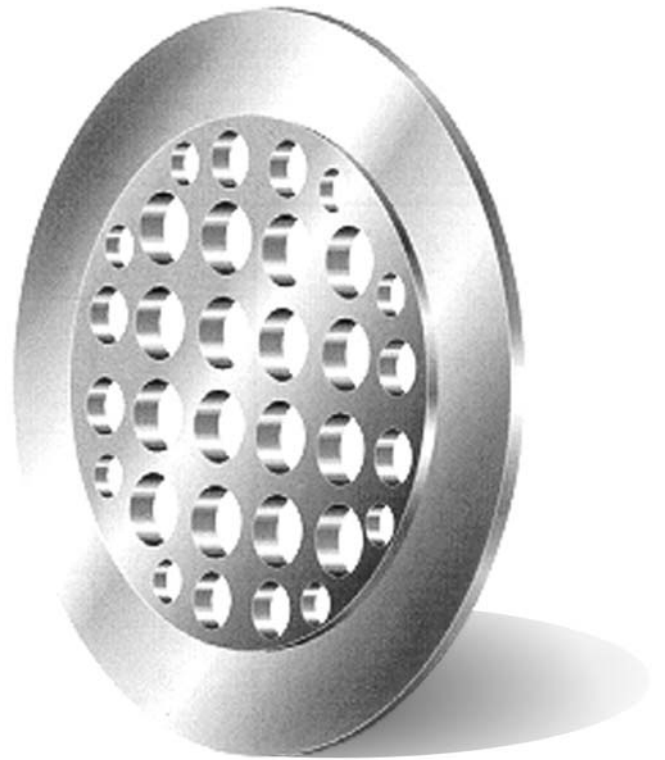


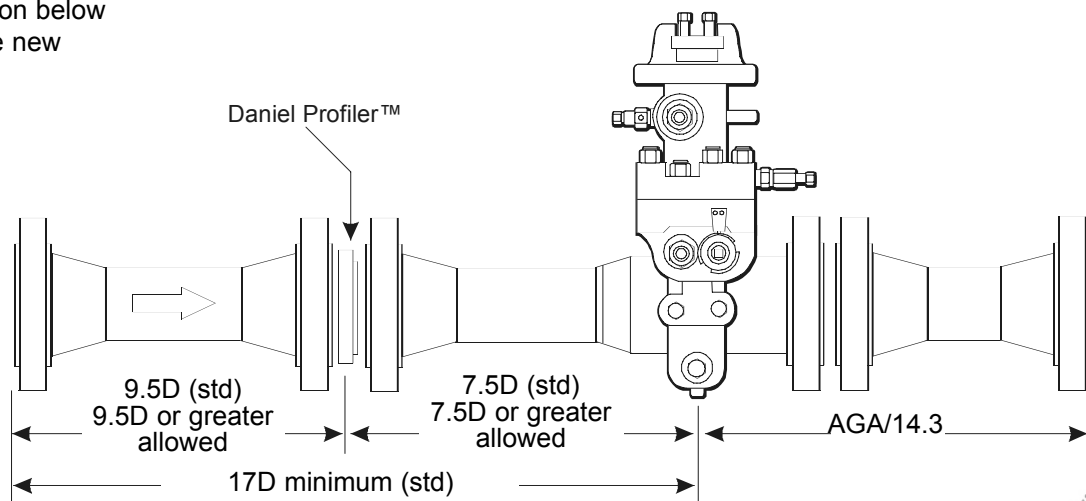
PROFILER™ Flow Conditioning Plate

The Daniel Profiler Flow Conditioning Plate provides an economical way to reduce uncertainty in orifice metering as outlined in API 14.3, Part 2.

- Cost effective for new or existing meter tubes.
- Qualified by performance tests conducted to API standards.
- Field retrofittable for most meter runs.
- Minimizes swirl and turbulence.
- Reduces meter-run lengths.
- Helps to provide the conditions necessary for a fully developed profile.



It has been determined that the previously stated upstream location limits for flow conditioning plates are more restrictive than they should be. Whereas it has been shown that the flow conditioning plate should be between 7.5 and 12D from the orifice plate, installation of the flow conditioning plate can actually be anywhere from 7.5D **OR MORE**, from the orifice as long as there is a minimum of 9.5D of additional pipe preceding the flow conditioning plate. Test data supports this. This information gives far more opportunity for customer field replacement of tube bundles in existing locations. The illustration below indicates the new information.



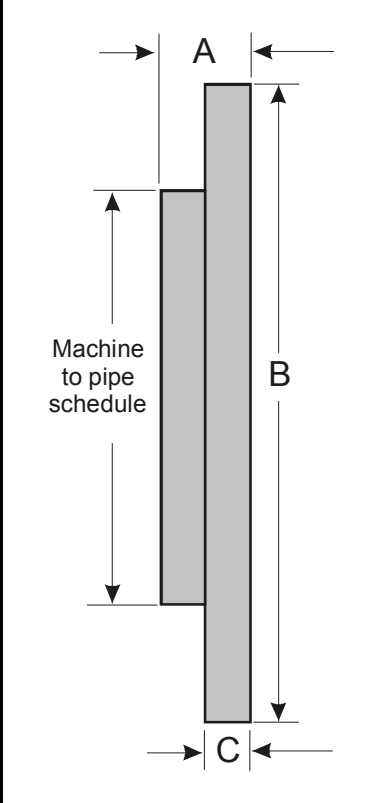
The Daniel Profiler Flow Conditioning Plate has been successfully tested to the standards set by API 14.3, Part 2. Test results are available upon request or visit the Daniel web site at www.daniel.com (from Home Page > Products > Differential Products > Technical Papers).

Flange type, sizes: 2" through 30"
Larger sizes available on request.

Standard material of construction:
304 stainless steel
Optional materials available.

Actual test include effects on a fully developed profile, two 90° elbows in perpendicular planes, one gate valve (50% closed), and high swirl angle over 25%. Additional test involved swirl at two beta values, Reynolds number (R_e) sensitivity, and scaling.

Dimensions (All in inches)

	Line Size	"A" Total Thickness	"B" Flange OD	"C" Flange Thickness	"D" Weight (lbs)
	2	0.5	3.62	0.25	0.75
2 1/2	0.5	4.12	0.25	1	
3	0.5	5	0.25	1.5	
4	0.5	6.19	0.25	2	
6	0.75	8.5	0.25	5	
8	1	10.62	0.25	11	
10	1.25	12.75	0.25	19	
12	1.5	15	0.25	31	
14	1.75	16.25	0.25	42	
16	2	18.5	0.25	63	
18	2.25	21	0.25	89	
20	2.5	23	0.25	122	
24	3	27.25	0.25	209	
30	3.75	33.75	0.25	407	

Please supply line size, schedule, and special material requirements when requesting price. For more information, contact your Daniel representative or visit our website.

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