end, the B10 life is greatly improved.

Lubrication
Standard grease optional oil.

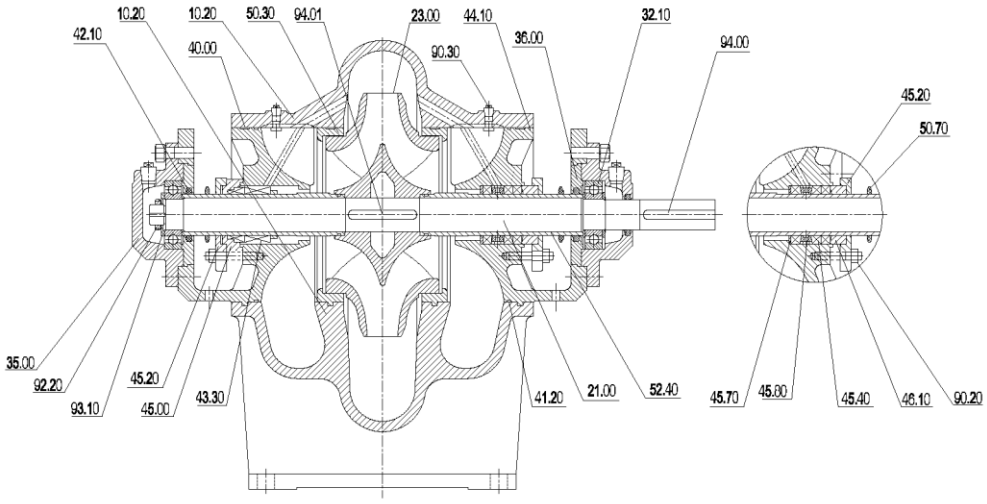
SSCA

Material Design

Product Identification Code			
Position	**Characteristic**	**Code**	**Explanation**
1-3	**Type**	**SSC**	**DR. PUMP** Single-Stage Double-Suction **S**plit **C**asing Pumps
4	**Construction**	**A**	
5-7	**Discharge Size**	**150**	Discharge size in mm
8-10	**Impeller Size**	**360**	Impeller nominal size in cm
11	**Hydraulic / Trim**	**A – B – C** **D – E – F**	
12	**Bearing Configuration**	**B**	Double deep grooved ball bearing and Double Angular Contact bearing
13 - 15	**Sealing**	**041** **ASF**	Soft Packing Mechanical Seal (A carbon, S silicon carbide, F fluorous rubber)
16-18	**Material**	**0B** **0C**	Impeller and Casing Cast Iron GG-25, Shaft Carbon Steel C45 Casing Cast Iron GG-25, Impeller Brass, Shaft Carbon Steel C45 ** Other material combinations on request*
19	**Rotation**	**D** **T**	Standard Rotation Special Rotation

Sectional Drawing

Item	**Part**
10.20	Volute Casing
21.00	Shaft
23.00	Impeller
32.10	Ball Bearing
35.00	Bearing Housing
36.00	Bearing Cover
40.00	Gasket Casing
41.20	O-Ring
42.10	Radial Shaft Seal Ring
43.30	Mechanical Seal
44.10	Seal Casing
45.00	Lock Washer
45.40	Stuffing Box Ring
45.20	Gland
45.50	Follower
45.70	Necked Ring
45.80	Latern Ring
46.10	Packing Seal
50.30	Impeller Wear Ring
50.70	Thrower
52.40	Shaft Sleeve
90.20	Stud
90.30	Plug
92.20	Shaft Nut
93.10	Lock Washer
94.00	Key



