

PE100 PIPES FOR SUBMERSIBLE PUMPS

The pipes manufactured by Saleplas are especially designed for submersible pumps and are cable or withstanding not only the internal hydrostatic pressure and the the high load caused by the weight of the pump, but also the pressure of the water column. Additionally, the connection of the pipes by flanges reinforced with stainless steel ensures a perfect union.

- ✓ **Rigid construction in high density polyethylene (PN16 and PN25)**, with stainless steel reinforcements in the flanged joints and O-rings that offer the best fixing and perfect sealing.
- ✓ The **high chemical resistance of polyethylene** makes it very suitable for wells with acid or alkaline water, or with high salt content.
- ✓ The **low density of polyethylene** compared to other materials facilitates the transport and handling of the pipes, allowing and easy and comfortable installation and assembly.
- ✓ The **low coefficient of friction** of polyethylene makes its surface very smooth, so that the pressure loss is almost non-existent compared to other materials.
- ✓ Its **great resistance to abrasion** makes it suitable for working even in water with high sand content.
- ✓ The low modulus of elasticity confers the pipes a **high resistance against sudden impacts or strong tensions** (water hammer).



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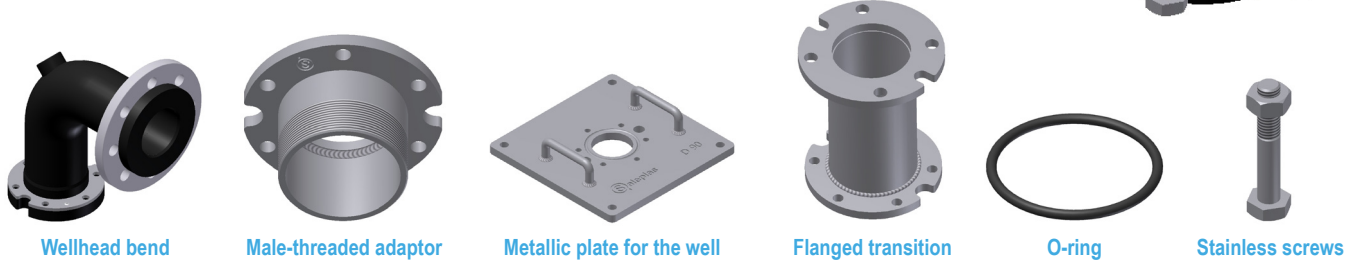
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Saleplas' extensive experience in the industry of water management and high-pressure installations has allowed us to innovate and create a range of products that meets all the safety and reliability requirements that are needed when working with pumps.

The controls and tests that the pipes and accessories must pass, as well as a strict selection of raw materials, give pipes for submersible pumps the highest quality.

ACCESSORIES

Wide range of accessories made of high density polyethylene and stainless steel for a complete installation



DETAILS OF DIMENSIONS AND WEIGHT

Code	Ø Nominal		Øext Flange	Pipe wall thickness				Pipe length	Weight	
	Inches	mm	mm	e _{min} (mm)		e _{max} (mm)		m	Kg (approx.)	
				PN16	PN25	PN16	PN25		PN16	PN25
TCS06303	2"	63	102	5,8	8,6	6,5	9,6	3,00	3,79	5,43
TCS06306								6,00	6,97	10,08
TCS06309								9,00	10,15	14,73
TCS07503	2 ½"	75	122	6,8	--	7,6	--	3,00	5,50	--
TCS07506								6,00	9,94	--
TCS07509								9,00	14,38	--
TCS09003	3"	90	138	8,2	12,3	9,2	13,7	3,00	7,65	10,92
TCS09006								6,00	14,07	20,37
TCS09009								9,00	20,49	29,82
TCS11003	4"	110	158	10,0	15,1	11,1	16,8	3,00	11,15	15,68
TCS11006								6,00	20,66	29,48
TCS11009								9,00	30,17	43,28
TCS14003	5"	140	188	12,7	--	14,1	--	3,00	18,32	--
TCS14006								6,00	33,71	--
TCS14009								9,00	49,10	--
TCS16003	6"	160	212	14,6	--	16,2	--	3,00	23,95	--
TCS16006								6,00	44,17	--
TCS16009								9,00	64,39	--
TCS20003	8"	200	268	18,2	--	20,2	--	3,00	38,52	--
TCS20006								6,00	70,02	--
TCS20009								9,00	105,52	--

