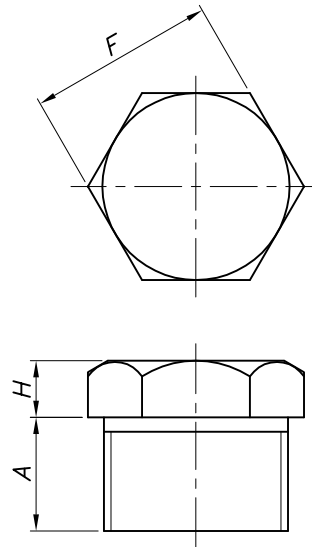
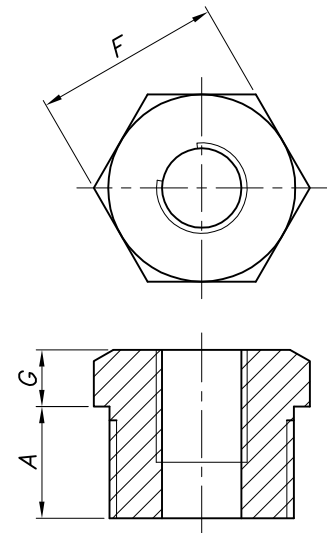


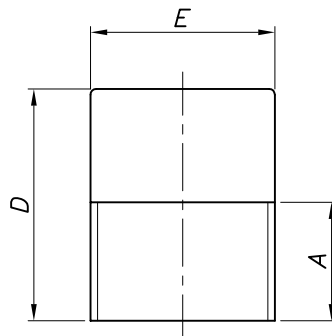
PLUG QUADRADO



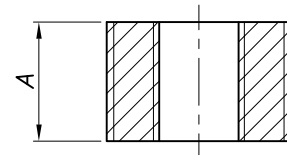
PLUG SEXTAVADO



BUCHA SEXTAVADA



PLUG REDONDO

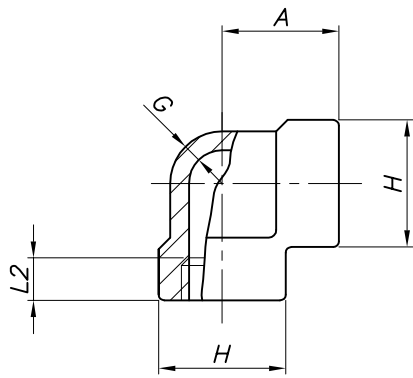


BUCHA

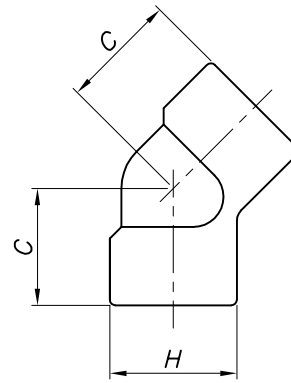
Ø NOM. POL. (INCH)	A		PLUG QUADRADO				PLUG REDONDO				PLUG SEXTAVADO / BUCHA				
			B		C		E		D		F		G	H	
	Nom.	Max. *	Min.	Max. *	Min.	Max. *	Min.	Toler. *	Min.	Max. *	Min.	Toler. *	Min.	Min.	Max. *
1/8	10.0	11.0	6.0	7.2	7.15	8.0	10.0	±0.2	35.0	35.8	11.11	±0.2	3.0 *	6.0	6.4
1/4	11.0	12.0	6.0	7.2	9.55	10.8	14.0	±0.2	41.0	41.8	15.88	±0.2	3.0	6.0	6.4
3/8	13.0	14.0	8.0	8.8	11.11	11.9	18.0	±0.2	41.0	41.8	17.46	±0.2	4.0	8.0	8.4
1/2	14.0	16.0	10.0	10.8	14.29	15.1	21.0	±0.2	44.0	44.8	22.23	±0.2	5.0	8.0	8.4
3/4	16.0	17.0	11.0	15.1	15.88	16.8	27.0	±0.2	44.0	44.8	26.99	±0.2	6.0	10.0	10.4
1	19.0	20.0	13.0	16.7	20.64	21.8	33.0	±0.2	51.0	52.2	34.93	±0.2	6.0	10.0	10.4
1.1/4	21.0	22.0	14.0	18.3	23.81	24.8	43.0	±0.4	51.0	52.2	44.45	±0.4	7.0	14.0	14.4
1.1/2	21.0	23.0	16.0	20.6	28.58	29.8	48.0	±0.4	51.0	52.2	50.80	±0.4	8.0	16.0	16.4
2	22.0	25.0	18.0	22.2	33.27	34.5	60.0	±0.4	64.0	65.2	63.50	±0.4	9.0	18.0	18.4
2.1/2	27.0	32.0	19.0	24.6	38.10	39.3	73.0	±0.4	70.0	71.2	76.20	±0.4	10.0	19.0	19.4
3	28.0	35.0	21.0	26.2	42.86	44.1	89.0	±0.4	70.0	71.2	88.90	±0.4	10.0	21.0	21.4
4	32.0	42.0	25.0	32.6	63.50	66.2	114.0	±0.4	76.0	77.2	117.48	±0.4	13.0	25.0	25.4

