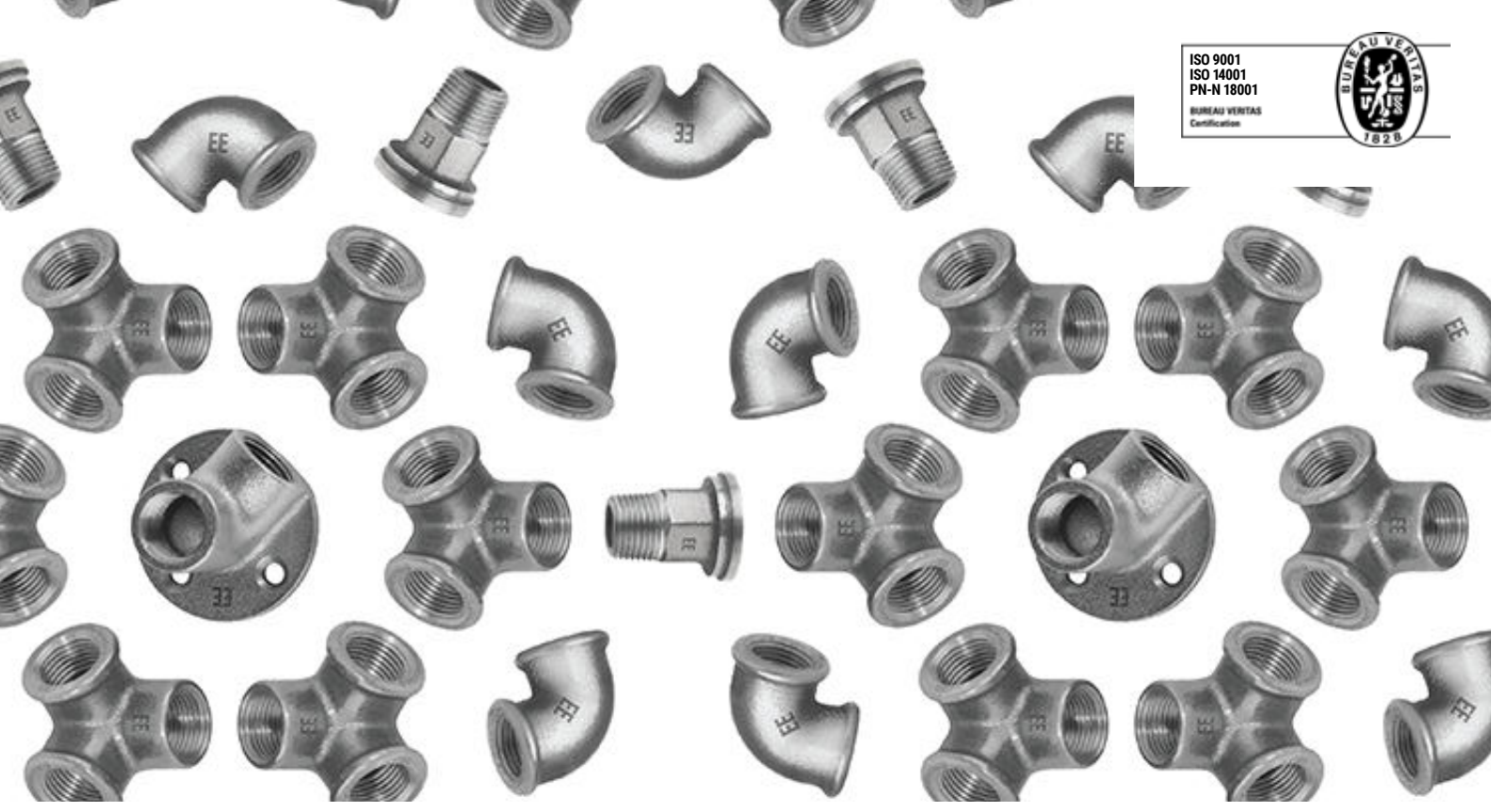
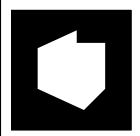


ISO 9001  
ISO 14001  
PN-N 18001  
BUREAU VERITAS  
Certification



<b>EE</b> 1886	<b>FITTINGS</b>
<b>GZ</b>	

EN 10242



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Do not wait to strike till the  
iron is hot; **but make it hot  
by striking.**

William Butler Yeats

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Usage instruction of whiteheart  
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# ABOUT US

ÜBER UNS

QUI SOMMES-NOUS

SU DI NOI

O HAC

Based on 130 years tradition, **Odlewnia Zawiercie Spółka Akcyjna** in Zawiercie has developed a rich experience in the production of whiteheart malleable cast iron fittings and castings. The plant, which has been and continues to be systematically developed and equipped, is constantly updated with the most modern machinery available.

Advanced technological and ecological processes and highly-skilled engineering staff ensure a worldwide appreciation for high quality products which comply with Polish and International Standards. For the over 130 years of its existence, EE brand has build and maintained an excellent reputation and trust with satisfied customers throughout the world.

# CERTIFICATES



# GENERAL INFORMATION

**USE** EE brand cast iron fittings are used in threaded pipe joints, particularly in water supply, gas, steam, central heating, sprinkler system networks, etc., transporting non-corrosive liquids and gases.

**RANGE OF DIMENSIONS** 1/4 to 4

<b>DN (MM)</b>	8	10	15	20	25	32	40	50	65	80	100
<b>THREAD</b>	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4

**MANUFACTURING** According to EN 10242 and ISO 49, construction symbol „A“.

**MATERIAL** Fittings: whiteheart malleable EN-GJMW-400-5 cast iron, according to EN 1562, equivalent to W 40-05, according to ISO 5922.

**THREADS** Threads: acc. to EN 10226-1 (ISO 7/1) - R tapered external threads, internal cylindrical Rp threads and acc. to EN ISO 228-1 - G connecting threads.

**SURFACE/ZINC PLATING** EE brand fittings can be supplied in accordance to order: with black or galvanized surfaces. According to EN 10242, zinc coating weight relative to the surface exceeds 500 g/m<sup>2</sup>, which corresponds to an average layer thickness of 70 µm. Both black and galvanized surfaces are protected against corrosion. Corrosion protection substance does not contain polycyclic aromatic hydrocarbons.

**OPERATING PRESSURE** 2.5 MPa / 25 bar / at the temp. from -20°C to 120°C  
2.0 MPa / 20 bar / at the temp. of 300°C

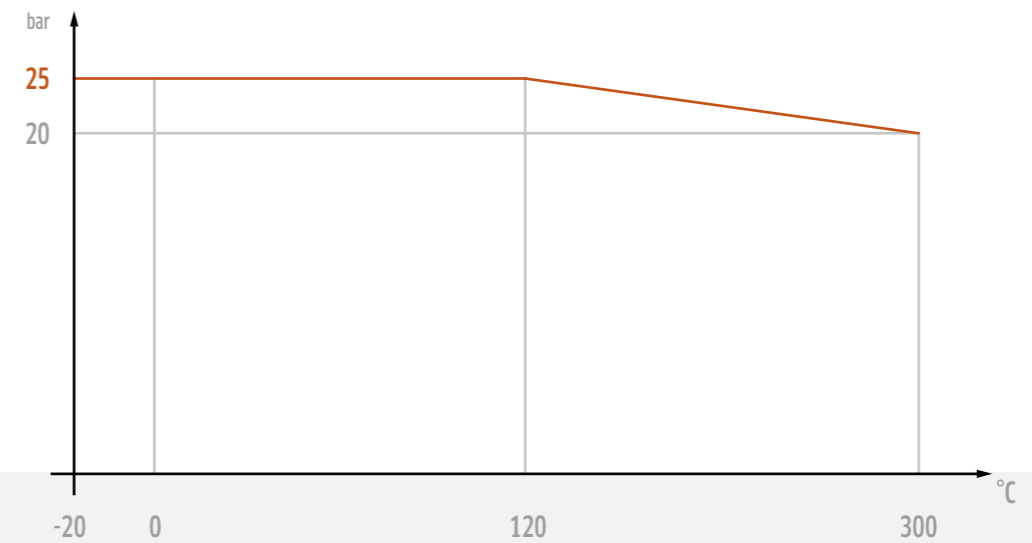


Diagram: pressure / temperature ratio

**LEAK TEST** According to EN 10242, each EE brand fitting is subjected to a leak test at air pressure of at least 0.5 MPa / 5 bar /, which is equivalent to a minimum hydrostatic pressure of 2.0 MPa / 20 bar /.

**DESIGN** Technical aspects, appearance, and other characteristics of fittings can be modified to match the technical advances and changes in accordance with the applicable standards.

# ALLGEMEINE INFORMATIONEN

**VERWENDUNGSZWEK** Tempergussfittings der Marke EE werden bei den Rohrverbindungen mit Gewinden verwendet, vor allem bei der Wasser-, Gas-, Dampfleitungen, Heizungs-, Sprinkleranlagen usw. für Flüssigkeiten und nicht aggressiven Gasen.

**DIMENSIONEN** 1/4 bis 4

<b>DN (MM)</b>	8	10	15	20	25	32	40	50	65	80	100
<b>GEWINDE</b>	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4

**AUSFÜHRUNG** Gemäß En 10242 und ISO 49 - Designsymbol „A“

**WERKSTOFF** Tempergussfittings aus weißem Temperguss EN-GJMw-400-5 nach EN 1562 bzw. W 40-05 nach ISO 5922.

**GEWINDE** Gewinde: nach EN 10226-1 - kegeliges Außengewinde R, zylindrisches Innengewinde Rp und EN ISO 228-1 - Gewinde G.

**OBERFLÄCHE / VERZINKUNG** Die Fittings der Marke EE können gemäß der Bestellung mit einer schwarzen oder verzinkten Oberfläche geliefert werden. Die Schichtdicke der Verzinkung entspricht der EN 10242 und beträgt ca. 70 µm. Das Gewicht der verzinkten Ausführung ist um ca. 5% höher als das Gewicht der schwarzen Ausführung. Sowohl die schwarze als auch die verzinkte Oberfläche ist mit einem Antikorrosionsschutz versehen. Der Antikorrosionsschutz beinhaltet keine aromatischen Kohlenwasserstoffe.

**BETRIEBSDRUCK** - Maximum 2,5 MPa / 25 bar / bei einer Temp. von -20°C bis 120°C  
- Maximum 2,0 MPa / 20 bar / bei einer Temp. 300°C

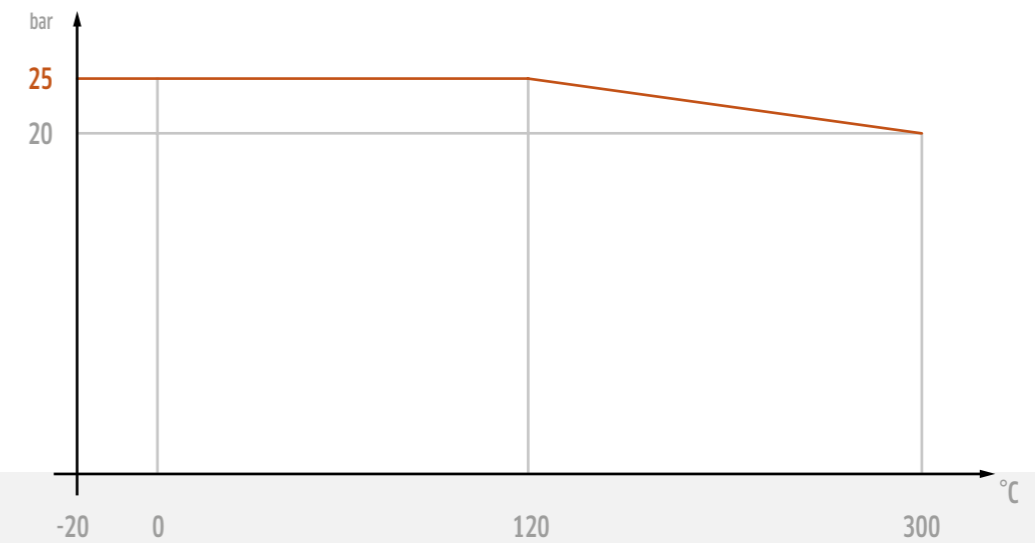


Diagramm: Druck/Temperatur

**DICHTHEITSPRÜFUNG** Gemäß der Norm En 10242 werden alle Tempergussfittings der Marke EE mit einem Prüfdruck von Minimum 0,5 MPa/5 bar auf Dichtheit geprüft. Was entspricht dem hydrostatischen Druck von Minimum 2,0 MPa/20 bar/.

