

Presetting	DN 10 LF - Qm 150		DN 10 - Qm 275		DN 15 LF - Qm 275		DN 15 - Qm 450		DN 20 - Qm 900		DN 25 - Qm 1700		DN 32 - Qm 3200	
	s%	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
20.0%	18.55	21.81	15.00	15.00	19.35	21.67	17.00	17.00	16.63	17.48	17.00	18.00	15.00	16.00
22.5%	18.52	21.77	14.75	14.94	19.20	21.46	16.88	16.94	16.50	17.42	16.75	17.75	14.75	15.75
25.0%	18.49	21.74	14.50	14.88	19.04	21.26	16.75	16.88	16.38	17.35	16.50	17.50	14.50	15.50
27.5%	18.46	21.70	14.25	14.81	18.89	21.06	16.63	16.81	16.25	17.29	16.25	17.25	14.25	15.25
30.0%	18.43	21.67	14.00	14.75	18.74	20.85	16.50	16.75	16.13	17.23	16.00	17.00	14.00	15.00
32.5%	18.40	21.63	13.75	14.69	18.58	20.65	16.38	16.69	16.00	17.17	15.75	16.75	13.75	14.75
35.0%	18.38	21.60	13.50	14.63	18.43	20.44	16.25	16.63	15.88	17.10	15.50	16.50	13.50	14.50
37.5%	18.35	21.56	13.25	14.56	18.28	20.24	16.13	16.56	15.75	17.04	15.25	16.25	13.25	14.25
40.0%	18.32	21.53	13.00	14.50	18.13	20.03	16.00	16.50	15.69	17.14	15.00	16.00	13.00	14.00
42.5%	18.25	21.47	12.88	14.44	18.08	19.97	15.75	16.44	15.44	17.08	14.75	15.88	12.75	13.88
45.0%	18.18	21.42	12.75	14.38	18.04	19.90	15.50	16.38	15.19	17.01	14.50	15.75	12.50	13.75
47.5%	18.11	21.36	12.63	14.31	17.99	19.84	15.25	16.31	14.94	16.95	14.25	15.63	12.25	13.63
50.0%	18.04	21.31	12.50	14.25	17.95	19.77	15.00	16.25	14.69	16.89	14.00	15.50	12.00	13.50
52.5%	17.97	21.25	12.38	14.19	17.91	19.71	14.75	16.19	14.44	16.83	13.75	15.38	11.75	13.38
55.0%	17.90	21.20	12.25	14.13	17.86	19.64	14.50	16.13	14.19	16.76	13.50	15.25	11.50	13.25
57.5%	17.84	21.15	12.13	14.06	17.82	19.58	14.25	16.06	13.94	16.70	13.25	15.13	11.25	13.13
60.0%	17.77	21.09	12.00	14.00	17.78	19.51	14.00	16.00	14.19	16.82	13.00	15.00	11.00	13.00
62.5%	17.58	20.94	11.63	13.63	17.72	19.40	13.75	15.75	13.94	16.57	12.63	14.63	10.50	12.50
65.0%	17.39	20.80	11.25	13.25	17.67	19.28	13.50	15.50	13.69	16.32	12.25	14.25	10.00	12.00
67.5%	17.20	20.65	10.88	12.88	17.62	19.17	13.25	15.25	13.44	16.07	11.88	13.88	9.50	11.50
70.0%	17.02	20.50	10.50	12.50	17.56	19.05	13.00	15.00	13.19	15.82	11.50	13.50	9.00	11.00
72.5%	16.83	20.35	10.13	12.13	17.51	18.93	12.75	14.75	12.94	15.57	11.13	13.13	8.50	10.50
75.0%	16.64	20.20	9.75	11.75	17.46	18.82	12.50	14.50	12.69	15.32	10.75	12.75	8.00	10.00
77.5%	16.45	20.06	9.38	11.38	17.40	18.70	12.25	14.25	12.44	15.07	10.38	12.38	7.50	9.50
80.0%	16.27	19.91	9.00	11.00	17.35	18.59	12.00	14.00	12.27	14.45	10.00	12.00	7.00	9.00
82.5%	16.08	19.74	8.81	10.81	17.17	18.47	11.75	13.75	12.02	14.20	9.63	11.63	6.75	8.75
85.0%	15.89	19.58	8.63	10.63	16.99	18.35	11.50	13.50	11.77	13.95	9.25	11.25	6.50	8.50
87.5%	15.70	19.41	8.44	10.44	16.82	18.23	11.25	13.25	11.52	13.70	8.88	10.88	6.25	8.25
90.0%	15.51	19.25	8.25	10.25	16.64	18.12	11.00	13.00	11.27	13.45	8.50	10.50	6.00	8.00
92.5%	15.32	19.08	8.06	10.06	16.46	18.00	10.75	12.75	11.02	13.20	8.13	10.13	5.75	7.75
95.0%	15.13	18.91	7.88	9.88	16.28	17.88	10.50	12.50	10.77	12.95	7.75	9.75	5.50	7.50
97.5%	14.94	18.75	7.69	9.69	16.10	17.77	10.25	12.25	10.52	12.70	7.38	9.38	5.25	7.25
100.0%	14.75	18.58	7.50	9.50	15.93	17.65	10.00	12.00	10.59	12.52	7.00	9.00	5.00	7.00

The flow is correct if the measured differential pressure P2-P3 is in the range Low - High



Verifying the flow on AB-QM valves

Flow verification in an installation

To verify that an installation functions according to the design specifications checking only the most critical valve in the installation is needed (see figure 1).

