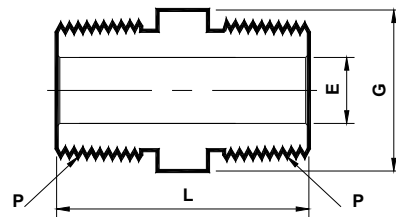


3. Pipe Fitting Part 1

1/16"-2" NPT, 1/8"-1/2" BSP/ISO, SAE/MS

01. Close Nipple :

NPT (M) x NPT (M)
(N - PCN)



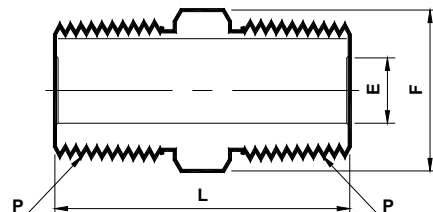
Sr. No.	NPT ② Male Pipe Size P	Ref Part No.	L	ØE ①	ØG
Dimensions in Inches					
1	1/16 x 27	1N PCN	0.75	0.12	5/16
2	1/8 x 27	2N PCN	0.75	0.19	7/16
3	1/4 x 18	4N PCN	1.12	0.28	9/16
4	3/8 x 18	6N PCN	1.12	0.38	11/16
5	½ x 14	8N PCN	1.50	0.47	7/8
6	3/4 x 14	12N PCN	1.50	0.62	1.1/16
7	1 x 11.5	16N PCN	1.88	0.88	1.3/8

NOTE : ① The 'E' Dimension is the minimum opening.

② NPT thread as per ANSI B 1.20.1.

02. Hex Nipple

NPT (M) x NPT (M)
(N - PHN)



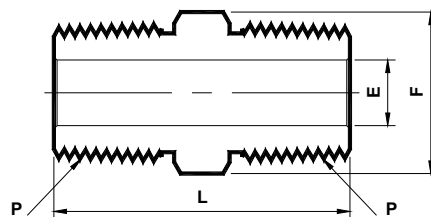
Sr. No.	NPT ② Male Pipe Size P	Ref Part No.	L	ØE ①	Hex F
Dimensions in Inches					
1	1/16 x 27	1N PHN	1.01	0.12	5/16
2	1/8 x 27	2N PHN	1.01	0.19	7/16
3	1/4 x 18	4N PHN	1.40	0.28	9/16
4	3/8 x 18	6N PHN	1.43	0.38	11/16
5	½ x 14	8N PHN	1.84	0.47	7/8
6	3/4 x 14	12N PHN	1.84	0.62	1.1/16
7	1 x 11.5	16N PHN	2.32	0.88	1.3/8
8	1-1/4 x 11.5	20N PHN	2.41	1.09	1.3/4
9	1-1/2 x 11.5	24N PHN	2.65	1.34	2.1/8
10	2 x 11.5	32N PHN	2.90	1.81	2.3/4

NOTE : ① The 'E' Dimension is the minimum opening.

② NPT thread as per ANSI B 1.20.1.

03. Hex Nipple

ISO Tapered (M) x ISO Tapered (M)
(IT - PHN)



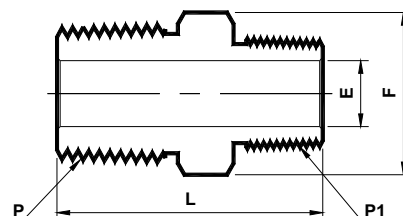
Sr. No.	ISO ② Male Pipe Size P	Ref Part No.	L	ØE ①	Hex F
Dimensions in Inches					
1	1/8 x 28	2IT PHN	1.01	0.18	7/16
2	1/4 x 19	4IT PHN	1.40	0.28	9/16
3	3/8 x 19	6IT PHN	1.43	0.37	11/16
4	1/2 x 14	8IT PHN	1.84	0.46	7/8

NOTE : ① The 'E' Dimension is the minimum opening.

② ISO (BSP Tapered) thread as per BS 21.

