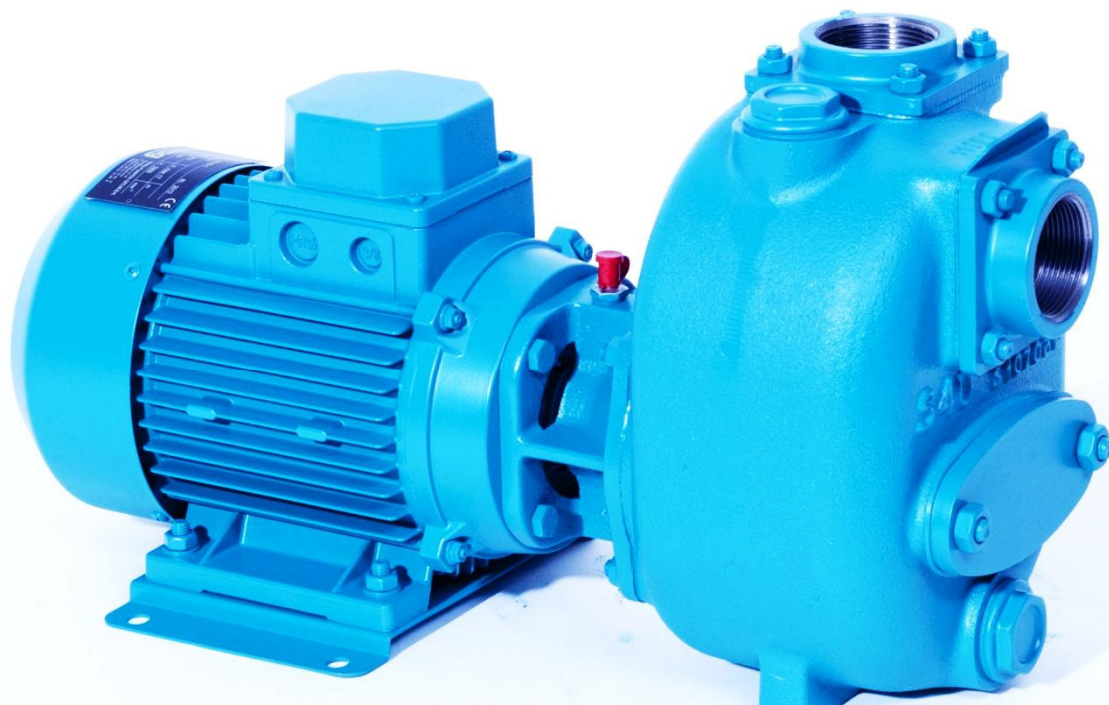


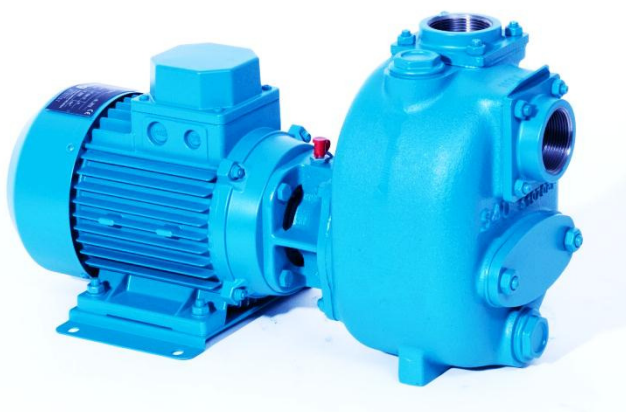
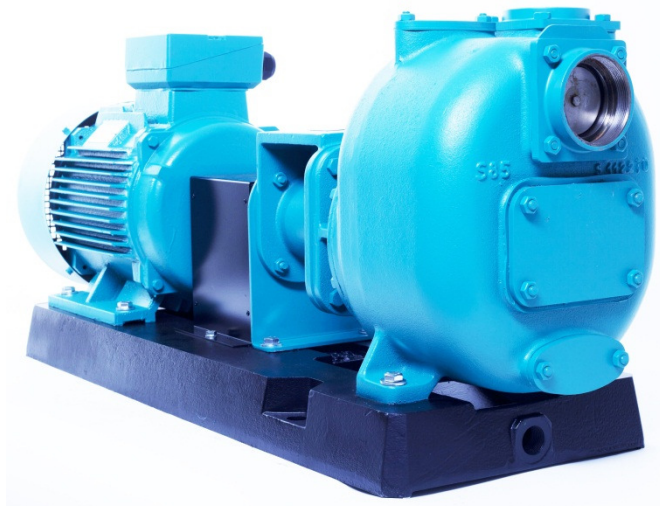