**TECHNISCHE AUSFÜHRUNG** Die Gestaltung und Ausführung der Tempergussfittings kann entsprechend der technischen Entwicklung und gemäß den Normänderungen angepasst werden.

# INFORMATIONS GÉNÉRALES

**UTILISATION** Les raccords en fonte de marque EE sont utilisés sur les assemblages des tuyaux filetés, et en particulier dans les réseaux de distribution d'eau, de gaz, de vapeur, de chauffage central, de systèmes d'arrosage, etc. pour le transfert de liquides et de gaz non corrosifs.

**PLAGE DE DIMENSIONS** De 1/4 à 4

<b>DN (MM)</b>	8	10	15	20	25	32	40	50	65	80	100
<b>FILETAGE</b>	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4

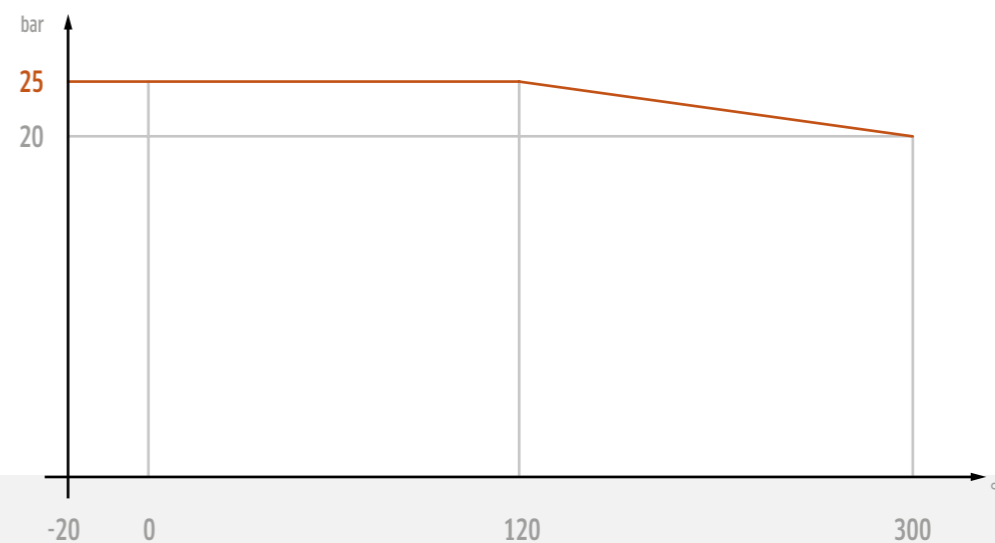
**RÉALISATION** Selon la norme EN 10242 et ISO 49 - symbole de construction «A».

**MATÉRIAU** Raccords : fonte malléable blanche EN-GJMW-400-5 selon EN 1562 équiv. W 40-05 selon ISO 5922.

**FILETAGES** Filetages: selon EN 10226-1 - filetages externes coniques R, filetages internes cylindrique Rp et EN ISO 228-1 - filetages de fixation G.

**SURFACE / GALVANISATION** Les raccords de marque EE peuvent être fournis conformément à la commande avec une surface noire ou galvanisée. Selon la norme EN 10242, le poids du revêtement en zinc par rapport à la surface est supérieur à 500 g./m<sup>2</sup>, ce qui correspond à une épaisseur de couche moyenne de 70 um. La surface noire, et la surface galvanisée, sont protégées contre la corrosion. La protection anticorrosive ne contient pas d'hydrocarbure aromatique polycyclique.

**PRESSIION DE TRAVAIL** - 2,5 MPa / 25 bar / à une temp. de -20°C à 120°C  
- 2,0 MPa / 20 bar / à une temp. de 300°C



Graphique: relation pression / température

**TEST D'ÉTANCHÉITÉ** Selon la norme EN 10242 chaque raccord de marque EE est soumis à un test d'étanchéité sous la pression d'air comprimé d'au moins 0,5 MPa / 5 bar /, ce qui équivaut à une pression hydrostatique minimale de 2,0 MPa / 20 bar /.

**CONSTRUCTION** Les aspects techniques, l'apparence et les autres caractéristiques des raccords peuvent être modifiés avec le progrès technique et en conformité avec l'évolution des normes applicables.

# GENERALITA'

**CAMPO D'IMPIEGO** I raccordi in ghisa col marchio EE sono utilizzati nell'accoppiamento di tubi filettati ed in particolare, negli impianti di fornitura d'acqua impianti gas, e vapore, di impianti di riscaldamento centralizzato, e di irrigazione, ecc. per il trasporto dei liquidi e dei gas non aggressivi.

**AMBITO DIMENSIONALE** Da 1/4 a 4

<b>DN (MM)</b>	8	10	15	20	25	32	40	50	65	80	100
<b>FILETTO</b>	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4

**ESECUZIONE** Conformemente alla norma EN 10242 e ISO 49 - simbolo di costruzione 'A'.

**MATERIALE** Raccordi: ghisa a cuore bianco EN-GJMW-400-5 secondo la norma EN 1562 rif.W 40-05 sec. ISO 5922.

**FILETIATURE** Secondo la norma EN 10226-1 - filettature esterne coniche R, filettature interne cilindriche Rp e EN ISO 228-1 - filettature di collegamento.

**SUPERFICIE / ZINCATURA** I raccordi col marchio EE possono essere forniti, in funzione dell'ordine, con la superficie nera o zincata. Conformemente alla norma EN 10242 il peso del rivestimento in zinco riferito alla superficie è superiore a 500 g/m<sup>2</sup>, il che corrisponde allo spessore medio dello strato di 70 µm. La superficie (sia nera che zincata) è protetta contro la corrosione. La protezione anticorrosiva non contiene idrocarburi policiclici aromatici.

**PRESSIONE D'ESERCIZIO** 2,5 MPa/ 25 bar/ a temp. da -20°C a 120°C  
2,0 MPa/ 20 bar/ a temp. 300°C

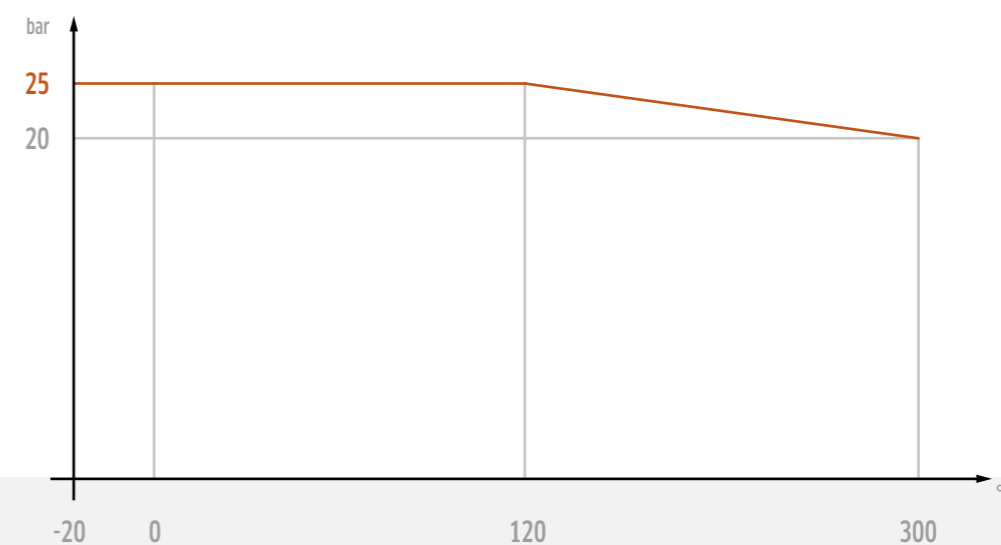


Diagramma: Rapporto pressione / temperature

**PROVA DI TENUTA** Conformemente alla norma EN 10242 ogni raccordo EE è sottoposto alla prova di tenuta sotto pressione dell'aria compressa al minimo di 0,5 MPa / 5 bar /, il che equivale alla pressione idrostatica minima di 2,0 MPa / 20 bar /.

**COSTRUZIONE** I concetti tecnici, aspetto esterno e altre caratteristiche dei raccordi sono soggette a modifiche dovute al progresso tecnico e a quelle inerenti le norme in vigore.



# ОБЩИЕ ВВЕДЕНИЯ

**ПРИМЕНЕНИЕ** Чугунные фитинги марки ЕЕ применяются в соединениях труб на резьбе, в частности в сетях водоснабжения, газоснабжения, подачи пара, центрального отопления, спринклерных установках и т. п. – для транспортировки неагрессивных жидкостей и газов.

**ПРЕДЕЛЫ РАЗМЕРОВ** От ¼ до 4

<b>DN (MM)</b>	8	10	15	20	25	32	40	50	65	80	100
<b>FILETTO</b>	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4

**ИСПОЛНЕНИЕ** В соответствии со стандартами EN 10242 и ISO 49 – конструкционный символ «А».

**МАТЕРИАЛ** Фитинги: белый ковкий чугун EN-GJMW-400-5 согл. EN 1562, аналог W 40-05 согл. ISO 5922.

**РЕЗЬБА** Резьба: согл. EN 10226-1 – коническая наружная резьба R, цилиндрическая внутренняя резьба Rp и EN ISO 228-1 – соединительная резьба G.

**ПОВЕРХНОСТЬ / ЦИНКОВОЕ ПОКРЫТИЕ** Фитинги марки ЕЕ могут поставляться в соответствии с заказом – вариант исполнения с чёрной или оцинкованной поверхностью. В соответствии со стандартом EN 10242 масса цинкового покрытия относительно площади поверхности – не менее 500 г/м<sup>2</sup>, что соответствует средней толщине слоя покрытия 70 мкм. Как чёрная, так и оцинкованная поверхность имеет антикоррозионную защиту. Антикоррозионная защита не содержит ароматических углеводородов.

**ПРИМЕНЕНИЕ** 2,5 МПа / 25 бар / при темп. от -20оС до 120оС  
2,0 МПа / 20 бар / при темп. 300оС

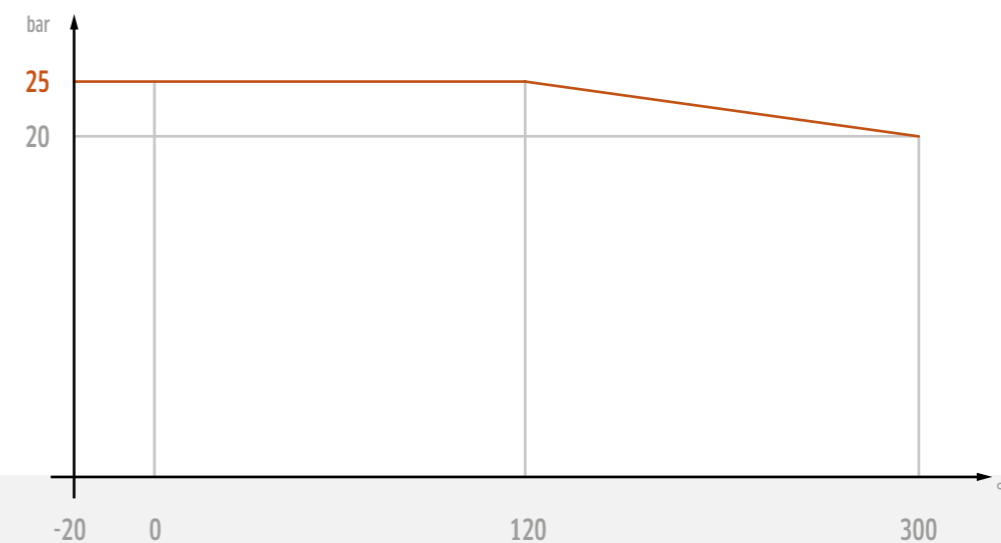


График: Зависимость давление-температура

**ПРОВЕРКА ГЕРМЕТИЧНОСТИ** В соответствии со стандартом EN 10242 для каждого фитинга марки ЕЕ выполняется проверка герметичности при давлении сжатого воздуха не менее 0,5 МПа / 5 бар /, что эквивалентно минимальному гидростатическому давлению 2,0 МПа / 20 бар /.