04. Hex Reducing Nipple

NPT (M) x NPT (M)
(N - PHRN - N)



Sr. No.	NPT ② Male Pipe Size P	NPT ② Male Pipe Size P1	Ref Part No.	L	ØE ①	Hex F
Dimensions in Inches						
1	(1/8 x 27) x (1/16 x 27)		2PHRN 1N	1.01	0.12	7/16
2	(1/4 x 18) x (1/16 x 27)		4PHRN 1N	1.25	0.12	9/16
3	(1/4 x 18) x (1/8 x 27)		4PHRN 2N	1.22	0.19	9/16
4	(3/8 x 18) x (1/16 x 27)		6PHRN 1N	1.27	0.12	11/16
5	(3/8 x 18) x (1/8 x 27)		6PHRN 2N	1.25	0.19	11/16
6	(3/8 x 18) x (1/4 x 18)		6PHRN 4N	1.43	0.28	11/16
7	(1/2 x 14) x (1/8 x 27)		8PHRN 2N	1.47	0.19	7/8
8	(1/2 x 14) x (1/4 x 18)		8PHRN 4N	1.65	0.28	7/8
9	(1/2 x 14) x (3/8 x 18)		8PHRN 6N	1.65	0.38	7/8
10	(3/4 x 14) x (1/8 x 27)		12PHRN 2N	1.59	0.19	1.1/16
11	(3/4 x 14) x (1/4 x 18)		12PHRN 4N	1.65	0.28	1.1/16
12	(3/4 x 14) x (3/8 x 18)		12PHRN 6N	1.78	0.38	1.1/16
13	(3/4 x 14) x (1/2 x 14)		12PHRN 8N	1.84	0.47	1.1/16
14	(1 x 11.5) x (1/8 x 27)		16PHRN 2N	1.78	0.19	1.3/8
15	(1 x 11.5) x (1/4 x 18)		16PHRN 4N	1.97	0.28	1.3/8
16	(1 x 11.5) x (1/2 x 14)		16PHRN 8N	2.13	0.47	1.3/8
17	(1 x 11.5) x (3/4 x 14)		16PHRN 12N	2.13	0.62	1.3/8
18	(1-1/4 x 11.5) x (1 x 11.5)		20PHRN 16N	2.41	0.88	1.3/4
19	(1-1/2 x 11.5) x (1 x 11.5)		24PHRN 16N	2.56	0.88	2.1/8
20	(2 x 11.5) x (1 x 11.5)		32PHRN 16N	2.78	0.88	2.3/4

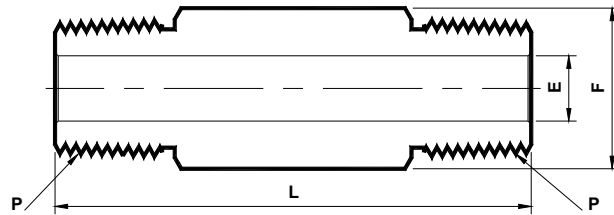
NOTE : ① The 'E' Dimension is the minimum opening.

② NPT thread as per ANSI B 1.20.1.

05. Hex Long Nipple

NPT (M) x NPT (M)

(N - PHLN)



Sr. No.	NPT ② Male Pipe Size P	Ref Part No.	L					ØE ①	Hex F
			Available Lengths						
			1.50	2.00	2.50	3.00	4.00		
	Dimensions in Inches								
1	1/16 x 27	1N PHLN (x)			x			0.12	7/16
2	1/8 x 27	2N PHLN	A	A	A	A	N/A	0.19	7/16
3	1/4 x 18	4N PHLN	A	A	A	A	A	0.28	9/16
4	3/8 x 18	6N PHLN	A	A	A	A	N/A	0.38	11/16
5	½ x 14	8N PHLN	N/A	A	N/A	A	A	0.47	7/8
6	3/4 x 14	12N PHLN	N/A	A	N/A	A	A	0.62	1.1/16
7	1 x 11.5	16N PHLN	N/A	N/A	N/A	A	A	0.88	1.3/8

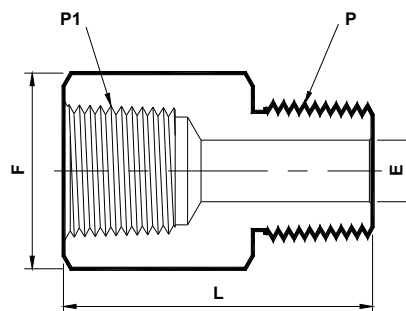
- Specified length (x) to be shown as last designator in the ordering number; example : 1N - PHLN - 2.00
- A - Available, N/A - Not Available

NOTE : ① The 'E' Dimension is the minimum opening.

② NPT thread as per ANSI B 1.20.1.