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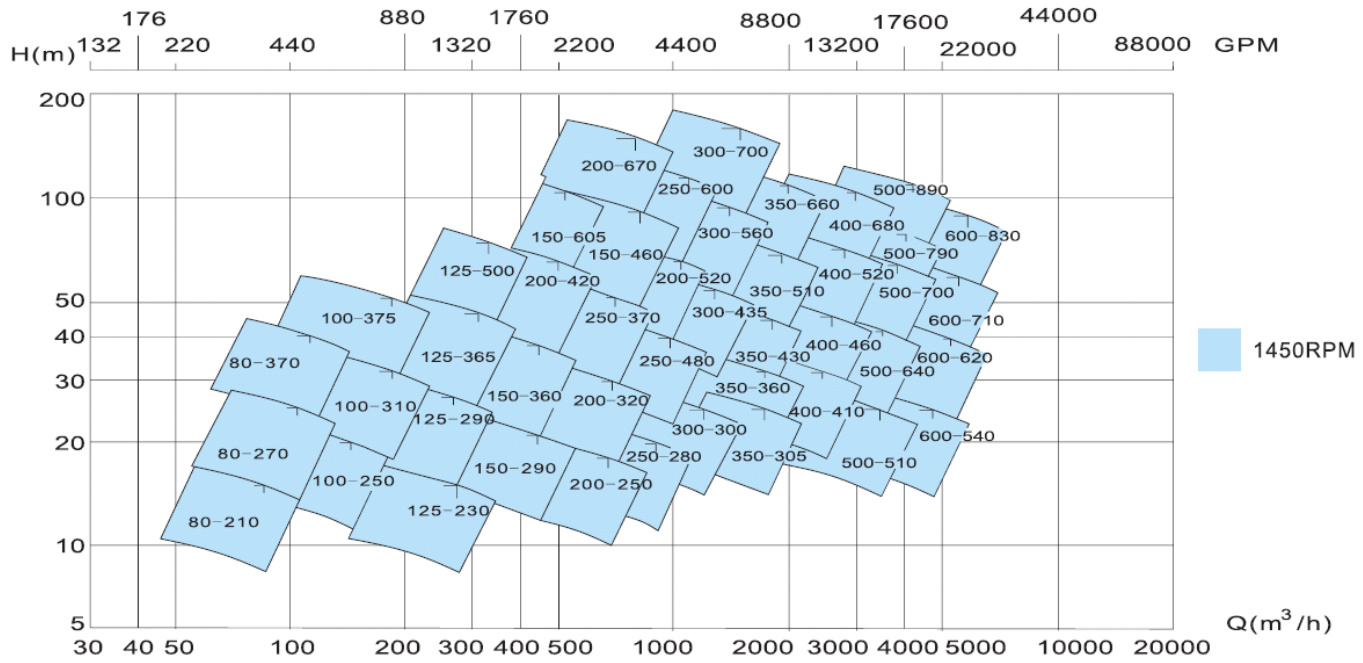
Performance Characteristics