* - TOLERÂNCIAS ADOTADAS COMO PADRÃO QG, PERMITIDAS CONFORME ASME B16.11 PARÁGRAFO 6.1

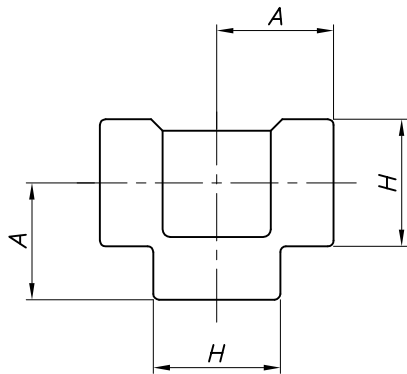
	QG IND. E COM. DE ACESSÓRIOS INDUSTRIAIS LTDA.				
	TÍTULO: PLUGS E BUCHAS 3000#		CÓDIGO: IT-009	FOLHA: 03	REV.: 03
	MATERIAL: AÇO INOX F304/L, F316/L AÇO CARBONO F11, F22, F91		NORMA: A182 - ASME B16.11		
	ESCALA: S/ESCALA	DATA: 29/07/19	DESENHISTA: SILVANA	VERIFICAÇÃO: SIDNEY	APROVAÇÃO: IVO



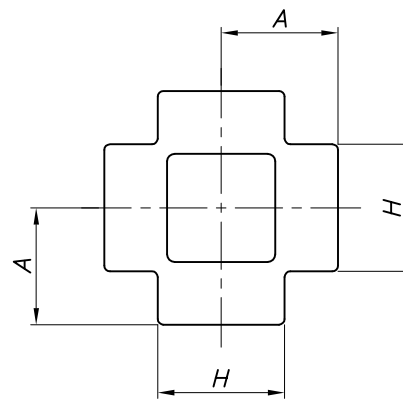
COTOVELO 90°



COTOVELO 45°



TEE



CRUZETA

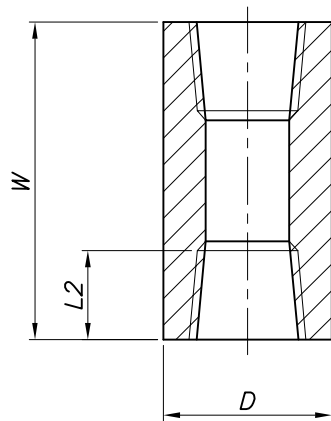
Ø NOM. POL. (INCH)	A			C			H			G			L2	
	2000	3000	Toler. *	2000	3000	Toler. *	2000	3000	Toler. *	2000	3000	Toler. *	Min	Toler. *
1/8	21.0	21.0	±0.6	17.0	17.0	±0.6	22.0	22.0	±0.6	3.18	3.18	-0.2/+0.4	6.7	-0/+1
1/4	21.0	25.0	±0.6	17.0	19.0	±0.6	22.0	25.0	±0.6	3.18	3.30	-0.2/+0.4	10.2	-0/+1
3/8	25.0	28.0	±0.6	19.0	22.0	±0.6	25.0	33.0	±0.6	3.18	3.51	-0.2/+0.4	10.4	-0/+1
1/2	28.0	33.0	±0.6	22.0	25.0	±0.6	33.0	38.0	±0.6	3.18	4.09	-0.2/+0.4	13.6	-0/+1
3/4	33.0	38.0	±0.6	25.0	28.0	±0.6	38.0	46.0	±0.6	3.18	4.32	-0.2/+0.4	13.9	-0/+1
1	38.0	44.0	±0.6	28.0	33.0	±0.6	46.0	56.0	±1.0	3.68	4.98	-0.2/+0.4	17.3	-0/+1
1.1/4	44.0	51.0	±0.6	33.0	35.0	±0.6	56.0	62.0	±1.0	3.89	5.28	-0.2/+0.4	18.0	-0/+1
1.1/2	51.0	60.0	±0.6	35.0	43.0	±0.6	62.0	75.0	±1.0	4.01	5.56	-0.2/+0.4	18.4	-0/+1
2	60.0	64.0	±1.2	43.0	44.0	±1.2	75.0	84.0	±1.0	4.27	7.14	-0.2/+0.6	19.2	-0/+1
2.1/2	76.0	83.0	±1.2	52.0	52.0	±1.2	92.0	102.0	±1.2	5.61	7.65	-0.2/+0.6	28.9	-0/+1
3	86.0	95.0	±1.2	64.0	64.0	±1.2	109.0	121.0	±1.2	5.99	8.84	-0.2/+0.6	30.5	-0/+1
4	106.0	114.0	±1.2	79.0	79.0	±1.2	146.0	152.0	±1.2	6.55	11.18	-0.2/+0.6	33.0	-0/+1

