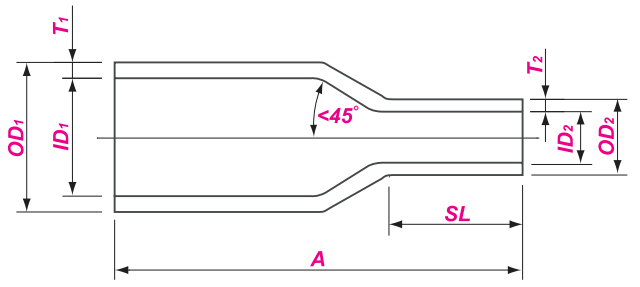
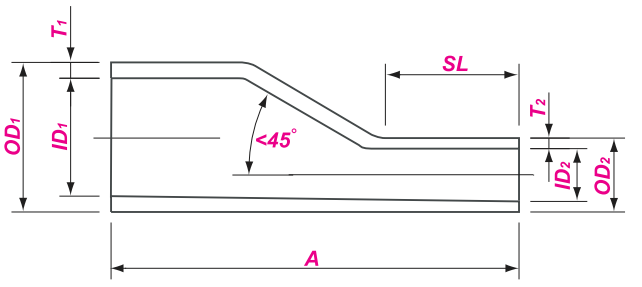
SWAGED NIPPLES



Concentric Swaged Nipple



Eccentric Swaged Nipple

MSS SP-95、SH/T 3419

Nominal Size		OD at End	Length of Small End	End to End
DN	NPS	$OD_1 \times OD_2$	SL_{min}	A
8 × 6	1/4 × 1/8	13.7 × 10.3	20	57
10 × 6	3/8 × 1/8	17.1 × 10.3	20	64
10 × 8	3/8 × 1/4	17.1 × 13.7	20	
15 × 6	1/2 × 1/8	21.3 × 10.3	20	
15 × 8	1/2 × 1/4	21.3 × 13.7	20	70
15 × 10	1/2 × 3/8	21.3 × 17.1	20	
20 × 6	3/4 × 1/8	26.7 × 10.3	20	
20 × 8	3/4 × 1/4	26.7 × 13.7	20	76
20 × 10	3/4 × 3/8	26.7 × 17.1	22	
20 × 15	3/4 × 1/2	26.7 × 21.3	22	
25 × 6	1 × 1/8	33.4 × 10.3	20	
25 × 8	1 × 1/4	33.4 × 13.7	20	
25 × 10	1 × 3/8	33.4 × 17.1	22	89
25 × 15	1 × 1/2	33.4 × 21.3	22	
25 × 20	1 × 3/4	33.4 × 26.7	22	
32 × 6	1¼ × 1/8	42.2 × 10.3	20	
32 × 8	1¼ × 1/4	42.2 × 13.7	20	
32 × 10	1¼ × 3/8	42.2 × 17.1	22	102
32 × 15	1¼ × 1/2	42.2 × 21.3	22	
32 × 20	1¼ × 3/4	42.2 × 26.7	25	
32 × 25	1¼ × 1	42.2 × 33.4	25	
40 × 6	1½ × 1/8	48.3 × 10.3	20	
40 × 8	1½ × 1/4	48.3 × 13.7	20	
40 × 10	1½ × 3/8	48.3 × 17.1	22	
40 × 15	1½ × 1/2	48.3 × 21.3	25	114
40 × 20	1½ × 3/4	48.3 × 26.7	25	
40 × 25	1½ × 1	48.3 × 33.4	25	
40 × 32	1½ × 1¼	48.3 × 42.2	25	
50 × 6	2 × 1/8	60.3 × 10.3	20	
50 × 8	2 × 1/4	60.3 × 13.7	22	
50 × 10	2 × 3/8	60.3 × 17.1	22	
50 × 15	2 × 1/2	60.3 × 21.3	25	
50 × 20	2 × 3/4	60.3 × 26.7	30	165
50 × 25	2 × 1	60.3 × 33.4	30	
50 × 32	2 × 1¼	60.3 × 42.2	30	
50 × 40	2 × 1½	60.3 × 48.3	30	

