

Uppgiftslämnaren reserverar sig för eventuella fel i produktinformationen eller felaktigt registrerade uppgifter och förbehåller sig rätten att korrigera och/eller komplettera produktinformation utan föregående avisering

1 GRUNDDATA

Varubeskrivning

Koppling av segjärn för alla rörmaterial, dragfast med Uni/Fixers, dimensionsområde DN 425 till 600

Övriga upplysningar

Sortiment: Rak koppling, rak koppling förminskad, flänskoppling, flänskoppling förminskad

Klassificeringar

ETIM ›	-EC003024 - Rördel med 2 anslutningar
BK04 ›	-20209 - VA-kopplingar
BSAB ›	
UNSPSC ›	

Leverantörsuppgifter

Företagsnamn

Georg Fischer AB

Organisationsnummer

5560744285

Adress

Liljeholmstranden 5

Hemsida

www.georgfischer.se/

Miljökontaktperson**Namn**

Jan Nordgren

Telefon

08 50677513

E-post

jan.nordgren@georgfischer.com

2 HÅLLBARHETSARBETE

Företagets certifiering

- ISO 9000
- ISO 14000

Policys och riktlinjer

Affärsidé Georg Fischer AB:

Vi skall erbjuda våra kunder optimala och kostnadseffektiva tekniska lösningar, med produkter, tjänster och kundservice av hög kvalitet. Vi eftersträvar en marknadsledande position inom valda marknadssegment.

Vi arbetar med försäljning, sammansättning och marknadsföring av rörsystem för säker transport av vätskor och gaser.

Vi skall i vår verksamhet hushålla med naturens resurser.

3

INNEHÅLLSDEKLARATION

Kemisk produkt	Nej
Omfattas varan av RoHS-direktivet	Nej
Innehåller produkten tillsatt nanomaterial, som är medvetet tillsatta för att uppnå en viss funktion	Nej
Varans vikt	73,8 - 146 kg

Vara / Delkomponenter

Koncentrationen har beräknats på hela varan

Ingående material /komponenter	Vikt-% i komponent	CAS-nr (alt legering)	EG-nr (alt legering)	Vikt % i produkt	Kommentar
Rostfritt stål, EN 1.4401, Bedömning på legeringsnivå, 10-13% Ni	13%	12597-68-1	603-108-1	13%	
Segjärn EN-GJS-450-10	75%	övrigt metaller	EN-GJS-450-10	75%	
POM, Polyoxymetylen	8%	66455-31-0	Saknas	8%	
Epoxy RT 9000 R4	2%			2%	
EPDM EN 681-1	2%		EN 681-1	2%	

Del av materialinnehållet som är deklarerat 100%

Särskilt farliga ämnen

Varan innehåller INTE några ämnen med särskilt farliga egenskaper (Substances of very high concern, SVHC-ämnena) som finns med på kandidatförteckningen i en koncentration som överstiger 0,1 vikts-%

Utgåva av kandidatförteckningen som har använts

2019-10-08 00:00:00

Övrigt

Ämnen är redovisade ned till 0.1 viktprocent enligt iBVDs redovisningskrav. Eventuell avvikelse från redovisningskraven redovisas nedan.

4 RÅVAROR

Återvunnet material

Innehåller varan återvunnet material: Ja

Specifikation av vilka material och andel som utgörs av den totala varans vikt

1. Återvunnet material
2. Andel (%) av totala varans vikt
3. Andel (%) av det återvunna materialet vilket **inte** har passerat konsumentledet
4. Andel (%) av det återvunna materialet vilket har passerat konsumentledet

1	2	3	4
Segjärn	85 %		85 %

Träråvara

Träråvara ingår i varan: Nej

5 MILJÖPÅVERKAN

Finns en miljövarudeklaration framtagen enligt EN15804 eller ISO14025 för varan

Nej

Finns annan miljövarudeklaration

Nej

Om miljövarudeklaration eller annan livscykelanalys saknas, beskriv hur miljöpåverkan av varan beaktas ur ett livscykelperspektiv

Minst 50 års livslängd

6 DISTRIBUTION

Beskrivning av emballagehantering för distribution av varan

Fulla Europaletter till grossister, ingår i återvinningssystemet för lastpallar.

