



**RODGER**

# BIOPHARMACEUTICAL Processing Components

Biopharmazeutische Prozesskomponenten  
Composants du traitement **biopharmaceutique**  
Componenti di processo per la **biofarmaceutica**



# Life Science and **SOLUTIONS**

Biowissenschaft und **Lösungen**

Sciences de la vie et **solutions**

Scienze della vita e **soluzioni**

Developments in the field of life sciences, and a rise in global population have created a growing demand for pharmaceuticals worldwide. By manufacturing BPE compliant fittings, RODGER INDUSTRIES INC. is an integral link in this supply chain.

Neue Entwicklungen im Bereich der Biowissenschaften sowie das Wachstum der Weltbevölkerung bedingen eine verstärkte internationale Nachfrage nach Pharmazeutika. Mit seinen BPE-konformen Armaturen ist RODGER INDUSTRIES INC. ein wichtiger Teil der relevanten Lieferkette

Les développements dans le domaine des sciences de la vie et l'augmentation de la population de la planète ont créé une demande croissante à l'échelle mondiale pour des produits pharmaceutiques. En fabriquant des raccords conformes avec la norme BPE, RODGER INDUSTRIES INC. constitue un maillon intégral de cette chaîne d'approvisionnement.

Gli sviluppi nel campo delle scienze della vita e l'aumento della popolazione mondiale hanno creato una crescente domanda di prodotti farmaceutici. Rodger Industries Inc., fabbricante di raccordi a norme BPE, è parte integrante di questa catena di fornitura.



# HYGIENIC PROCESSING COMPONENTS

Hygienische Verarbeitungskomponenten · Composants de traitement hygiénique · Componenti per l'elaborazione igienica





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# About US

Über Uns

À propos de Nous

Informazioni

RODGER INDUSTRIES INC. has more than 80 years collective experience in dairy, food, beverage and high purity industries such as biopharmaceutical and cosmetics. While fittings and filtration solutions are our focal point, we offer additional complementary process components such as valves and high purity tubing. We are committed to continuous improvement of our product quality and range. Our dedicated staff welcomes customer challenges as opportunities to create quality solutions.

RODGER INDUSTRIES INC. hat insgesamt mehr als 80 Jahre Erfahrung in der Milch-, Lebensmittel- und Getränkeindustrie sowie in hochreinen Sektoren wie der Biopharma- und Kosmetikbranche. Unser Schwerpunkt sind zwar Armaturen und Filterlösungen, doch wir bieten auch dazugehörige Prozesskomponenten wie Ventile und hochreine Rohre an. Wir verpflichten uns zur kontinuierlichen Verbesserung unserer Produktqualität und Produktauswahl. Unser engagiertes Team begrüßt spezielle Kundenanforderungen als Chance zur Entwicklung von hochwertigen Lösungen.

RODGER INDUSTRIES INC. a plus de 80 ans d'expérience collective dans les industries laitières, les domaines des produits alimentaires et des boissons et les industries d'une grande pureté comme celles du domaine biopharmaceutique ou des cosmétiques. Alors que les solutions de raccords et de filtration sont notre priorité, nous offrons des composants du traitement complémentaire supplémentaires, tels que des valves et des tubes d'une grande pureté. Nous nous engageons à fournir une amélioration continue de la qualité et de la gamme de nos produits. Notre personnel dévoué accueille les enjeux des clients comme des occasions de créer des solutions de qualité.

RODGER INDUSTRIES INC. vanta un'esperienza collettiva di più di 80 anni-uomo nelle industrie lattiero-casearia, alimentare, delle bevande e in settori ad alta purezza come la biofarmaceutica e la cosmetica. Sebbene raccorderie e soluzioni per la filtrazione siano il nostro punto focale, offriamo anche componenti di processo complementari come valvole e tubazioni ad alta purezza. Siamo impegnati a migliorare continuamente la qualità e la gamma dei nostri prodotti. Il nostro personale è orgoglioso di considerare le problematiche della clientela come opportunità per creare soluzioni di qualità.



# North American MADE

Gefertigt in Nordamerika  
Fabriqués en Amérique du Nord  
Prodotto in Nord America

The utilization of automated processes, combined with skilled craftsmanship provides us with the optimum formula to produce essential process components, such as fittings and filters. Products continuously undergo meticulous inspection starting with the arrival of raw materials through to final quality control and packaging stages. Biopharmaceutical fittings are visually inspected by use of borescope and white light visual inspection, as well as measured with a profilometer to ensure maximum surface roughness ( $R_a$   $\mu\text{-in}$ ) tolerances have not been exceeded. Uncompromising adherence to product integrity and ensuring maximum repeatability define the values of our organization.



Die Kombination von automatisierten Prozessen und hohem Können ermöglicht uns die optimierte Fertigung wesentlicher Prozesskomponenten wie z.B. Armaturen und Filter. Die genaue Überprüfung unserer Produkte beginnt schon beim Eingang der Rohstoffe und setzt sich fort bis zur abschließenden Qualitätsprüfung und Verpackung. Biopharmazeutische Armaturen werden visuell mit endoskopischen Kameras und Weißlicht inspiriert und mit einem Profilometer vermessen, um zu garantieren, dass die maximalen Toleranzen der Oberflächenrauheit ( $R_a$   $\mu\text{-in}$ ) nicht überschritten wurden. Absolute Produktintegrität und maximale Verlässlichkeit sind definierende Werte unseres Unternehmens.

L'utilisation de procédés automatisés, combinée avec des travailleurs qualifiés nous fournit la formule optimale pour produire les principaux composants de procédé, tels que les raccords et les filtres. Les produits sont continuellement soumis à une inspection méticuleuse, de l'arrivée des matières brutes en passant par le contrôle de qualité final et les étapes de l'emballage. Les raccords biopharmaceutiques sont inspectés visuellement au moyen d'un endoscope et de lumière blanche, en plus d'être mesurés au moyen d'un profilomètre afin de s'assurer que les tolérances en matière de rugosité de surface maximale ( $R_a$   $\mu\text{-in}$ ) n'ont pas été dépassées. Le respect sans compromis de l'intégrité du produit et la répétabilité maximale définissent les valeurs de notre organisation.

L'uso di processi automatizzati, combinato con una manodopera specializzata, costituisce la formula ottimale per produrre componente essenziale di processo come giunti e filtri. I prodotti sono sottoposti a continue meticolose ispezioni, dall'arrivo delle materie prime al controllo finale di qualità e al confezionamento. I raccordi per l'industria biofarmaceutica vengono ispezionati visivamente usando un boroscopio e un'ispezione visiva a luce bianca, oltre che misurati con un profilometro, onde garantire che non si siano superate le tolleranze di rugosità (RA). L'aderenza senza compromessi all'integrità di prodotto e la garanzia della massima ripetibilità definiscono i valori della nostra organizzazione.





# Our BRAND AND RANGE

Notre Marque et Notre Gamme • Il nostro Marchio e l'assortimento

## Unsere Marke und Produktpalette

Standing behind our brand is of utmost importance to us. We take pride in our product's quality and that is why we put our stamp on it. Confidence earned in the marketplace has inherently linked our brand to quality. RODGER sanitary fittings are marked with heat numbers offering complete traceability. Heat numbers are connected to a Material Test Report (MTR) providing a link to the metallurgical origins of the raw components produced by the steel mill. RODGER fittings are marked with alloy type and applicable fittings are marked with Canadian Registration Number (CRN). In addition to this, applicable fittings are accredited with 3A sanitary certification. Rodger Industries offers a wide product range of components and extensive inventory of process components such as sanitary fittings, biopharmaceutical fittings, filters and strainers. From receipt of order to product at your door - we take satisfaction in providing our customers with the fastest possible turnaround times and second to none service.

La réputation derrière notre marque est de la plus haute importance pour nous. Nous sommes fiers de la qualité de nos produits et c'est la raison pour laquelle nous en avons fait notre marque. La confiance que nous avons acquise sur le marché associe de façon inhérente notre marque à la qualité. Les raccords sanitaires de Rodger sont marqués avec des numéros de coulée, offrant une traçabilité complète. Les numéros de coulée sont associés à un rapport d'essai de matériau (MTR) fournissant un lien vers les origines métallurgiques des composants bruts produits par l'aciérie. Les raccords RODGER portent le type d'alliage et les raccords applicables portent le Numéro d'enregistrement canadien (NEC). De plus, les raccords applicables sont accrédités avec la certification sanitaire 3A. Rodger Industries offre un large éventail de produits conçus pour un usage sanitaire et d'autres industries de haute pureté. Nous tirons une grande satisfaction de fournir à nos clients des délais d'exécution les plus rapides possible et un service irréprochable.

Hinter unserer Marke zu stehen ist von größter Bedeutung für uns. Das am Markt gewonnene Vertrauen hat dazu geführt, dass unsere Marke automatisch mit hochwertiger Qualität assoziiert wird. Vertrauen am Markt hat dazu geführt, dass unsere Marke mit hochwertiger Qualität assoziiert wird. Die Sanitärarmaturen von Rodger sind mit Schmelznummern gekennzeichnet, wodurch absolute Rückverfolgbarkeit gewährleistet wird. Die Schmelznummern sind mit einem Materialtestbericht (Material Test Report, MRT) verknüpft, der auf den metallurgischen Ursprung der vom Stahlwerk erzeugten Rohstoffkomponenten hinweist. Die Armaturen von RODGER sind zudem mit einer kanadischen Registrierungsnummer (Canadian Registration Number, CRN) und dem Legierungstyp gekennzeichnet. Rodger Industries bietet ein umfassendes Angebot an Produkten, die sich für den Einsatz in sanitären Prozessen und anderen hochreinen Bereichen eignen. Wir sind nur dann zufrieden, wenn wir unseren Kunden die schnellstmögliche Lieferung und unübertroffenen Service bieten können.

Sostenere il nostro marchio è per noi della massima importanza. Siamo orgogliosi della qualità dei nostri prodotti, ed è per questo che li firmiamo. La fiducia del mercato associa il nostro marchio alla qualità. La fiducia conquistata sul mercato associa indissolubilmente il nostro marchio alla qualità. I numeri di marcatura sono collegati al Rapporto di prova materiali (MTR), che identifica l'origine metallurgica dei componenti grezzi prodotti dall'acciaieria. I raccordi RODGER sono contrassegnati con il tipo di lega e, ove applicabile, con il numero di registrazione canadese (Canadian Registration Number, CRN). Inoltre, i raccordi che ne necessitano ricevono la certificazione sanitaria 3A. Rodger Industries offre una vasta gamma di prodotti adatti all'uso nei trattamenti sanitari e in altri settori ad alta purezza. Ci pregiamo di offrire ai nostri clienti i tempi di lavorazione più veloci possibile e un'assistenza che non teme confronti.



# BPE MATERIALS

BPE-Materialien • Matériaux en BPE • Materiali BPE

Biopharmaceutical tubes and fittings are manufactured of T316L stainless steel. Raw materials are always inspected upon arrival at our facility and continuously monitored throughout the production process. All mechanically polished tubes meet or exceed A270, 3A, A270-S2.

Biopharmazeutische Röhren und Armaturen werden aus T316L Edelstahl gefertigt. Rohstoffe werden stets nach Eingang in unserer Anlage inspiziert und während des gesamten Produktionsprozesses laufend überwacht. Alle mechanisch polierten Röhren entsprechen oder übertreffen A270, 3A, A270-S2.

Les tubes et raccords biopharmaceutiques sont fabriqués avec de l'acier inoxydable T316L. Les matières brutes sont toujours inspectées lors de leur arrivée à notre usine et constamment surveillées pendant le processus de production. Tous les tubes polis mécaniquement satisfont ou dépassent les normes A270, 3A, A270-S2.

Tubi e raccordi per uso biofarmaceutico sono prodotti in acciaio inossidabile T316L. Le materie prime vengono sempre ispezionate all'arrivo nel nostro stabilimento e controllate in continuo durante tutto il processo produttivo. Tutti i tubi lucidati meccanicamente rispettano o superano le norme A270, 3A, A270-S2.

CHEMICAL COMPOSITION	ELEMENT	%
Carbon • Carbone • Kohlenstoff • Carbonio	(C)	0.030% Max
Manganese • Manganèse • Mangan • Manganese	(Mn)	2.0% Max
Phosphorus • Phosphore • Phosphor • Fosforo	(P)	0.045% Max
Sulphur • Soufre • Schwefel • Zolfo	(S)	0.030% Max
Silicone • Silicone • Silikon • Silicio	(Si)	1.0%
Chromium • Chrome • Chrom • Cromo	(Cr)	16.0-18.0%
Nickel • Nickel • Fünfcentstück • Nichel	(Ni)	10.0-14.0%
Molybdenum • Molybdène • Molybdän • Molibdeno	(Mo)	2.0-3.0%
Nitrogen • Azote • Stickstoff • Azoto	(N)	





# +/- TOLERANCE

+/- Toleranz

Tolérances +/-

+/- Tolerantie

Utilization of automated processes, combined with skilled craftsmanship provides the optimum formula to produce BPE compliant fittings that exceed the exacting tolerances demanded by the biopharmaceutical industry. Uncompromising adherence to product integrity and ensuring maximum repeatability define the values of our organization.

Die Kombination von automatisierten Prozessen und hohem Können erlaubt die Fertigung BPE-konformer Armaturen, die weit über den in der biopharmazeutischen Industrie geltenden strengen Toleranzen liegen. Absolute Produktintegrität und maximale Verlässlichkeit sind definierende Werte unseres Unternehmens.

L'utilisation de processus automatisés, combinée avec une excellente fabrication, fournit la formule optimale permettant de produire des raccords conformes à la norme BPE qui dépassent les tolérances strictes exigées par le secteur biopharmaceutique. Le respect sans compromis de l'intégrité du produit et la répétabilité maximale définissent les valeurs de notre organisation.

L'uso di processi automatizzati, combinato con una manodopera specializzata, costituisce la formula ottimale per produrre giunti a norme BPE che superino le rigorose tolleranze imposte dall'industria biofarmaceutica. L'aderenza senza compromessi all'integrità di prodotto e la garanzia della massima ripetibilità definiscono i valori della nostra organizzazione.





# Material **TRACEABILITY**

Absolute Rückverfolgbarkeit

Traçabilité complète

Tracciabilità completa

Fittings and other bioprocessing components are constructed of high purity stainless steel and offer full traceability. Rodger biopharmaceutical fittings are manufactured to BPE standards and are marked to indicate Canadian Registration Number (CRN), alloy type and heat number. Heat numbers offer a link to the Material Test Report (MTR), which certifies the metallurgical origins of the raw components produced by the steel mill. Products are rigorously inspected throughout the manufacturing process, starting with the arrival of raw materials continuing through final quality control. Rodger BPE fittings are only offered in T316L grade stainless steel.

Armaturen und andere Komponenten für Bioprozesse werden aus hochreinem Edelstahl gefertigt und bieten absolute Rückverfolgbarkeit. Biopharmazeutische Armaturen von Rodger werden gemäß der BPE-Standards gefertigt und sind mit dem Legierungstyp und der Schmelznummer und, soweit zutreffend, mit der kanadischen Registrierungsnummer (CRN) gekennzeichnet. Schmelznummern bieten eine Verbindung zum MTR (Material Test Report), der die metallurgischen Herkunft der vom Stahlwerk produzierten Rohkomponenten zertifiziert. Produkte werden über den gesamten Fertigungsprozess hinweg genau geprüft, von der Ankunft der Rohmaterialien bis zur abschließenden Qualitätskontrolle. Armaturen von Rodger BPE werden nur aus Edelstahl der Güte T316L gefertigt.