06. Adapter

NPT (M) x NPT (F)
(N - PA)



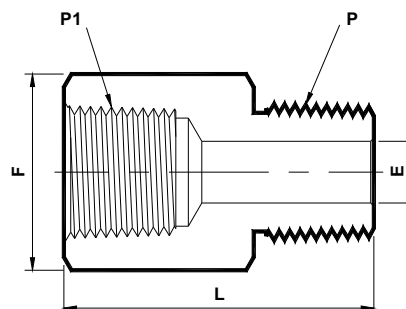
Sr. No.	NPT ② Male Pipe Size P	NPT ② Female Pipe Size P1	Ref Part No.	L	ØE ①	Hex F
Dimensions in Inches						
1	(1/8 x 27) x (1/8 x 27)		2N PA	1.10	0.19	9/16
2	(1/4 x 18) x (1/4 x 18)		4N PA	1.40	0.28	3/4
3	(3/8 x 18) x (3/8 x 18)		6N PA	1.51	0.38	7/8
4	(1/2 x 14) x (1/2 x 14)		8N PA	1.94	0.47	1.1/16
5	(3/4 x 14) x (3/4 x 14)		12N PA	2.02	0.62	1.1/4
6	(1 x 11.5) x (1 x 11.5)		16N PA	2.28	0.88	1.5/8

NOTE : ① The 'E' Dimension is the minimum opening.

② NPT thread as per ANSI B 1.20.1.

07. Adapter

ISO Tapered (M) x ISO Tapered (F)
(IT - PA)



Sr. No.	ISO ② Male Pipe Size P	ISO ② Female Pipe Size P1	Ref Part No.	L	ØE ①	Hex F
Dimensions in Inches						
1	(1/8 x 28) x (1/8 x 28)		2IT PA	1.09	0.18	9/16
2	(1/4 x 19) x (1/4 x 19)		4IT PA	1.42	0.28	3/4
3	(3/8 x 19) x (3/8 x 19)		6IT PA	1.50	0.37	7/8
4	(1/2 x 14) x (1/2 x 14)		8IT PA	1.95	0.46	1.1/16

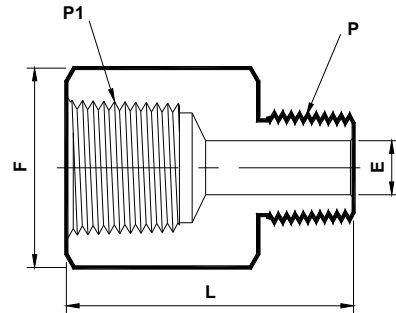
NOTE : ① The 'E' Dimension is the minimum opening.

② ISO (BSP Tapered) thread as per BS 21.

08. Reducing Adapter

NPT (F) x NPT (M)

(N - PRA - N)



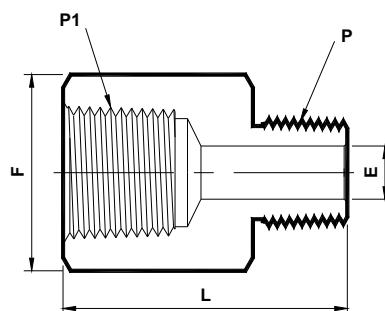
Sr. No.	NPT ② Female Pipe Size P1	NPT ② Male Pipe Size P	Ref Part No.	L	ØE ①	Hex F
Dimensions in Inches						
1	(1/8 x 27) x (1/16 x 27)		2PRA 1N	1.09	0.12	9/16
2	(1/4) x (1/16 x 27)		4PRA 1N	1.20	0.12	3/4
3	(3/8) x (1/16 x 27)		6PRA 1N	1.25	0.12	7/8
4	(1/4 x 18) x (1/8 x 27)		4PRA 2N	1.26	0.19	3/4
5	(3/8 x 18) x (1/8 x 27)		6PRA 2N	1.33	0.19	7/8
6	(1/2 x 14) x (1/8 x 27)		8PRA 2N	1.58	0.19	1.1/16
7	(3/4) x (1/8 x 27)		12PRA 2N	1.56	0.19	1.1/4
8	(1 x 11.5) x (1/8 x 27)		16PRA 2N	1.81	0.19	1.5/8
9	(3/8 x 18) x (1/4 x 18)		6PRA 4N	1.50	0.28	7/8
10	(1/2 x 14) x (1/4 x 18)		8PRA 4N	1.76	0.28	1.1/16
11	(3/4 x 14) x (1/4 x 18)		12PRA 4N	1.85	0.28	1.1/4
12	(1 x 11.5) x (1/4 x 18)		16PRA 4N	1.96	0.28	1.5/8
13	(1/2 x 14) x (3/8 x 18)		8PRA 6N	1.75	0.38	1.1/16
14	(3/4 x 14) x (3/8 x 18)		12PRA 6N	1.82	0.38	1.1/4
15	(1 x 11.5) x (3/8 x 18)		16PRA 6N	2.00	0.38	1.5/8
16	(3/4 x 14) x (1/2 x 14)		12PRA 8N	2.02	0.47	1.1/4
17	(1 x 11.5) x (1/2 x 14)		16PRA 8N	2.16	0.47	1.5/8
18	(1 x 11.5) x (3/4 x 14)		16PRA 12N	2.17	0.62	1.5/8
19	(1-1/2 x 11.5) x (3/4 x 14)		24PRA 12N	2.48	0.62	2.3/8
20	(1-1/4 x 11.5) x (1 x 11.5)		20PRA 16N	2.53	0.88	2.1/8
21	(1-1/2 x 11.5) x (1 x 11.5)		24PRA 16N	2.65	0.88	2.3/8
22	(2 x 11.5) x (1 x 11.5)		32PRA 16N	2.68	0.88	2.7/8