7

BYGGSCKEDET

Ställer varan särskilda krav vid lagring?	Nej
Ställer varan särskilda krav på omgivande byggvaror?	Nej

8

BRUKSSKEDET

Finns skötselansvisningar/skötselråd?	Ja
Finns en energimärkning enligt energimärkningsdirektivet (2010/30/EU) för varan?	Ej relevant

9

RIVNING

Kräver varan särskilda åtgärder för skydd av hälsa och miljö vid rivning/demontering?	Nej
---	-----

10

AVFALLSHANTERING

Omfattas den levererade varan av förordningen (2014:1075) om producentansvar för elektriska och elektroniska produkter när den blir avfall?	Nej
Är återanvändning möjlig för hela eller delar av varan?	Ja
Återanvändning möjlig upp till 10 gånger.	
Är materialåtervinning möjlig för hela eller delar av varan?	Ja
Alla detaljer kan återvinnas.	
Är energiåtervinning möjlig för hela eller delar av varan?	Nej
Har leverantören restriktioner och rekommendationer för återanvändning, material- eller energiåtervinning eller deponering?	Nej
När den levererade varan blir avfall, klassas den då som farligt avfall?	Nej
Avfallskod (EWC) för den levererade varan	170405

RSK-nummer	Eget Artikel-nr	GTIN
115 04 72	709355374	
115 04 73	709355378	
115 04 74	709455392	
115 04 75	709355376	
115 04 76	709305372	
115 04 77	709305374	
115 04 78	709305376	
115 04 79	709305378	
115 04 80	709405392	
115 04 81	709405394	
115 04 82	709405396	
115 05 57	709 305 342	
115 05 58	709 305 373	
115 05 59	709 405 393	
115 05 60	709 405 395	
115 05 82	709 405 389	
115 05 83	709 405 397	
115 05 84	709 455 388	
115 05 85	709 455 390	

Produktdatablad	brochure MULTI-JOINT 3000 Plus DN50-DN600 11-2016 EN.pdf
Prestandadeklaration	
Säkerhetsblad	
Miljövarudeklaration	
Skötselansvisning	User Manual MJ3000 Plus DN425-DN600 10-2016.pdf
Övriga bifogade dokument	

GB	User Manual
D	Montageanleitung
NL	Montagehandleiding
F	Manuel d'instruction
NO	Brukermanual
SE	Användarmanual
DK	Montagevejledning
FIN	Käyttömanuaali
ES	Manual de instalacion
PT	Manual de instalação
IT	Manuale d'uso
RO	Manualul utilizatorului
CZ	Návod k montáži
GR	Εγχειρίδιο χρήσης
HU	Szerelési utasítás
RUS	Руководство по установке
PL	Instrukcja Obsługi

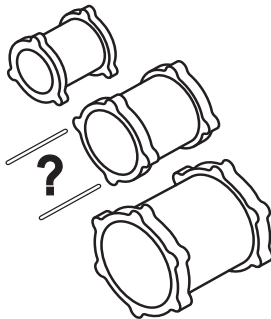
MULTI/JOINT® 3000 Plus DN425-DN600





01

FITTING CHOICE



D Kupplung auswählen

NL Keuze koppeling

F Choisir le raccord

NO Valg av kobling

SE Kopplings val

DK Valg af kobling

FIN Muhvi vaihtoehdot

PT Escolha do tipo de ligação

ES Elegir union

IT Scelta del giunto

GR Επιλογή συνδέσμου

CZ Výchěr spojky

HU Idom kiválasztása

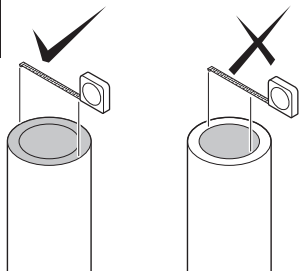
RO Alegerea cuplei

PL Wybór łącznika

RUS Выбор фитинга

01

CHECK TABLE IF CHOSEN FITTING MATCHES PIPE OD.



DN	Range (mm)
DN425	432 - 464
DN450	450 - 482
DN475	481 - 513
DN500	500 - 532
DN550	548 - 580
DN600	605 - 637

D Die Rohraussendurchmesser überprüfen und mit der Tabelle vergleichen.

NL Kies de juiste koppeling m.b.v. de tabel.

F Vérifiez sur le tableau si le raccord couvre bien le diamètre extérieur du tube.

NO Sjekk med tabell at koblingen stemmer overens med utvendig diameter rør.

SE Kontrollera om vald rördel stämmer mot rörets yterdiameter.

DK Kontroller med tabellen om den valgte kobling passer til rørdiameteren.

FIN Tarkista taulukosta jos valitut asennukset sopivat putkelle QD.

PT Ver na tabela se os acessórios estão de acordo com o diâmetro exterior dos tubos.

ES Ver tabla anexa para unir distintos diámetros exteriores.

IT Controllare sulla tabella se il giunto è idoneo al d.e. del tubo.

GR Με βάση το πίνακα μεγεθών, επιβεβαιώστε ότι ο σύνδεσμος είναι κατάλληλος για τη συγκεκριμένη διάμετρο αγωγού στον οποίο πρόκειται να τοποθετηθεί.

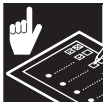
CZ V tabulce zkontrolovat použitelnost tvarovky v daném rozsahu průměru.

HU Ellenőrizze, hogy a kiválasztott idom megfelel-e a cső külső átmérőjéhez.

