

Pipe Cross Dimensions



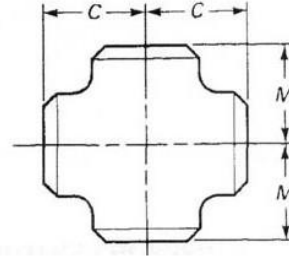
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اكتشف السبائك والموردين المعتمدين في الشرق الأوسط

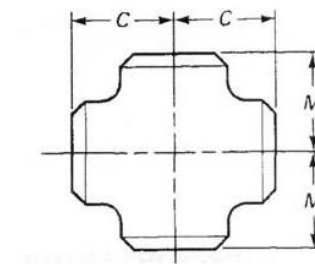
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أبعاد متقاطعة متساوية

Equal cross dimensions

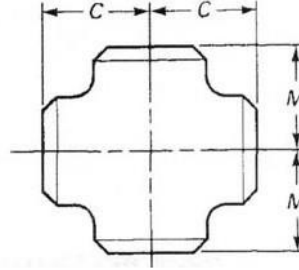
NPS	DN	O.D. at Bevel	Center- to-End	
			Run.(C)	Outlet. (M)
1/2	15	21.3	25	25
3/4	20	26.7	29	29
1	25	33.4	38	38
1-1/4	32	42.2	48	48
1-1/2	40	48.3	57	57
2	50	60.3	64	64
2-1/2	65	73.0	76	76
3	80	88.9	86	86
3-1/2	90	101.6	95	95
4	100	114.3	105	105
5	125	141.3	124	124
6	150	168.3	143	143
8	200	219.1	178	178
10	250	273.0	216	216
12	300	323.8	254	254
14	350	355.6	279	279
16	400	406.4	305	305



أبعاد متقاطعة متساوية

Equal cross dimensions

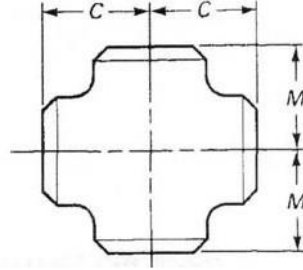
NPS	DN	O.D. at Bevel	Center- to-End	
			Run.(C)	Outlet. (M)
18	450	457	343	343
20	500	508	381	381
22	550	559	419	419
24	600	610	432	432
26	650	660	495	495
28	700	711	521	521
30	750	762	559	559
32	800	813	597	597
34	850	864	635	635
36	900	914	673	673
38	950	965	711	711
40	1000	1016	749	749
42	1050	1067	762	711
44	1100	1118	813	762
46	1150	1168	851	800
48	1200	1219	889	838



تقليل الأبعاد المتقاطعة

Reducing cross dimensions

NPS		O.D.				Center to End	
		D1		D2			
DN	NPS	Series A	Series B	Series A	Series B	C	M
15×15	1/2×1/2	21.3	18	21.3	18	25	25
15×10	1/2×3/8	21.3	18	17.3	14	25	25
15×8	1/2×1/4	21.3	18	13.7	10	25	25
20×20	3/4×3/4	26.9	25	26.9	25	29	29
20×15	3/4×1/2	26.9	25	21.3	18	29	29
20×10	3/4×3/8	26.9	25	17.3	14	29	29
25×25	1×1	33.7	32	33.7	32	38	38
25×20	1×3/4	33.7	32	26.9	25	38	38
25×15	1×1/2	33.7	32	21.3	18	38	38
32×32	1.1/4×1.1/4	42.4	38	42.4	38	48	48
32×25	1.1/4×1	42.4	38	33.7	32	48	48
32×20	1.1/4×3/4	42.4	38	26.9	25	48	48
32×15	1.1/4×1/2	42.4	38	21.3	18	48	48
40×40	1.1/2×1.1/2	48.3	45	48.3	45	57	57
40×32	1.1/2×1.1/4	48.3	45	42.4	38	57	57
40×25	1.1/2×1	48.3	45	33.7	32	57	57
40×20	1.1/2×3/4	48.3	45	26.9	25	57	57