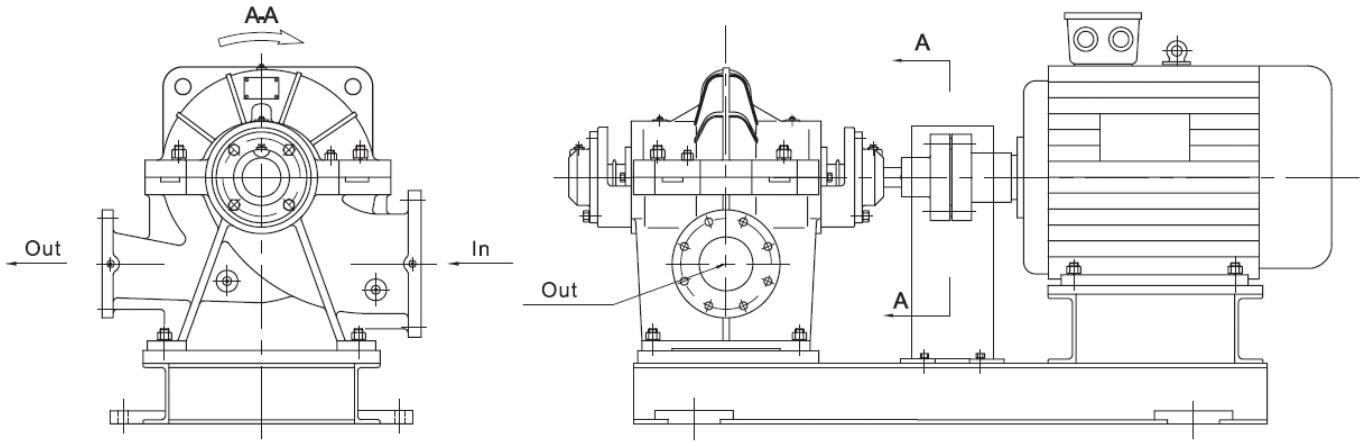
Family Curve



Direction of Rotation

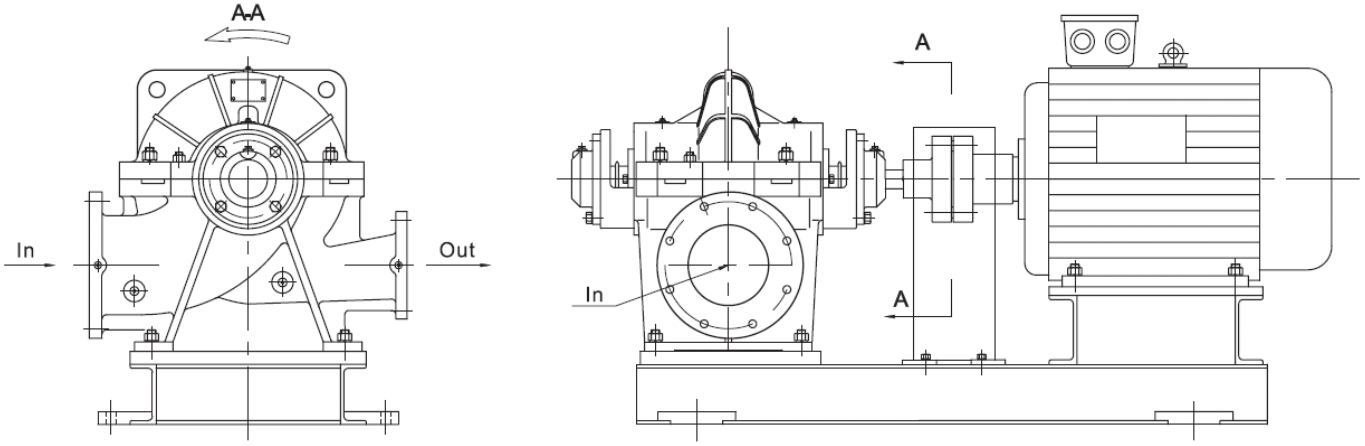
Standard Type

Clockwise viewing from drive side



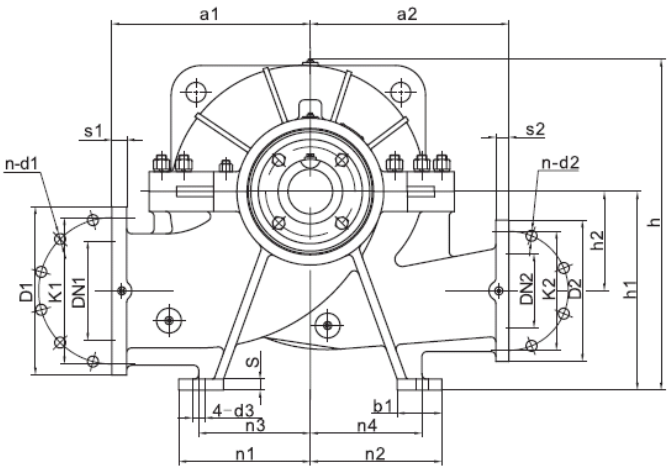
Special Type

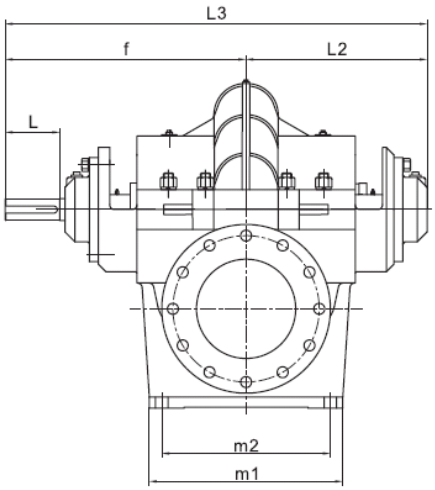
Counter clockwise viewing from drive side