Les raccords et les autres composants pour la biotransformation sont fabriqués en acier inoxydable d'une très grande pureté et offrent une traçabilité totale. Les raccords biomédicaux de Rodger sont fabriqués conformément aux normes BPE, et portent le type d'alliage et le numéro de coulée, et les raccords applicables portent le Numéro d'enregistrement canadien (NEC). Les numéros de coulée fournissent un lien avec le rapport d'essai de matériau (MTR), qui certifie les origines métallurgiques des composants bruts produits par l'aciérie. Les produits subissent des inspections rigoureuses pendant le processus de fabrication, de l'arrivée des matières brutes au contrôle final de la qualité. Les raccords de Rodger conformes aux normes BPE ne sont offerts qu'en acier inoxydable de calibre T316L.

Raccordi e altri componenti per la biofarmaceutica sono fabbricati in acciaio inossidabile ad alta purezza e garantiscono la completa tracciabilità. I giunti biofarmaceutici Rodger sono fabbricati a norme BPE e sono contrassegnati con il tipo di lega e il numero di identificazione ("heat number"); ove applicabile, i raccordi riportano il numero di registrazione canadese (Canadian Registration Number, CRN). I numeri di marcatura sono collegati al Rapporto di prova materiali (MTR), che certifica l'origine metallurgica dei componenti grezzi prodotti dall'acciaieria. I prodotti sono ispezionati rigorosamente durante tutto il processo di fabbricazione, dall'arrivo delle materie prime fino al controllo finale di qualità. I giunti BPE Rodger sono offerti solamente in acciaio inossidabile T316L.



# Surface DESIGNATIONS

Oberflächenangaben • Désignations des surfaces • Designazioni superficiali

Rodger BPE fittings are available with both mechanically polished SF1 and electro-polished SF4 surface finishes. Fittings are measured with a profilometer to ensure that maximum surface roughness (Ra.) tolerances have not been exceeded in adherence to BPE standards. Surface finish reports are available on request. Fitting ends are closed with polyethylene caps and colour coded upon request.

Die Armaturen werden mit einem Profilometer vermessen, um zu garantieren, dass die maximalen Toleranzen der Oberflächenrauheit (Ra) gemäß den BPE-Standards nicht überschritten wurden. Die Armaturenenden werden mit Polyethylen-Kappen verschlossen und auf Wunsch farblich markiert.

Les raccords sont mesurés au moyen d'un profilomètre afin de s'assurer que les tolérances en matière de rugosité de surface maximale (Ra) ne dépassent pas les normes BPE. Les extrémités des raccords sont fermées avec des capuchons en polyéthylène et un code de couleurs est ajouté sur demande.

I raccordi vengono misurati con un profilometro per garantire il rispetto delle tolleranze massime di rugosità (Ra.) in conformità alle norme BPE. Le estremità dei raccordi sono chiuse con tappi in polietilene e a richiesta riportano un colore di codifica.

ASME BPE Surface Designation	Inside Surface			Outside Surface		
	-	µ-in. Max Ra.	µm Max Ra.	Surface Treatment	µ-in.	µm Max Ra.
SF1	20	.5	Mechanically Polished	≤ 32	0.8 µm	Mechanically Polished
SF4	15	.375	Mechanically Polished and Electropolished	≤ 32	0.8 µm	Mechanically Polished



# MAX Ra. and Visual Inspection

**Max. Ra-Wert und visuelle Inspektionen**

**Rugosité de surface maximale et inspection visuelle**

**Max Ra. en visuele inspectie**

Tubes and fittings undergo meticulous quality measures and inspection to ensure compliance to BPE standards.

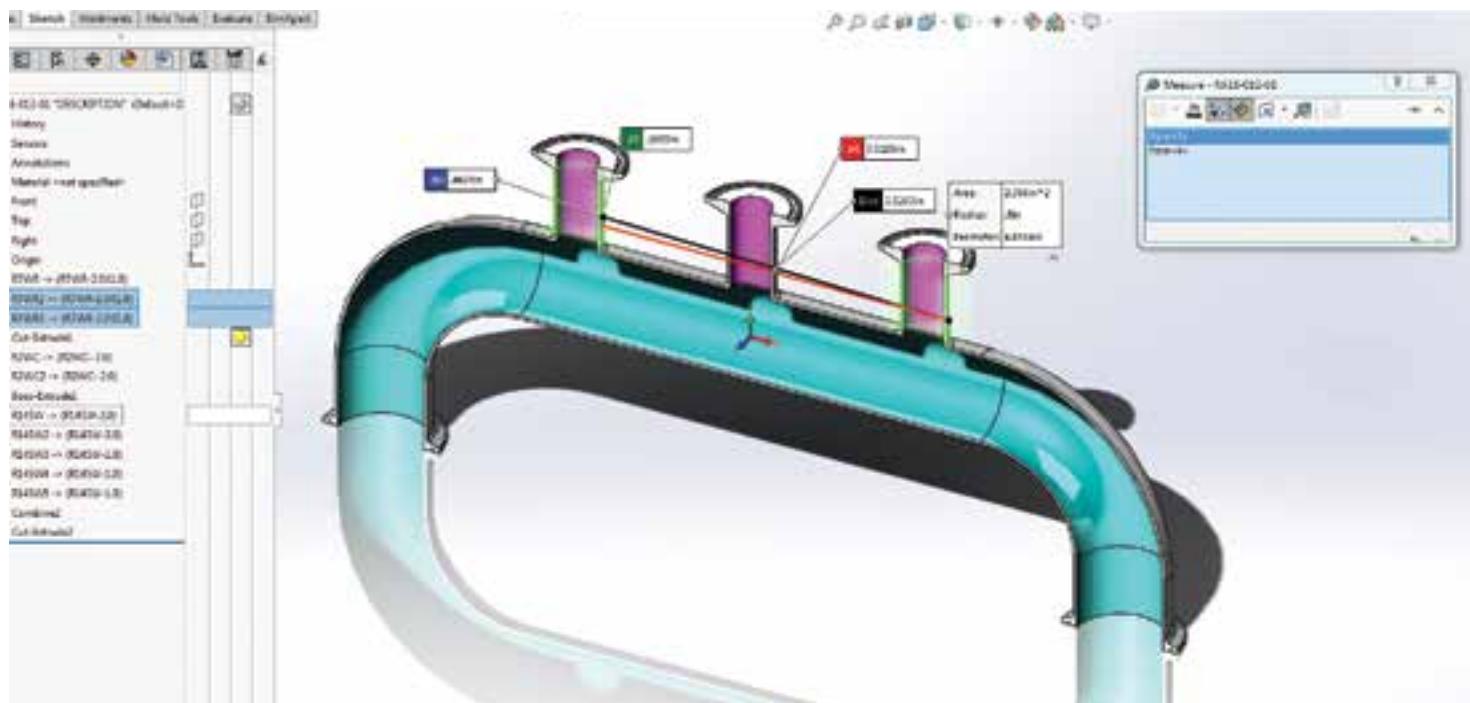
Biopharmaceutical components are visually inspected by use of borescope camera and white light visual inspection, as well as measured with a profilometer. Fittings are measured with a profilometer to ensure that maximum surface roughness (Ra.) tolerances have not been exceeded in adherence to BPE standards. Surface finish reports are available on request.

Röhren und Armaturen werden genauen Qualitätssicherungsmaßnahmen und Prüfungen unterzogen, um die Einhaltung der BPE-Vorgaben zu garantieren. Biopharmazeutische Komponenten werden visuell mit endoskopischen Kameras und Weißlicht inspiziert und mit einem Profilometer vermessen, um zu garantieren, dass die maximalen Toleranzen der Oberflächenrauheit (Ra) gemäß der BPE-Standards nicht überschritten wurden. Berichte zur Oberflächenbehandlung sind auf Anfrage verfügbar.

Les tubes et les raccords font l'objet de mesures de qualité et d'inspections méticuleuses afin d'assurer leur conformité avec les normes BPE. Les composants biopharmaceutiques sont inspectés visuellement au moyen d'un endoscope et de lumière blanche, en plus d'être mesurés au moyen d'un profilomètre afin de s'assurer que les tolérances en matière de rugosité de surface maximale (Ra) ne dépassent pas les normes BPE. Des rapports sur le fini de surface sont disponibles sur demande.

Tubi e raccordi vengono sottoposti a meticolose misurazioni e ispezioni per garantire la conformità alle norme BPE. I componenti per l'industria biofarmaceutica vengono ispezionati visivamente usando una telecamera boroscopica e un'ispezione visiva a luce bianca, oltre che misurati con un profilometro, onde garantire che non si siano superate le tolleranze di rugosità (RA) prescritte dalle norme BPE. I rapporti di finitura superficiale sono disponibili a richiesta.





# Customized **CAPABILITIES**

Angepasste Ressourcen  
Capacités personnalisées  
Op maat gemaakte kwaliteit



In-house capabilities of producing customized fittings and manifolds allow our customers to focus on their core competencies. Solutions to unique challenges are designed and manufactured to adhere to strict deadlines.

Additionally, required documentation for all custom assemblies is provided, ensuring full traceability. Our know-how and adaptability supports the blueprint to your success.

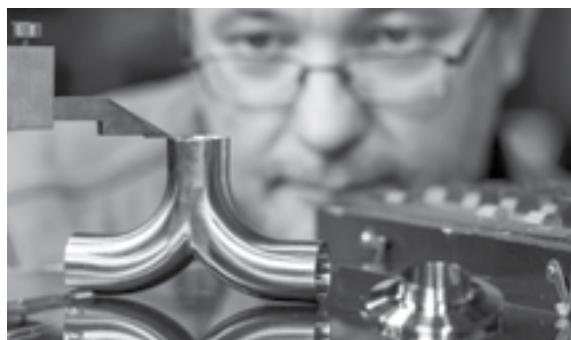
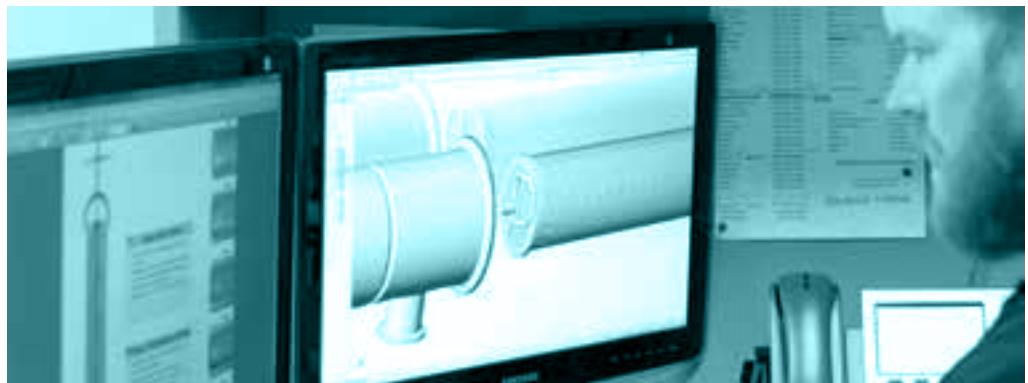
Dank unserer internen Ressourcen für die Herstellung passgenauer Armaturen können unsere Kunden sich auf ihre Kernkompetenzen zu konzentrieren. Lösungen für besondere Herausforderungen werden gemäß strikter Terminvorgaben entwickelt und gefertigt. Zudem wird die erforderliche Dokumentation für alle angepassten Baugruppen geliefert, was eine umfassende Rückverfolgbarkeit gewährleistet. Unser Know-how und unsere Anpassbarkeit arbeiten für Ihren Erfolg.

Nos capacités internes de production de raccords et de collecteurs personnalisés permettent à nos clients de se concentrer sur leurs compétences fondamentales. Des solutions à des défis uniques sont conçues et fabriquées dans le respect d'échéanciers stricts. De plus, la documentation requise pour tous les assemblages sur mesure est fournie, assurant ainsi une traçabilité complète. Notre savoir-faire et notre adaptabilité sont la clé de votre succès.

La nostra capacità di produrre internamente giunti e raccordi customizzati permette ai nostri clienti di concentrarsi sulle proprie competenze chiave. Le soluzioni a problematiche uniche sono concepite e realizzate per rispettare scadenze rigorose. Inoltre, per tutti gli assemblaggi customizzati viene fornita la documentazione necessaria, garantendo la piena tracciabilità. Il nostro know-how e la nostra adattabilità supportano il vostro progetto di successo.



Our know-how and adaptability supports the blueprint to your success



# ELBOWS AND U-BENDS

Rohrkrümmer und U-Bögen · Coudes et coudes en U · Gomiti e tubi a U

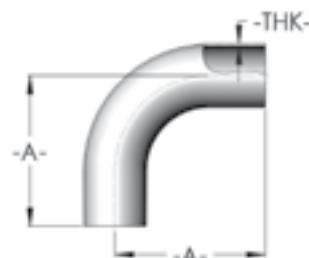




# Biopharmaceutical Processing Components

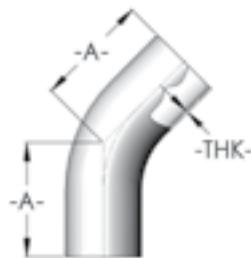


Biopharmazeutische Prozesskomponenten • Composants du traitement biopharmaceutique • Componenti di processo per la biofarmaceutica



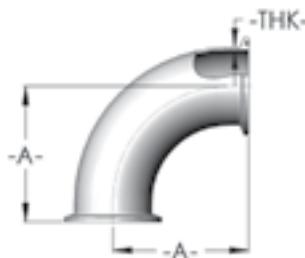
**RBP2S**

DT- 4.1.1-1



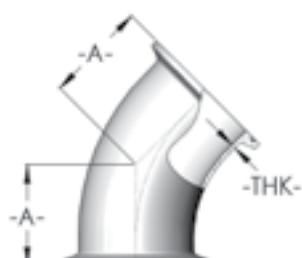
**RBP2KS**

DT- 4.1.1-4



**RBP2C**

DT- 4.1.1-3



**RBP2K**

DT- 4.1.1-6

**90° Elbow**  
Both Ends Butt Weld

**90° Winkel**  
Stumpfschweißnaht an beiden Enden

**Coude à 90°**  
extrémités à souder

**Gomito a 90°**  
Saldatura testa a testa a entrambe le estremità

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	THK (in.)	THK (mm)
½	12.70	3.000	76.2	.065	1.65
¾	19.05	3.000	76.2	.065	1.65
1	25.40	3.000	76.2	.065	1.65
1 ½	38.10	3.750	95.3	.065	1.65
2	50.80	4.750	120.7	.065	1.65
2 ½	63.50	5.500	139.7	.065	1.65
3	76.20	6.250	158.8	.065	1.65
4	101.60	8.000	203.2	.083	2.11

**45° Elbow**  
Both Ends Butt Weld

**45° Winkel**  
Stumpfschweißnaht an beiden Enden

**Coude à 45°**  
extrémités à souder

**Gomito a 45°**  
Saldatura testa a testa a entrambe le estremità

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	THK (in.)	THK (mm)
½	12.70	2.250	57.2	.065	1.65
¾	19.05	2.250	57.2	.065	1.65
1	25.40	2.250	57.2	.065	1.65
1 ½	38.10	2.500	63.5	.065	1.65
2	50.80	3.000	76.2	.065	1.65
2 ½	63.50	3.375	85.7	.065	1.65
3	76.20	3.625	92.1	.065	1.65
4	101.60	4.500	114.3	.083	2.11

