



PISTON TYPE	ps0 [Kg]	ps1 [Kg/m]	Pt0 [Kg]	Pt0c [Kg]	Pt1 [Kg/m]	Qt [lt/m]	qc [lt/m]
<b>58/3</b>	34	7.7	52	80	16.8	5.1	2.6
<b>75/3</b>	49	12.6	75	110	24.2	7.9	4.4
<b>98/3</b>	80	20.2	125	160	35	13.1	7.6
<b>107/3</b>	95	25.3	155	200	53.6	15.5	9
<b>127/3</b>	134	29.2	227	275	52.6	21.7	12.7
<b>150/3</b>	195	40	345	416	83.7	30.7	17.7
<b>176/3</b>	272	54.4	472	560	122.3	41.9	24.4

ps0 = Rod basic weight.  
 ps1 = Weight for every metre of the rod  
 Pt0 = Basic weight of the complete piston  
 Pt0c = Basic weight of the complete central piston (with plates)  
 Pt1 = Weight for every metre of the complete piston  
 Qt = Oil in the cylinder for every metre of travel with the rod completely out (to add to the minimum quantity of the oil in the tank)  
 qc = Oil in circulation for every metre of the piston travel (to compare with the quantity available in the tank)

#### DELIVERY PRESSURE CALCULATION

Piston	Formula
58/3	$P_s = (P_3 + Q + 16 + (4.9 \times C)) * 0.981 / 262$
75/3	$P_s = (P_3 + Q + 20 + (8.3 \times C)) * 0.981 / 442$
98/3	$P_s = (P_3 + Q + 29 + (12.2 \times C)) * 0.981 / 757$
107/3	$P_s = (P_3 + Q + 33 + (16.7 \times C)) * 0.981 / 896$
127/3	$P_s = (P_3 + Q + 46 + (17.8 \times C)) * 0.981 / 1267$
150/3	$P_s = (P_3 + Q + 69 + (23.1 \times C)) * 0.981 / 1770$
176/3	$P_s = (P_3 + Q + 90 + (32.6 \times C)) * 0.981 / 2435$

P3+Q = kg of weight on the piston  
 C = metres of total stroke of the piston  
 Ps = Mpa of delivery static pressure

Type	G1 [mm]	T1 [mm]	G2 [mm]	T2 [mm]	G3 [mm]
<b>58/3</b>	45	105	30	110	30
<b>75/3</b>	45	105	30	115	30
<b>98/3</b>	47	113	30	120	30
<b>107/3</b>	50	113	30	120	30
<b>127/3</b>	65	120	30	125	30
<b>150/3</b>	70	122	30	132	30
<b>176/3</b>	71	125	30	140	35

Type	d1 [mm]	e st1 [mm]	2d1 [mm]	d2 [mm]	e st2 [mm]	2d2 [mm]	d3 [mm]	e st3 [mm]	D [mm]	e cyl [mm]	Di [mm]	e1 [mm]	r1 [mm]	s1 [mm]	h1 [mm]	u1 [mm]	Sp [mm]
<b>58/3</b>	34.8	/	128	54.9	4.95	280	75	5.5	120	10	103	25	11	10.5	23	12	345
<b>75/3</b>	48	/	158	70.2	5.1	320	98.5	6.75	150	10	133	25	11	10.5	23	12	350
<b>98/3</b>	64.5	13.75	220	89.23	7.1	400	129.6	9.83	190	10	173	30	11	10.5	28	14	370
<b>107/3</b>	70	/	205	97.6	6.3	400	139.6	9.8	219	17	187	35	11	18	33	15	370
<b>127/3</b>	84.8	13.9	255	117.8	8.9	480	165.5	10.25	244.5	12.25	223	35	11	12.75	35	15	390
<b>150/3</b>	97	13.5	285	139.7	9.85	500	196.7	13.38	298	19	263	40	11	19.75	38	20	410
<b>176/3</b>	120	18.5	350	160	10	580	230	15	355	25	308	45	11	25.5	43	25	430

#### MATERIALS RESISTANCE

- ① A) Tondi Rm = 410, Rp0.2 = 240 N/mm2 B) Tubi Rm = 510, Rp0.2 = 360 N/mm2      ② Rm = 510, Rp0.2 = 360 N/mm2  
 ③ Rm = 510, Rp0.2 = 360 N/mm2      ④ Rm = 510, Rp0.2 = 360 N/mm2      ⑤ Rm = 510, Rp0.2 = 360 N/mm2

**CALCULATING DATA  
 TELESCOPIC PISTONS  
 THREE EXTENSIONS**



**Start Elevator Srl**

10 142 / I

rev. 1

1/1