* - TOLERÂNCIAS ADOTADAS COMO PADRÃO QG, PERMITIDAS CONFORME ASME B16.11 PARÁGRAFO 6.1

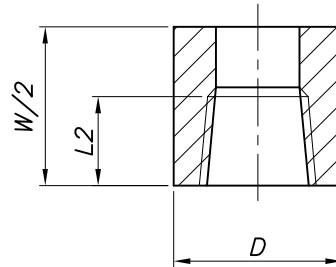


QG IND. E COM. DE ACESSÓRIOS INDUSTRIAIS LTDA.

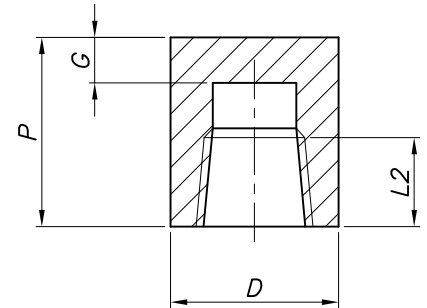
TÍTULO:		CONEXÕES FORJADAS ROSCADAS 3000#			CÓDIGO:	FOLHA:	REV.:
					IT-009	01	03
MATERIAL:				NORMA:			
AÇO INOX F304/L, F316/L AÇO CARBONO F11, F22, F91				A182 - ASME B16.11			
ESCALA:		DATA:		DESENHISTA:		VERIFICAÇÃO:	
S/ESCALA		29/07/19		SILVANA		SIDNEY	
						APROVAÇÃO:	
						IVO	