SSCA

Dimensions





Flange Standard Dimensions (ISO7005.2 - DIN2501 PN16)												
DN1/DN2	80	100	125	150	200	250	300	350	400	500	600	700
K1/K2	160	180	210	240	295	355	410	470	525	650	770	840
D1/D2	200	220	250	285	340	405	460	520	580	715	840	910
S1/S2	22	24	26	26	30	32	34	38	40	46	54	54
n-d1/n-d2	8-Φ17.5	8-Φ17.5	8-Φ17.5	8-Φ22	12-Φ22	12-Φ26	12-Φ26	16-Φ26	16-Φ30	20-Φ33	20-Φ36	24-Φ36

Nr	Model	Flange		Pump Body								Foot									Shaft			
		DN1	DN2	a1	a2	f	l2	l3	h	h1	h2	m1	m2	n1	n2	n3	n4	b1	d3	s	d	b	l	t
1	SSC 80-210	125	80	300	300	385	300	685	480	315	140	320	270	205	205	170	170	80	Φ25	22	Φ34	10	80	37.3
2	SSC 80-270	125	80	300	300	385	300	685	505	315	140	320	270	205	205	170	170	80	Φ25	22	Φ34	10	80	37.3
3	SSC 80-370	125	80	330	330	385	300	685	540	315	140	320	270	205	205	170	170	80	Φ25	22	Φ34	10	80	37.3
4	SSC 100-250	150	100	330	330	385	300	685	545	355	170	320	270	235	235	200	200	80	Φ25	22	Φ34	10	80	37.3
5	SSC 100-310	150	100	330	330	385	300	685	585	355	170	320	270	235	235	200	200	80	Φ25	22	Φ34	10	80	37.3
6	SSC 100-375	150	100	330	370	385	300	685	610	355	170	320	270	235	235	200	200	75	Φ25	22	Φ34	10	80	37.3
7	SSC 125-230	200	125	370	370	485	365	850	620	400	200	390	340	265	265	225	225	90	Φ25	22	Φ44	12	110	47.3
8	SSC 125-290	200	125	370	370	485	365	850	635	400	200	390	340	265	265	225	225	90	Φ25	22	Φ44	12	110	47.3
9	SSC 125-365	200	125	370	370	485	365	850	660	400	200	390	340	265	265	225	225	90	Φ25	22	Φ44	12	110	47.3
10	SSC 125-500	200	125	450	450	485	365	850	715	400	200	390	340	320	320	280	280	85	Φ25	22	Φ44	12	110	47.3
11	SSC 150-290	200	150	400	400	485	365	850	655	400	200	340	340	265	265	225	225	90	Φ25	22	Φ44	12	110	47.3
12	SSC 150-360	200	150	400	400	485	365	850	670	400	200	340	340	265	265	225	225	90	Φ25	22	Φ44	12	110	47.3
13	SSC 150-460	200	150	450	450	520	400	920	710	400	200	480	430	315	315	280	280	75	Φ30	35	Φ54	16	110	58.3
14	SSC 150-605	200	150	600	500	520	400	920	885	500	300	480	430	390	390	350	350	95	Φ30	35	Φ54	16	110	58.3
15	SSC 200-250	250	200	450	450	520	400	920	780	500	240	480	430	315	315	280	280	85	Φ25	25	Φ54	16	110	58.3
16	SSC 200-320	250	200	450	450	520	400	920	800	500	240	480	430	315	315	280	280	85	Φ25	25	Φ54	16	110	58.3
17	SSC 200-420	250	200	500	500	520	400	920	820	500	240	480	430	330	330	280	280	100	Φ25	25	Φ54	16	110	58.3
18	SSC 200-520	250	200	600	600	614	464	1078	920	560	300	490	430	400	400	350	350	100	Φ28	28	Φ64	18	140	68.4
19	SSC 200-670	250	200	650	550	614	464	1078	920	600	350	500	400	400	400	350	350	110	Φ30	35	Φ64	18	140	68.4
20	SSC 250-280	300	250	500	500	614	464	1078	940	600	300	480	400	400	400	350	350	100	Φ30	28	Φ64	18	140	68.4
21	SSC 250-370	300	250	500	500	614	464	1078	945	600	300	480	400	400	400	350	350	100	Φ30	28	Φ64	18	140	68.4
