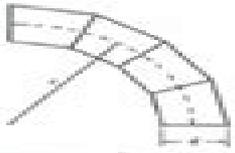
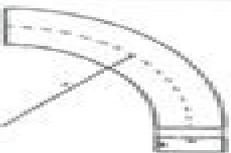
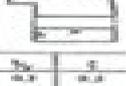


# CFSE GUIDE

## FLOW OF FLUIDS

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**TABLE C4.25** Velocity pressure loss factors for duct fittings — continued

<b>RADIUS BENDS</b> (Factors refer to the velocity pressure in the duct.)																																																																																																																						
CIRCULAR DUCT, 90°					RECTANGULAR DUCT, 90°																																																																																																																	
 <table border="1" style="margin-left: auto; margin-right: auto;"> <tr><th><math>R/D</math></th><th>0.25</th><th>0.50</th><th>1.00</th><th>2.00</th></tr> <tr><td>0.25</td><td>0.24</td><td>0.29</td><td>0.35</td><td>0.41</td></tr> <tr><td>0.50</td><td>0.24</td><td>0.29</td><td>0.35</td><td>0.41</td></tr> <tr><td>1.00</td><td>0.24</td><td>0.29</td><td>0.35</td><td>0.41</td></tr> <tr><td>2.00</td><td>0.24</td><td>0.29</td><td>0.35</td><td>0.41</td></tr> </table>					$R/D$	0.25	0.50	1.00	2.00	0.25	0.24	0.29	0.35	0.41	0.50	0.24	0.29	0.35	0.41	1.00	0.24	0.29	0.35	0.41	2.00	0.24	0.29	0.35	0.41	 <table border="1" style="margin-left: auto; margin-right: auto;"> <tr><th><math>R/D</math></th><th>0.25</th><th>0.50</th><th>1.00</th><th>2.00</th></tr> <tr><td>0.25</td><td>0.27</td><td>0.33</td><td>0.40</td><td>0.47</td></tr> <tr><td>0.50</td><td>0.26</td><td>0.32</td><td>0.39</td><td>0.46</td></tr> <tr><td>1.00</td><td>0.26</td><td>0.32</td><td>0.39</td><td>0.46</td></tr> <tr><td>2.00</td><td>0.25</td><td>0.31</td><td>0.38</td><td>0.45</td></tr> </table>					$R/D$	0.25	0.50	1.00	2.00	0.25	0.27	0.33	0.40	0.47	0.50	0.26	0.32	0.39	0.46	1.00	0.26	0.32	0.39	0.46	2.00	0.25	0.31	0.38	0.45																																																											
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**Notes to Table C4.25.**

**Duct angle**

When bends have through angles of less than 90°, the pressure loss factors may be presumed to vary in the proportion  $45^\circ/90^\circ$  unless stated otherwise.

**Changes of shape (contraction)**

For tapered changes of shape where  $\theta < 90^\circ$  and  $A_2 = A_1$ , the

**Notes**

When straight ducts form splines, the straight duct sections between the conical part should be considered.

**Application**

The values for the pressure loss factors quoted here assume that the approaching velocity profile is regular. Any irregularity or disturbance may increase or decrease the loss.

**Comments**

For rectangular ducts, the hydraulic mean diameter is given by

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Environmental Design Randall

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