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NOCCHI PRESSURE UNITS

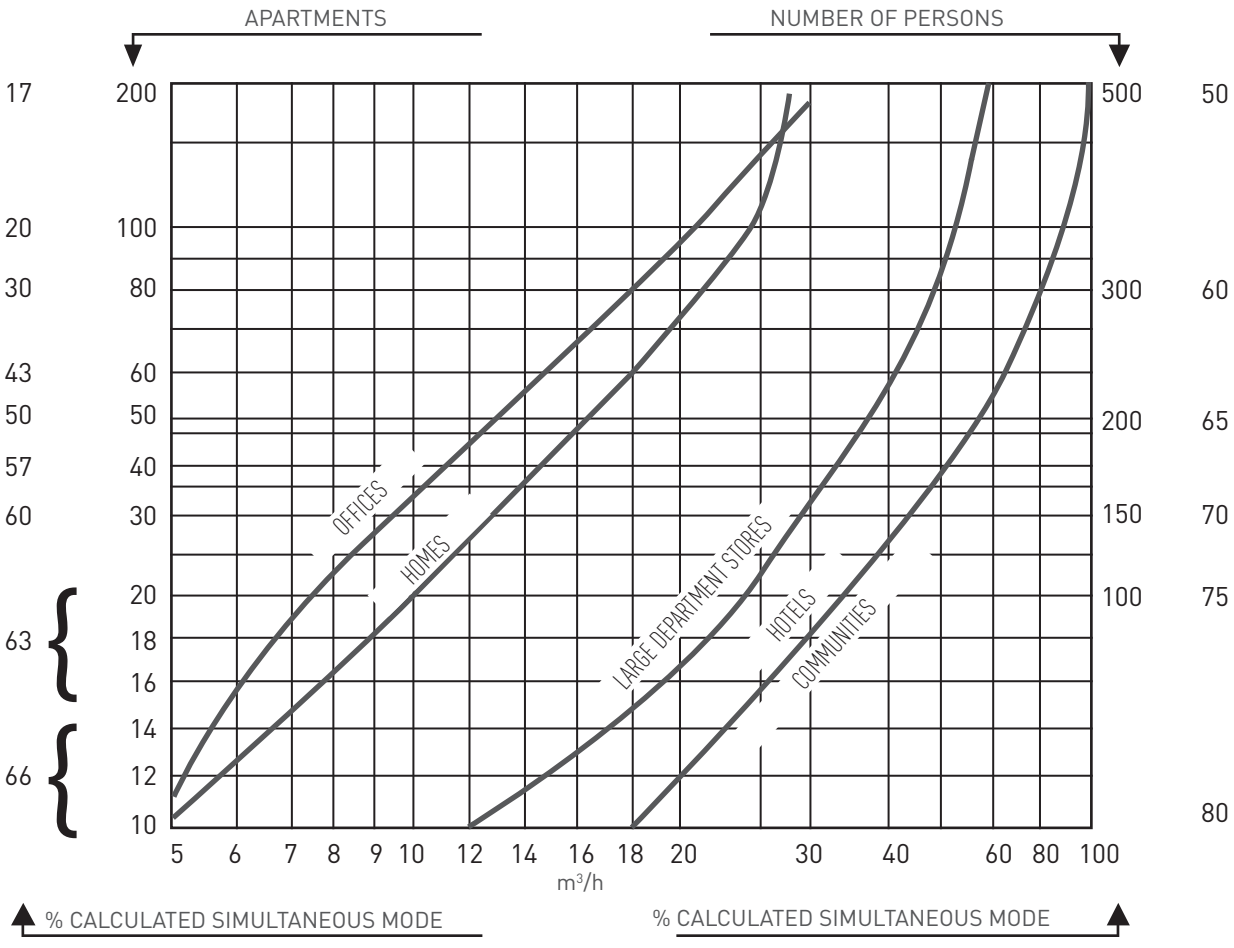
GUIDE TO THE SELECTION OF PRESSURE UNITS

There are two essential factors to consider when selecting a pressure unit: the required flow rate at the peak time of use, and the total manometric head.

The required flow rate can be read on the statistical average diagram shown below (Fig. 1).
The total manometric head (corresponding to the minimum operating pressure of the unit) is calculated in three ways: supply from a deposit located on the same level as the unit (A) supply from an aqueduct or deposit located on a level above the unit (B) supply from a well or deposit located on a level below the unit (C).
Case (A) The height of the highest collection point is added to the pressure required at that point, plus any relevant pressure drops. (See example in Fig. 2)
Case (B) Starting as per case A, after which the specific pressure of the aqueduct or that generated by the drop from the deposit is subtracted from the obtained value. (See example in Fig. 3)
Case (C) Starting as per case A, after which the value obtained is added to the value in meters between the water level and the unit. (See Fig. 4) The data obtained, with reference to the tables of specifications of the various autoclave units provided in the catalog will enable selection of the most suitable unit. It is necessary to take into account that these tables envisage a minimum pressure at the topmost valve of 1.5 ATM.

