

고압단조핏팅 (HIGH PRESSURE FORGED FITTING)



- 01 생산형태 : 주문생산 (ORDER MADE) 및주문자상표 (OEM) 생산
- 02 종 류 : 엘보우, 티, 커프링, 캡, 플러그, 부싱, 유니온, 아웃렛(소쿠레) 니플, 레듀서, 보스 등
- 03 규 격 : 1/8"(3mm) ~ 4"(100mm)
- 04 타입및압력 :소켓용접형 - 3000LBS, 6000LBS, 9000LBS
 나사연결형(NPT, PT) - 2000LBS, 3000LBS, 6000LBS
 버트용접형 - SCH40, SCH80, SCH160 등
- 05 제원 및 사양
 - 규 격 : ASME B16.11-2001(REVISION OF ASME 16.11-1996)
MSS-SP-79,83,95,97
 - 재 료 : ASTM A105, A350LF2, A106, A312, A234, A403
ASTM A182 (F304, F304L, F316, F316L, F304H, F316H,
F317L, F321, F11, F22, F91, F51, F53, F55, F904L, F44)
 - 재료규격 : Ø19 ~ Ø100 환봉
 - 도 색 : 탄강 - 아연도금, 착색, ... 발주자사양
스텐레스스틸 - 초음파세척

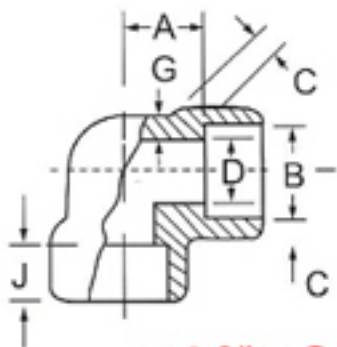
생산품 소개

소켓용접형

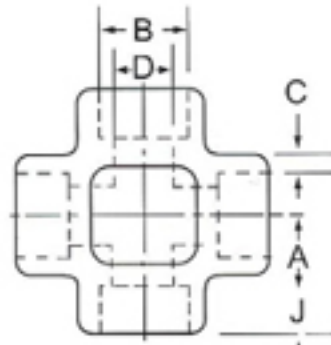
나사연결형

파이프 규격

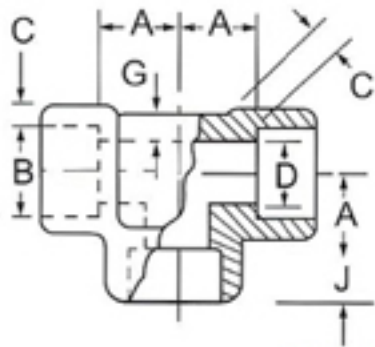
ASME B16.11-2005(ASME B16.11-2001의수정본)



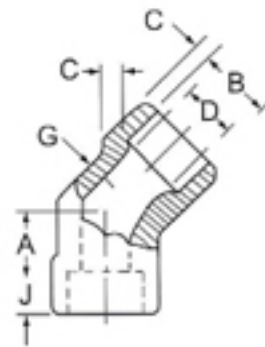
90° 엘보우(ELBOW)



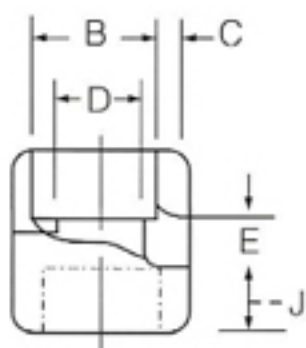
크로스(CROSS)



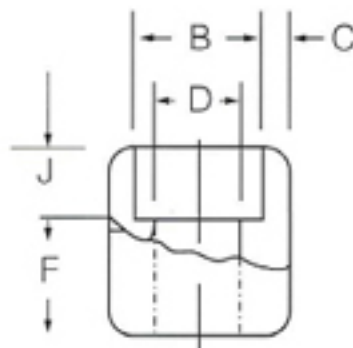
티 (TEE)



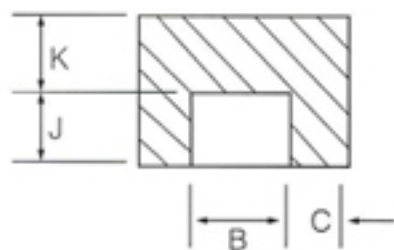
45° 엘보우(ELBOW)