SELF-PRIMING CENTRIFUGAL PUMP



INDUSTRY APPLICATION

Self-priming centrifugal pumps of type „S“ are used for pumping clean and contaminated liquids containing solids. The special design makes them suitable also for abrasive liquids.



„S“-pumps are universally applicable, if the following criteria are of particular importance:

- Self-priming
- Large solid passage
- Resistance against abrasive
- Dry-run safety
- Long service life

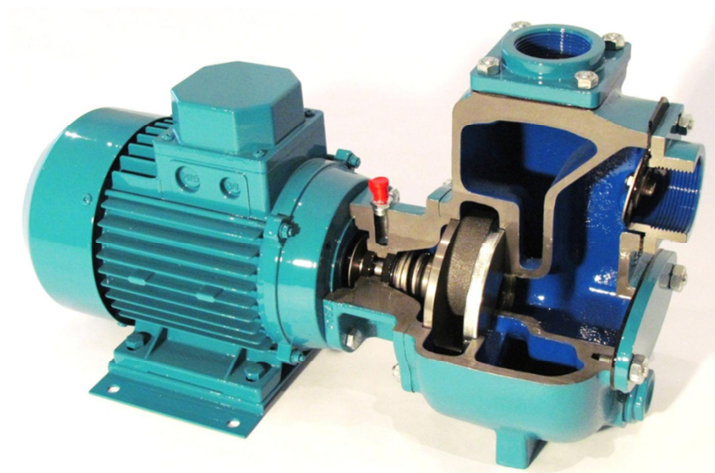
„S“-pumps are used in:

- Industry
- Waste treatment
- Environment protection
- Construction industry
- Civil engineering

Viscous liquids up to 50 mm²/s, which can contain air and be abrasive, corrosive and compatible with cast iron, stainless steel or bronze can be pumped with the “S”-series. The pumps can be located above or on side of the liquid.

Depending from the pump model they can self-prime up to the physical limit of 8-9 m.

CONSTRUCTION



This kind of pump is normally placed dry above or aside the liquid. On these cases the suction line contains air, which a “normal priming” centrifugal pump cannot separate. Because of the special design from the self-priming centrifugal pumps of type “S” all the air can be evacuated:

The vacuum produced as the impeller rotates, draws air into the pump where it is mixed with the liquid already contained in the pump casing. The air-liquid mixture is driven to the discharge side where the air separates out and is expelled through the discharge port while the liquid, due to the higher gravity, falls back and is reused in the suction side through a small passage. When all the air has been evacuated from the suction line the liquid is pumped continuously, even if the liquid is aerated.

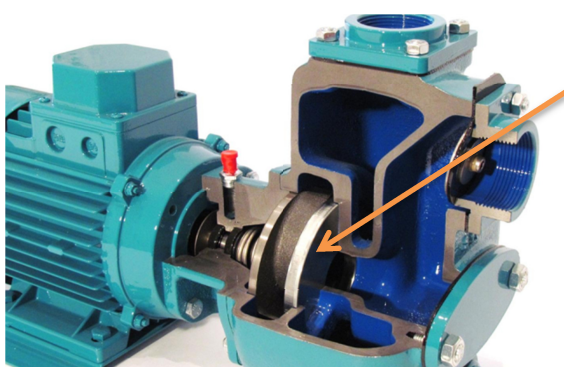
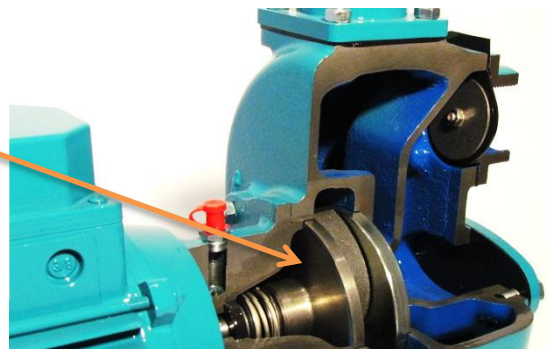
The high suction port keeps enough liquid inside the casing to allow re-priming any time.

