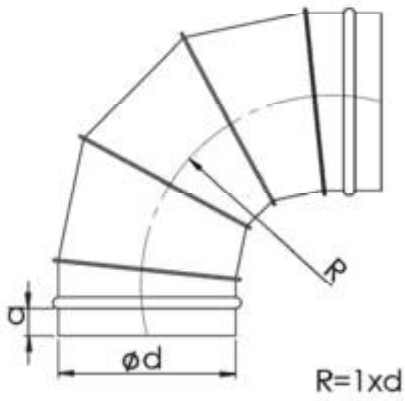
CUBE
METAL INDUSTRIES
المكعب الدولي للصناعات المعدنية

Bends - REL 90-5

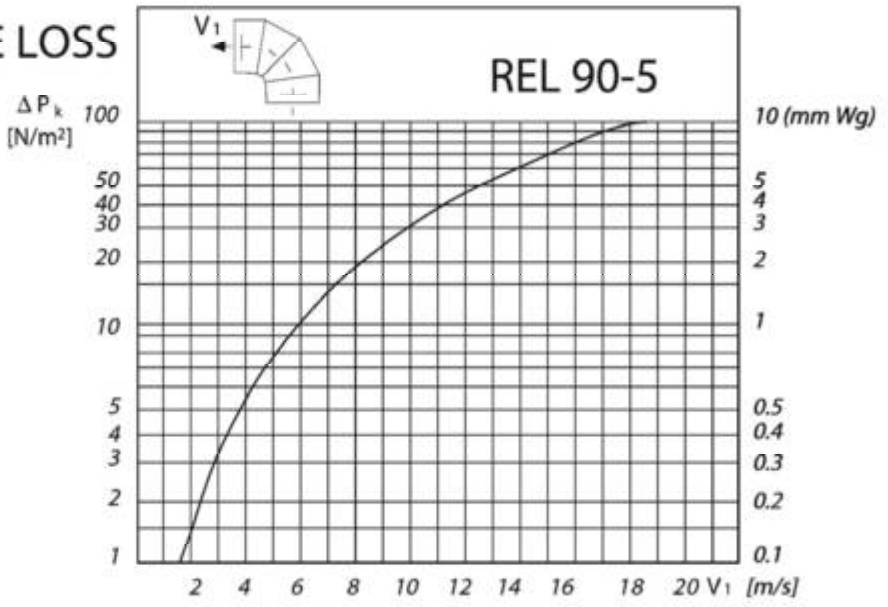


R=1xd

d in mm \ Thickness | Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
80	40	0.34				
100	40	0.49				
125	40	0.69				
140	40	0.83				
150	40	0.92				
160	40	1.03				
180	40	1.24				
200	40	1.52				
224	40	1.83				
250	55	2.21				
280	75	2.73				
300	75	3.08				
315	75	3.40				
355	75	4.19				
400	75	5.18				
450	75	6.40				
500	75	7.75				
560	75	9.80				
600	75	11.11				
630	75		16.19			
650	75		17.14			
700	100		19.65			
750	100		22.32			
800	100		25.17			

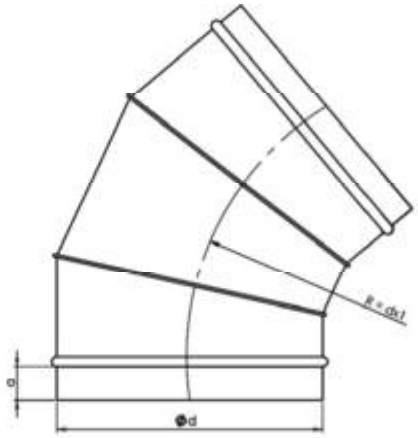
d in mm \ Thickness | Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
850	100		28.18			
900	100		31.36			
950	155			43.40		
1000	155			47.80		
1050	155			52.42		
1100	155			57.24		
1150	155			62.28		
1200	155			67.54		
1250	155			73.00		
1300	155			78.68		
1400	155			90.67		
1500				103.50		
1550					132.29	
1600					140.63	
1700					158.07	
1800					176.53	
1900					196.01	
2000					216.50	
2100					238.02	
2200						325.69
2300						355.13
2400						385.84
2500						417.82

PRESSURE LOSS



CUBE
METAL INDUSTRIES
المكعب الدولي للصناعات المعدنية

Bends - REL 75-5



d in mm \ Thickness Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
80	40	0.30				
100	40	0.43				
125	40	0.63				
140	40	0.77				
150	40	0.88				
160	40	0.98				
180	40	1.22				
200	40	1.47				
224	40	1.81				
250	55	2.34				
280	75	3.04				
300	75	3.44				
315	75	3.76				
355	75	4.67				
400	75	5.81				
450	75	7.22				
500	75	8.78				
560	75	11.05				
600	75	12.57				
630	75		18.36			
650	75		19.47			
700	100		23.11			
750	100		26.61			
800	100		30.00			

d in mm \ Thickness Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
850	100		33.60			
900	100		37.40			
950	155			54.58		
1000	155			59.88		
1050	155			65.53		
1100	155			71.44		
1150	155			78.23		
1200	155			84.67		
1250	155			91.36		
1300	155			98.31		
1400	155			114.03		
1500						
1550						
1600						
1700						
1800						
1900						
2000						
2100						
2200						
2300						
2400						
2500						

The material used for elbows are G.I steel sheet, thickness range from 0.5mm to 1.5mm.
Stainless Steel Sheet used are of grade 304 and 316; thickness range from 0.5 to 1.50mm.
Aluminum sheet , thickness range from 0.5 to 0.20mm.

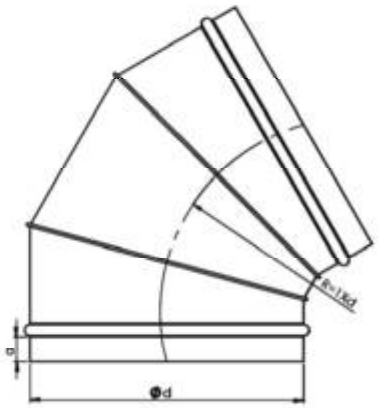
Round elbow are built of galvanized steel sheet, G90 zinc coating, lock forming quality, conform to ASTM A653 and A924 in accordance with table 3-2 and 3-3, SMACNA HVAC Duct Construction standard - 2nd edition 1995. All standard dimensions are available.

The diameter of fittings shall be appropriated for mating with sections of the straight duct,equipment, and air terminals to which they connected.

Seam: All continuously welded or brazed.
Tack or spot welded (and sealed or unsealed). Seam locked (and sealed or unsealed). Rivet, screw, or punched-die-stamp locked (and sealed or unsealed).
The most popular transverse joints are the slip or lap types. The flanged joint is used in ducts over 60" (1524 mm) in diameter because of its advantage in retaining the circular shape.

CUBE
METAL INDUSTRIES
المكعب الدولي للصناعات المعدنية

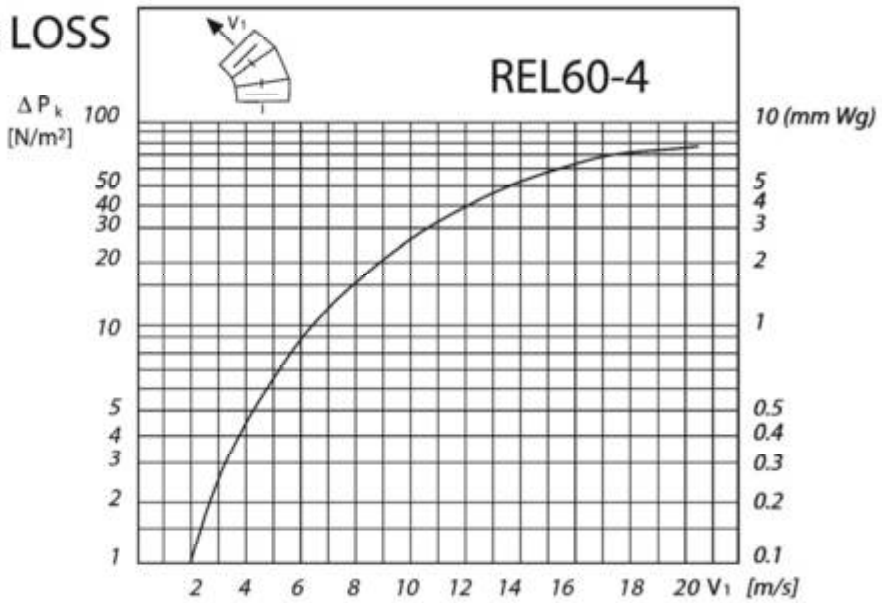
Bends - REL60-4



d in MM \ Thickness \ Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
80	40	0.25				
100	40	0.37				
125	40	0.51				
140	40	0.60				
150	40	0.67				
160	40	0.74				
180	40	0.89				
200	40	1.09				
224	40	1.31				
250	55	1.57				
280	75	1.95				
300	75	2.19				
315	75	2.43				
355	75	2.98				
400	75	3.66				
450	75	4.49				
500	75	5.41				
560	75	6.90				
600	75	7.80				
630	75		11.35			
650	75		12.00			
700	100		13.72			
750	100		15.54			
800	100		17.48			

