

Training 11 - Installation - Inlet and outlet pipes

培训 11 - 安装 - 出入口管道

It is very important for flow meters to install them correctly. One of the most important points is to have straight inlet and outlet pipes before and after the flow meter. The reason for this is that you **need a symmetrical flow profile** inside the pipe for a correct measurement.

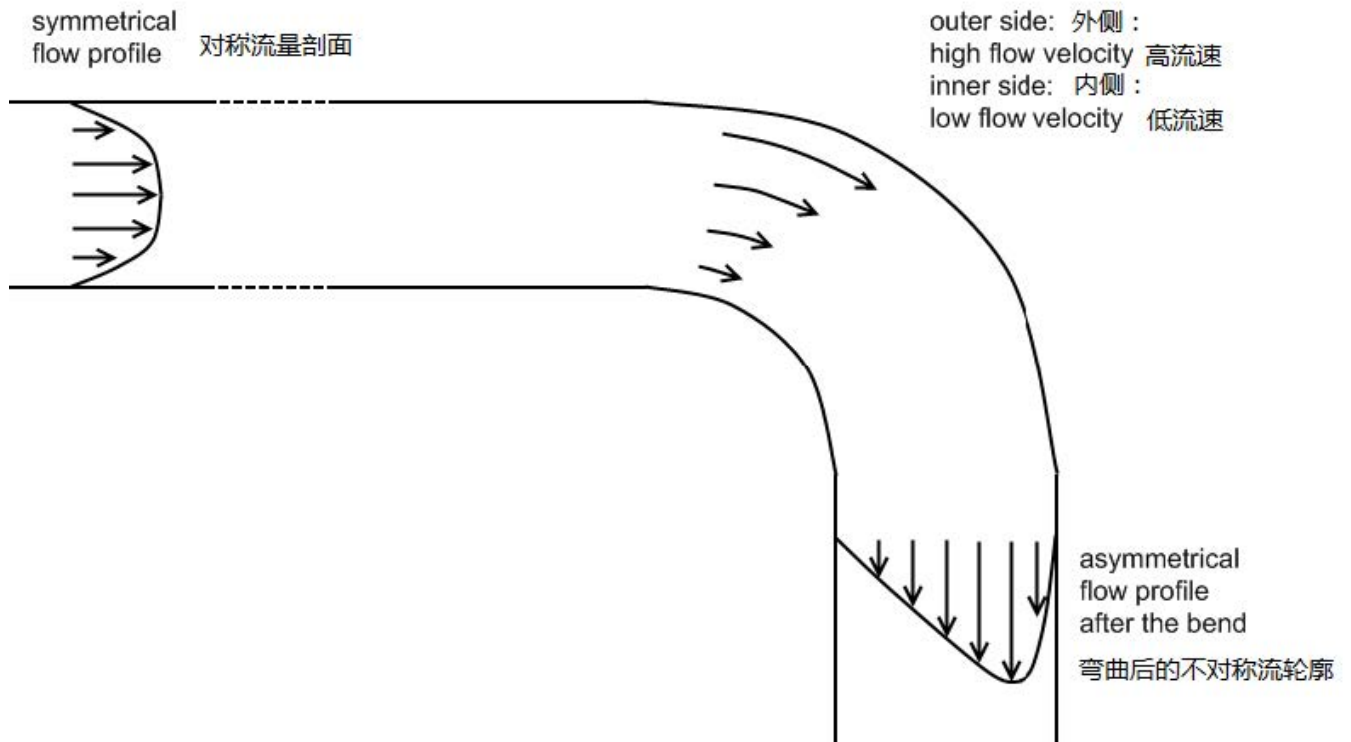
正确安装流量计是非常重要的。最重要的一点是在流量计前后都要有适当距离。这样做的原因是，您需要在管道内进行对称的流量配置，以进行正确的测量。

Flow profile

流量简介

The flow profile can be disturbed by changes of the pipe diameter, obstacles inside the pipe or bends. In the following example you can see how a bend disturbs the flow profile:

管道直径的变化、管道内的障碍物或弯管会使流量分布受到干扰。在下面的例子中，您可以看到一个弯曲是如何扰乱流程概要的：



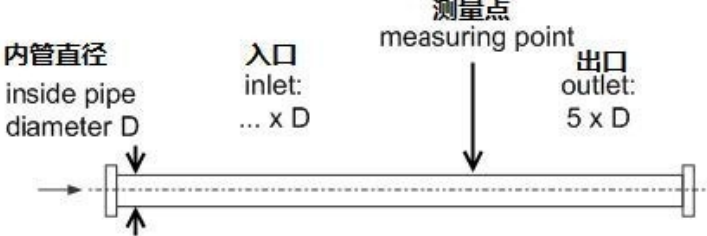

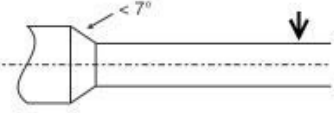

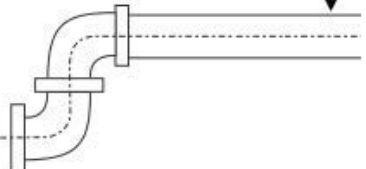
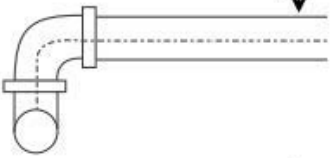
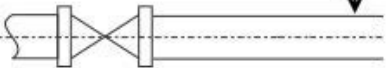
After a certain distance the disturbed flow profile will be symmetrical again. This distance is the required inlet length.

经过一定的距离后，扰动流的轮廓将再次对称。这段距离是所需的安装长度距离。

Inlet and Outlet pipes 输入和输出管道

All FlowVision user manuals for flow meters demand a straight inlet length of $20 \times D$ (D = inside pipe diameter) and a straight outlet length of $5 \times D$. But in some cases this requirement is insufficient. The following table shows the required inlet and outlet lengths in all cases:

所有Flow vision用户手册要求入口长度为 $20 \times D$ (D =内管径)和直通出口长度 $5 \times D$ ，但在某些情况下，这一要求是不够的。下表显示所有情况下所需的进出口长度：

	
	<p>扩张 expansion: $20 \times D$</p>
	<p>减径管 reducer: $20 \times D$</p>
	<p>弯头 90° elbow: $20 \times D$</p>
	<p>两个90°弯头 在一个水平上 two 90° elbows in one level: $25 \times D$</p>
	<p>两个90°弯头 在两个水平上 two 90° elbows in two levels: $40 \times D$</p>
	<p>阀/幻灯片 valve/slide: $50 \times D$</p>