COUPLING



HALF COUPLING

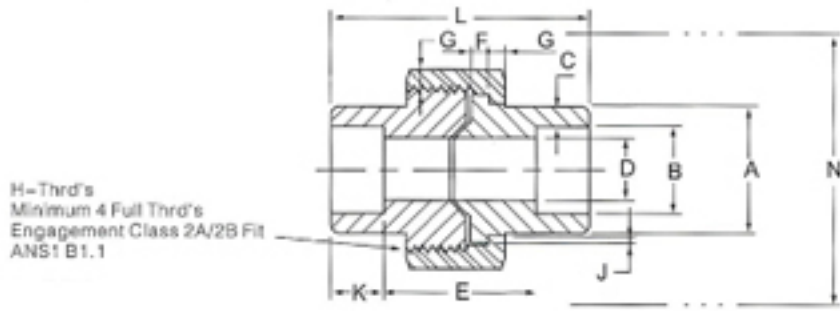


CAP



중심에서 소켓의 바닥면까지거리						길이		공차 ±			바닥면 두께 End Wall Thickness K (Min).			관규격	
90° 엘보, 티, 크로스 90° Elbows tees, Crosses			45° 엘보 45° Elbows			커플링 Couplings E	숏커플링 Half Couplings F	A	E	F	관규격별숫수			Nom. Pipe Size	DN
관규격별숫수 Designation			관규격별숫수								3000	6000	9000		
3000	6000	9000	3000	6000	9000						3000	6000	9000		
11.0	11.0		8.0	8.0		6.5	16.0	1.0	1.5	1.0	4.8	6.4		1/8	6
11.0	13.5		8.0	8.0		6.5	16.0	1.0	1.5	1.0	4.8	6.4		1/4	8
13.5	15.5		8.0	11.0		6.5	17.5	1.5	3.0	1.5	4.8	6.4		3/8	10
15.5	19.0	38.0	11.0	12.5	15.5	9.5	22.5	1.5	3.5	1.5	6.4	7.9	11.2	1/2	15
19.0	22.5	28.5	13.0	14.0	19.0	9.5	24.0	1.5	3.5	1.5	6.4	7.9	12.7	3/4	20
22.5	27.0	32.0	14.0	17.5	20.5	12.5	28.5	2.0	2.0	2.0	9.6	11.2	14.2	1	25
27.0	32.0	35.0	17.5	20.5	22.5	12.5	30.0	2.0	4.0	2.0	9.6	11.2	14.2	1-1/4	32
32.0	38.0	38.0	20.5	25.5	25.5	12.5	32.0	2.0	4.0	2.0	11.2	12.7	15.7	1-1/2	40
38.0	41.0	54.0	28.5	28.5	28.5	19.0	41.0	2.0	4.0	2.0	12.7	15.7	19.0	2	50
41.0			28.5			19.0	43.0	2.5	5.0	2.5	15.7	19.0		2-1/2	65
57.0			32.0			19.0	44.5	2.5	5.0	2.5	19.0	22.4		3	80
66.5			41.0			19.0	48.0	2.5	5.0	2.5	22.4	28.4		4	100

THREADED END MSS-SP-83-2001



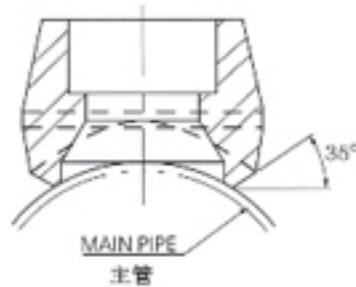
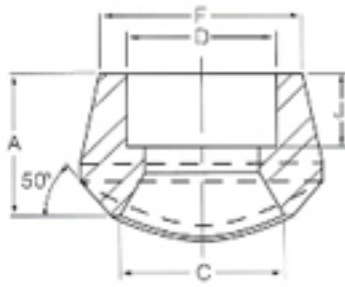
유니온 (UNION)

WELDED END MSS-SP-83-2001

관규격	A	B	C	D	E	F	G	H	J	K	D	N
1/8	21.8	11.18 10.67	3.18	7.59 6.07	22.4 19.1	3.18	3.18	16	9.7	41.4	41.4	50.8
1/4	21.8	14.61 14.10	3.30	10.01 8.48	22.4 19.1	3.18	3.18	16	9.7	41.4	41.4	50.8
3/8	25.9	18.03 17.53	3.51	13.28 11.76	26.9 20.6	3.43	3.43	14	9.7	46.0	46.0	55.9
1/2	31.2	22.23 21.73	4.09	16.56 15.04	26.9 20.6	3.68	3.68	14	9.7	49.0	49.0	58.4
3/4	37.1	27.56 27.05	4.27	21.69 20.17	31.8 25.4	4.06	4.06	11	12.7	56.9	56.9	66.0
1	45.5	34.20 33.78	4.98	27.41 25.88	34.3 26.2	4.57	4.45	11	12.7	62.9	62.9	78.7
1-1/4	54.9	43.05 42.55	5.28	35.81 34.29	40.6 32.5	5.33	5.21	11	12.7	71.1	71.1	94.0
1-1/2	61.5	49.15 46.64	5.54	41.66 40.13	42.2 34.0	5.84	5.59	10	12.7	76.5	76.5	111.8
2	75.2	61.62 61.11	6.05	53.26 51.74	45.5 37.3	6.60	6.35	10	15.7	86.1	86.1	132.1
2-1/2	91.7	74.45 73.01	7.67	64.24 61.19	64.24 61.19	7.49	7.11	8	15.7	102.4	102.4	149.9
3	109.2	90.42 89.79	8.31	79.45 76.40	63.8 53.6	8.26	8.00	8	15.7	109.0	109.0	175.3

MSS-SP-97-2001

용접형소쿠레 (WELDED OUTLET)