22	SSC 250-480	300	250	550	550	695	515	1210	950	600	300	600	520	400	400	350	350	100	Φ30	32	Φ74	20	170	78.9
23	SSC 250-600	300	250	650	550	695	515	1210	1050	630	350	600	520	400	400	350	350	110	Φ30	35	Φ74	20	170	78.9
24	SSC 300-300	350	300	550	500	614	464	1078	1000	630	300	500	400	400	400	350	350	100	Φ30	30	Φ64	18	140	68.4
25	SSC 300-435	350	300	650	550	695	515	1210	1050	670	350	600	520	400	400	350	350	100	Φ30	32	Φ74	20	170	78.9
26	SSC 300-560	400	300	700	650	765	585	1350	1135	710	350	620	520	525	525	475	475	110	Φ30	35	Φ84	22	170	89.4
27	SSC 300-700	400	300	750	650	765	585	1350	1235	750	400	620	520	530	530	475	475	120	Φ30	40	Φ84	22	170	89.4
28	SSC 350-305	400	350	650	550	695	515	1210	1060	670	350	600	520	400	400	350	350	100	Φ30	32	Φ74	20	170	78.9
29	SSC 350-360	400	350	650	550	695	515	1210	1090	670	350	600	520	400	400	350	350	100	Φ30	32	Φ74	20	170	78.9
30	SSC 350-430	450	350	750	650	765	585	1350	1165	750	400	600	520	530	530	475	475	120	Φ30	35	Φ84	22	170	89.4
31	SSC 350-510	400	350	700	650	765	585	1350	1185	750	400	620	520	525	525	475	475	110	Φ30	40	Φ84	22	170	89.4
32	SSC 350-660	450	350	750	650	765	585	1350	1255	780	400	620	520	530	530	475	475	120	Φ30	40	Φ84	22	170	89.4
33	SSC 400-410	500	400	700	550	840	655	1495	1205	800	400	750	650	420	420	370	370	120	Φ33	40	Φ75	20	170	79.9
34	SSC 400-460	500	400	650	550	840	655	1495	1225	800	400	750	650	520	520	470	470	120	Φ33	40	Φ75	20	170	79.9
35	SSC 400-520	500	400	750	650	765	585	1350	1380	900	450	700	600	550	550	500	500	120	Φ33	45	Φ84	22	170	89.4
36	SSC 400-680	500	400	750	650	895	670	1565	1390	850	450	720	650	500	500	440	440	150	Φ33	40	Φ95	25	210	100.4
37	SSC 500-510	600	500	850	750	940	755	1695	1490	950	475	900	600	560	560	500	500	150	Φ42	60	Φ85	22	170	90.4
38	SSC 500-640	600	500	850	750	940	755	1695	1490	950	470	900	600	560	560	500	500	150	Φ42	60	Φ85	22	170	90.4
39	SSC 500-700	600	500	1000	850	935	710	1645	1630	1050	550	790	660	720	720	660	660	150	Φ42	60	Φ105	28	210	111.4
40	SSC 500-790	600	500	1000	900	1078	810	1888	1760	1100	600	1000	900	710	710	650	650	150	Φ42	60	Φ115	32	220	122.4
41	SSC 500-890	600	500	1050	950	1078	810	1888	1855	1150	650	1000	900	710	710	650	650	150	Φ42	60	Φ115	32	220	122.4
42	SSC 600-540	700	600	1100	900	940	755	1695	1695	1100	560	910	790	705	705	650	650	150	Φ42	60	Φ85	22	170	90.4
43	SSC 500-620	700	600	1000	1000	1025	800	1825	1725	1100	545	950	850	725	725	665	665	150	Φ42	60	Φ105	28	210	111.4
44	SSC 600-710	700	600	1000	1100	1078	810	1888	1710	1050	545	1020	900	710	710	650	650	150	Φ42	50	Φ115	32	220	122.4
45	SSC 600-830	600	600	1100	1200	1130	855	1985	1850	1150	650	970	820	710	710	650	650	150	Φ42	60	Φ125	32	250	132.4