RO Se verifica in tabel daca fittingul ales corespunde Dext al tevii.

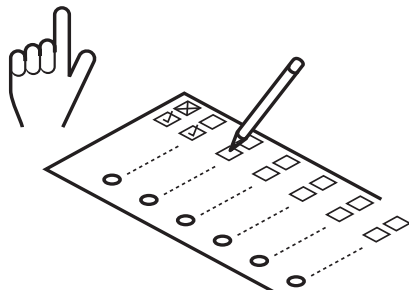
PL Sprawdź w tabeli czy łącznik pasuje do zewnętrznej średnicy rury.

RUS Проверить по таблице совместимость фитинга с трубой.



02
03
04

PREPARE FITTING FOR INSTALLATION



D Kupplung für die Montage vorbereiten

NL Montageklaar maken

F Préparez le raccord pour l'installation

NO Forbredelse av kobling

SE Förbered kopplingen för installation

DK Klargør koblingen til installationen

FIN Valmista muhvi asennusta varten

PT Preparação da ligação

ES Preparar manguito para instalacion

IT Preparazione per l'installazione

GR Προετοιμασία συνδέσμου για τοποθέτηση

CZ Příprava spojky pro instalaci

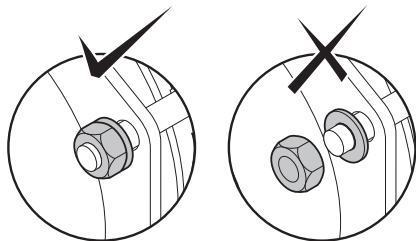
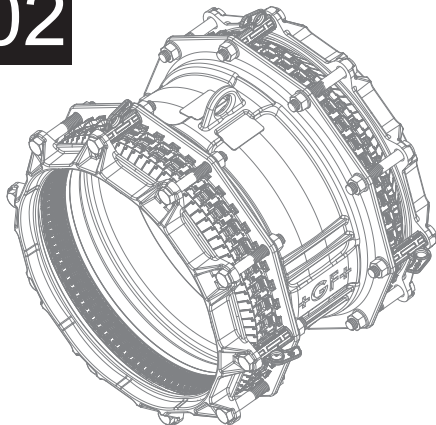
HU Idom előkészítése a felhelyezésre

RO Pregătirea cuplei pentru instalare

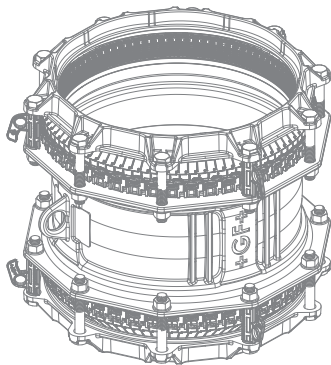
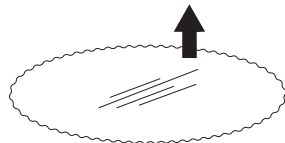
PL Przygotowanie łącznika do instalacji

RUS Подготовка фитинга к установке

02

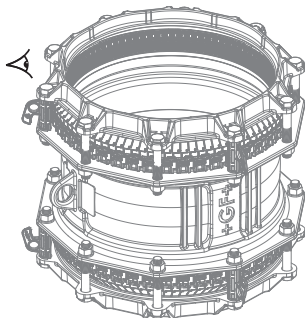


03



04

CHECK IF “FIKSERS” (METAL GRIPPERS) POSITION IS CORRECT.



05



DN425-600



05

D Sicherstellen, dass alle Fikser richtig positioniert sind.

NL Controleer de juiste positie van de “Fiksers”.

F Assurez-vous que les “Fiksers” (les mors métalliques) sont correctement positionnés.

NO Kontrollér at “Fikserne” er i riktig posisjon.

SE Kontrollera om “Fiksers” position är korrekt.

DK Kontrollér om “Fikernes” placering er korrekt.

FIN Tarkista “Fikseri”, että asento on oikein.

PT Ver se a posição dos “Fiksers” é correto.

ES Revise si los “Fiksers” se encuentran en la posición correcta.

IT Controllare gli inserti antisfilo “Fiksers” sono OK.

GR Ελέγξτε αν τα εξαρτήματα αγκύρωσης που διαθέτει ο σύνδεσμος “Fiksers” έχουν αγκυρώσει σωστά πάνω στον αγωγό.

CZ Zkontrolovat správnou polohu fixerů.

HU Ellenőrizze, hogy a “Fikser”-ek megfelelő helyzetben vannak-e.

RO Se verifica dacă poziția elementelor de fixare “Fiksers” este corectă.

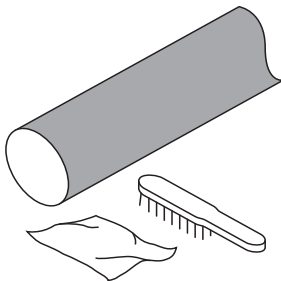
PL Sprawdzić poprawność ułożenia blaszek.