BRANCH OUTLET FITTINGS SOCKET

WELDED END MSS-SP-97-2001

3000 Lb Standard and extra strong

가치관규격 (in)	A	C	D	F	J (Min)
1/8	19.0	13.7	10.9	17.3	10.0
1/4	19.0	13.7	14.4	22.0	10.0
3/8	21.0	17.1	17.8	25.8	10.0
1/2	25.0	21.3	22.0	31.3	10.0
3/4	27.0	26.7	27.3	37.1	13.0
1	33.0	33.4	34.1	45.5	13.0
1-1/4	33.0	42.2	42.8	54.9	13.0
1-1/2	35.0	48.3	48.9	61.6	13.0
2	38.0	60.3	61.4	75.3	16.0
2-1/2	46.0	73.0	74.2	91.7	16.0
3	51.0	88.9	90.1	109.1	16.0
4	57.0	114.3	115.8	137.2	19.0

6000 Lb Schedule 160 and double extra strong

가치관규격 (in)	A	C	D	F	J (Min)
1/2	32.0	16.6	22.0	33.9	10.0
3/4	37.0	21.2	27.3	41.2	13.0
1	40.0	27.0	34.1	49.9	13.0
1-1/4	41.0	35.8	42.8	58.6	13.0
1-1/2	43.0	41.2	48.9	66.7	13.0
2	52.0	51.6	61.4	83.2	16.0

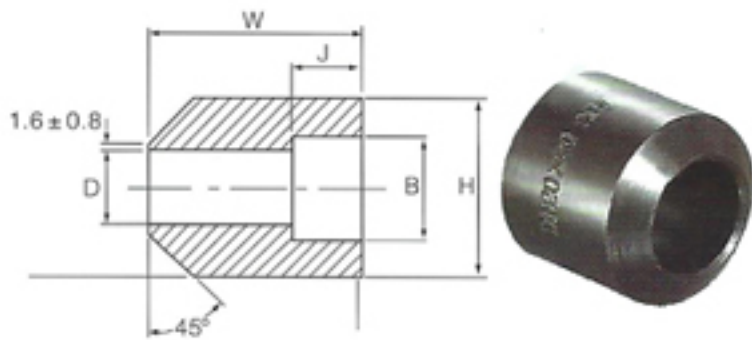
(1) 소켓재원은 ASME B16.11에준함

(2) 나사사양은 ASME B1.20.1에준함

용접형소켓 허용공차표

Dimensional toleranc of forged socket welding fitting

Item	Type of pipe fitting	ND	6 to 8	10 to 20	25 to 50	65 to 100
		NPS	1/8 to 1/4	3/8 to 3/4	1 to 2	2-1/2 to 4
Bore diameter of socket(B)	All types of pipe fittings	+0.3 -0				+0.4
Bore diameter of fitting(D)		±0.4				±0.8
Centrioity of bore(X)		±0.8				
Coin cadence of axes(Y)						
Center to bottom of socket(A)	45,90D Elbow,Tee	±0.3	±1.5	±2	±2.5	
Bottom to bottom of socket(E)	Full cupling	±1.5	±3	±4	±5	
Bottom of socket to opposite face(F)	Half coupling	±0.8	±1.5	±2	±2.5	



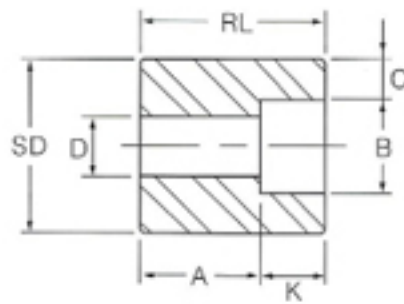
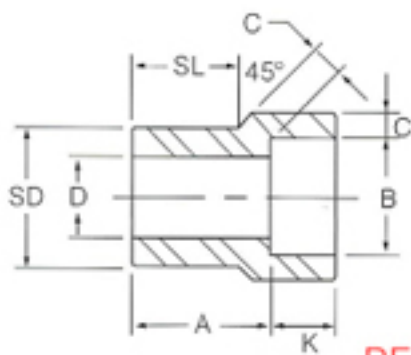
SPCLET-WELDING

3000Lbs

Size (in)	B	D	J (Min)	W	H
1/4	14.3	9.3	9.9	39.9	22.3
3/8	17.7	12.6	10.9	50.0	26.5
1/2	21.9	15.8	13.0	50.0	34.2
3/4	27.3	21.0	14.0	50.0	39.5
1	34.0	26.7	16.0	50.0	46.3
1-1/4	42.8	35.1	18.0	50.0	55.2
1-1/2	48.9	40.9	19.1	50.0	65.1
2	61.4	52.5	22.1	59.9	80.2

6000Lbs

Size (in)	B	D	J (Min)	W	H
1/4	21.9	11.8	14.0	50.0	43.3
3/4	27.3	15.6	16.0	50.0	49.1
1	34.0	20.7	18.0	50.0	56.0
1-1/4	42.8	29.5	19.1	50.0	65.2
1-1/2	48.9	34.0	22.0	50.0	80.1
2	61.4	42.9	25.9	59.9	95.1