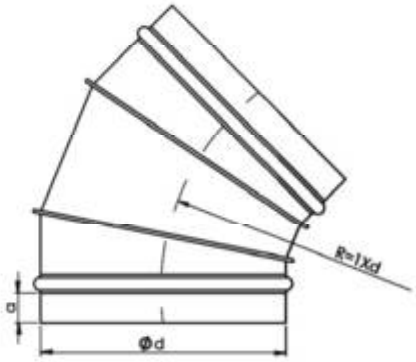
d in mm \ Thickness \ Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
850	100		19.53			
900	100		21.70			
950	155			29.97		
1000	155			32.96		
1050	155			36.10		
1100	155			39.37		
1150	155			42.78		
1200	155			46.34		
1250	155			50.04		
1300	155			53.88		
1400	155			61.98		
1500				70.65		
1550					90.23	
1600					95.85	
1700					107.61	
1800					120.05	
1900					133.17	
2000					146.96	
2100					161.44	
2200						220.74
2300						240.52
2400						261.16
2500						282.65

PRESSURE LOSS



CUBE
METAL INDUSTRIES
المكعب الدولي للصناعات المعدنية

Bends - REL45-3



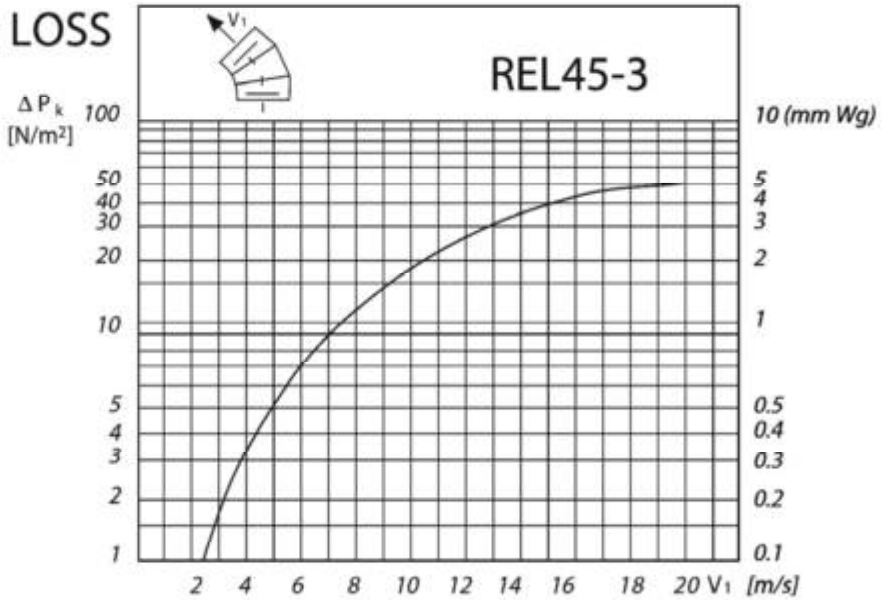
d in mm \ Thickness Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
80	40	0.22				
100	40	0.32				
125	40	0.44				
140	40	0.51				
150	40	0.57				
160	40	0.63				
180	40	0.75				
200	40	0.91				
224	40	1.09				
250	55	1.29				
280	75	1.60				
300	75	1.79				
315	75	1.99				
355	75	2.42				
400	75	2.95				
450	75	3.60				
500	75	4.31				
560	75	5.52				
600	75	6.22				
630	75		9.02			
650	75		9.52			
700	100		10.84			
750	100		12.24			
800	100		13.73			

m(kg)

d in mm \ Thickness Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
850	100		15.30			
900	100		16.95			
950	155			23.37		
1000	155			25.64		
1050	155			28.03		
1100	155			30.51		
1150	155			33.11		
1200	155			35.81		
1250	155			38.61		
1300	155			41.52		
1400	155			47.65		
1500				54.20		
1550					69.16	
1600					73.40	
1700					82.27	
1800					91.65	
1900					101.52	
2000					111.90	
2100					122.79	
2200						167.72
2300						182.59
2400						198.08
2500						214.21

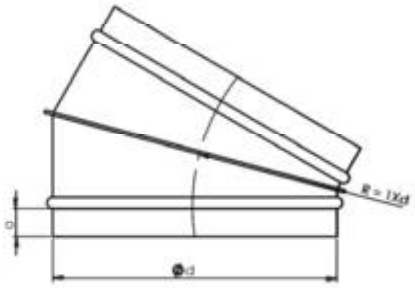
m(kg)

PRESSURE LOSS



CUBE
METAL INDUSTRIES
المكعب الدولي للصناعات المعدنية

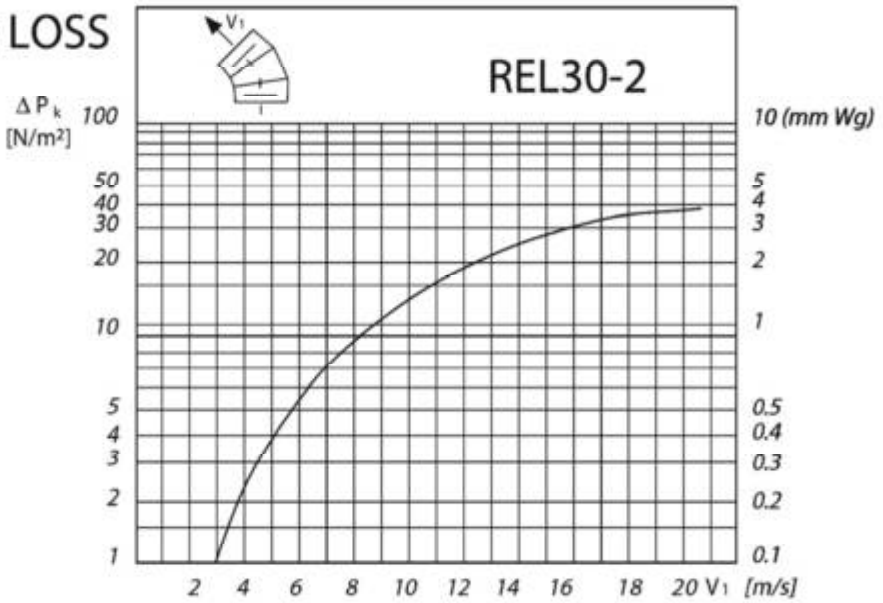
Bends - REL30-2



d in mm \ Thickness Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
80	40	0.16				
100	40	0.24				
125	40	0.32				
140	40	0.37				
150	40	0.41				
160	40	0.45				
180	40	0.54				
200	40	0.67				
224	40	0.79				
250	55	0.94				
280	75	1.16				
300	75	1.30				
315	75	1.45				
355	75	1.76				
400	75	2.13				
450	75	2.59				
500	75	3.08				
560	75	4.01				
600	75	4.50				
630	75		6.51			
650	75		6.86			
700	100		7.78			
750	100		8.76			
800	100		9.80			

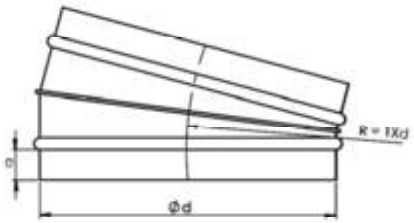
d in mm \ Thickness Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
850	100		10.89			
900	100		12.04			
950	155			16.55		
1000	155			18.13		
1050	155			19.78		
1100	155			21.49		
1150	155			23.28		
1200	155			25.14		
1250	155			27.07		
1300	155			29.08		
1400	155			33.29		
1500				37.79		
1550					48.17	
1600					51.08	
1700					57.16	
1800					63.57	
1900					70.33	
2000					77.42	
2100					84.85	
2200						115.78
2300						125.92
2400						136.49
2500						147.48