**90° Elbow**  
Both Ends Clamp

**90° Winkel**  
an beiden Enden geklemmt

**Coude à 90°**  
extrémités type clamp

**Gomito a 90°**  
Clamp a entrambe le estremità

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	THK (in.)	THK (mm)
½	12.70	1.625	41.3	.065	1.65
¾	19.05	1.625	41.3	.065	1.65
1	25.40	2.000	50.8	.065	1.65
1 ½	38.10	2.750	69.9	.065	1.65
2	50.80	3.500	88.9	.065	1.65
2 ½	63.50	4.250	108.0	.065	1.65
3	76.20	5.000	127.0	.065	1.65
4	101.60	6.625	168.3	.083	2.11

**45° Elbow**  
Both Ends Clamp

**45° Winkel**  
an beiden Enden geklemmt

**Coude à 45°**  
extrémités type clamp

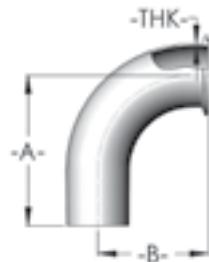
**Gomito a 45°**  
Clamp a entrambe le estremità

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	THK (in.)	THK (mm)
½	12.70	1.000	25.4	.065	1.65
¾	19.05	1.000	25.4	.065	1.65
1	25.40	1.125	28.6	.065	1.65
1 ½	38.10	1.438	36.5	.065	1.65
2	50.80	1.750	44.5	.065	1.65
2 ½	63.50	2.063	52.4	.065	1.65
3	76.20	2.375	60.3	.065	1.65
4	101.60	3.125	79.4	.083	2.11

# Biopharmaceutical Processing Components



Biopharmazeutische Prozesskomponenten • Composants du traitement biopharmaceutique • Componenti di processo per la biofarmaceutica



**RBP2CW**  
DT- 4.1.1-2

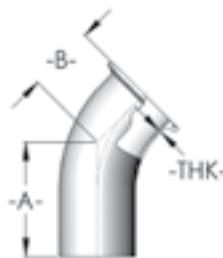
**90° Elbow**  
One End Clamp  
Other End Butt Weld

**90° Winkel**  
an einem Ende geklemmt  
Stumpfschweißnaht am anderen Ende

**Coude à 90°**  
extrémités type clamp  
et à souder

**Gomito a 90°**  
Clamp a una estremità  
Saldatura testa a testa all'altra estremità

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	B (in.)	B (mm)	THK (in.)	THK (mm)
1/2	12.70	3.000	76.2	1.625	41.3	.065	1.65
3/4	19.05	3.000	76.2	1.625	41.3	.065	1.65
1	25.40	3.000	76.2	2.000	50.8	.065	1.65
1 1/2	38.10	3.750	95.3	2.750	69.9	.065	1.65
2	50.80	4.750	120.7	3.500	88.9	.065	1.65
2 1/2	63.50	5.500	139.7	4.250	108.0	.065	1.65
3	76.20	6.250	158.8	5.000	127.0	.065	1.65
4	101.60	8.000	203.2	6.625	168.3	.083	2.11



**RBP2KW**  
DT- 4.1.1-5

**45° Elbow**  
One End Clamp  
Other End Butt Weld

**45° Winkel**  
an einem Ende geklemmt  
Stumpfschweißnaht am anderen Ende

**Coude à 45°**  
extrémités type clamp  
et à souder

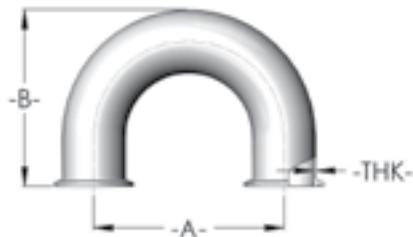
**Gomito a 45°**  
Clamp a una estremità  
Saldatura testa a testa all'altra estremità

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	B (in.)	B (mm)	THK (in.)	THK (mm)
1/2	12.70	2.250	57.2	1.000	25.4	.065	1.65
3/4	19.05	2.250	57.2	1.000	25.4	.065	1.65
1	25.40	2.250	57.2	1.125	28.6	.065	1.65
1 1/2	38.10	2.500	63.5	1.438	36.5	.065	1.65
2	50.80	3.000	76.2	1.750	44.5	.065	1.65
2 1/2	63.50	3.375	85.7	2.063	52.4	.065	1.65
3	76.20	3.625	92.1	2.375	60.3	.065	1.65
4	101.60	4.500	114.3	3.125	79.4	.083	2.11

# Biopharmaceutical Processing Components



Biopharmazeutische Prozesskomponenten • Composants du traitement biopharmaceutique • Componenti di processo per la biofarmaceutica



**180° U-Bend**  
Both Ends Clamp

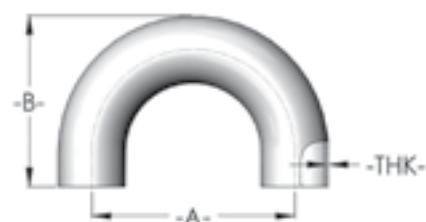
**180° U-Bogen**  
an beiden Enden geklemmt

**Coude en U de 180°**  
extrémités type clamp

**Tubi a U da 180°**  
beide uiteinden klem

## R2UC

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	B (in.)	B (mm)	THK (in.)	THK (mm)
1	25.40	3.000	76.2	3.063	77.8	.065	1.65
1 ½	38.10	4.500	114.3	4.188	106.4	.065	1.65
2	50.80	6.000	152.4	5.563	141.3	.065	1.65
2 ½	63.50	7.500	190.5	6.938	176.2	.065	1.65
3	76.20	9.000	228.6	8.313	211.2	.065	1.65
4	101.60	12.000	304.8	10.938	277.8	.083	2.11



**180° U-Bend**  
Both Ends Butt Weld

**180° U-Bogen**  
Stumpfschweißnaht an beiden Enden

**Coude en U de 180°**  
extrémités à souder

**Tubi a U da 180°**  
Saldatura testa a testa a entrambe le estremità

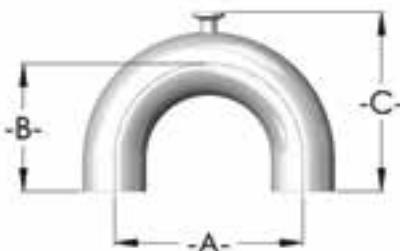
## R2UW

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	B (in.)	B (mm)	THK (in.)	THK (mm)
1	25.40	3.000	76.2	2.563	65.1	.065	1.65
1 ½	38.10	4.500	114.3	3.688	93.7	.065	1.65
2	50.80	6.000	152.4	5.063	128.6	.065	1.65
2 ½	63.50	7.500	190.5	6.438	163.5	.065	1.65
3	76.20	9.000	228.6	7.813	198.5	.065	1.65
4	101.60	12.000	304.8	10.313	262.0	.083	2.11

# Biopharmaceutical Processing Components



Biopharmazeutische Prozesskomponenten • Composants du traitement biopharmaceutique • Componenti di processo per la biofarmaceutica



**R2UWPUA**

**Point of Use U-Bend**

Both Ends Weld  
Clamp point of use port

**Einsatzort U-Bogen**

Beide Enden stumpfgeschweißt  
Einsatzort Klemmanschluss

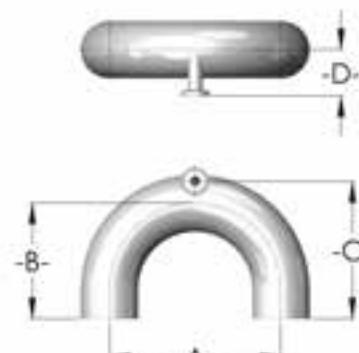
**Code en U au point d'utilisation-**

Soudure bout à bout aux deux extrémités  
Port de serrage au point d'utilisation

**Tubi a U al punto d'uso**

Brasatura ad ambo le estremità  
Apertura a clamp al punto d'uso

Tube Size (in.)	Port Size (in.)	A (in.)	A (mm)	B (in.)	B (mm)	C (in.)	C (mm)
1	1/2	3.00	76.2	2.06	52.4	3.19	81.1
1	3/4	3.00	76.2	2.06	52.4	3.19	81.1
1 1/2	1/2	4.50	114.3	2.94	74.6	4.32	109.7
1 1/2	3/4	4.50	114.3	2.94	74.6	4.32	109.7
1 1/2	1	4.50	114.3	2.94	74.6	4.32	109.7
2	1/2	6.00	152.4	4.06	103.2	5.69	144.6
2	3/4	6.00	152.4	4.06	103.2	5.69	144.6
2	1	6.00	152.4	4.06	103.2	5.69	144.6
2	1 1/2	6.00	152.4	4.06	103.2	5.69	144.6
2 1/2	1/2	7.50	190.5	5.19	131.8	7.07	179.5
2 1/2	1	7.50	190.5	5.19	131.8	7.07	179.5
2 1/2	2	7.50	190.5	5.19	131.8	7.07	179.5
3	1/2	9.00	228.6	6.31	160.4	8.44	214.5
3	3/4	9.00	228.6	6.31	160.4	8.44	214.5
3	1	9.00	228.6	6.31	160.4	8.44	214.5
3	1 1/2	9.00	228.6	6.31	160.4	8.44	214.5
3	2	9.00	228.6	6.31	160.4	8.44	214.5



**R2UWPUB**

**Point of Use U-Bend**

Both Ends Weld  
Clamp point of use port

**Einsatzort U-Bogen**

Beide Enden stumpfgeschweißt  
Einsatzort Klemmanschluss

**Code en U au point d'utilisation**

Soudure bout à bout aux deux extrémités  
Port de serrage au point d'utilisation

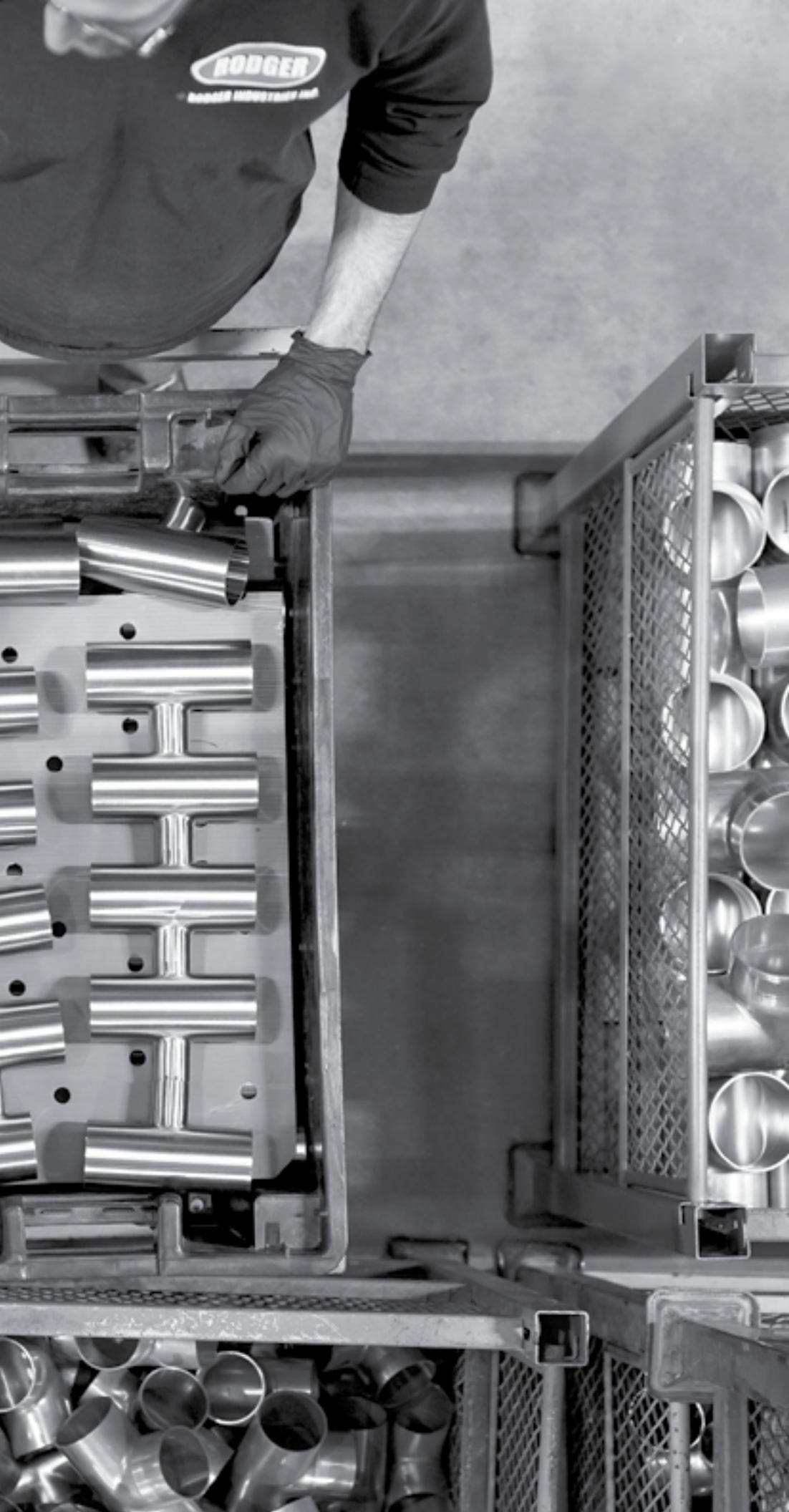
**Tubi a U al punto d'uso**

Brasatura ad ambo le estremità  
Apertura a clamp al punto d'uso

Tube Size (in.)	Port Size (in.)	A (in.)	A (mm)	B (in.)	B (mm)	C (in.)	C (mm)	D (in.)	D (mm)
1	3/4	3.00	76.2	2.06	52.4	2.19	55.7	1.13	28.7
1 1/2	3/4	4.50	114.3	2.94	74.6	3.32	84.3	1.38	35.1
1 1/2	1	4.50	114.3	2.94	74.6	3.19	81.0	1.38	35.1
2	3/4	6.00	152.4	4.06	103.2	4.69	119.2	1.63	41.4
2	1	6.00	152.4	4.06	103.2	4.56	115.9	1.63	41.4
2	1 1/2	6.00	152.4	4.06	103.2	4.31	109.6	1.63	41.4
2 1/2	1	7.50	190.5	5.19	131.8	5.94	150.8	1.88	47.8
2 1/2	1 1/2	7.50	190.5	5.19	131.8	5.69	144.5	1.88	47.8
2 1/2	2	7.50	190.5	5.19	131.8	5.44	138.1	1.88	47.8
3	1	9.00	228.6	6.31	160.4	7.31	185.8	2.13	54.1
3	1 1/2	9.00	228.6	6.31	160.4	7.06	179.4	2.13	54.1
3	2	9.00	228.6	6.31	160.4	6.81	173.1	2.13	54.1
3	2 1/2	9.00	228.6	6.31	160.4	6.56	166.7	2.13	54.1
4	1	12.00	304.8	8.31	211.2	9.81	249.3	2.63	66.8
4	1 1/2	12.00	304.8	8.31	211.2	9.56	242.9	2.63	66.8
4	2	12.00	304.8	8.31	211.2	9.31	236.6	2.63	66.8
4	2 1/2	12.00	304.8	8.31	211.2	9.06	230.2	2.63	66.8
4	3	12.00	304.8	8.31	211.2	8.81	223.9	2.63	66.8

