LAME

AB

RACCORDI FORGIATI

FORGED STEEL FITTINGS

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COSTRUZIONE RACCORDI
PER INDUSTRIE PETROLCHIMICHE

FORGED STEEL FITTINGS
FOR PETROCHEMICAL INDUSTRY

DIMENSIONI E TOLLERANZE SECONDO

DIMENSIONS AND TOLLERANCES
IN ACCORDANCE TO

ASME B16.11 AND BS 3799

CATALOGO N° 009/12

A COMPANY CERTIFIED PED and ISO 9001:2008

LAME

CONDIZIONI GENERALI DI VENDITA

1) ACCETTAZIONE DELL'ORDINE

L'ordine si intende accettato soltanto dopo la nostra conferma scritta.
Qualsiasi deroga alle presenti Condizioni e qualsiasi accordo verbale saranno ritenuti validi solo se da noi accettati per iscritto.
Le Condizioni Generali di Vendita valgono per qualsiasi ordine, anche se non espressamente richiamate. Il compratore rinuncia ad opporre eccezioni basate su intese verbali di qualunque genere.
Le nostre offerte e i preventivi non sono impegnativi e potranno subire, in qualsiasi momento, variazioni. Misure, pesi, disegni e riproduzioni sono impegnativi per l'esecuzione dell'ordine, soltanto se ciò è stato espressamente confermato per iscritto.

2) FORNITURE E TERMINI DI CONSEGNA

Per i limiti della fornitura e termini della consegna fa stato esclusivamente la nostra conferma d'ordine. Il termine della consegna da noi indicato decorre dal momento in cui sono stati chiariti tutti i dati relativi all'esecuzione dell'ordine.
I termini di consegna sono sempre approssimativi e non impegnativi.
Interruzioni forzate del lavoro o altri casi di forza maggiore comprese disposizioni delle autorità, difficoltà e perturbazioni al normale approvvigionamento, conflitti sindacali, mancanza di materie prime ecc., ci autorizzano a prorogare proporzionalmente il termine di consegna oppure a recedere totalmente o in parte dal contratto, senza che ciò possa dar luogo a pretese di indennizzo o di successiva consegna della merce.
Senza il nostro esplicito consenso, gli ordini, regolarmente impartiti ed accettati non possono essere nè parzialmente nè totalmente annullati, anche nel caso di ritardi nelle consegne.
Sono consentite consegne parziali. In caso di dilazionamento della spedizione su richiesta del cliente, fermi restando i suoi obblighi di pagamento, verranno allo stesso addebitate le spese derivanti dal magazzinaggio.
Qualunque ordinazione assunta da agenti, rappresentanti o viaggiatori del venditore non è per lo stesso impegnativa finchè questi non avrà data la sua approvazione. Gli agenti, rappresentanti e viaggiatori non possono procedere ad incassi di alcun genere se non muniti di specifica autorizzazione scritta del venditore: in difetto, il pagamento viene effettuato a rischio e pericolo del cliente.

3) SPEDIZIONI

Se nelle ordinazioni non è prescritto il modo di spedizione, il venditore inoltrerà la merce nel modo che riterrà più conveniente; per le forniture in porto franco, la scelta del modo di spedizione spetta al venditore. In ogni caso il venditore non assume nessuna responsabilità per la scelta del modo di spedizione. Se il compratore prescrive il modo di spedizione, il venditore ha la facoltà di bonificare al compratore le spese di trasporto calcolate per la via più diretta.
Il venditore si riserva la facoltà di effettuare spedizioni anche da luoghi diversi dal suo magazzino.

4) RISCHI DI TRASPORTO

La merce, anche se fornita franco, viaggia sempre a rischio e pericolo del compratore.
L'assicurazione viene coperta soltanto su richiesta e a carico del compratore.

5) RECLAMI

Contestazioni di qualsiasi natura devono essere fatte subito dopo il ricevimento della merce, ed in ogni caso non oltre otto giorni dalla scoperta. Reclami relativi ad ammanchi o deterioramenti durante il trasporto vanno immediatamente fatti al venditore, provvedendo il compratore a raccogliere e conservare tutte le prove relative all'irregolarità contestata, allo scopo di poterle far valere nei confronti del vettore stesso.

6) GARANZIA

Se le condizioni di pagamento ed ogni altro obbligo a carico del compratore, anche per forniture diverse da quella a cui la contestazione si riferisce, sono stati osservati, viene da noi data garanzia per i nostri prodotti nel senso che sostituiremo gratuitamente, nello stato della nostra fornitura, entro un termine ragionevole e alle condizioni pattuite per l'ordine, quei pezzi che, in condizioni di esercizio normali al massimo entro un anno dalla data fattura, presentassero dei guasti dovuti a difetti di costruzione, di materiale o di lavorazione a noi imputabili.
Sono esclusi dalla garanzia i danni dovuti a normale usura, magazzinaggio inadatto, imperizia, sovraccarichi, ecc.
È formalmente esclusa ogni altra responsabilità, in particolare per danni diretti ed indiretti derivanti da vizi della merce, compresa la mancanza di qualità promessa, nonchè dalla sostituzione e dalle sue conseguenze.
Per prodotti fabbricati da terzi, la nostra garanzia si limita alla cessione dei nostri diritti di garanzia nei confronti del fornitore del prodotto.
Le parti sostituite diventano di nostra proprietà.
La garanzia decade, qualora l'oggetto della fornitura sia stato modificato per l'intervento di terzi o a seguito del montaggio di prodotti di provenienza estranea oppure che non siano state osservate le prescrizioni di installazione e di uso.
Non assumiamo responsabilità per le difficoltà che potessero derivare dalle norme sulla protezione della proprietà industriale nel caso di rivendita o di impiego dei nostri prodotti.

7) CONDIZIONI DI PAGAMENTO E RISERVA DI PROPRIETÀ

Solo le condizioni di pagamento stipulate nella nostra conferma d'ordine sono valide.
È formalmente esclusa ogni altra responsabilità. Il diritto di proprietà sulla merce venduta resta a noi riservato fino ad intervenuto integrale pagamento della stessa.
Abbiamo la facoltà di risolvere e/o di sospendere le forniture nel caso di mora del compratore per qualsiasi importo a suo debito o qualora la sua situazione patrimoniale e/o finanziaria peggiorasse successivamente alla conclusione del contratto.
Verificandosi ritardi nei pagamenti da parte del compratore, anche per precedenti o successive forniture, anche se motivati da contestazioni su forniture, potremo chiedere l'immediato pagamento del residuo importo complessivo a nostro credito o valerci della riserva di proprietà, esigendo l'immediata riconsegna della merce.
Sui pagamenti anche se con effetti ritardati oltre ai termini stabiliti e riportati in fattura, decorreranno, senza pregiudizio di ogni altra azione, gli interessi di mora al tasso del corrente sconto bancario.

8) LUOGO DI ADEMPIMENTO E FORO COMPETENTE

Luogo di adempimento, e Foro competente sono per entrambe le parti Busto Arsizio. Spetterà però al venditore la facoltà di azionare il compratore avanti altro Foro competente.

Le indicazioni contenute nel presente opuscolo hanno un valore puramente indicativo e non sono impegnative.

GENERAL SALES CONDITIONS

1) ACCEPTANCE OF ORDER

The order is considered accepted only after our written confirmation.
Any departure from these conditions and any verbal agreement shall be considered valid only if confirmed by us in writing.
The General Sales Conditions apply to anysoever order even if not expressly mentioned. Buyer hereby renounces to oppose exceptions based upon verbal understandings of any kind.
Our offers and preventives are not binding and may be varied at any moment.
Measures, weights, drawings and copies are considered to be binding for the carrying out of the order only if expressly confirmed in writing.

2) SUPPLIES AND DELIVERY TERMS

The limits of supply and delivery terms are defined exclusively by our confirmation of order. The terms of delivery given by us shall come into force at the moment, at which all the data relating to the carrying out of the order are fully defined.
The delivery terms are always approximate and not binding. Forced interruptions of the work and other acts of God such as provisions made by the authorities, difficulties and troubles in normal procurements, trade union conflicts, raw material lacks etc. shall authorize us to prorogate proportionally the delivery terms or back down in part or wholly from the contract, this without this leading to claims for damages or late delivery of the goods.
The orders regularly given and accepted shall not be cancelled in part or totally without our explicit consent even in the case of delay of delivery.
Part deliveries are consented. In the case of deferment of the shipments upon client's request, without changing the latter's obligations of payment, the stocking expenses shall be charged to the client.
Any order taken by agents, representatives or travelling clerks of seller are in itself not binding until approved by seller. The said agents, representatives and travelling clerks shall not be allowed to collect any payments unless provided with a specific written authorization by seller to do so: otherwise any payment made shall be considered as being made at client's risk and danger.

3) CONSIGNMENTS

If the order does not prescribe the preferred kind of forwarding the goods, seller shall proceed in the manner considered by him to be the most convenient one; for supplies in free port, the choice of forwarding is up to seller. Seller, in any case, does not assume any responsibility for the choice of forwarding the goods. If the buyer does define the way of forwarding, seller is authorized to credit buyer the forwarding expenses calculated for the most direct way.
Seller reserves himself the right to forward the goods also from places different from his magazines.

4) TRANSPORT RISKS

The goods, even if free buyer's place, travel always at buyer's risk.
Any insurance will be subscribed only upon buyer's request and at his charge.

5) CLAIMS

Any claims of any kind shall be made immediately after receiving the goods and not later than eight days after ascertainement. Claims for deficits or travelling damages shall be made immediately to seller with buyer collecting and preserving all the proofs relating to the contested irregularity for enabling us to proceed against the forwarding agent.

6) GUARANTEE

Provided that the conditions of payment and other obligations of buyer, also for supplies different from those the said claims refer to, have been observed, we shall guarantee the free replacement of our products as according to the conditions of supply, within a reasonable term and according to the conditions agreed upon for the order, of those pieces which, within a year date of invoice, are affected by flaws caused by constructional, material or machining defects the cause of which can be attributed to us.
Not covered by the guarantee are damages caused by normal wear, unsuitable storing, lack of skill in use, overloads and the like.
Any other responsibility shall be excluded, in particular for direct and indirect damages caused by faults of the goods, comprising the lack of promised quality, as well as caused by the replacement of parts and the therefrom ensuing consequences.
For products constructed by third parties, our guarantee shall be limited to right of cession of our guarantee rights against the maker of the product.
Replaced parts shall become our property.
This guarantee shall no longer apply, if the object of the supply has been modified by third parties or in case of the assembling of foreign products or else if the relative instructions for installation and use have not been observed.
We assume no responsibility at all for any difficulty which may arise from the rules regarding the protection of industrial property in the case of resale and use of our products.

7) CONDITIONS OF PAYMENT AND PROPERTY RIGHTS

Only the conditions of payment given in our confirmation of order shall apply.
Any other responsibility is formally excluded. The right of property to the sold goods is ours until such a time the whole payment therefor has been made.
We are hereby authorized to rescind and/or suspend the supply in case of the buyer being in arrears for any amount he owes or if his statement of assets or liability and/or financial should worsen after the conclusion of the contract.
If there are any delays in payments by the buyer also for preceding or later supplies, even if motivated by claims on supplies, we are authorized to ask for the immediate payment of the total rest amount due to us and avail ourselves of the right of property by asking for the immediate return of the goods.
Delayed payments, even if made after the terms laid down and reported in the invoice, shall be subjected, without prejudice to any other action, to interest in arrears at the rate of the bank discounts in force.

8) PLACE OF PERFORMANCE AND COURT OF COGNIZANCE

The place of performance and competent Court shall be for both parties Busto Arsizio. Seller has, however, the right to proceed against buyer at other competent Courts of Law.

The contents of these instructions are purely indicative and not binding.