PRESSURE LOSS



CUBE
METAL INDUSTRIES
المكعب الدولي للصناعات المعدنية

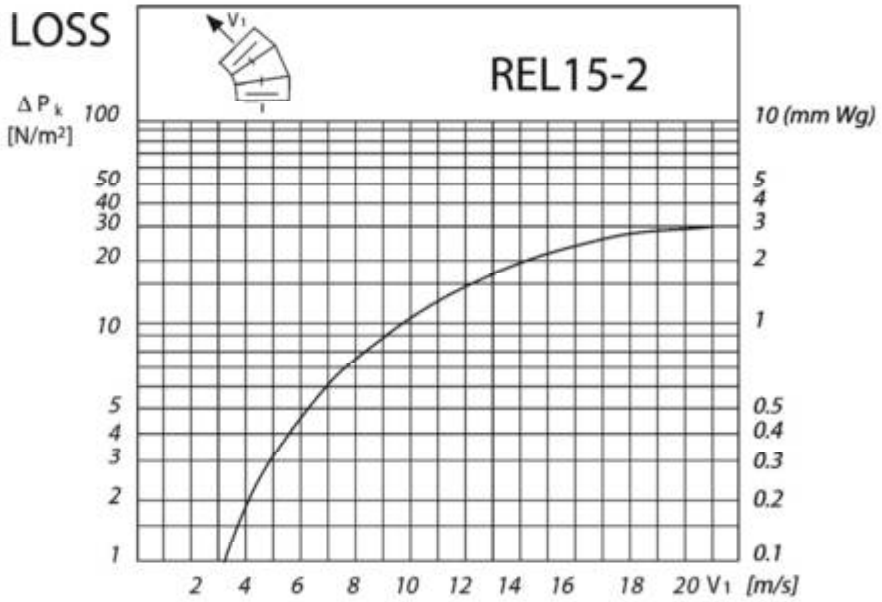
Bends - REL15-2



d in mm \ Thickness Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
80	40	0.13				
100	40	0.19				
125	40	0.25				
140	40	0.29				
150	40	0.31				
160	40	0.34				
180	40	0.40				
200	40	0.49				
224	40	0.57				
250	55	0.66				
280	75	0.82				
300	75	0.90				
315	75	1.02				
355	75	1.21				
400	75	1.43				
450	75	1.70				
500	75	2.00				
560	75	2.64				
600	75	2.93				
630	75		4.21			
650	75		4.41			
700	100		4.94			
750	100		5.50			
800	100		6.09			

d in mm \ Thickness Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
850	100		6.71			
900	100		7.35			
950	155			10.03		
1000	155			10.90		
1050	155			11.81		
1100	155			12.76		
1150	155			13.73		
1200	155			14.75		
1250	155			15.79		
1300	155			16.88		
1400	155			19.15		
1500				21.55		
1550					27.37	
1600					28.92	
1700					32.15	
1800					35.54	
1900					39.09	
2000					42.82	
2100					46.71	
2200						63.45
2300						68.73
2400						74.22
2500						79.92

PRESSURE LOSS



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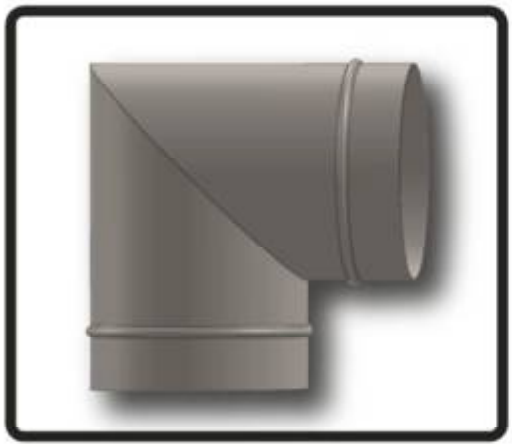
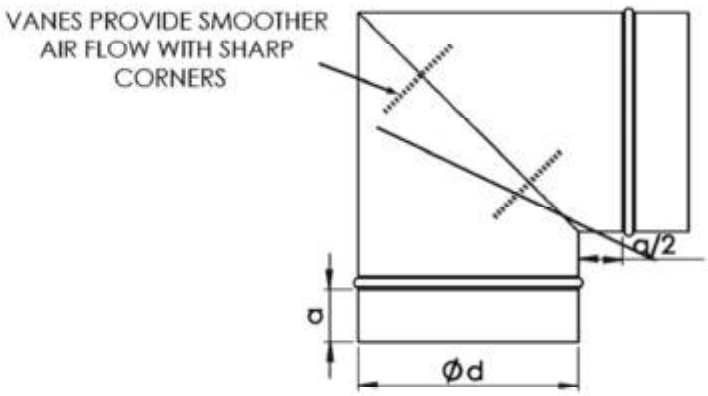
METAL INDUSTRIES
المكعب الدولي للصناعات المعدنية

Round Mittered Elbow 90 - RMEL90





d in mm \ Thickness Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
80	40	0.26				
100	40	0.35				
125	40	0.49				
140	40	0.58				
150	40	0.65				
160	40	0.71				
180	40	0.86				
200	40	1.01				
224	40	1.22				
250	55	1.63				
280	75	2.21				
300	75	2.46				
315	75	2.66				
355	75	3.21				
400	75	3.89				
450	75	4.72				
500	75	5.63				
560	75	6.82				
600	75	7.67				
630	75		11.12			
650	75		11.74			
700	100		14.42			
750	100		16.22			
800	100		18.11			

m(kg)

d in mm \ Thickness Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
850	100		20.11			
900	100		22.21			
950	155			35.42		
1000	155			38.54		
1050	155			41.80		
1100	155			45.18		
1150	155			49.08		
1200	155			52.72		
1250	155			56.50		
1300	155			60.40		
1400	155			68.58		
1500						
1550						
1600						
1700						
1800						
1900						
2000						
2100						
2200						
2300						
2400						
2500						

m(kg)

Material:

G.I steel sheet ,thickness range from 0.5 to 2.0 mm.
Stainless Steel Sheet grade 304 and 316 thickness range from 0.50 to 1.50 mm. Aluminum sheet , thickness range from 0.5 to 1.20mm.
2 gore stitch or continuous welded seam are standard construction.

Round mitered elbow 90 degree built of galvanized steel sheet, G90 zinc coating, lock forming quality, conform to ASTM A653 and A924 in accordance with table 3-2 and 3-3, SMACNA HVAC Duct Construction standard, 2nd edition 1995.
All standard dimensions are available.
The diameter of fittings shall be appropriated for mating with sections of the straight duct, equipment, and air terminals to which they connected.
Seam: All continuously welded or brazed. Tack or spot welded (and sealed or unsealed).
Rivet, screw, or punched-die-stamp locked (and sealed or unsealed).

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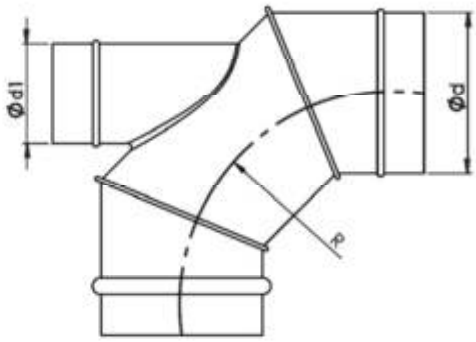
METAL INDUSTRIES
المكعب الدولي للصناعات المعدنية

Round Heal Elbow 90 - RHEL90-3



d in mm	Thickness Guage → / a (mm)	0.60	0.80	1.00	1.20	1.50
	m(kg)					
80	40	0.90				
100	40	1.03				
125	40	1.32				
140	40	1.89				
150	40	2.09				
160	40	2.29				
180	40	2.73				
200	40	3.20				
224	40	3.80				
250	55	4.64				
280	75	5.73				
300	75	6.39				
315	75	6.91				
355	75	8.39				
400	75	10.22				
450	75	12.45				
500	75	14.89				
560	75	18.10				
600	75	20.41				
630	75		29.65			
650	75		31.33			
700	100		36.48			
750	100		41.22			
800	100		46.24			

d in mm	Thickness Guage → / a (mm)	0.60	0.80	1.00	1.20	1.50
	m(kg)					
850	100		51.54			
900	100		57.13			
950	155			81.56		
1000	155			89.40		
1050	155			97.60		
1100	155			106.16		
1150	155			115.07		
1200	155			124.33		
1250	155			133.95		
1300	155			143.93		
1400	155			164.95		
1500						
1550						
1600						
1700						
1800						
1900						
2000						
2100						
2200						
2300						
2400						
2500						

Material:

G.I steel sheet ,thickness range from 0.50 to 1.50 mm.
Stainless Steel Sheet grade 304 and 316 thickness range from 0.50 to 1.50 mm.
Aluminum sheet, thickness range from 0.50 to 1.20 mm.
3 gore segmented seam or segmented standing seam, stitch or continuous welded seam are standard construction.

Round Heal elbow 90 degree built of galvanized steel sheet, G90 zinc coating, lock forming quality, conform to ASTM A653 and A924 in accordance with table 3-2 and 3-3, SMACNA HVAC Duct Construction standard - 2nd edition 1995. The diameter of fittings shall be appropriated for mating with sections of the straight duct, equipment, and air terminals to which they are connected.
Seam: All continuously welded or brazed. Tack or spot welded (and sealed or unsealed). Seam locked (and sealed or unsealed). Rivet, screw, or punched-die-stamp locked (and sealed or unsealed).