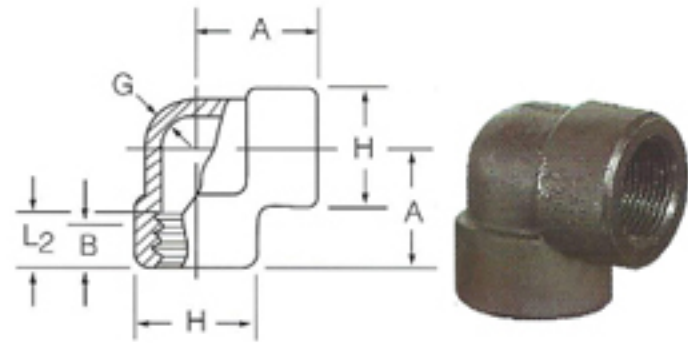


REDUCER INSERTS SOCKET

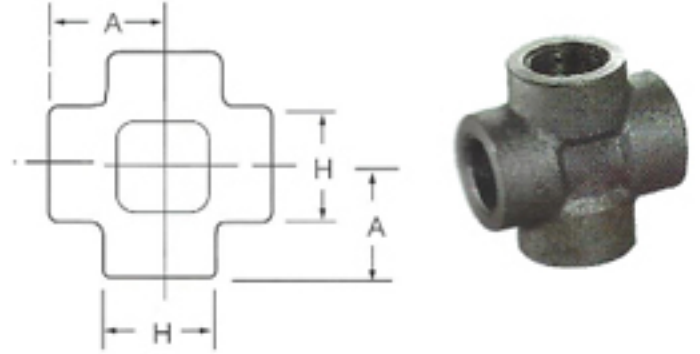
WELDED END MSS-SP-79-1999a

관규격	Type(1)		소켓		SD	A		D		C		길이			
	3M	6M	B	min K		3M	6M	3M	6M	3M	6M	3M	6M	3M	3M
3/8x1/4	1	1	14.35	10	17.15	19	21	9.9	6.5	3.78	4.60	14	16		
1/2x3/8	1	1	17.78	10	21.34	21	23	12.5	9.0	4.01	5.03	16	16		
1/2x1/4	1	1	14.35	10	21.34	21	21	9.0	6.5	3.78	4.60	16	16		
3/4x1/2	1	1	21.97	10	26.67	22	25	16.0	11.5	4.67	5.97	17	19		
3/4x3/8	2	1	17.78	10	26.67	16	22	12.5	9.0	4.01	5.03		19	27	
3/4x1/4	2	2	14.35	10	26.67	18	22	9.0	6.5	3.78	4.60			27	32
1x3/4	1	1	27.31	13	33.40	24	28	21.0	15.5	4.90	6.96	19	21		
1x1/2	2	1	21.97	10	33.40	16	28	16.0	11.5	4.67	5.97		21	28	
1x3/8	2	2	17.78	10	33.40	18	22	12.5	9.0	4.01	5.03			28	33
1x1/4	2	2	14.35	10	33.40	19	24	9.0	6.5	3.78	4.60			28	33
1-1/4x1	1	1	34.04	13	42.16	25	30	26.5	20.5	5.69	7.92	21	22		
1-1/4x3/4	2	2	27.31	13	42.16	18	21	21.0	15.5	4.90	6.96			32	35
1-1/4x1/2	2	2	21.97	10	42.16	19	22	16.0	11.5	4.67	5.97			32	35
1-1/4x3/8	2	2	17.78	10	42.16	21	24	12.5	9.0	4.01	5.03			32	35
1-1/4x1/4	2	2	14.35	10	42.16	22	25	9.0	6.5	3.78	4.60			32	35
1-1/2x1-1/4	1	1	42.80	13	48.26	28	35	25.0	29.5	6.07	7.92	22	25		
1-1/2x1	2	1	34.04	13	48.26	18	29	26.5	20.5	5.69	7.92		25	33	
1-1/2x3/4	2	2	27.31	13	48.26	19	25	21.0	15.5	4.90	6.96			33	40
1-1/2x1/2	2	2	21.97	10	48.26	21	27	16.0	11.5	4.67	5.97			33	40
1-1/2x3/8	2	2	17.78	10	48.26	22	28	12.5	9.0	4.01	5.03			33	40
2x1-1/2	1	1	48.90	13	60.32	32	39	41.0	34.0	6.35	8.90	25	28		
2x1-1/4	2	2	42.80	13	60.32	21	24	35.0	29.5	6.07	7.92			38	41
2x1	2	2	34.04	13	60.32	22	25	26.5	21.0	5.69	7.92			38	41
2x3/4	2	2	27.31	13	60.32	24	27	21.0	15.5	4.90	6.96			38	41
2x1/2	2	2	21.97	10	60.32	25	28	16.0	11.5	4.67	5.97			38	41

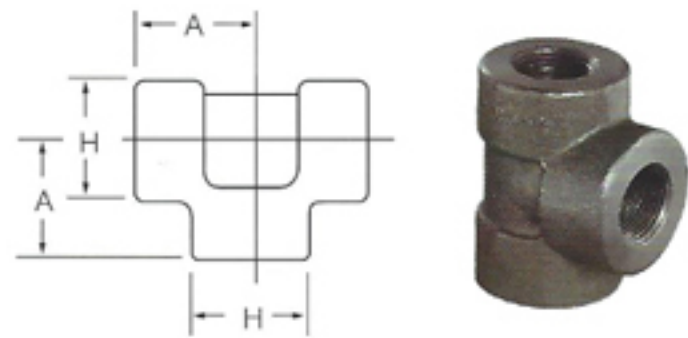
ASME B16.11-2005(ASME B16.11-2001의수정본)



