



# VS 6" - 8" SERIES 50 HZ

STAINLESS STEEL SUBMERSIBLE PUMPS  
FOR 6" AND 8" DEEP WELLS OR LARGER



# **VS 8" Series**

**50 Hz**

**VS 78 - 97**

# 8" STAINLESS STEEL SUBMERSIBLE PUMPS

## APPLICATION

- Municipal water works
- Water distribution and pressure boosting
- Irrigation and sprinkler systems, water treatment plants, filtration and reverse osmosis
- Industrial cooling and processing
- Mining industry, drainage and dewatering
- Fire-fighting equipment
- Fountains

## FEATURES

- Stainless steel components for durability and robustness, guaranteeing longevity and trouble-free operation. Many design technical features make this pump range very compact and extremely reliable, to ensure applications in the most complex and severe conditions.
- External stainless steel sleeve to improve stiffness and assure permanent alignment of all the components
- Motor adapter and discharge head may be removed without disturbing the impeller / diffuser stack
- Built-in check valve and over size pump shaft
- Easy maintenance without the need of special tools

## PUMP SPECIFICATION

- Flow: up to 120 m<sup>3</sup>/h at 50 Hz
- Head: up to 500 m (50 Bar) at 50 Hz
- Water temperature range:
  - Minimum: -5 °C
  - Maximum: +90 °C (+60 °C for NBR parts)
- Maximum allowable amount of sand 100 g/m<sup>3</sup>
- Rotation: counter clockwise when looking into the discharge
- Pump can work continuously in vertical or horizontal position

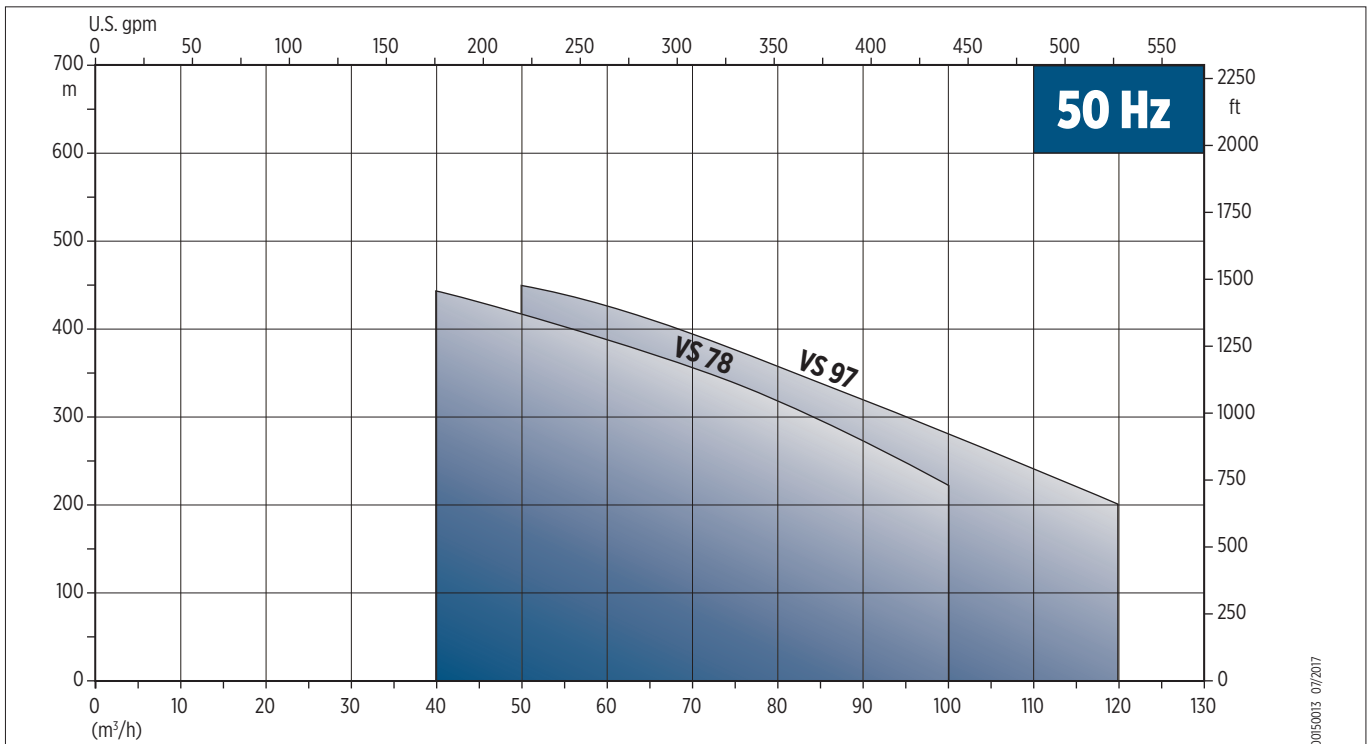
## MOTOR SPECIFICATION

- Motor adapter in compliance with NEMA standard
- For more information consult the product catalog of Submersible motors

## AVAILABLE ON REQUEST

- Pump material:
  - 316 Stainless steel (N) version (DIN/EN 1.4401)
  - 904L (R) version (DIN/EN 1.4539)
  - See specified material variant in Materials/fluids compatibility table on page 50
- Double cable guard
- Discharge head:
  - Rp 4" for I and N versions
  - Rp 6" for R version
- Pump with NBR rubber parts

## FAMILY CURVES



## PUMP IDENTIFICATION CODE

VS 78 / 15 I M8 RP5 E1 P HP SD

- VS 78 / Pump model
- 15 Number of stages
- I Material: I (AISI 304); N (AISI 316); R (AISI 904L)
- M8 Motor coupling dimension: M8 (8")
- RP5 Discharge head (threaded type and dimension): Rp(X); NPT(X)
- E1 Bearing bush material: E1 (EPDM)
- P Pump speciality: P (Passivated); HP (High pressure); SD (Double cable guard)
- HP SD