INDICE - INDEX

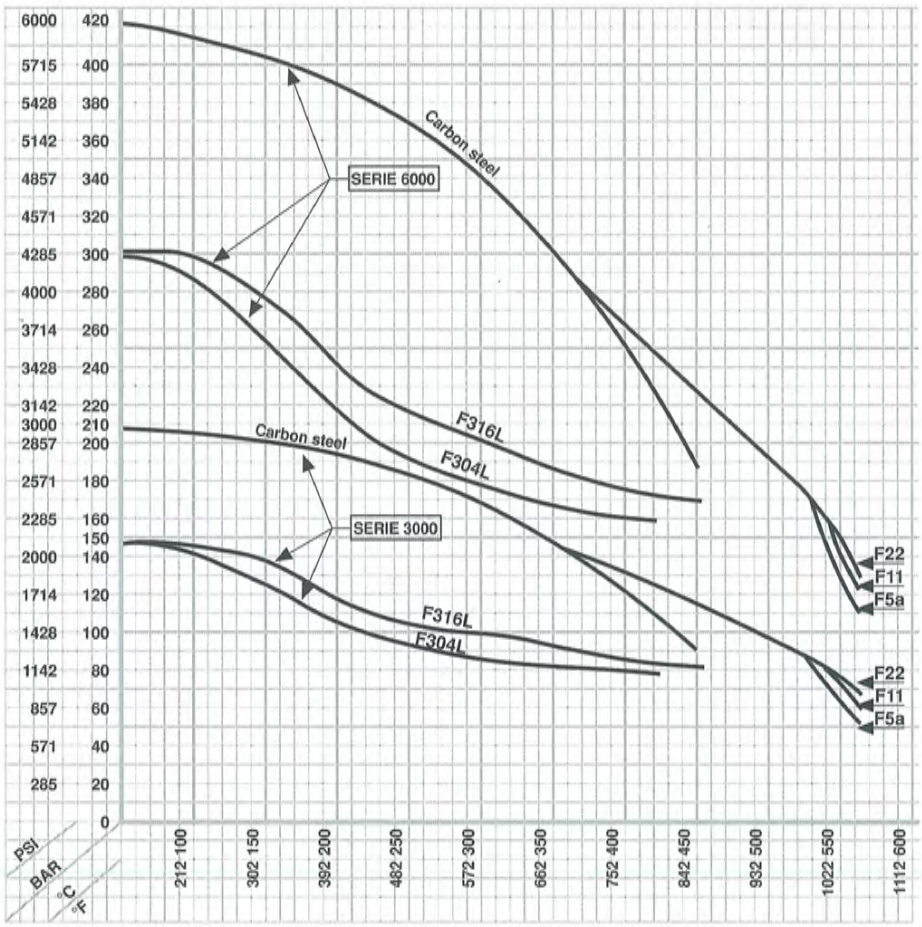
Pressioni di servizio
Pressure rating

RACCORDI / FITTINGS		Tubo Pipe
Serie / Class	Tipo / Type	
2000 lb	Threaded	Sch. 80
3000 lb	Threaded	Sch. 160
6000 lb	Threaded	XXS
3000 lb	Socket-welding	Sch. 80
6000 lb	Socket-welding	Sch. 160
9000 lb	Socket-welding	XXS

Correlazione tra la serie dei raccordi ed i tubi in accordo alle ASME B16.11

Correlation of fittings class with wall designation of pipe according to ASME B16.11

Pressioni e temperature di servizio secondo ASME B16.11
Pressure – temperatures ratings according to ASME B16.11



— Acciaio al carbonio
Carbon steel ASTM A 105

— Acciaio legato
Alloy steel ASTM A 182 F 5a

— Acciaio legato
Alloy steel ASTM A 182 F 22

— Acciaio legato
Alloy steel ASTM A 182 F 11

— Acciaio inox
Stainless steel ASTM A 182 F 304 L

— Acciaio inox
Stainless steel ASTM A 182 F 316 L

NORME ASTM / ASTM STANDARDS

Riassunto delle principali norme ASTM, generalmente utilizzate nelle industrie petrolifere.
Summary of the main ASTM standards generally used in the petroleum industries.

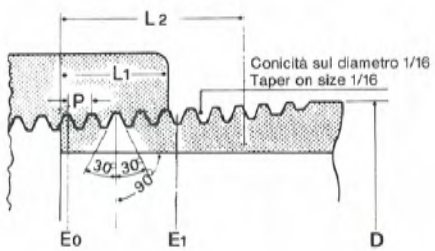
ASTM	Grado Grade	Designazione UNS Designation	COMPOSIZIONE CHIMICA % - CHEMICAL REQUIREMENTS %									CARATTERISTICHE MECCANICHE - MECHANICAL REQUIREMENTS								
			C	Mn	Pmax	Smax	Si	Ni	Cr	Mo	Altri Others	Resistenza Tensile strenght min. MPa	Resistenza Tensile strenght min. ksi	Snervamento Yield strenght min. MPa	Snervamento Yield strenght min. ksi	Allung. min.% Elongat. min. %	Contraz. min.% Red. of area min. %	Durezza Hardness	Resilienza a Impact test at °C	Resilienza a Impact test at °F
A105			0,35 max	0,60-1,05	0,040	0,050	0,35 max	0,40 max	0,30 max	0,12 max	Cu<0,40-V<0,03 Cb<0,02	485	70	250	36	22	30	137-187HB		
A106	B		0,30 max	0,29-1,06	0,035	0,035	0,10 min	0,40 max	0,40 max	0,15 max	Cu<0,40-V<0,08	415	60	240	35	L30T16,5				
A182	F5a	K42544	0,25 max	0,60 max	0,040	0,030	0,50 max	0,50 max	4,0-6,0	0,44-0,55		620	90	450	65	22	50	187-248HB		
	F11	K11572	0,10-0,20	0,30-0,8	0,040	0,040	0,50-1,00		1,0-1,50	0,44-0,65		485	70	275	40	20	30	143-207HB		
	F22	K21590	0,05-0,15	0,30-0,6	0,040	0,040	0,50 max		2,0-2,50	0,87-1,13		515	75	310	45	20	30	156-207HB		
	F304	S30400	0,08 max	2,00 max	0,040	0,030	1,00 max	8,0-11,0	18,0-20,0			515	75	205	30	30	50			
	F304L	S30403	0,035 max	2,00 max	0,040	0,030	1,00 max	8,0-13,0	18,0-20,0			485	70	170	25	30	50			
	F316	S31600	0,08 max	2,00 max	0,040	0,030	1,00 max	10,0-14,0	16,0-18,0	2,00-3,00		515	75	205	30	30	50			
	F316L	S31603	0,035 max	2,00 max	0,040	0,030	1,00 max	10,0-15,0	16,0-18,0	2,00-3,00		485	70	170	25	30	50			
	F321	S32100	0,08 max	2,00 max	0,040	0,030	1,00 max	9,0-12,0	17,0 min		5C<Ti<0,70%	515	75	205	30	30	50			
	F347	S34700	0,08 max	2,00 max	0,040	0,030	1,00 max	9,0-13,0	17,0-20,0		10C<Cb+Ta<1,10%	515	75	205	30	30	50			
	F51	S31803	0,03 max	2,00 max	0,030	0,020	1,00 max	4,5-6,5	21,0-23,0	2,5-3,5	N 0,08-0,20	620	90	450	65	25	45			
A312	TP304	S30400	0,08 max	2,00 max	0,040	0,030	0,75 max	8,0-11,0	18,0-20,0			515	75	205	30	L35T25				
	TP304L	S30403	0,035 max	2,00 max	0,040	0,030	0,75 max	8,0-13,0	18,0-20,0			485	70	170	25	L35T25				
	TP316	S31600	0,08 max	2,00 max	0,040	0,030	0,75 max	11,0-14,0	16,0-18,0	2,00-3,00		515	75	205	30	L35T25				
	TP316L	S31603	0,035 max	2,00 max	0,040	0,030	0,75 max	10,0-15,0	16,0-18,0	2,00-3,00		485	70	170	25	L35T25				
	TP321	S32100	0,08 max	2,00 max	0,040	0,030	0,75 max	9,0-13,0	17,0-20,0		5C<Ti<0,70%	515	75	205	30	L35T25				
	TP347	S34700	0,08 max	2,00 max	0,040	0,030	0,75 max	9,0-13,0	17,0-20,0		10C<Cb+Ta<1%	515	75	205	30	L35T25				
A333	6		0,30 max	0,29-1,06	0,025	0,025	0,10 min					415	60	240	35	L30T16,5			-45	-50
A335	P5	K41545	0,15 max	0,30-0,60	0,025	0,025	0,50 max		4,00-6,00	0,45-0,65		415	60	205	30	L30T20				
	P11	K11597	0,05-0,15	0,30-0,60	0,025	0,025	0,50-1,00		1,00-1,50	0,44-0,65		415	60	205	30	L30T20				
	P22	K21590	0,05-0,15	0,30-0,60	0,025	0,025	0,50 max		1,90-2,60	0,87-1,13		415	60	205	30	L30T20		max197HB		
A350	LF2		0,30 max	1,35 max	0,035	0,040	0,15-0,30	0,40 max	0,30 max	0,12 max	Cu<0,40 Cb<0,02 V<0,03	485-655	70-95	250	36	22	30		-45,6	-50
A420	WPL6		0,30 max	0,39-1,06	0,030	0,030	0,10 min					415-585	60-85	240	35	L30T16,5			-45	-50
A403	WP304		0,08 max	2,00 max	0,045	0,030	1,00 max	8,0-11,00	18,0-20,0			515	75	205	30	L28T20				
	WP304L		0,035 max	2,00 max	0,045	0,030	1,00 max	8,0-13,00	18,0-20,0			485	70	170	25	L28T20				
	WP347		0,08 max	2,00 max	0,045	0,030	1,00 max	9,0-13,00	17,0-20,0		a)	515	75	205	30	L28T20				
	WP316		0,08 max	2,00 max	0,045	0,030	1,00 max	10,0-14,00	16,0-18,0	2,00-3,00		515	75	205	30	L28T20				
	WP316L		0,035 max	2,00 max	0,045	0,030	1,00 max	10,0-15,00	16,0-18,0	2,00-3,00		485	70	170	25	L28T20				
	WP321		0,08 max	2,00 max	0,045	0,030	1,00 max	9,0-13,00	17,0-20,0		b)	515	75	205	30	L28T20				

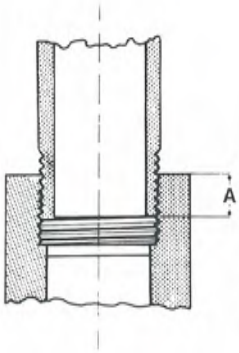
a) Devono avere un contenuto di Niobio + Tantalio di non meno 10 volte il contenuto di Carbonio e non più del 1,10%.
Niobium + Tantalium content must be: not 10 times minus than Carbon content and not 1,10% more.

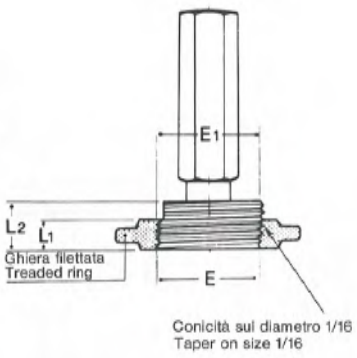
b) Devono avere un contenuto di Titanio di non meno 5 volte il contenuto di Carbonio e non più dello 0,70%.
Titanium content must be: not 5 times minus than Carbon content and not 0,70% more.

Filettatura conica per tubi (NPT)
Standard taper pipe thread (NPT)

ANSI/ASME B1.20.1







∅ NOMIN. PIPE SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
D mm.	10.29	13.72	17.14	21.34	26.67	33.40	42.16	48.26	60.32	73.02	88.90	114.30
n *	27	18	18	14	14	11 1/2	11 1/2	11 1/2	11 1/2	8	8	8
P mm.	0.940	1.411	1.411	1.814	1.814	2.209	2.209	2.209	2.109	3.175	3.175	3.175
E0 mm.	9.233	12.126	15.545	19.264	24.579	30.826	39.551	45.621	57.633	69.076	84.852	110.093
E1 mm.	9.489	12.487	15.926	19.772	25.117	31.461	40.218	46.287	58.325	70.159	86.068	111.433
L2 mm.	6.703	10.205	10.358	13.556	13.860	17.343	17.952	18.377	19.215	28.892	30.480	33.020
L1 mm.	4.102	5.786	6.096	8.128	8.610	10.160	10.668	10.668	11.074	17.322	19.456	21.437
mm.	0.0586	0.0881	0.0881	0.1132	0.1132	0.1379	0.1379	0.1379	0.1379	0.1982	0.1983	0.1983
A mm.	6.9	10	10.3	13.6	14.1	16.8	17.3	17.3	17.7	23.7	25.8	27.8

* n = Numero di filetti per 25,4 mm / Number of threads for 25,4 mm

Filettatura conica ISO 7-1 - Standard taper pipe thread ISO 7-1

Dimensioni nominali
Nominal dimensions

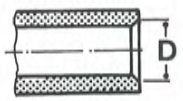
$P = \frac{25,4}{z}$

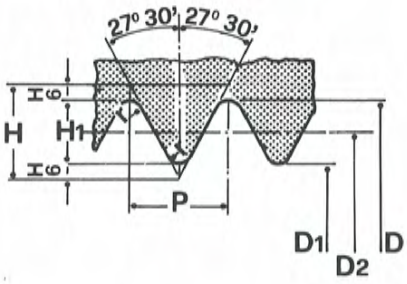
$H = 0,960\,491\ P$

$H_1 = 0,640\,327\ P$

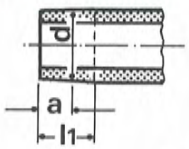
$r = 0,137\,329\ P$

Filettatura interna cilindrica
Cylindrical inside thread





Dimensioni in mm.
Dimensions in mm.