**ПРОВЕРКА ГЕРМЕТИЧНОСТИ** Технические аспекты, внешний вид и другие характерные свойства фитингов могут подвергаться изменению с учётом технического прогресса и в соответствии с изменениями в действующих стандартах.



1 1a 2 2a 3



40 41 85 90 92



94 95or 96 97or 98



120 130 131 135 165



180 220 221 240 241



245 246 270 271 280



281 290 291 300 301



310 321 326 330or 331or



340 341 370 371or 372or



374 471 529a 623 624

● **Limit** - longer realization time

**CARTONS**

**S [small]** - 192 x 285 x 110 mm - weight: 0,200 Kg

**M [medium]** - 385 x 285 x 110 mm - weight: 0,420 Kg

**L [large]** - 385 x 285 x 220 mm - weight: 0,560 Kg



1

ISO/EN G4

Long sweep bend 90°  
Bogen 90°, lang  
Courbe à grand rayon 90°  
Curva lunga 90°  
Отвод 90°

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
1/4	5,10	5907791600011	6,24	5907791600028	S	120	5,6	6,2	10
3/8	6,10	5907791600042	7,64	5907791600059	S	80	6,7	7,0	10
1/2	5,48	5907791600073	6,86	5907791600080	M	100	11,1	11,7	10
3/4	9,50	5907791600103	11,92	5907791600110	M	60	13,1	13,6	10
1	12,80	5907791600134	16,24	5907791600141	L	60	23,6	24,3	
1 1/4	22,54	5907791600165	27,96	5907791600172	L	35	22,4	23,4	
1 1/2	29,04	5907791600196	36,98	5907791600202	L	25	21,1	22,0	
2	48,10	5907791600226	59,60	5907791600233	L	15	20,6	21,6	
2 1/2	104,82	5907791600257	133,98	5907791600264	L	4	10,0	10,2	
3	135,74	5907791600288	171,88	5907791600295	L	3	10,8	11,1	
4	246,26	5907791600318	312,00	5907791600325	L	1	6,5	6,7	



1a

ISO/EN D4

Short bend 90°  
Bogen 90°, kurz  
Courbe courte 90°  
Curva corta 90°  
Отвод 90°

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
3/8	5,72	5907791619150	7,12	5907791619167	S	80	5,8	6,0	10
1/2	5,00	5907791619181	6,24	5907791619198	S	50	6,2	6,4	10
3/4	7,80	5907791619211	9,60	5907791619228	S	30	5,1	5,3	10
1	10,38	5907791619242	12,90	5907791619259	S	20	6,8	7,1	
1 1/4	15,16	5907791619273	19,44	5907791619280	S	10	5,4	5,6	
1 1/2	22,12	5907791619303	27,96	5907791619310	S	8	5,7	5,8	
2	39,54	5907791619334	48,94	5907791619341	S	4	4,4	4,5	



2

ISO/EN G1

Long sweep bend 90°  
Bogen 90°, lang  
Courbe à grand rayon 90°  
Curva lunga 90°  
Отвод 90°

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
1/4	5,52	5907791600349	6,66	5907791600356	S	100	6,3	6,6	10
3/8	5,88	5907791600370	7,64	5907791600387	S	60	5,8	6,0	10
1/2	6,24	5907791600400	7,74	5907791600417	M	80	11,8	12,1	10
3/4	9,76	5907791600431	11,96	5907791600448	M	60	14,5	15,1	10
1	12,80	5907791600462	16,24	5907791600479	L	50	22,3	22,6	
1 1/4	22,64	5907791600493	28,06	5907791600509	L	30	24,5	25,0	
1 1/2	27,90	5907791600523	34,50	5907791600530	L	23	22,1	23,0	
2	38,46	5907791600554	47,90	5907791600561	L	12	17,9	18,3	
2 1/2	106,56	5907791600585	134,72	5907791600592	L	4	11,0	11,2	
3	133,84	5907791600615	169,36	5907791600622	L	3	11,9	12,2	
4	253,54	5907791600646	321,06	5907791600653	L	1	6,9	7,0	



2a

ISO/EN D1

Short bend 90°  
Bogen 90°, kurz  
Courbe courte 90°  
Curva corta 90°  
Отвод 90°

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
3/8	5,10	5907791619365	6,14	5907791619372	S	60	5,0	5,2	10
1/2	4,74	5907791619396	6,04	5907791619402	S	50	6,8	7,0	10
3/4	6,40	5907791619426	8,26	5907791619433	S	30	6,7	6,8	10
1	9,96	5907791619457	12,80	5907791619464	S	15	5,6	5,8	
1 1/4	14,86	5907791619488	19,14	5907791619495	S	10	5,8	6,0	
1 1/2	20,32	5907791619518	25,78	5907791619525	S	5	3,9	4,0	
2	31,92	5907791619549	41,30	5907791619556	S	3	3,6	3,7	



3

ISO/EN G8

Long sweep bend 90°  
Bogen 90°, lang  
Courbe à grand rayon 90°  
Curva lunga 90°  
Отвод 90°

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
1/2	9,50	5907791600677	11,86	5907791600684	S	50	5,2	5,6	10
3/4	10,58	5907791621795	13,30	5907791621801	S	30	5,4	5,7	10
1	15,32	5907791621870	19,08	5907791621887	S	20	6,6	6,9	



40

ISO/EN G4/45°

Long sweep bend 45°  
Bogen 45°, lang  
Courbe à grand rayon 45°  
Curva lunga 45°  
Отвод 45°

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
1/4	7,58	5907791600790	9,24	5907791600806	S	100	4,3	4,4	10
3/8	6,82	5907791600820	8,42	5907791600837	S	80	4,8	5,0	10
1/2	6,24	5907791600851	7,74	5907791600868	M	100	9,3	9,6	10
3/4	8,42	5907791600882	10,48	5907791600899	M	70	9,7	10,1	10
1	11,92	5907791600912	14,66	5907791600929	M	40	10,6	11,2	-
1 1/4	20,52	5907791600943	25,58	5907791600950	M	25	11,5	12,0	
1 1/2	24,66	5907791600974	30,42	5907791600981	M	15	8,1	8,5	
2	38,78	5907791601001	48,20	5907791601018	M	8	7,5	7,7	
2 1/2	84,60	5907791601032	107,02	5907791601049	M	4	6,0	6,2	
3	92,12	5907791601063	116,78	5907791601070	L	6	13,8	14,2	
4	208,06	5907791601094	263,28	5907791601100	L	2	7,8	8,0	



41

ISO/EN G1/45°

Long sweep bend 45°  
Bogen 45°, lang  
Courbe à grand rayon 45°  
Curva lunga 45°  
Отвод 45°

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
1/4	7,30	5907791601124	8,90	5907791601131	S	100	5,0	5,2	10
3/8	7,84	5907791601155	9,70	5907791601162	S	60	4,6	4,9	10
1/2	7,58	5907791601186	9,24	5907791601193	M	100	12,5	13,0	10
3/4	9,34	5907791601216	11,72	5907791601223	M	60	13,0	13,4	10
1	12,08	5907791601247	14,96	5907791601254	M	30	10,2	10,7	-
1 1/4	21,36	5907791601278	26,82	5907791601285	M	20	11,5	11,8	
1 1/2	27,96	5907791601308	35,42	5907791601315	M	12	8,9	9,2	
2	39,54	5907791601339	49,70	5907791601346	M	6	6,4	6,5	
2 1/2	77,70	5907791601360	98,10	5907791601377	M	4	7,3	7,5	
3	98,88	5907791601391	125,08	5907791601407	L	6	15,5	16,1	



85

Crossover  
Überspringbogen  
Dos d'âne  
Scavalcattubo a curva  
Обход

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
1/2	7,90	5907791601452	9,90	5907791601469	M	80	16,5	17,0	-
3/4	12,08	5907791601483	14,96	5907791601490	M	40	14,6	15,7	



90

ISO/EN A1

Elbow 90°, equal  
Winkel 90°, egal  
Coude 90°, égal  
Gomito 90°, uguale  
Угольник 90°

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
1/4	3,40	5907791601513	4,02	5907791601520	M	250	11,7	12,0	10
3/8	2,78	5907791601544	3,58	5907791601551	M	200	12,3	12,9	10
1/2	1,83	5907791601605	2,45	5907791601612	M	150	14,0	14,4	10
3/4	2,92	5907791601698	3,86	5907791601704	M	80	12,5	12,9	10
1	4,48	5907791601810	5,68	5907791601827	L	100	22,9	24,0	10
1 1/4	8,74	5907791601933	10,80	5907791601940	L	60	23,5	24,0	-
1 1/2	14,04	5907791602053	17,33	5907791602060	L	50	24,9	25,5	-
2	16,24	5907791602206	20,48	5907791602213	L	25	17,5	18,1	-
2 1/2	47,44	5907791602381	59,96	5907791602398	L	15	17,3	18,0	-
3	66,04	5907791602534	82,18	5907791602541	L	10	15,1	15,5	-
4	116,36	5907791602657	147,14	5907791602664	L	4	11,1	11,4	-

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
3/8 x 1/4	5,22	5907791601575	6,34	5907791601582	S	100	5,4	5,8	10
1/2 x 1/4	6,34	5907791601636	7,80	5907791601643	S	80	5,8	6,0	10
1/2 x 3/8	3,72	5907791601667	4,64	5907791601674	S	80	6,4	6,5	10
3/4 x 1/4	7,02	5907791601728	8,50	5907791601735	S	50	4,9	5,2	10
3/4 x 3/8	6,14	5907791601759	7,68	5907791601766	S	50	5,3	5,6	10
3/4 x 1/2	4,44	5907791601780	5,16	5907791601797	M	100	12,1	12,7	10
1 x 3/8	7,54	5907791601841	8,98	5907791601858	S	40	6,0	6,2	10
1 x 1/2	5,88	5907791601872	7,58	5907791601889	M	70	13,8	14,4	10
1 x 3/4	6,46	5907791601902	7,94	5907791601919	L	100	19,5	19,8	10
1 1/4 x 1/2	9,90	5907791601964	11,96	5907791601971	M	45	11,3	12,8	-
1 1/4 x 3/4	13,10	5907791601995	16,24	5907791602008	M	40	11,1	11,4	-
1 1/4 x 1	10,38	5907791602022	12,90	5907791602039	M	35	11,2	11,8	-
1 1/2 x 1/2	15,67	5907791602084	19,58	5907791602091	M	40	11,6	12,3	-
1 1/2 x 3/4	16,00	5907791602114	19,80	5907791602121	M	30	9,7	10,0	-
1 1/2 x 1	14,86	5907791602145	18,88	5907791602152	M	30	11,2	11,4	-
1 1/2 x 1 1/4	16,60	5907791602176	20,52	5907791602183	M	20	9,3	9,6	-
2 x 1/2	16,15	5907791602237	20,07	5907791602244	M	27	11,0	11,8	-
2 x 3/4	24,60	5907791602268	30,74	5907791602275	M	25	11,1	11,3	-
2 x 1	26,14	5907791602299	32,48	5907791602305	M	15	7,1	7,2	-
2 x 1 1/4	27,96	5907791602329	35,22	5907791602336	M	14	8,1	8,6	-
2 x 1 1/2	26,56	5907791602350	33,06	5907791602367	M	14	8,7	9,3	-
2 1/2 x 1 1/2	36,11	5907791602473	43,95	5907791602480	M	10	9,9	10,5	-
2 1/2 x 2	64,79	5907791602503	79,96	5907791602510	M	8	8,1	8,4	-
3 x 1 1/2	62,66	5907791602565	73,20	5907791602572	M	9	10,6	11,1	-
3 x 2	66,03	5907791602596	77,05	5907791602602	M	5	7,0	7,2	-
3 x 2 1/2	69,65	5907791602626	80,91	5907791602633	M	5	8,2	8,5	-

90

ISO/EN A1

Elbow 90°, reducing  
Winkel 90°, reduziert  
Coude 90°, réduit  
Gomito 90°, ridotto  
Угольник 90°



92

ISO/EN A4

Elbow 90°, equal  
Winkel 90°, egal  
Coude 90°, égal  
Gomito 90°, uguale  
Угольник 90°