## PUMPS AND MOTORS RANGE

Type	Versions			Motor power range [kW]	
	I EN 1.4301	N EN 1.4401	R EN 1.4539	I e N	R
	VS78	○	○	●	7.5 ÷ 93
VS97	○	○	●	9.3 ÷ 110	30 ÷ 93

○ = Version available ● = Version available only with 6" motor coupling

## MATERIALS/FLUIDS COMPATIBILITY

Ref. No.	Parts description	Material	Standard					
			I Version		N Version		R Version	
			ASTM	DIN/EN	ASTM	DIN/EN	ASTM	DIN/EN
10.00	Discharge head	Stainless steel	CF8 (304)	1.4308	CF8M (316)	1.4408	CD4MCuN (904L)	1.4517
10.01	Valve	Stainless steel	316	1.4401	316	1.4401	2205/904L	1.4462/1.4460
10.02	Sealing O-ring	EPDM						
10.03	Outer case locking nuts	Stainless steel	316	1.4401	316	1.4401	2205	1.4462
10.04	Valve support	Stainless steel and PTFE	316	1.4401	316	1.4401	904L	1.4539
10.05	Seeger ring	Stainless steel	316	1.4401	316	1.4401	904L	1.4539
20.00	Outer case	Stainless steel	304	1.4301	316	1.4401	2205	1.4462
20.01	Suction strainer	Stainless steel	316	1.4401	316	1.4401	904L	1.4539
20.02	Cable guard and screws	Stainless steel	316	1.4401	316	1.4401	904L	1.4539
20.03	Initial spacer	Stainless steel	316	1.4401	316	1.4401	904L	1.4539
20.04	Flange	Stainless steel	CF8 (304)	1.4308	CF8M (316)	1.4408	CD4MCuN (904L)	1.4517
	Screws		304	1.4301	316	1.4401	904L	1.4539
20.05	Motor adapter	Stainless steel	CF8 (304)	1.4308	CF8M (316)	1.4408	CD4MCuN (904L)	1.4517
30.00	Pump shaft	Stainless steel	329	1.4460	329	1.4460	329	1.4460
30.01	Coupling	Stainless steel	431/329	1.4057/1.4460	316/329	1.4401/1.4460	2205/904L	1.4462/1.4539
30.02	Upper up-thrustwasher	Stainless steel	329	1.4460	329	1.4460	329	1.4460
30.03	Lower up-thrust washer	Stainless steel	329	1.4460	329	1.4460	329	1.4460
30.04	Upper journal sleeve <sup>(1)</sup>	Alluminum Oxide (Alumina)	Al2 O3 (99,7%)					
30.05	Screw and washer <sup>(1)</sup>	Stainless steel	316	1.4401	316	1.4401	904L/329	1.4539/1.4460
30.06	Up-thrust ring	PTFE + Graphite						
40.00	Diffuser	Stainless steel	304	1.4301	316	1.4401	904L	1.4539
40.01	Secondary bearing bush	EPDM						
40.02	Floating neck ring	PTFE						
40.03	Flange clamping neck ring	Stainless steel	316	1.4401	316	1.4401	904L	1.4539
50.00	Impeller	Stainless steel	316	1.4401	316	1.4401	904L	1.4539
51.01	Split cone	Stainless steel	316	1.4401	316	1.4401	329	1.4460
51.02	Split cone nut	Stainless steel	316	1.4401	316	1.4401	329	1.4460

1) Only for models with more that 8 stages

# HYDRAULIC PERFORMANCE AT 50 HZ

## VS 78

Pump model	R Vers.	RATED POWER		Q = DELIVERY								
				m <sup>3</sup> /h 0	30	40	50	60	70	80	90	100
				l/min 0	500	666	833	1000	1166	1333	1500	1666
[kW]		[HP]	H = TOTAL HEAD METERS COLUMN OF WATER [m]									
VS 78/2	●	7.5	10	40	38	35	32	30	29	24	20	18
VS 78/3	●	11	15	60	55	51	49	45	41	36	30	24
VS 78/4	●	15	20	80	74	70	65	60	55	49	41	32
VS 78/5	●	18.5	25	99	92	88	81	75	69	60	51	41
VS 78/6	●	22	30	119	110	104	98	89	81	71	60	49
VS 78/7	●	30	40	139	130	122	114	105	96	85	72	58
VS 78/8	●	30	40	159	149	140	131	120	110	98	82	67
VS 78/9	●	30	40	180	168	158	147	135	123	110	92	73
VS 78/10	●	37	50	197	183	172	160	148	134	119	100	79
VS 78/11	●	37	50	216	202	190	176	162	148	130	110	87
VS 78/12	●	45	60	248	232	219	205	189	172	153	131	106
VS 78/13	●	55	75	269	252	237	221	205	188	168	142	115
VS 78/14	●	55	75	289	271	256	239	220	201	180	153	123
VS 78/15	●	55	75	309	290	274	255	235	215	192	165	132
VS 78/16	●	75	100	332	311	294	275	252	231	208	177	143
VS 78/17	●	75	100	352	330	312	291	269	246	220	188	151
VS 78/18	●	75	100	373	350	330	309	284	260	232	198	161
VS 78/19	●	75	100	394	370	348	325	300	275	245	210	170
VS 78/20	●	75	100	415	389	368	343	316	290	259	220	179
VS 78/21	●	75	100	436	409	385	360	331	304	271	231	189
VS 78/22	●	93	125	457	428	404	378	347	320	284	243	198
VS 78/23	●	93	125	478	446	421	394	362	332	297	254	207
VS 78/24	●	93	125	498	467	440	411	379	348	310	265	216