RUS Убедиться в правильности установки “Fiksers” (металлических фиксаторов).



05 08
06 09
07

PIPE PREPARATION



D Zu verbindende Rohre vorbereiten

NL Voorbereiden buis

F Préparez les tubes

NO Forbredelse av rør

SE Rörberedning

DK Klargøring af røret

FIN Putken esivalmistus

PT Preparação do tubo

ES Preparacion de la tuberia

IT Preparazione tubazione

GR Προετοιμασία Αγωγού

CZ Příprava trubky

HU Cső előkészítése

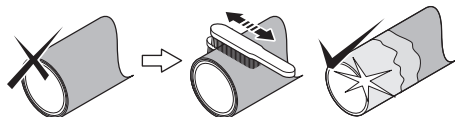
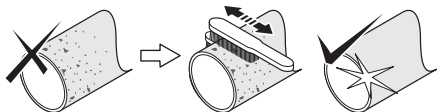
RO Pregătirea conductei

PL Przygotowanie rury

RUS Подготовка труб

05

REMOVE ALL RUST, DIRT, BURRS, DAMAGES AND ALL FINISHING LAYERS FROM THE PIPE. MOUNT ON MEDIUM CARRYING PIPE MATERIAL ONLY.



D Von der drucktragenden Rohroberfläche allen Rost, Grat, Schmutz, Schäden und alle Beschichtungen entfernen.

NL Verwijder alle roest, vuil, bramen, beschadigingen en buislagen. Monteer alleen op de mediumvoerende buis.

F Éliminez la rouille, la saleté, les bourrelets de soudures, les défauts de surface et toutes les couches de finition du tube. Assemblez seulement sur le matériau principal du tube.

NO Fjern all rust, løs overflate samt skader på materialet og overflatebehandling.

SE Avlägsna all rost, smuts, grader och eventuell ytbehandling från røret. Montera endast på mediabärande rörmaterial.

DK Fjern al rust, snavs, spåner, beskadigelser og alle belægninger på røret. Monter kun på selve det mediebærende rør.

FIN Poista kaikki ruoste, lika, taite, vauriot ja kasaumat putkesta. Asenna ainoastaan keskivahvalle putkelle.

PT Remover oxidação, sugeira, rebarbas, e revestimento do tubo.

HU Távolítsd el minden rozsdát, szennyeződést, sorját, sérüléseket és minden fedőréteget a csőről. Csak közvetlenül a közeg szállító csőanyagára helyezze fel az idomot.

ES Retirar toda la suciedad, polvo, daños y etiquetas de la tubería. Montar solamente entre tubos.

IT Rimuovere sporczia, polvere, intagli e gli strati superficiali della tubazione. Il montaggio deve avvenire sullo strato a contatto del fluido trasportato.

GR Καθαρίστε όλα τα οξειδωμένα τμήματα, τις επικαθίσεις, τις παραμορφώσεις και τις υλικές βλάβες της επιφάνειας του αγωγού καθώς και τις επιστρώσεις του αγωγού μέχρι τον αγωγό μεταφοράς του υλικού.

CZ Odstranit všechny nečistoty, rez, ořepky a všechny dodatečné vrstvy z povrchu trubky. Montovat pouze na trubky určené pro transport médií.

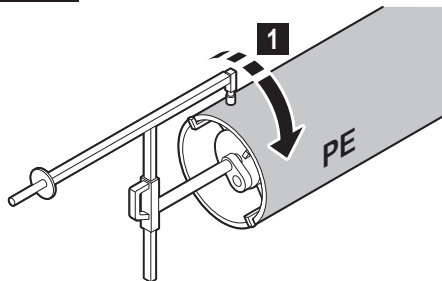
RO Îndepartati praful, crestaturile, murdaria, defectele precum si toate straturile de acoperire de pe teava. Se monteaza doar pe materialul conductei.

PL Usuń wszelkiego rodzaju uszkodzenia, zabrudzenia, zadrapania, rdzę i wierzchnie warstwy na długości rury pokrytej przez łącznik.

RUS Удалить любые загрязнения, ржавчину, задиры и напылы, а так же покрытия с поверхности трубы. Устанавливать только на основной материал трубы.

06

USE AN (BY GF) APPROVED SCRAPING TOOL.



GAS / GAZ

D Für PE-Rohre ist ein GF Schälggerät zu verwenden.

NL Gebruik een door GF goedgekeurde schiller.

F Utilisez un grattoir mécanique approuvé par GF.

NO Bruk skrapeverktøy godkjent av GF.

SE Använd ett (av GF) godkänt skrapverktyg.

DK Brug et (af GF) godkendt skrabeværktøj.

FIN Käytä (GF) hyväksymää karhennus työkalua.