LUVA



MEIA-LUVA



CAP

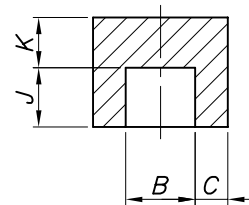
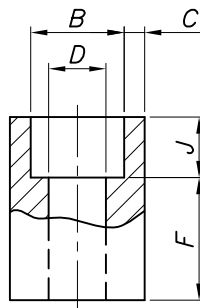
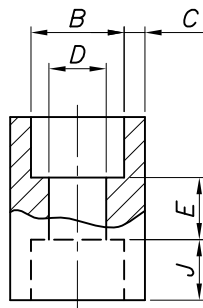
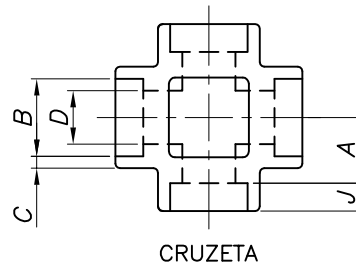
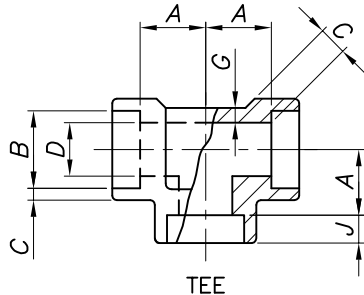
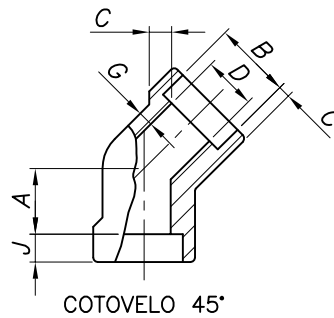
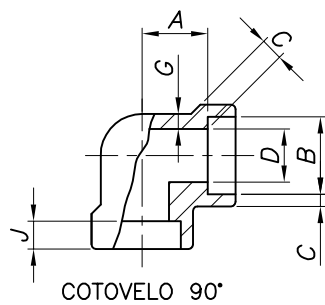
Ø NOM. POL. (INCH)	W		W/2		P		D		G		L2	
	Nominal	Tol.(±) *	Nominal	Tol.(±) *	Nominal	Tol.(±) *	Nominal	Tol.(±) *	Nominal	Max	Min	Max
1/8	32.0	±0.4	16.0	±0.4	19.0	±0.4	16.0	±0.2	4.8	5,2	6,7	7,7
1/4	35.0	±0.4	17.5	±0.4	25.0	±0.4	19.0	±0.2	4.8	5,2	10,2	11,2
3/8	38.0	±0.4	19.0	±0.4	25.0	±0.4	22.0	±0.2	4.8	5,2	10,4	11,4
1/2	48.0	±0.4	24.0	±0.4	32.0	±0.4	28.0	±0.2	6.4	6,8	13,6	14,6
3/4	51.0	±0.4	25.5	±0.4	37.0	±0.4	35.0	±0.2	6.4	6,8	13,9	14,9
1	60.0	±0.4	30.0	±0.4	41.0	±0.4	44.0	±0.2	9.7	10,1	17,3	18,3
1.1/4	67.0	±0.8	33.5	±0.4	44.0	±0.4	57.0	±0.2	9.7	10,1	18.0	19,0
1.1/2	79.0	±0.8	39.5	±0.4	44.0	±0.4	64.0	±0.2	11.2	11,6	18,4	19,4
2	86.0	±0.8	43.0	±0.4	48.0	±0.4	76.0	±0.4	12.7	13,1	19,2	20,2
2.1/2	92.0	±0.8	46.0	±0.4	60.0	±0.4	92.0	±0.4	15.7	16,1	28,9	29,9
3	108.0	±0.8	54.0	±0.4	65.0	±0.4	108.0	±0.4	19.0	19,4	30,5	31,5
4	121.0	±0.8	60.5	±0.4	68.0	±0.4	140.0	±0.4	22.4	22,8	33,0	34,0

* - TOLERÂNCIAS ADOTADAS COMO PADRÃO QG, PERMITIDAS CONFORME ASME B16.11 PARÁGRAFO 6.1



QG IND. E COM. DE ACESSÓRIOS INDUSTRIAIS LTDA.

TÍTULO:		CONEXÕES ROSCADAS 3000#		CÓDIGO:	IT-009	FOLHA:	02	REV.:	03
MATERIAL:				AÇO INOX F304/L, F316/L AÇO CARBONO F11, F22, F91		NORMA:			
				A182 - ASME B16.11					
ESCALA:		DATA:		DESENHISTA:		VERIFICAÇÃO:		APROVAÇÃO:	
S/ESCALA		29/07/19		SILVANA		SIDNEY		IVO	