Nominal Size		OD at End	Length of Small End	End to End
DN	NPS	$OD_1 \times OD_2$	SL_{min}	A
65 × 6	2½ × 1/8	73.0 × 10.3	22	
65 × 8	2½ × 1/4	73.0 × 13.7	22	
65 × 10	2½ × 3/8	73.0 × 17.1	22	
65 × 15	2½ × 1/2	73.0 × 21.3	25	
65 × 20	2½ × 3/4	73.0 × 26.7	25	178
65 × 25	2½ × 1	73.0 × 33.4	30	
65 × 32	2½ × 1¼	73.0 × 42.2	30	
65 × 40	2½ × 1½	73.0 × 48.3	40	
65 × 50	2½ × 2	73.0 × 60.3	40	
80 × 6	3 × 1/8	88.9 × 10.3	22	
80 × 8	3 × 1/4	88.9 × 13.7	22	
80 × 10	3 × 3/8	88.9 × 17.1	22	
80 × 15	3 × 1/2	88.9 × 21.3	25	
80 × 20	3 × 3/4	88.9 × 26.7	25	203
80 × 25	3 × 1	88.9 × 33.4	30	
80 × 32	3 × 1¼	88.9 × 42.2	30	
80 × 40	3 × 1½	88.9 × 48.3	40	
80 × 50	3 × 2	88.9 × 60.3	40	
80 × 65	3 × 2½	88.9 × 73.0	40	
90 × 6	3½ × 1/8	101.6 × 10.3	22	
90 × 8	3½ × 1/4	101.6 × 13.7	22	
90 × 10	3½ × 3/8	101.6 × 17.1	22	
90 × 15	3½ × 1/2	101.6 × 21.3	25	
90 × 20	3½ × 3/4	101.6 × 26.7	25	
90 × 25	3½ × 1	101.6 × 33.4	30	203
90 × 32	3½ × 1¼	101.6 × 42.2	30	
90 × 40	3½ × 1½	101.6 × 48.3	40	
90 × 50	3½ × 2	101.6 × 60.3	40	
90 × 65	3½ × 2½	101.6 × 73.0	40	
90 × 80	3½ × 3	101.6 × 88.9	40	
100 × 8	4 × 1/4	114.3 × 13.7	25	
100 × 10	4 × 3/8	114.3 × 17.1	25	
100 × 15	4 × 1/2	114.3 × 21.3	25	229
100 × 20	4 × 3/4	114.3 × 26.7	30	
100 × 25	4 × 1	114.3 × 33.4	30	
100 × 32	4 × 1¼	114.3 × 42.2	40	

SWAGED NIPPLES

Nominal Size		OD at End	Length of Small End	End to End
DN	NPS	$OD_1 \times OD_2$	SL_{min}	A
100 × 40	4 × 1½	114.3 × 48.3	40	229
100 × 50	4 × 2	114.3 × 60.3	45	
100 × 65	4 × 2½	114.3 × 73.0	45	
100 × 80	4 × 3	114.3 × 88.9	45	
100 × 90	4 × 3½	114.3 × 101.6	45	
125 × 8	5 × 1/4	141.3 × 13.7	25	279
125 × 10	5 × 3/8	141.3 × 17.1	25	
125 × 15	5 × 1/2	141.3 × 21.3	25	
125 × 20	5 × 3/4	141.3 × 26.7	30	
125 × 25	5 × 1	141.3 × 33.4	30	
125 × 32	5 × 1¼	141.3 × 42.2	40	
125 × 40	5 × 1½	141.3 × 48.3	40	
125 × 50	5 × 2	141.3 × 60.3	45	
125 × 65	5 × 2½	141.3 × 73.0	45	
125 × 80	5 × 3	141.3 × 88.9	45	
125 × 90	5 × 3½	141.3 × 101.6	45	
125 × 100	5 × 4	141.3 × 114.3	50	
150 × 15	6 × 1/2	168.3 × 21.3	30	304
150 × 20	6 × 3/4	168.3 × 26.7	30	
150 × 25	6 × 1	168.3 × 33.4	40	
150 × 32	6 × 1¼	168.3 × 42.2	40	
150 × 40	6 × 1½	168.3 × 48.3	45	
150 × 50	6 × 2	168.3 × 60.3	45	
150 × 65	6 × 2½	168.3 × 73.0	45	
150 × 80	6 × 3	168.3 × 88.9	45	
150 × 90	6 × 3½	168.3 × 101.6	50	
150 × 100	6 × 4	168.3 × 114.3	50	
150 × 125	6 × 5	168.3 × 141.3	60	