PT Usar uma ferramenta (GF) adequada.

ES Utilizar un rascador circular GF.

IT Utilizzare in raschiatore approvato da GF.

GR Για τις εργασίες καθαρισμού και λείανσης χρησιμοποιείστε το κατάλληλο (από την GF) εργαλείο.

CZ Použit škrabku (schválenou GF).

HU Használjon (GF által jóváhagyott) hántoló szerszámot.

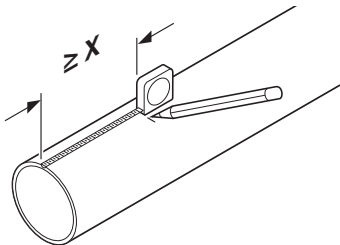
RO Se va utiliza un dispozitiv de raschetat recomandat (de GF).

PL Użyj skrobaka (GF) do przygotowania rury.

RUS Использовать только разрешенный (компанией GF) инструмент для зачистки.

07

CHECK TABLE FOR MINIMUM INSERTION DEPTH (X).



DN	X Min. insertion depth (mm)*
DN425	170
DN450	
DN475	
DN500	
DN550	
DN600	

* For maximum joint gap information; see our technical manual or see our website www.waga.nl



D Aus der Tabelle die Einstecktiefe entnehmen.

NL Zie de tabel voor de minimale insteekdiepte (X).

F Vérifiez sur le tableau la profondeur d'insertion correcte du tube.

NO Sjekk med tabell for korrekt innstikksdybde (X).

SE Kontrollera i tabellen korrekt insticksdjup (X).

DK Kontroller med tabellen for korrekt indstikksdybde (X).

FIN Tarkista taulukosta oikea asennus syvyys.

PT Ver na tabela a profundidade (X) de inserção do tubo no acessório.

ES Ver tabla para la profundidad de inserción mínima.

IT Controllare sulla tabella la profondità di inserimento (X).

GR Συμβουλευτείτε τον πίνακα για την υπόδειξη του κατάλληλου βάθους εισαγωγής (X) του συνδέσμου στον αγωγό.

CZ Zkontrolovat v tabulce správnou hloubku zasunutí (X).

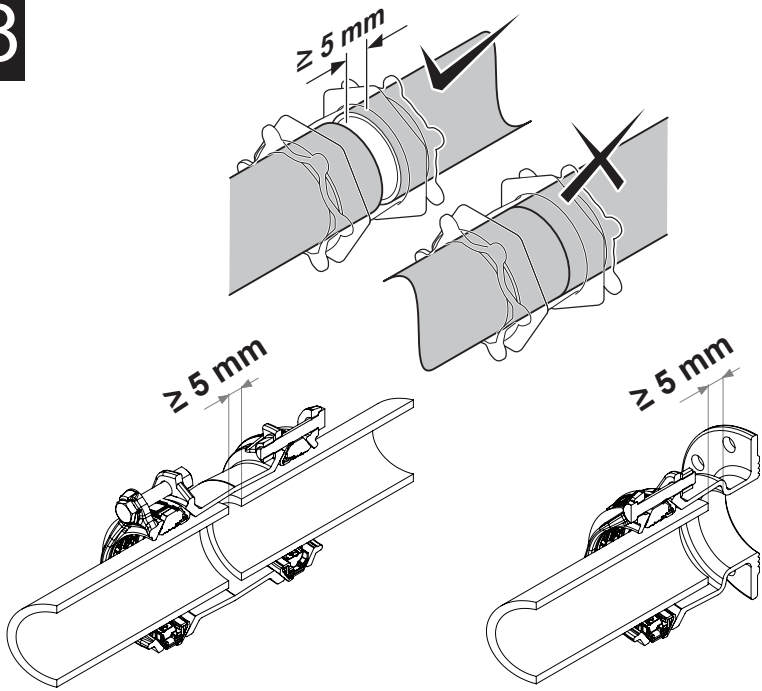
HU Ellenőrizze a táblázatot a megfelelő betolási mélység érdekében (X).

RO Se verifica in tabel adancimea corecta de inserare (X).

PL Korzystając z tabeli określ głębokość nasunięcia łącznika (X).

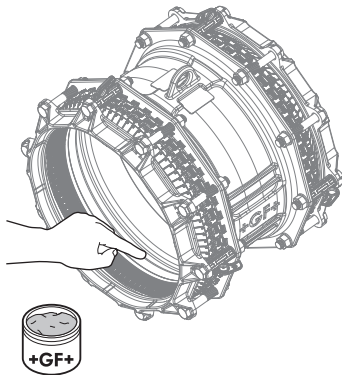
RUS Проверить по таблице значение глубины ввода трубы (X).

08



09

APPLY SUITABLE GREASE



GAS / GAZ

D

Für die Gasanwendung den Dichtungsbereich ausreichend mit Gleitmittel versehen.