Filettatura esterna conica
Conical outside thread

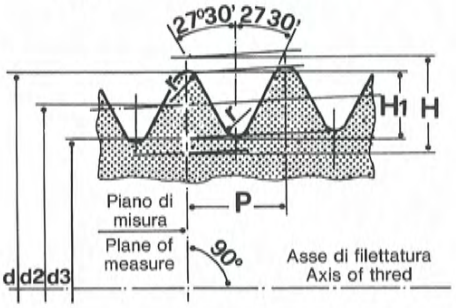
$P = \frac{25,4}{z}$

$H = 0,960\,237\ P$

$H_1 = 0,640\,327\ P$

$r = 0,137\,278\ P$

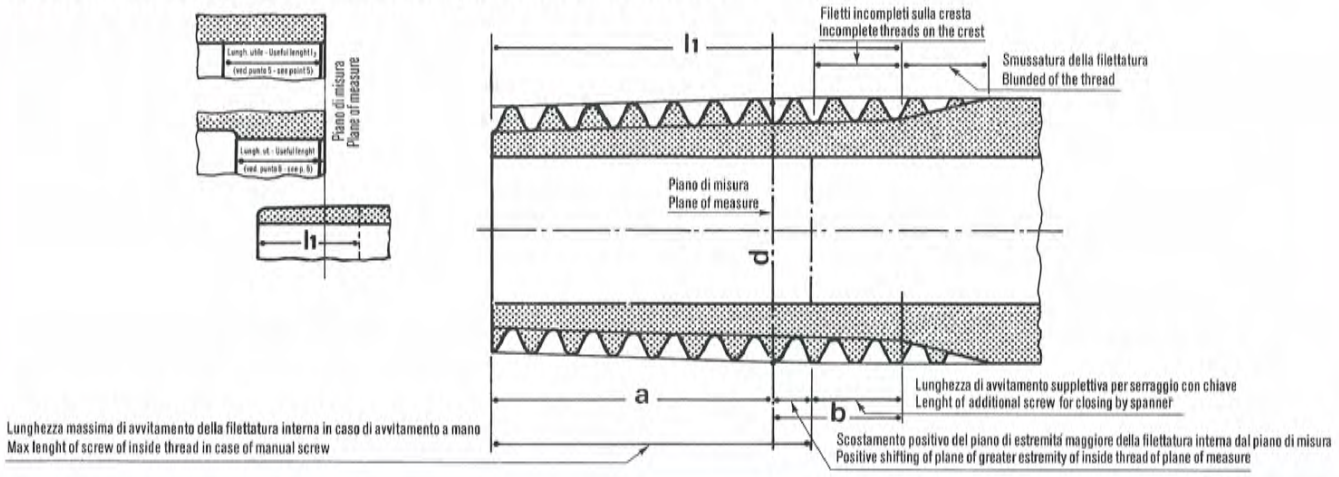
Conicità 1 : 16



Ø NOMINALE PIPE SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6
Diametro di filettatura Size of thread **d = D**	9.728	13.157	16.662	20.955	26.441	33.249	41.910	47.803	59.614	75.184	87.884	100.330	113.030	138.430	163.830
Distanza tra il piano di estremità del tubo ed il piano di misura **a** Distance between the plane of extrem. of pipe and plane of measure **a**	4.0	6.0	6.4	8.2	9.5	10.4	12.7	12.7	15.9	17.5	20.6	22.2	25.4	28.6	28.6
Passo **P** Pitch **P**	0.907	1.337	1.337	1.814	1.814	2.309	2.309	2.309	2.309	2.309	2.309	2.309	2.309	2.309	2.309
Numero di filetti per 25.4 mm **Z** Number of threads for 25.4 mm **Z**	28	19	19	14	14	11	11	11	11	11	11	11	11	11	11
Diametro medio Middle size **d2 = D2**	9.147	12.301	15.806	19.793	25.279	31.770	40.431	46.324	58.135	73.705	86.405	98.851	111.551	136.951	162.351
Diam. di nocciolo Size of stone **d3 = D1**	8.566	11.445	14.950	18.631	24.117	30.291	38.952	44.845	56.656	72.226	84.926	97.372	110.072	135.472	160.872
H1	0.581	0.856	0.856	1.162	1.162	1.479	1.479	1.479	1.479	1.479	1.479	1.479	1.479	1.479	1.479
r ≈	0.125	0.184	0.184	0.249	0.249	0.317	0.317	0.317	0.317	0.317	0.317	0.317	0.317	0.317	0.317
Lungh. di filettatura utile **L1** Lenght of useful thread **L1**	6.5	9.7	10.1	13.2	14.5	16.8	19.1	19.1	23.4	26.7	29.8	31.4	35.8	40.1	40.1

Lunghezze di filettatura, tolleranze e dimensioni limite - Dimensions and lenghts of thread

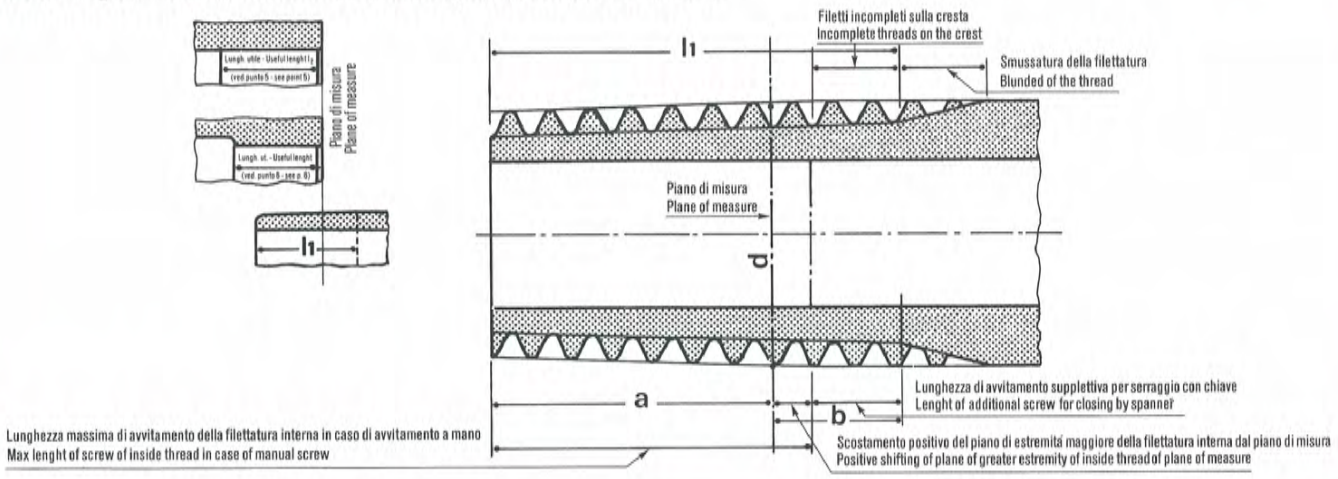
Accoppiamento filettatura esterna conica con filettatura interna cilindrica
Matching conical outside thread with cylindrical inside thread



	∅ NOMINALE - PIPE SIZE			1/8	1/4	3/8	1/2	3/4
FILETTATURA ESTERNA OUTSIDE THREAD	Diametro di filettatura nel piano di misura **d** Size of thread in plane of measure			9.728	13.157	16.662	20.955	26.441
	Lunghezza di misura **a** Lenght of measure **a**	Dimensione nominale Nominal dimension		4.0	6.0	6.4	8.2	9.5
		Scostamenti Shiftings	mm ≈	± 0.9	± 1.3	± 1.3	± 1.8	± 1.8
			Filetti Threads	± 1	± 1	± 1	± 1	± 1
		Dimensione Dimension	Massima Max. ≈	4.9	7.3	7.7	10.0	11.3
			Minima Min. ≈	3.1	4.7	5.1	6.4	7.7
	Tolleranza di avvitamento **b** Tolerance of screw **b**	mm ≈		2.5	3.7	3.7	5.0	5.0
		Filetti Threads		2 3/4	2 3/4	2 3/4	2 3/4	2 3/4
	Lungh. min. di filettatura utile **l1** Lenght min. of useful thread **l1**	Per **a** nominale For **a** nominal		6.5	9.7	10.1	13.2	14.5
		Per **a** massima For **a** max.		7.4	11.0	11.4	15.0	16.3
		Per **a** minima For **a** min.		5.6	8.4	8.8	11.4	12.7
FILETTATURA INTERNA INSIDE THREAD	Lunghezza di filettatura utile **l2** Lenght of useful thread **l2**			7.4	11.0	11.4	15,0	16.3
	Scostamenti del piano di estremità dal piano di misura Shifting of plane of extremity on the plane of measure		mm ≈	± 1.1	± 1.7	± 1.7	± 2.3	± 2.3
			Filetti Threads	± 1 1/4	± 1 1/4	± 1 1/4	± 1 1/4	± 1 1/4
	Scostamenti sui diametri di filettatura medio e di nocciolo Shiftings on sizes of middle thread and of stone			± 0.071	± 0.104	± 0.104	± 0.142	± 0.142

Lunghezze di filettatura, tolleranze e dimensioni limite - Dimensions and lenghts of thread

Accoppiamento filettatura esterna conica con filettatura interna cilindrica
Matching conical outside thread with cylindrical inside thread



1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6
33.249	41.910	47.803	59.614	75.184	87.884	100.330	113.030	138.430	163.830
10.4	12.7	12.7	15.9	17.5	20.6	22.2	25.4	28.6	28.6
± 2.3	± 2.3	± 2.3	± 2.3	± 3.5	± 3.5	± 3.5	± 3.5	± 3.5	± 3.5
± 1	± 1	± 1	± 1	± 1 1/2	± 1 1/2	± 1 1/2	± 1 1/2	± 1 1/2	± 1 1/2
12.7	15.0	15.0	18.2	21.0	24.1	25.7	28.9	32.1	32.1
8.1	10.4	10.4	13.6	14.0	17.1	18.7	21.9	25.1	25.1
6.4	6.4	6.4	7.5	9.2	9.2	9.2	10.4	11.5	11.5
2 3/4	2 3/4	2 3/4	3 1/4	4	4	4	4 1/2	5	5
16.8	19.1	19.1	23.4	26.7	29.8	31.4	35.8	40.1	40.1
19.1	21.4	21.4	25.7	30.2	33.3	34.9	39.3	43.6	43.6
14.5	16.8	16.8	21.1	23.2	26.3	27.9	32.3	36.6	36.6
19.1	21.4	21.4	25.7	30.2	33.3	34.9	39.3	43.6	43.6
± 2.9	± 2.9	± 2.9	± 2.9	± 3.5	± 3.5	± 3.5	± 3.5	± 3.5	± 3.5
± 1 1/4	± 1 1/4	± 1 1/4	± 1 1/4	± 1 1/2	± 1 1/2	± 1 1/2	± 1 1/2	± 1 1/2	± 1 1/2
± 0.180	± 0.180	± 0.180	± 0.180	± 0.217	± 0.217	± 0.217	± 0.217	± 0.217	± 0.217

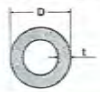
Dimensioni dei tubi secondo Pipe dimensions in accordance to NORMA ANSI B 36.10

LAME

Diametro tubi Size pipes		Spessori nominali e pesi - Nominal thickness and weights																											
		NUMERO DI «SCHEDULE» - NUMBER OF «SCHEDULES»																											
nominale in pollici nominal in inches	esterno in mm outside in mm	Standard		Extra-Strong		Double Extra-Strong		10		20		30		40		60		80		100		120		140		160		5 S *		10 S *	
		mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m
⅛	10,3	1,73	0,36	2,41	0,46	–	–	–	–	–	–	–	–	1,73	0,36	–	–	2,41	0,46	–	–	–	–	–	–	–	–	–	–	1,28	0,28
¼	13,7	2,24	0,63	3,02	0,80	–	–	–	–	–	–	–	–	2,24	0,63	–	–	3,02	0,80	–	–	–	–	–	–	–	–	–	–	1,65	0,49
⅜	17,1	2,31	0,85	3,20	1,10	–	–	–	–	–	–	–	–	2,31	0,85	–	–	3,20	1,10	–	–	–	–	–	–	–	–	–	–	1,65	0,63
½	21,3	2,77	1,26	3,73	1,62	7,47	2,54	–	–	–	–	–	–	2,77	1,26	–	–	3,73	1,62	–	–	–	–	–	–	4,78	1,95	1,65	0,80	2,11	1,00
¾	26,7	2,87	1,68	3,91	2,19	7,82	3,63	–	–	–	–	–	–	2,87	1,68	–	–	3,91	2,19	–	–	–	–	–	–	5,56	2,89	1,65	1,03	2,11	1,28
1	33,4	3,38	2,50	4,55	3,23	9,09	5,45	–	–	–	–	–	–	3,38	2,50	–	–	4,55	3,23	–	–	–	–	–	–	6,35	4,23	1,65	1,29	2,77	2,08
1.¼	42,2	3,56	3,38	4,85	4,46	9,70	7,75	–	–	–	–	–	–	3,56	3,38	–	–	4,85	4,46	–	–	–	–	–	–	6,35	5,60	1,65	1,65	2,77	2,69
1.½	48,3	3,68	4,05	5,08	5,40	10,16	9,54	–	–	–	–	–	–	3,68	4,05	–	–	5,08	5,40	–	–	–	–	–	–	7,14	7,23	1,65	1,90	2,77	3,12
2	60,3	3,91	5,43	5,54	7,47	11,07	13,44	–	–	–	–	–	–	3,91	5,43	–	–	5,54	7,47	–	–	–	–	–	–	8,74	11,10	1,65	2,38	2,77	3,94
2.½	73,0	5,16	8,62	7,01	11,40	14,02	20,39	–	–	–	–	–	–	5,16	8,62	–	–	7,01	11,40	–	–	–	–	–	–	9,52	14,90	2,11	3,70	3,05	5,26
3	88,9	5,49	11,28	7,62	15,25	15,24	27,65	–	–	–	–	–	–	5,49	11,28	–	–	7,62	15,25	–	–	–	–	–	–	11,13	21,30	2,11	4,50	3,05	6,45
3.½	101,6	5,74	13,56	8,08	18,62	–	–	–	–	–	–	–	–	5,74	13,56	–	–	8,08	18,62	–	–	–	–	–	–	–	–	2,11	5,20	3,05	7,40
4	114,3	6,02	16,06	8,56	22,29	17,12	40,99	–	–	–	–	–	–	6,02	16,06	–	–	8,56	22,29	–	–	11,13	28,25	–	–	13,49	33,51	2,11	5,81	3,05	8,34
5	141,3	6,55	21,76	9,52	30,92	19,05	57,37	–	–	–	–	–	–	6,55	21,76	–	–	9,52	30,92	–	–	12,70	40,24	–	–	15,88	49,05	2,77	9,45	3,40	11,56
6	168,3	7,11	28,23	10,97	42,52	21,95	79,11	–	–	–	–	–	–	7,11	28,23	–	–	10,97	42,52	–	–	14,27	54,20	–	–	18,26	67,47	2,77	11,31	3,40	13,82
8	219,1	8,18	42,49	12,70	64,57	22,22	107,78	–	–	6,35	33,28	7,04	36,76	8,18	42,49	10,31	53,07	12,70	64,57	15,09	75,79	18,26	90,32	20,62	100,89	23,01	111,18	2,77	14,78	3,76	19,94
10	273,0	9,27	60,24	12,70	81,46	25,40	154,97	–	–	6,35	41,73	7,80	50,96	9,27	60,24	12,70	81,46	15,09	95,84	18,26	114,59	21,44	132,85	25,40	154,97	28,58	172,11	3,40	22,62	4,19	27,83
12	323,9	9,52	73,76	12,70	97,36	25,40	186,75	–	–	6,35	49,68	8,38	65,14	10,31	79,71	14,27	108,97	17,48	131,81	21,44	159,67	25,40	186,75	28,58	207,87	33,32	238,60	3,96	33,00	4,57	36,00
14	355,6	9,52	81,21	12,70	107,28	–	–	6,35	54,63	7,92	67,98	9,52	81,21	11,13	94,31	15,09	126,51	19,05	157,94	23,83	194,64	27,79	224,36	31,75	253,32	35,71	281,49	3,96	34,23	4,78	41,18
16	406,4	9,52	93,13	12,70	123,18	–	–	6,35	62,58	7,92	77,92	9,52	93,13	12,70	123,18	16,66	160,04	21,44	203,26	26,19	245,34	30,96	286,33	36,53	332,72	40,49	364,94	4,19	41,60	4,78	47,33
18	457,2	9,52	105,05	12,70	139,07	–	–	6,35	70,53	7,92	87,85	11,13	122,12	14,27	155,90	19,05	205,62	23,83	254,24	29,36	309,55	34,92	363,33	39,67	408,21	45,24	459,18	4,19	46,83	4,78	53,18
20	508,0	9,52	116,97	12,70	154,97	–	–	6,35	78,47	9,52	116,97	12,70	154,97	15,09	183,14	20,62	247,79	26,19	310,91	32,54	381,20	38,10	441,06	44,45	507,63	50,01	564,24	4,78	59,22	5,54	68,50
22	558,8	9,52	128,89	12,70	170,86	–	–	6,35	86,42	9,52	128,89	12,70	170,86	–	–	22,22	293,80	28,58	373,27	34,92	450,75	41,28	526,24	47,62	599,76	53,98	671,28	4,78	63,75	5,54	73,81
24	609,6	9,52	140,81	12,70	186,75	–	–	6,35	94,37	9,52	140,81	14,27	209,54	17,48	254,74	24,61	354,62	30,96	441,30	38,89	546,84	46,02	639,18	52,37	719,16	59,54	806,74	5,54	82,60	6,35	94,37
26	660,4	9,52	152,73	12,70	202,65	–	–	7,92	127,58	12,70	202,65	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
28	711,2	9,52	164,65	12,70	218,54	–	–	7,92	137,52	12,70	218,54	15,88	271,94	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
30	762,0	9,52	176,57	12,70	234,44	–	–	7,92	147,45	12,70	234,44	15,88	291,81	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
32	812,8	9,52	188,50	12,70	250,33	–	–	7,92	157,39	12,70	250,33	15,88	311,67	17,48	342,17	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
34	863,6	9,52	200,42	12,70	266,22	–	–	7,92	167,32	12,70	266,22	15,88	331,54	17,48	364,01	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
36	914,4	9,52	212,34	12,70	282,12	–	–	7,92	177,26	12,70	282,12	15,88	351,41	19,05	420,21	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