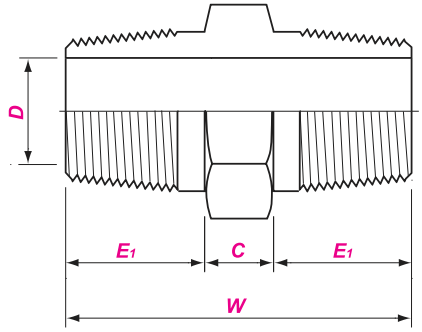
Nominal Size		OD at End	Length of Small End	End to End
DN	NPS	$OD_1 \times OD_2$	SL_{min}	A
200 × 25	8 × 1	219.1 × 33.4	40	330
200 × 32	8 × 1¼	219.1 × 42.2	40	
200 × 40	8 × 1½	219.1 × 48.3	45	
200 × 50	8 × 2	219.1 × 60.3	45	
200 × 65	8 × 2½	219.1 × 73.0	45	
200 × 80	8 × 3	219.1 × 88.9	50	
200 × 90	8 × 3½	219.1 × 101.6	50	
200 × 100	8 × 4	219.1 × 114.3	50	
200 × 125	8 × 5	219.1 × 141.3	60	
200 × 150	8 × 6	219.1 × 168.3	60	
250 × 50	10 × 2	273.0 × 60.3	45	381
250 × 65	10 × 2½	273.0 × 73.0	45	
250 × 80	10 × 3	273.0 × 88.9	50	
250 × 90	10 × 3½	273.0 × 101.6	50	
250 × 100	10 × 4	273.0 × 114.3	60	
250 × 125	10 × 5	273.0 × 141.3	60	
250 × 150	10 × 6	273.0 × 168.3	65	
250 × 200	10 × 8	273.0 × 219.1	65	
300 × 50	12 × 2	323.8 × 60.3	50	406
300 × 65	12 × 2½	323.8 × 73.0	50	
300 × 80	12 × 3	323.8 × 88.9	60	
300 × 90	12 × 3½	323.8 × 101.6	60	
300 × 100	12 × 4	323.8 × 114.3	65	
300 × 125	12 × 5	323.8 × 141.3	65	
300 × 150	12 × 6	323.8 × 168.3	65	
300 × 200	12 × 8	323.8 × 219.1	70	
300 × 250	12 × 10	323.8 × 273.0	70	

Note:
1) If ordering per SH/T 3419,the outside diameter specified in SH/T 3405 《tube outside diameter in petrochemical industry》 shall be applied.

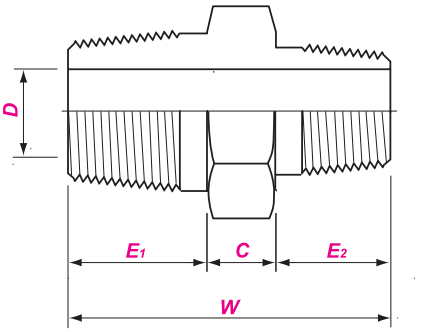
TOLERANCES OF SWAGED NIPPLES

Nominal Size		OD at End		ID at End	End to End	Wall
DN	NPS	OD		ID	A	T
		Plain End	Other Ends			
6～10	1/8～3/8	+0.4 −0.8	±0.8	±0.8	±1.6	Not less than 87.5% Nominal Wall Thickness
15～40	1/2～1½	+0.4 −0.8	+1.6 −0.8	±0.8	±1.6	
50～65	2～2½	±0.8	+1.6 −0.8	±0.8	±3.2	
80～100	3～4	±0.8	±1.6	±1.6	±3.2	
125～150	5～6	+2.4 −1.6	+2.4 −1.6	±1.6	±4.8	
200～300	8～12	+4.0 −3.2	+4.0 −3.2	±3.2	±6.4	