NL

Smeer de afdichting in met een geschikt glijmiddel.

F

Lubrifiez le bague de joint avec une graisse appropriée.

NO

Bruk egnet glidemiddel.

SE

Applicera lämpligt smörjmedel.

DK

Påfør egnet glidemiddel.

FIN

Lisää soveltava rasva.

PT

Aplicar lubrificante adequado (nunca de origem mineral).

ES

Aplicar la grasa correspondiente.

IT

Applicare lubrificante opportuno.

GR

Τοποθετήστε κατάλληλη ποσότητα λιπαντικής ουσίας στα μηχανικά μέρη του συνδέσμου.

CZ

Aplikovat vhodné mazivo.

HU

Használnjon megfelelő kenőanyagot.

RO

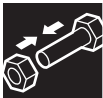
Se aplica lubrifiant.

PL

Nalóż warstwę smaru.

RUS

Использовать только подходящую смазку.



10	13°
11	13°
12	14

INSTALLATION

**EN:**

When manoeuvring the product out of the packaging to the pipe surface, please ensure that the proper lifting procedures are followed. Ensure that local safety and lifting procedures are adopted. All lifting should be done by qualified personnel, with approved equipment.

NL:

Zorg ervoor dat bij het manoeuvreren van het product vanuit de verpakking naar het buisoppervlak, de juiste hijsprocedures in acht worden genomen. U dient de lokale veiligheids- en hijsvoorschriften op te volgen. Het hijsen van producten dient te gebeuren met gekeurde hijsmiddelen en gekwalificeerd personeel.

D:

Bitte stellen Sie eine ordnungsgemäße manuelle Handhabung sicher, wenn das Produkt aus seiner Verpackung entnommen, transportiert und am Rohr angebracht wird. Ist der Einsatz mechanischer Hebezeuge erforderlich, so muss gewährleistet werden, dass sichere Arbeitsverfahren angewendet werden, geprüfte und anerkannte Hebezeuge verwendet werden und von qualifiziertem Personal durchgeführt werden.

DU Montage

NL Montage

F Installation

NO Montering

SE Installation

DK Installation

FIN Asennus

PT Instalação

ES Instalación

IT Installazione

GR Installazione

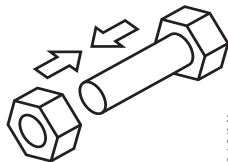
CZ Instalace

HU Felhelyezés

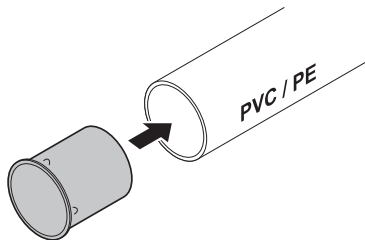
RO Instalarea

PL Montaż

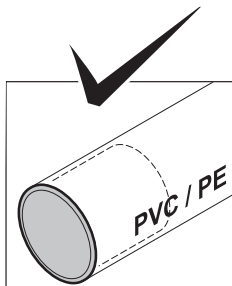
RUS Установка



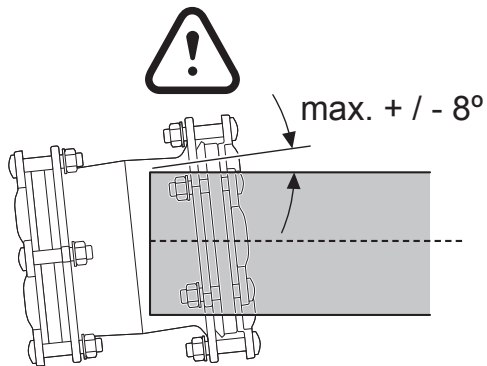
10



[approved by Georg Fischer Waga N.V.]

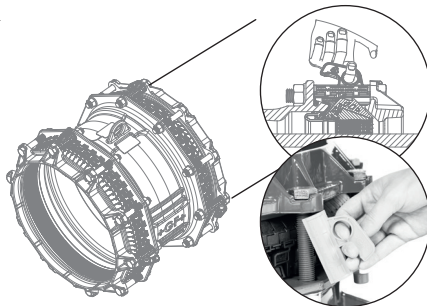
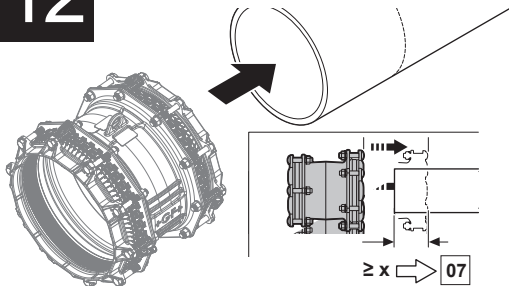


11



12

SLIDE THE MULTI/JOINT® 3000 PLUS ONTO PIPE END AND REMOVE TRANSPORT CLIP!