These tables contain guideline values only as the specific conditions of use in each application cannot be envisaged.

Fig. 1



BENDS FOR WC WITH ENCLOSURES
(FOR WC WITH RAPID ROUTERS + 30%)

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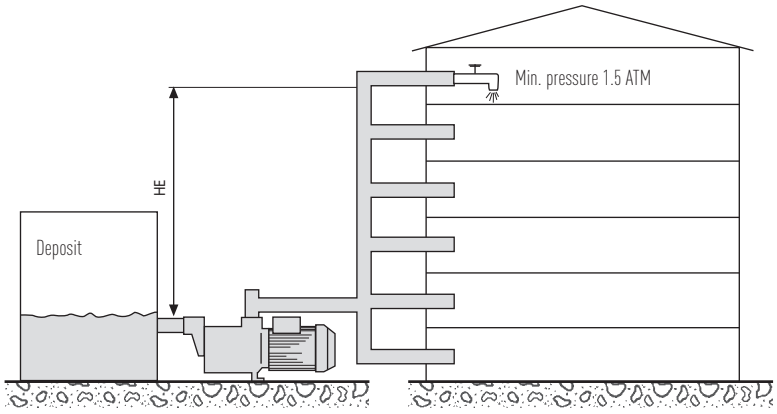
Fig. 2

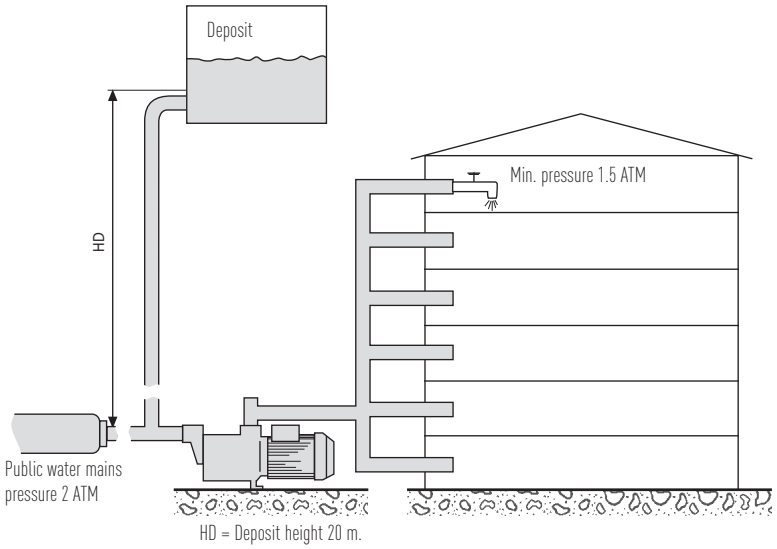


HE = Building height 18 m.

CASE A

Building H		18 +
Minimum pressure		15 +
Pressure drops	2 =	
		35 Meters

Fig. 3

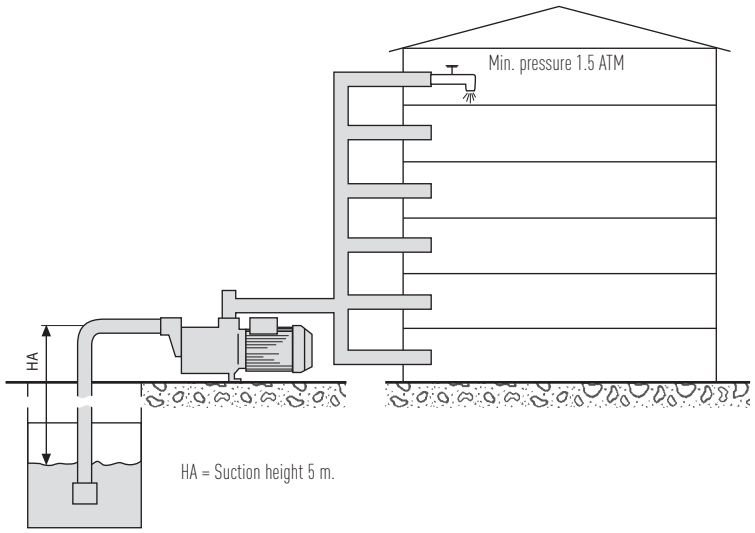


HD = Deposit height 20 m.

CASE B

Required head	35 -	
Aqueduct pressure	20 =	
		15 Meters
Meters	35 -	
Tank		20 =
		15 Meters

Fig. 4



HA = Suction height 5 m.