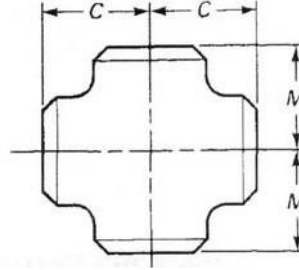


تقليل الأبعاد المتقاطعة

Reducing cross dimensions



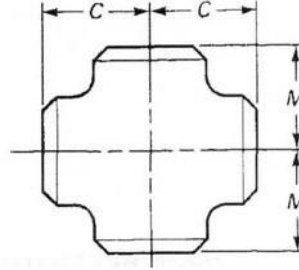
NPS		O.D.				Center to End	
		D1		D2			
DN	NPS	Series A	Series B	Series A	Series B	C	M
40×15	1.1/2×1/2	48.3	45	21.3	18	57	57
50×50	2×2	60.3	57	60.3	57	64	64
50×40	2×1.1/2	60.3	57	48.3	45	64	60
50×32	2×1.1/4	60.3	57	42.4	38	64	57
50×25	2×1	60.3	57	33.7	32	64	51
50×20	2×3/4	60.3	57	26.9	25	64	44
65×65	2 1/2×2.1/2	73.0	76	73.0	76	76	76
65×50	2 1/2×2	73.0	76	60.3	57	76	70
65×40	2 1/2×1.1/2	73.0	76	48.3	45	76	67
65×32	2 1/2×1.1/4	73.0	76	42.4	38	76	64
65×25	2 1/2×1	73.0	76	33.7	32	76	57
80×80	3×3	88.9	89	88.9	89	86	86
80×65	3×2.1/2	88.9	89	73.0	76	86	83
80×50	3×2	88.9	89	60.3	57	86	76
80×40	3×1.1/2	88.9	89	48.3	45	86	73
80×32	3×1.1/4	88.9	89	42.4	38	86	70



تقليل الأبعاد المتقاطعة

Reducing cross dimensions

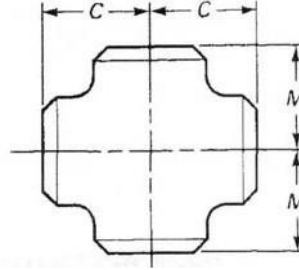
NPS		O.D.				Center to End	
		D1		D2			
DN	NPS	Series A	Series B	Series A	Series B	C	M
90×80	3.1/2×3	101.6	–	88.9	89	95	92
90×65	3.1/2×2.1/2	101.6	–	73.0	76	95	89
90×50	3.1/2×2	101.6	–	60.3	57	95	83
90×40	3.1/2×1.1/2	101.6	–	48.3	45	95	79
100×100	4×4	114.3	108	114.3	108	105	105
100×90	4×3.1/2	114.3	108	101.6	–	105	102
100×80	4×3	114.3	108	88.9	89	105	98
100×65	4×2.1/2	114.3	108	73.0	76	105	95
100×50	4×2	114.3	108	60.3	57	105	89
100×40	4×1.1/2	114.3	108	48.3	45	105	86
125×125	5×5	141.3	133	141.3	133	124	124
125×100	5×4	141.3	133	114.3	108	124	117
125×90	5×3.1/2	141.3	–	101.6	–	124	114
125×80	5×3	141.3	133	88.9	89	124	111
125×65	5×2.1.2	141.3	133	73.0	76	124	108
125×50	5×2	141.3	133	60.3	57	124	105
150×150	6×6	168.3	159	168.3	159	143	143



تقليل الأبعاد المتقاطعة

Reducing cross dimensions

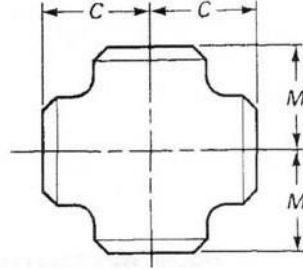
NPS		O.D.				Center to End	
		D1		D2			
DN	NPS	Series A	Series B	Series A	Series B	C	M
150×125	6×5	168.3	159	141.3	133	143	137
150×100	6×4	168.3	159	114.3	108	143	130
150×90	6×3.1/2	168.3	–	101.6	–	143	127
150×80	6×3	168.3	159	88.9	89	143	124
150×65	6×2.1/2	168.3	159	73.0	76	143	121
200×200	8×8	219.1	219	219.1	219	178	178
200×150	8×6	219.1	219	168.3	159	178	168
200×125	8×5	219.1	219	141.4	133	178	162
200×100	8×4	219.1	219	114.3	108	178	156
200×90	8×3.1/2	219.1	–	101.6	–	178	152
250×250	10×10	273.0	273	273.0	273	216	216
250×200	10×8	273.0	273	219.1	219	216	203
250×150	10×6	273.0	273	168.3	159	216	194
250×125	10×5	273.0	273	141.3	133	216	191
250×100	10×4	273.0	273	114.3	108	216	184
300×300	12×12	323.9	325	323.9	325	254	254
300×250	12×10	323.9	325	273.0	273	254	241