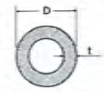
N.B. - Gli spessori ed i pesi «Standard», «Extra-Strong» e «Double Extra-Strong» entro i bordi ingrossati, hanno un corrispondente valore in una «schedula».
Per spessori diversi da quelli indicati il peso può essere ricavato tramite la seguente formula: $\frac{24.66\ (D-t)\ t}{1000}$

* Secondo NORMA ANSI B 36.19



N.B. - Thickness and weights «Standard», «Extra-Strong» and «Double Extra-Strong» within swell elges have a correspondent value in a «schedule».
For different thickness that suitable the weights can proceeds by following formula: $\frac{24.66\ (D-t)\ t}{1000}$

* In accordance to ANSI B 36.19



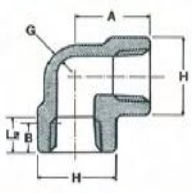
Raccordi filettati - Threaded fittings

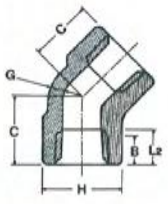
Gomiti 90°
90° Elbows

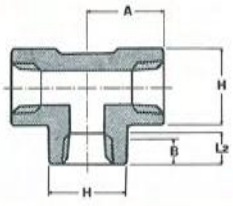
Gomiti 45°
45° Elbows

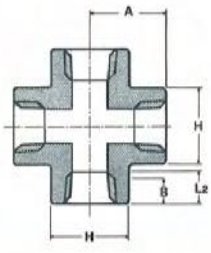
Tee
Equal tees

Croci
Crosses





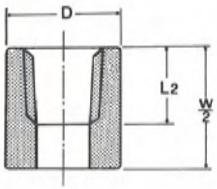




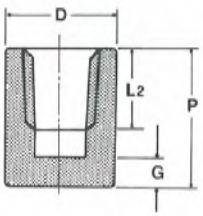
Ø NOMINALE PIPE SIZE		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
LUNGHEZZA MINIMA FILETTATURA	B	6.5	8	9	11	12.5	14.5	17	18	19	23.5	26	27.5
LENGTH OF THREAD. MIN.	L2	6.5	10	10.5	13.5	14	17.5	18	18.5	19	29	30.5	33
2000 LBS	A	21	21	25	29	33	38	44	51	60	76	86	106
	C	17	17	19	22	25	29	33	35	43	52	64	79
	H	22	22	25	33	38	46	56	62	75	92	110	146
	G	3	3	3	3	3	3.5	4	4	4.5	5.5	6	6.5
3000 LBS	A	21	25	29	33	38	44	51	60	64	83	95	114
	C	17	19	22	25	29	33	35	43	45	52	64	79
	H	22	25	33	38	46	56	62	75	84	102	121	152
	G	3	3.5	3.5	4	4.5	5	5.5	5.5	7	7.5	9	11
6000 LBS	A	25	29	33	38	44	51	60	64	83	95	106	114
	C	19	22	25	29	33	35	43	44	52	64	79	79
	H	25	33	38	46	56	62	75	84	102	121	146	152
	G	6.5	6.5	7	8	8.5	10	10.5	11	12	15.5	16.5	18.5

Raccordi filettati - Threaded fittings

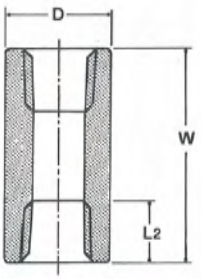
Mezzi manicotti
Half couplings



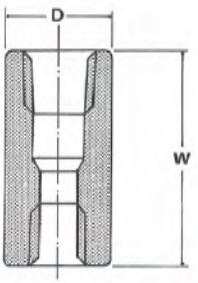
Tappi femmina
Caps



Manicotti
Full couplings



Manicotti ridotti
Reducing couplings



Ø NOMINALE PIPE SIZE		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
LUNG. FILETTO	B	6.5	8	9	11	12.5	14.5	17	18	19	23.5	26	27.5
LENGTH OF THREADED MIN.	L2	6.5	10	10.5	13.5	14	17.5	18	18.5	19	29	30.5	33
3000 LBS	W	32	35	38	48	51	60	67	79	86	92	108	121
	P	19	25	25	32	37	41	44	44	48	60	65	68
	D	16	20	24	30	36	45	60	65	75	95	110	140
	G MIN.	5.0	5.0	5.0	6.5	6.5	9.5	9.5	11	12.5	16.0	19.0	22.0
6000 LBS	W	32	35	38	48	51	60	67	79	86	92	108	121
	P	—	27	27	33	38	43	46	48	51	64	68	75
	D	24	26	32	38	45	60	65	75	95	110	140	160
	G MIN.	—	6.5	6.5	8.0	8.0	11.0	11.0	12.5	16.0	19.0	22.0	28.5

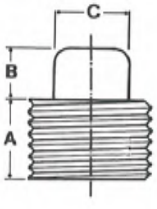
Raccordi filettati - Threaded fittings

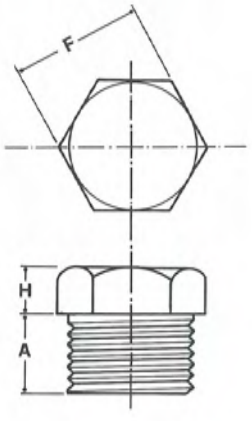
Tappi T. quadra
Square H. plugs

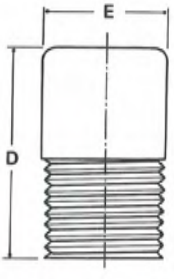
Tappi T. esag.
Hex. H. plugs

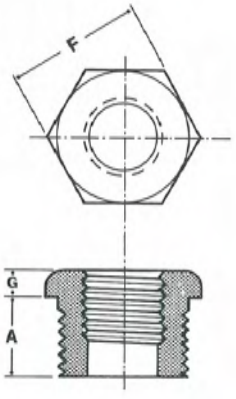
Tappi T. tonda
Round H. plugs

Riduz. esag. M/F
Bushings





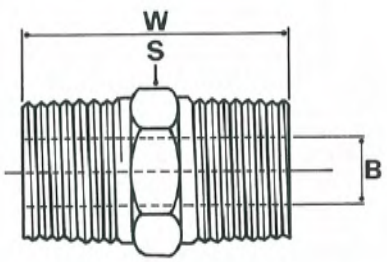




Ø NOMINALE PIPE SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
A MIN.	10	15	16	20	21	25	26	26	27	41	42	45
B MIN.	6	6	8	10	11	13	14	16	17	19	21	25
C MIN.	7.0	9.5	11.0	14.5	16.0	20.5	24.0	28.5	33.5	38.0	43.0	63.5
D MIN.	35	41	41	45	45	51	51	51	64	70	70	76
E NOM.	10	13	17	21	27	33	43	48	60	73	89	114
F NOM.	11.0	16.0	17.5	22.0	27.0	35.0	44.5	51.0	63.5	76.0	89.0	117.5
G MIN.	–	3	4	5	6	6	7	8	9	10	10	13
H MIN.	6	6	8	8	10	10	14	16	17	19	21	25

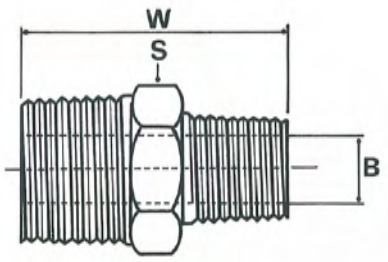
Raccordi filettati - Threaded fittings

Nippli esagonali
Hex. nipples



Nota: Per i nippli ridotti la quota "B" è quella del Ø minore.

Nippli esagonali ridotti
Reducing hex. nipples



Notes: For reducing nipples the dimension B is for small size.

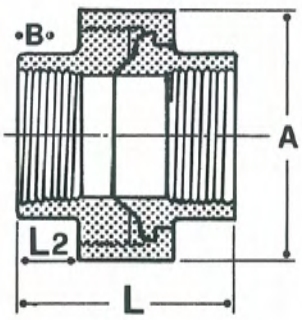
DIMENS.	SERIE CLASS	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
W	3000 LBS	24	36	40	48	52	60	66	68	71	84	94	125
	6000 LBS	24	36	40	48	52	60	66	68	71	84	94	125
S	3000 LBS	11	15	19	22	27	35	45	50	65	80	90	120
	6000 LBS	11	15	19	22	27	35	45	50	65	80	90	120
B	3000 LBS	5	8	11	14	19	24	32	38	49	59	74	97
	6000 LBS	2	6	8	11	13	17	23	30	39	45	58	80

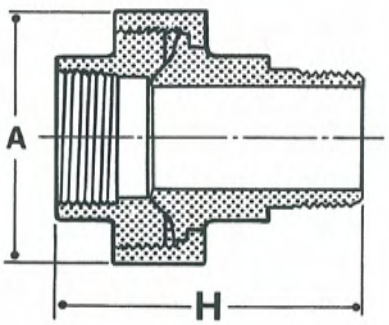
B = dimensions may vary at discretion of the manufacturer

Raccordi filettati - Threaded fittings

Bocchettoni femmina-femmina
Female-female unions

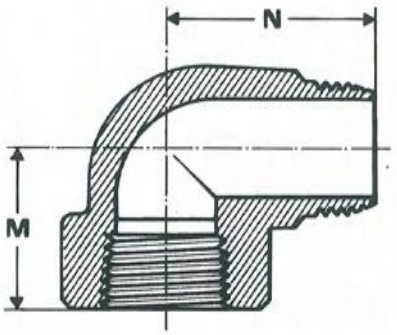
Bocchettoni maschio-femmina
Male-female unions





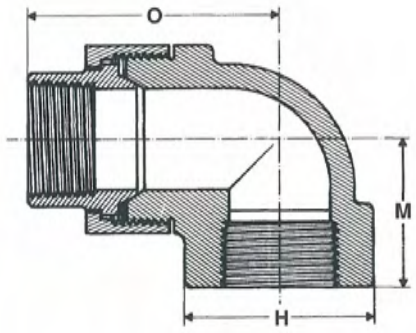
Ø NOMINALE PIPE SIZE		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
LUNGH. FILETTO	B	6.5	8	9	11	12.5	14.5	17	18	19	23.5	26	27.5
LENGHT OF THREADED MIN.	L2	6.5	10	10.5	13.5	14	17.5	18	18.5	19	29	30.5	33
3000 LBS	A	32	35	41	45	55	65	78	85	100	123	148	180
	L	44	40	47	49	57	62	71	75	84	110	120	157
	H	—	64	69	73	83	92	96	110	130	—	—	—
6000 LBS	A												
	L	Dati fornibili su richiesta - Dimensions on request											
	H												