● = Pump available in R (AISI 904L) version

## VS 97

Pump model	R Vers.	RATED POWER		Q = DELIVERY										
				m <sup>3</sup> /h 0	30	40	50	60	70	80	90	100	110	120
				l/min 0	500	666	833	1000	1166	1333	1500	1666	1833	2000
[kW]		[HP]	H = TOTAL HEAD METERS COLUMN OF WATER [m]											
VS 97/2	●	9.3	12.5	42	41	39	36	32	30	29	26	22	19	15
VS 97/3	●	15	20	63	60	58	53	49	45	42	39	33	29	21
VS 97/4	●	18.5	25	84	81	77	71	65	60	57	51	45	38	30
VS 97/5	●	22	30	104	101	95	88	80	74	69.5	62	55	46	37
VS 97/6	●	30	40	127	122	115	107	98	90	84	77	68	57	46
VS 97/7	●	30	40	148	143	135	123	115	106	99	90	79	68	52
VS 97/8	●	37	50	168	160	151	140	130	120	110	100	88.5	74	59
VS 97/9	●	37	50	188	180	170	158	147	133	124	113	99	83	66
VS 97/10	●	45	60	219	211	200	185	172	159	148	137	120	103	82
VS 97/11	●	55	75	241	232	220	204	189	175	162	149	132	113	91
VS 97/12	●	55	75	262	253	240	221	207	191	178	162	143	123	99
VS 97/13	●	55	75	284	275	260	241	223	207	191	177	155	132	108
VS 97/14	●	75	100	309	297	282	261	242	226	209	191	169	145	121
VS 97/15	●	75	100	330	319	303	280	260	240	222	205	181	155	130
VS 97/16	●	75	100	352	340	322	299	279	258	238	220	194	165	139
VS 97/17	●	75	100	373	361	342	319	294	272	252	232	207	176	147
VS 97/18	●	93	125	398	382	363	337	313	289	268	247	219	188	155
VS 97/19	●	93	125	419	403	382	354	330	305	282	260	230	197	164
VS 97/20	●	93	125	440	423	404	372	347	320	298	273	241	208	171
VS 97/21	●	93	125	462	445	422	391	363	337	312	289	255	219	171
VS 97/22		110	150	484	466	442	410	381	353	328	301	267	229	190
VS 97/23		110	150	507	487	463	430	399	370	341	315	279	239	199

● = Pump available in R (AISI 904L) version

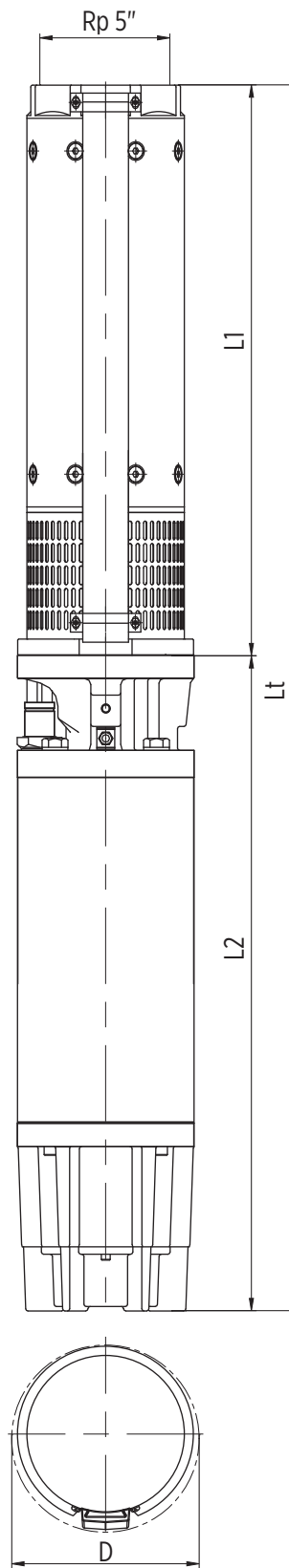
# VS 78 - TECHNICAL DATA

## PUMPS WITH ENCAPSULATED MOTOR

Pump model	Motor			Dimensions					Pump weight [Kg]
	Type	[kW]	[HP]	L1 [mm]	L2 [mm]	Lt [mm]	D [mm]		
							1 cable	2 cable	
VS 78/2	E6	7.5	10	644	646	1290	188	194	77
VS 78/3		11	15	770	711	1481	188	194	87
VS 78/4		15	20	896	776	1672	188	194	57
VS 78/5		18.5	25	1022	841.5	1863.5	188	194	109
VS 78/6		22	30	1148	906.5	2054.5	188	194	120
VS 78/7		30	40	1274	1036.5	2310.5	188	194	140
VS 78/8		30	40	1400	1036.5	2436.5	188	194	145
VS 78/9		30	40	1526	1036.5	2562.5	188	194	150
VS 78/10		37	50	1652	1405	3057	188	194	206
VS 78/11		37	50	1778	1405	3183	188	194	211
VS 78/12		E8	45	60	1909	1077	2986	200	202
VS 78/13	55		75	2035	1394	3429	200	202	259
VS 78/14	55		75	2161	1394	3555	200	202	294
VS 78/15	55		75	2287	1394	3681	200	202	299
VS 78/16	75		100	2413	1496	3909	200	202	342
VS 78/17	75		100	2539	1496	4035	200	202	347
VS 78/18	75		100	2665	1496	4161	200	202	352
VS 78/19	75		100	2791	1496	4287	200	202	357
VS 78/20	75		100	2917	1496	4413	200	202	361
VS 78/21	75		100	3043	1496	4539	200	202	366
VS 78/22	93		125	3169	1748	4917	200	202	449
VS 78/23	93		125	3295	1748	5043	200	202	454
VS 78/24	93		125	3421	1748	5169	200	202	459