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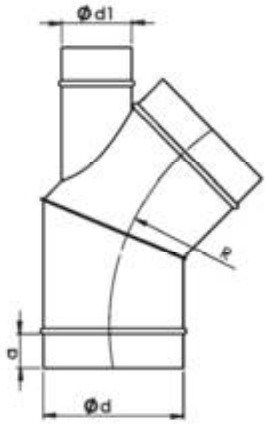
Round Heal Elbow 45 - RHEL45-2



d in mm \ Thickness Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
80	40	2.19				
100	40	2.67				
125	40	3.25				
140	40	3.97				
150	40	4.22				
160	40	4.46				
180	40	4.95				
200	40	5.42				
224	40	6.27				
250	55	7.00				
280	75	8.25				
300	75	8.54				
315	75	9.92				
355	75	10.96				
400	75	14.14				
450	75	15.56				
500	75	27.47				
560	75	30.24				
600	75	36.68				
630	75		50.97			
650	75		52.33			
700	100		56.41			
750	100		59.70			
800	100		62.90			

d = d1
d<450; L = 1200
450<d<950; L = 2500
d>950; L = 3500

d in mm \ Thickness Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
850	100		74.74			
900	100		78.26			
950	155			104.93		
1000	155			136.13		
1050	155			139.98		
1100	155			170.61		
1150	155			176.98		
1200	155			183.23		
1250	155			189.36		
1300	155			195.38		
1400	155			207.07		
1500						
1550						
1600						
1700						
1800						
1900						
2000						
2100						
2200						
2300						
2400						
2500						

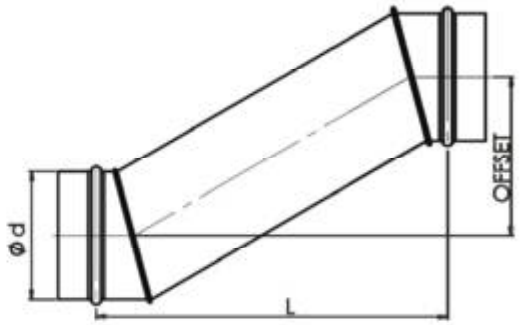
Material:

G.I steel sheet ,thickness range from 0.50 to 1.50 mm.
Stainless Steel Sheet grade 304 and 316 thickness range from 0.50 to 1.50 mm.
Aluminum sheet , thickness range from 0.50 to 1.20 mm.
3 gore segmented seam or segmented standing seam , stitch or continuous welded seam are standard construction.

Round Heal elbow 45 degree built of galvanized steel sheet, G90 zinc coating, lock forming quality, conform to ASTM A653 and A924 in accordance with table 3-2 and 3-3, SMACNA HVAC Duct Construction standard - 2nd edition 1995. The diameter of fittings shall be appropriated for mating with sections of the straight duct, equipment, and air terminals to which they are connected.
Seam: All continuously welded or brazed. Tack or spot welded (and sealed or unsealed). Seam locked (and sealed or unsealed). Rivet, screw, or punched-die-stamp locked (and sealed or unsealed).

CUBE
METAL INDUSTRIES
المكعب الدولي للصناعات المعدنية

Round Offset - ROFF-3



d in mm	Thickness Guage / a (mm)	m(kg) 0.60	0.80	1.00	1.20	1.50
80	40	0.69				
100	40	0.84				
125	40	1.05				
140	40	1.18				
150	40	1.27				
160	40	1.35				
180	40	1.53				
200	40	1.71				
224	40	1.92				
250	55	2.28				
280	75	2.75				
300	75	2.99				
315	75	3.18				
355	75	4.65				
400	75	5.27				
450	75	5.98				
500	75	6.72				
560	75	7.80				
600	75	10.04				
630	75		14.11			
650	75		14.59			
700	100		16.56			
750	100		17.94			
800	100		20.04			

d<315 ;L = 400,O = 200
355<d<560;L = 600,O = 300
600<d<800;L = 800,O = 400
850<d<1050;L = 1000,O = 500
1000<d<1300;L = 1250,O = 650
d>1400; L = 1500, O = 800

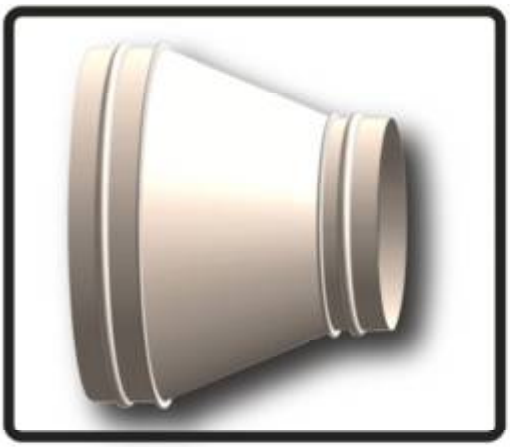
d in MM	Thickness Guage / a (mm)	m(kg) 0.60	0.80	1.00	1.20	1.50
850	100		24.52			
900	100		26.09			
950	155			37.37		
1000	155			39.70		
1050	155			42.51		
1100	155			51.53		
1150	155			54.54		
1200	155			57.21		
1250	155			60.03		
1300	155			63.15		
1400	155			77.53		
1500						
1550						
1600						
1700						
1800						
1900						
2000						
2100						
2200						
2300						
2400						
2500						

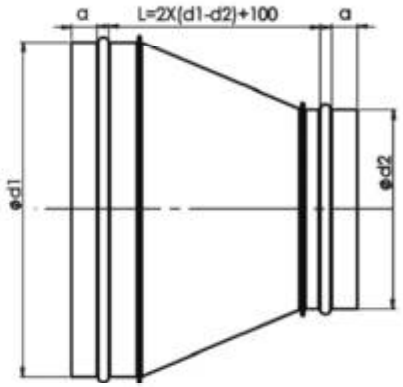
Material:
G.I steel sheet ,thickness range from 0.50 to 1.50 mm.
Stainless Steel Sheet grade 304 and 316 thickness range from 0.50 to 1.50 mm. Aluminum sheet , thickness range from 0.50 to 1.20 mm.
3 gore segmented seam or segmented standing seam , stitch or continuous welded seam are standard construction. Mitered offset is standard construction. Radiussed offset is available on request.

Round offset built of galvanized steel sheet, G90 zinc coating, lock forming quality, conform to ASTM A653 and A924 in accordance with table 3-2 and 3-3, SMACNA HVAC Duct Construction standard - 2nd edition 1995.
All standard dimensions are available.
Seam: All continuously welded or brazed.Tack or spot welded (and sealed or unsealed). Seam locked (and sealed or unsealed). Rivet, screw, or punched-die-stamp locked (and sealed or unsealed).The most popular transverse joints are the slip or lap types. The flanged joint is used in ducts over 60" (1524 mm) in diameter because of its advantage in retaining the circular shape.

CUBE
METAL INDUSTRIES
المكعب الدولي للصناعات المعدنية

Round Reducer Concentric - RCM



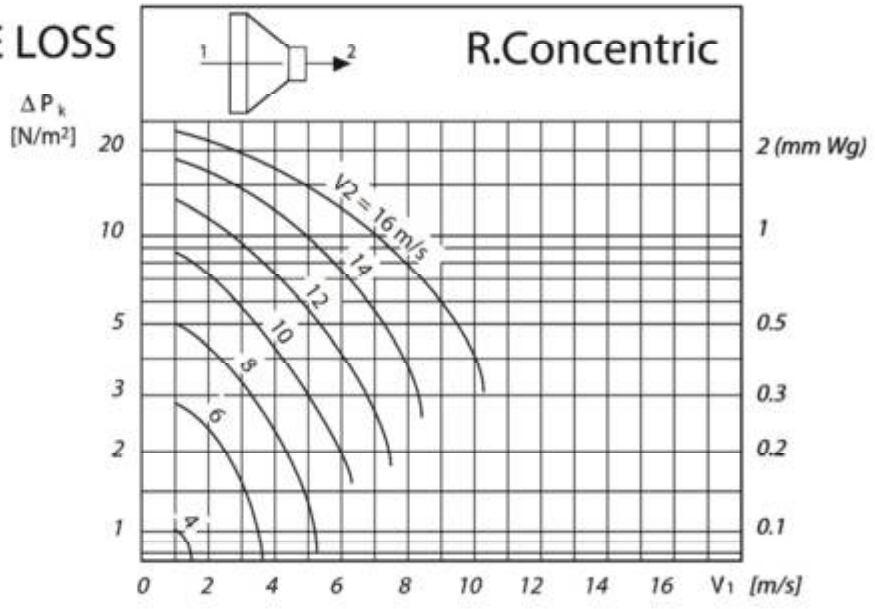


d in mm	a (mm)	Thickness Guage 0.60	0.80	1.00	1.20	1.50
		m(kg)				
80	40	0.26				
100	40	0.30				
125	40	0.38				
140	40	0.44				
150	40	0.48				
160	40	0.52				
180	40	0.57				
200	40	0.64				
224	40	0.72				
250	55	0.83				
280	75	0.99				
300	75	1.21				
315	75	1.29				
355	75	1.43				
400	75	1.63				
450	75	1.87				
500	75	2.12				
560	75	2.42				
600	75	2.68				
630	75		3.82			
650	75		4.00			
700	100		5.13			
750	100		5.28			
800	100		5.59			

d in mm	a (mm)	Thickness Guage 0.60	0.80	1.00	1.20	1.50
		m(kg)				
850	100		6.23			
900	100		6.73			
950	155			10.62		
1000	155			11.73		
1050	155			12.90		
1100	155			13.51		
1150	155			14.36		
1200	155			15.26		
1250	155			16.15		
1300	155			17.07		
1400	155			18.13		
1500						
1550						
1600						
1700						
1800						
1900						
2000						
2100						
2200						
2300						
2400						
2500						