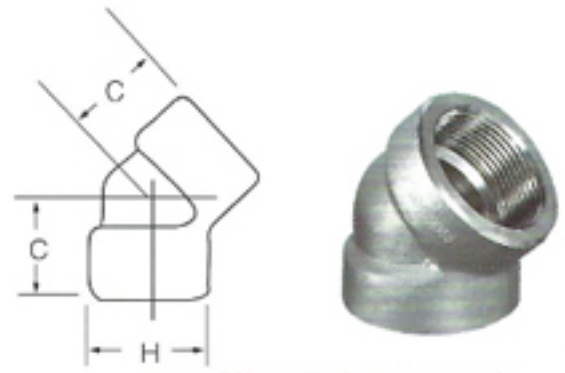
90° 엘보우(ELBOW)



크로스(CROSS)

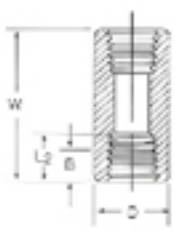


티 (TEE)

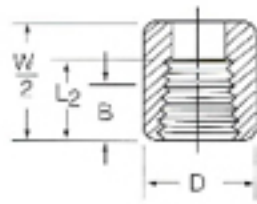


45° 엘보우(ELBOW)

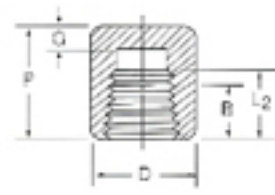
관규격		90° 엘보, 티, 크로스90° Elbows tees, Crosses A			45° 엘보 중심에서 소켓의 바 닥면까지거리 C			밴드 외경 H			최소 두께 G			나사길이 .(1)	
DN	Nom. Pipe Size	2000	3000	6000	2000	3000	6000	2000	3000	6000	2000	3000	6000	B	L2
6	1/8	21	21	25	17	17	17	22	22	25	3.18	3.18	6.35	6.4	6.7
8	1/4	21	25	28	17	19	22	22	25	33	3.18	3.30	6.60	8.1	10.2
10	3/8	25	28	33	19	22	25	25	33	38	3.18	3.51	6.98	9.1	10.5
15	1/2	28	33	38	22	25	28	33	38	46	3.18	4.09	8.15	10.9	13.6
20	3/4	33	38	44	25	28	33	38	46	56	3.19	4.32	8.53	12.7	13.9
25	1	38	44	51	28	33	35	46	56	62	3.68	4.98	9.93	14.7	17.3
32	1-1/4	44	51	60	33	35	43	56	62	75	3.89	5.25	10.59	17.0	18.0
40	1-1/2	51	60	64	35	35	44	62	75	84	4.01	5.56	11.07	17.8	18.4
50	2	60	64	83	43	44	52	75	84	102	4.27	4.01	12.09	19.0	19.2
65	2-1/2	76	83	95	52	52	64	76	146	121	5.61	7.65	15.29	23.6	28.9
80	3	86	95	106	64	64	79	119	121	146	5.99	8.84	16.64	25.9	30.5
100	4	106	114	114	79	79	79	146	152	152	6.55	11.18	11.18	27.7	33.0



COUPLING



HALF COUPLING

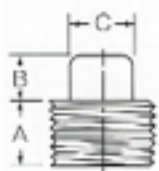


CAP



관규격		커플링전장 W	캡전장 P		외경 D		바닥면두께 G(Min.)		나사길이 (Min)(1)	
DN	Nom. Pipe Size	3000&6000	3000	6000	3000	6000	3000	6000	B	L2
6	1/8	32	19	...	16	22	4.8	...	6.4	6.7
8	1/4	35	25	27	19	25	4.8	6.4	8.1	10.2
10	3/8	38	25	27	22	32	4.8	6.4	9.1	10.4
15	1/2	48	32	33	28	38	6.4	7.9	10.9	13.6
20	3/4	51	37	38	35	44	6.4	7.9	12.7	13.9
25	1	60	41	43	44	57	9.7	11.2	14.7	17.3
32	1-1/4	67	44	46	57	64	9.7	11.2	17.0	18.0
40	1-1/2	79	44	48	64	76	11.2	12.7	17.8	18.4
50	2	86	48	51	76	92	12.7	15.7	19.0	19.2
65	2-1/2	92	60	64	92	108	15.7	19.0	23.6	28.9
80	3	108	65	68	108	127	19.0	22.4	25.9	30.5
100	4	121	68	75	140	159	22.4	28.4	27.7	33.0

ASME B16.11-2005(ASME B16.11-2001의수정본)