تقليل الأبعاد المتقاطعة

Reducing cross dimensions

NPS		O.D.				Center to End	
		D1		D2			
DN	NPS	Series A	Series B	Series A	Series B	C	M
300×200	12×8	323.9	325	219.1	219	254	229
300×150	12×6	323.9	325	168.3	159	254	219
300×125	12×5	323.9	325	141.3	133	254	216
350×350	14×14	355.6	377	355.6	377	279	279
350×300	14×12	355.6	377	323.9	325	279	270
350×250	14×10	355.6	377	273.0	273	279	257
350×200	14×8	355.6	377	219.1	219	279	248
350×150	14×6	355.6	377	168.3	159	279	238
400×400	16×16	406.4	426	406.4	426	305	305
400×350	16×14	406.4	426	355.6	377	305	305
400×300	16×12	406.4	426	323.9	325	305	295
400×250	16×10	406.4	426	273.0	273	305	283
400×200	16×8	406.4	426	219.1	219	305	273
400×150	16×6	406.4	426	168.3	159	305	264
450×450	18×18	457	480	457	480	343	343
450×400	18×16	457	480	406.4	426	343	330
450×350	18×14	457	480	355.6	377	343	330



تقليل الأبعاد المتقاطعة

Reducing cross dimensions

NPS		O.D.				Center to End	
		D1		D2			
DN	NPS	Series A	Series B	Series A	Series B	C	M
450×300	18×12	457	480	323.9	325	343	321
450×250	18×10	457	480	273.0	273	343	308
450×200	18×8	457	480	219.1	219	343	298
500×500	20×20	508	530	508	530	381	381
500×450	20×20	508	530	457	480	381	368
500×400	20×20	508	530	406.4	426	381	356
500×350	20×20	508	530	355.6	377	381	356
500×300	20×20	508	530	323.9	325	381	346
500×250	20×20	508	530	273.0	273	381	333
500×200	20×20	508	530	219.1	219	381	324



أنواع صليب الأنابيب

Types of pipe cross



Cross Pipe Fitting



Reducing Cross



Equal Cross



Steel Cross Pipe Fitting



Stainless Steel Cross Pipe Fitting



Reducing Cross Pipe Fitting



Reducing Cross Tee



4 Way Cross Pipe Fitting



6 Way Cross Pipe Fitting



What are the two types of steel cross pipe fitting connections?

These four-way fittings comprise one inlet and three outlets, with the ends at 90 degrees. Usually, they use weld sockets (solvent-based) or female threads. They build a stable grip by connecting to the male threaded ends. You will commonly find steel pipe crosses in textiles, refining, petroleum, and wastewater treatment. A stainless steel cross pipe fitting gets preferred due to its durability and corrosion resistance.

The two main types of crosses are: equal and reducing. The former uses pipe crosses of equal diameter where the connecting pipes have the same size. Or you can use a reducing cross pipe fitting where the branch pipe has a smaller size.

What is the pipe cross sectional area formula?

Technically, the common region you get from the intersection of a plane with a 3D object is called a cross-section. Calculating the cross-sectional area requires the inner diameter (d) and the outer diameter (D). You can calculate the cross-sectional area of a steel cross pipe fitting using this formula:

$$\text{Cross-sectional area} = [D^2 - d^2] \times \pi / 4$$

Essentially, you have to find the difference between the squares of the inner diameter and the outer diameter. Then, this gets multiplied by π and divided by 4. The cross-sectional area is a vital consideration in selecting the components of industrial installations.

What is center to end in equal cross dimensions?

Choosing the right fittings for your requirement boosts the chances of high performance and long service life. The center-to-end measurement is essential to detail the dimensions of an equal cross. It refers to the distance from the exact central location of the fitting axis of the pipe. It is the center line of one end onwards to the opposite face.



In an equal cross, the branch diameter equals the measurement of the main pipe. Besides the center-to-end distance, the nominal and outside diameters also feature on the manufacturers' charts for cross pipe fitting dimensions.

What is the nominal diameter in reducing cross dimensions?

Measuring the dimensions of pipe crosses will help you select the best fittings for your application. One of the measurements for a reducing cross tee is the nominal diameter. It relates to the outside diameter or OD of a pipe. For instance, a measurement of 2 NPS can cover all piping with a specific OD. The inside diameter and the thickness of the wall are not significant here. In a reducing cross, the branch pipe will be smaller.

Along with the nominal diameter, you also need the outside diameter and the center-to-end measurement. These values together describe the dimensions of a reducing cross.

Difference between 4 way cross and 6 way cross pipe fitting

Applications that need fittings to connect pipes and manage the flow often use pipe crosses. A 4 way cross pipe fitting is helpful in pneumatic applications that do not suffer from thermal expansion. These fittings are at the center of four connection points, which may cause stress in the piping. The temperature changes make them unsuitable for hydraulic applications.

Another option is a 6 way cross pipe fitting. It usually has double outlets for branching six pieces of pipe. You can connect it to male tubes and control the flow in your application. These crosses are not as popular due to the multiple connection points and the potential for additional stress in the installation. However, they sometimes get used in research environments and special vacuum conditions.

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