NOTE : ① The 'E' Dimension is the minimum opening.

② NPT thread as per ANSI B 1.20.1.

09. Reducing Adapter

ISO Tapered (F) x ISO Tapered (M)
(IT - PRA - IT)



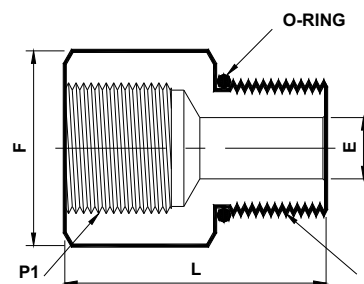
Sr. No.	ISO ② Female Pipe Size P1	ISO ② Male Pipe Size P	Ref Part No.	L	ØE ①	Hex F
Dimensions in Inches						
1	(1/4 x 19) x (1/8 x 28)		4PRA 2IT	1.26	0.18	3/4
2	(3/8 x 19) x (1/4 x 19)		6PRA 4IT	1.50	0.28	7/8
3	(1/2 x 14) x (1/4 x 19)		8PRA 4IT	1.76	0.28	1.1/16
4	(1/2 x 14) x (3/8 x 19)		8PRA 6IT	1.75	0.37	1.1/16

NOTE : ① The 'E' Dimension is the minimum opening.

② ISO (BSP Tapered) thread as per BS 21.

10. SAE Adapter

UNF (M) x UNF (F)
(U - PSA - U)



Sr. No.	UNF ② Male Pipe Size P	UNF ② Female Pipe Size P1	Ref Part No.	L	ØE ①	Hex F
Dimensions in Inches						
1	(9/16 x 18) x (7/16 x 20)		9PSA 7U	1.03	0.297	11/16
2	(3/4 x 16) x (7/16 x 20)		12PSA 7U	1.09	0.375	7/8
3	(1-1/16 x 12) x (3/4 x 16)		17PSA 12U	1.00	0.625	1.1/4
4	(1-5/16 x 12) x (1-1/16 x 12)		21PSA 17U	1.75	0.750	1.1/2

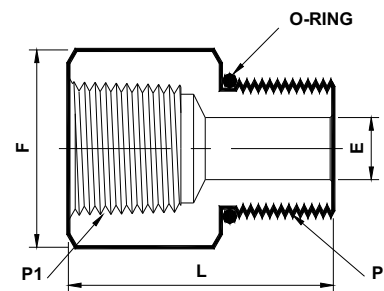
- O-ring provided are Buna-N standard and Viton - optional.

NOTE : ① The 'E' Dimension is the minimum opening.

② SAE/MS (UNF) thread as per ASME B1.1.