# CROSSES AND TEES

Kreuzstücke und T-Stücke · Croix et tés · Incroci e raccordi a T

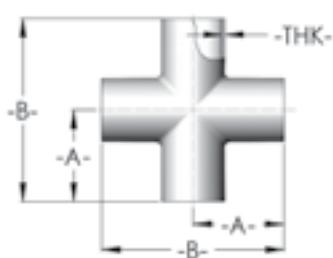




# Biopharmaceutical Processing Components



Biopharmazeutische Prozesskomponenten • Composants du traitement biopharmaceutique • Componenti di processo per la biofarmaceutica



## Cross

All Ends Butt Weld

## Kreuzstück

Stumpfschweißnaht an allen Enden

## Croix

extrémités à souder

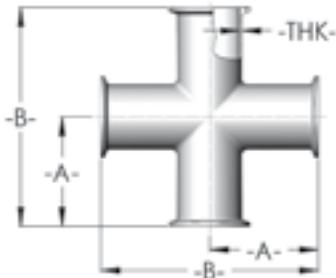
## Incrocio

Saldatura testa a testa a tutte le estremità

**RBP9WWWW**

DT- 4.1.2-1

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	B (in.)	B (mm)	THK (in.)	THK (mm)
1/2	12.70	1.875	47.6	3.750	95.3	.065	1.65
3/4	19.05	2.000	50.8	4.000	101.6	.065	1.65
1	25.40	2.125	54.0	4.250	108.0	.065	1.65
1 1/2	38.10	2.375	60.3	4.750	120.7	.065	1.65
2	50.80	2.875	73.0	5.750	146.1	.065	1.65
2 1/2	63.50	3.125	79.4	6.250	158.8	.065	1.65
3	76.20	3.375	85.7	6.750	171.5	.065	1.65
4	101.60	4.125	104.8	8.250	209.6	.083	2.11



## Cross

All Ends Clamp

## Kreuzstück

an allen Enden geklemmt

## Croix

extrémités type clamp

## Incrocio

Clamp a tutte le estremità

**RBP9**

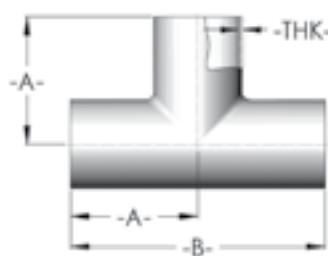
DT- 4.1.2-4

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	B (in.)	B (mm)	THK (in.)	THK (mm)
1/2	12.70	2.250	57.2	4.500	114.3	.065	1.65
3/4	19.05	2.375	60.3	4.750	120.7	.065	1.65
1	25.40	2.625	66.7	5.250	133.4	.065	1.65
1 1/2	38.10	2.875	73.0	5.750	144.8	.065	1.65
2	50.80	3.375	85.7	6.750	171.5	.065	1.65
2 1/2	63.50	3.625	92.1	7.250	184.2	.065	1.65
3	76.20	3.875	98.4	7.750	196.9	.065	1.65
4	101.60	4.750	120.7	9.500	241.3	.083	2.11

# Biopharmaceutical Processing Components



Biopharmazeutische Prozesskomponenten • Composants du traitement biopharmaceutique • Componenti di processo per la biofarmaceutica



**Tee**  
All Ends Butt Weld

**T-Stück**  
Stumpfschweißnaht an allen Enden

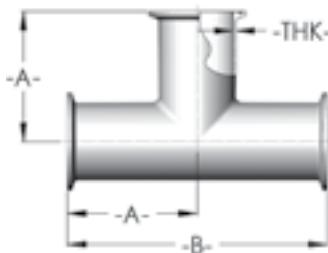
**Té**  
extrémités à souder

**Giunto a T**  
Saldatura testa a testa a tutte le estremità

**RBP7W**

DT- 4.1.2-1

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	B (in.)	B (mm)	THK (in.)	THK (mm)
½	12.70	1.875	47.6	3.750	95.3	.065	1.65
¾	19.05	2.000	50.8	4.000	101.6	.065	1.65
1	25.40	2.125	54.0	4.250	108.0	.065	1.65
1 ½	38.10	2.375	60.3	4.750	120.7	.065	1.65
2	50.80	2.875	73.0	5.750	146.1	.065	1.65
2 ½	63.50	3.125	79.4	6.250	158.8	.065	1.65
3	76.20	3.375	85.7	6.750	171.5	.065	1.65
4	101.60	4.125	104.8	8.250	209.6	.083	2.11



**Tee**  
All Ends Clamp

**T-Stück**  
an allen Enden geklemmt

**Té**  
extrémités type clamp

**Giunto a T**  
Clamp a tutte le estremità

**RBP7C**

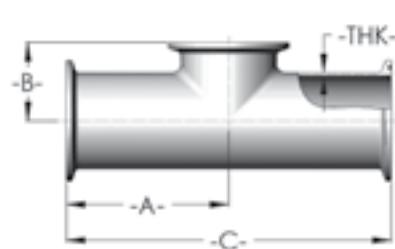
DT- 4.1.2-4

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	B (in.)	B (mm)	THK (in.)	THK (mm)
½	12.70	2.250	57.2	4.500	114.3	.065	1.65
¾	19.05	2.375	60.3	4.750	120.7	.065	1.65
1	25.40	2.625	66.7	5.250	133.4	.065	1.65
1 ½	38.10	2.875	73.0	5.750	146.1	.065	1.65
2	50.80	3.375	85.7	6.750	171.5	.065	1.65
2 ½	63.50	3.625	92.1	7.250	184.2	.065	1.65
3	76.20	3.875	98.4	7.750	196.9	.065	1.65
4	101.60	4.750	120.7	9.500	241.3	.083	2.11

# Biopharmaceutical Processing Components



Biopharmazeutische Prozesskomponenten • Composants du traitement biopharmaceutique • Componenti di processo per la biofarmaceutica



**RBP7SC**

DT- 4.1.2-5

**Tee**

Run Ends Clamp  
Branch Short Clamp

**T-Stück**

Durchlaufenden geklemmt  
Abzweigung geklemmt

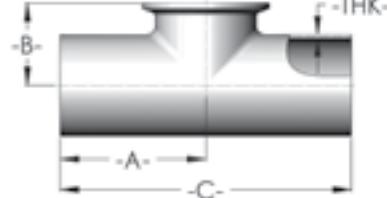
**Té**

extrémités type clamp  
embranchement court type clamp

**Giunto a T**

Clamp alle estremità in linea  
Clamp all'estremità laterale corta

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	B (in.)	B (mm)	C (in.)	C (mm)	THK (in.)	THK (mm)
½	12.70	2.250	57.2	1.000	25.4	4.500	114.3	.065	1.65
¾	19.05	2.375	60.3	1.125	28.6	4.750	120.7	.065	1.65
1	25.40	2.625	66.7	1.125	28.6	5.250	133.4	.065	1.65
1 ½	38.10	2.875	73.0	1.375	34.9	5.750	146.1	.065	1.65
2	50.80	3.375	85.7	1.625	41.3	6.750	171.5	.065	1.65
2 ½	63.50	3.625	92.1	1.875	47.6	7.250	184.2	.065	1.65
3	76.20	3.875	98.4	2.125	54.0	7.750	196.9	.065	1.65
4	101.60	4.750	120.7	2.750	69.9	9.500	241.3	.083	2.11



**RBP7WWSC**

DT- 4.1.2-2

**Tee**

Run Ends Butt Weld  
Branch Short Clamp

**T-Stück**

Stumpfschweißnaht an den Durchlaufenden  
Abzweigung geklemmt

**Té**

extrémités à souder  
embranchement court type clamp

**Giunto a T**

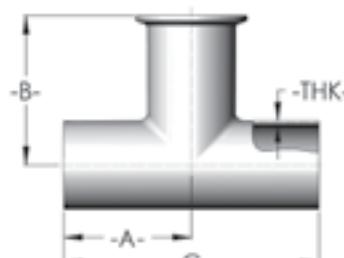
Saldataura testa a testa alle estremità in linea  
Clamp all'estremità laterale corta

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	B (in.)	B (mm)	C (in.)	C (mm)	THK (in.)	THK (mm)
½	12.70	1.875	47.6	1.000	25.4	3.750	95.3	.065	1.65
¾	19.05	2.000	50.8	1.125	28.6	4.000	101.6	.065	1.65
1	25.40	2.125	54.0	1.125	28.6	4.250	108.0	.065	1.65
1 ½	38.10	2.375	60.3	1.375	34.9	4.750	120.7	.065	1.65
2	50.80	2.875	73.0	1.625	41.3	5.750	146.1	.065	1.65
2 ½	63.50	3.125	79.4	1.875	47.6	6.250	158.8	.065	1.65
3	76.20	3.375	85.7	2.125	54.0	6.750	171.5	.065	1.65
4	101.60	4.125	104.8	2.750	69.9	8.250	209.6	.083	2.11

# Biopharmaceutical Processing Components



Biopharmazeutische Prozesskomponenten • Composants du traitement biopharmaceutique • Componenti di processo per la biofarmaceutica



**RBP7WWC**

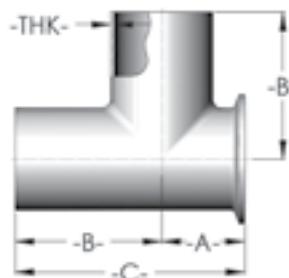
**Tee**  
Run Ends Butt Weld  
Branch Clamp

**T-Stück**  
Stumpfschweißnaht an den Durchlaufenden  
Abzweigung geklemmt

**Té**  
extrémités à souder  
embranchement type clamp

**Giunto a T**  
Saldatura testa a testa alle estremità in linea  
Clamp all'estremità laterale

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	B (in.)	B (mm)	C (in.)	C (mm)	THK (in.)	THK (mm)
½	12.70	1.875	47.6	2.250	57.2	3.750	95.3	.065	1.65
¾	19.05	2.000	50.8	2.375	60.3	4.000	101.6	.065	1.65
1	25.40	2.125	54.0	2.625	66.7	4.250.	108.0	.065	1.65
1 ½	38.10	2.375	60.3	2.875	73.0	4.750	120.7	.065	1.65
2	50.80	2.875	73.0	3.375	85.7	5.750	146.1	.065	1.65
2 ½	63.50	3.125	79.4	3.625	92.1	6.250	158.8	.065	1.65
3	76.20	3.375	85.7	3.875	98.4	6.750	171.5	.065	1.65
4	101.60	4.125	104.8	4.750	120.7	8.250	209.6	.083	2.11



**RBP7WSCW**

DT- 4.1.2-3

**Tee**  
Run End Butt Weld and Short Clamp  
Branch Butt Weld

**T-Stück**  
Stumpfschweißnaht an den Durchlaufenden und Abzweigung geklemmt  
Stumpfschweißnaht an der Abzweigung

**Té**  
extrémités à souder et court  
type clamp embranchement à souder

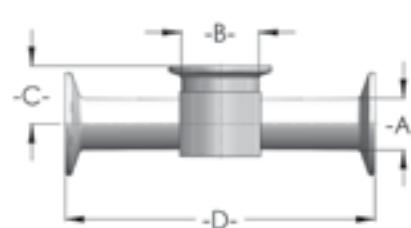
**Giunto a T**  
Saldatura testa a testa e clamp alle estremità in linea  
Saldatura testa a testa all'estremità laterale

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	B (in.)	B (mm)	C (in.)	C (mm)	THK (in.)	THK (mm)
½	12.70	0.875	22.2	1.875	47.6	2.750	69.9	.065	1.65
¾	19.05	1.000	25.4	2.000	50.8	3.000	76.2	.065	1.65
1	25.40	1.125	28.6	2.125	54.0	3.250	82.6	.065	1.65
1 ½	38.10	1.375	34.9	2.375	60.3	3.750	95.3	.065	1.65
2	50.80	1.625	41.3	2.875	73.0	4.500	114.3	.065	1.65
2 ½	63.50	1.875	47.6	3.125	79.4	5.000	127.0	.065	1.65
3	76.20	2.125	54.0	3.375	85.7	5.500	139.7	.065	1.65
4	101.60	2.750	69.9	4.125	104.8	6.875	174.6	.083	2.11

# Biopharmaceutical Processing Components



Biopharmazeutische Prozesskomponenten • Composants du traitement biopharmaceutique • Componenti di processo per la biofarmaceutica



**Instrument Tee**

All Ends Clamp

**Instrumenten-T-Stück**

an allen Enden geklemmt

**Té à instrumentation**

extrémités type clamp

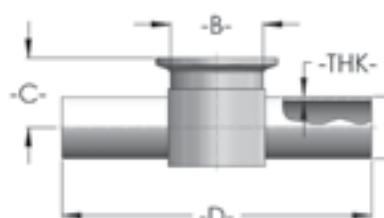
**Giunto a T per strumentazione**

Clamp a tutte le estremità

## RBP7IC

DT- 4.1.2-11

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	B (in.)	B (mm)	C (in.)	C (mm)	D (in.)	D (mm)
1 1/2 x 1/2	38.10 x 12.70	1/2	12.70	1 1/2	38.10	0.875	22.2	6.000	152.4
1 1/2 x 3/4	38.10 x 19.05	3/4	19.05	1 1/2	38.10	1.000	25.4	6.000	152.4
1 1/2 x 1	38.10 x 25.40	1	25.40	1 1/2	38.10	1.125	28.6	6.000	152.4
2 x 1/2	50.80 x 12.70	1/2	12.70	2	50.80	1.000	25.4	6.500	152.4
2 x 3/4	50.80 x 19.05	3/4	19.05	2	50.80	1.125	28.6	6.500	165.1
2 x 1	50.80 x 24.50	1	25.40	2	50.80	1.250	31.8	6.500	165.1



**Instrument Tee**

Run Ends Butt Weld  
Branch Clamp

**Instrumenten-T-Stück**

Stumpfschweißnaht an beiden Durchlaufenden  
Abzweigungen geklemmt

**Té à instrumentation**

extrémités à souder  
embranchement type clamp

**Giunto a T per strumentazione**

Saldatura testa a testa alle estremità in linea  
Clamp all'estremità laterale

## RBP7IWWC

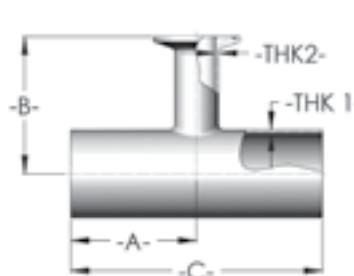
DT- 4.1.2-10

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	B (in.)	B (mm)	C (in.)	C (mm)	D (in.)	D (mm)	THK (in.)	THK (mm)
1 1/2 x 1/2	38.10 x 12.70	1/2	12.70	1 1/2	38.10	0.875	22.2	5.000	127.0	.065	1.65
1 1/2 x 3/4	38.10 x 19.05	3/4	19.05	1 1/2	38.10	1.000	25.4	5.000	127.0	.065	1.65
1 1/2 x 1	38.10 x 25.40	1	25.40	1 1/2	38.10	1.125	28.6	5.000	127.0	.065	1.65
2 x 1/2	50.80 x 12.70	1/2	12.70	2	50.80	1.000	25.4	5.500	139.7	.065	1.65
2 x 3/4	50.80 x 19.05	3/4	19.05	2	50.80	1.125	28.6	5.500	139.7	.065	1.65
2 x 1	50.80 x 24.50	1	25.40	2	50.80	1.250	31.8	5.500	139.7	.065	1.65