- Pipes manufactures according to Norm UNE-EN 12201.
- All the pipes are supplied with O-rings and stainless steel screws and nuts.
- Other lengths can be manufactured on demand. Consult us for the minimum order quantities.



PRESSURE LOSS DUE TO FRICTION (Meters of water gauge*)

PN 16 - Water column of 100 m

Flow rate (Q)		Ø Nominal of the pipe (Inches / mm)						
m³/h	l/s	2" / Ø63	2 ½" / Ø75	3" / Ø90	4" / Ø110	5" / Ø140	6" / Ø160	8" / Ø200
10	2,78	3,60	1,56	0,66	0,25	0,08	0,04	0,01
15	4,17	7,45	3,22	1,35	0,52	0,16	0,09	0,03
20	5,56	12,39	5,42	2,25	0,86	0,27	0,14	0,05
25	6,94	18,64	8,07	3,36	1,29	0,41	0,21	0,07
30	8,33	25,89	11,09	4,67	1,77	0,56	0,30	0,10
35	9,72	33,95	14,74	6,14	2,33	0,74	0,39	0,13
40	11,11	43,21	18,78	7,84	2,98	0,93	0,50	0,17
45	12,50	53,98	23,18	9,68	3,68	1,16	0,61	0,21
50	13,89	64,87	28,25	11,65	4,44	1,39	0,74	0,25
60	16,67		39,08	16,35	6,15	1,94	1,03	0,35
70	19,44		51,69	21,36	8,15	2,57	1,35	0,46
80	22,22		65,63	27,52	10,37	3,27	1,72	0,59
90	25,00			33,87	12,95	4,04	2,13	0,73
100	27,78			41,22	15,55	4,92	2,56	0,88
125	34,72			61,59	23,27	7,27	3,84	1,31
150	41,67				32,53	10,18	5,37	1,84
175	48,61				42,93	13,46	7,11	2,43
200	55,56				55,20	17,32	9,02	3,09
225	62,50					21,25	11,24	3,79
250	69,44					25,82	13,66	4,61
275	76,39					30,75	16,03	5,50
300	83,33						19,07	6,44

PN 25 - Water column of 200 m

Flow rate (Q)		Ø Nominal of the pipe (Inches / mm)		
m³/h	l/s	2" / Ø63	3" / Ø90	4" / Ø110
10	2,78	12,59	2,29	0,88
15	4,17	26,03	4,71	1,80
20	5,56	43,22	7,86	3,01
25	6,94		11,72	4,44
30	8,33		16,31	6,19
35	9,72		21,42	8,14
40	11,11		27,30	10,38
45	12,50		33,69	12,83
50	13,89			15,65
60	16,67			21,69
70	19,44			28,73
80	22,22			
90	25,00			
100	27,78			
125	34,72			
150	41,67			

• * M.W.G.: Meters of water gauge is a unit for Gravitational Metric System. One meter of water column (at 4°C) equals to 9,806.65 Pascal or 0.098 bar.
• Pressure loss calculated according to the Colebrook equation.