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
1/4	3,52	5907791602688	4,38	5907791602695	M	300	11,9	12,8	10
3/8	3,40	5907791602718	4,02	5907791602725	M	250	14,2	15,0	10
1/2	2,35	5907791602749	2,82	5907791602756	M	150	14,9	15,3	10
3/4	3,60	5907791602800	4,43	5907791602817	M	80	11,3	11,6	10
1	5,72	5907791602862	7,34	5907791602879	L	100	22,3	23,2	10
1 1/4	10,39	5907791602923	12,60	5907791602930	L	55	21,4	22,1	-
1 1/2	15,17	5907791602985	18,92	5907791602992	L	45	22,2	23,1	-
2	19,76	5907791603012	24,86	5907791603029	L	25	17,4	18,1	-
2 1/2	49,80	5907791603043	61,86	5907791603050	L	15	16,4	16,8	-
3	65,42	5907791603074	81,46	5907791603081	L	10	16,3	16,9	-
4	109,92	5907791603104	139,10	5907791603111	L	4	12,0	12,3	-



92

ISO/EN A4

Elbow 90°, reducing  
Winkel 90°, reduziert  
Coude 90°, réduit  
Gomito 90°, ridotto  
Угольник 90°

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
1/2 x 3/8	8,16	5907791602770	10,06	5907791602787	S	80	5,8	6,0	10
3/4 x 1/2	9,14	5907791602831	11,50	5907791602848	S	50	5,8	6,4	10
1 x 3/4	12,08	5907791602893	14,96	5907791602909	M	50	9,7	10,3	10

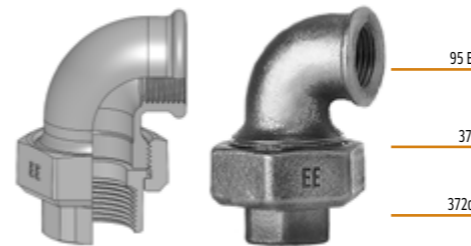


94

ISO/EN A4

Elbow 90°  
Winkel 90°  
Coude 90°  
Gomito 90°  
Угольник 90°

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
1/2	8,26	5907791621900	10,48	5907791621917	S	60	5,1	5,3	10
3/4	9,14	5907791603135	11,72	5907791603142	S	40	4,8	5,0	10
1	14,50	5907791621931	17,90	5907791621948	M	30	6,5	6,7	10

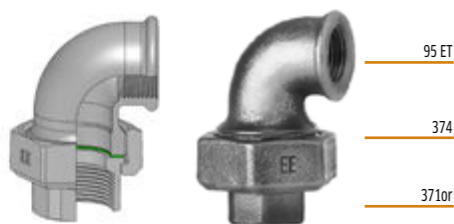


95or

ISO/EN UA1

Union elbow, flat seat  
Winkelverschraubung, flach dichtend  
Coude union, à joint plat  
Gomito con bocchettone, a sede piana  
Разъем. соединение угловое

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
3/8	16,96	5907791619723	21,20	5907791619730	S	40	6,4	6,7	-
1/2	13,26	5907791619754	16,50	5907791619761	S	30	8,6	9,0	-
3/4	14,60	5907791619785	18,06	5907791619792	S	20	7,0	7,3	-
1	18,00	5907791619815	22,54	5907791619822	M	20	9,4	9,7	-
1 1/4	31,20	5907791619846	39,18	5907791619853	M	10	8,5	8,8	-
1 1/2	43,42	5907791619877	54,86	5907791619884	M	8	8,1	8,3	-
2	64,92	5907791619907	81,72	5907791619914	M	6	8,9	9,1	-



<b>95oru</b> with gaskets	ISO/EN UA1
	Union elbow, flat seat Winkelverschraubung, flach dichtend Coude union, à joint plat Gomito con bocchettone, a sede piana Разъем. соединение угловое

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
3/8	17,64	5907791629203	22,05	5907791629210	S	40	6,4	6,7	-
1/2	13,79	5907791629227	17,16	5907791629234	S	30	8,6	9,0	-
3/4	15,18	5907791629241	18,78	5907791629258	S	20	7,0	7,3	-
1	18,72	5907791629265	23,44	5907791629272	M	20	9,4	9,7	-
1 1/4	32,45	5907791629289	40,75	5907791629296	M	10	8,5	8,8	-
1 1/2	45,16	5907791629302	57,05	5907791629319	M	8	8,1	8,3	-
2	67,52	5907791629326	84,99	5907791629333	M	6	8,9	9,1	-



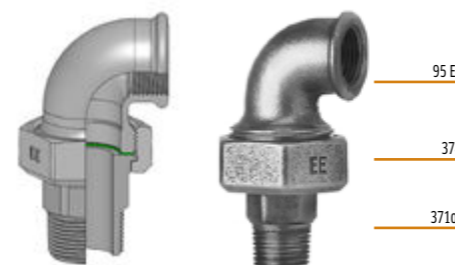
<b>96</b>	ISO/EN UA11
	Union elbow, taper seat Winkelverschraubung, kegelig dichtend Coude union, à joint conique Gomito con bocchettone, a sede conica Конусное соединение угловое

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
3/8	18,00	5907791603371	22,48	5907791603388	S	40	6,5	6,8	-
1/2	13,20	5907791603401	16,66	5907791603418	M	60	17,9	18,5	-
3/4	15,26	5907791603432	19,28	5907791603449	M	45	16,9	17,5	-
1	22,02	5907791603463	27,64	5907791603470	M	20	9,9	10,2	-
1 1/4	37,08	5907791603494	46,04	5907791603500	M	10	8,8	9,0	-
1 1/2	43,42	5907791603524	54,86	5907791603531	M	8	8,3	8,7	-
2	73,16	5907791603555	92,50	5907791603562	M	6	9,6	9,9	-



<b>97or</b>	ISO/EN UA2
	Union elbow, flat seat Winkelverschraubung, flach dichtend Coude union, à joint plat Gomito con bocchettone, a sede piana Разъем. соединение угловое

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
3/8	16,96	5907791619938	21,20	5907791619945	S	30	5,4	5,5	-
1/2	13,42	5907791619969	16,92	5907791619976	S	20	6,4	6,7	-
3/4	16,20	5907791619990	20,38	5907791620002	S	17	6,7	7,0	-
1	20,38	5907791620026	25,88	5907791620033	M	15	8,4	8,6	-
1 1/4	34,86	5907791620057	45,02	5907791620064	M	10	9,8	10,2	-
1 1/2	47,28	5907791620088	59,70	5907791620095	M	7	8,3	8,5	-
2	68,72	5907791620118	86,98	5907791620125	M	5	8,3	8,6	-



<b>97oru</b> with gaskets	ISO/EN UA2
	Union elbow, flat seat Winkelverschraubung, flach dichtend Coude union, à joint plat Gomito con bocchettone, a sede piana Разъем. соединение угловое

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
3/8	17,64	5907791629340	22,05	5907791629357	S	30	5,4	5,5	-
1/2	13,96	5907791629364	17,60	5907791629371	S	20	6,4	6,7	-
3/4	16,85	5907791629388	21,20	5907791629395	S	17	6,7	7,0	-
1	21,20	5907791629401	26,92	5907791629418	M	15	8,4	8,6	-
1 1/4	36,25	5907791629425	46,82	5907791629432	M	10	9,8	10,2	-
1 1/2	49,17	5907791629449	62,09	5907791629456	M	7	8,3	8,5	-
2	71,47	5907791629463	90,46	5907791629470	M	5	8,3	8,6	-



<b>98</b>	ISO/EN UA12
	Union elbow, taper seat Winkelverschraubung, kegelig dichtend Coude union, à joint conique Gomito con bocchettone, a sede conica Конусное соединение угловое

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
3/8	16,20	5907791603791	19,96	5907791603807	S	30	5,2	5,5	-
1/2	13,26	5907791603821	16,72	5907791603838	M	50	16,5	17,0	-
3/4	16,92	5907791603852	21,20	5907791603869	M	35	14,8	15,3	-
1	23,16	5907791603883	29,04	5907791603890	M	15	8,9	9,2	-
1 1/4	38,36	5907791603913	48,68	5907791603920	M	10	10,0	10,3	-
1 1/2	48,00	5907791603944	59,60	5907791603951	M	7	8,5	8,7	-
2	77,96	5907791603975	98,52	5907791603982	M	5	8,7	9,0	-



<b>120</b>	ISO/EN A1/45°
	Elbow 45° Winkel 45° Coude 45° Gomito 45° Угольник 45°

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
1/2	6,40	5907791604002	8,16	5907791604019	S	70	5,9	6,2	10
3/4	7,90	5907791604033	10,06	5907791604040	S	40	5,4	5,6	10
1	11,67	5907791604064	14,60	5907791604071	M	50	10,4	10,8	10





<b>131</b>	ISO/EN E1
	Pitcher tee, equal Bogen-T-Stück, egal Té cintré, égal Ti a una curva, uguale Тройник с отводом



<b>135</b>	Tee, equal T-Stück, egal Té, égal Ti, uguale Тройник прямой
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<b>165</b>	Tee 45°, equal T-Stück 45°, egal Té 45° égal Ti 45°, uguale Тройник 45° о прямой
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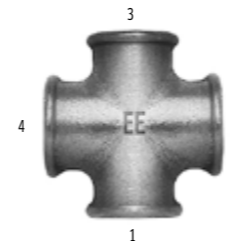
DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
1/2	10,38	5907791606709	13,20	5907791606716	S	30	5,7	5,7	-
3/4	13,10	5907791606730	16,66	5907791606747	S	20	5,9	6,0	-
1	19,70	5907791606761	25,16	5907791606778	S	10	4,9	5,0	-
1 1/4	26,60	5907791606792	34,08	5907791606808	S	8	6,5	6,5	-
1 1/2	39,54	5907791606822	49,80	5907791606839	S	3	3,2	3,3	-
2	55,94	5907791606853	71,76	5907791606860	S	2	3,0	3,0	-

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
1	22,38	5907791621962	28,06	5907791621979	S	20	6,3	6,6	-

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
1/2	15,88	5907791606884	19,80	5907791606891	S	30	6,0	6,1	-
3/4	18,20	5907791606914	22,80	5907791606921	S	15	4,9	5,1	-
1	27,18	5907791606945	34,14	5907791606952	S	10	5,3	5,6	-
1 1/4	33,42	5907791606976	42,28	5907791606983	S	6	5,1	5,3	-
1 1/2	45,42	5907791607003	56,76	5907791607010	S	3	3,4	3,5	-
2	66,98	5907791607034	84,56	5907791607041	S	2	3,2	3,4	-



<b>180</b>	ISO/EN C1
	Cross, equal Kreuz, egal Croix, égal Croce, uguale Крестовина



<b>180</b>	ISO/EN C1
	Cross, reducing Kreuz, reduziert Croix, réduit Croce, ridotto Крестовина



<b>220</b>	Y-piece Y-Verteiler Distributeur Y Distribuzione a Y Тройник вилкообразный
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<b>221</b>	ISO/EN Za1
	Side outlet elbow Winkelverteiler Distributeur à coude Distribuzione a gomito Тройник трехобвой

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
3/8	9,50	5907791607096	11,92	5907791607102	S	40	4,1	4,2	10
1/2	9,34	5907791607126	11,72	5907791607133	M	60	9,8	10,0	10
3/4	14,28	5907791607188	17,44	5907791607195	M	40	9,7	10,2	10
1	17,44	5907791607300	21,60	5907791607317	M	25	10,6	10,9	-
1 1/4	23,16	5907791607423	28,98	5907791607430	M	12	8,1	8,3	-
1 1/2	30,64	5907791607546	38,62	5907791607553	M	12	10,1	10,3	-
2	45,52	5907791607690	57,64	5907791607706	M	6	7,1	7,1	-
2 1/2	103,00	5907791607812	130,38	5907791607829	M	3	5,4	5,5	-
3	118,58	5907791607843	150,12	5907791607850	L	4	10,4	10,7	-
4	195,64	5907791607874	248,90	5907791607881	L	3	12,8	13,1	-

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
1/2 x 3/8 x 1/2 x 3/8	8,96	5907791607157	11,24	5907791607164	S	30	4,2	4,3	10
3/4 x 3/8 x 3/4 x 3/8	9,14	5907791607218	11,78	5907791607225	S	20	3,1	3,2	10
3/4 x 1/2 x 3/4 x 1/2	13,10	5907791607270	16,36	5907791607287	S	20	4,3	4,4	10
1 x 1/2 x 1 x 1/2	26,00	5907791607362	32,74	5907791607379	S	15	4,1	4,2	-
1 x 3/4 x 1 x 3/4	26,00	5907791607393	32,74	5907791607409	S	15	4,5	4,7	-
1 1/4 x 1/2 x 1 1/4 x 1/2	19,23	5907791607454	23,32	5907791607461	L	30	10,6	11,0	-
1 1/2 x 3/4 x 1 1/2 x 3/4	20,30	5907791607607	24,43	5907791607614	L	25	13,3	13,8	-
2 x 3/4 x 2 x 3/4	17,78	5907791607751	21,22	5907791607768	L	15	11,0	11,3	-

