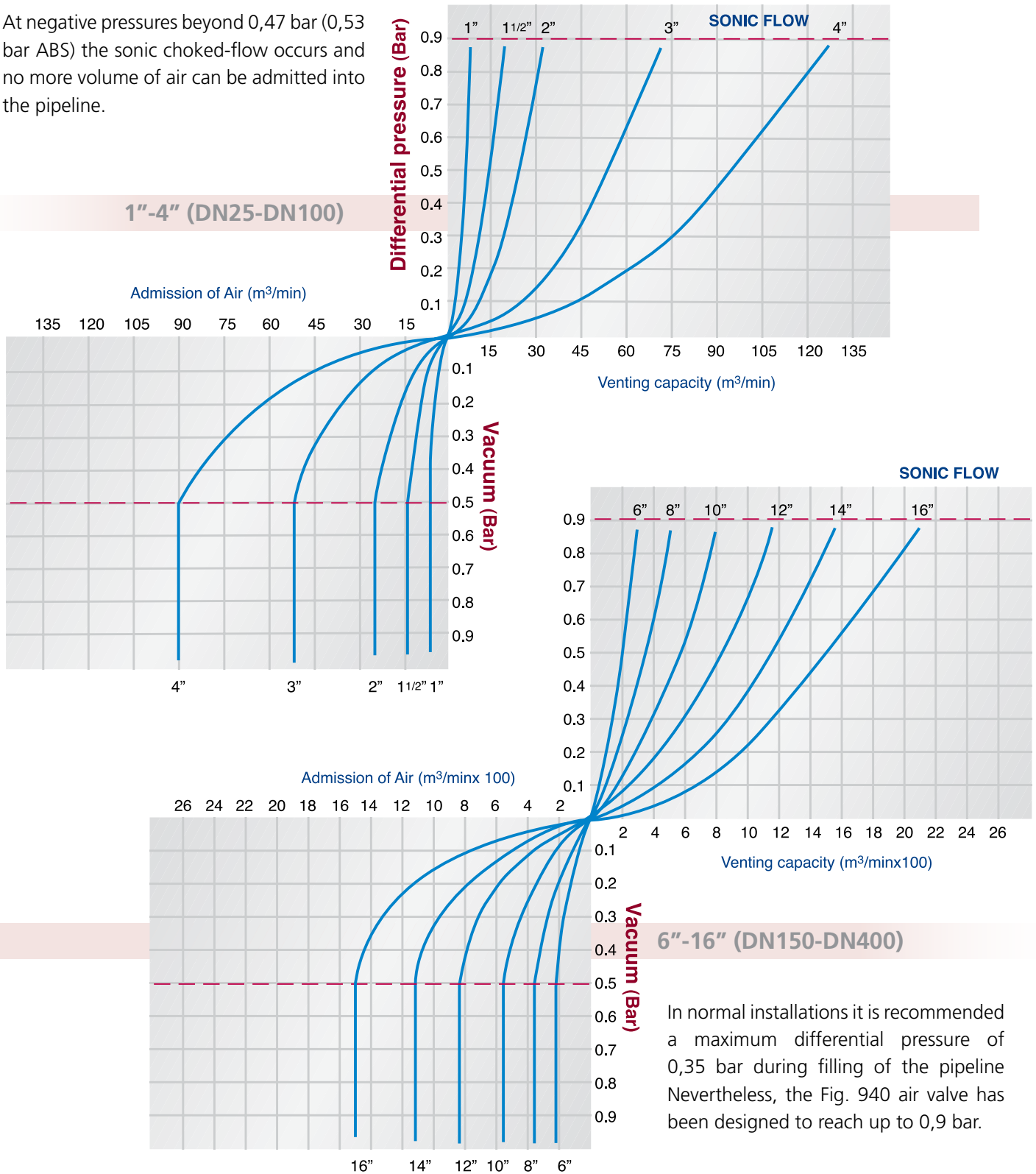


AIR VACUUM VALVES, AIR INLET AND OUTLET CURVES

At negative pressures beyond 0,47 bar (0,53 bar ABS) the sonic choked-flow occurs and no more volume of air can be admitted into the pipeline.



AIR RELEASE VALVES, SELECTION AND SIZING

METHOD 1: IF A SPECIFIC VENTING CAPACITY IS REQUIRED

A. USING TABLE #1

If the specific venting rate is known, refer to Table #1 and select the Air Release Valve which has an orifice available whose venting rate is at least equal to the required rate, at the maximum working pressure the valves will be operating. Select standard orifices whenever possible.

On a long pipeline, it is better to install Air Release Valves with smaller orifices at frequent intervals than to install a few valves with large orifices.

WORKING PRESSURE Bar		CLEAN FLUIDS												SEWAGE SERVICE					
		9100		9120		9200		9220		9230				9250		9270		9290	
										DN 100		DN 150							
0,35	0,04		0,07		0,18		0,7		1,24		5		0,5		1,24		0,5		
0,7	0,06		0,11		0,24		1		1,75		7		0,7		1,75		0,7		
1	0,07		0,13		0,3		1,2		2,12		8,5		0,83	8	2,12	12,5	0,83	8	
1,7	0,1		0,18		0,4		1,6		2,85		11,3		1,1		2,85		1,1		
3,5	0,16	2,25	0,29	3	0,65	5	2,6	9,5	4,6	12,5	18,5	25	1,8		4,6		1,8		
5	0,22		0,4		0,9		3,6		6,43		25,7		2,5		6,43		2,5		
7	0,28		0,5		1,15		4,62		8,22		32,9		1,16		6,3		1,16		
8,5	0,35		0,62		1,4		5,63		10		40		1,4	4,5	7,67	11	1,4	4,5	
10	0,41		0,73		1,65		6,64		11,8		47,2		1,66		9,05		1,66		
14	0,24		0,54		0,96		2,94		8,7		29,1		Consult Factory						
16	0,3	1,5	0,66	2,25	1,18	3	3,6	5,5	10,6	9,5	35,9	17							
20	0,22		0,3		1,4		3,43		8,8		26,9								
25	0,27	1,25	0,4	1,5	1,65	3	4,25	5	10,9	8	33,3	14							

FOR OTHER ORIFICES, CONSULT FACTORY

B. USING GRAPH #1

1. Enter system pressure and venting capacity onto Graph #1 and select nearest larger orifice diameter.
2. Consult available Air Release Valve orifice diameters on Table #1 and select valve with correct orifice diameter and pressure rating. SELECT A STANDARD ORIFICE WHENEVER POSSIBLE.
3. It is more efficient to install a greater quantity of air release valves at strategic locations with smaller orifice than lesser quantity with larger orifice.