11. SAE Adapter

UNF (M) x NPT (F)
(U - PSA - N)



Sr. No.	SAE/MS ^③ Male Pipe Size P	NPT ^② Female Pipe Size P1	Ref Part No.	L	ØE ^①	Hex F
Dimensions in Inches						
1	(7/16 x 20) x (1/4 x 18)		7UPSA 4N	1.19	0.20	3/4
2	(9/16 x 18) x (3/8 x 18)		9UPSA 6N	1.26	0.30	7/8
3	(3/4 x 16) x (1/2 x 14)		12UPSA 8N	1.50	0.39	1.1/16
4	(1-1/16 x 12) x (3/4 x 14)		17UPSA 12N	1.83	0.66	1.1/4
5	(1-5/16 x 12) x (1 x 11.5)		21UPSA 16N	1.88	0.88	1.5/8

- O-ring provided are Buna-N standard and Viton - optional.

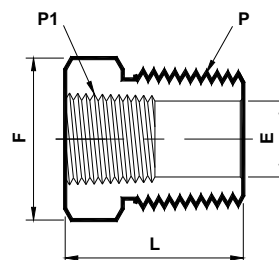
NOTE : ① The 'E' Dimension is the minimum opening.

② NPT thread as per ANSI B 1.20.1.

③ SAE/MS (UNF) thread as per ASME B1.1.

12. Reducing Bushing

NPT (M) x NPT (F)
(N - PRB - N)



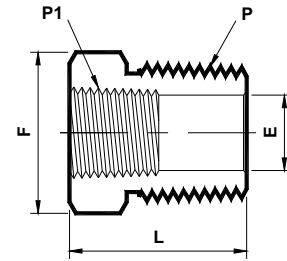
Sr. No.	NPT ② Male Pipe Size P	NPT ② Female Pipe Size P1	Ref Part No.	L	ØE ①	Hex F
Dimensions in Inches						
1	(1/8 x 27) x (1/16 x 27)		2PRB 1N	1.03	0.19	7/16
2	(1/4 x 18) x (1/16 x 27)		4PRB 1N	1.03	0.19	9/16
3	(1/4 x 18) x (1/8 x 27)		4PRB 2N	1.06	0.28	9/16
4	(3/8 x 18) x (1/16 x 27)		6PRB 1N	0.86	0.19	3/4
5	(3/8 x 18) x (1/8 x 27)		6PRB 2N	0.86	0.34	3/4
6	(3/8 x 18) x (1/4 x 18)		6PRB 4N	1.19	0.38	3/4
7	(1/2 x 14) x (1/8 x 27)		8PRB 2N	1.08	0.34	7/8
8	(1/2 x 14) x (1/4 x 18)		8PRB 4N	1.08	0.45	7/8
9	(1/2 x 14) x (3/8 x 18)		8PRB 6N	1.41	0.47	7/8
10	(3/4 x 14) x (1/8 x 27)		12PRB 2N	1.17	0.28	1.1/16
11	(3/4 x 14) x (1/4 x 18)		12PRB 4N	1.08	0.45	1.1/16
12	(3/4 x 14) x (3/8 x 18)		12PRB 6N	1.08	0.59	1.1/16
13	(3/4 x 14) x (1/2 x 14)		12PRB 8N	1.63	0.62	1.1/16
14	(1 x 11.5) x (1/8 x 27)		16PRB 2N	1.36	0.28	1.3/8
15	(1 x 11.5) x (1/4 x 18)		16PRB 4N	1.37	0.45	1.3/8
16	(1 x 11.5) x (3/8 x 18)		16PRB 6N	1.37	0.59	1.3/8
17	(1 x 11.5) x (1/2 x 14)		16PRB 8N	1.37	0.73	1.3/8
18	(1 x 11.5) x (3/4 x 14)		16PRB 12N	1.85	0.88	1.3/8
19	(1-1/4 x 11.5) x (1/2 x 14)		20PRB 8N	1.46	0.73	1.3/4
20	(1-1/4 x 11.5) x (3/4 x 14)		20PRB 12N	1.47	0.94	1.3/4
21	(1-1/4 x 11.5) x (1 x 11.5)		20PRB 16N	1.94	1.17	1.3/4
22	(1-1/2 x 11.5) x (1/2 x 14)		24PRB 8N	1.61	0.73	2.1/8
23	(1-1/2 x 11.5) x (3/4 x 14)		24PRB 12N	1.61	0.94	2.1/8
24	(1-1/2 x 11.5) x (1 x 11.5)		24PRB 16N	1.61	1.17	2.1/8
25	(1-1/2 x 11.5) x (1-1/4)		24PRB 20N	2.31	1.50	2.1/8
26	(2 x 11.5) x (1/2 x 14)		32PRB 8N	1.83	0.73	2.3/4
27	(2 x 11.5) x (3/4 x 14)		32PRB 12N	1.83	0.94	2.3/4
28	(2 x 11.5) x (1 x 11.5)		32PRB 16N	1.83	1.17	2.3/4
29	(2 x 11.5) x (1-1/4 x 11.5)		32PRB 20N	1.83	1.50	2.3/4
30	(2 x 11.5) x (1-1/2 x 11.5)		32PRB 24N	1.83	1.73	2.3/4