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
1/2	11,04	5907791621993	13,62	5907791622006	S	30	4,0	4,2	10
3/4	16,96	5907791622020	21,40	5907791622037	S	20	4,4	4,6	-
1	28,06	5907791622051	35,42	5907791622068	S	15	5,0	5,1	-

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
3/8	11,50	5907791607904	14,50	5907791607911	S	50	4,3	4,5	10
1/2	8,98	5907791607935	11,00	5907791607942	M	80	9,7	10,1	10
3/4	11,14	5907791607966	17,44	5907791607973	M	50	9,8	10,8	10
1	18,56	5907791607997	23,10	5907791608000	M	30	9,3	9,7	-
1 1/4	32,48	5907791608024	40,88	5907791608031	M	15	8,5	8,7	-
1 1/2	46,10	5907791608055	58,06	5907791608062	M	10	6,7	6,8	-
2	70,12	5907791608086	88,72	5907791608093	M	7	7,2	7,3	-



DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
3/8 x 1/4	3,78	5907791608116	4,84	5907791608123	S	150	6,2	6,6	10
1/2 x 1/4	4,02	5907791608147	5,06	5907791608154	S	100	6,6	6,8	10
1/2 x 3/8	3,58	5907791608178	4,22	5907791608185	S	100	6,6	7,0	10
3/4 x 3/8	4,64	5907791608239	5,88	5907791608246	S	60	5,1	5,5	10
3/4 x 1/2	3,84	5907791608260	4,96	5907791608277	M	100	10,5	10,7	10
1 x 1/4	8,62	5907791608291	10,05	5907991608307	S	40	5,4	5,5	10
1 x 3/8	6,46	5907791608321	8,16	5907791608338	S	40	5,1	5,2	10
1 x 1/2	5,00	5907791608352	6,24	5907791608369	L	180	25,5	26,7	10
1 x 3/4	4,48	5907791608383	5,68	5907791608390	L	150	24,0	24,5	10
1 1/4 x 3/8	11,50	5907791608413	14,50	5907791608420	S	25	5,7	5,8	-
1 1/4 x 1/2	9,14	5907791608444	11,86	5907791608451	M	50	11,7	12,0	-
1 1/4 x 3/4	8,26	5907791608475	10,48	5907791608482	L	100	23,4	24,4	-
1 1/4 x 1	8,16	5907791608505	10,16	5907791608512	L	100	23,3	24,0	-
1 1/2 x 1/2	14,60	5907791608536	18,32	5907791608543	M	40	11,5	11,5	-
1 1/2 x 3/4	12,80	5907791608567	16,24	5907791608574	M	40	11,5	12,0	-
1 1/2 x 1	9,90	5907791608598	12,34	5907791608604	L	80	24,0	25,0	-
1 1/2 x 1 1/4	10,74	5907791608628	13,62	5907791608635	L	75	22,0	23,9	-
2 x 1/2	20,26	5907791608659	25,32	5907791608666	M	20	8,5	8,6	-
2 x 3/4	21,04	5907791608680	26,30	5907791608697	M	20	7,8	8,1	-
2 x 1	19,04	5907791608710	24,24	5907791608727	L	50	22,3	22,8	-
2 x 1 1/4	17,08	5907791608741	21,40	5907791608758	L	50	22,2	22,9	-
2 x 1 1/2	16,20	5907791608772	20,32	5907791608789	L	40	18,5	18,7	-
2 1/2 x 1	38,16	5907791608802	48,16	5907791608819	M	15	10,1	10,9	-
2 1/2 x 1 1/4	43,16	5907791608833	53,94	5907791608840	M	15	10,0	10,5	-
2 1/2 x 1 1/2	50,88	5907791608864	64,50	5907791608871	M	15	10,8	11,2	-
2 1/2 x 2	44,08	5907791608895	54,70	5907791608901	M	12	8,9	9,4	-
3 x 1	45,78	5907791608925	58,51	5907791608932	M	12	10,6	11,2	-
3 x 1 1/4	43,34	5907791608956	54,78	5907791608963	M	12	11,3	11,7	-
3 x 1 1/2	46,72	5907791608987	59,08	5907791608994	M	12	11,5	11,6	-
3 x 2	68,26	5907791609014	86,26	5907791609021	M	12	11,6	12,0	-
3 x 2 1/2	77,74	5907791609045	98,16	5907791609052	M	8	8,8	9,0	-
4 x 1 1/2	102,54	5907791609076	122,14	5907791609083	M	5	7,1	7,7	-
4 x 2	117,80	5907791609106	149,20	5907791609113	M	6	9,2	9,5	-
4 x 2 1/2	123,32	5907791609137	155,90	5907791609144	M	6	10,2	10,6	-
4 x 3	126,30	5907791609168	159,96	5907791609175	M	6	9,4	9,9	-

240

ISO/EN M2  
Socket, reducing  
Muffe, reduziert  
Manchon, réduit  
Manicotto, ridotto  
Муфта переходная



DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
3/8 x 1/4	2,48	5907791609199	3,20	5907791609205	S	200	3,8	4,0	10
1/2 x 1/4	2,02	5907791609229	2,48	5907791609236	S	150	6,5	6,8	10
1/2 x 3/8	1,86	5907791609250	2,48	5907791609267	M	300	9,2	9,8	10
3/4 x 1/4	3,68	5907791609281	4,54	5907791609298	S	100	7,0	7,2	10
3/4 x 3/8	2,84	5907791609311	3,46	5907791609328	S	100	5,9	6,1	10
3/4 x 1/2	1,96	5907791609342	2,62	5907791609359	M	200	10,7	11,1	10
1 x 3/8	4,64	5907791609403	5,72	5907791609410	S	60	6,3	6,5	10
1 x 1/2	2,88	5907791609434	3,68	5907791609441	L	220	22,9	23,3	10
1 x 3/4	2,62	5907791609465	3,46	5907791609472	L	250	21,4	22,1	10
1 1/4 x 3/8	8,26	5907791609496	10,48	5907791609502	S	40	8,4	8,6	10
1 1/4 x 1/2	5,36	5907791609526	6,34	5907791609533	L	100	19,9	20,4	10
1 1/4 x 3/4	4,60	5907791609557	5,68	5907791609564	L	120	21,6	22,4	10
1 1/4 x 1	3,46	5907791609588	4,22	5907791609595	L	150	22,4	22,5	10
1 1/2 x 1/2	6,56	5907791609618	8,42	5907791609625	L	90	22,9	23,4	-
1 1/2 x 3/4	7,58	5907791609649	9,28	5907791609656	L	90	22,8	23,1	-
1 1/2 x 1	5,00	5907791609670	6,24	5907791609687	L	100	22,0	22,4	-
1 1/2 x 1 1/4	5,10	5907791609700	6,34	5907791609717	L	150	22,2	23,1	-
2 x 1/2	13,30	5907791609731	16,86	5907791609748	L	60	22,2	23,1	-
2 x 3/4	13,20	5907791609762	16,66	5907791609779	L	55	20,9	21,0	-
2 x 1	10,85	5907791609793	13,63	5907791609809	L	55	21,2	21,4	-
2 x 1 1/4	10,34	5907791609823	13,01	5907791609830	L	60	21,6	22,1	-
2 x 1 1/2	9,26	5907791609854	11,67	5907791609861	L	80	23,3	23,8	-
2 1/2 x 1	21,56	5907791609946	26,82	5907791609953	M	20	12,0	12,3	-
2 1/2 x 1 1/4	24,76	5907791609977	31,04	5907791609984	M	20	12,1	12,3	-
2 1/2 x 1 1/2	23,56	5907791610003	29,30	5907791610010	L	36	20,5	21,2	-
2 1/2 x 2	17,80	5907791610034	22,44	5907791610041	L	45	21,5	21,8	-
3 x 1	33,26	5907791610065	42,02	5907791610072	M	12	10,9	11,2	-
3 x 1 1/4	33,26	5907791610096	42,02	5907791610102	M	12	11,0	11,3	-
3 x 1 1/2	31,10	5907791610126	38,98	5907791610133	M	12	10,9	11,0	-
3 x 2	23,32	5907791610157	28,92	5907791610164	L	26	22,1	22,6	-
3 x 2 1/2	26,30	5907791610188	32,74	5907791610195	L	30	19,0	19,2	-
4 x 1	34,7	5907791610218	43,09	5907791610225	L	15	23,3	23,7	-
4 x 1 1/4	35,3	5907791610249	43,74	5907791610256	L	15	24,9	25,1	-
4 x 1 1/2	35,3	5907791610270	43,74	5907791610287	L	15	21,0	21,7	-
4 x 2	66,46	5907791610300	84,08	5907791610317	M	10	16,4	16,6	-
4 x 2 1/2	49,34	5907791610331	62,60	5907791610348	M	10	16,0	16,5	-
4 x 3	47,38	5907791610362	60,06	5907791610379	L	15	21,0	21,2	-

241

ISO/EN N4  
Reducing bush  
Reduziernippel  
Mamelon, réduit  
Nipplo di riduzione  
Футорка





245	ISO/EN N8
	Hexagon nipple, reducing Doppelnippel, reduziert Mamelon, réduit Nipplo doppio, ridotto Ниппель редуционный



246	ISO/EN M4
	Socket, reducing Muffe, reduziert Manchon, réduit Manicotto, ridotto Муфта редуционная



270	ISO/EN M2
	Socket, equal Muffe, egal Manchon, égal Manicotto, uguale Муфта

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
3/8 x 1/4	3.84	5907791610393	5.06	5907791610409	S	150	5,4	5,9	10
1/2 x 1/4	5.36	5907791610423	6.34	5907791610430	S	100	5,3	5,5	10
1/2 x 3/8	4.64	5907791610454	5.88	5907791610461	S	100	6,2	6,5	10
3/4 x 3/8	8.36	5907791610485	10,42	5907791610492	S	70	6,0	6,3	10
3/4 x 1/2	4.22	5907791610515	5,10	5907791610522	M	150	13,5	14,0	10
1 x 3/8	8.93	5907791610546	10,35	5907791610553	M	90	11,7	12,0	10
1 x 1/2	8.16	5907791610577	10,32	5907791610584	L	150	21,8	22,2	10
1 x 3/4	4.64	5907791610607	5,88	5907791610614	L	180	24,8	25,7	10
1 1/4 x 1/2	12.54	5907791610638	15,78	5907791610645	M	50	10,9	11,4	10
1 1/4 x 3/4	10.88	5907791610669	13,42	5907791610676	L	100	21,0	22,1	10
1 1/4 x 1	7.64	5907791610690	9,28	5907791610706	L	100	22,8	23,5	10
1 1/2 x 1/2	6.47	5907791610720	7,66	5907791610737	M	40	9,8	10,2	-
1 1/2 x 3/4	10.88	5907791610751	13,62	5907791610768	M	40	10,5	10,9	-
1 1/2 x 1	17.08	5907791610782	21,60	5907791610799	L	80	23,1	23,8	-
1 1/2 x 1 1/4	9.18	5907791610812	11,72	5907791610829	L	60	18,0	18,7	-
2 x 1/2	14.99	5907791610843	16,98	5907791610850	M	25	10,1	10,7	-
2 x 3/4	12.33	5907791611024	14,12	5907791610881	M	25	10,4	10,8	-
2 x 1	15.48	5907791610904	19,44	5907791610911	M	25	11,1	11,3	-
2 x 1 1/4	19.40	5907791610935	24,24	5907791610942	L	45	20,3	21,0	-
2 x 1 1/2	17.58	5907791610966	22,12	5907791610973	L	45	19,1	19,6	-
2 1/2 x 1	20.07	5907791610997	23,28	5907791611000	M	17	12,0	12,4	-
2 1/2 x 1 1/4	15.85	5907791611024	19,09	5907791611031	M	11	8,3	8,5	-
2 1/2 x 1 1/2	25.38	5907791611055	31,92	5907791611062	M	16	12,1	12,4	-
2 1/2 x 2	42.60	5907791611086	53,00	5907791611093	M	16	10,5	10,9	-
3 x 2	51.66	5907791611116	65,28	5907791611123	M	9	9,4	9,4	-
3 x 2 1/2	67.70	5907791611147	85,64	5907791611154	M	9	9,0	9,0	-