# Biopharmaceutical Processing Components



Biopharmazeutische Prozesskomponenten • Composants du traitement biopharmaceutique • Componenti di processo per la biofarmaceutica



**Reducing Tee**  
Run Ends Butt Weld  
Branch Clamp

**Stumpfschweißnaht an beiden Durchlaufenden des Reduzier-T-Stücks**  
Abzweigung geklemmt

**Réduit en té**  
extrémités à souder  
embranchement type clamp

**Giunto riduttore a T**  
Saldatura testa a testa alle estremità in linea  
Clamp all'estremità laterale

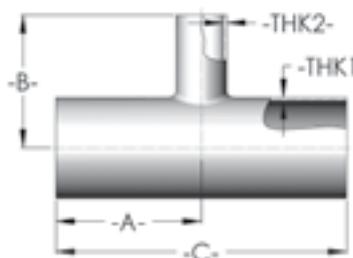
**RBP7RWTC**

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	B (in.)	B (mm)	C (in.)	C (mm)	THK (in.)	THK (mm)	THK (in.)	THK (mm)
¾ x ½	19.05 x 12.70	2.000	50.8	2.500	63.5	4.000	101.6	.065	1.65	.065	1.65
1 x ½	25.40 x 12.70	2.125	54.0	2.625	66.7	4.250	108.0	.065	1.65	.065	1.65
1 x ¾	25.40 x 19.05	2.125	54.0	2.625	66.7	4.250	108.0	.065	1.65	.065	1.65
1 ½ x ½	38.10 x 12.70	2.375	60.3	2.875	73.0	4.750	120.7	.065	1.65	.065	1.65
1 ½ x ¾	38.10 x 19.05	2.375	60.3	2.875	73.0	4.750	120.7	.065	1.65	.065	1.65
1 ½ x 1	38.10 x 25.40	2.375	60.3	2.875	73.0	4.750	120.7	.065	1.65	.065	1.65
2 x ½	50.80 x 12.70	2.875	73.0	3.125	79.4	5.750	146.1	.065	1.65	.065	1.65
2 x ¾	50.80 x 19.05	2.875	73.0	3.125	79.4	5.750	146.1	.065	1.65	.065	1.65
2 x 1	50.80 x 25.40	2.875	73.0	3.125	79.4	5.750	146.1	.065	1.65	.065	1.65
2 x 1 ½	50.80 x 38.10	2.875	73.0	3.125	79.4	5.750	146.1	.065	1.65	.065	1.65
2 ½ x ½	63.50 x 12.70	3.125	79.4	3.375	85.7	6.250	158.8	.065	1.65	.065	1.65
2 ½ x ¾	63.50 x 19.05	3.125	79.4	3.375	85.7	6.250	158.8	.065	1.65	.065	1.65
2 ½ x 1	63.50 x 25.40	3.125	79.4	3.375	85.7	6.250	158.8	.065	1.65	.065	1.65
2 ½ x 1 ½	63.50 x 38.10	3.125	79.4	3.375	85.7	6.250	158.8	.065	1.65	.065	1.65
2 ½ x 2	63.50 x 50.80	3.125	79.4	3.375	85.7	6.250	158.8	.065	1.65	.065	1.65
3 x ½	76.20 x 12.70	3.375	85.7	3.625	92.1	6.750	171.5	.065	1.65	.065	1.65
3 x ¾	76.20 x 19.05	3.375	85.7	3.625	92.1	6.750	171.5	.065	1.65	.065	1.65
3 x 1	76.20 x 25.40	3.375	85.7	3.625	92.1	6.750	171.5	.065	1.65	.065	1.65
3 x 1 ½	76.20 x 38.10	3.375	85.7	3.625	92.1	6.750	171.5	.065	1.65	.065	1.65
3 x 2	76.20 x 50.80	3.375	85.7	3.625	92.1	6.750	171.5	.065	1.65	.065	1.65
3 x 2 ½	76.20 x 63.50	3.375	85.7	3.625	92.1	6.750	171.5	.065	1.65	.065	1.65
4 x ½	101.60 x 12.70	4.125	104.8	4.125	104.8	8.250	209.6	.083	2.11	.065	1.65
4 x ¾	101.60 x 19.05	4.125	104.8	4.125	104.8	8.250	209.6	.083	2.11	.065	1.65
4 x 1	101.60 x 25.40	4.125	104.8	4.125	104.8	8.250	209.6	.083	2.11	.065	1.65
4 x 1 ½	101.60 x 38.10	4.125	104.8	4.125	104.8	8.250	209.6	.083	2.11	.065	1.65
4 x 2	101.60 x 50.80	4.125	104.8	4.375	111.1	8.250	209.6	.083	2.11	.065	1.65
4 x 2 ½	101.60 x 63.50	4.125	104.8	4.375	111.1	8.250	209.6	.083	2.11	.065	1.65
4 x 3	101.60 x 76.20	4.125	104.8	4.375	111.1	8.250	209.6	.083	2.11	.065	1.65

# Biopharmaceutical Processing Components



Biopharmazeutische Prozesskomponenten • Composants du traitement biopharmaceutique • Componenti di processo per la biofarmaceutica



**Reducing Tee**

All Ends Butt Weld

**Reduzier-T-Stück**

Stumpfschweißnaht an allen Enden

**Réduit en té**

extrémités à souder

**Giunto riduttore a T**

Saldatura testa a testa a tutte le estremità

## RBP7WR

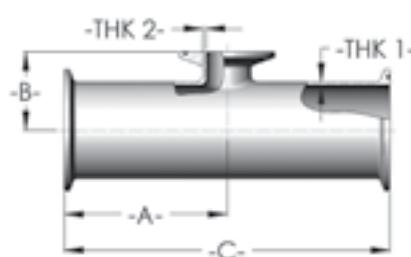
DT- 4.1.2-6

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	B (in.)	B (mm)	C (in.)	C (mm)	THK 1 (in.)	THK 1 (mm)	THK 2 (in.)	THK 2 (mm)
3/4 x 1/2	19.05 x 12.70	2.000	50.8	2.000	50.8	4.000	101.6	.065	1.65	.065	1.65
1 x 1/2	25.40 x 12.70	2.125	54.0	2.125	54.0	4.250	108.0	.065	1.65	.065	1.65
1 x 3/4	25.40 x 19.05	2.125	54.0	2.125	54.0	4.250	108.0	.065	1.65	.065	1.65
1 1/2 x 1/2	38.10 x 12.70	2.375	60.3	2.375	60.3	4.750	120.7	.065	1.65	.065	1.65
1 1/2 x 3/4	38.10 x 19.05	2.375	60.3	2.375	60.3	4.750	120.7	.065	1.65	.065	1.65
1 1/2 x 1	38.10 x 25.40	2.375	60.3	2.375	60.3	4.750	120.7	.065	1.65	.065	1.65
2 x 1/2	50.80 x 12.70	2.875	73.0	2.625	66.7	5.750	146.1	.065	1.65	.065	1.65
2 x 3/4	50.80 x 19.05	2.875	73.0	2.625	66.7	5.750	146.1	.065	1.65	.065	1.65
2 x 1	50.80 x 25.40	2.875	73.0	2.625	66.7	5.750	146.1	.065	1.65	.065	1.65
2 x 1 1/2	50.80 x 38.10	2.875	73.0	2.625	66.7	5.750	146.1	.065	1.65	.065	1.65
2 1/2 x 1/2	63.50 x 12.70	3.125	79.4	2.875	73.0	6.250	158.8	.065	1.65	.065	1.65
2 1/2 x 3/4	63.50 x 19.05	3.125	79.4	2.875	73.0	6.250	158.8	.065	1.65	.065	1.65
2 1/2 x 1	63.50 x 25.40	3.125	79.4	2.875	73.0	6.250	158.8	.065	1.65	.065	1.65
2 1/2 x 1 1/2	63.50 x 38.10	3.125	79.4	2.875	73.0	6.250	158.8	.065	1.65	.065	1.65
2 1/2 x 2	63.50 x 50.80	3.125	79.4	2.875	73.0	6.250	158.8	.065	1.65	.065	1.65
3 x 1/2	76.20 x 12.70	3.375	85.7	3.125	79.4	6.750	171.5	.065	1.65	.065	1.65
3 x 3/4	76.20 x 19.05	3.375	85.7	3.125	79.4	6.750	171.5	.065	1.65	.065	1.65
3 x 1	76.20 x 25.40	3.375	85.7	3.125	79.4	6.750	171.5	.065	1.65	.065	1.65
3 x 1 1/2	76.20 x 38.10	3.375	85.7	3.125	79.4	6.750	171.5	.065	1.65	.065	1.65
3 x 2	76.20 x 50.80	3.375	85.7	3.125	79.4	6.750	171.5	.065	1.65	.065	1.65
3 x 2 1/2	76.20 x 63.50	3.375	85.7	3.125	79.4	6.750	171.5	.065	1.65	.065	1.65
4 x 1/2	101.60 x 12.70	4.125	104.8	3.625	92.1	8.250	209.6	.083	2.11	.065	1.65
4 x 3/4	101.60 x 19.05	4.125	104.8	3.625	92.1	8.250	209.6	.083	2.11	.065	1.65
4 x 1	101.60 x 25.40	4.125	104.8	3.625	92.1	8.250	209.6	.083	2.11	.065	1.65
4 x 1 1/2	101.60 x 38.10	4.125	104.8	3.625	92.1	8.250	209.6	.083	2.11	.065	1.65
4 x 2	101.60 x 50.80	4.125	104.8	3.875	98.4	8.250	209.6	.083	2.11	.065	1.65
4 x 2 1/2	101.60 x 63.50	4.125	104.8	3.875	98.4	8.250	209.6	.083	2.11	.065	1.65
4 x 3	101.60 x 76.20	4.125	104.8	3.875	98.4	8.250	209.6	.083	2.11	.065	1.65

# Biopharmaceutical Processing Components



Biopharmazeutische Prozesskomponenten • Composants du traitement biopharmaceutique • Componenti di processo per la biofarmaceutica



## Reducing Tee

Run Ends Clamp  
Branch Short Clamp

## Reduzier-T-Stück

an beiden Durchlaufenden geklemmt  
Abzweigung geklemmt

## Réduit en té

extrémités type clamp  
embranchement court type clamp

## Giunto riduttore a T

Clamp alle estremità in linea  
Clamp all'estremità laterale corta

**RBP7RSC**

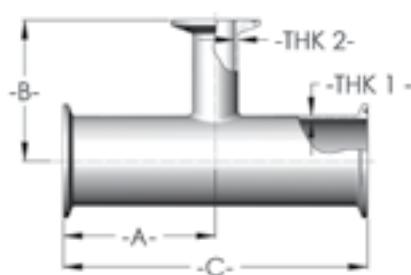
DT- 4.1.2-9

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	B (in.)	B (mm)	C (in.)	C (mm)	THK 1 (in.)	THK 1 (mm)	THK 2 (in.)	THK 2 (mm)
¾ x ½	19.05 x 12.70	2.500	63.5	1.000	25.4	5.000	127.0	.065	1.65	.065	1.65
1 x ½	25.40 x 12.70	2.625	66.7	1.125	28.6	5.250	133.4	.065	1.65	.065	1.65
1 x ¾	25.40 x 19.05	2.625	66.7	1.125	28.6	5.250	133.4	.065	1.65	.065	1.65
1 ½ x ½	38.10 x 12.70	2.875	73.0	1.375	34.9	5.750	146.1	.065	1.65	.065	1.65
1 ½ x ¾	38.10 x 19.05	2.875	73.0	1.375	34.9	5.750	146.1	.065	1.65	.065	1.65
1 ½ x 1	38.10 x 25.40	2.875	73.0	1.375	34.9	5.750	146.1	.065	1.65	.065	1.65
2 x ½	50.80 x 12.70	3.375	85.7	1.625	41.3	6.750	171.5	.065	1.65	.065	1.65
2 x ¾	50.80 x 19.05	3.375	85.7	1.625	41.3	6.750	171.5	.065	1.65	.065	1.65
2 x 1	50.80 x 25.40	3.375	85.7	1.625	41.3	6.750	171.5	.065	1.65	.065	1.65
2 x 1 ½	50.80 x 38.10	3.375	85.7	1.625	41.3	6.750	171.5	.065	1.65	.065	1.65
2 ½ x ½	63.50 x 12.70	3.625	92.1	1.875	47.6	7.250	184.2	.065	1.65	.065	1.65
2 ½ x ¾	63.50 x 19.05	3.625	92.1	1.875	47.6	7.250	184.2	.065	1.65	.065	1.65
2 ½ x 1	63.50 x 25.40	3.625	92.1	1.875	47.6	7.250	184.2	.065	1.65	.065	1.65
2 ½ x 1 ½	63.50 x 38.10	3.625	92.1	1.875	47.6	7.250	184.2	.065	1.65	.065	1.65
2 ½ x 2	63.50 x 50.80	3.625	92.1	1.875	47.6	7.250	184.2	.065	1.65	.065	1.65
3 x ½	76.20 x 12.70	3.875	98.4	2.125	54.0	7.750	196.9	.065	1.65	.065	1.65
3 x ¾	76.20 x 19.05	3.875	98.4	2.125	54.0	7.750	196.9	.065	1.65	.065	1.65
3 x 1	76.20 x 25.40	3.875	98.4	2.125	54.0	7.750	196.9	.065	1.65	.065	1.65
3 x 1 ½	76.20 x 38.10	3.875	98.4	2.125	54.0	7.750	196.9	.065	1.65	.065	1.65
3 x 2	76.20 x 50.80	3.875	98.4	2.125	54.0	7.750	196.9	.065	1.65	.065	1.65
3 x 2 ½	76.20 x 63.50	3.875	98.4	2.125	54.0	7.750	196.9	.065	1.65	.065	1.65
4 x ½	101.60 x 12.70	4.750	120.7	2.625	66.7	9.500	241.3	.083	2.11	.065	1.65
4 x ¾	101.60 x 19.05	4.750	120.7	2.625	66.7	9.500	241.3	.083	2.11	.065	1.65
4 x 1	101.60 x 25.40	4.750	120.7	2.625	66.7	9.500	241.3	.083	2.11	.065	1.65
4 x 1 ½	101.60 x 38.10	4.750	120.7	2.625	66.7	9.500	241.3	.083	2.11	.065	1.65
4 x 2	101.60 x 50.80	4.750	120.7	2.625	66.7	9.500	241.3	.083	2.11	.065	1.65
4 x 2 ½	101.60 x 63.50	4.750	120.7	2.625	66.7	9.500	241.3	.083	2.11	.065	1.65
4 x 3	101.60 x 76.20	4.750	120.7	2.625	66.7	9.500	241.3	.083	2.11	.065	1.65

# Biopharmaceutical Processing Components



Biopharmazeutische Prozesskomponenten • Composants du traitement biopharmaceutique • Componenti di processo per la biofarmaceutica



