

INSTALLATION VOLUME (IV) AND PURGE VOLUME (PV) CALCULATION SHEET FOR STEEL PIPE SYSTEMS					
Nom. bore	Individual lengths (m)		Total length (m)	x (m <sup>3</sup> per m)	= IV (m <sup>3</sup> )
150 mm				0.02	
125 mm				0.014	
100 mm				0.009	
80 mm				0.0054	
65 mm				0.0038	
50 mm				0.0024	
40 mm				0.0015	
32 mm				0.0011	
25 mm				0.00064	
20 mm				0.00046	
15 mm				0.00024	

Meter designation	IV <sub>meter</sub> (m <sup>3</sup> )	Cyclic volume (m <sup>3</sup> )
E6	0.0024	N/A
G4 U6	0.008	0.002
G10 U16	0.025	0.006
G16 U25	0.037	0.01
G25 U40	0.067	0.02
G40 U65	0.100	0.025
G65 U100	0.182	0.057
G100 U160	0.304	0.071

IV <sub>pipes</sub>	m <sup>3</sup>
IV <sub>fittings</sub> = IV <sub>pipes</sub> × 0.1	m <sup>3</sup>
IV <sub>meter</sub>	m <sup>3</sup>
<b>IV<sub>total</sub></b>	<b>m<sup>3</sup></b>
PV <sub>pipes</sub> = IV <sub>pipes</sub> × 1.5	m <sup>3</sup>
PV <sub>fittings</sub> = PV <sub>pipes</sub> × 0.1	m <sup>3</sup>
PV <sub>meter</sub> = Cyclic volume × 5	m <sup>3</sup>
PV <sub>hose</sub> = Length × Volume per metre × 1.5	m <sup>3</sup>
<b>PV<sub>total</sub></b>	<b>m<sup>3</sup></b>

For each **Nom. bore** (internal diameter) write down the **Individual lengths**. Find the **Total length** and multiply it by the (m<sup>3</sup> per m) factor to get the **IV**. Add the IVs to get **IV<sub>pipes</sub>**.

Gas meter IVs and cyclic volumes are typical figures. Consult manufacturer's data for specific meters.

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<b>Nom. bore</b>	<b>Individual lengths (m)</b>		<b>Total length (m)</b>	<b>x (m<sup>3</sup> per m)</b>	<b>= IV (m<sup>3</sup>)</b>
150 mm				0.02	
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100 mm				0.009	
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$IV_{\text{pipes}}$	<b>m<sup>3</sup></b>
$IV_{\text{fittings}} = IV_{\text{pipes}} \times 0.1$	<b>m<sup>3</sup></b>
$IV_{\text{meter}}$	<b>m<sup>3</sup></b>
<b><math>IV_{\text{total}}</math></b>	<b>m<sup>3</sup></b>
$PV_{\text{pipes}} = IV_{\text{pipes}} \times 1.5$	<b>m<sup>3</sup></b>
$PV_{\text{fittings}} = PV_{\text{pipes}} \times 0.1$	<b>m<sup>3</sup></b>
$PV_{\text{meter}} = \text{Cyclic volume} \times 5$	<b>m<sup>3</sup></b>
$PV_{\text{hose}} = \text{Length} \times \text{Volume per metre} \times 1.5$	<b>m<sup>3</sup></b>
<b><math>PV_{\text{total}}</math></b>	<b>m<sup>3</sup></b>

For each **Nom. bore** (internal diameter) write down the **Individual lengths**. Find the **Total length** and multiply it by the (**m<sup>3</sup> per m**) factor to get the **IV**. Add the IVs to get **IV<sub>pipes</sub>**.

Gas meter IVs and cyclic volumes are typical figures. Consult manufacturer's data for specific meters.