The built-in check-valve in the suction port avoids a backflow of the liquid and reduces priming time.

PROPERTIES AND ADVANTAGES

- **Extremely robust** by its massive construction
- Wetted parts in steel or cast iron or stainless steel
- Possibility of different pump material combinations – in accordance to the pumped liquid
- **Self-priming** because of special casing construction
- **Large solid passage**

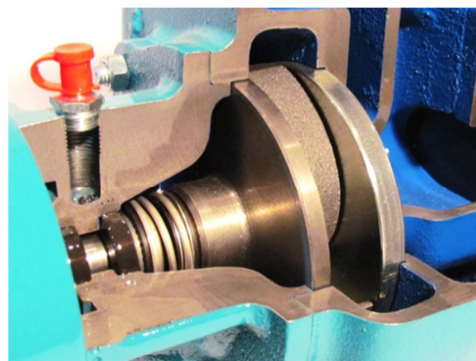
- **Open channel impeller** made of thick-walled material against wear
- Cutter for special liquids as option



- Thick-walled and **easy interchangeable wear plate**, minimizes repair- and maintenance costs. Pump casing must not be renewed

- **Inspection cover** for controlling and cleaning of the impeller
- **Built-in check valve** on suction connection, available in various materials

- **Dry-run safety** of mechanical seal because of lubrication device
- Material of mechanical seal can be selected individually, external flushing of mechanical seal as option



- Suction- and discharge connections are available as threaded or flanged connections (DIN or ASA)

VERSIONS AND MATERIALS

• Materials

Part Description	Pumps - Materials - Execution		
	G	B	K
Casing	EN-GJL-250 (GG25)	Bronze	1.4408/AISI316
Impeller	EN-GJL-250 (GG25)	Bronze	1.4408/AISI316
Wear plate	Steel	1.4408/AISI316	1.4408/AISI316
Head	EN-GJL-250 (GG25)	Bronze	1.4408/AISI316
Shaft	Steel	1.4401/AISI316	1.4401/AISI316
Bearing housing	EN-GJL-250 (GG25)	EN-GJL-250 (GG25)	EN-GJL-250 (GG25)

• Versions

- **Close-coupled monobloc pump** directly connected with electric motor with extended shaft. Easy, compact and low price
- **Bi-Block-version**. Pump with bearing bracket and elastic coupling with an IEC-norm electric motor connected into a compact unit. User-friendly, safe and space saving
- **Pump with bearing bracket** and free shaft end with elastic coupling, coupling guard and IEC-norm electric motor, mounted on base plate. Robust, safe, flexible, ideal for continuous operation
- **Contractors pump** with diesel- or petrol engines on tank frame or mobil on chassis frame
- Smallest close-coupled pump type S 40 available with **carrying frame**

• ATEX-version

Pumps and pump-units can be certificated for ATEX. For the available designs, materials and the possible accessories please contact our sales department.