**Reducing Tee**

All Ends Clamp

**Reduzier-T-Stück**

an allen Enden geklemmt

**Réduit en té**

extrémités type clamp

**Giunto riduttore a T**

Clamp a tutte le estremità

**RBP7RC**

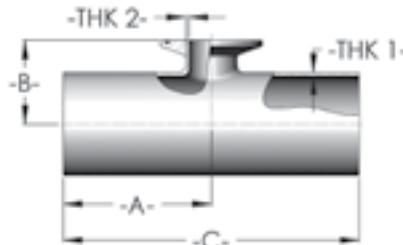
**DT- 4.1.2-8**

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	B (in.)	B (mm)	C (in.)	C (mm)	THK 1 (in.)	THK 1 (mm)	THK 2 (in.)	THK 2 (mm)
3/4 x 1/2	19.05 x 12.70	2.500	63.5	2.500	63.5	5.000	127.0	.065	1.65	.065	1.65
1 x 1/2	25.40 x 12.70	2.625	66.7	2.625	66.7	5.250	133.4	.065	1.65	.065	1.65
1 x 3/4	25.40 x 19.05	2.625	66.7	2.625	66.7	5.250	133.4	.065	1.65	.065	1.65
1 1/2 x 1/2	38.10 x 12.70	2.875	73.0	2.875	73.0	5.750	146.1	.065	1.65	.065	1.65
1 1/2 x 3/4	38.10 x 19.05	2.875	73.0	2.875	73.0	5.750	146.1	.065	1.65	.065	1.65
1 1/2 x 1	38.10 x 25.40	2.875	73.0	2.875	73.0	5.750	146.1	.065	1.65	.065	1.65
2 x 1/2	50.80 x 12.70	3.375	85.7	3.125	79.4	6.750	171.5	.065	1.65	.065	1.65
2 x 3/4	50.80 x 19.05	3.375	85.7	3.125	79.4	6.750	171.5	.065	1.65	.065	1.65
2 x 1	50.80 x 25.40	3.375	85.7	3.125	79.4	6.750	171.5	.065	1.65	.065	1.65
2 x 1 1/2	50.80 x 38.10	3.375	85.7	3.125	79.4	6.750	171.5	.065	1.65	.065	1.65
2 1/2 x 1/2	63.50 x 12.70	3.625	92.1	3.375	85.7	7.250	184.2	.065	1.65	.065	1.65
2 1/2 x 3/4	63.50 x 19.05	3.625	92.1	3.375	85.7	7.250	184.2	.065	1.65	.065	1.65
2 1/2 x 1	63.50 x 25.40	3.625	92.1	3.375	85.7	7.250	184.2	.065	1.65	.065	1.65
2 1/2 x 1 1/2	63.50 x 38.10	3.625	92.1	3.375	85.7	7.250	184.2	.065	1.65	.065	1.65
2 1/2 x 2	63.50 x 50.80	3.625	92.1	3.375	85.7	7.250	184.2	.065	1.65	.065	1.65
3 x 1/2	76.20 x 12.70	3.875	98.4	3.625	92.1	7.750	196.9	.065	1.65	.065	1.65
3 x 3/4	76.20 x 19.05	3.875	98.4	3.625	92.1	7.750	196.9	.065	1.65	.065	1.65
3 x 1	76.20 x 25.40	3.875	98.4	3.625	92.1	7.750	196.9	.065	1.65	.065	1.65
3 x 1 1/2	76.20 x 38.10	3.875	98.4	3.625	92.1	7.750	196.9	.065	1.65	.065	1.65
3 x 2	76.20 x 50.80	3.875	98.4	3.625	92.1	7.750	196.9	.065	1.65	.065	1.65
3 x 2 1/2	76.20 x 63.50	3.875	98.4	3.625	92.1	7.750	196.9	.065	1.65	.065	1.65
4 x 1/2	101.60 x 12.70	4.750	120.7	4.125	104.8	9.500	241.3	.083	2.11	.065	1.65
4 x 3/4	101.60 x 19.05	4.750	120.7	4.125	104.8	9.500	241.3	.083	2.11	.065	1.65
4 x 1	101.60 x 25.40	4.750	120.7	4.125	104.8	9.500	241.3	.083	2.11	.065	1.65
4 x 1 1/2	101.60 x 38.10	4.750	120.7	4.125	104.8	9.500	241.3	.083	2.11	.065	1.65
4 x 2	101.60 x 50.80	4.750	120.7	4.375	111.1	9.500	241.3	.083	2.11	.065	1.65
4 x 2 1/2	101.60 x 63.50	4.750	120.7	4.375	111.1	9.500	241.3	.083	2.11	.065	1.65
4 x 3	101.60 x 76.20	4.750	120.7	4.375	111.1	9.500	241.3	.083	2.11	.065	1.65

# Biopharmaceutical Processing Components



Biopharmazeutische Prozesskomponenten • Composants du traitement biopharmaceutique • Componenti di processo per la biofarmaceutica



**Reducing Tee**  
Run Ends Butt Weld  
Branch Short Clamp

**Stumpfschweißnaht an beiden Durchlaufenden des Reduzier-T-Stücks, kurzes Klemmstück an der Abzweigung**

**Réduit en té**  
extrémités à souder  
embranchement court type clamp

**Giunto riduttore a T**  
Saldatura testa a testa alle estremità in linea  
Clamp all'estremità laterale corta

**RBP7RWWSC**

**DT- 4.1.2-7**

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	B (in.)	B (mm)	C (in.)	C (mm)	THK 1 (in.)	THK 1 (mm)	THK 2 (in.)	THK 2 (mm)
¾ x ½	19.05 x 12.70	2.000	50.8	1.000	25.4	4.000	101.6	.065	1.65	.065	1.65
1 x ½	25.40 x 12.70	2.125	54.0	1.125	28.6	4.250	108.0	.065	1.65	.065	1.65
1 x ¾	25.40 x 19.05	2.125	54.4	1.125	28.6	4.250	108.0	.065	1.65	.065	1.65
1 ½ x ½	38.10 x 12.70	2.375	60.3	1.375	34.9	4.750	120.7	.065	1.65	.065	1.65
1 ½ x ¾	38.10 x 19.05	2.375	60.3	1.375	34.9	4.750	120.7	.065	1.65	.065	1.65
1 ½ x 1	38.10 x 25.40	2.375	60.3	1.375	34.9	4.750	120.7	.065	1.65	.065	1.65
2 x ½	50.80 x 12.70	2.875	73.0	1.625	41.3	5.750	146.1	.065	1.65	.065	1.65
2 x ¾	50.80 x 19.05	2.875	73.0	1.625	41.3	5.750	146.1	.065	1.65	.065	1.65
2 x 1	50.80 x 25.40	2.875	73.0	1.625	41.3	5.750	146.1	.065	1.65	.065	1.65
2 x 1 ½	50.80 x 38.10	2.875	73.0	1.625	41.3	5.750	146.1	.065	1.65	.065	1.65
2 ½ x ½	63.50 x 12.70	3.125	79.4	1.875	47.6	6.250	158.8	.065	1.65	.065	1.65
2 ½ x ¾	63.50 x 19.05	3.125	79.4	1.875	47.6	6.250	158.8	.065	1.65	.065	1.65
2 ½ x 1	63.50 x 25.40	3.125	79.4	1.875	47.6	6.250	158.8	.065	1.65	.065	1.65
2 ½ x 1 ½	63.50 x 38.10	3.125	79.4	1.875	47.6	6.250	158.8	.065	1.65	.065	1.65
2 ½ x 2	63.50 x 50.80	3.125	79.4	1.875	47.6	6.250	158.8	.065	1.65	.065	1.65
3 x ½	76.20 x 12.70	3.375	85.7	2.125	54.0	6.750	171.5	.065	1.65	.065	1.65
3 x ¾	76.20 x 19.05	3.375	85.7	2.125	54.0	6.750	171.5	.065	1.65	.065	1.65
3 x 1	76.20 x 25.40	3.375	85.7	2.125	54.0	6.750	171.5	.065	1.65	.065	1.65
3 x 1 ½	76.20 x 38.10	3.375	85.7	2.125	54.0	6.750	171.5	.065	1.65	.065	1.65
3 x 2	76.20 x 50.80	3.375	85.7	2.125	54.0	6.750	171.5	.065	1.65	.065	1.65
3 x 2 ½	76.20 x 63.50	3.375	85.7	2.125	54.0	6.750	171.5	.065	1.65	.065	1.65
4 x ½	101.60 x 12.70	4.125	104.8	2.625	66.7	8.250	209.6	.083	2.11	.065	1.65
4 x ¾	101.60 x 19.05	4.125	104.8	2.625	66.7	8.250	209.6	.083	2.11	.065	1.65
4 x 1	101.60 x 25.40	4.125	104.8	2.625	66.7	8.250	209.6	.083	2.11	.065	1.65
4 x 1 ½	101.60 x 38.10	4.125	104.8	2.625	66.7	8.250	209.6	.083	2.11	.065	1.65
4 x 2	101.60 x 50.80	4.125	104.8	2.625	66.7	8.250	209.6	.083	2.11	.065	1.65
4 x 2 ½	101.60 x 63.50	4.125	104.8	2.625	66.7	8.250	209.6	.083	2.11	.065	1.65
4 x 3	101.60 x 76.20	4.125	104.8	2.625	66.7	8.250	209.6	.083	2.11	.065	1.65

# REDUCERS

Reduzierstücke · Raccords réducteurs · Riduttori

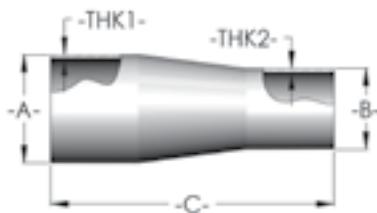




# Biopharmaceutical Processing Components

**RODGER**

Biopharmazeutische Prozesskomponenten • Composants du traitement biopharmaceutique • Componenti di processo per la biofarmaceutica



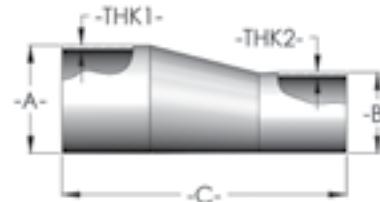
**RBP31E**

**Concentric Reducer**  
Run Ends Butt Weld  
with Tangents

**Konzentrisches Reduzierstück**  
Stumpfschweißnaht an beiden  
Enden mit Tangenten

**Réducteur concentrique**  
extrémités à souder  
avec tangentes

**Riduttore concentrico**  
Saldatura testa a testa a entrambe  
le estremità con tangenti



**RBP32E**

**Eccentric Reducer**  
Run Ends Butt Weld  
with Tangents

**Exzentrisches Reduzierstück**  
Stumpfschweißnaht an beiden Enden  
mit Tangenten

**Réducteur excentrique**  
extrémités à souder  
avec tangentes

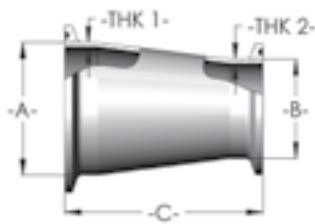
**Riduttore eccentrico**  
Saldatura testa a testa a entrambe  
le estremità con tangenti

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	B (in.)	B (mm)	C (in.)	C (mm)	THK 1 (in.)	THK 1 (mm)	THK 2 (in.)	THK 2 (mm)
3/4 x 1/2	19.05 x 12.70	0.750	19.1	0.500	12.7	4.000	101.6	.065	1.65	.065	1.65
1 x 1/2	25.40 x 12.70	1.000	25.4	0.500	12.7	4.500	114.3	.065	1.65	.065	1.65
1 x 3/4	25.40 x 19.05	1.000	25.4	0.750	19.1	4.000	101.6	.065	1.65	.065	1.65
1 1/2 x 1/2	38.10 x 12.70	1.500	38.1	0.500	12.7	5.500	139.7	.065	1.65	.065	1.65
1 1/2 x 3/4	38.10 x 19.05	1.500	38.1	0.750	19.1	5.000	127.0	.065	1.65	.065	1.65
1 1/2 x 1	38.10 x 25.40	1.500	38.1	1.000	25.4	5.000	127.0	.065	1.65	.065	1.65
2 x 1/2	50.80 x 12.70	2.000	50.80	0.500	12.7	7.750	196.9	.065	1.65	.065	1.65
2 x 3/4	50.80 x 19.05	2.000	50.80	0.750	19.1	7.250	184.2	.065	1.65	.065	1.65
2 x 1	50.80 x 25.40	2.000	50.80	1.000	25.4	7.250	184.2	.065	1.65	.065	1.65
2 x 1 1/2	50.80 x 38.10	2.000	50.80	1.500	38.1	5.250	133.4	.065	1.65	.065	1.65
2 1/2 x 1/2	63.50 x 12.70	2.500	63.50	0.500	12.7	9.750	247.7	.065	1.65	.065	1.65
2 1/2 x 3/4	63.50 x 19.05	2.500	63.50	0.750	19.1	9.250	235.0	.065	1.65	.065	1.65
2 1/2 x 1	63.50 x 25.40	2.500	63.50	1.000	25.4	9.250	235.0	.065	1.65	.065	1.65
2 1/2 x 1 1/2	63.50 x 38.10	2.500	63.50	1.500	38.1	7.250	184.2	.065	1.65	.065	1.65
2 1/2 x 2	63.50 x 50.80	2.500	63.50	2.000	50.8	5.500	139.7	.065	1.65	.065	1.65
3 x 1	76.20 x 25.40	3.000	76.2	1.000	25.4	11.250	285.8	.065	1.65	.065	1.65
3 x 1 1/2	76.20 x 38.10	3.000	76.2	1.500	38.1	9.250	235.0	.065	1.65	.065	1.65
3 x 2	76.20 x 50.80	3.000	76.2	2.000	50.8	7.500	190.5	.065	1.65	.065	1.65
3 x 2 1/2	76.20 x 63.50	3.000	76.2	2.500	63.5	5.500	139.7	.065	1.65	.065	1.65
4 x 1	101.60 x 25.40	4.000	101.6	1.000	25.4	15.500	393.7	.083	2.11	.065	1.65
4 x 1 1/2	101.60 x 38.10	4.000	101.6	1.500	38.1	13.500	342.9	.083	2.11	.065	1.65
4 x 2	101.60 x 50.80	4.000	101.6	2.000	50.8	11.750	298.5	.083	2.11	.065	1.65
4 x 2 1/2	101.60 x 63.50	4.000	101.6	2.500	63.5	9.750	247.7	.083	2.11	.065	1.65
4 x 3	101.60 x 76.20	4.000	101.6	3.000	76.2	7.750	196.9	.083	2.11	.065	1.65

# Biopharmaceutical Processing Components



Biopharmazeutische Prozesskomponenten • Composants du traitement biopharmaceutique • Componenti di processo per la biofarmaceutica



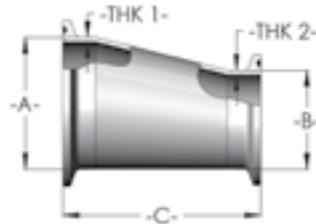
## RBP31CC

**Concentric Reducer**  
Both Ends Clamp

**Konzentrisches Reduzierstück**  
an beiden Enden geklemmt

**Réducteur concentrique**  
extrémités type clamp

**Riduttore concentrico**  
Clamp a entrambe le estremità



## RBP32CC

**Eccentric Reducer**  
Both Ends Clamp

**Exzentrisches Reduzierstück**  
an beiden Enden geklemmt

**Réducteur excentrique**  
extrémités type clamp

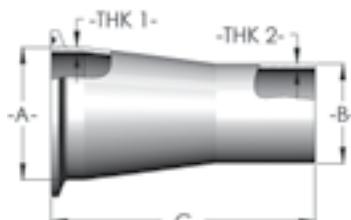
**Riduttore eccentrico**  
Clamp a entrambe le estremità