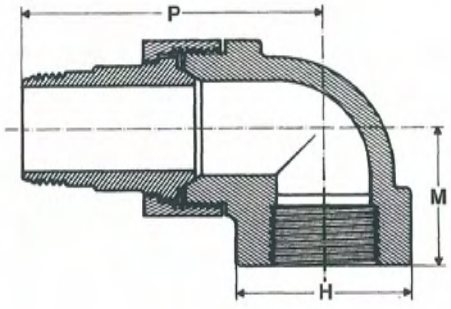
Raccordi filettati - Threaded fittings
Gomiti 90° M/F - Street elbows



Ø NOMINALE PIPE SIZE		1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
3000 LBS	M	24.6	30	33.5	38	46.5	53	62	68
	N	32	39	44	49	59	65	75	82.5
6000 LBS	M	30	33.5	38	46.5	53	62	68	82.5
	N	39	44	49	59	65	75	82.5	110
		Dimensioni non elencate nella ASME B16.11 - 1991 e BS3799 Dimensions not listed in ASME B16.11 - 1991 and BS3799							

Raccordi filettati - Threaded fittings
Gomiti a bocchettone - Union elbows

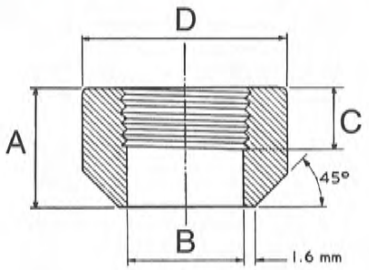




Ø NOMINALE PIPE SIZE		1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
3000 LBS	M	25	30	33	38	45	51	60	64
	H	33	33	38	46	56	62	75	84
	O	45	54	60	65	75	85	98	108
	P	60	70	80	90	100	115	125	140

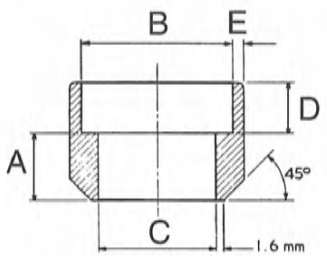
Dimensioni non elencate nella ASME B16.11 e BS3799, possono variare a discrezione del produttore
Dimensions not listed in ASME B16.11 and BS3799, may vary according to the manufacturer

Raccordi filettati - Dimensioni minime degli Inserti Bosses
Threaded fittings - Minimum dimensions of Welding Bosses



DIMENS.	SERIE CLASS	1/8	1/4	3/8	1/2	3/4	1	1 1/2	2	2 1/2	3	4
A MIN.	3/6000 LBS	38	41	45	51	51	51	51	51	51	57	64
B MIN.	3/6000 LBS	8.4	11.1	14.2	18	23	29	44	56	67	82	95
C MIN.	3/6000 LBS	6.70	10.21	10.36	13.56	13.86	17.34	18.38	19.22	28.89	30.48	33.02
D MIN.	3000 LBS	20	20	24	30	36	45	65	75	95	110	140
	6000 LBS	24	26	32	38	45	60	75	95	-	-	-

Raccordi a saldare di tasca - Dimensioni degli Inserti Bosses
Socket welding fittings - Dimensions of Welding Bosses



DIMENS.	SERIE CLASS	1/8	1/4	3/8	1/2	3/4	1	1 1/2	2	2 1/2	3
A MIN.	3/6000 LBS	28	32	34	38	38	35	32	29	29	29
B MIN.	3/6000 LBS	10.7	14.1	17.6	21.8	27.4	34.1	49	61	73.8	89.7
C MIN.	3000 LBS	6.8	9.2	12.5	15.5	21	26.5	40.5	52	62	78
	6000 LBS	-	-	-	11.8	15.5	20.7	34	43	54	66
D MIN.	3/6000 LBS	10	10	11	13	13	16	19	22	22	22
E MIN.	3000 LBS	3.2	3.3	3.5	4.1	4.3	5	5.6	6.1	7.7	8.3
	6000 LBS	-	-	-	5.2	6.1	7	7.8	9.5	10.4	12.2

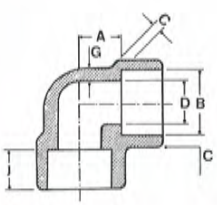
Raccordi a tasca da saldare - Socket welding fittings

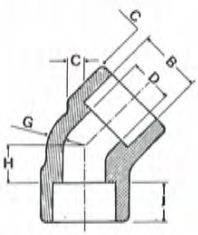
Gomiti 90°
90° Elbows

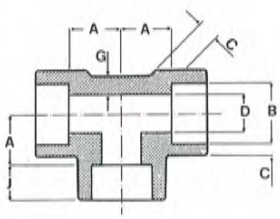
Gomiti 45°
45° Elbows

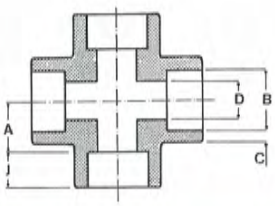
Tee
Equal tees

Croci
Crosses









Φ NOMINALE PIPE SIZE		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
DIAM. TASCA SOCKET BORE	B MAX.	10.90	14.35	17.80	21.95	27.30	34.05	42.80	48.90	61.35	74.20	90.15	115.80
	B MIN.	10.65	14.10	17.55	21.70	27.05	33.80	42.55	48.65	61.10	73.80	89.80	115.45
PROF. TASCA DEPTH SOCKET	J MIN.	10	10	10	10	13	13	13	13	16	16	16	19
3000 LBS	D MAX.	7.6	10.0	13.3	16.6	21.7	27.4	35.8	41.7	53.5	64.2	79.5	103.8
	D MIN.	6.1	8.5	11.8	15.0	20.2	25.9	34.3	40.1	51.7	61.2	76.4	100.7
	C MAX.	3.2	3.8	4.0	4.65	4.90	5.70	6.05	6.35	6.95	8.75	9.50	10.70
	C MIN.	3.2	3.3	3.5	4.10	4.25	5.00	5.3	5.55	6.05	7.65	8.30	9.35
	G MIN.	2.4	3	3.2	3.75	3.90	4.55	4.85	5.10	5.55	7.0	7.60	8.55
	A MAX.	12	12	15	17	21	24	29	34	40	44	60	69
	A MIN.	10	10	12	14	18	20	25	30	36	39	55	64
	H MAX.	9	9	9	13	14	16	19	23	27	31	34	44
	H MIN.	7	7	7	10	11	12	15	19	23	27	29	39
6000 LBS	D MAX.	4.8	7.1	9.9	12.5	16.3	21.5	30.2	34.7	43.6	55.5	67.5	88.5
	D MIN.	3.2	5.6	8.4	11.0	14.8	19.9	28.7	33.2	42.1	54	66	87
	C MAX.	3.95	4.60	5.05	5.95	6.95	7.90	7.90	8.90	10.90	—	—	—
	C MIN.	3.45	4.00	4.35	5.20	6.05	6.95	6.95	7.80	9.50	—	—	—
	G MIN.	3.15	3.70	4.0	4.80	5.55	6.35	6.35	7.15	8.75	—	—	—
	A MAX.	12	17	17	21	24	29	34	40	43	—	—	—
	A MIN.	10	13	14	18	21	25	30	36	39	—	—	—
	H MAX.	9	9	13	14	16	19	23	27	31	—	—	—
	H MIN.	7	7	10	11	13	15	19	23	27	—	—	—

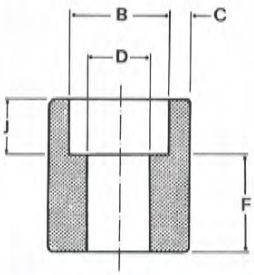
Raccordi a tasca da saldare - Socket weldings fittings

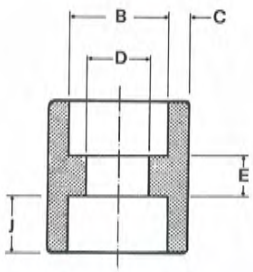
Mezzi manicotti
Half couplings

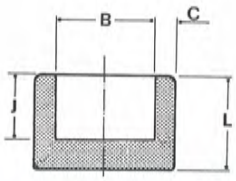
Manicotti
Couplings

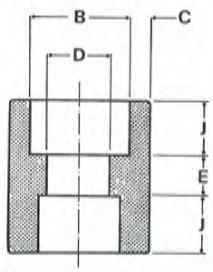
Tappi femmina
Caps

Manicotti ridotti
Reducing couplings





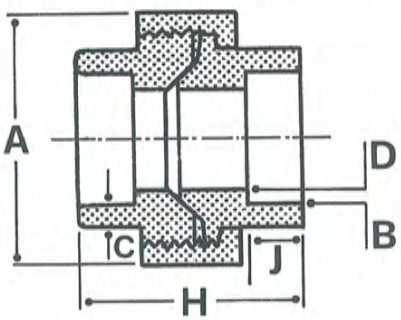




Ø NOMINALE PIPE SIZE		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
DIAM. TASCA SOCKET BORE	B MAX.	10.90	14.35	17.80	21.95	27.30	34.05	42.80	48.90	61.35	74.20	90.15	115.80
	B MIN.	10.65	14.10	17.55	21.70	27.05	33.80	42.55	48.65	61.10	73.80	89.80	115.45
PROF. TASCA DEPTH SOCKET	J MIN.	10	10	10	10	13	13	13	13	16	16	16	19
3000 LBS	C MAX.	3.20	3.80	4.00	4.65	4.90	5.70	6.05	6.35	6.95	8.75	9.50	10.7
	C MIN.	3.20	3.30	3.50	4.10	4.25	5.00	5.30	5.55	6.05	7.65	8.30	9.35
	D MAX.	7.6	10.0	13.3	16.6	21.7	27.4	35.8	41.7	53.5	64.2	79.5	103.8
	D MIN.	6.1	8.5	11.8	15.0	20.2	25.9	34.3	40.1	51.7	61.2	76.4	100.7
	E MAX.	8	8	9	13	13	17	17	17	23	24	24	24
	E MIN.	5	5	5	6	6	9	9	9	15	14	14	14
	F MAX.	17	17	19	24	25	31	32	34	43	45	47	50
	F MIN.	15	15	16	21	22	27	28	30	39	40	42	45
	L NOM.	18	18	19	23	26	28	30	32	39	39	45	48
6000 LBS	C MAX.	3.95	4.60	5.05	5.95	6.95	7.90	7.90	8.90	10.90	—	—	—
	C MIN.	3.45	4.00	4.35	5.20	6.05	6.95	6.95	7.80	9.50	—	—	—
	D MAX.	4.8	7.1	9.9	12.5	16.3	21.5	30.2	34.7	43.6	—	—	—
	D MIN.	3.2	5.6	8.4	11.0	14.8	19.9	28.7	33.2	42.1	—	—	—
	E MAX.	8	8	9	13	13	17	17	17	23	24	24	24
	E MIN.	5	5	5	6	6	9	9	9	15	14	14	14
	F MAX.	17	17	19	24	25	31	32	34	43	45	47	50
	F MIN.	15	15	16	21	22	27	28	30	39	40	42	45
	L NOM.	18	18	19	23	26	28	30	32	39	39	45	48

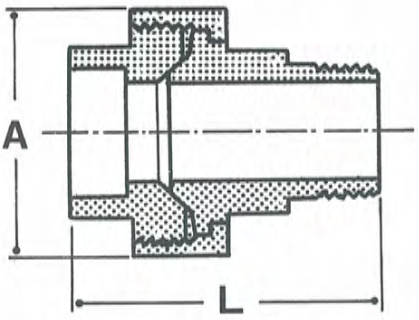
Raccordi a tasca da saldare - Socket welding fittings

Bocchettoni femmina-femmina
Female-female unions



Nota: Dimensioni dei bocchettoni 6000 LBS a richiesta.

Bocchettoni maschio-femmina
Male-female unions



Note: Dimension of union 6000 LBS on request.