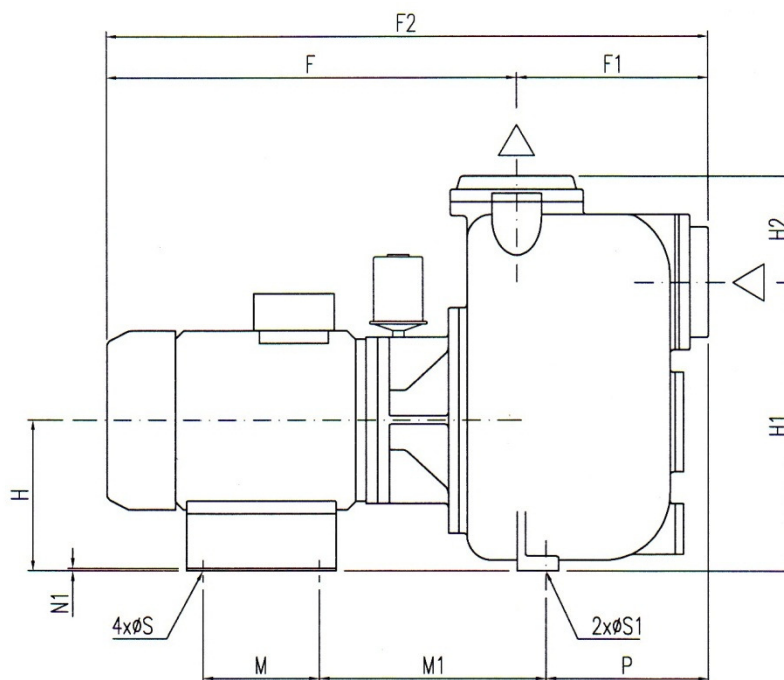
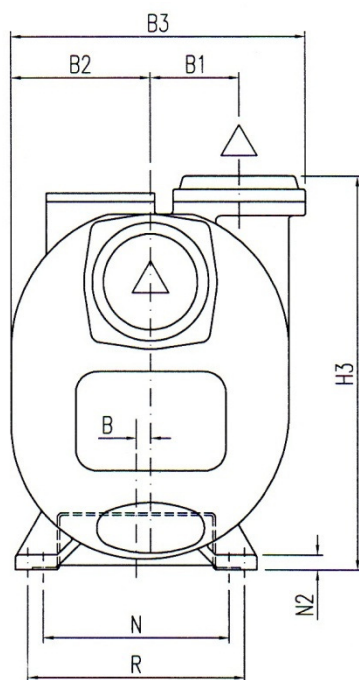


PUMP SELECTION - CHARACTERISTICS

Type	Size	Solid handling Ø mm	Capacity m³/h	Head m	Motor kW	Impeller Ø mm	Pedestal size
2900 min ⁻¹							
S 40	1 ½"	20	20/16/7	5/10/15	1,1	110	1
S 45	1 ½"	15	22/14/5	10/20/30	2,2	172	2
S 50	2"	25	40/30/13	5/10/15	2,2	120	2
S 60	2"	17	42/30/14	10/20/30	4,0	172	3
S 63	2"	15	45/28/18	30/40/45	7,5	195	3
S 68	2"	25	42/30/16	35/45/55	11,0	220	4
S 80	3"	30	80/47/20	5/15/20	4,0	140	3
S 83	3"	20	80/57/20	15/25/20	7,5	172	3
S 88	3"	30	93/70/32	25/35/45	15,0	220	4
S 100	4"	45	135/100/60	10/20/25	11,0	160	4
S 108	4"	40	135/105/65	25/35/45	22,0	220	5
1450 min ⁻¹							
S 65	2"	25	40/28/10	5/10/15	2,2	220	4
S 85	3"	40	80/62/20	5/10/15	4,0	220	4
S 105	4"	45	140/100/50	5/10/15	5,5	220	4
S 121	4"	45	178/100/50	10/20/25	11,0	280	5
S 150	6"	60	260/180/80	5/10/15	11,0	220	5
S 161	6"	60	310/230/110	10/15/20	18,5	280	5
S 180	6"	45	320/250/160	20/25/30	30,0	358	6
S 201	8"	57	500/400/250	5/10/15	22,0	280	6
S 230	8"	72	630/440/250	20/30/35	45,0	258	6
960 min ⁻¹							
S 170	6"	50	300/240/120	5/10/15	11,0	358	6
S 220	8"	72	530/420/180	5/10/15	18,5	358	6
S 300	12"	76	1200/1000/450	5/10/15	55,0	405	7