HEXAGDNAL NIPPLES



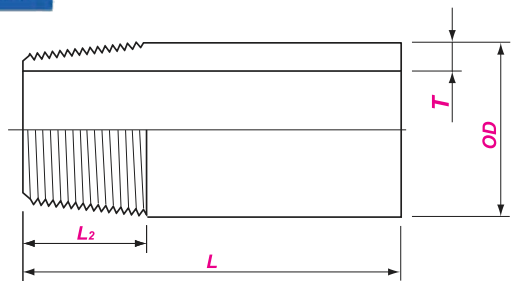
Straight Hexagonal Nipple



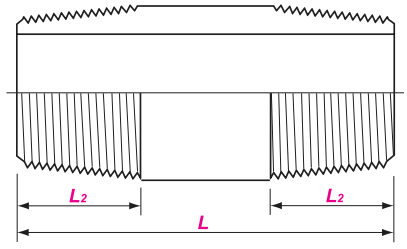
Reducing Hexagonal Nipple

Nominal Size		Size					
DN	NPS	C_{nom}	$E_{1\ nom}$	$E_{2\ nom}$	W	D	
						Sch80	Sch160
6	1/8	6	10	-	26	5	4
8	1/4	6	15	-	36	7	6
8 × 6	1/4 × 1/8	6	15	10	31	5	4
10	3/8	8	16	-	40	10	8
10 × 8	3/8 × 1/4	8	16	15	39	7	6
15	1/2	8	20	-	48	13	10
15 × 10	1/2 × 3/8	8	20	16	44	10	8
15 × 8	1/2 × 1/4	8	20	15	43	7	6
20	3/4	10	21	-	52	18	14
20 × 15	3/4 × 1/2	10	21	20	51	13	10
20 × 10	3/4 × 3/8	10	21	16	47	10	8
25	1	10	25	-	60	23	19
25 × 20	1 × 3/4	10	25	21	56	18	14
25 × 15	1 × 1/2	10	25	20	55	13	10
32	1¼	12	25	-	62	31	28
32 × 25	1¼ × 1	12	25	25	62	23	19
32 × 20	1¼ × 3/4	12	25	21	58	18	14
32 × 15	1¼ × 1/2	12	25	20	57	13	10
40	1½	16	26	-	68	36	32
40 × 32	1½ × 1¼	16	26	25	67	31	28
40 × 25	1½ × 1	16	26	25	67	23	19
40 × 20	1½ × 3/4	16	26	21	63	18	14
40 × 15	1½ × 1/2	16	26	20	62	13	10
50	2	18	27	-	72	47	40
50 × 40	2 × 1½	18	27	26	71	36	32
50 × 32	2 × 1¼	18	27	25	70	31	28
50 × 25	2 × 1	18	27	25	70	23	19
50 × 20	2 × 3/4	18	27	21	66	18	14
50 × 15	2 × 1/2	18	27	20	65	13	10
65	2½	20	38	-	96	57	51
65 × 50	2½ × 2	20	38	27	85	47	40
65 × 40	2½ × 1½	20	38	26	84	36	32
65 × 32	2½ × 1¼	20	38	25	83	31	28
65 × 25	2½ × 1	20	38	25	83	23	19
65 × 20	2½ × 3/4	20	38	21	79	18	14
80	3	20	40	-	100	70	63
80 × 65	3 × 2½	20	40	38	98	57	51
80 × 50	3 × 2	20	40	27	87	47	40
80 × 40	3 × 1½	20	40	26	86	36	32
80 × 32	3 × 1¼	20	40	25	85	31	28
80 × 25	3 × 1	20	40	25	85	23	19

PIPE NIPPLES



Pipe Nipple(TOE)



Pipe Nipple(TBE)

ASTM A733

Nominal Size		OD of Pipes	Lengths of Thread	Wall of pipes	Pipe Nipple Lengths.		
DN	NPS	*OD*	$L_{2\ min}$	*T*	*L*		
					I	II	III
6	1/8	10.3	6.7	STD, XS	50	75	100
8	1/4	13.7	10.2				
10	3/8	17.1	10.4	Sch40,Sch80			
15	1/2	21.3	13.6	STD, XS	50	75	100
20	3/4	26.7	13.9				
25	1	33.4	17.3	Sch40,Sch80			
32	1¼	42.2	18.0	STD, XS	75	100	150
40	1½	48.3	18.4				
50	2	60.3	19.2	Sch40,Sch80			
65	2½	73.0	28.9	STD, XS	100	150	200
80	3	88.9	30.5				
90	3½	101.6	31.8	Sch40,Sch80			
100	4	114.3	33.0	STD, XS	100	150	200
125	5	141.3	35.7				
150	6	168.3	38.4	Sch40,Sch80			
200	8	219.1	43.5	STD, XS	150	200	250
250	10	273.0	48.9				
300	12	323.8	54.0	Sch40,Sch80			

Note:

1) The lengths indicated in the above table are the generally referenced ones. Manufacturer shall conform to the ones specified in the purchase specification. If not specified, manufacturer can select one of the above three series.

TOLERANCES OF HEXAGONAL NIPPLES & PIPE NIPPLES

Nominal Size		Hexagonal Nipple		Pipe Nipple
DN	NPS	*w*	*D*	*L*
6～20	1/8～3/4	± 1.6	0 − 0.8	± 1.6
25～80	1～3	± 1.6	0 − 1.6	± 1.6
90～300	3½～12	-	-	± 1.6

Note:

1) If the length L of the thread nipple is more than and including 305mm (12″), the tolerance shall be ± 3.2mm.