LUVA

MEIA-LUVA

CAP

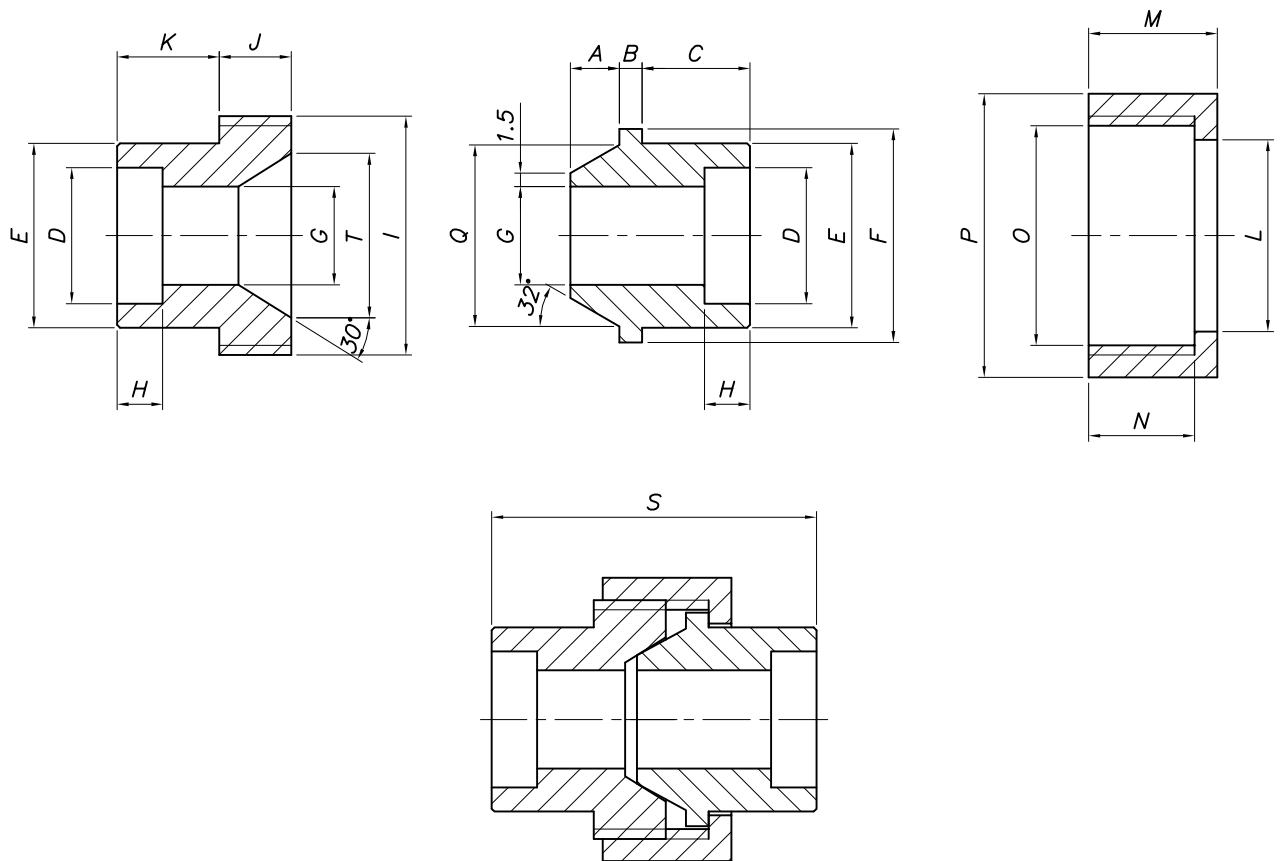
Ø NOM. POL. (INCH)	B		D		C		G		J		A			E		F		K	
	Min.	Max.	Min.	Max.	Min.	Max.*	Min.	Max.*	Min.	Max.*	Cotov. 45°	Outros	Toler. +/-	Med.	Toler. +/-	Med.	Toler. +/-	Min.	Max.*
1/8	10.8	11.2	6.1	7.6	3.18	3.70	2.41	3.20	9.5	10.0	8.0	11.0	1.0	6.5	1.5	16.0	1.5	4.8	5.2
1/4	14.2	14.6	8.5	10.0	3.30	4.00	3.02	3.80	9.5	10.0	8.0	11.0	1.0	6.5	1.5	16.0	1.5	4.8	5.2
3/8	17.6	18.0	11.8	13.3	3.50	4.50	3.20	4.00	9.5	10.0	8.0	13.5	1.5	6.5	3.0	17.5	3.0	4.8	5.2
1/2	21.8	22.2	15.0	16.6	4.09	5.30	3.73	4.60	9.5	10.0	11.0	15.5	1.5	9.5	3.0	22.5	3.0	6.4	6.8
3/4	27.2	27.6	20.2	21.7	4.27	5.50	3.91	4.80	12.5	13.0	13.0	19.0	1.5	9.5	3.0	24.0	3.0	6.4	6.8
1	33.9	34.3	25.9	27.4	4.98	6.40	4.55	5.40	12.5	13.0	14.0	22.5	2.0	12.5	4.0	28.5	4.0	9.6	10.0
1.1/4	42.7	43.1	34.3	35.8	5.28	6.90	4.85	5.70	12.5	13.0	17.5	27.0	2.0	12.5	4.0	30.0	4.0	9.6	10.0
1.1/2	48.8	49.2	40.1	41.6	5.54	7.20	5.08	5.90	12.5	13.0	20.5	32.0	2.0	12.5	4.0	32.0	4.0	11.2	11.6
2	61.2	61.7	51.7	53.3	6.04	7.80	5.54	6.50	16.0	16.5	25.5	38.0	2.0	19.0	4.0	41.0	4.0	12.7	13.1
2.1/2	73.9	74.4	61.2	64.2	7.67	9.90	7.01	8.00	16.0	16.5	28.5	41.0	2.5	19.0	5.0	43.0	5.0	15.7	16.1
3	89.8	90.3	76.4	79.4	8.30	10.70	7.62	8.50	16.0	16.5	32.0	57.0	2.5	19.0	5.0	44.5	5.0	19.0	19.4
4	115.2	115.7	100.7	103.8	9.35	12.10	8.56	9.50	19.0	19.5	41.0	66.5	2.5	19.0	5.0	48.0	5.0	22.4	22.8