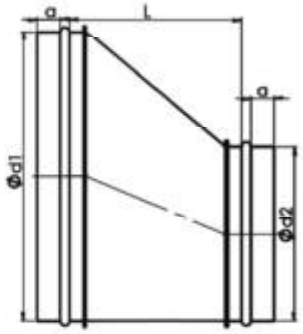
$d_2 = 1/2\ d_1$

PRESSURE LOSS



CUBE
METAL INDUSTRIES
المكعب الدولي للصناعات المعدنية

Round Reducer Eccentric - REM

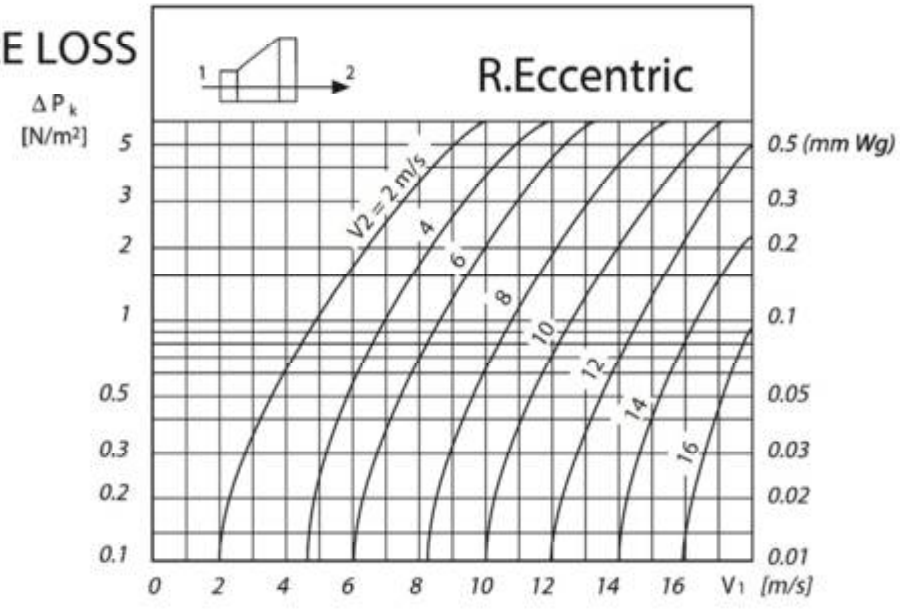


d in mm	Thickness Guage / a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
80	40	0.37				
100	40	0.43				
125	40	0.53				
140	40	0.61				
150	40	0.65				
160	40	0.70				
180	40	0.78				
200	40	0.87				
224	40	0.97				
250	55	1.09				
280	75	1.30				
300	75	1.54				
315	75	1.64				
355	75	1.81				
400	75	2.06				
450	75	2.34				
500	75	2.64				
560	75	3.00				
600	75		4.40			
630	75		4.69			
650	75		5.59			
700	100		5.94			
750	100		6.46			
800	100		6.85			

d in mm	Thickness Guage / a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
850	100		7.40			
900	100		7.98			
950	155			13.27		
1000	155			13.48		
1050	155			14.74		
1100	155			15.37		
1150	155			16.31		
1200	155			16.98		
1250	155			17.65		
1300	155			18.38		
1400	155			19.04		
1500						
1550						
1600						
1700						
1800						
1900						
2000						
2100						
2200						
2300						
2400						
2500						

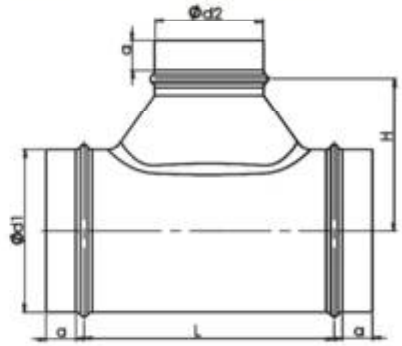
$d_2 = 1/2\ d_1$

PRESSURE LOSS



CUBE
METAL INDUSTRIES
المكعب الدولي للصناعات المعدنية

Round Tee Concentric - RTC

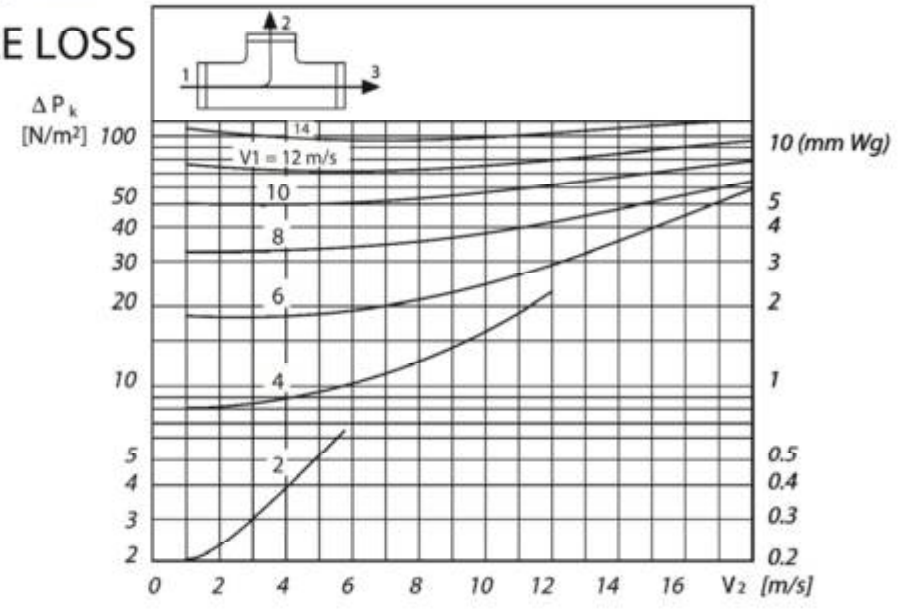


d in mm	a (mm)	Thickness Guage 0.60	0.80	1.00	1.20	1.50	m(kg)
80	40	1.87					
100	40	2.22					
125	40	2.68					
140	40	2.94					
150	40	2.97					
160	40	3.29					
180	40	3.47					
200	40	3.80					
224	40	4.41					
250	55	4.99					
280	75	5.72					
300	75	6.09					
315	75	6.37					
355	75	7.12					
400	75	7.96					
450	75	8.90					
500	75	9.84					
560	75	10.96					
600	75		15.66				
630	75		16.90				
650	75		17.38				
700	100		19.34				
750	100		20.59				
800	100		21.85				

d in mm	a (mm)	Thickness Guage 0.60	0.80	1.00	1.20	1.50	m(kg)
850	100		23.12				
900	100		24.39				
950	155			47.67			
1000	155			50.08			
1050	155			52.49			
1100	155			54.91			
1150	155			57.33			
1200	155			59.75			
1250	155			62.17			
1300	155			64.60			
1400	155			69.45			
1500							
1550							
1600							
1700							
1800							
1900							
2000							
2100							
2200							
2300							
2400							
2500							

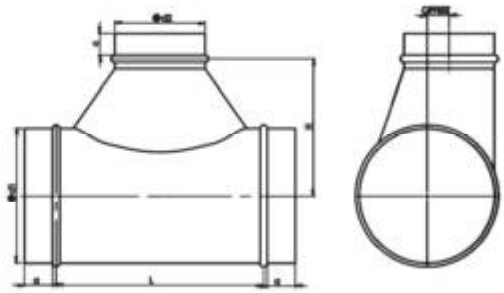
d_1<560, d_2=100; d_1>600, d_2= 500.
d_1<900, L=1000; d_1>900, L= 1500.