## PUMPS WITH REWINDABLE MOTOR

Pump model	R vers.	Motor			Dimensions					Pump weight [Kg]
		Type	[kW]	[HP]	L1 [mm]	L2 [mm]	Lt [mm]	D [mm]		
								1 cable	2 cable	
VS 78/2	●	RW6	7.5	10	644	719	1363	188	194	82
VS 78/3	●		11	15	770	779	1549	188	194	92
VS 78/4	●		15	20	896	874	1770	188	194	96
VS 78/5	●		18.5	25	1022	919	1941	188	194	116
VS 78/6	●	RW8	30	40	1022	1140	2162	197	199.5	190
	●	RW6	22	30	1148	1009	2157	188	194	130
VS 78/7	●	RW8	30	40	1148	1140	2288	197	199.5	193
	●	RW6	26	35	1274	1114	2388	188	194	146
VS 78/8	●	RW8	30	40	1274	1140	2288	197	199.5	198
	●	RW6	30	40	1400	1214	2614	188	194	161
VS 78/9	●	RW8	30	40	1400	1140	2540	197	199.5	203
	●	RW6	30	40	1526	1214	2740	188	194	166
VS 78/10	●	RW8	30	40	1526	1140	2666	197	199.5	208
	●	RW6	37	50	1652	1294	2946	188	194	178
VS 78/11	●	RW8	37	50	1652	1140	2792	197	199.5	213