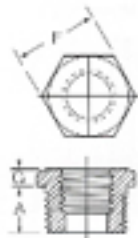
SQUARE HEAD PLUG



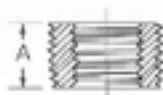
HEX HEAD PLUG



ROUND HEAD PLUG

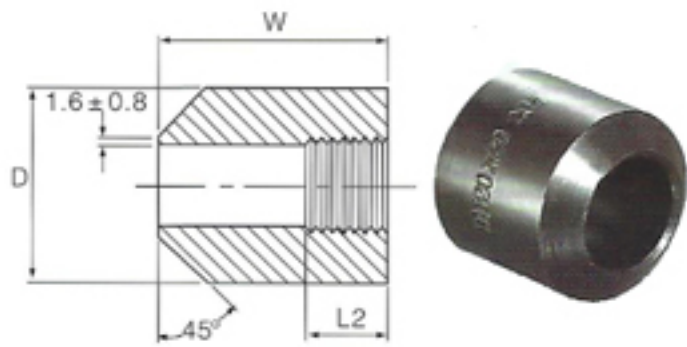


HEX HEAD(1) BUSHING



FLUSH BUSHING

관규격		길이 (Min.) A	육각머리		둥근머리		플러그 & 부싱		
			육각높이 (Min.) B	면간거리 (Min.) C	둥근머리외경 E	길이 (Min.) D	면간거리 (Nom) F	Hex Height (Min.)	
DN	Nom. Pipe Size						내외부나사부싱 G	플러그 H	
6	1/8	10	6	7	10	35	11	---	6
8	1/4	14	6	10	14	41	16	3	6
10	3/8	13	8	11	18	41	18	4	8
15	1/2	14	10	14	24	44	22	5	8
20	3/4	16	11	16	27	44	27	6	10
25	1	19	13	21	33	51	36	6	10
32	1-1/4	21	14	24	43	51	46	7	14
40	1-1/2	21	16	28	48	51	50	8	16
50	2	22	18	32	60	64	65	9	18
65	2-1/2	27	19	36	73	70	75	10	19
80	3	28	21	41	89	70	90	10	21
100	4	32	25	65	114	76	115	13	25



THRADED

3000Lbs

Size (in)	D	W	L2 (Min)
1/4	22.1	39.9	10.0
3/8	25.9	50.0	10.5
1/2	34.0	50.0	13.5
3/4	39.1	50.0	14.0
1	48.0	50.0	17.5
1-1/4	59.9	50.0	18.0
1-1/2	65.0	50.0	18.5
2	80.0	59.9	19.0

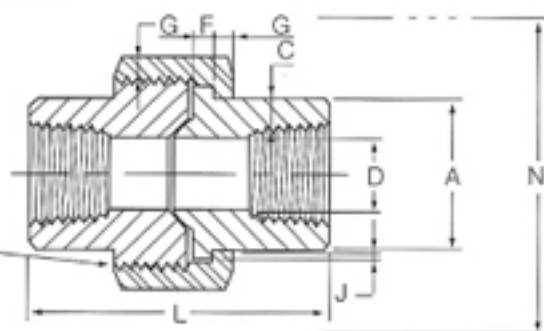
6000Lbs

Size (in)	D	W	L2 (Min)
1/4	25.9	39.9	10.0
3/8	36.0	50.0	10.5
1/2	43.9	50.0	13.5
3/4	50.0	50.0	14.0
1	59.9	50.0	17.5
1-1/4	65.0	50.0	18.0
1-1/2	80.0	50.0	18.5
2	95.0	59.0	19.0

THREADED END MSS-SP-83-2001

H-Thrd's
Minimum 4 Full Thrd's
Engagement Class 2A/2B Fit
ANSI B1.1

H-螺紋按 ANSI B1.1 Class 2A/2B
螺紋啮合牙數量最少4牙



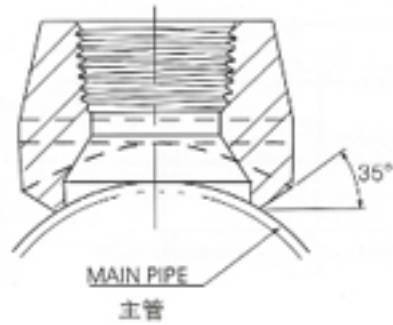
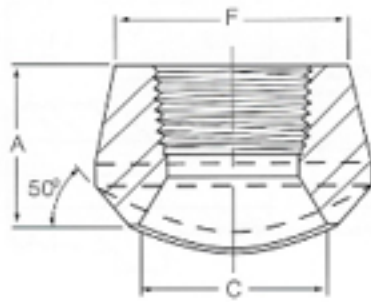
유니온 (UNION)

THREADED END MSS-SP-83-2001

관규격	A	C	D	F	G	H	J	D	N
1/8	14.7	2.41	8.43 6.43	3.18	3.18	16	1.24	41.4	50.8
1/4	19.0	3.02	11.43 9.45	3.18	3.18	16	1.24	41.4	50.8
3/8	22.9	3.20	14.27 13.51	3.43	3.43	14	1.37	46.0	55.9
1/2	27.7	3.73	17.86 17.07	3.68	3.68	14	1.50	49.0	58.4
3/4	33.5	3.91	23.01 21.39	4.06	4.06		1.68	56.9	66.0
1	41.4	4.55	28.98 27.74	4.57	4.45	11	1.85	62.9	78.7
1-1/4	50.5	4.85	37.69 35.36	5.32	5.21	11	2.13	71.1	94.0
1-1/2	57.2	5.08	43.54 41.20	5.84	5.59	10	2.31	76.5	111.8
2	70.1	5.54	55.58 52.12	6.60	6.35	10	2.69	86.1	132.1
2-1/2	85.3	7.01	66.27 64.31	7.40	7.11	8	3.07	102.4	149.9
3	102.4	7.62	86.25 77.27	8.26	8.00	8	3.53	109.0	175.3