PRESSURE LOSS



CUBE
METAL INDUSTRIES
المكعب الدولي للصناعات المعدنية

Round Tee Eccentric - RTE

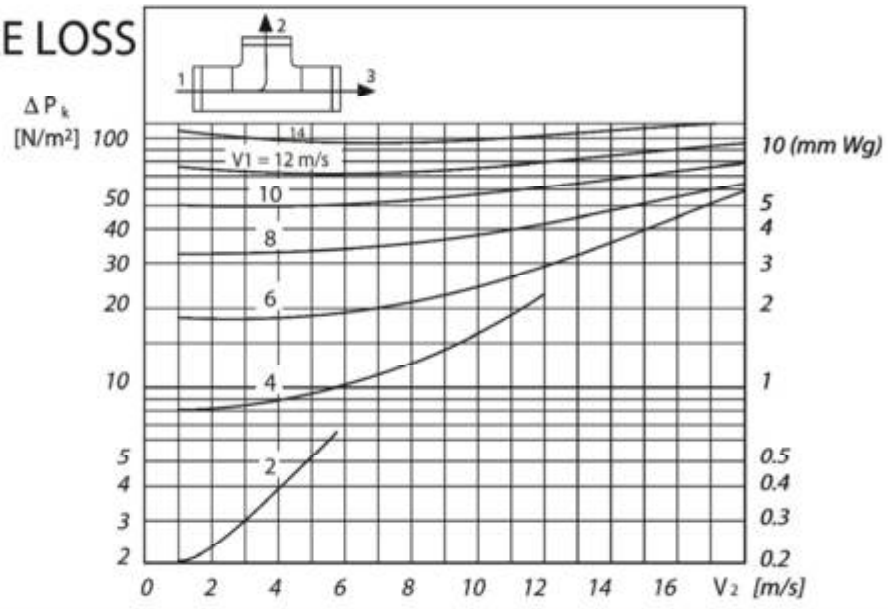


d in mm	Thickness Guage / a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
80	40	1.78				
100	40	2.06				
125	40	2.50				
140	40	2.77				
150	40	2.94				
160	40	3.12				
180	40	3.48				
200	40	3.84				
224	40	4.27				
250	55	4.86				
280	75	5.60				
300	75	5.98				
315	75	6.27				
355	75	7.04				
400	75	7.91				
450	75	8.88				
500	75	9.85				
560	75	11.01				
600	75	11.71				
630	75		16.36			
650	75		16.87			
700	100		18.91			
750	100		20.25			
800	100		21.61			

d in mm	Thickness Guage / a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
850	100		22.99			
900	100		24.37			
950	155			47.78		
1000	155			50.34		
1050	155			52.90		
1100	155			55.46		
1150	155			58.03		
1200	155			60.61		
1250	155			63.19		
1300	155			65.78		
1400	155			70.97		
1500						
1550						
1600						
1700						
1800						
1900						
2000						
2100						
2200						
2300						
2400						
2500						

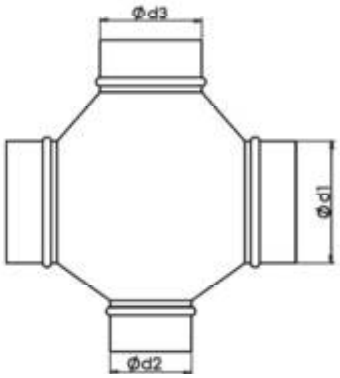
d_1<560, d_2=100; d_1>600, d_2= 500.
d_1<900, L=1000; d_1>900, L= 1500.

PRESSURE LOSS



CUBE
METAL INDUSTRIES
المكعب الدولي للصناعات المعدنية

Round Cross - 4 way - RC90°



d in mm	a (mm)	Thickness Guage 0.60	0.80	1.00	1.20	1.50
		m(kg)				
80	40	2.51				
100	40	3.07				
125	40	3.79				
140	40	4.03				
150	40	4.53				
160	40	4.78				
180	40	5.32				
200	40	5.87				
224	40	6.55				
250	55	7.38				
280	75	8.06				
300	75	8.96				
315	75	9.81				
355	75	10.92				
400	75	11.94				
450	75	13.06				
500	75	14.43				
560	75	15.80				
600	75	16.91				
630	75		23.09			
650	75		24.30			
700	100		26.53			
750	100		28.30			
800	100		30.01			

d in mm	a (mm)	Thickness Guage 0.60	0.80	1.00	1.20	1.50
		m(kg)				
850	100		31.72			
900	100		32.93			
950	155			92.19		
1000	155			95.19		
1050	155			99.44		
1100	155			104.34		
1150	155			125.65		
1200						
1250						
1300						
1400						
1500						
1550						
1600						
1700						
1800						
1900						
2000						
2100						
2200						
2300						
2400						
2500						

$d_1=d_2=d_3$
$d_1<900$, L=1500;
$d_1>900$, L= 1750

Material:
G.I steel sheet ,thickness range from 0.50 to 1.50 mm. Stainless Steel Sheet grade 304 and 316 thickness range from 0.5 to 1.50mm Aluminum sheet, thickness range from 0.50 to 1.20 mm. Stitch , spot or continuous welded seam are standard construction.

Round Cross 90° built of galvanized steel sheet, G90 zinc coating, lock forming quality, conform to ASTM A653 and A924 in accordance with table 3-2 and 3-3, SMACNA HVAC Duct Construction standard - 2nd edition 1995. All standard dimensions are available. The diameter of fittings shall be appropriated for mating with sections of the straight duct, equipment, and air terminals to which they connected.
Seam: All continuously welded or brazed. Tack or spot welded (and sealed or unsealed). Rivet, screw, or punched-die-stamp locked (and sealed or unsealed).

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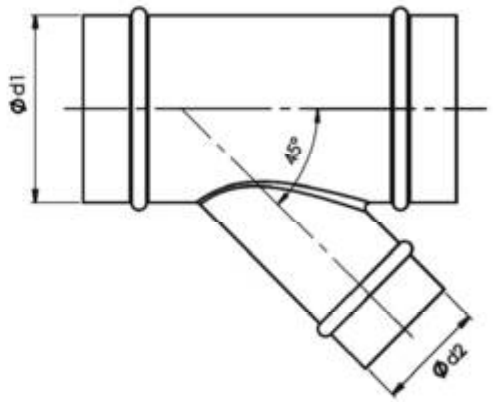
METAL INDUSTRIES
المكعب الدولي للصناعات المعدنية

Round Lateral Tee - RLT-45°



d in mm \ Thickness Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
80	40	0.23				
100	40	0.31				
125	40	0.43				
140	40	0.50				
150	40	0.55				
160	40	0.61				
180	40	0.73				
200	40	0.86				
224	40	1.02				
250	55	1.22				
280	75	1.47				
300	75	1.64				
315	75	1.78				
355	75	2.18				
400	75	2.67				
450	75	3.28				
500	75	3.95				
560	75	4.82				
600	75	5.46				
630	75		7.95			
650	75		8.41			
700	100		9.62			
750	100		10.91			
800	100		12.29			

d in mm \ Thickness Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
850	100		13.74			
900	100		15.28			
950	155			21.12		
1000	155			23.24		
1050	155			25.46		
1100	155			27.79		
1150	155			30.21		
1200	155			32.74		
1250	155			35.36		
1300	155			38.09		
1400	155			43.85		
1500						
1550						
1600						
1700						
1800						
1900						
2000						
2100						
2200						
2300						
2400						
2500						

$d_1=d_2$

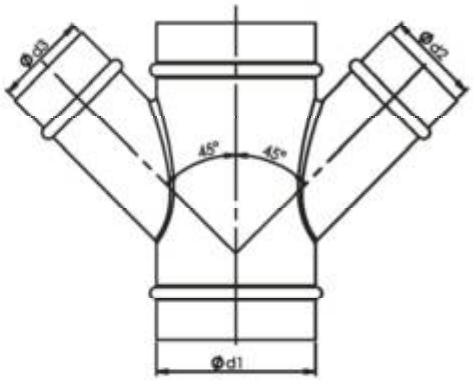
$d_1<600$, L=1000; $d_1>600$, L= 2500.

Material:
G.I steel sheet ,thickness range from 0.50 to 1.50 mm.
Stainless Steel Sheet grade 304 and 316 thickness range from 0.50 to 1.50 mm. Aluminum sheet , thickness range from 0.50 to 1.20 mm.
Stitch, spot or continuous welded seam are standard construction.

Round Lateral Tee 45° built of galvanized steel sheet, G90 zinc coating, lock forming quality, conform to ASTM A653 and A924 in accordance with table 3-2 and 3-3, SMACNA HVAC Duct Construction standard - 2nd edition 1995. The diameter of fittings shall be appropriated for mating with sections of the straight duct,equipment, and air terminals to which they connected.
Seam: All continuously welded or brazed. Tack or spot welded (and sealed or unsealed). Rivet, screw, or punched-die-stamp locked (and sealed or unsealed).