	●	RW6	37	50	1778	1294	3072	188	194	183
VS 78/12	●	RW8	37	50	1778	1140	2918	197	199.5	218
VS 78/13	●		45	60	1909	1230	3139	197	199.5	238
VS 78/14	●		52	70	2035	1340	3375	197	199.5	266
VS 78/15	●		52	70	2161	1340	3501	197	199.5	271
VS 78/16	●		55	75	2287	1340	3627	197	199.5	276
VS 78/17	●		60	80	2413	1470	3883	197	199.5	300
VS 78/18	●		67	90	2539	1470	4009	197	199.5	305
VS 78/19	●		67	90	2665	1470	4135	197	199.5	310
VS 78/20	●		75	100	2791	1560	4351	197	199.5	332
VS 78/21	●		75	100	2917	1560	4477	197	199.5	336
VS 78/22	●		83	110	3043	1560	4603	197	199.5	341
VS 78/23	●		83	110	3169	1560	4729	197	199.5	378
VS 78/24	●		83	110	3295	1560	4855	197	199.5	383
VS 78/24	●	93	125	3421	1740	5161	197	199.5	388	

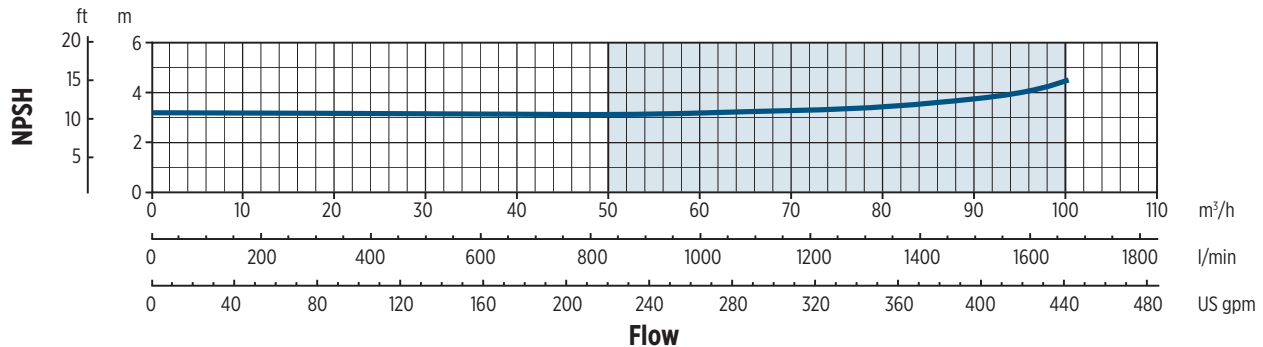
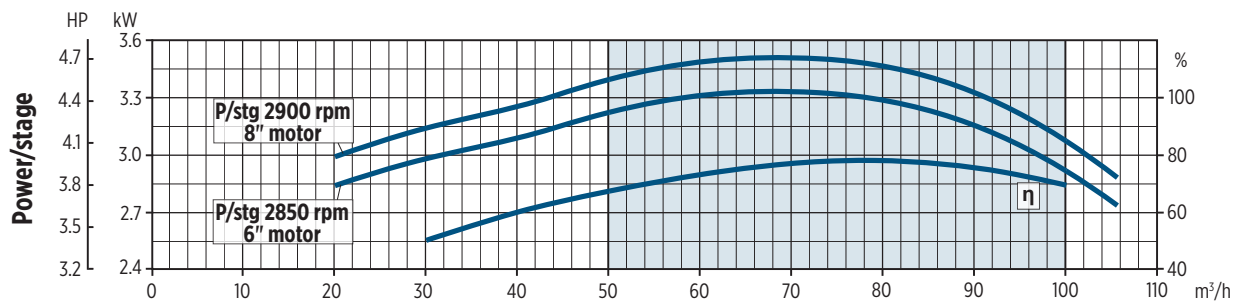
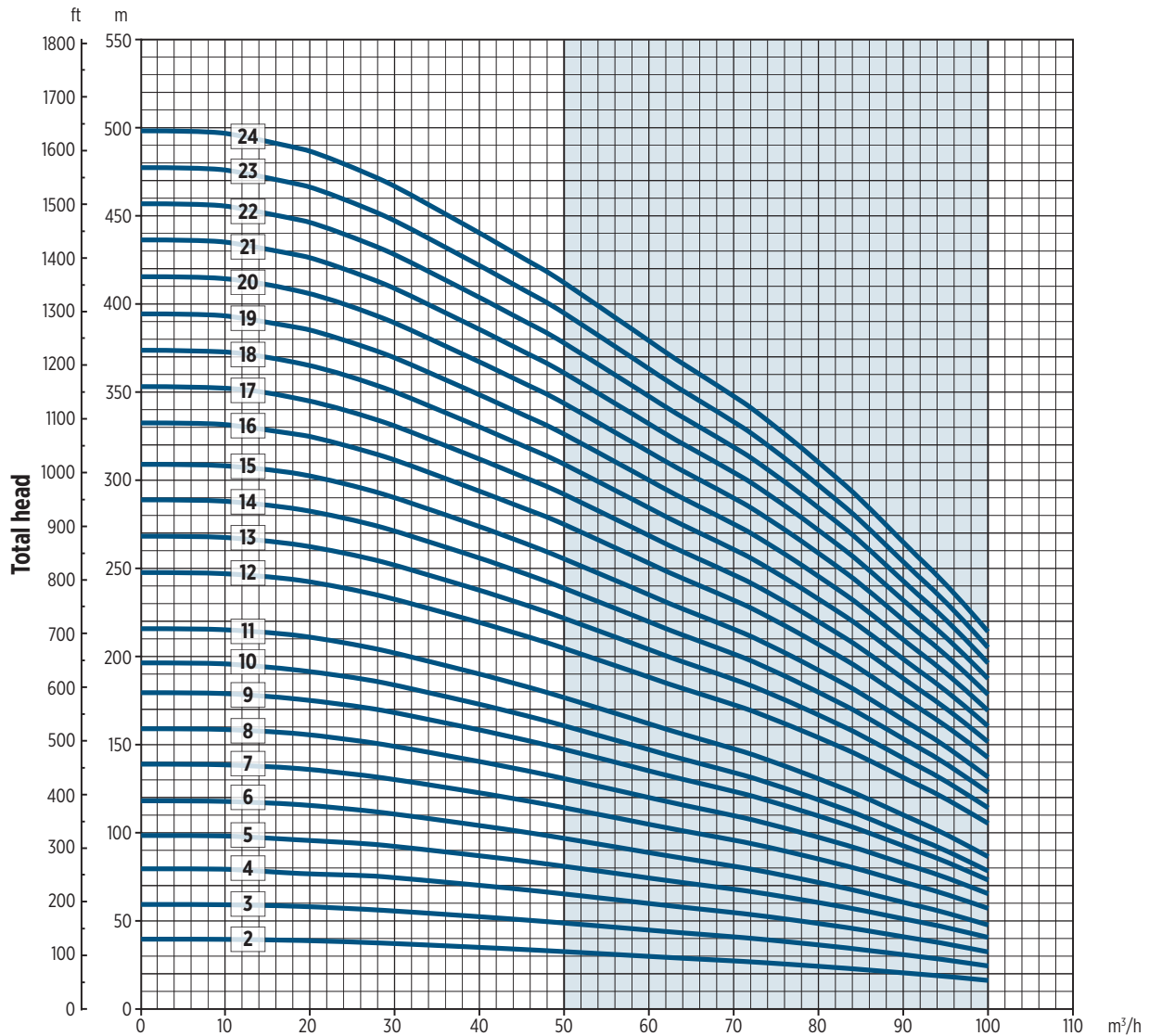