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
3/8 x 1/4	3.58	5907791611178	4.44	5907791611185	S	150	5,4	5,7	10
1/2 x 1/4	4.80	5907791611208	5.88	5907791611215	S	100	5,9	6,1	10
1/2 x 3/8	3.78	5907791611239	4.70	5907791611246	S	100	6,8	7,2	10
3/4 x 3/8	6.40	5907791611260	7.94	5907791611277	S	50	4,7	4,9	10
3/4 x 1/2	4.02	5907791611291	5.06	5907791611307	M	100	10,0	10,7	10
1 x 1/2	6.30	5907791611321	7.74	5907791611338	M	80	11,4	12,4	10
1 x 3/4	6.46	5907791611352	8.20	5907791611369	L	150	22,1	22,5	10
1 1/4 x 3/4	11.76	5907791611383	14,66	5907791611390	M	50	11,6	12,2	-
1 1/4 x 1	7.48	5907791611413	9.08	5907791611420	L	95	22,2	23,4	-
1 1/2 x 1	14.08	5907791611444	17,44	5907791611451	M	40	11,9	12,3	-
1 1/2 x 1 1/4	12.29	5907791611475	15,27	5907791611482	M	35	11,7	12,1	-
2 x 1 1/4	19.70	5907791611505	24,76	5907791611512	M	20	9,1	9,4	-
2 x 1 1/2	20.58	5907791611536	26,10	5907791611543	M	20	9,3	9,5	-

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
1/4	3.04	5907791611567	3.98	5907791611574	S	150	5,7	6,0	10
3/8	2.84	5907791611598	3.40	5907791611604	S	100	4,8	5,0	10
1/2	2.28	5907791611628	2.78	5907791611635	M	180	13,6	14,1	10
3/4	2.98	5907791611659	3.78	5907791611666	L	200	21,8	22,4	10
1	3.84	5907791611680	5.00	5907791611697	L	150	24,6	25,2	10
1 1/4	6.34	5907791611710	7.84	5907791611727	L	80	21,0	21,3	-
1 1/2	8.85	5907791611741	11,31	5907791611758	L	70	20,2	20,7	-
2	13.27	5907791611772	16,71	5907791611789	L	30	14,7	15,0	-
2 1/2	37.38	5907791611802	46,36	5907791611819	L	20	14,7	15,1	-
3	44.76	5907791611833	55,68	5907791611840	L	10	10,6	10,8	-
4	102.70	5907791611864	129,82	5907791611871	L	10	17,4	18,1	-



271	ISO/EN M2 R-L
	Socket, right and left hand thread Muffe, m. Rechts- u. Linksgewinde Manchon, filetage droite/gauche Manicotto, con filettatura destra/sinistra Муфта



280	ISO/EN N8
	Hexagon nipple Doppelnippel Mamelon Nipplo doppio Ниппель шестигранный



281	ISO/EN N8 R-L
	Hexagon nipple, right and left hand thread Doppelnippel, m. Rechts- u. Linksgewinde Mamelon, filetage droite/gauche Nipplo doppio, con filettatura destra/sinistra Ниппель шестигранный

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
3/8	3.84	5907791611925	4.84	5907791611932	S	100	4,2	4,3	10
1/2	3.52	5907791611956	4.38	5907791611963	S	80	5,6	5,7	10
3/4	4.54	5907791611987	5.84	5907791611994	S	50	5,4	5,6	10
1	6.04	5907791612014	7.54	5907791612021	S	40	6,1	6,4	10
1 1/4	11.50	5907791612045	14,40	5907791612052	S	20	5,3	5,4	-
1 1/2	12.54	5907791612076	15,78	5907791612083	S	12	3,8	4,0	-
2	22.38	5907791612106	28,06	5907791612113	S	8	3,7	3,7	-
2 1/2	28.64	5907791612137	38,05	5907791612144	S	5	3,9	4,0	-
3	25.30	5907791612168	32,74	5907791612175	S	3	3,1	3,2	-
4	49.54	5907791612199	62,63	5907791612205	S	2	3,3	3,5	-

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
1/4	3.46	5907791612229	4.12	5907791612236	S	200	6,0	6,2	10
3/8	3.78	5907791612250	4.70	5907791612267	S	150	6,6	6,8	10
1/2	1.96	5907791612281	2.48	5907791612298	M	160	11,8	12,5	10
3/4	2.62	5907791612311	3.20	5907791612328	M	140	12,8	13,3	10
1	3.62	5907791612342	4.64	5907791612359	L	130	22,1	23,4	10
1 1/4	6.34	5907791612373	7.84	5907791612380	L	80	22,9	23,8	-
1 1/2	7.51	5907791612403	9.05	5907791612410	L	75	21,5	22,7	-
2	13.06	5907791612434	16,30	5907791612441	L	40	20,6	20,8	-
2 1/2	23.56	5907791612465	29,30	5907791612472	L	25	20,1	20,6	-
3	28.56	5907791612496	35,28	5907791612502	L	20	23,2	23,9	-
4	102.70	5907791612526	129,82	5907791612533	L	8	15,4	15,7	-

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
1/4	10.45	5907791612557	13,02	5907791612564	S	170	5,1	5,3	10
3/8	7.69	5907791612588	9.54	5907791612595	S	150	6,6	7,4	10
1/2	3.78	5907791612618	4.64	5907791612625	S	100	7,2	7,5	10
3/4	4.54	5907791612649	5.72	5907791612656	S	70	6,6	6,8	10
1	7.84	5907791612670	9.70	5907791612687	S	40	7,0	7,3	10
1 1/4	11.00	5907791612700	13,78	5907791612717	S	20	5,6	5,9	-
1 1/2	13.10	5907791612731	16,36	5907791612748	S	20	6,2	6,5	-
2	24.24	5907791612762	30,22	5907791612779	S	8	4,4	4,6	-



290	ISO/EN T9
	Plug, beaded Stopfen, mit Rand Bouchon, avec collet Tappo, con bordo Пробка



291	ISO/EN T8
	Plug, plain Stopfen, ohne Rand Bouchon, sans collet Tappo, senza bordo Пробка



300	ISO/EN T1
	Cap Kappe Bouchon Calotta Заглушка



301	ISO/EN U1
	Cap Kappe Bouchon Calotta Заглушка

DIMENSIONS (INCH)	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT (PC) IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK (KG)	GALV (KG)	
1/4	1,80	5907791612885	2,38	5907791612892	S	300	7,1	8,3	10
3/8	1,65	5907791612915	1,92	5907791612922	S	250	8,7	8,9	10
1/2	1,60	5907791612946	1,92	5907791612953	M	350	19,0	19,4	10
3/4	2,16	5907791612977	2,62	5907791612984	M	200	15,5	16,1	10
1	2,42	5907791613004	2,88	5907791613011	L	150	18,6	19,4	10
1 1/4	4,38	5907791613035	5,48	5907791613042	L	100	19,5	19,7	-
1 1/2	5,52	5907791613066	6,66	5907791613073	L	80	17,7	18,1	-
2	9,72	5907791613097	11,88	5907791613103	L	55	23,5	24,2	-
2 1/2	20,52	5907791613127	26,00	5907791613134	L	30	21,8	22,5	-
3	26,56	5907791613158	33,46	5907791613165	L	20	17,3	17,6	-
4	46,72	5907791613189	59,08	5907791613196	L	10	19,4	20,1	-

DIMENSIONS (INCH)	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT (PC) IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK (KG)	GALV (KG)	
1/4	2,02	5907791613219	2,54	5907791613226	S	300	3,2	3,8	10
3/8	1,80	5907791613240	2,42	5907791613257	S	250	4,4	4,9	10
1/2	1,70	5907791613271	2,32	5907791613288	S	200	5,2	5,6	10
3/4	2,54	5907791613301	3,40	5907791613318	S	150	7,5	7,7	10
1	3,30	5907791613332	3,98	5907791613349	S	100	7,4	7,7	10
1 1/4	4,48	5907791613363	5,72	5907791613370	S	80	10,4	10,8	-
1 1/2	7,64	5907791613394	9,50	5907791613400	S	50	7,8	8,1	-
2	10,48	5907791613424	13,06	5907791613431	S	30	8,3	8,4	-
2 1/2	19,80	5907791613455	24,90	5907791613462	S	15	6,8	7,0	-
3	24,24	5907791613486	30,38	5907791613493	S	10	6,7	6,8	-
4	83,68	5907791613516	105,90	5907791613523	S	4	4,9	5,1	-

DIMENSIONS (INCH)	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT (PC) IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK (KG)	GALV (KG)	
1/4	2,38	5907791613547	2,98	5907791613554	S	200	5,0	5,2	10
3/8	2,12	5907791613578	2,78	5907791613585	S	200	6,8	7,0	10
1/2	2,48	5907791613608	3,14	5907791613615	M	250	14,2	14,7	10
3/4	2,98	5907791613639	3,78	5907791613646	M	200	16,9	17,7	10
1	3,62	5907791613660	4,44	5907791613677	L	150	21,3	21,9	10
1 1/4	5,52	5907791613691	6,66	5907791613707	L	100	21,5	22,2	-
1 1/2	6,79	5907791613721	8,28	5907791613738	L	70	16,9	17,5	-
2	12,50	5907791613752	15,63	5907791613769	L	45	22,2	23,0	-
2 1/2	22,80	5907791613783	28,52	5907791613790	L	30	19,7	20,1	-
3	24,90	5907791613813	31,10	5907791613820	L	24	23,7	24,5	-
4	53,52	5907791613844	67,96	5907791613851	L	10	20,1	20,5	-

DIMENSIONS (INCH)	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT (PC) IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK (KG)	GALV (KG)	
3/8	1,61	5907791613875	2,13	5907791613882	S	200	7,0	7,2	10
1/2	1,77	5907791613905	2,48	5907791613912	M	250	13,0	13,5	10
3/4	1,72	5907791613936	2,13	5907791613943	M	150	11,9	12,2	10
1	2,16	5907791613967	2,70	5907791613974	L	150	16,5	17,1	10
1 1/4	3,21	5907791613998	4,16	5907791614001	L	100	18,3	18,8	-
1 1/2	4,09	5907791614025	5,23	5907791614032	L	70	15,6	16,0	-
2	7,68	5907791614056	9,42	5907791614063	L	45	14,5	14,8	-



310	ISO/EN P4
	Backnut Gegenmutter Contre-écrou Controdado Контргайка



321	ISO/EN T8
	Flange without bolt holes Gewindeflansch, ungebohrt Bride sans trou de boulons Flangia senza fori per viti Фланец



326	ISO/EN T1
	Screwed flange, with 2 bolt holes Gewindeflansch, gebohrt, 2 Loch Bride avec 2 trous de boulons Flangia con 2 fori per viti Фланец с 2-мя отверстиями



330or	ISO/EN U1
	Union, flat seat Verschraubung, flach dichtend Manchon, union à joint plat Bocchettone, a sede piana Разъемное соединение под плоское уплотнение

DIMENSIONS (INCH)	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT (PC) IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK (KG)	GALV (KG)	
1/4	2,28	5907791614087	2,84	5907791614094	S	300	3,8	4,1	10
3/8	2,38	5907791614117	2,98	5907791614124	S	250	5,7	5,9	10
1/2	1,80	5907791614148	2,38	5907791614155	S	200	6,2	6,4	10
3/4	2,02	5907791614179	2,48	5907791614186	S	150	5,3	5,6	10
1	3,10	5907791614209	3,68	5907791614216	M	150	9,9	10,4	10
1 1/4	4,44	5907791614230	5,26	5907791614247	M	100	9,9	10,3	10
1 1/2	4,84	5907791614261	6,04	5907791614278	M	100	11,5	12,0	-
2	9,60	5907791614292	11,92	5907791614308	M	50	9,9	10,1	-
2 1/2	21,20	5907791614322	26,72	5907791614339	S	15	6,7	6,9	-
3	24,80	5907791614353	31,40	5907791614360	S	10	4,9	5,2	-
4	21,93	5907791614384	26,31	5907791614391	S	6	5,7	6,0	-