* - TOLERÂNCIAS ADOTADAS COMO PADRÃO QG, PERMITIDAS CONFORME ASME B16.11 PARÁGRAFO 6.1



QG IND. E COM. DE ACESSÓRIOS INDUSTRIAIS LTDA.

TÍTULO: CONEXÕES FORJADAS SOCKETWELDING 3000#		CÓDIGO: IT-009	FOLHA: 04	REV.: 04
MATERIAL: AÇO INOX F304/L, F316/L AÇO CARBONO F11, F22, F91		NORMA: A182 - ASME B16.11		
ESCALA: S/ESCALA	DATA: 29/07/19	DESENHISTA: SILVANA	VERIFICAÇÃO: SIDNEY	APROVAÇÃO: IVO

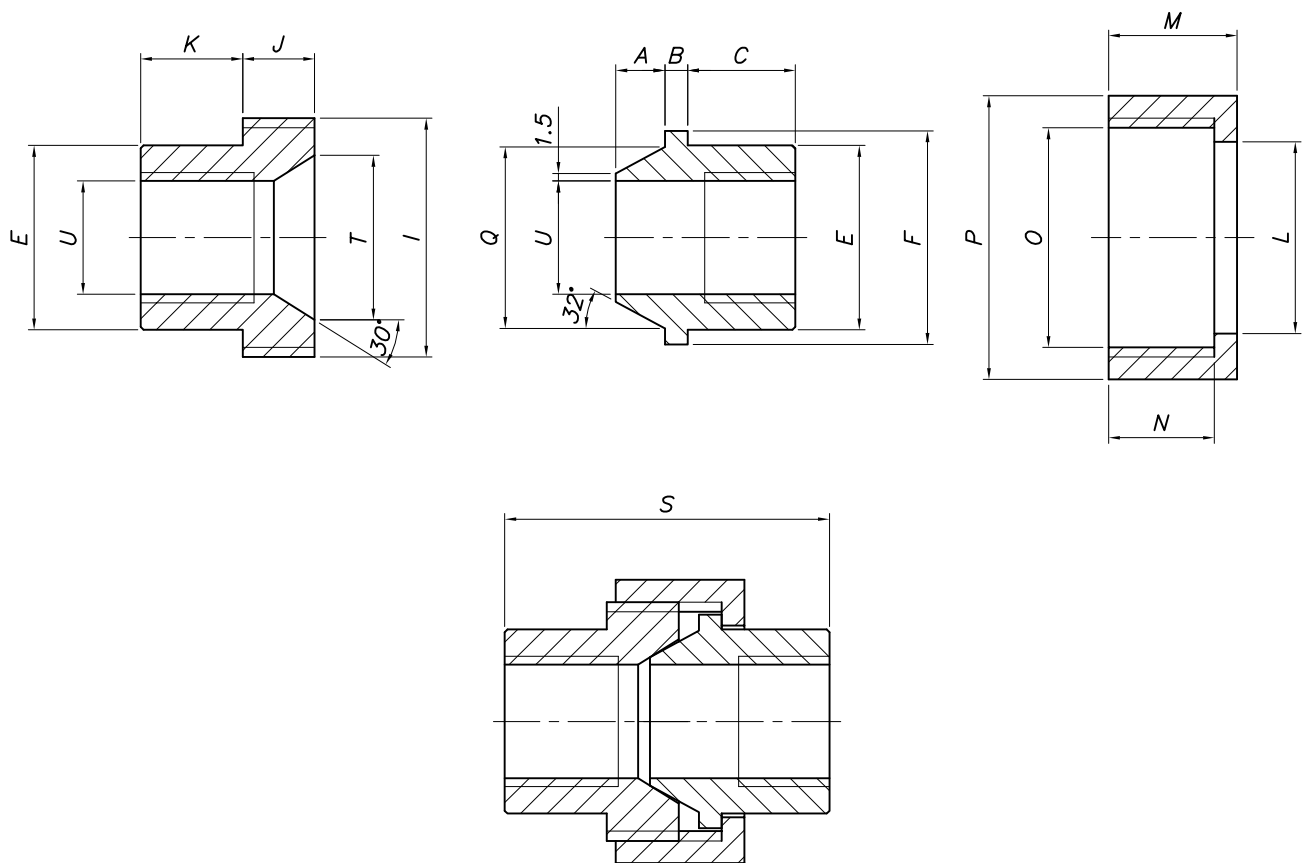


Ø NOMINAL POL. (INCH)		1/4	3/8	1/2	3/4	1	1.1/4	1.1/2	2	2.1/2	3	TOLER.
mm	A	5.0	5.0	7.0	7.0	7.0	7.0	8.0	9.0	13.0	16.0	±0.4
	B	4.0	4.0	4.0	4.0	4.0	5.0	5.0	6.0	6.0	8.0	±0.4
	C	17.0	17.0	20.0	21.0	24.0	28.0	30.0	34.0	38.0	43.0	±0.4
	D	14.3	17.6	21.8	27.2	33.9	42.8	48.7	61.2	74.0	90.0	±0.2
	E	21.0	25.0	31.0	36.0	44.5	55.0	62.0	76.0	89.0	108.0	±0.2
	F	25.4	28.5	34.9	40.0	50.8	63.5	69.8	85.5	95.0	120.0	±0.2
	G	9.0	12.0	15.8	20.5	26.5	34.0	41.0	52.5	63.0	78.0	±0.2
	H	9.7	9.7	9.7	12.7	12.7	12.7	12.7	15.8	15.8	15.8	±0.4