CASE C

Required head	35 +	
Suction H		5 =
		40 Meters

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FLOW RATE			GALVANISED PIPELINES - NEW											
			NOMINAL DIAMETERS IN INCHES AND MILLIMETRES											
m³/h	L/min.	L/sec.	1/2" 15.75	3/4" 21.25	1" 27.00	1 1/4" 35.75	1 1/2" 41.25	2" 52.50	2 1/2" 68.00	3" 80.25	3 1/2" 92.50	4" 105.00	5" 130.00	6" 155.50
0.6	10	0.16	0.855 9.910	0.470 2.407	0.292 0.784									
0.9	15	0.25	1.282 20.11	0.705 4.862	0.438 1.570	0.249 0.416								
1.2	20	0.33	1.710 33.53	0.940 8.035	0.584 2.588	0.331 0.677	0.249 0.346				Large figures: Pressure drops per 100 m of pipeline Small figures: Speed of water in m / second			
1.5	25	0.42	2.138 49.93	1.174 11.91	0.730 3.834	0.415 1.004	0.312 0.510							
1.8	30	0.50	2.565 69.34	1.409 16.50	0.876 5.277	0.498 1.379	0.374 0.700	0.231 0.223						
2.1	35	0.58	2.993 91.54	1.644 21.75	1.022 6.949	0.581 1.811	0.436 0.914	0.269 0.291						
2.4	40	0.67		1.879 27.66	1.168 8.820	0.664 2.290	0.499 1.1160	0.308 0.368						
3.0	50	0.83		2.349 41.40	1.460 13.14	0.830 3.403	0.623 1.719	0.385 0.544	0.229 0.159					
3.6	60	1.00		2.819 57.74	1.751 18.28	0.996 4.718	0.748 2.375	0.462 0.751	0.275 0.218					
4.2	70	1.12		3.288 76.49	2.043 24.18	1.162 6.231	0.873 3.132	0.539 0.988	0.321 0.287	0.231 0.131				
4.8	80	1.33			2.335 30.87	1.328 7.940	0.997 3.988	0.616 1.254	0.376 0.363	0.263 0.164				
5.4	90	1.50			2.627 38.30	1.494 9.828	1.122 4.927	0.693 1.551	0.413 0.449	0.296 0.203				
6.0	100	1.67			2.919 46.49	1.660 11.90	1.247 5.972	0.770 1.875	0.459 0.542	0.329 0.244	0.248 0.124			
7.5	125	2.08			3.649 70.41	2.075 17.93	1.558 8.967	0.962 2.802	0.574 0.809	0.412 0.365	0.310 0.185	0.241 0.101		
9.0	150	2.50				2.490 25.11	1.870 12.53	1.154 3.903	0.688 1.124	0.494 0.506	0.372 0.256	0.289 0.140		
10.5	175	2.92				2.904 33.32	2.182 16.66	1.347 5.179	0.803 1.488	0.576 0.670	0.434 0.338	0.337 0.184		
12	200	3.33				3.319 42.75	2.493 21.36	1.539 6.624	0.918 1.901	0.659 0.855	0.496 0.431	0.385 0.234	0.251 0.084	
15	250	4.17				4.149 64.86	3.117 32.32	1.924 10.03	1.147 2.860	0.823 1.282	0.620 0.646	0.481 0.350	0.314 0.126	
18	300	5.00					3.740 45.52	2.309 14.04	1.377 4.009	0.988 1.792	0.744 0.903	0.577 0.488	0.377 0.175	0.263 0.074
24	400	6.67					4.987 78.17	3.078 24.04	1.836 6.828	1.317 3.053	0.992 1.530	0.770 0.829	0.502 0.294	0.351 0.124
30	500	8.33						3.848 36.71	2.295 10.40	1.647 4.622	1.240 2.315	0.962 1.254	0.628 0.445	0.439 0.187
36	600	10.0						4.618 51.84	2.753 14.62	1.976 6.505	1.488 3.261	1.155 1.757	0.753 0.623	0.526 0.260
42	700	11.7							3.212 19.52	2.306 8.693	1.736 4.356	1.347 2.345	0.879 0.831	0.614 0.347
48	800	13.3							3.671 25.20	2.635 11.18	1.984 5.582	1.540 3.009	1.005 1.066	0.702 0.445
54	900	15.0							4.130 31.51	2.964 13.97	2.232 6.983	1.732 3.762	1.130 1.328	0.790 0.555

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60	1000	16.7							4.589 38.43	3.294 17.06	2.480 8.521	1.925 4.595	1.256 1.616	0.877 0.674
75	1250	20.8								4.117 26.10	3.100 13.00	2.406 7.010	1.570 2.458	1.097 1.027
90	1500	25.0								4.941 36.97	3.720 18.42	2.887 9.892	2.197 3.458	1.316 1.444
105	1750	29.2									4.340 24.76	3.368 13.30	2.511 4.665	1.535 1.934
120	2000	33.3									4.960 31.94	3.850 17.16	3.139 5.995	1.754 2.496
150	2500	41.7										4.812 26.26	3.767 9.216	2.193 3.807
180	3000	50.0											5.023 13.05	2.632 5.417
240	4000	66.7											22.72	3.509 8.926
300	5000	83.3												4.386 14.42

N.B. - When assessing pressure drops in pipelines constructed in other materials, the value obtained for the galvanized pipe should be multiplied by the following fixed coefficients:
0.6 for PVC pipes
0.7 for aluminum pipes
0.8 for sheet steel pipes
1.3 for cement fiber pipes