Ø NOMINALE PIPE SIZE			1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
DIAM. TASCA SOCKET BORE	B	MAX.	10.90	14.35	17.80	21.95	27.30	34.05	42.80	48.90	61.35	74.20	90.15	115.80
		MIN.	10.65	14.10	17.55	21.70	27.05	33.80	42.55	48.65	61.10	73.80	89.80	115.45
PROF. TASCA DEPTH. SOCKET	J	MIN.	10	10	10	10	13	13	13	13	16	16	16	19
DIMENSIONE BOCCHETTONE 3000 LBS	H	NOM.	44	40	47	49	57	62	71	75	84	110	120	157
DIMENSIONS OF UNION 3000 LBS	A	NOM.	32	35	41	45	55	65	78	85	100	123	148	180
3000 LBS	C	MAX.	3.20	3.80	4.00	4.65	4.90	5.70	6.05	6.35	6.95	8.75	9.50	10.7
		MIN.	3.20	3.30	3.50	4.10	4.25	5.00	5.30	5.55	6.05	7.65	8.30	9.35
	D	MAX.	7.6	10.0	13.3	16.6	21.7	27.4	35.8	41.7	53.5	64.2	79.5	103.8
		MIN.	6.1	8.5	11.8	15.0	20.2	25.9	34.3	40.1	51.7	61.2	76.4	100.7
	L	NOM.	—	64	69	73	83	92	96	110	130	—	—	—
6000 LBS	C	MAX.	3.95	4.60	5.05	5.95	6.95	7.90	7.90	8.90	10.90	—	—	—
		MIN.	3.45	4.00	4.35	5.20	6.05	6.95	6.95	7.80	9.50	—	—	—
	D	MAX.	4.8	7.1	9.9	12.5	16.3	21.5	30.2	34.7	43.6	—	—	—
		MIN.	3.2	5.6	8.4	11.0	14.8	19.9	28.7	33.2	42.1	—	—	—
	L	NOM.	Dati fornibili su richiesta - Dimensions on request											

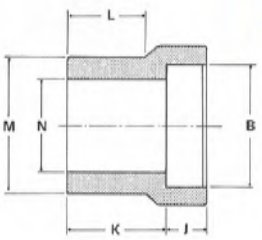
Ø NOMINALE PIPE SIZE	TYPE	M	N	K	L	J
3/8 x 1/4	1	17.15	9	19	14	10
1/2 x 3/8	1	21.34	12.5	21	16	10
1/2 x 1/4	1	21.34	9	21	16	10
3/4 x 1/2	1	26.67	16	22	17	10
3/4 x 3/8	2	26.67	12.5	16	—	10
1 x 3/4	1	33.4	21	24	19	13
1 x 1/2	2	33.4	16	16	—	10
1 1/4 x 1	1	42.16	26.5	25	21	13
1 1/4 x 3/4	2	42.16	21	18	—	13
1 1/4 x 1/2	2	42.16	16	19	—	10
1 1/2 x 1 1/4	1	48.26	35	28	22	13
1 1/2 x 1	2	48.26	26.5	18	—	13
1 1/2 x 3/4	2	48.26	21	19	—	13
1 1/2 x 1/2	2	48.26	16	21	—	10
2 x 1 1/2	1	60.3	41	32	25	13
2 x 1 1/4	2	60.3	35	21	—	13
2 x 1	2	60.3	26.5	22	—	13
2 x 3/4	2	60.3	21	24	—	13
2 x 1/2	2	60.3	16	25	—	10
2 1/2 x 2	1	73	52.5	46	38	16
2 1/2 x 1 1/2	2	73	41	35	—	13
2 1/2 x 1 1/4	2	73	35	37	—	13
2 1/2 x 1	2	73	26.5	38	—	13
2 1/2 x 3/4	2	73	21	40	—	13
3 x 2 1/2	1	88.9	62.5	38	32	16
3 x 2	2	88.9	52.5	25	—	16
3 x 1 1/2	2	88.9	41	29	—	13
3 x 1 1/4	2	88.9	35	30	—	13
3 x 1	2	88.9	26.5	32	—	13
4 x 3	2	114.3	78	33	—	16
4 x 2 1/2	2	114.3	62.5	38	—	16
4 x 2	2	114.3	52.4	38	—	16

Inserti ridotti
Reducer inserts

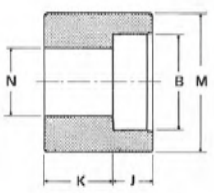
Raccordi a tasca da saldare
Socket welding fittings

Serie 3000 LBS
Class 3000 LBS

Tipo 1
Type 1



Tipo 2
Type 2

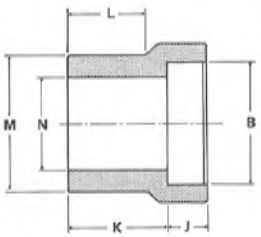


Inserti ridotti - Reducer inserts
Raccordi a tasca da saldare - Socket welding fittings

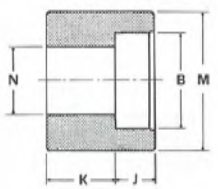
Ø NOMINALE PIPE SIZE	TYPE	M	N	K	L	J
3/8 x 1/4	1	17.15	6.5	21	16	10
1/2 x 3/8	1	21.34	9	23	16	10
1/2 x 1/4	1	21.34	6.5	21	16	10
3/4 x 1/2	1	26.67	11.5	25	19	10
3/4 x 3/8	1	26.67	9	22	19	10
3/4 x 1/4	2	26.67	6.5	22	—	10
1 x 3/4	1	33.4	15.5	28	21	13
1 x 1/2	1	33.4	11.5	28	21	10
1 x 3/8	2	33.4	9	22	—	10
1 x 1/4	2	33.4	6.5	24	—	10
1 1/4 x 1	1	42.16	20.5	30	22	13
1 1/4 x 3/4	2	42.16	15.5	21	—	13
1 1/4 x 1/2	2	42.16	11.5	22	—	10
1 1/4 x 3/8	2	42.16	9	24	—	10
1 1/4 x 1/4	2	42.16	6.5	25	—	10
1 1/2 x 1 1/4	1	48.26	29.5	35	25	13
1 1/2 x 1	1	48.26	20.5	29	25	13
1 1/2 x 3/4	2	48.26	15.5	25	—	13
1 1/2 x 1/2	2	48.26	11.5	27	—	10
1 1/2 x 3/8	2	48.26	9	28	—	10
2 x 1 1/2	1	60.3	34	39	28	13
2 x 1 1/4	2	60.3	29.5	24	—	13
2 x 1	2	60.3	21	25	—	13
2 x 3/4	2	60.3	15.5	27	—	13
2 x 1/2	2	60.3	11.5	28	—	10
2 1/2 x 2	1	73	43	43	32	16
2 1/2 x 1 1/2	2	73	34	40	—	13
2 1/2 x 1 1/4	2	73	29.5	40	—	13
2 1/2 x 1	2	73	21	40	—	13
2 1/2 x 3/4	2	73	15.5	40	—	13
3 x 2 1/2	1	88.9	54	60	35	16
3 x 2	2	88.9	43	55	—	16

Serie 6000 LBS
Class 6000 LBS

Tipo 1
Type 1

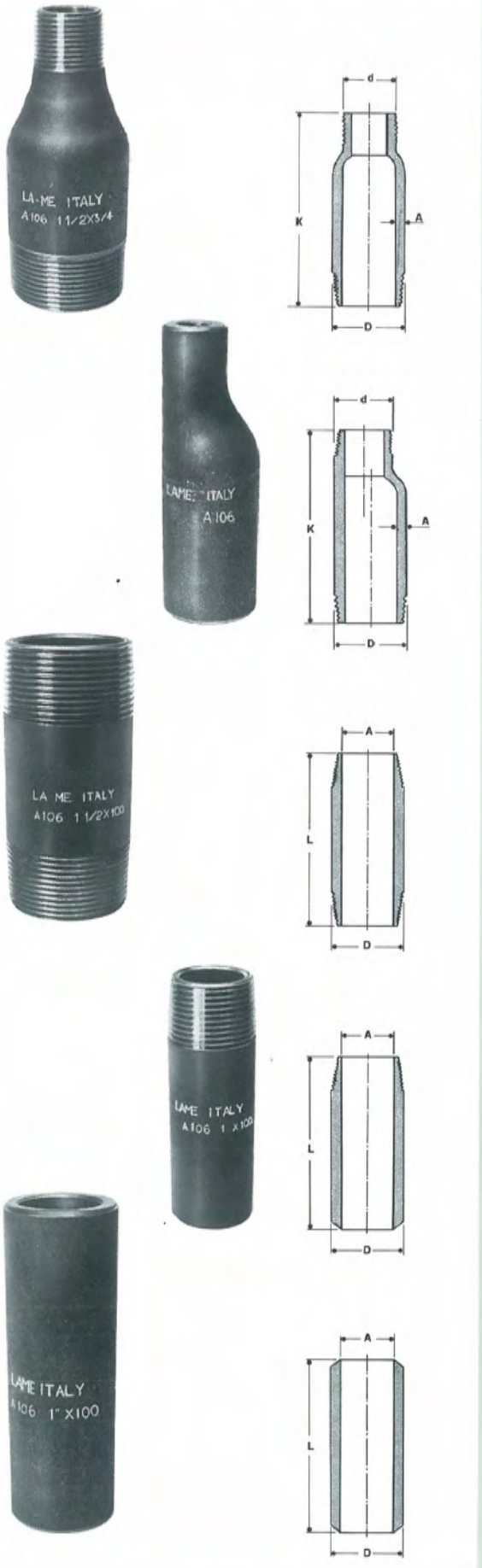


Tipo 2
Type 2



Nippli da tubo a bottiglia
Swage nipples
Nippli da tubo - Pipe nipples

D x d nom.	K nom.	A	L
3/8 x 1/4	64	A Vs. richiesta/On Yr. request: Sch. 80 - 160 - XXS	A Vs. richiesta lungh./On Yr. request lenght: close - 2" - 2 1/2" - 3" - 4" - 5" - 6"
1/2 x 3/8	70		
1/2 x 1/4			
3/4 x 1/2	76		
3/4 x 3/8			
1 x 3/4	89		
1 x 1/2			
1 1/4 x 1	102		
1 1/4 x 3/4			
1 1/4 x 1/2			
1 1/2 x 1 1/4	114		
1 1/2 x 1			
1 1/2 x 3/4			
1 1/2 x 1/2			
2 x 1 1/2	165		
2 x 1			
2 x 3/4			
2 x 1/2			
2 1/2 x 2	178		
2 1/2 x 1 1/2			
2 1/2 x 1			
3 x 2 1/2	203		
3 x 2			
3 x 1 1/2			
3 x 1			
4 x 3	229		
4 x 2 1/2			
4 x 2			
4 x 1 1/2			



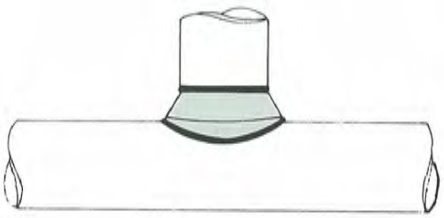
Note informative sull'applicazione delle derivazioni
General informations about the application of Welding-Outlets

a) Si usano ovunque sia necessario un raccordo da saldare.
They are used anywhere welding fittings are requested.

b) Le derivazioni sostituiscono i raccordi a T da saldare con costi di materiale ed installazione inferiori.
The welding outlets replace welding Tees with lower costs of material and installation.

...Le derivazioni conservano integralmente le resistenze del tubo in accordo alle Norme ASME B16.9 ed ASME B31.1.
...The welding outlets maintain full pipe strenght in accordance to specifications ASME B16.9 and ASME B31.1.

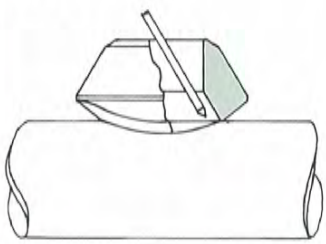
WELDING TEE



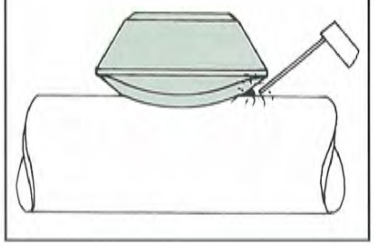
WELDING OUTLET

Le derivazioni sono pronte per essere saldate
Welding Outlets are ready to be welded

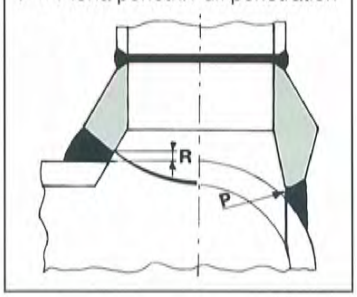
Tracciatura e taglio foro
Layout and cut hole



Saldatura
Welding



R = Distanza di penetr./Root gap
P = Piena penetr./Full penetration



Unificazione dimensioni

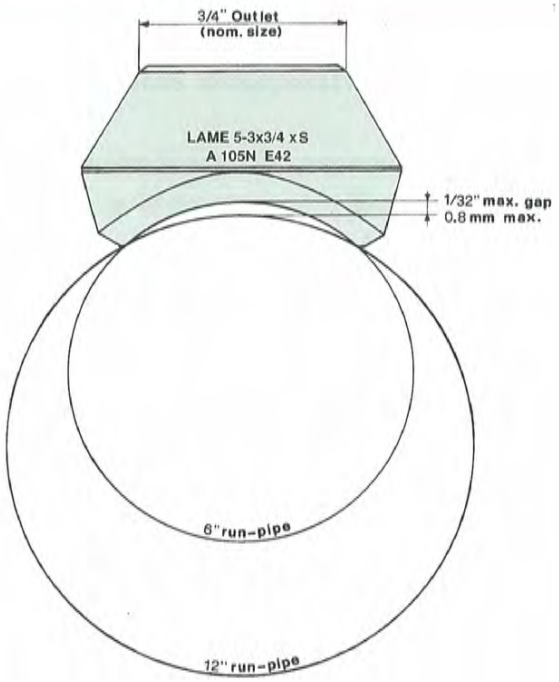
Al fine di ridurre le voci di magazzino, le nostre derivazioni sono state unificate per poter essere impiegate su tubi di diametri diversi, con un gioco massimo di adattamento pari a 0,8 mm, tale da non pregiudicare la saldatura.

Dimensions unification

In order to reduce warehouse inventory, our outlets have been unified to fit on different runpipe sizes with a gap maximum of 1/32" between the run pipe-and outlet. This does not cause any problem during welding.

Tutti i raccordi con uscita superiore a 4" devono essere ordinati precisando le misure esatte del tubo.

Outlet over 4" order to specific run-pipe size.