	I	28.0	31.0	38.0	43.0	53.8	66.5	73.0	88.5	98.5	123.0	±0.1
	J	10.0	10.0	11.0	11.0	11.0	11.0	13.0	15.0	17.0	22.0	±0.4
	K	14.0	14.0	17.0	18.0	21.0	25.0	28.0	31.0	36.0	41.0	±0.4
	L	21.5	25.5	31.5	36.5	45.0	55.5	62.5	76.5	89.5	108.5	±0.2
	M	20.0	20.0	21.0	22.0	24.0	25.0	26.0	29.0	32.0	40.0	±0.4
	N	16.0	16.0	17.0	18.0	18.0	19.0	20.0	23.0	26.0	34.0	±0.4
	O	26.0	29.0	35.5	40.5	51.3	64.0	70.5	86.0	95.8	120.3	±0.1
	P	34.9	41.2	47.6	50.8	64.0	80.0	92.0	105.0	117.0	145.0	±0.2
	Q	18.2	21.2	27.5	32.2	38.2	45.7	54.0	66.7	82.2	101.0	±0.2
	S	47.0	47.0	54.0	57.0	63.5	71.5	79.5	89.0	100.0	118.0	±0.4
	T	15.7	18.7	25.0	28.5	33.9	42.6	49.6	63.0	78.5	96.0	±0.2



QG IND. E COM. DE ACESSÓRIOS INDUSTRIAIS LTDA.

TÍTULO:		UNIÃO SOCKET WELDING – 3000 LBS			CÓDIGO:	FOLHA:	REV.:
					IT-009	07	03
MATERIAL:				NORMA:			
AÇO INOX F304/L, F316/L AÇO CARBONO F11, F22, F91				A182 – PADRÃO QG			
ESCALA:	DATA:	DESENHISTA:	VERIFICAÇÃO:	APROVAÇÃO:			
S/ ESCALA	29/07/19	SILVANA	SIDNEY	IVO			