DIMENSIONS (INCH)	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT (PC) IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK (KG)	GALV (KG)	
3/8	11,46	5907791614414	14,02	5907791614421	S	50	9,0	9,2	-
1/2	11,40	5907791614445	14,14	5907791614452	S	40	8,3	8,5	-
3/4	13,82	5907791614476	17,38	5907791614483	S	30	8,3	8,5	-
1	16,00	5907791614506	20,12	5907791614513	S	20	7,4	7,7	-
1 1/4	21,20	5907791614537	26,72	5907791614544	S	15	7,9	8,1	-
1 1/2	25,88	5907791614568	32,48	5907791614575	S	10	7,1	7,3	-
2	31,30	5907791614599	39,24	5907791614605	S	10	9,3	9,4	-
2 1/2	39,35	5907791614629	46,92	5907791614636	M	7	9,2	9,3	-
3	47,33	5907791614650	56,47	5907791614667	M	5	10,3	10,6	-
4	83,94	5907791614681	97,23	5907791614698	M	4	10,1	10,4	-

DIMENSIONS (INCH)	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT (PC) IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK (KG)	GALV (KG)	
3/4	22,74	5907791622143	28,78	5907791622150	S	30	9,6	9,7	-
1	23,16	5907791622167	28,88	5907791622174	S	20	8,2	8,4	-
1 1/4	29,04	5907791622235	36,56	5907791622242	S	15	9,1	9,2	-
1 1/2	31,72	5907791622259	40,06	5907791622266	S	10	7,9	8,2	-

DIMENSIONS (INCH)	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT (PC) IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK (KG)	GALV (KG)	
3/8	12,18	5907791620149	14,90	5907791620156	S	60	7,7	8,0	-
1/2	8,33	5907791620170	10,03	5907791620187	M	80	18,5	19,1	-
3/4	9,46	5907791620200	11,67	5907791620217	M	60	16,9	17,6	-
1	10,49	5907791620262	13,21	5907791620279	M	35	12,37	12,69	-
1 1/4	18,20	5907791620323	22,80	5907791620330	L	35	22,6	23,2	-
1 1/2	23,42	5907791620385	29,44	5907791620392	L	25	18,7	19,1	-
2	38,46	5907791620415	48,82	5907791620422	L	20	21,4	21,9	-
2 1/2	88,46	5907791620446	111,82	5907791620453	L	10	19,0	19,5	-
3	129,76	5907791620477	164,10	5907791620484	L	8	21,4	22,0	-
4	303,28	5907791620507	384,22	5907791620514	L	4	19,3	19,7	-



ISO/EN U1	
<b>330oru</b> with gaskets	Union, flat seat Verschraubung, flach dichtend Manchon, union à joint plat Bocchettone, a sede piana Разъемное соединение под плоское уплотнение



ISO/EN U2	
<b>331or</b>	Union, flat seat Verschraubung, flach dichtend Manchon, union à joint plat Bocchettone, a sede piana Разъемное соединение под плоское уплотнение



ISO/EN U2	
<b>331oru</b> with gaskets	Union, flat seat Verschraubung, flach dichtend Manchon, union à joint plat Bocchettone, a sede piana Разъемное соединение под плоское уплотнение



ISO/EN U11	
<b>340</b>	Union, taper seat Verschraubung, kegelig dichtend Manchon, union à joint conique Bocchettone, a sede conica Конусное соединение

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
3/8	12,67	5907791622945	15,50	5907791622952	S	60	7,7	8,0	-
1/2	8,66	5907791622761	10,43	5907791622778	M	80	18,5	19,1	-
3/4	9,84	5907791622792	12,14	5907791622808	M	60	16,9	17,6	-
1	10,91	5907791622822	13,74	5907791622839	M	35	12,37	12,69	-
1 1/4	18,93	5907791622853	23,71	5907791622860	L	35	22,6	23,2	-
1 1/2	24,36	5907791622884	30,62	5907791622891	L	25	18,7	19,1	-
2	40,00	5907791622914	50,77	5907791622921	L	20	21,4	21,9	-
2 1/2	92,00	5907791622976	116,29	5907791622983	L	10	19,0	19,5	-
3	134,95	5907791623003	170,66	5907791623010	L	8	21,4	22,0	-
4	315,41	5907791623034	399,59	5907791623041	L	4	19,3	19,7	-

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
3/8	13,16	5907791620538	16,24	5907791620545	S	50	7,2	7,5	-
1/2	9,51	5907791620569	11,72	5907791620576	M	40	10,7	11,1	-
3/4	10,39	5907791620590	13,11	5907791620606	M	30	10,0	10,3	-
1	12,64	5907791620620	15,68	5907791620637	M	30	13,56	13,57	-
1 1/4	21,82	5907791620651	28,62	5907791620668	L	30	23,4	24,1	-
1 1/2	27,48	5907791620682	34,54	5907791620699	L	25	22,8	23,4	-
2	42,64	5907791620712	54,04	5907791620729	L	15	18,7	19,3	-
2 1/2	99,40	5907791620743	125,68	5907791620750	L	10	21,1	21,8	-
3	145,32	5907791620774	183,74	5907791620781	L	6	20,5	21,1	-

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
3/8	13,69	5907791626141	16,89	5907791626158	S	50	7,2	7,5	-
1/2	9,89	5907791625939	12,19	5907791625946	M	40	10,7	11,1	-
3/4	10,81	5907791626127	13,63	5907791626134	M	30	10,0	10,3	-
1	13,15	5907791625908	16,31	5907791625922	M	30	13,56	13,57	-
1 1/4	22,69	5907791625991	29,76	5907791626004	L	30	23,4	24,1	-
1 1/2	28,58	5907791625960	35,92	5907791625977	L	25	22,8	23,4	-
2	44,35	5907791626028	56,20	5907791626035	L	15	18,7	19,3	-
2 1/2	103,38	5907791626059	130,71	5907791626066	L	10	21,1	21,8	-
3	151,13	5907791626080	191,09	5907791626097	L	6	20,5	21,1	-

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
3/8	13,20	5907791615190	16,24	5907791615206	S	60	8,2	8,4	-
1/2	12,54	5907791615220	15,68	5907791615237	M	80	19,3	19,8	-
3/4	11,21	5907791615251	14,09	5907791615268	M	60	17,5	18,0	-
1	13,06	5907791615282	16,25	5907791615299	L	60	21,2	22,0	-
1 1/4	21,56	5907791615312	27,96	5907791615329	L	35	23,5	24,1	-
1 1/2	25,26	5907791615343	32,74	5907791615350	L	25	19,7	20,4	-
2	41,40	5907791615374	53,88	5907791615381	L	20	23,6	24,2	-
2 1/2	93,52	5907791615404	118,42	5907791615411	L	10	19,7	20,0	-
3	130,44	5907791615435	165,12	5907791615442	L	8	23,0	23,7	-
4	263,12	5907791615466	333,38	5907791615473	L	4	20,8	21,0	-



ISO/EN U12	
<b>341</b>	Union, taper seat Verschraubung, kegelig dichtend Manchon, union à joint conique Bocchettone, a sede conica Конусное соединение



370	
	Union bush, flat seat Einschraubteil, flach dichtend Pièce filetée, à joint plat Pezzo filettato, a sede piana Плоское соединение



371or	
	Union end, flat seat Einlege teil, flach dichtend Pièce folle, à joint plat Pezzo folle, a sede piana Плоское соединение

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
3/8	11,60	5907791615497	14,60	5907791615503	S	50	7,3	7,7	-
1/2	9,77	5907791615527	12,14	5907791615534	M	40	11,1	11,3	-
3/4	11,78	5907791615558	14,60	5907791615565	M	30	10,3	10,6	-
1	14,55	5907791615589	18,15	5907791615596	L	50	22,4	23,1	-
1 1/4	23,10	5907791615619	28,88	5907791615626	L	30	24,0	24,6	-
1 1/2	29,44	5907791615640	36,98	5907791615657	L	25	23,7	24,3	-
2	47,08	5907791615671	58,98	5907791615688	L	15	19,6	20,2	-
2 1/2	102,24	5907791615701	129,20	5907791615718	L	10	22,4	22,9	-
3	159,60	5907791615732	202,04	5907791615749	L	6	22,0	22,5	-
4	292,36	5907791615763	370,40	5907791615770	L	2	12,4	12,5	-

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
1/2	3,52	5907791615824	4,18	5907791615831	S	100	7,2	7,3	-
3/4	4,02	5907791615855	5,00	5907791615862	S	100	9,6	10,0	-
1	4,74	5907791615886	6,04	5907791615893	M	100	12,2	12,8	-
1 1/4	6,82	5907791615916	8,42	5907791615923	M	50	11,6	11,9	-
1 1/2	8,88	5907791615947	10,74	5907791615954	M	40	10,5	10,6	-
2	15,52	5907791615978	19,28	5907791615985	M	20	7,9	8,1	-
2 1/2	30,74	5907791616005	38,88	5907791616012	M	15	10,8	11,0	-
3	45,06	5907791616036	56,98	5907791616043	M	10	9,3	9,5	-

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT [PC] IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK [KG]	GALV [KG]	
1/2	5,52	5907791620835	6,86	5907791620842	S	100	9,2	9,6	-
3/4	5,22	5907791620866	6,34	5907791620873	S	80	9,6	10,0	-
1	6,24	5907791620897	7,80	5907791620903	M	60	11,2	11,4	-
1 1/4	10,88	5907791620927	13,42	5907791620934	M	40	12,1	12,5	-
1 1/2	12,44	5907791620958	15,52	5907791620965	M	25	10,1	10,4	-
2	17,58	5907791620989	21,86	5907791620996	M	15	8,1	8,3	-
2 1/2	36,30	5907791621016	45,88	5907791621023	M	8	6,9	7,1	-
3	64,18	5907791621047	81,10	5907791621054	M	6	8,8	8,9	-



372or

Union end, flat seat, equal  
Einlegeteil, flach dichtend, egal  
Pièce folle, à joint plat, égal  
Pezzo folle, a sede piana, uguale  
Плоское соединение д/насоса

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT (PC) IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK (KG)	GALV (KG)	
1/2	3,62	5907791621108	4,80	5907791621115	M	250	15,0	16,0	-
3/4	3,68	5907791621139	5,00	5907791621146	M	250	19,2	20,5	-
1	3,72	5907791621160	5,36	5907791621177	L	200	20,0	20,4	-
1 1/4	5,84	5907791621191	7,38	5907791621207	L	100	16,5	16,9	-
1 1/2	7,84	5907791621221	9,90	5907791621238	M	40	9,3	9,5	-
2	12,58	5907791621252	15,58	5907791621269	M	20	7,2	7,4	-
2 1/2	27,34	5907791621283	34,44	5907791621290	M	15	9,2	9,6	-
3	49,50	5907791621313	62,60	5907791621320	M	10	7,1	7,2	-



374

Union nut  
Überwurfmutter  
Ecrou  
Dado  
Гайка д/насоса

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT (PC) IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK (KG)	GALV (KG)	
3/8	3,04	5907791616579	3,68	5907791616586	S	150	7,4	7,7	-
1/2 x11/8	3,30	5907791616609	3,98	5907791616616	M	200	19,9	20,5	-
3/4	3,30	5907791616661	4,12	5907791616678	M	150	16,2	16,7	-
1	3,62	5907791616692	4,74	5907791616708	L	200	24,2	25,0	-
1 1/4	5,88	5907791616722	7,64	5907791616739	L	100	25,3	26,0	-
1 1/2	7,38	5907791616753	8,98	5907791616760	M	40	10,5	10,8	-
2	10,38	5907791616784	13,06	5907791616791	M	24	8,3	8,4	-
2 1/2	25,32	5907791616814	32,02	5907791616821	M	18	10,5	10,7	-
3	32,70	5907791616845	41,24	5907791616852	M	8	8,8	9,2	-



471

Bracket elbow  
Deckenwinke  
Applique à coude  
Gomito per soffitto  
Угольник установочный

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT (PC) IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK (KG)	GALV (KG)	
1/2	12,56	5907791617804	15,52	5907791617811	S	30	5,6	5,7	-
3/4	24,18	5907791617835	29,86	5907791617842	S	20	5,6	5,8	-



529a

ISO/EN M4  
Socket, with, internal and external thread  
Muffe, mit, Innen- und Aussengewinde  
Manchon, avec filetage femelle et mâle  
Manicotto, con filettatura interno e esterno  
Муфта

DIMENSIONS [INCH]	INDEX BLACK	BLACK BAR CODE	INDEX GALV	GALV BAR CODE	CARTON S / M / L	QUANT (PC) IN CARTON	WEIGHT OF CARTON		BAGS 10 PC IN CARTON
							BLACK (KG)	GALV (KG)	
3/8	3,84	5907791619570	4,96	5907791619587	S	150	6,0	6,3	10
1/2	4,02	5907791619600	5,06	5907791619617	M	120	8,7	9,1	10
3/4	5,88	5907791619631	7,54	5907791619648	M	100	11,5	12,0	10
1	9,18	5907791619662	11,72	5907791619679	M	70	11,9	12,7	10
1 1/4	12,08	5907791619693	14,96	5907791619709	M	40	11,1	11,5	-



Odlewnia Zawiercie SA offers also specialist fittings for gas installations:

fittings A/R 1 (no 601) and nuts A/G 11/4 (no 600). They are used as couplings for bellows gas meters with connector pipe with external thread G 11/4 - according to EN ISO 228-1.