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	B (in.)	B (mm)	C (in.)	C (mm)	THK 1 (in.)	THK 1 (mm)	THK 2 (in.)	THK 2 (mm)
3/4 x 1/2	19.05 x 12.70	0.750	19.1	0.500	12.7	2.000	50.8	.065	1.65	.065	1.65
1 x 1/2	25.40 x 12.70	1.000	25.4	0.500	12.7	2.500	63.5	.065	1.65	.065	1.65
1 x 3/4	25.40 x 19.05	1.000	25.4	0.750	19.1	2.000	50.8	.065	1.65	.065	1.65
1 1/2 x 1/2	38.10 x 12.70	1.500	38.1	0.500	12.7	3.500	88.9	.065	1.65	.065	1.65
1 1/2 x 3/4	38.10 x 19.05	1.500	38.1	0.750	19.1	3.000	76.2	.065	1.65	.065	1.65
1 1/2 x 1	38.10 x 25.40	1.500	38.1	1.000	25.4	3.000	76.2	.065	1.65	.065	1.65
2 x 1/2	50.80 x 12.70	2.000	50.8	0.500	12.7	5.500	139.7	.065	1.65	.065	1.65
2 x 3/4	50.80 x 19.05	2.000	50.8	0.750	19.1	5.000	127.0	.065	1.65	.065	1.65
2 x 1	50.80 x 25.40	2.000	50.8	1.000	25.4	5.000	127.0	.065	1.65	.065	1.65
2 x 1 1/2	50.80 x 38.10	2.000	50.8	1.500	38.1	3.000	76.2	.065	1.65	.065	1.65
2 1/2 x 1/2	63.50 x 12.70	2.500	63.5	0.500	12.7	7.500	190.5	.065	1.65	.065	1.65
2 1/2 x 3/4	63.50 x 19.05	2.500	63.5	0.750	19.1	7.000	177.8	.065	1.65	.065	1.65
2 1/2 x 1	63.50 x 25.40	2.500	63.5	1.000	25.4	7.000	177.8	.065	1.65	.065	1.65
2 1/2 x 1 1/2	63.50 x 38.10	2.500	63.5	1.500	38.1	5.000	127.0	.065	1.65	.065	1.65
2 1/2 x 2	63.50 x 50.80	2.500	63.5	2.000	50.8	3.000	76.2	.065	1.65	.065	1.65
3 x 1	76.20 x 25.40	3.000	76.2	1.000	25.4	9.000	228.6	.065	1.65	.065	1.65
3 x 1 1/2	76.20 x 38.10	3.000	76.2	1.500	38.1	7.000	177.8	.065	1.65	.065	1.65
3 x 2	76.20 x 50.80	3.000	76.2	2.000	50.8	5.000	127.0	.065	1.65	.065	1.65
3 x 2 1/2	76.20 x 63.50	3.000	76.2	2.500	63.5	3.000	76.2	.065	1.65	.065	1.65
4 x 1	101.60 x 25.40	4.000	101.6	1.000	25.4	13.125	333.4	.083	2.11	.065	1.65
4 x 1 1/2	101.60 x 38.10	4.000	101.6	1.500	38.1	11.125	282.6	.083	2.11	.065	1.65
4 x 2	101.60 x 50.80	4.000	101.6	2.000	50.8	9.125	231.8	.083	2.11	.065	1.65
4 x 2 1/2	101.60 x 63.50	4.000	101.6	2.500	63.5	7.125	181.0	.083	2.11	.065	1.65
4 x 3	101.60 x 76.20	4.000	101.6	3.000	76.2	5.125	130.2	.083	2.11	.065	1.65

# Biopharmaceutical Processing Components

RODGER

Biopharmazeutische Prozesskomponenten • Composants du traitement biopharmaceutique • Componenti di processo per la biofarmaceutica



**RBP31CE**

**Concentric Reducer**

Large End Clamp  
Small End Butt Weld with Tangent

**Konzentrisches Reduzierstück**

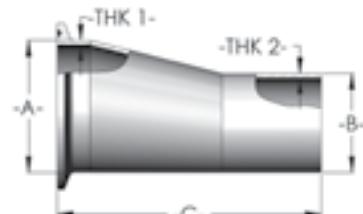
Klemme am langen Ende  
Stumpfschweißnaht am kurzen Ende mit Tangente

**Réducteur concentrique**

extrémités grande type clamp  
petite à souder avec tangente

**Riduttore concentrico**

Clamp all'estremità maggiore  
Saldatura testa a testa con tangente all'estremità  
minore



**RBP32CE**

**Eccentric Reducer**

Large End Clamp  
Small End Butt Weld with Tangent

**Exzentrisches Reduzierstück**

Klemme am langen Ende  
Stumpfschweißnaht am kurzen Ende mit Tangente

**Réducteur excentrique**

extrémités grande type clamp  
petite à souder avec tangente

**Riduttore eccentrico**

Clamp all'estremità maggiore  
Saldatura testa a testa con tangente all'estremità  
minore

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	B (in.)	B (mm)	C (in.)	C (mm)	THK 1 (in.)	THK 1 (mm)	THK 2 (in.)	THK 2 (mm)
3/4 x 1/2	19.05 x 12.70	0.750	19.1	0.500	12.7	3.000	76.2	.065	1.65	.065	1.65
1 x 1/2	25.40 x 12.70	1.000	25.4	0.500	12.7	3.500	88.9	.065	1.65	.065	1.65
1 x 3/4	25.40 x 19.05	1.000	25.4	0.750	19.1	3.000	76.2	.065	1.65	.065	1.65
1 1/2 x 1/2	38.10 x 12.70	1.500	38.1	0.500	12.7	4.500	114.3	.065	1.65	.065	1.65
1 1/2 x 3/4	38.10 x 19.05	1.500	38.1	0.750	19.1	4.000	101.6	.065	1.65	.065	1.65
1 1/2 x 1	38.10 x 25.40	1.500	38.1	1.000	25.4	4.000	101.6	.065	1.65	.065	1.65
2 x 1/2	50.80 x 12.70	2.000	50.8	0.500	12.7	6.500	165.1	.065	1.65	.065	1.65
2 x 3/4	50.80 x 19.05	2.000	50.8	0.750	19.1	6.000	152.4	.065	1.65	.065	1.65
2 x 1	50.80 x 25.40	2.000	50.8	1.000	25.4	6.000	152.4	.065	1.65	.065	1.65
2 x 1 1/2	50.80 x 38.10	2.000	50.8	1.500	38.1	4.000	101.6	.065	1.65	.065	1.65
2 1/2 x 1/2	63.50 x 12.70	2.500	63.5	0.500	12.7	8.500	215.9	.065	1.65	.065	1.65
2 1/2 x 3/4	63.50 x 19.05	2.500	63.5	0.750	19.1	8.000	203.2	.065	1.65	.065	1.65
2 1/2 x 1	63.50 x 25.40	2.500	63.5	1.000	25.4	8.000	203.2	.065	1.65	.065	1.65
2 1/2 x 1 1/2	63.50 x 38.10	2.500	63.5	1.500	38.1	6.000	152.4	.065	1.65	.065	1.65
2 1/2 x 2	63.50 x 50.80	2.500	63.5	2.000	50.8	4.250	108.0	.065	1.65	.065	1.65
3 x 1	76.20 x 25.40	3.000	76.2	1.000	25.4	10.000	254.0	.065	1.65	.065	1.65
3 x 1 1/2	76.20 x 38.10	3.000	76.2	1.500	38.1	8.000	203.2	.065	1.65	.065	1.65
3 x 2	76.20 x 50.80	3.000	76.2	2.000	50.8	6.250	158.8	.065	1.65	.065	1.65
3 x 2 1/2	76.20 x 63.50	3.000	76.2	2.500	63.5	4.250	108.0	.065	1.65	.065	1.65
4 x 1	101.60 x 25.40	4.000	101.6	1.000	25.4	14.125	358.8	.083	2.11	.065	1.65
4 x 1 1/2	101.60 x 38.10	4.000	101.6	1.500	38.1	12.125	308.0	.083	2.11	.065	1.65
4 x 2	101.60 x 50.80	4.000	101.6	2.000	50.8	10.375	263.5	.083	2.11	.065	1.65
4 x 2 1/2	101.60 x 63.50	4.000	101.6	2.500	63.5	8.375	212.7	.083	2.11	.065	1.65
4 x 3	101.60 x 76.20	4.000	101.6	3.000	76.2	6.375	161.9	.083	2.11	.065	1.65



# FERRULES AND ADAPTORS

Hülsen und Adapter · Viroles et adaptateurs · Ghiere e adattatori





# Biopharmaceutical Processing Components



Biopharmazeutische Prozesskomponenten • Composants du traitement biopharmaceutique • Componenti di processo per la biofarmaceutica



- BPE Long Ferrule**  
One End Clamp  
One End Butt Weld
- Lange BPE-Zwinge**  
an einem Ende geklemmt  
Stumpfschweißnaht an einem Ende
- Ferrule allongée**  
extrémités type clamp  
et à souder
- Ghiera lunga BPE**  
Clamp a una estremità  
Saldatura testa a testa all'altra estremità

**STL14AM7**

DT-4.1.4-1

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	THK (in.)	THK (mm)
½	12.70	1.750	44.5	.065	1.65
¾	19.05	1.750	44.5	.065	1.65
1	25.40	1.750	44.5	.065	1.65
1 ½	38.10	1.750	44.5	.065	1.65
2	50.80	2.250	57.2	.065	1.65
2 ½	63.50	2.250	57.2	.065	1.65
3	76.20	2.250	57.2	.065	1.65
4	101.60	2.250	57.2	.083	2.11



- Short Weld Ferrule**  
One End Clamp  
One End Butt Weld
- T-stuk**  
an einem Ende geklemmt  
Stumpfschweißnaht an einem Ende
- Ferrule courte à souder**  
extrémités type clamp  
et à souder
- Ghiera saldata corta**  
Clamp a una estremità  
Saldatura testa a testa all'altra estremità

**R14SW**

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	THK (in.)	THK (mm)
½	12.70	0.500	12.7	.065	1.65
¾	19.05	0.500	12.7	.065	1.65
1	25.40	0.500	12.7	.065	1.65
1 ½	38.10	0.500	12.7	.065	1.65
2	50.80	0.500	12.7	.065	1.65
2 ½	63.50	0.500	12.7	.065	1.65
3	76.20	0.500	12.7	.065	1.65
4	101.60	0.625	15.9	.083	2.11



- Ferrule**  
One End Clamp  
One End Butt Weld
- Zwinge**  
an einem Ende geklemmt  
Stumpfschweißnaht an einem Ende
- Réducteur excentrique**  
extrémités grande type clamp  
petite à souder avec tangente
- Ghiera**  
Clamp a una estremità  
Saldatura testa a testa all'altra estremità

**R14A**

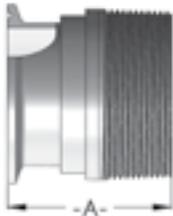
Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	THK (in.)	THK (mm)
1	25.40	1.125	28.6	.065	1.65
1 ½	38.10	1.125	28.6	.065	1.65
2	50.80	1.125	28.6	.065	1.65
2 ½	63.50	1.125	28.6	.065	1.65
3	76.20	1.125	28.6	.065	1.65
4	101.60	1.125	28.6	.083	2.11



# Biopharmaceutical Processing Components

RODGER

Biopharmazeutische Prozesskomponenten • Composants du traitement biopharmaceutique • Componenti di processo per la biofarmaceutica



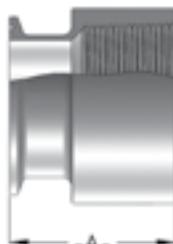
R21

**Adaptor**  
Clamp to Male NPT  
\*No Wrench Flats

**Adapter**  
Klemme auf NPT-Stecker  
\*Kein Hex-

**Adaptateur**  
extrémités type clamp et NPT mâle  
avec écrou  
\*Sans écrou

**Adattatore**  
Da clamp a NPT maschio  
\*Senza attacchi esagonali



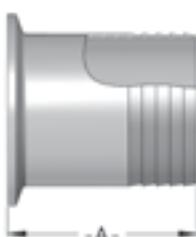
R22

**Adaptor**  
Clamp to Female NPT  
\*No Wrench Flats

**Adapter**  
Klemme auf NPT-Buchse  
\*Kein Hex

**Adaptateur**  
extrémités type clamp et NPT femelle  
avec écrou  
\*Sans écrou

**Adattatore**  
Da clamp a NPT femmina  
\*Senza attacchi esagonali



R14AHR

**Clamp x Rubber Hose Adaptor**

**Adapter für Gummischlauch**  
mit Klemme

**Adaptateur pour boyau**  
en caoutchouc extrémités type clamp

**Adattatore per tubo in gomma con**  
clamp

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)
½ x ¼	12.70 x 3.18	2.000	50.8
½ x ¾	12.70 x 6.35	2.000	50.8
½ x ⅜	12.70 x 9.53	2.000	50.8
½ x ½	12.70 x 12.70	2.000	50.8
½ x ¾	12.70 x 19.05	2.000	50.8
¾ x ¼	19.05 x 3.18	2.000	50.8
¾ x ¾	19.05 x 6.35	2.000	50.8
¾ x ⅜	19.05 x 9.53	2.000	50.8
¾ x ½	19.05 x 12.70	2.000	50.8
¾ x ¾	19.05 x 19.05	2.000	50.8
1 x 1	25.40 x 25.40	2.250	57.2
1 ½ x 1 ½	38.10 x 38.10	2.438	61.9
2 x 2	50.80 x 50.80	2.656	67.5
2 ½ x 2 ½	63.50 x 63.50	3.281	83.3
3 x 3 *	76.20 x 76.20	3.500	88.9
4 x 4 *	101.60 x 101.60	3.813	96.9

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)
½ x ¼	12.70 x 3.18	1.250	31.8
½ x ¾	12.70 x 6.35	1.500	38.1
½ x ⅜	12.70 x 9.53	1.500	38.1
½ x ½	12.70 x 12.70	1.500	38.1
½ x ¾	12.70 x 19.05	1.625	41.3
¾ x ¼	19.05 x 3.18	1.250	31.8
¾ x ¾	19.05 x 6.35	1.500	38.1
¾ x ⅜	19.05 x 9.53	1.500	38.1
¾ x ½	19.05 x 12.70	1.500	38.1
¾ x ¾	19.05 x 19.05	1.625	41.3
1 x 1	25.40 x 25.40	1.625	41.3
1 ½ x 1 ½	38.10 x 38.10	2.250	57.2
2 x 2	50.80 x 50.80	1.687	42.8
2 ½ x 2 ½	63.50 x 63.50	2.094	53.2
3 x 3 *	76.20 x 76.20	2.187	55.5
4 x 4 *	101.60 x 101.60	2.625	66.7

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)
½	12.70	1.500	38.1
¾	19.05	1.500	38.1
1	25.40	2.500	63.5
1 ½	38.10	2.500	63.5
2	50.80	2.500	63.5
2 ½	63.50	2.500	63.5
3	76.20	2.500	63.5
4	101.60	2.625	66.7