● = Pump available in R (AISI 904L) version

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# VS 78 - PERFORMANCE CURVES AT 50 HZ



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# VS 97 - TECHNICAL DATA

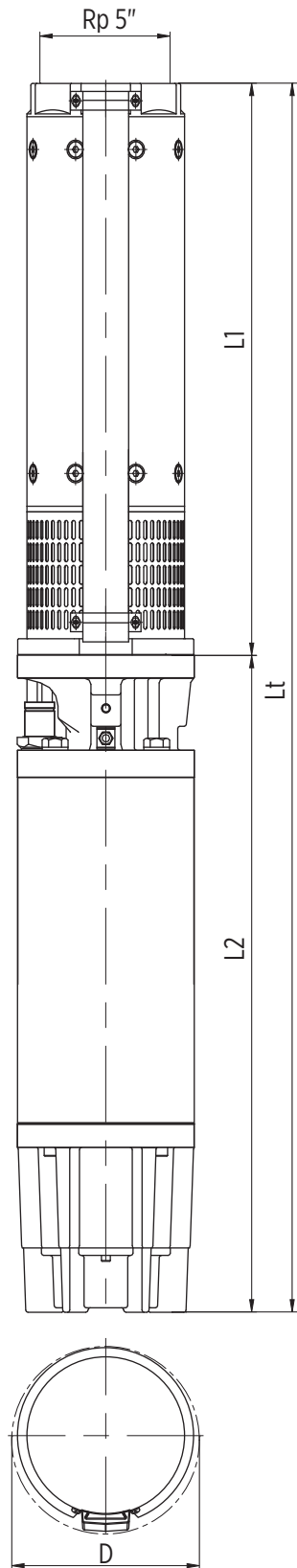
## PUMPS WITH ENCAPSULATED MOTOR

Pump model	Motor			Dimensions					Pump weight [Kg]
	Type	[kW]	[HP]	L1 [mm]	L2 [mm]	Lt [mm]	D [mm]		
							1 cable	2 cable	
VS 97/2	E6	9.3	12.5	644	678.5	1322.5	188	194	79
VS 97/3		15	20	770	776	1546	188	194	93
VS 97/4		18.5	25	896	841.5	1737.5	188	194	105
VS 97/5		22	30	1022	906.5	1928.5	188	194	115.5
VS 97/6		30	40	1148	1036.5	2184.5	188	194	135
VS 97/7		30	40	1274	1036.5	2310.5	188	194	140
VS 97/8		37	50	1400	1405	2805	188	194	196
VS 97/9		37	50	1526	1405	2931	188	194	201
VS 97/10		E8	45	60	1657	1077	2734	200	202
VS 97/11	55		75	1783	1394	3177	200	202	279
VS 97/12	55		75	1909	1394	3303	200	202	284
VS 97/13	55		75	2035	1394	3429	200	202	289
VS 97/14	75		100	2161	1496	3657	200	202	332
VS 97/15	75		100	2287	1496	3783	200	202	337
VS 97/16	75		100	2413	1496	3909	200	202	342
VS 97/17	75		100	2539	1496	4035	200	202	346.5
VS 97/18	93		125	2665	1748	4413	200	202	429.5
VS 97/19	93		125	2791	1748	4539	200	202	434.5
VS 97/20	93		125	2917	1748	4665	200	202	439
VS 97/21	93		125	3043	1748	4791	200	202	444
VS 97/22	110		150	3169	1976	5145	200	202	512
VS 97/23	110		150	3295	1976	5271	200	202	517