600

Nut A/G 1 1/4 with internal thread G1 1/4



601

Fitting A/R 1 with external thread R1



600 &amp; 601

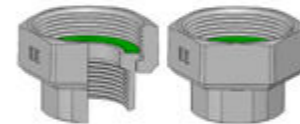
Fitting A/R 1 (no 601)  
and Nut A/G 11/4 (no 600)  
as set for gas

# PUMP SET OF FITTINGS NO 623

# PUMP SET OF FITTINGS NO 624

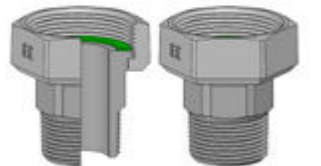
## 1 SET CONSISTS OF:

- 2 nuts, ref. 374/52, threaded in accordance with EN ISO 228-1
- 2 union ends, ref. 372or/51or, threaded in accordance with EN 10266 (ISO 7/1)
- 2 synthetic fibre gaskets, no asbestos content, GAMBIT AF-153. thickness 2mm
  - max. working temperature, standard 155° - higher to be negotiated
  - max. steam working temperature, standard 130° - higher to be negotiated
- sets are made in black (not galvanized), unless otherwise specified
- each set is packed in shrink foil plus cardboard box and is labelled



## 1 SET CONSISTS OF:

- 2 nuts, ref 52/374, threaded in accordance with EN ISO 228/1
- 2 union ends, ref 50or/371or, threaded in accordance with EN 10266 (ISO 7/1)
- 2 synthetic fibre gaskets, no asbestos content, GAMBIT AF-153. thickness 2mm
  - max. working temperature, standard 155° - higher to be negotiated
  - max. steam working temperature, standard 130° - higher to be negotiated
- sets are made in black (not galvanized), unless otherwise specified
- each set with gaskets is packed in a shrink foil plus a cardboard box and is labelled



## MANUFACTURED DIMENSIONS

THREAD		DIMENSION (INCH)	WEIGHT OF CARTON (KG) BLACK	QUANTITY IN CARTON
372or	374			
Rp 3/4	G 1 1/4	3/4 x 1 1/4	13	35
Rp 1	G 1 1/2	1 x 1 1/2	9	20
Rp 1 1/4	G 2	1 1/4 x 2	13	15

## MANUFACTURED DIMENSIONS

THREAD		DIMENSION (INCH)	WEIGHT OF CARTON (KG) BLACK	QUANTITY IN CARTON
371or/50or	374/52			
Rp 1	G 1 1/2	1 x 1 1/2	13	20

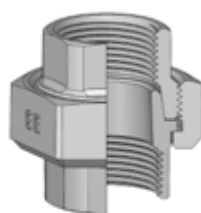
# USAGE INSTRUCTION OF WHITEHEART MALLEABLE CAST IRON UNIONS EE BRAND

## 1. CONICAL UNIONS

Leak tightness of these connections is obtained by conical clip (metallic) that is attained by exact tightening moment. Assembling of the unions by using torque wrench.

DIMENSIONS IN INCHES	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
MIN. TIGHTENING MOMENT Nm	60	90	120	170	210	250	340	420	500	600

Newton-meter - unit of the moment of a force 1Nm = 0,1 kGm

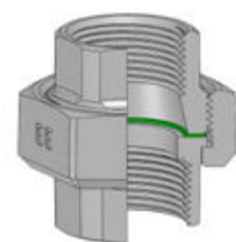


Note: Conical unions and conical union details cannot be used again after disassembly because of surface deformation of the cone. It is recommended to use unions as a complete set due to the fact that union details manufactured by different producers or component parts of a different unions manufactured by the same producer does not have to be mutually interchangeable. The constructions of the cone are not normalized.

## 2. FLAT UNIONS

Leak tightness of these details is obtained by using the special gaskets:

DIMENSIONS OF UNIONS IN INCHES	GASKET SIZE [MM]		THREAD DIMENSION OF UNION NUTS
	INNER DIAMETER [MM]	OUTER DIAMETER [MM]	
3/8	19	27	G 7/8
1/2	24	34	G 1 1/8
3/4	27	38	G 1 1/4
1	32	44	G 1 1/2
1 1/4	42	55	G2
1 1/2	46	62	G 2 1/4
2	60	78	G 2 3/4
2 1/2	75	97	G 3 1/2
3	88	110	G4
4	120	148	G 5 1/2



Material used for gaskets depends on the usage (the transmitted factor, temperature). Gaskets of our unions are made from synthetic fibers which does not contain asbestos.

- Max working temperature standard 155°C
- Max steam temperature standard 130°C

Higher parameters to be agreed upon orders.

The gaskets and other seals measures for the threads used by the customers shall comply with the requirements and standards appropriate to the type of installation.

# USAGE INSTRUCTION OF WHITEHEART MALLEABLE CAST IRON FITTINGS EE BRAND

## WHITEHEART MALLEABLE CAST IRON FITTINGS EE BRAND

### THE OFFERED RANGE

Dimension ¼ ÷ 4

Assortment in accordance with EN 10242 and ISO 49 catalogues of Odlewnia Żeliwa Spółka Akcyjna in Zawiercie.

### GRADE OF MATERIAL

Whiteheart malleable cast iron EN-GJMW - 400 - 05 according to EN 1562 equivalent of W 40-05 according to ISO 5922.

### APPROPRIATION:

For water, central heating, gaseous, steam-driven, fire-proof and other installations, for transmitting liquids and non-aggressive gases - to perform at the highest admissible working pressure and temperature ranges quoted in the table:

TEMPERATURE °C	-20 to 120	140	160	180	200	220	240	260	280	300
MAX. PRESSURE	25	24,45	23,9	23,3	22,8	22,2	21,7	21,1	20,5	20

1 bar = 0,1 Mpa

Cast Iron fittings EE brand are characterized by high quality standard it means proper surface finish, dimensional stability, stability of the cast iron structure by keeping hardness, plasticity and strength. They fulfill the requirements of A constructional symbol it means:

- threads are according to EN 10226-1: external - taper R and internal - cylindrical (Rp).

Threads of backnuts, union nuts and threads working with them - according to EN ISO 228-1

- range from ¼" - 5½" - of the symbol G

Combinations of the threads connections:

To obtain tight connection it is needed to use the following combination: internal thread Rp - external thread R. Connection of the external cylindrical thread G with internal cylindrical thread Rp is risky as it may finish with leaky installation. The leaky installations may be the results of the following combinations:

- connection of the external thread G with internal thread G
- connection of the external thread R with internal thread G

**EE**  
1886

# USAGE OF FITTINGS EE BRAND

EN 10242



CAD LIBRARY OF WHITEHEART MALLEABLE  
CAST IRON FITTINGS EE BRAND



WATER



GAS



INDUSTRY



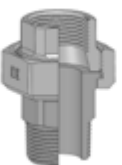
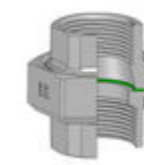
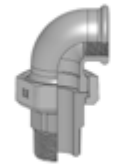
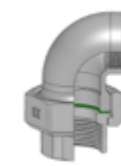
FIRE PROTECTION



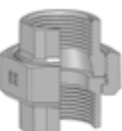
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HEATING



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professional

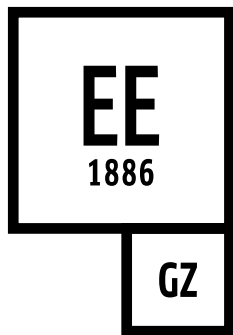
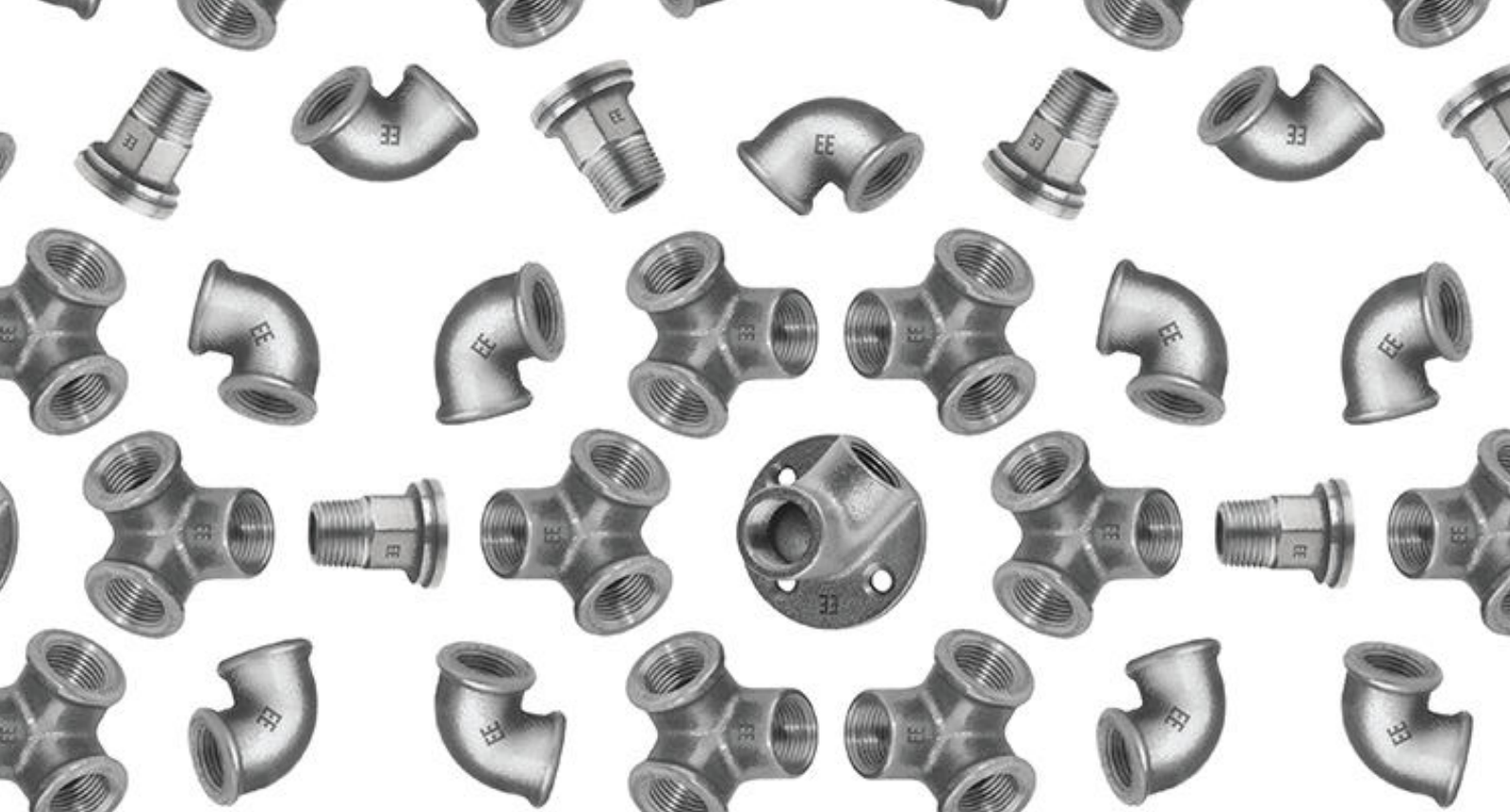
**EMIA**

## A PERFECT CONNECTION



**WHITEHEART MALLEABLE CAST IRON FITTINGS EE BRAND**





**Grupa Zawiercie**  
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