D Den MULTI/JOINT® 3000 Plus auf das Rohrende schieben und den Transportclip entfernen!

NL Schuif de MULTI/JOINT® 3000 Plus op het buiseinde en verwijder de transportclips!

F Faites glisser le MULTI/JOINT® 3000 Plus sur l'extrémité du tuyau et retirez le clip de transport!

NO Skli MULTI/JOINT® 3000 Plus muffe innpå rørende og deretter fjern transportpinnen.

SE Skjut MULTI/JOINT® 3000 Plus kopplingen på röret och ta bort transportsäkringarna (clip)!

DK Skub MULTI/JOINT® 3000 Plus på røret og fjern transportbeslaget!

FIN Liu'uta MULTI/JOINT® 3000 Plus putken päälle ja poista kuljetus klipsi!

PT Deslize o MULTI/JOINT® 3000 Plus na extremidade do tubo e remover o clipe de transporte!

ES Deslice el MULTI/JOINT® 3000 Plus sobre el extremo del tubo y retire el clip de transporte!

IT Inserire MULTI/JOINT® 3000 Plus sul tubo e successivamente rimuovere i fermi per il trasporto!

GR Εισαγάγετε το multi/joint® 3000 plus στο ακρό του αγωγού και αφαιρέστε το κομπιωμα μεταφορας!

CZ Nasunout tvarovku MULTI/JOINT® 3000 Plus na konec trubky a teprve potom odstranit oranžové vymešovaci díly!

HU Csúsztassa a MULTI/JOINT® 3000 Plus kötőidomot a csővégre, és távolítsa el a szállítási rögzítőelemet!

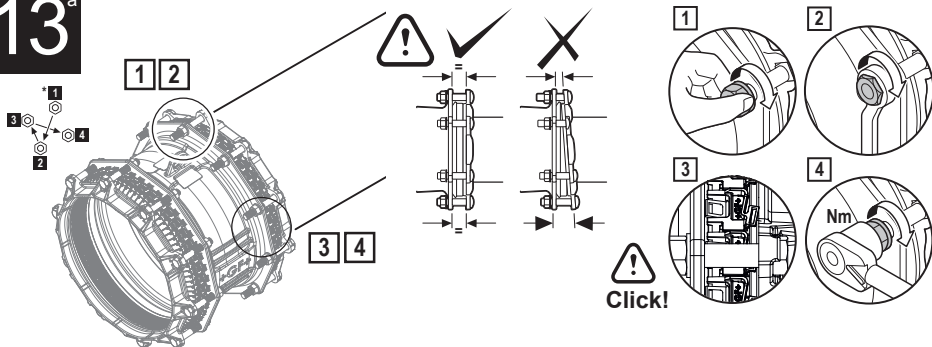
RO Introduceți piesa MULTI/JOINT® 3000 Plus pe capatul conductei și înlăturați siguranta pentru transport!

PL Nasuń łącznik MULTI/JOINT® 3000 Plus na rurę a następnie zdejmij zabezpieczenie transportowe!

RUS Установите MULTI/JOINT® 3000 Plus на конец трубы и удалите транспортировочный хомут!

13^a

TIGHTEN THE BOLTS WITH THE CORRECT TORQUE.



D

Der Tabelle das richtige Schraubendrehmoment entnehmen.

NL

Zie de tabel voor het juiste aandraaimoment.

F

Vérifiez dans les tableaux le couple de serrage à respecter.

NO

Mutrene strammes i kryss, da man skal holde samme avstand mellom koblingshus og trykkflens(gland). Etterstram med en momentnøkkel ihht. Momenttabell.

SE

Kontrollera i tabell korrekt åtdragningsmoment.

DK

Det rigtige tilspændingsmoment findes i tabellen.

FIN

Tarkista taulukosta oikea vääntömomentti.

PT

Ver na tabela a força de aperto.

ES

Ver tabla para el par de apriete.

IT

Controllare la tabella per il serraggio.

GR

Συμβουλευτείτε τον πίνακα για την επιλογή της κατάλληλης στρεπτικής ροπής που θα πρέπει να εφαρμοστεί στον σύνδεσμο, κατά την διαδικασία της σύσφιξης του στον αγωγό.

CZ

Zkontrolovat v tabulce správný utahovací moment.

HU

Ellenőrizze a táblázatot a megfelelő nyomaték érdekében.

RO

Se verifica in tabel valoarea momentului de stangere.

PL

Odczytaj z tabeli odpowiedni moment dokręcania śrub.

RUS

Проверить по таблице соответствующий момент затяжки болтов.

13^b**CHECK TABLE FOR CORRECT TORQUE.****restraint****non restraint**

MULTI/JOINT®
3000 Plus
with Fikser



MULTI/JOINT®
3000 Plus
without Fikser



(S)St, CU, DCI, GCI, AC*, GRP*, PVC, PE, PEX, PP-B, PP-H, ABS
(* NO guarantee as quality varies!)