The AB-QM maintains a constant differential pressure over the valve and any excess pressure will automatically be throttled. If there is not enough differential pressure the valve cannot reach the set flow. The valve that is furthest away has the lowest available differential pressure, so if this critical valve has enough pressure it means the other valves will also function properly.

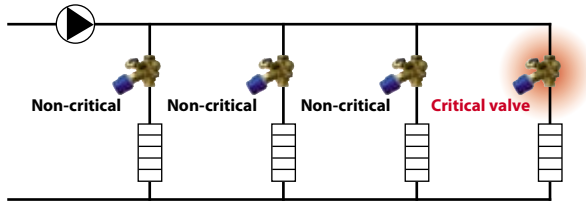


Fig. 1

Important: To get a useful measurement the installation should run on full load, so all actuators in the installation should be opened fully. This ensures that you are measuring under the most unfavourable circumstances. The AB-QM's will have more differential pressure available when the installation is working on partial load.

Due to the compact design of the AB-QM the measurements across the measuring points are influenced by the dynamic pressure, turbulences, flow patterns and internal tolerances. Therefore the measured differential pressure can't be used to calculate the flow directly. It's necessary to use the table that was derived from statistical measurements.

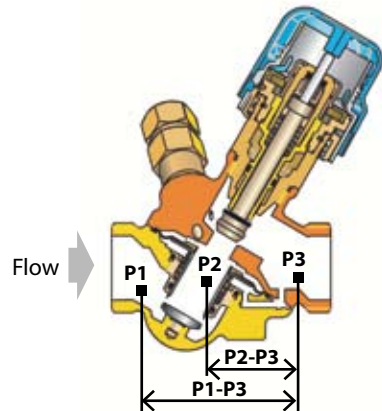


Fig. 2

Method of verification:

- Measure the differential pressure across the measuring nipples of the AB-QM. The measuring nipples are placed in such a way that P2-P3 is measured (see figure 2).
- Check the measured value against the values in the table. Be careful to check size and setting of the measured valve.

If the measured value is below the value in the column marked "Low" then there is not enough differential pressure available for the AB-QM. If the measured value is above the value in the column marked "High" then the AB-QM has enough differential pressure available and the flow is limited according to the setting.

If the measured value is between the "Low" and "High" value the flow through the valve is at least 80% of the setting but there is no certainty there is enough differential pressure to reach 100%. To make sure there is sufficient differential pressure please execute the pump optimisation procedure explained in technote **VN.A3.N1.02**

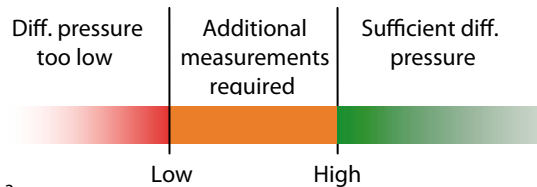
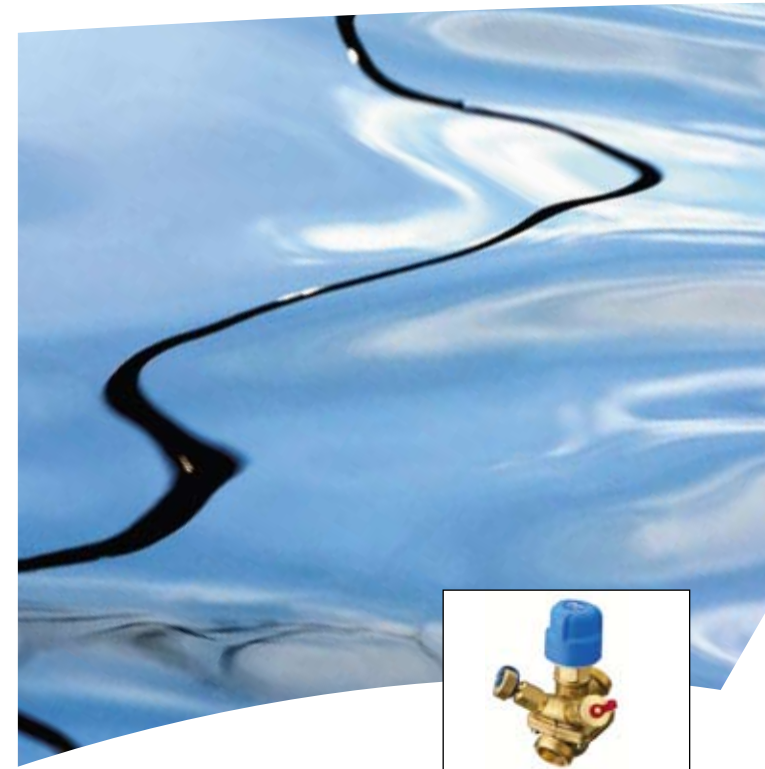


Fig. 3



AB-QM flow checker