## PUMPS WITH REWINDABLE MOTOR

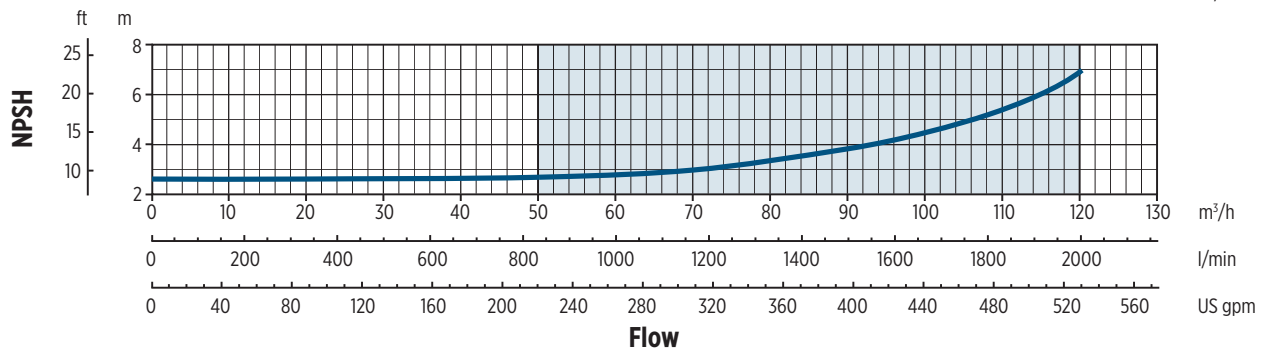
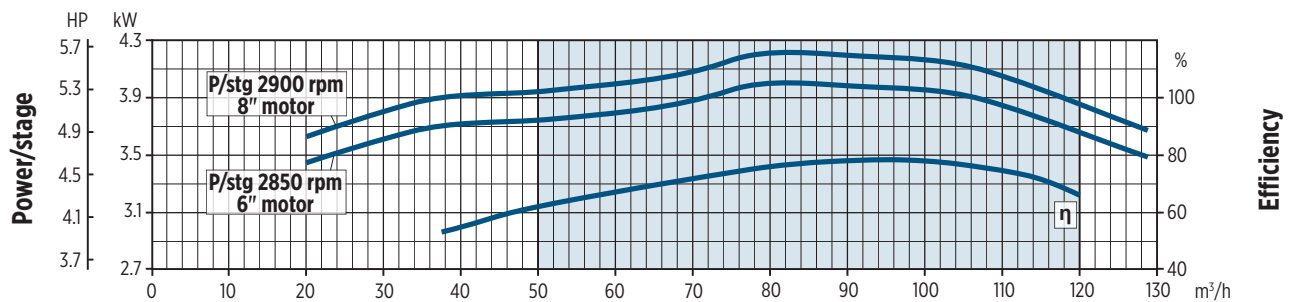
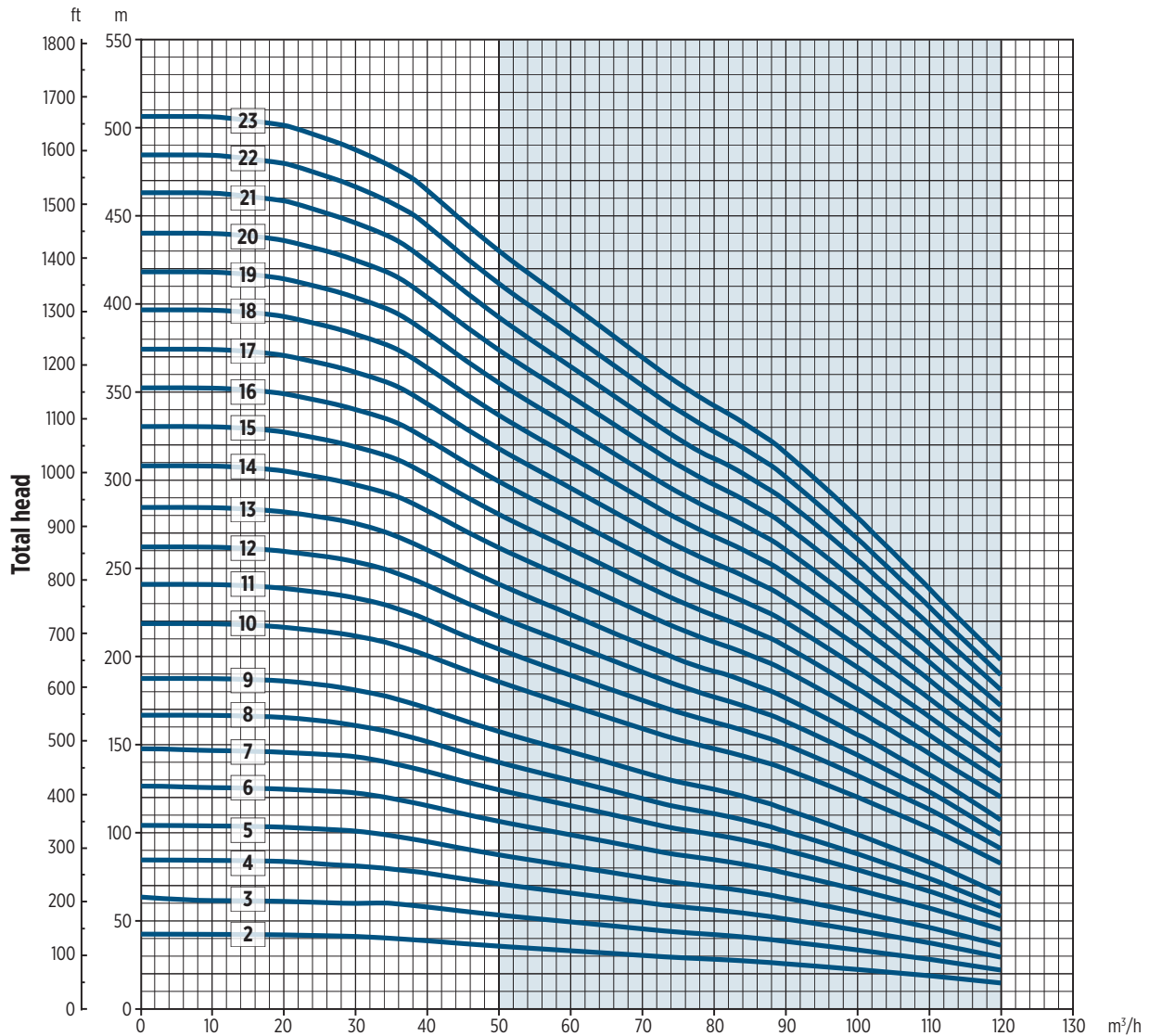
Pump model	R vers.	Motor			Dimensions					Pump weight [Kg]
		Type	[kW]	[HP]	L1 [mm]	L2 [mm]	Lt [mm]	D [mm]		
								1 cable	2 cable	
VS 97/2	●	RW6	9.3	12.5	644	749	1393	188	194	84.5
VS 97/3	●		13	17.5	770	829	1599	188	194	97.5
VS 97/4	●		18.5	25	896	919	1815	188	194	111.5
VS 97/5	●	RW8	22	30	1022	1009	2031	188	194	125
VS 97/6	●		30	40	1022	1140	2162	197	199.5	188
VS 97/7	●	RW6	26	35	1148	1114	2262	188	194	141
VS 97/8	●		30	40	1148	1140	2288	197	199.5	193
VS 97/9	●	RW8	30	40	1274	1214	2488	188	194	156
VS 97/10	●		30	40	1274	1140	2414	197	199.5	198
VS 97/11	●	RW6	37	50	1400	1294	2694	188	194	168
VS 97/12	●		37	50	1400	1140	2540	197	199.5	203
VS 97/13	●	RW8	37	50	1526	1294	2820	188	194	173
VS 97/14	●		37	50	1526	1140	2666	197	199.5	208
VS 97/15	●	RW6	45	70	1657	1230	2887	197	199.5	228
VS 97/16	●		52	70	1783	1340	3123	197	199.5	256
VS 97/17	●	RW8	52	75	1909	1340	3249	197	199.5	261
VS 97/18	●		55	90	2035	1340	3375	197	199.5	266
VS 97/19	●	RW6	67	90	2161	1470	3631	197	199.5	290
VS 97/20	●		67	90	2287	1470	3757	197	199.5	295
VS 97/21	●	RW8	75	100	2413	1560	3973	197	199.5	317
VS 97/22	●		75	100	2539	1560	4099	197	199.5	321.5
VS 97/23	●	RW6	83	110	2665	1560	4225	197	199.5	358.5
VS 97/24	●		83	110	2791	1560	4351	197	199.5	363.5
VS 97/25	●	RW8	93	125	2917	1740	4657	197	199.5	368
VS 97/26	●		93	125	3043	1740	4783	197	199.5	373