BW - OUTLETS STANDARD ED EXTRA-STRONG
THD - OUTLETS 3000 LBS
SW - OUTLETS 3000 LBS

3/8 x 1/8	1 1/4 x 1 1/4	3 x 3
1/2 x 1/8	1 1/2 x 1 1/4	3 1/2 x 3
1-3/4 x 1/8	2 x 1 1/4	4 x 3
2 1/2-1 1/4 x 1/8	2 1/2 x 1 1/4	5 x 3
36-3 x 1/8	3 1/2-3 x 1 1/4	6 x 3
	5-4 x 1 1/4	8 x 3
3/8 x 1/4	8-6 x 1 1/4	10 x 3
1/2 x 1/4	18-10 x 1 1/4	14-12 x 3
1-3/4 x 1/4	36-20 x 1 1/4	20-16 x 3
2 1/2-1 1/4 x 1/4		36-24 x 3
36-3 x 1/4	1 1/2 x 1 1/2	
	2 x 1 1/2	3 1/2 x 3 1/2
1/2 x 3/8	2 1/2 x 1 1/2	4 x 3 1/2
1-3/4 x 3/8	3 x 1 1/2	5 x 3 1/2
2 1/2-1 1/4 x 3/8	4-3 1/2 x 1 1/2	6 x 3 1/2
36-3 x 3/8	6-5 x 1 1/2	8 x 3 1/2
	12-8 x 1 1/2	10 x 3 1/2
1/2 x 1/2	24-14 x 1 1/2	14-12 x 3 1/2
3/4 x 1/2	36-26 x 1 1/2	20-16 x 3 1/2
1 x 1/2		36-24 x 3 1/2
1 1/2-1 1/4 x 1/2	2 x 2	
2 1/2-2 x 1/2	2 1/2 x 2	4 x 4
8-3 x 1/2	3 x 2	5 x 4
36-10 x 1/2	3 1/2 x 2	6 x 4
	4 x 2	8 x 4
3/4 x 3/4	5 x 2	10 x 4
1 x 3/4	6 x 2	14-12 x 4
1 1/2-1 1/4 x 3/4	10-8 x 2	20-16 x 4
2 1/2-2 x 3/4	18-12 x 2	36-24 x 4
5-3 x 3/4	36-20 x 2	
12-6 x 3/4		
36-14 x 3/4	2 1/2 x 2 1/2	
	3 x 2 1/2	
1 x 1	3 1/2 x 2 1/2	
1 1/4 x 1	4 x 2 1/2	
1 1/2 x 1	5 x 2 1/2	
2 x 1	6 x 2 1/2	
2 1/2 x 1	8 x 2 1/2	
3 1/2-3 x 1	12-10 x 2 1/2	
5-4 x 1	18-14 x 2 1/2	
10-6 x 1	36-20 x 2 1/2	
36-12 x 1		

THD - OUTLETS 6000 LBS
SW - OUTLETS 6000 LBS

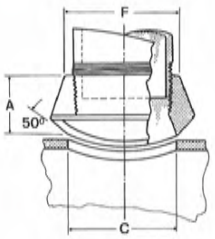
1-3/4 x 1/2	1 1/2 x 1 /14	2 1/2 x 2
2-1 1/4 x 1/2	2 1/2-2 x 1 1/4	3 x 2
6-2 1/2 x 1/2	3 1/2-3 x 1 1/4	4 x 2
36-8 x 1/2	8-4 x 1 1/4	5 x 2
	20-10 x 1 1/4	6 x 2
1 x 3/4	36-24 x 1 1/4	10-8 x 2
2 1/2-1 1/4 x 3/4		20-12 x 2
10-3 x 3/4	2 x 1 1/2	36-24 x 2
36-12 x 3/4	2 1/2 x 1 1/2	
	3 1/2-3 x 1 1/2	
1 1/2-1 1/4 x 1	5-4 x 1 1/2	
2 1/2-2 x 1	8-6 x 1 1/2	
10-3 x 1	18-10 x 1 1/2	
36-12 x 1	36-20 x 1 1/2	

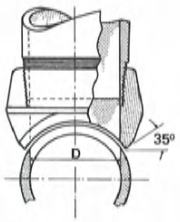
BW - OUTLETS SCH 160 - XXS

1/2 X 1/2	1 1/2-1 1/4 X 1 1/4	2 X 2
1 1/4-3/4 X 1/2	2 1/2-2 X 1 1/4	2 1/2 X 2
36-1 1/2 X 1/2	10-3 X 1 1/4	3 1/2-3 X 2
	36-12 X 1 1/4	5-4 X 2
1-3/4 X 3/4		8-6 X 2
2-1 1/4 X 3/4	1 1/2 X 1 1/2	18-10 X 2
6-2 1/2 X 3/4	2 1/2-2 X 1 1/2	36-20 X 2
36-8 X 3/4	3 1/2-3 X 1 1/2	
	8-4 X 1 1/2	
1 X 1	20-10 X 1 1/2	
2 1/2-1 1/4 X 1	36-24 X 1 1/2	
10-3 X 1		
36-12 X 1		

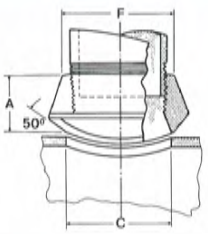
Derivazioni filettate - Threaded Outlets

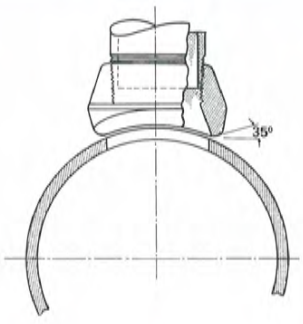
Serie 3000 LBS
Class 3000 LBS





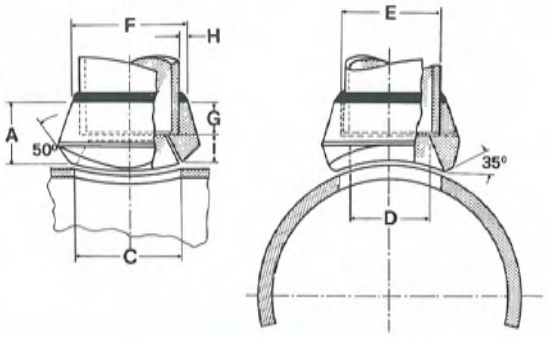
∅ NOMIN. PIPE SIZE	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6
A	25.4	27.0	33.3	33.3	34.9	38.1	46.0	50.8	57.2	61.9	65.1
C	23.8	30.2	36.5	44.5	50.8	65.1	76.2	93.7	120.7	133.4	169.8
D	15.9	20.6	27.0	34.9	41.3	52.4	63.5	77.8	103.2	128.6	154.0
F	31.8	36.5	46.0	55.6	61.9	74.6	87.3	104.8	130.2	160.3	188.9
Weight Kgs.	0.07	0.11	0.20	0.32	0.41	0.64	1.13	1.95	3.08	4.17	7.12





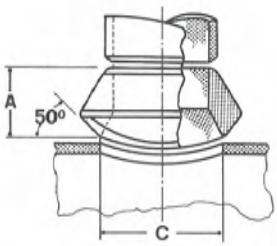
∅ NOMIN. PIPE SIZE	SERIE CLASS	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6
A	3000 LBS	25.4	27.0	33.3	33.3	34.9	38.1	46.0	50.8	57.2	66.7	68.3
	6000 LBS	31.8	36.5	39.7	41.3	42.9	52.4	—	—	—	—	—
C	3000 LBS	23.8	30.2	36.5	44.5	50.8	65.1	76.2	93.7	120.6	141.3	169.8
	6000 LBS	19.1	25.4	33.3	38.1	49.2	69.9	—	—	—	—	—
F	3000 LBS	31.8	36.5	46.0	55.6	61.9	74.6	87.3	104.8	130.2	160.3	188.9
	6000 LBS	39.7	46.0	57.2	65.1	76.2	92.1	—	—	—	—	—
Weight Kgs.	3000 LBS	0.11	0.16	0.28	0.41	0.45	0.79	1.36	1.97	3.22	5.44	6.94
	6000 LBS	0.20	0.34	0.56	0.71	0.89	2.30	—	—	—	—	—

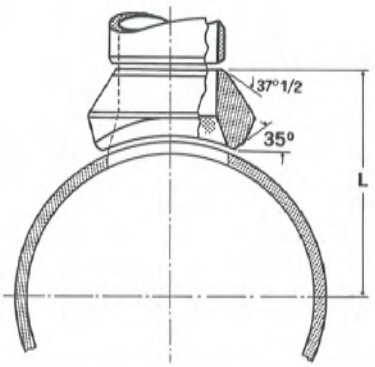
Derivazioni a tasca da saldare - Socket Welding Outlets



Ø NOMINALE PIPE SIZE	SERIE CLASS	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6
A	3000 LBS	25.4	27.0	33.3	33.3	34.9	38.1	46.0	50.8	57.2	66.7	68.3
	6000 LBS	31.8	36.5	39.7	41.3	42.9	52.4	—	—	—	—	—
C	3000 LBS	23.8	30.2	36.5	44.5	50.8	65.1	76.2	93.7	120.7	141.3	169.9
	6000 LBS	19.1	25.4	33.3	38.1	49.2	58.7	—	—	—	—	—
D	3000 LBS	15.8	20.9	26.6	35.1	40.9	52.5	62.7	77.9	102.3	128.2	154.1
	6000 LBS	11.8	15.6	20.7	29.5	34.0	42.9	—	—	—	—	—
E	3000 LBS	21.7	27.1	33.8	42.6	48.6	61.1	73.8	89.8	115.4	142.7	169.9
	6000 LBS	21.7	27.1	33.8	42.6	48.6	61.1	—	—	—	—	—
F	3000 LBS	31.8	36.5	46.0	55.6	61.9	74.6	87.3	104.8	130.2	160.3	187.3
	6000 LBS	39.7	45.2	57.2	65.1	76.2	92.1	—	—	—	—	—
G	3000 LBS	9.5	12.7	12.7	12.7	12.7	15.9	15.9	15.9	19.1	32.5	32.5
	6000 LBS	9.5	12.7	12.7	12.7	12.7	15.9	—	—	—	—	—
H	3000 LBS	5.2	4.8	6.4	6.4	6.0	6.8	6.8	7.5	7.5	8.7	8.7
	6000 LBS	9.1	8.3	11.9	11.5	16.3	15.5	—	—	—	—	—
I	3000 LBS	15.9	14.3	20.6	20.6	22.2	22.2	30.2	34.9	38.1	34.1	35.7
	6000 LBS	22.3	23.8	27.0	28.6	30.2	36.5	—	—	—	—	—
Weight Kgs.	3000 LBS	0.14	0.15	0.27	0.39	0.47	0.73	1.25	1.72	3.3	5.4	6.6
	6000 LBS	0.23	0.36	0.60	0.75	0.90	2.30	—	—	—	—	—

Derivazioni a saldare di testa - Butt Welding Outiets



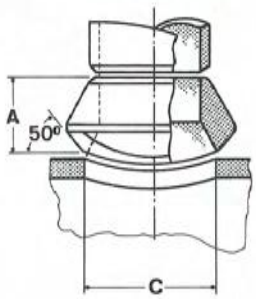


La quota "L" è uguale a A + ($\frac{De}{2}$ del collettore)

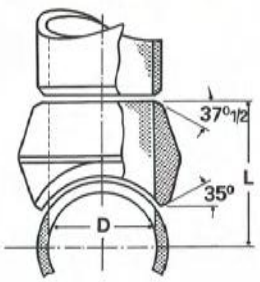
The dimension "L" is for A + ($\frac{De}{2}$ of outlets)

Ø NOMINALE PIPE SIZE	SCH.	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6
A	STD.	19.1	22.2	27.0	31.8	33.3	38.1	41.3	47.6	52.4	57.2	60.3
	XS	19.1	22.2	27.0	31.8	33.3	38.1	41.3	47.6	52.4	57.2	77.8
	160	28.6	31.8	38.1	44.5	50.8	55.6	61.9	73.0	84.1	93.7	104.8
C	STD.	23.8	30.2	36.5	44.5	50.8	65.1	76.2	93.7	120.7	141.3	169.9
	XS	23.8	30.2	36.5	44.5	50.8	65.1	76.2	93.7	120.7	141.3	169.9
	160	14.3	19.1	25.4	33.3	38.1	42.9	54.0	73.0	98.4	122.2	146.0
Weight Kgs.	STD.	0.08	0.11	0.23	0.36	0.45	0.8	1.1	1.8	2.9	4.7	5.5
	XS	0.09	0.14	0.21	0.41	0.50	0.79	1.2	1.9	2.9	4.7	10.4
	160	0.11	0.32	0.38	0.57	0.79	0.97	1.53	2.87	4.76	6.46	12.70

Derivazioni a saldare di testa - Butt Welding Outlets



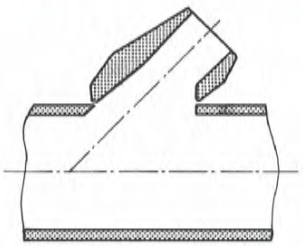
La quota "L" è data da A + ($\frac{De}{2}$ del collettore)

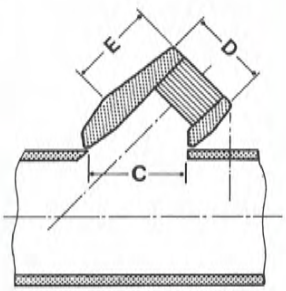


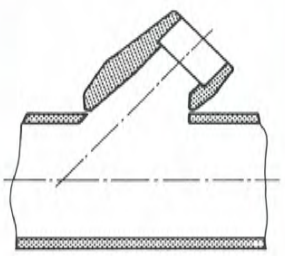
The dimension "L" is for A + ($\frac{De}{2}$ of outlets)