# Biopharmaceutical Processing Components



Biopharmazeutische Prozesskomponenten • Composants du traitement biopharmaceutique • Componenti di processo per la biofarmaceutica



**R16A**

DT- 4.1.5-2

- Solid End Cap**
- Solider Endverschluss**
- Bouchon solide**
- Tappo solido all'estremità**

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	B (in.)	B (mm)
½	12.70	0.993	25.2	0.187	4.7
¾	19.05	0.993	25.2	0.187	4.7
1	25.40	1.984	50.4	0.250	6.4
1 ½	38.10	1.984	50.8	0.250	6.4
2	50.80	2.516	63.9	0.250	6.4
2 ½	63.50	3.047	77.4	0.250	6.4
3	76.20	3.579	90.9	0.250	6.4
4	101.60	4.682	118.9	0.312	7.9



**RBP16W**  
DT- 4.1.5-1

- Weld Cap**
- Schweißverschluss**
- Bouchon extrémités à souder**
- Tappo saldato**

Tube Size (in.)	Tube Size (mm)	A (in.)	A (mm)	THK 2 (in.)	THK 2 (mm)
½	12.70	1.500	38.1	.065	1.65
¾	19.05	1.500	38.1	.065	1.65
1	25.40	1.500	38.1	.065	1.65
1 ½	38.10	1.500	38.1	.065	1.65
2	50.80	1.500	38.1	.065	1.65
2 ½	63.50	1.500	38.1	.065	1.65
3	76.20	1.750	44.5	.065	1.65
4	101.60	2.000	50.80	.083	1.65

# Biopharmaceutical Processing Components



Biopharmazeutische Prozesskomponenten • Composants du traitement biopharmaceutique • Componenti di processo per la biofarmaceutica



**R13HC**

- Heavy Duty Clamp**
- Heavy-Duty-Klemme**
- Collet renforcé**
- Clamp ad alte prestazioni**

Tube Size (in.)	Tube Size (mm)
½	12.70
¾	19.05
1 ½	38.10
2	50.80
2 ½	63.50
3	76.20
4	101.60



**R13HCD**

- Heavy Duty Clamp (2 pin)**
- Heavy-Duty-Klemme (2 Stifte)**
- Collet renforcé (2 attaches)**
- Clamp ad alte prestazioni (a 2 perni)**

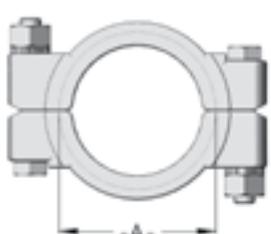
Tube Size (in.)	Tube Size (mm)
1 ½	38.10
2	50.80
2 ½	63.50
3	76.20
4	101.60



**R13HC3S**

- Three Segment Heavy Duty Clamp**
- Drei Segmente Heavy-Duty-Klemme**
- Trois segments Collet renforcé**
- Clamp ad alte prestazioni a tre segmenti**

Tube Size (in.)	Tube Size (mm)
1 ½	38.10
2	50.80
2 ½	63.50
3	76.20
4	101.60



**R13HP**

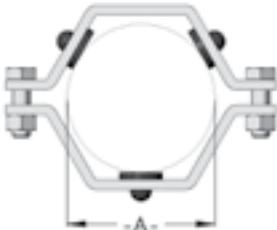
- Two Piece High Pressure Clamp**  
Stainless Steel Cast Construction
- Zweiteilige Hochdruck-Klemme**  
Edelstahlkonstruktion
- Collet pour haute pression**  
deux pièces d'acier inoxydable moulé
- Clamp per alte pressioni a due pezzi**  
Fabbricazione in acciaio inossidabile stampato

Tube Size (in.)	Tube Size (mm)
½	12.70
¾	19.05
1 ½	38.10
2	50.80
2 ½	63.50
3	76.20
4	101.60

# Biopharmaceutical Processing Components

RODGER

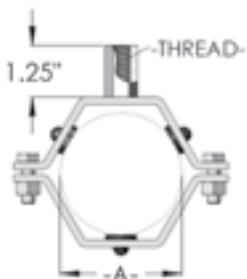
Biopharmazeutische Prozesskomponenten • Composants du traitement biopharmaceutique • Componenti di processo per la biofarmaceutica



**R24G**

- Stainless Steel Support**  
with Grommets
- Edelstahl-Rohrstützen**  
mit Tüllen
- Support en acier inoxydable**  
avec oeillets
- Supporto tubolare in acciaio inossidabile**  
con occhielli

Tube Size (in.)	Tube Size (mm)
½	12.70
¾	19.05
1	25.40
1 ½	38.10
2	50.80
2 ½	63.50
3	76.20
4	101.60



**R24GC**

- Stainless Steel Tube Support**  
With Grommets & ½" UNC threaded nut
- Edelstahl-Rohrstützen**  
mit Tüllen & ½" UNC-Gewindemutter.
- Support en acier inoxydable**  
avec oeillets et écrou
- Supporto tubolare in acciaio inossidabile**  
con occhielli e dado filettato UNC da ½"

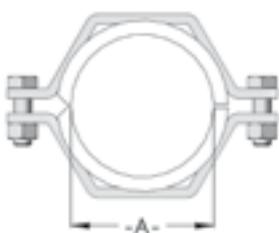
\*Note: 1" Also available with 3/8"-16 UNC nut.

\*Hinweis: 1", auch verfügbar mit 3/8"-16 UNC-Mutter.

\* Note: 1 pouce aussi disponible avec un écrou 3/8 po.-16 UNC

\*Nota: Disponibile anche in 1" con dado UNC da 3/8"-16.

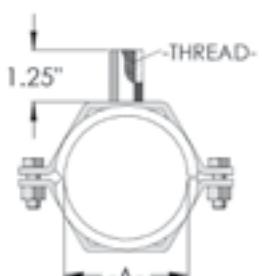
Tube Size (in.)	Tube Size (mm)
½	12.70
¾	19.05
1	25.40
1 ½	38.10
2	50.80
2 ½	63.50
3	76.20
4	101.60



**R24GP**

- Stainless Steel Tube Support**  
with plastic sleeve
- Edelstahl-Rohrstützen**  
mit Plastikhülle
- Support en acier inoxydable**  
avec manchon en plastique
- Supporto tubolare in acciaio inossidabile**  
con camicia in plastica

Tube Size (in.)	Tube Size (mm)
½	12.70
¾	19.05
1	25.40
1 ½	38.10
2	50.80
2 ½	63.50
3	76.20
4	101.60



**R24GPC**

- Stainless Steel Tube Support**  
with plastic sleeve & ½" UNC threaded nut
- Edelstahl-Rohrstützen**  
mit Plastikhülle & ½" UNC-Gewindemutter
- Support en acier inoxydable**  
avec manchon en plastique et écrou
- Supporto tubolare in acciaio inossidabile**  
con camicia in plastica e dado filettato UNC  
da ½"

\*Note: 1" Also available with 3/8"-16 UNC nut.

\*Hinweis: 1", auch verfügbar mit 3/8"-16 UNC-Mutter.

\* Note: 1 pouce aussi disponible avec un écrou 3/8 po.-16 UNC

\*Nota: Disponibile anche in 1" con dado UNC da 3/8"-16.

Tube Size (in.)	Tube Size (mm)
½	12.70
¾	19.05
1	25.40
1 ½	38.10
2	50.80
2 ½	63.50
3	76.20
4	101.60

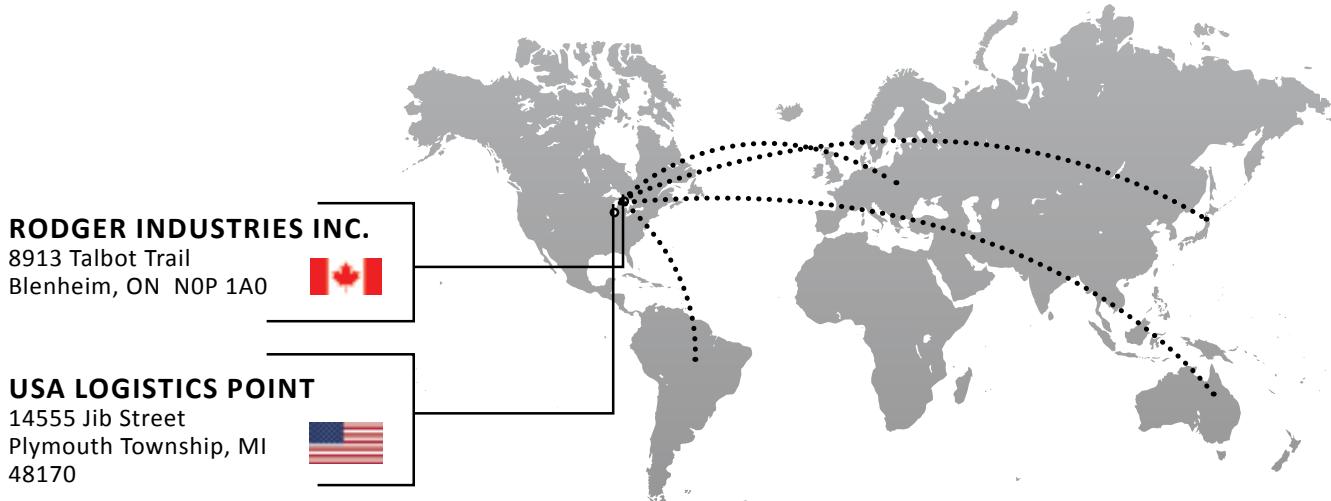


Rodger Industries Inc. connects seamlessly to the global marketplace. With a growing network of international partners, we understand the unique challenges faced in the biopharmaceutical industry worldwide.

Rodger Industries Inc. ist nahtlos in den globalen Markt integriert. Dank einem wachsenden Netzwerk internationaler Partner verstehen wir die besonderen Herausforderungen der internationalen Biopharmazeutik-Branche.

Rodger Industries Inc. se connecte harmonieusement au marché mondial. Grâce à notre réseau croissant de partenaires internationaux, nous comprenons les défis uniques auxquels fait face le secteur biopharmaceutique dans le monde entier.

Rodger Industries Inc. si collega senza problemi con il mercato globale. Con la nostra rete di partner internazionali, noi comprendiamo bene le specifiche problematiche cui si trova di fronte il settore biofarmaceutico mondiale.



## Let's Connect

Treten wir in **Verbindung**  
**Connectons-nous**  
**Mettiamoci in contatto**



Connect with us via the web, tablet or smart phone.

Verbinden Sie sich mit uns über Web, Tablet oder Smartphone.

Connectez-vous à nous par Internet, tablette ou téléphone intelligent.

Contattateci tramite web, tablet o smartphone. Visitate il nostro sito all'indirizzo



## Further To Our Product Range

### Filtration

In addition to biopharmaceutical fittings, Rodger Industries Inc. offers a unique range of filtration solutions for use in food and beverage and other hygienic processing industries.

We welcome you to contact us for further information.

## Erweitern Sie unser Produktangebot

### Filtration

Neben biopharmazeutischen Armaturen bietet Rodger Industries Inc. ein einmaliges Sortiment an Filtrationslösungen für die Lebensmittel- und Getränkebranche und andere verarbeitende Branchen mit Fokus auf Hygiene an.

Wir lassen Ihnen gerne weitere Informationen zukommen.

## Gamme de produits supplémentaires

### Filtration

En plus de raccords biopharmaceutiques, Rodger Industries Inc. offre une gamme unique de solutions de filtration pouvant être utilisées par le secteur de la transformation des aliments et des boissons et d'autres secteurs de transformation hygiénique

N'hésitez pas à prendre contact avec nous pour obtenir de plus amples renseignements.

## La nostra gamma di altri prodotti

### Filtrazione

In aggiunta ai raccordi per la biofarmaceutica, Rodger Industries Inc. offre una gamma unica di soluzioni filtranti per l'uso nell'alimentare e in altre industrie di trattamento igienico.

Saremo lieti di rispondere alle Vs. richieste di ulteriori informazioni.



# FILTERS AND STRAINERS

Filter und Siebe · Filtres et de Crépines · Filtri e Setacci



# Industry Terminology

## **ANNEALING**

A treatment process for steel for reducing hardness, improving machinability, facilitating cold working, or producing a desired mechanical, physical, or other property (The American Society of Mechanical Engineers Bioprocessing Equipment [ASME BPE], 2014)

## **ASEPTIC**

Free of pathogenic (causing or capable of causing disease) microorganisms (ASME BPE, 2014)

## **BRIGHT ANNEALING**

Reducing oxidation on metal surface by heating and slowly cooling in controlled atmosphere. The heat treatment causes changes in properties of material such as hardness, ductility and strength. Note: Following this process the steel has a more reflective appearance, but still may have imperfections and cloudiness.

## **BORESCOPE**

A device for indirect visual inspection of difficult access locations such as equipment and pipes (ASME BPE, 2014)

## **CORROSION**

A chemical or electrochemical interaction between a metal and its environment, which results in changes in the property of the metal. This may lead to impairment of the function of the metal, the environment, and/or the technical system involved (ASME BPE, 2014)

## **MILL FINISH**

Surface finish of metal after forming process takes place. Surface is normally rough and absent of luster that polished surfaces have.

## **MECHANICAL POLISHING**

A process by which abrasive media is applied to a surface with intent to smoothen until a desired and/or specified surface roughness (Ra) is achieved (ASME BPE, 2014)

## **ELECTROPOLISHING**

A controlled electrochemical process utilizing acid electrolyte, DC current, anode, and cathode to smooth the surface by removal of metal (ASME BPE, 2014)

## **HEAT NUMBER**

An alphanumeric identification of a stated tonnage of metal obtained from a continuous melting in a furnace (ASME BPE, 2014)

## **HYDROTEST**

A pressure test of piping, pressure vessels, or pressure-containing parts, usually performed by pressurizing the internal volume with water at a pressure determined by the applicable code (ASME BPE, 2014)

## **OVALITY (to tolerances of the standard)**

The degree of deviation from perfect circularity of the cross section.

## **MATERIAL TEST REPORT (MTR)**

A document in which the results of tests, examinations, repairs, or treatments required by the material specification to be reported are recorded. This document includes those of any supplementary requirements or other requirements stated in the order for the material. This document may be combined with a certificate of compliance as a single document. When preparing a material test report, a material manufacturer may transcribe data produced by other organizations, provided he accepts responsibility for the accuracy and authenticity of the data (ASME BPE, 2014)

## **NICK**

A surface void anomaly caused by material removal or compression from the surface, whose bottom surface is usually irregular (ASME BPE, 2014)

## **PASSIVATION**

Removal of exogenous iron or iron from the surface of stainless steels and higher alloys by means of a chemical dissolution, most typically by a treatment with an acid solution that will remove the surface contamination and enhance the formation of the passive layer (ASME BPE, 2014)

## **POROSITY**

Cavity-type discontinuities formed by gas entrapment during solidification (ASME BPE, 2014)

## **PROFILOMETER**

An instrument for the measurement of the degree of surface roughness (ASME BPE, 2014)

## **ROUGHNESS AVERAGE (RA.)**

Log of the arithmetic mean of the surface profile. (ASME BPE, 2014)

## **SEAMLESS TUBING (NO DEFINITION)**

Tubing which is extruded and drawn (from a billet) during manufacturing. During the drawing process, the tube forms by means of being pulled through a die.

## **WELDED TUBING (NO DEFINITION)**

Tubing manufactured from a strip which is roll formed and welded to produce a tube.

## Notes:



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