CUBE
METAL INDUSTRIES
المكعب الدولي للصناعات المعدنية

Round Lateral Cross - RLC-45°



d in mm \ Thickness Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
80	40	2.60				
100	40	3.22				
125	40	4.01				
140	40	4.49				
150	40	4.80				
160	40	5.13				
180	40	5.78				
200	40	6.45				
224	40	7.25				
250	55	8.26				
280	75	9.49				
300	75	10.21				
315	75	10.76				
355	75	12.24				
400	75	13.95				
450	75	15.89				
500	75	17.88				
560	75	20.32				
600	75	22.00				
630	75		44.64			
650	75		46.21			
700	100		50.95			
750	100		55.05			
800	100		59.22			

m(kg)

$d_1=d_2=d_3$

$d_1<600$, L=1500; $d_1>600$, L= 2500.

d in mm \ Thickness Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
850	100		63.45			
900	100		67.75			
950	155			74.36		
1000	155			78.91		
1050	155			83.52		
1100	155			88.20		
1150	155			92.95		
1200	155			97.76		
1250	155			102.63		
1300	155			107.57		
1400	155			117.65		
1500						
1550						
1600						
1700						
1800						
1900						
2000						
2100						
2200						
2300						
2400						
2500						

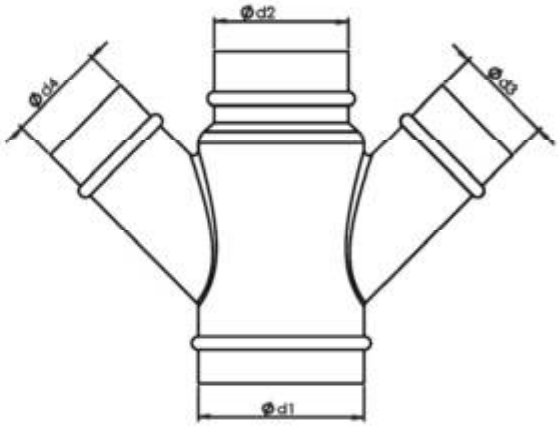
m(kg)

Material:
G.I steel sheet ,thickness range from 0.50 to 1.50 mm.
Stainless Steel Sheet grade 304 and 316 thickness range from 0.50 to 1.50 mm. Aluminum sheet, thickness range from 0.50 to 1.20 mm.
Stitch, spot or continuous welded seam are standard construction.

Round Lateral Cross 45° built of galvanized steel sheet, G90 zinc coating, lock forming quality, conform to ASTM A653 and A924 in accordance with table 3-2 and 3-3, SMACNA HVAC Duct Construction standard - 2nd edition 1995.
The diameter of fittings shall be appropriated for mating with sections of the straight duct,equipment, and air terminals to which they connected.
Seam: All continuously welded or brazed. Tack or spot welded (and sealed or unsealed). Rivet, screw, or punched-die-stamp locked (and sealed or unsealed).

CUBE
METAL INDUSTRIES
المكعب الدولي للصناعات المعدنية

Round Lateral Cross Reducer
RLCR-45°



d in mm \ Thickness Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
80	40	2.60				
100	40	3.22				
125	40	4.01				
140	40	4.49				
150	40	4.80				
160	40	5.13				
180	40	5.78				
200	40	6.45				
224	40	7.25				
250	55	8.26				
280	75	9.49				
300	75	10.21				
315	75	10.76				
355	75	12.24				
400	75	13.95				
450	75	15.89				
500	75	17.88				
560	75	20.32				
600	75	22.00				
630	75		44.64			
650	75		46.21			
700	100		50.95			
750	100		55.05			
800	100		59.22			

d in mm \ Thickness Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
850	100		63.45			
900	100		67.75			
950	155			74.36		
1000	155			78.91		
1050	155			83.52		
1100	155			88.20		
1150	155			92.95		
1200	155			97.76		
1250	155			102.63		
1300	155			107.57		
1400	155			117.65		
1500						
1550						
1600						
1700						
1800						
1900						
2000						
2100						
2200						
2300						
2400						
2500						

$d_1=d_2=d_3=d_4$

$d_1<600$, L=1500; $d_1>600$, L= 2500.

Material:
G.I steel sheet ,thickness range from 0.50 to 1.50 mm.
Stainless Steel Sheet grade 304 and 316 thickness range from 0.50 to 1.50 mm.
Aluminum sheet , thickness range from 0.50 to 1.20 mm. Stitch, spot or continuous welded seam are standard construction.

Round Lateral Cross Reducer built of galvanized steel sheet, G90 zinc coating, lock forming quality, conform to ASTM A653 and A924 in accordance with table 3-2 and 3-3, SMACNA HVAC Duct Construction standard - 2nd edition 1995.
The diameter of fittings shall be appropriated for mating with sections of the straight duct,equipment, and air terminals to which they connected.
Seam: All continuously welded or brazed.
Tack or spot welded (and sealed or unsealed). Rivet, screw, or punched-die-stamp locked (and sealed or unsealed).

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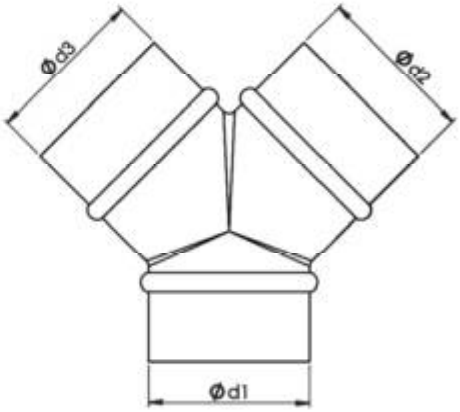
METAL INDUSTRIES
المكعب الدولي للصناعات المعدنية

Round wye equal - Rwye



d in mm	Thickness Guage → / a (mm)	0.60	0.80	1.00	1.20	1.50	m(kg)
80	40	1.01					
100	40	1.21					
125	40	1.42					
140	40	1.68					
150	40	1.82					
160	40	1.95					
180	40	2.18					
200	40	2.44					
224	40	2.75					
250	55	3.08					
280	75	4.02					
300	75	4.23					
315	75	4.48					
355	75	4.98					
400	75	5.64					
450	75	6.38					
500	75	7.15					
560	75	8.27					
600	75	8.88					
630	75		12.29				
650	75		12.75				
700	100		13.61				
750	100		15.75				
800	100		16.84				

d in mm	Thickness Guage → / a (mm)	0.60	0.80	1.00	1.20	1.50	m(kg)
850	100		17.93				
900	100		19.02				
950	155			29.78			
1000	155			30.75			
1050	155			32.53			
1100	155			34.39			
1150	155			36.31			
1200	155			38.30			
1250	155			40.35			
1300	155			42.47			
1400	155			46.21			
1500							
1550							
1600							
1700							
1800							
1900							
2000							
2100							
2200							
2300							
2400							
2500							

$d_1=d_2=d_3$

Material:
G.I steel sheet, thickness range from 0.50 to 1.50 mm.
Stainless Steel Sheet grade 304 and 316 thickness range from 0.50 to 1.50 mm.
Aluminum sheet, thickness range from 0.50 to 1.20 mm.
Stitch, spot or continuous welded seam are standard construction.

Round wye equal built of galvanized steel sheet, G90 zinc coating, lock forming quality, conform to ASTM A653 and A924 in accordance with table 3-2 and 3-3, SMACNA HVAC Duct Construction standard - 2nd edition 1995.
The diameter of fittings shall be appropriated for mating with sections of the straight duct,equipment, and air terminals to which they connected.
Seam: All continuously welded or brazed.
Tack or spot welded (and sealed or unsealed). Rivet, screw, or punched-die-stamp locked (and sealed or unsealed).

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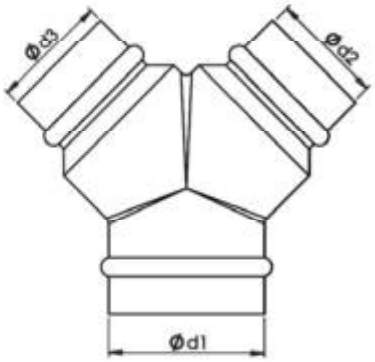
المكعب الدولي للصناعات المعدنية

Round Wye Reducer - Rwyer



d in mm	Thickness Guage / a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
80	40	1.01				
100	40	1.21				
125	40	1.42				
140	40	1.68				
150	40	1.82				
160	40	1.95				
180	40	2.18				
200	40	2.44				
224	40	2.75				
250	55	3.08				
280	75	4.02				
300	75	4.23				
315	75	4.48				
355	75	4.98				
400	75	5.64				
450	75	6.38				
500	75	7.15				
560	75	8.27				
600	75	8.88				
630	75		12.29			
650	75		12.75			
700	100		13.61			
750	100		15.75			
800	100		16.84			

$d_1=d_2=d_3$

d in mm	Thickness Guage / a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
850	100		17.93			
900	100		19.02			
950	155			29.78		
1000	155			30.75		
1050	155			32.53		
1100	155			34.39		
1150	155			36.31		
1200	155			38.30		
1250	155			40.35		
1300	155			42.47		
1400	155			46.21		
1500						
1550						
1600						
1700						
1800						
1900						
2000						
2100						
2200						
2300						
2400						
2500						

Material:

G.I steel sheet ,thickness range from 0.50 to 1.50 mm.
Stainless Steel Sheet grade 304 and 316
thickness range from 0.50 to 1.50 mm.
Aluminum sheet , thickness range from 0.50 to 1.20 mm.
Stitch, spot or continuous welded seam are standard construction.

Round wye reducer built of galvanized steel sheet, G90 zinc coating, lock forming quality, conform to ASTM A653 and A924 in accordance with table 3-2 and 3-3, SMACNA HVAC Duct Construction standard - 2nd edition 1995. The diameter of fittings shall be appropriated for mating with sections of the straight duct, equipment, and air terminals to which they are connected.
Seam: All continuously welded or brazed.
Tack or spot welded (and sealed or unsealed).
Rivet, screw, or punched-die-stamp locked (and sealed or unsealed).