Ø NOMINALE PIPE SIZE	SCH.	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6
	STD.	19.1	22.2	27.0	31.8	33.3	38.1	41.3	47.6	52.4	57.2	60.3
A	XS	19.1	22.2	25.4	28.6	31.8	38.1	41.3	47.6	52.4	57.2	77.8
	160	28.6	31.8	38.1	44.5	50.8	55.6	61.9	73.0	84.1	93.7	104.8
	STD.	23.8	30.2	36.5	44.5	50.8	65.1	76.2	97.3	120.7	141.9	169.9
C	XS	23.8	30.2	36.5	44.5	50.8	65.1	76.2	93.7	120.7	141.3	169.9
	160	14.3	19.1	25.4	33.3	38.1	42.9	54.0	73.0	98.4	122.2	146.0
	STD.	15.9	20.6	26.2	34.9	41.3	52.4	61.9	77.8	101.6	128.6	154.0
D	XS	15.9	20.6	26.2	34.9	41.3	52.4	61.9	77.8	101.6	128.6	154.0
	160	14.3	19.1	25.4	33.3	38.1	42.9	54.0	73.0	98.4	122.2	146.0
	STD.	0.07	0.11	0.18	0.32	0.36	0.68	1.02	1.70	3.0	3.9	6.4
Weight Kgs.	XS	0.07	0.11	0.18	0.32	0.41	0.73	1.13	1.86	3.40	4.30	6.80
	160	0.11	0.32	0.38	0.57	0.79	0.97	1.53	2.87	4.76	6.46	13.72

Derivazioni filettate, a tasca da saldare e a saldare di testa, a 45° per tubi
Threaded, socket welding and butt welding outles for pipes

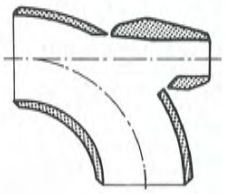


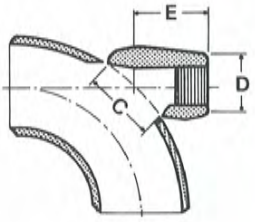


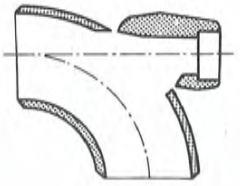


Ø NOMIN. PIPE SIZE	SERIE CLASS	1/2	3/4	1	1 1/4	1 1/2	2	3	4	6
C	3000 LBS	36.5	43.6	54	67.5	76.2	104.8	125.4	163.5	228.6
	6000 LBS	43.6	54	67.5	76.2	104.8	—	—	—	—
D	3000 LBS	31.8	35.7	45.2	54.8	63.5	82.6	88.9	114.3	168.3
	6000 LBS	35.7	45.2	54.8	63.5	82.6	—	—	—	—
E	3000 LBS	39.7	47.6	57.2	61.9	66.7	81	95.3	114.3	155.6
	6000 LBS	47.6	57.2	61.9	66.7	81	—	—	—	—

Derivazioni filettate a tasca da saldare e a saldare di testa su curve
Threaded, socket welding and butt welding outlets for long radius elbows



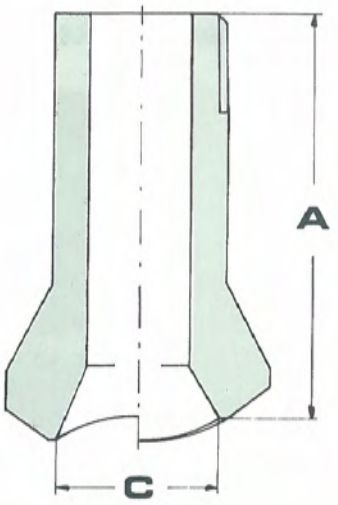




Ø NOMINALE PIPE SIZE	SERIE CLASS	1/2	3/4	1	1 1/4	1 1/2	2
C	3000 LBS	38.1	43.6	54.0	73.0	79.4	106.4
	6000 LBS	43.6	54	73.0	79.4	106.4	—
D	3000 LBS	31.8	35.7	45.2	54.8	63.5	—
	6000 LBS	35.7	45.2	54.8	63.5	82.6	—
E	3000 LBS	38.1	45.2	52.4	55.6	58.8	69.9
	6000 LBS	45.2	52.4	55.6	58.8	69.9	—

Derivazioni maschio (PE-NPT-BW)
Nipple-Outlets (Plain end - Threaded end & Bevel end)

Derivaz. in poll. Outlet size	Reducing sizes			
	3000 Lbs		6000 Lbs	
	A	C	A	C
1/2	89	24	89	14,5
3/4	89	30	89	19,0
1	89	36,5	89	25,5
1 1/4	89	44,5	89	24
1 1/2	89	51	89	38,0
2	89	65	89	43



Appunti/Notes:

Tutte le misure sono in millimetri / All dimensions are in millimeters

Peso approssimativo dei raccordi in Kg.
Approx. weight of fittings in kgs.

Materiali: Acciaio al Carbonio, Legato ed Inossidabile secondo specifiche ASTM.
Materials: Carbon, Alloy and Stainless Steels to ASTM Specs.

Raccordi filettati / Screwed fittings ASME B16.11

		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Gomiti 90°	2000lbs	0.10	0.10	0.14	0.24	0.32	0.49	0.74	0.99	1.61	2.91	4.79	12.00
	3000lbs	0.14	0.16	0.32	0.44	0.68	1.05	1.26	2.43	3.35	5.38	8.53	17.00
90° Elbows	6000lbs	0.19	0.30	0.48	0.75	1.21	1.62	2.73	3.57	6.16	9.36	17.10	—
Gomiti 45°	2000lbs	0.09	0.09	0.12	0.20	0.28	0.42	0.62	0.78	1.32	2.61	4.26	10.20
	3000lbs	0.12	0.14	0.28	0.36	0.54	0.90	1.16	1.86	3.01	4.73	7.35	15.00
45° Elbows	6000lbs	0.17	0.27	0.39	0.66	1.02	1.35	2.26	3.08	5.06	7.74	14.35	—
Tee	2000lbs	0.13	0.13	0.17	0.30	0.42	0.62	0.94	1.25	2.02	3.60	6.07	15.00
	3000lbs	0.18	0.23	0.38	0.54	0.84	1.30	1.64	2.92	4.10	6.88	10.65	19.00
Equal Tees	6000lbs	0.24	0.43	0.61	0.97	1.59	2.12	3.34	4.42	7.82	12.28	22.65	—
Croce	2000lbs	0.19	0.20	0.23	0.36	0.49	0.74	1.14	1.48	2.47	5.02	7.70	18.00
	3000lbs	0.22	0.27	0.43	0.70	1.05	1.61	2.14	3.35	5.05	8.33	14.63	23.00
Crosses	6000lbs	0.28	0.51	0.73	1.25	1.94	2.62	4.35	5.59	9.90	14.36	27.10	—
Gomiti MF / Street elbows	3000lbs	0.10	0.11	0.18	0.25	0.42	0.65	0.94	1.42	2.17	—	—	—
Manicotti	3000lbs	0.06	0.07	0.09	0.15	0.22	0.43	0.85	1.08	1.64	2.32	3.60	6.40
Couplings	6000lbs	0.10	0.11	0.14	0.29	0.45	0.96	1.30	2.00	3.40	5.00	6.70	12.50
Manicotti Ridotti	3000lbs	0.07	0.08	0.11	0.18	0.27	0.52	1.02	1.30	1.97	2.79	4.32	7.68
Red. Couplings	6000lbs	0.12	0.13	0.17	0.35	0.60	1.16	1.56	2.40	4.08	6.00	8.04	15.00
Mezzi manicotti	3000lbs	0.03	0.04	0.05	0.08	0.11	0.22	0.42	0.54	0.82	1.16	1.80	3.20
Half Couplings	6000lbs	0.05	0.06	0.07	0.15	0.23	0.48	0.65	1.00	1.70	2.50	3.35	6.25
Calotta	3000lbs	0.03	0.04	0.06	0.12	0.16	0.28	0.51	0.73	1.30	2.25	3.33	6.42
Caps	6000lbs	0.05	0.06	0.08	0.15	0.23	0.49	0.68	1.02	1.75	2.60	4.00	9.00
Bocchettoni	3000lbs	0.25	0.33	0.42	0.54	0.66	0.80	1.37	1.96	3.62	6.71	8.85	12.00
Unions	6000lbs	—	0.48	0.66	1.45	1.79	2.30	2.83	3.90	6.78	—	—	—
Bocchettone MF	3000lbs	0.29	0.36	0.47	0.62	0.77	1.24	1.80	2.50	4.44	7.87	9.65	15.20
MF Unions	6000lbs	—	0.54	0.73	1.70	2.01	2.78	3.48	4.90	8.48	—	—	—
Nippli esagonali	3000lbs	0.03	0.03	0.05	0.08	0.11	0.17	0.28	0.34	0.55	1.11	1.66	4.40
Hex Nipples	6000lbs	—	0.05	0.10	0.15	0.21	0.35	0.45	0.55	1.00	1.80	2.50	6.20
Nipplo esag. ridotto/Red. Hex Nipples		—	0.04	0.06	0.08	0.13	0.24	0.35	0.40	0.75	1.20	1.70	5.20
Riduz. Esagonale/Bushings	3/6000lbs	—	0.02	0.02	0.03	0.05	0.07	0.11	0.14	0.28	0.49	0.71	1.50
Tappi	3/6000lbs												
T.E./Hex H. Plugs		0.02	0.03	0.05	0.08	0.14	0.25	0.51	0.64	1.06	1.78	2.75	6.20
T.Q./Square H. Plugs		0.01	0.02	0.03	0.05	0.09	0.15	0.27	0.40	0.68	1.02	1.47	3.70
T.T./Round H. Plugs		0.03	0.05	0.08	0.12	0.19	0.34	0.54	0.74	1.45	2.22	3.43	6.30
Nippli Tubo	2" = 50 mm	0.03	0.04	0.06	0.08	0.11	0.17	0.22	0.27	0.37	0.57	0.76	1.11
	3" = 75 mm	0.04	0.06	0.08	0.12	0.17	0.25	0.33	0.41	0.56	0.86	1.14	1.67
Pipe Nipples	4" = 100 mm	0.05	0.08	0.11	0.16	0.22	0.33	0.44	0.54	0.74	1.14	1.52	2.22
Nippli Bott./Conc. Swages	Sch. 80	—	0.25	0.50	0.11	0.17	0.29	0.45	0.70	1.45	2.00	3.50	4.80

Raccordi a tasca / Socket weld fittings ASME B16.11

		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Gomiti 90°	3000lbs	0.10	0.10	0.13	0.24	0.34	0.51	0.77	1.03	1.59	2.79	4.80	14.50
90° Elbows	6000lbs	—	—	0.31	0.46	0.73	1.13	1.50	2.59	3.47	6.21	9.52	15.50
Gomiti 45°	3000lbs	0.09	0.09	0.11	0.20	0.28	0.44	0.65	0.84	1.30	2.50	4.15	12.50
45° Elbows	6000lbs	—	—	0.28	0.40	0.65	0.96	1.30	2.20	3.01	5.20	7.50	13.25
Tee	3000lbs	0.15	0.16	0.17	0.32	0.45	0.70	0.99	1.29	2.10	3.72	6.25	18.50
Tees	6000lbs	—	—	0.48	0.62	0.99	1.51	2.03	3.42	4.50	7.82	12.50	20.00
Croci	3000lbs	0.18	0.19	0.27	0.39	0.56	0.84	1.23	1.66	2.64	5.10	8.05	23.00
Crosses	6000lbs	—	—	0.55	0.77	1.28	1.96	2.60	4.50	5.95	10.50	15.50	25.00
Manicotti	3000lbs	0.06	0.07	0.09	0.14	0.20	0.34	0.49	0.66	1.04	1.70	2.15	3.61
Couplings	6000lbs	—	—	0.21	0.29	0.40	0.72	0.95	1.35	2.24	3.13	4.20	7.50
Manicotti Ridotti	3000lbs	0.07	0.08	0.11	0.17	0.24	0.40	0.60	0.80	1.25	2.04	2.58	4.33
Red. Couplings	6000lbs	—	—	0.25	0.35	0.48	0.86	1.14	1.62	2.69	3.76	5.04	9.00
Mezzi manicotti	3000lbs	0.06	0.07	0.10	0.16	0.23	0.38	0.63	0.80	1.24	1.90	2.45	4.16
Half Couplings	6000lbs	—	—	0.23	0.35	0.45	0.80	1.08	1.52	2.55	3.61	5.00	8.50
Calotta	3000lbs	0.03	0.06	0.08	0.12	0.16	0.25	0.43	0.55	0.93	1.43	2.31	4.20
Caps	6000lbs	—	—	0.16	0.19	0.28	0.59	0.77	1.09	1.55	2.57	3.53	6.30
Bocchettoni	3000lbs	0.27	0.30	0.39	0.52	0.70	1.10	1.36	1.94	2.87	6.60	8.20	13.00
Unions	6000lbs	—	—	—	1.43	1.87	2.24	2.87	4.06	7.10	—	—	—
Inserti Rid.	A	—	—	—	0.10	0.15	0.30	0.50	0.75	—	—	—	—
Tipo/Type	B	—	—	—	0.07	0.08	0.15	0.30	0.40	0.75	—	—	—
Red. Inserts	C	—	—	—	0.07	0.08	0.15	0.30	0.40	0.70	—	—	—
Outlet-ELB	3000lbs	—	0.23	0.23	0.29	0.34	0.52	0.86	1.20	2.38	—	—	—
Outlet-LAT	3000lbs	—	0.23	0.23	0.29	0.34	0.52	0.86	1.20	2.38	—	—	—

Per gli altri Outlets vedi pagine precedenti. / About others Outlets see previous pages.

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