MSS-SP-97-2001

나사형소쿠레 (THREADED OUTLET)



BRANCH OUTLET FITTINGS SOCKET

THREADED END MSS-SP-97-2001

3000PSI STD/xs

3000 Lb Standard and extra strong

가시관규격(in)	A	C	F
1/8	19.0	13.7	17.3
1/4	19.0	13.7	22.0
3/8	21.0	17.1	25.8
1/2	25.0	21.3	31.3
3/4	27.0	26.7	37.1
1	33.0	33.4	45.5
1-1/4	33.0	42.2	54.9
1 - 1/2	35.0	48.3	61.6
2	38.0	60.3	75.3
2-1/2	46.0	73.0	91.7
3	51.0	88.9	109.1
4	57.0	114.3	137.2

6000PSI S160/xs

6000 Lb Schedule 160 and double extra strong

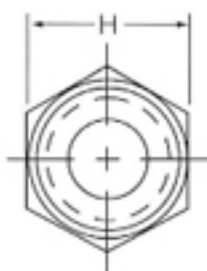
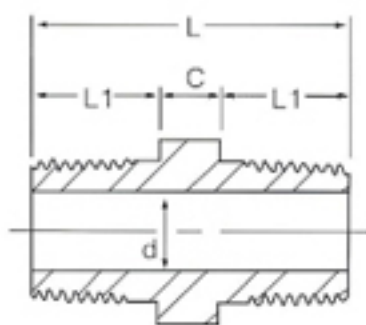
가시관규격(in)	A	C	F
1/2	32.0	16.6	33.9
3/4	37.0	21.2	41.2
1	40.0	27.0	49.9
1 - 1/4	41.0	35.8	58.6
1 - 1/2	43.0	41.2	66.7
2	52.0	51.6	83.2

(1) 소켓재원은 ASME B16.11에준함

(2) 나사사양은 ASME B1.20.1에준함

ANSI / ASME B1.20-1983-NPT

육각닛블(Hex Nipple)



NIPPLE

ANSI / ASME B1.20.1-1983-NPT

닛블(스탠다드형)

관규격	C	L1	L	d		H
				3M	6M	
1/8	6.0	10.0	26.0	4.0	-	12.0
1/4	8.0	14.0	36.0	6.4	-	17.0
3/8	8.0	14.0	36.0	9.2	4.3	19.0
1/2	9.0	19.0	47.0	11.8	6.4	24.0
3/4	10.0	19.0	48.0	15.6	11.1	30.0
1	11.0	24.0	59.0	20.7	15.2	35.0
1-1/4	12.0	24.0	60.0	29.5	22.8	46.0
1-1/2	14.0	24.0	62.0	34.0	28.0	50.0
2	16.0	26.0	68.0	42.9	38.2	65.0
2-1/2	18.0	38.0	94.0	53.8	-	80.0
3	20.0	40.0	100.0	66.5	-	95.0
4	24.5	40.0	105.0	87.3	-	125.5

닛블(컴팩트형)

관규격	C	L1	L2	L	d		H
					3M	6M	
3/8x1/4	8.0	14.0	14.0	36.0	6.4	-	19.0
1/2x1/4	9.0	19.0	14.0	42.0	6.4	-	24.0
1/2x3/8	9.0	19.0	14.0	42.0	9.2	4.3	24.0
3/4x1/4	10.0	19.0	14.0	43.0	6.4	-	30.0
3/4x3/8	10.0	19.0	14.0	43.0	9.2	4.3	30.0
3/4x1/2	10.0	19.0	19.0	48.0	11.8	6.4	30.0
1x3/8	11.0	24.0	14.0	49.0	9.2	4.3	35.0
1x1/2	11.0	24.0	19.0	54.0	11.8	6.4	35.0
1x3/4	11.0	24.0	19.0	54.0	15.6	11.1	35.0
1-1/4x1/2	12.0	24.0	19.0	55.0	11.8	6.4	46.0
1-1/4x3/4	12.0	24.0	19.0	55.0	15.6	11.1	46.0
1-1/4x1	12.0	24.0	24.0	60.0	20.7	15.2	46.0
1-1/2x3/4	14.0	24.0	19.0	57.0	15.6	11.1	50.0
1-1/2x1	14.0	24.0	24.0	62.0	20.7	15.2	50.0
1-1/2x1-1/4	14.0	24.0	24.0	62.0	29.5	22.8	50.0
2x1	16.0	26.0	24.0	66.0	20.7	15.2	65.0
2x1-1/4	16.0	26.0	24.0	66.0	29.5	22.8	65.0
2x1-1/2	16.0	26.0	24.0	66.0	34.0	28.0	65.0
2-1/2x1-1/4	18.0	38.0	24.0	80.0	29.5	22.8	80.0
2-1/2x1-1/2	18.0	38.0	24.0	80.0	34.0	28.0	80.0
2-1/2x2	18.0	38.0	26.0	82.0	42.9	38.2	80.0
3x1-1/2	20.0	40.0	24.0	84.0	34.0	28.0	95.0
3x2	20.0	40.0	26.0	86.0	42.9	38.2	95.0
3x2-1/2	20.0	40.0	38.0	98.0	53.8	-	95.0