NOTE : ① The 'E' Dimension is the minimum opening.

② NPT thread as per ANSI B 1.20.1.

13. Reducing Bushing

ISO Tapered (M) x ISO Tapered (F)
(IT - PRB - IT)



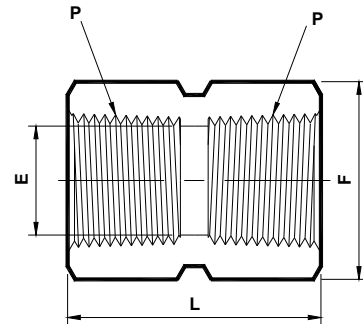
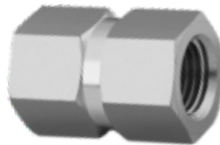
Sr. No.	ISO ② Male Pipe Size P	ISO ② Female Pipe Size P1	Ref Part No.	L	ØE ①	Hex F
Dimensions in Inches						
1	(1/4 x 19) x (1/8 x 28)		4PRB 2IT	1.06	0.28	9/16
2	(3/8 x 19) x (1/4 x 19)		6PRB 4IT	1.19	0.37	3/4
3	(1/2 x 14) x (1/4 x 19)		8PRB 4IT	1.08	0.43	7/8
4	(1/2 x 14) x (3/8 x 19)		8PRB 6IT	1.41	0.46	7/8

NOTE : ① The 'E' Dimension is the minimum opening.

② ISO (BSP Tapered) thread as per BS 21.

14. Hex Coupling

NPT (F) x NPT (F)
(N - PHC)



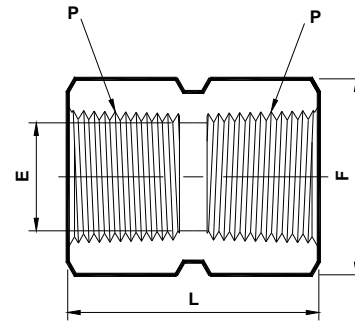
Sr. No.	NPT ② Female Pipe Size P	Ref Part No.	L	ØE ①	Hex F
Dimensions in Inches					
1	1/16 x 27	1N PHC	0.75	0.25	1/2
2	1/8 x 27	2N PHC	0.81	0.34	9/16
3	1/4 x 18	4N PHC	1.19	0.45	3/4
4	3/8 x 18	6N PHC	1.31	0.59	7/8
5	1/2 x 14	8N PHC	1.56	0.73	1.1/16
6	3/4 x 14	12N PHC	1.62	0.94	1.1/4
7	1 x 11.5	16N PHC	2.00	1.17	1.5/8
8	1-1/4 x 11.5	20N PHC	2.38	1.50	2.1/8
9	1-1/2 x 11.5	24N PHC	2.62	1.73	2.3/8
10	2 x 11.5	32N PHC	2.62	2.22	2.7/8

NOTE : ① The 'E' Dimension is the minimum opening.

② NPT thread as per ANSI B 1.20.1.

15. Hex Coupling

ISO Tapered (F) x ISO Tapered (F)
(IT - PHC)



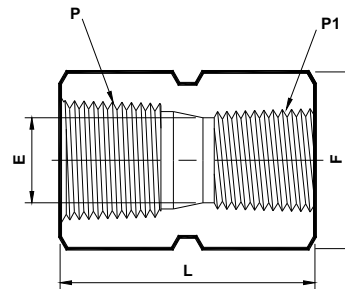
Sr. No.	ISO ② Female Pipe Size P	Ref Part No.	L	ØE ①	Hex F
Dimensions in Inches					
1	1/8 x 28	2IT PHC	0.81	0.32	9/16
2	1/4 x 19	4IT PHC	1.19	0.43	3/4
3	3/8 x 19	6IT PHC	1.31	0.57	7/8
4	1/2 x 14	8IT PHC	1.56	0.71	1.1/16

NOTE : ① The 'E' Dimension is the minimum opening.