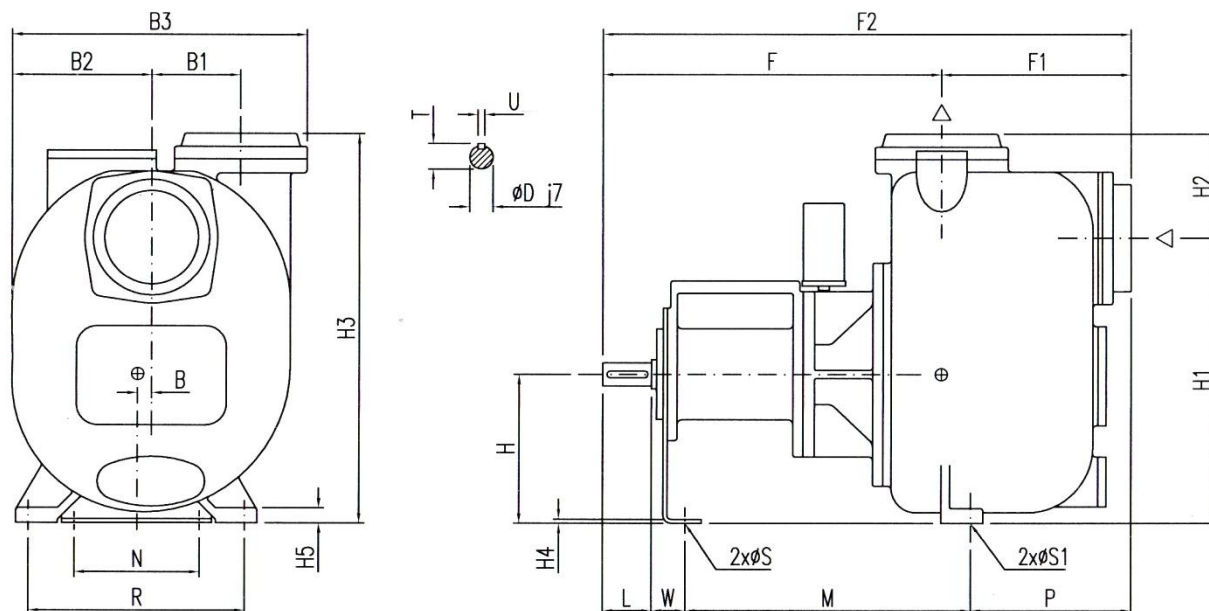
DIMENSIONS

Close-coupled pump:



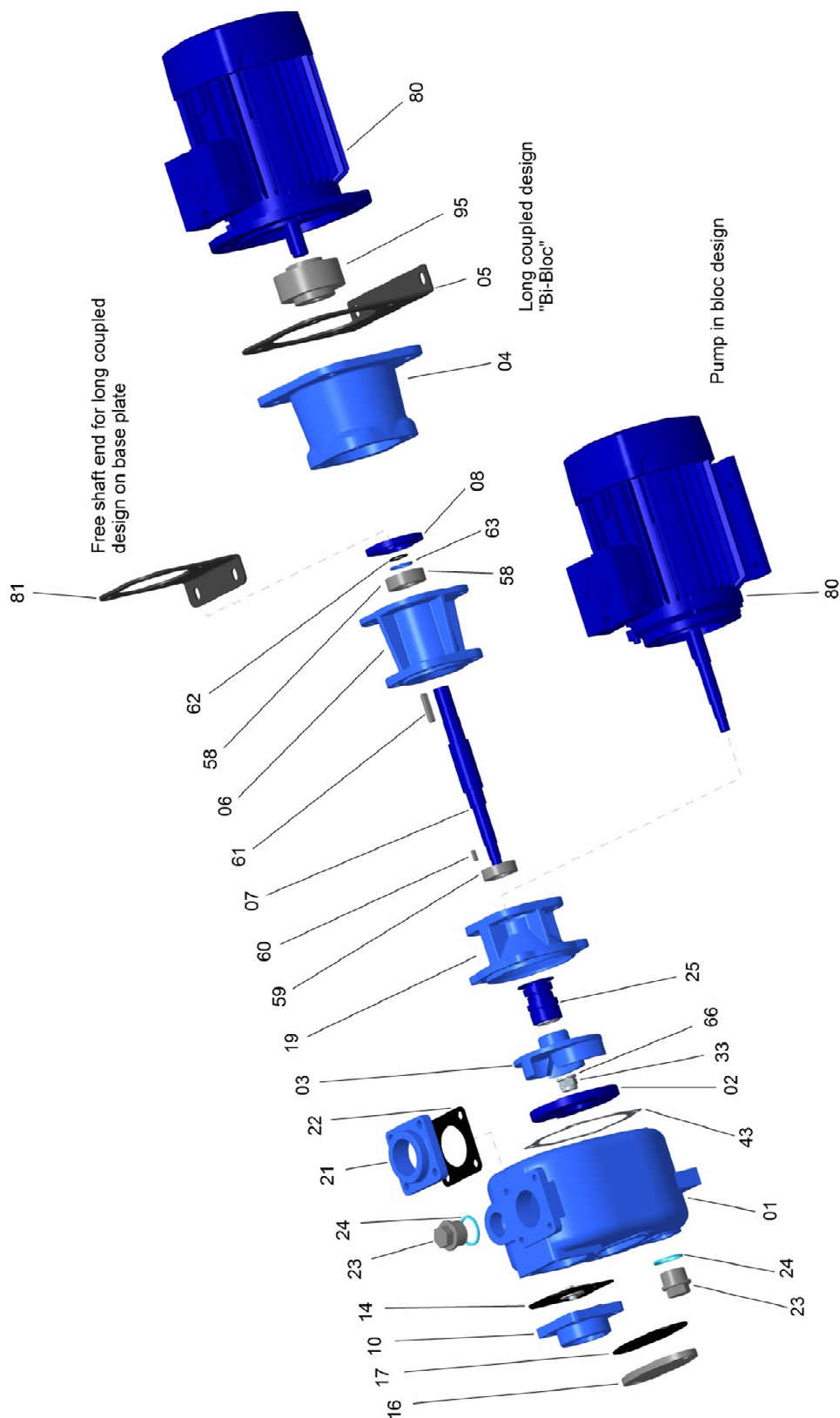
Size	Dimension in mm																						
	DN	B	B1	B2	B3	F	F1	F2	H	H1	H2	H3	M	M1	N	N1	N2	R	P	S	S1	kg	
2900 min ⁻¹																							
S 40	1½"	40	7	29	112	210	366	98	464	90	187	70	257	100	186	190	2	-	-	87	9	-	25
S 45	1½"	40	7	80	122	242	392	122	514	110	237	75	312	125	181	210	2	-	-	112	9	-	38
S 50	2"	50	9	36	124	230	427	113	540	110	227	83	310	125	216	210	2	-	-	103	9	-	38
S 60	2"	50	9	36	149	280	456	113	569	132	267	83	350	140	233	240	3	-	-	98	12	-	55
S 63	2"	50	9	94	154	290	450	144	594	132	272	83	355	140	204	260	3	-	-	134	12	-	71
S 80	3"	80	13	40	153	280	465	140	605	132	277	101	378	140	242	240	3	-	-	125	12	-	62
S 83	3"	80	12	85	157	290	460	170	630	132	277	101	378	140	214	260	3	-	-	160	12	-	73
1450 min ⁻¹																							
S 65	2"	50	9,5	60	154	308	487	113	600	160	310	83	393	140	265	240	3	18	260	89	12	14	72
S 68	2"	50	9,5	60	154	308	596	113	709	160	310	83	393	270	245	216	4	18	260	89	12	14	106
S 85	3"	80	16	106	161	327	466	195	661	160	310	101	411	140	265	240	3	18	260	150	12	14	92
S 88	3"	80	16	106	161	327	575	194	769	160	310	101	411	270	245	216	4	18	260	149	12	14	125
S 100	4"	100	17	50	162	319	613	160	773	160	320	130	450	270	245	216	4	18	260	155	12	14	121
S 105	4"	100	17	107	167	354	493	230	723	180	345	126	471	140	272	260	3	18	260	195	12	14	112
S 121	4"	100	19	143	203	426	583	250	833	220	390	121	511	178	296	305	5	18	295	210	12	14	166
S 150	6"	150	26	109	196	477	645	271	916	200	380	174	554	178	351	305	5	18	295	236	12	14	184
S 161	6"	150	26	139	236	517	769	271	1040	230	410	174	584	254	370	385	5	18	315	236	14	14	273