● = Pump available in R (AISI 904L) version



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# VS 97 - PERFORMANCE CURVES AT 50 HZ

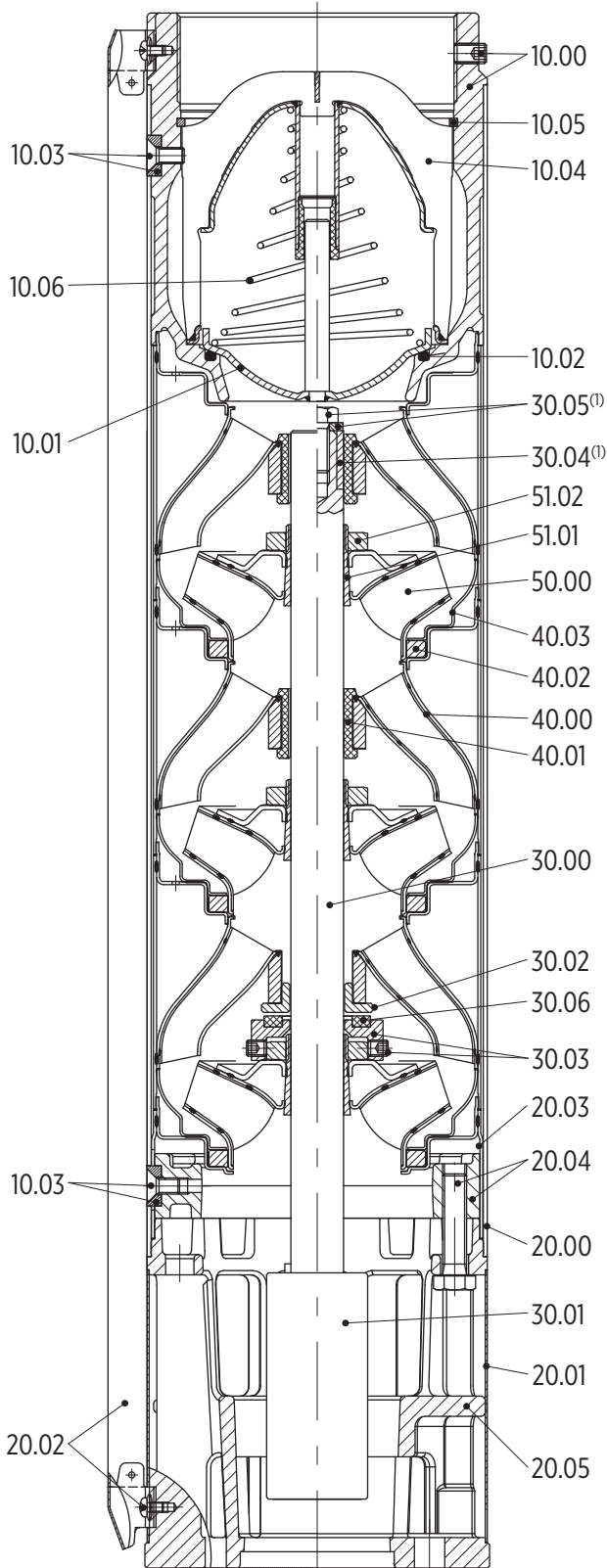


The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

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# SPARE PARTS

VS 78-97



Ref. N.	Description
10.00	Discharge head
10.01	Valve
10.02	Sealing O-ring
10.03	Outer case locking nuts
10.04	Valve support
10.05	Seeger ring
20.00	Outer case
20.01	Suction strainer
20.02	Cable guard and screws
20.03	Initial spacer
20.04	Flange
	Screws
20.05	Motor adapter
30.00	Pump shaft
30.01	Coupling
30.02	Upper up-thrustwasher
30.03	Lower up-thrust washer
30.04	Upper journal sleeve <sup>(1)</sup>
30.05	Screw and washer <sup>(1)</sup>
30.06	Up-thrust ring
40.00	Diffuser
40.01	Secondary bearing bush
40.02	Floating neck ring
40.03	Flange clamping neck ring
50.00	Impeller
51.01	Split cone
51.02	Split cone nut

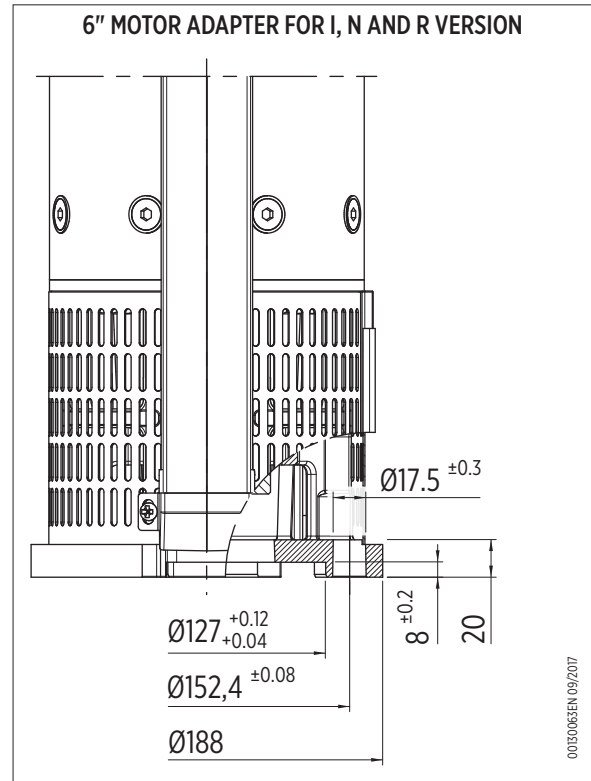
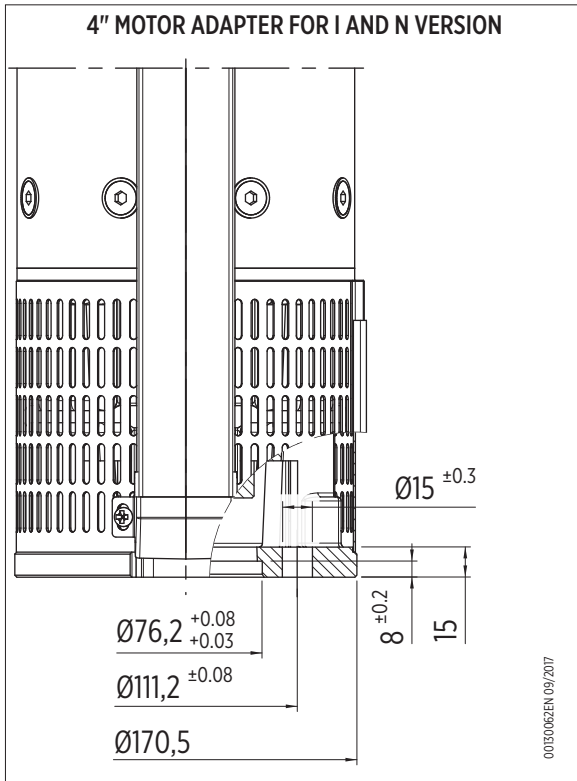
1) only for types with more than 8 stages

0030061 09/2017



# MOTOR ADAPTER AND DIMENSIONS

VS 78-97





## CATALOG REVISION CHANGES NOTICE

Rev. No.	Changes	Page
02	Deleted section "Motor and Accessories"	60 ÷ 82 (REV 01)
03	Modified "Table of Hydraulic performace" for VS 8"	49
	Modified "Technical data - pumps with rewindable motor" table for VS 8"	50-52
04	Added notes for 4" motor adapter	14, 20
	Updated general descriptions	4-46
	Updated "Pump identification code"	5, 47
	Updated "Material/fluids compatibility" tables	7, 50
	Updated "Spare parts" list (VS 6")	42, 43
	Added VS25 model	4,5,6,7,10,26-27,43,44

