

STRAIGHT LENGTHS - Comparison chart with or without conditioner - examples

- Required straight lengths between orifice plate and fittings
- For a value of $\beta = 0,5$
- Values expressed as multiples of pipe's internal diameter, D

	without conditioner	with NOVA K-Lab conditioner	maximum reduction in %
Single 90° bend	22 D	$L_s \geq 8,5 D^{(2)}$	≈ 60 %
Two 90° bends in perpendicular planes $5D \leq S \leq 30D$	44 D	$L_s \geq 8,5 D^{(2)}$	≈ 80 %
Single 90° tee	19 D	$L_s \geq 8,5 D^{(2)}$	≈ 55 %
Abrupt symmetrical reduction	30 D	$L_s \geq 8,5 D^{(2)}$	≈ 71%

	without conditioner	with ZANKER plate conditioner	maximum reduction in %
Single 90° bend	22 D	$L_s \geq 7,5 D^{(1)}$	≈ 65 %
Two 90° bends in perpendicular planes $5D \leq S \leq 30D$	44 D	$L_s \geq 7,5 D^{(1)}$	≈ 82 %
Single 90° tee	19 D	$L_s \geq 7,5 D^{(1)}$	≈ 60 %
Abrupt symmetrical reduction	30 D	$L_s \geq 7,5 D^{(1)}$	≈ 75 %

(1) $7,5 D \leq L_s \leq L_f - 8,5 D$

(2) $8,5 D \leq L_s \leq L_f - 7,5 D$

L_s , the distance between the downstream face of the flow conditioner and the diaphragm

L_f , the distance between the diaphragm and the nearest upstream fitting (L_f must be at least 17 D)

Nota:

Straight lengths shall be measured from the downstream end of the curved portion of the nearest fitting to the upstream face of the primary element.

S is the distance between two fittings.