MAXIMUM SUPPORTED WEIGHT

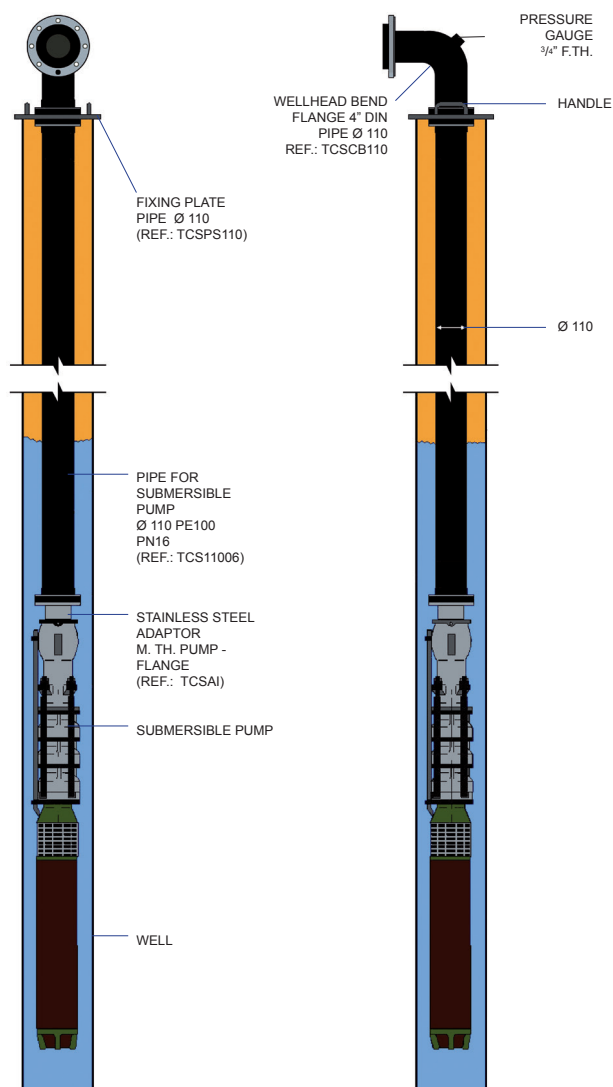
Pipe length	Ø Nominal		Approximate weight (Kg)						Total weight (Kg)	
	Inches	mm	Pipes		Water column		Pump set	Cables		
			150 m (PN 16)	200 m (PN25)	150 m (PN 16)	200 m (PN 25)			PN 16	PN 25
3,00 m	2"	63	189,61	362,00	313,01	331,99	100	55	657,62	848,99
6,00 m			174,31	336,00					642,32	822,99
9,00 m			172,59	327,33					640,60	814,32
3,00 m	2 ½"	75	275,00	--	443,61	--	200	55	973,61	--
6,00 m			248,50	--					947,11	--
9,00 m			244,46	--					943,07	--
3,00 m	3"	90	382,34	728,00	638,80	677,53	250	70	1.341,14	1.725,53
6,00 m			351,67	679,00					1.310,47	1.676,53
9,00 m			348,28	662,67					1.307,08	1.660,20
3,00 m	4"	110	557,34	104,53	954,26	1.012,12	300	105	1.916,60	1.521,65
6,00 m			516,42	982,67					1.875,68	2.399,78
9,00 m			512,84	961,78					1.872,10	2.378,89
3,00 m	5"	140	815,80	--	1.545,75	--	350	180	2.991,55	--
6,00 m			842,65	--					2.918,40	--
9,00 m			834,63	--					2.910,38	--
3,00 m	6"	160	1.197,40	--	2.018,93	--	400	240	3.856,33	--
6,00 m			1.104,20	--					3.763,13	--
9,00 m			1.094,60	--					3.753,53	--
3,00 m	8"	200	1.926,00	--	3.154,58	--	500	330	5.910,58	--
6,00 m			1.750,50	--					5.735,08	--
9,00 m			1.725,84	--					5.170,42	--

- Suitable for submersible pump installations and a maximum water column of 150 m for PN16 pipes and a maximum of 200 m for PN25 pipes.



FORMULA FOR CALCULATING THE MAXIMUM INSTALLATION DEPTH

$Z = (PN - P) \times 10 - h$	
Z	Pump installation depth (m)
PN	Nominal pressure of the pipes (atm)
h	Total loss of pressure (m.w.g.) in the pipes
P	Pressure at the head of the well (atm o kg/cm ²)



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