Bare shaft pump with bearing bracket:



Size	Dimension in mm																										
	DN	B	B1	B2	B3	D	F	F1	F2	H	H1	H2	H3	H4	H5	L	M	N	P	R	S	S1	T	U	W	kg	
2900 min ⁻¹																											
S 40	1½"	40	7	29	89	178	19	267	97	364	90	187	70	257	3	-	40	202	80	88	110	10	10	21,5	6	35	17
S 45	1½"	40	7	80	111	231	19	270	122	392	110	237	75	312	3	-	40	201	100	112	130	10	10	21,5	6	40	28
S 50	2"	50	9	36	103	206	19	305	113	418	110	225	83	308	3	-	40	236	100	103	130	10	10	21,5	6	40	26
S 60	2"	50	9	36	129	258	28	361	113	474	132	267	83	350	4	-	60	271	125	98	140	12	12	31	8	45	39
S 63	2"	50	9,5	94	131	275	28	329	144	473	132	272	83	355	4	-	60	240	125	129	140	12	12	31	8	45	42
S 80	3"	80	13	40	130	260	28	369	140	509	132	277	101	378	4	-	60	279	125	125	140	12	12	31	8	45	46
S 83	3"	80	14	85	133	278	28	339	170	509	132	277	101	378	4	-	60	250	125	155	160	12	12	31	8	45	50
1450 min ⁻¹																											
S 65	2"	50	9,5	60	154	308	28	421	113	543	160	310	84	394	5	18	60	344	150	89	260	14	14	31	8	41	67
S 68	2"	50	9,5	60	154	308	28	421	113	543	160	310	84	394	5	18	60	344	150	89	260	14	14	31	8	41	67
S 85	3"	80	16	106	160	326	28	400	195	604	160	310	101	411	5	18	60	344	150	150	260	14	14	31	8	41	78
S 88	3"	80	16	106	160	326	28	400	195	604	160	310	101	411	5	18	60	344	150	150	260	14	14	31	8	41	82
S 100	4"	100	17,5	50	157	314	28	440	158	607	160	320	130	450	5	18	60	344	150	153	260	14	14	31	8	41	77
S 105	4"	100	17	107	167	354	28	410	230	649	180	345	126	471	5	18	60	344	150	195	260	14	14	31	8	41	97
S 108	4"	100	17	107	167	354	32	487	230	716	180	345	126	471	6	18	80	387	150	195	260	14	14	35	10	55	95
S 121	4"	100	19	143	203	426	32	497	250	737	220	390	121	511	6	18	80	402	150	210	295	14	14	35	10	55	132
S 150	6"	150	26	109	194	443	32	547	271	817	200	380	174	554	6	18	80	447	150	202	295	14	14	35	10	55	145
S 161	6"	150	26	139	225	504	32	557	271	817	230	410	174	584	6	18	80	457	150	202	315	14	14	35	10	55	189
S 180	6"	150	26	173	264	577	42	602	313	939	280	490	180	670	8	25	90	489	260	229	380	18	18	45	12	77	257
S 201	8"	200	36	140	271	571	42	618	374	1005	280	461	208	663	8	25	90	500	260	294	410	18	18	45	12	77	256
S 230	8"	200	36	179	291	630	42	622	374	1020	310	530	194	724	8	25	90	509	260	290	450	18	18	45	12	77	325
960 min ⁻¹																											
S 170	6"	150	26	173	264	577	42	602	313	939	280	490	180	670	8	25	90	489	260	229	380	18	18	45	12	77	257
S 220	8"	200	36	179	291	630	42	622	374	1020	310	530	194	724	8	25	90	509	260	290	450	18	18	45	12	77	325

EXPLODED VIEW





Basic Data:

Capacity:	max. 1500 m ³ /h
Discharge Head:	max. 70 m W.S.r
Self-priming:	max. 8-9 m
Solid size:	max. 76 mm ø
Connections:	DN 40 – DN 300