파이프 규격 (SEAMLESS, STAINLESS SEAMLESS PIPE)
(ASME B36.10M---2004, ASME B36.19---2004)

치수공차 TOLERANCES			파이프 규격 NPS IN	외경 OutsideDia.			강관 STEEL PIPE													스테인레스스틸 ST,ST PIPE			
A53 A106 O.D.	API 5L O.D.	A530 O.D.					두께 Wall Thickness													두께 Wall Thickness			
				STD	MAX	MIN	S/10	S/20	S/30	S/40	STD	S/60	XS	S/80	S/100	S/120	S/140	S/160	XXS	S/5S	S/1 OS S/40S	S/80S	
+1/64" -1/32"	+1/64" -1/32"	+1/64" -1/32"	1/8	10.3	10.7	9.5	1.2		1.5	1.7	S/40		S/80	2.4				3.2	4.8	1.2	1.7	2.4	
			1/4	13.7	14.1	12.7	1.7		1.9	2.2	S/40		S/80	3.0				3.7	6.1	1.7	2.2	3.0	
			3/8	17.1	17.5	16.3	1.7		1.9	2.3	S/40		S/80	3.2				4.0	6.4	1.7	2.3	3.2	
			1/2	21.3	21.7	20.5	2.1		2.4	2.8	S/40		S/80	3.7				4.7	7.5	1.7	2.1	2.8	3.7
			3/4	26.7	27.1	25.9	2.1		2.4	2.9	S/40		S/80	3.9				5.5	7.8	1.7	2.1	2.9	3.9
			1	33.4	33.8	32.8	2.8		2.9	3.4	S/40		S/80	4.5				6.4	9.1	1.7	2.8	3.4	4.5
			1-1/4	42.2	42.6	41.4	2.8		3.0	3.6	S/40		S/80	4.9				6.4	9.7	1.7	2.8	3.6	4.9
±1%	±0.75%	+1/32" -1/32"	1-1/2	48.3	48.7	47.5	2.8		3.2	3.7	S/40		S/80	5.1				7.1	10.2	1.7	2.8	3.7	5.1
			2	60.3	60.9	59.7	2.8		3.2	3.9	S/40		S/80	5.5				8.7	11.1	1.7	2.8	3.9	5.5
			2-1/2	73.0	73.7	72.2	3.1		4.8	5.5	S/40		S/80	7.0				9.5	14.0	2.1	3.0	5.2	7.0
			3	88.9	89.8	88.0	3.1		4.8	5.5	S/40		S/80	7.6				11.1	15.2	2.1	3.0	5.5	7.6
			3-1/2	101.6	102.6	100.6	3.1		4.8	5.7	S/40		S/80	8.1						2.1	3.0	5.7	8.1
		+1/16" -1/32"	4	114.3	115.4	113.2	3.1		4.8	6.0	S/40		S/80	8.6		11.1		13.5	17.1	2.1	3.0	6.0	8.6
			5	141.3	142.7	139.9	3.4			6.6	S/40		S/80	9.5		12.7		15.9	19.1	2.8	3.4	6.6	9.5
			6	168.3	170.0	166.6	3.4			7.1	S/40		S/80	11.0		14.3		18.2	21.9	2.8	3.4	7.1	11.0
			8	219.1	221.3	216.9	3.8	6.4	7.0	8.2	S/40	10.3	S/80	12.7	15.1	18.2	20.6	23.0	22.2	2.8	3.8	8.2	12.7
			10	273.0	275.8	270.4	4.2	6.4	7.8	9.3	S/40	12.7	S/60	15.1	18.2	21.5	25.4	28.6	S/140	3.4	4.2	9.3	12.7
		+3/32" -1/32"	12	323.8	327.1	320.7	4.6	6.4	8.4	10.3	9.5	14.3	12.7	17.4	21.4	25.4	28.6	33.3	S/120	4.0	4.6	9.5	12.7
			14	355.5	359.2	352.0	6.4	7.9	9.5	11.1	S/30	15.1	12.7	19.1	23.8	27.8	31.8	35.7		4.0	4.8	9.5	12.7
			16	406.4	410.5	402.3	6.4	7.9	9.5	12.7	S/30	16.7	S/40	21.4	26.2	30.9	36.5	40.5		4.2	4.8	9.5	12.7
			18	457.0	461.8	452.6	6.4	7.9	11.1	14.3	9.5	19.1	0.50	23.8	29.4	34.9	39.7	45.2		4.2	4.8	9.5	12.7
+0.15% -0.25%	+1/8" -1/32"	20	508.0	513.1	502.9	6.4	9.5	12.7	15.1	S/20	20.8	S/30	26.2	32.5	38.1	44.5	50.0		4.8	5.5	9.5	12.7	
		24	610.0	615.7	603.5	0.25	9.5	14.3	17.4	S/20	24.6	12.7	30.9	38.9	46.0	52.4	59.5		5.5	6.4	9.5	12.7	