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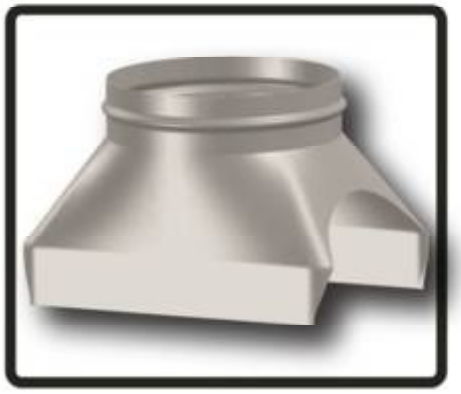
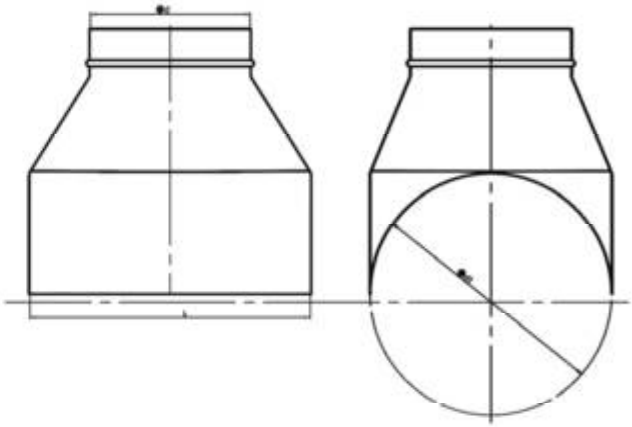
METAL INDUSTRIES
المكعب الدولي للصناعات المعدنية

Round Collar Saddle - RCSM





d in mm \ Thickness Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
80	40	1.16				
100	40	1.37				
125	40	1.66				
140	40	1.85				
150	40	1.97				
160	40	2.07				
180	40	2.29				
200	40	2.53				
224	40	2.80				
250	55	3.21				
280	75	3.76				
300	75	5.31				
315	75	5.56				
355	75	6.26				
400	75	7.08				
450	75	8.03				
500	75	9.01				
560	75	13.79				
600	75	14.86				
630	75		25.44			
650	75		26.20			
700	100		28.76			
750	100		29.18			
800	100		32.51			

$d = d_1$

d in mm \ Thickness Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
850	100		34.37			
900	100		36.20			
950	155			63.21		
1000	155			66.20		
1050	155			69.29		
1100	155			72.29		
1150	155			75.31		
1200	155			78.31		
1250	155			81.29		
1300	155			84.25		
1400	155			90.03		
1500						
1550						
1600						
1700						
1800						
1900						
2000						
2100						
2200						
2300						
2400						
2500						

Material:

G.I steel sheet, thickness range from 0.50 to 1.50 mm.
Stainless Steel Sheet grade 304 and 316 thickness range from 0.50 to 1.50 mm.
Aluminum sheet , thickness range from 0.50 to 1.20 mm.
Stitch, spot or continuous welded seam are standard construction.

Round Collar Saddle built of galvanized steel sheet, G90 zinc coating, lock forming quality, conform to ASTM A653 and A924 in accordance with table 3-2 and 3-3, SMACNA HVAC Duct Construction standard - 2nd edition 1995. The diameter of fittings shall be appropriated for mating with sections of the straight duct, equipment, and air terminals to which they are connected.
Seam: All continuously welded or brazed.
Tack or spot welded (and sealed or unsealed).
Rivet, screw, or punched-die-stamp locked (and sealed or unsealed).

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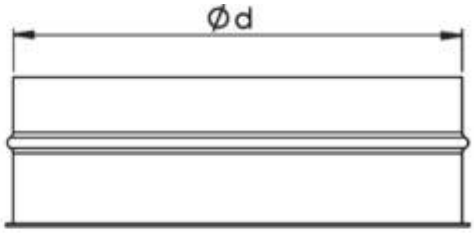
METAL INDUSTRIES
المكعب الدولي للصناعات المعدنية

Round End Cap - REC



d in mm \ Thickness | Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
80	40	0.05				
100	40	0.09				
125	40	0.12				
140	40	0.15				
150	40	0.17				
160	40	0.19				
180	40	0.22				
200	40	0.26				
224	40	0.31				
250	55	0.38				
280	75	0.51				
300	75	0.66				
315	75	0.72				
355	75	0.84				
400	75	1.07				
450	75	1.23				
500	75	1.47				
560	75	1.77				
600	75	2.02				
630	75		2.98			
650	75		3.14			
700	100		3.92			
750	100		4.29			
800	100		4.78			

d in mm \ Thickness | Guage	a (mm)	0.60	0.80	1.00	1.20	1.50
		m(kg)				
850	100		5.42			
900	100		5.85			
950	155			9.49		
1000	155			10.11		
1050	155			11.03		
1100	155			11.91		
1150	155			12.83		
1200	155			14.10		
1250	155			15.09		
1300	155			16.11		
1400	155			18.05		
1500						
1550						
1600						
1700						
1800						
1900						
2000						
2100						
2200						
2300						
2400						
2500						

Material:

G.I steel sheet ,thickness range from 0.50 to 1.50 mm.
Stainless Steel Sheet grade 304 and 316 thickness range from 0.50 to 1.50 mm.
Aluminum sheet , thickness range from 0.50 to 1.20 mm.
Stitch, spot or continuous welded seam are standard construction.

Round End Cap built of galvanized steel sheet, G90 zinc coating, lock forming quality, conform to ASTM A653 and A924 in accordance with table 3-2 and 3-3, SMACNA HVAC Duct Construction standard - 2nd edition 1995. The diameter of fittings shall be appropriated for mating with sections of the straight duct, equipment, and air terminals to which they are connected.
Seam: Tack or spot welded (and sealed or unsealed).
Seam locked (and sealed or unsealed).
Rivet, screw, or punched-die-stamp locked (and sealed or unsealed).

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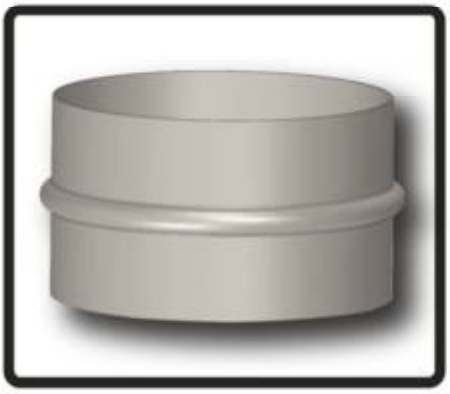
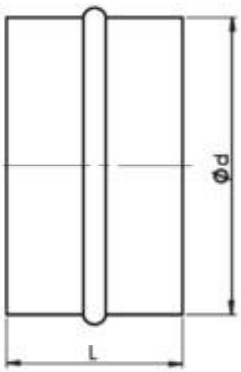
المكعب الدولي للصناعات المعدنية

Round Coupling Male





d in MM	Thickness Guage / a (mm)	0.60	0.80	1.00	1.20	1.50
80	40	0.11				
100	40	0.14				
125	40	0.17				
140	40	0.19				
150	40	0.21				
160	40	0.22				
180	40	0.25				
200	40	0.28				
224	40	0.31				
250	55	0.50				
280	75	0.56				
300	75	0.60				
315	75	0.63				
355	75	0.71				
400	75	0.80				
450	75	1.17				
500	75	1.30				
560	75	1.46				
600	75	1.56				
630	75		2.18			
650	75		3.18			
700	100		3.42			
750	100		3.67			
800	100		3.91			

LENGTH ALL EQUAL TO 10mm.

d in MM	Thickness Guage / a (mm)	0.60	0.80	1.00	1.20	1.50
850	100		4.16			
900	100		4.40			
950	155			6.78		
1000	155			7.20		
1050	155			7.56		
1100	155			7.91		
1150	155			8.27		
1200	155			8.63		
1250	155			8.98		
1300	155			11.34		
1400	155			12.20		
1500						
1550						
1600						
1700						
1800						
1900						
2000						
2100						
2200						
2300						
2400						
2500						

Material:

G.I steel sheet ,thickness range from 0.50 to 1.50 mm.
Stainless Steel Sheet grade 304 and 316 thickness range from 0.5 to 1.50mm
Aluminum sheet , thickness range from 0.50 to 1.20 mm.
Stitch, spot or continuous welded seam are the standard construction.
Slip or Lap joint type, male or Female type are the standard construction.
Standard length is 100mm.

Round coupling built of galvanized steel sheet, G90 zinc coating, lock forming quality, conform to ASTM A653 and A924 in accordance with table 3-2 and 3-3, SMACNA HVAC Duct Construction standard - 2nd edition 1995. The diameter of fittings shall be appropriated for mating with sections of the straight duct, equipment, and air terminals to which they connected. Tack or spot welded (and sealed or unsealed). Rivet, screw, or punched-die-stamp locked (and sealed or unsealed). Couplings to transverse joints are the slip or lap types to connect the spiral tubes and fittings.