② ISO (BSP Tapered) thread as per BS 21.

16. Hex Reducing Coupling

NPT (F) x NPT (F)
(N - PHRC - N)



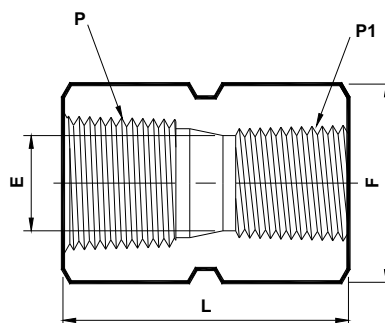
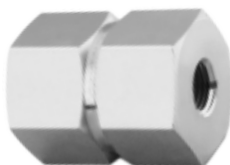
Sr. No.	NPT ② Female Pipe Size P	NPT ② Female Pipe Size P1	Ref Part No.	L	ØE ①	Hex F
Dimensions in Inches						
1	(1/8 x 27) x (1/16 x 27)		2PHRC 1N	0.75	0.25	9/16
2	(1/8 x 27) x (1/4)		2PHRC 4N	1.22	0.34	3/4
3	(1/4 x 18) x (1/16 x 27)		4PHRC 1N	0.92	0.25	3/4
4	(3/8 x 18) x (1/16 x 27)		6PHRC 1N	0.95	0.25	7/8
5	(3/8 x 18) x (1/8 x 27)		6PHRC 2N	1.03	0.34	7/8
6	(3/8 x 18) x (1/4 x 18)		6PHRC 4N	1.38	0.45	7/8
7	(1/2 x 14) x (1/8 x 27)		8PHRC 2N	1.56	0.34	9/16
8	(1/2 x 14) x (1/4 x 18)		8PHRC 4N	1.75	0.45	1.1/16
9	(1/2 x 14) x (3/8 x 18)		8PHRC 6N	1.78	0.59	1.1/16
10	(3/4 x 14) x (1/8 x 27)		12PHRC 2N	1.39	0.34	1.1/4
11	(3/4 x 14) x (1/4 x 18)		12PHRC 4N	1.81	0.45	1.1/4
12	(3/4 x 14) x (3/8 x 18)		12PHRC 6N	1.69	0.58	1.1/4
13	(3/4 x 14) x (1/2 x 14)		12PHRC 8N	2.06	0.73	1.1/4
14	(1 x 11.5) x (1/8 x 27)		16PHRC 2N	1.44	0.34	1.5/8
15	(1 x 11.5) x (1/4 x 18)		16PHRC 4N	1.63	0.45	1.5/8
16	(1 x 11.5) x (3/8 x 18)		16PHRC 6N	1.63	0.58	1.5/8
17	(1 x 11.5) x (1/2 x 14)		16PHRC 8N	2.19	0.73	1.5/8
18	(1 x 11.5) x (3/4 x 14)		16PHRC 12N	2.25	0.94	1.5/8
19	(1-1/4 x 11.5) x (1 x 11.5)		20PHRC 16N	2.41	1.17	2.1/8
20	(1-1/2 x 11.5) x (1 x 11.5)		24PHRC 16N	2.38	1.17	2.3/8
21	(2 x 11.5) x (1 x 11.5)		32PHRC 16N	2.58	1.17	2.7/8

NOTE : ① The 'E' Dimension is the minimum opening.

② NPT thread as per ANSI B 1.20.1.

17. Hex Reducing Coupling

ISO Tapered (F) x ISO Tapered (F)
(IT - PHRC - IT)



Sr. No.	ISO ② Female Pipe Size P	ISO ② Female Pipe Size P1	Ref Part No.	L	ØE ①	Hex F
Dimensions in Inches						
1	(3/8 x 19) x (1/4 x 19)		6PHRC 4IT	1.38	0.43	7/8
2	(1/2 x 14) x (1/4 x 19)		8PHRC 4IT	1.75	0.43	1.1/16
3	(1/2 x 14) x (3/8 x 19)		8PHRC 6IT	1.78	0.57	1.1/16

NOTE : ① The 'E' Dimension is the minimum opening.

② ISO (BSP Tapered) thread as per BS 21.