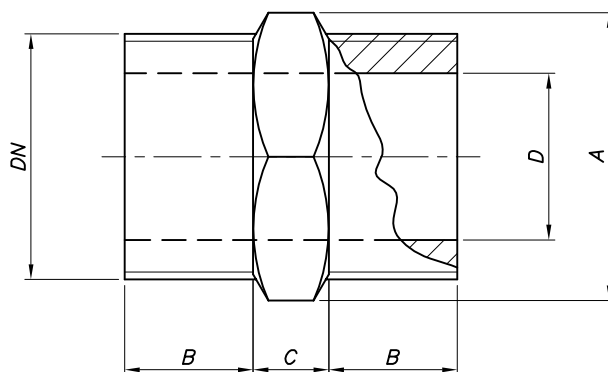


Ø NOMINAL POL. (INCH)	1/4	3/8	1/2	3/4	1	1.1/4	1.1/2	2	2.1/2	3	TOLER.	
mm	A	5.0	5.0	7.0	7.0	7.0	7.0	8.0	9.0	13.0	16.0	±0.4
	B	4.0	4.0	4.0	4.0	4.0	5.0	5.0	6.0	6.0	8.0	±0.4
	C	17.0	17.0	20.0	21.0	24.0	28.0	30.0	34.0	38.0	43.0	±0.4
	E	21.0	25.0	31.0	36.0	44.5	55.0	62.0	76.0	89.0	108.0	±0.2
	F	25.4	28.5	34.9	40.0	50.8	63.5	69.8	85.5	95.0	120.0	±0.2
	I	28.5	31.0	38.1	43.0	53.8	66.5	73.0	88.5	98.5	123.0	±0.1
	J	10.0	10.0	11.0	11.0	11.0	11.0	13.0	15.0	17.0	22.0	±0.4
	K	14.0	14.0	17.0	18.0	21.0	25.0	28.0	31.0	36.0	41.0	±0.4
	L	21.5	25.5	31.5	36.5	45.0	55.5	62.5	76.5	89.5	108.5	±0.2
	M	20.0	20.0	21.0	22.0	24.0	25.0	26.0	29.0	32.0	40.0	±0.4
	N	16.0	16.0	17.0	18.0	18.0	19.0	20.0	23.0	26.0	34.0	±0.4
	O	26.0	29.0	35.5	40.5	51.3	64.0	70.5	86.0	95.8	120.3	±0.1
	P	34.9	41.2	47.6	50.8	64.0	80.0	92.0	105.0	117.0	145.0	±0.2
	Q	20.2	23.7	29.7	34.7	40.7	49.7	57.0	70.2	86.2	106.0	±0.2
	S	47.0	47.0	54.0	57.0	63.5	71.5	79.5	89.0	100.0	118.0	±0.4
	T	17.7	21.2	27.2	31.0	36.4	46.6	52.6	66.5	82.5	101.0	±0.2
U	11.0	14.5	18.0	23.0	29.0	38.0	44.0	56.0	67.0	83.0	±0.1	



QG IND. E COM. DE ACESSÓRIOS INDUSTRIAIS LTDA.

TÍTULO:		UNIÃO COM ROSCA – 3000 LBS			CÓDIGO:	FOLHA:	REV.:
					IT-009	08	03
MATERIAL:				NORMA:			
AÇO INOX F304/L, F316/L AÇO CARBONO F11, F22, F91				A182 – PADRÃO QG			
ESCALA:	DATA:	DESENHISTA:	VERIFICAÇÃO:	APROVAÇÃO:			
S/ ESCALA	29/07/19	SILVANA	SIDNEY	IVO			



NIPLE SEXTAVADO

Ø NOMINAL POL. (INCH)	1/8	1/4	3/8	1/2	3/4	1	1.1/4	1.1/2	2	2.1/2	3	4	
mm	A	12.7	15.9	19.1	22.2	28.5	34.9	44.5	50.8	64.0	76.2	92.0	117.0
	B	10,0	11,0	12,0	15,0	16,0	19,0	21,0	22,0	24,0	30,0	34,0	40,0
	C	6,0	6,0	6,0	7,0	8,0	9,0	10,0	11,0	12,0	15,0	15,0	15,0
	D	5,0	7,0	9,0	12,5	18,0	23,0	29,0	33,0	43,0	63,0	67,0	90,0



QG IND. E COM. DE ACESSÓRIOS INDUSTRIAIS LTDA.

TÍTULO:	NIPLE SEXTAVADO – 3000 LIBRAS			CÓDIGO:	IT-009	FOLHA:	09	REV.:	03
MATERIAL:	AÇO INOX F304/L, F316/L AÇO CARBONO F11, F22, F91			NORMA:	A182 – PADRÃO QG				
ESCALA:	S/ ESCALA	DATA:	29/07/19	DESENHISTA:	SILVANA	VERIFICAÇÃO:	SIDNEY	APROVAÇÃO:	IVO