(S)St, CU, DCI, GCI, AC, GRP, PVC, PE, PEX, PP-B, PP-H, ABS

DN	Torque (Nm)	MOP gas (bar)	PFA water (bar)
DN425	140	5	10
DN450			
DN475			
DN500			
DN550			
DN600			

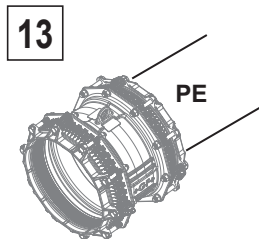
DN	Torque (Nm)	MOP gas (bar)	PFA water (bar)
DN425	140	8	16
DN450			
DN475			
DN500			
DN550			
DN600			

14

≤ 0 °C ONLY ON PE PIPE UNDER FREEZING CONDITIONS, APPLY TORQUE (PRESCRIBED UNDER 13) ONE MORE TIME AFTER 30 MINUTES.



PE



D

Nur für Einsatz auf PE Röhren bei Temperaturen ≤ 0, das unter 13 ermittelte Schraubendrehmoment nach 30 Minuten noch einmal aufbringen.

NL

Alleen bij montage op PE bij temperaturen onder 0, het (onder 13) voorgeschreven draaimoment na 30 minuten nog eenmaal aanbrengen.

F

Répetez l'étape 13 après 30 minutes seulement sur des tubes en PE en temps glacial.





15
16

TESTING



$$P_{\max} \leq 1,5 \times PFA$$

D Dichtheitsprüfung

NL Testen

F Essais

NO Trykktesting

SE Testa

DK Prøvning

FIN Testi

PT Teste

ES Probar

IT Test

GR Έλεγχος/ δοκιμές

CZ Zkouška

HU Tesztelés

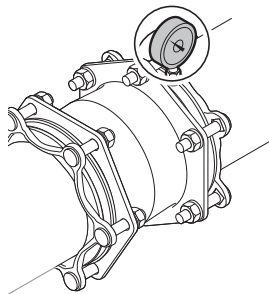
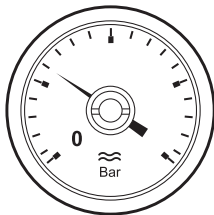
RO Testarea

PL Testowanie

RUS Испытание

15

CONDUCT A PRESSURE TEST.

13^b

Designation	PFA gas (bar)	PFA gas (bar)	PFA gas (bar)	PFA gas (bar)
71	8	8	8	1
90	8	8	8	1
105	8	8	8	1
132	8	8	8	1
155	8	8	8	1
192	8	8	8	1

D Dichtheitsprüfung durchführen.

NL Voer een druktest uit.

F Procédez à un essai de pression.

NO Utfør trykktest på hele installasjonen, med minimum det aktuelle driftstrykk før anlegget dekkes til. Trykktestingen må ikke overstige 1,5 x PFA (max arbeidstrykk) i henhold til tabellen.

SE Utför tryckprovning.

DK Gennemfør en trykprøvning.

FIN Aseta painetesti.

PT Efetuar teste de pressão.

ES Realizar un test de presión.

IT Fare test in pressione.

GR Για τον έλεγχο της στεγανότητας της σύνδεσης πραγματοποιείστε δοκιμή υπό πίεση στον αγωγό για τυχόν διαρροές.

CZ Provést tlakovou zkoušku.

HU Hajtson végre nyomáspróbát.

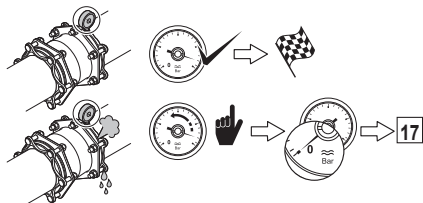
RO Se realizeaza un test de presiune.

PL Przeprowadź próbę ciśnieniową.

RUS Провести опрессовку.

16

IF PRESSURE TEST FAILS: REINSTALL FITTING. TEST OK → INSTALLATION FINISHED.



17-21



01

D

Falls die Dichtheitsprüfung eine Undichtheit aufzeigt, den Montagevorgang wiederholen - nach wiederholter, erfolgreicher Dichtheitsprüfung ist die Montage abgeschlossen.

NL

Druktest negatief → opnieuw installeren. Test OK → installatie gereed.

F

Mauvais résultat d'essai, réinstallez le raccord. Essai réussi, l'installation est terminée.

NO

Trykkprøving negativ → Re-installer kobling. Test OK → installasjon er utført.

SE

Tryckprovning falerar → Ommontera rördelen. Test OK → installation avslutad.

DK

Trykprøvning negativ → Re-installer kobling. Test OK → installationen er udført.

FIN

Paine testi hylätty → asenna uudelleen. Testi OK → asennus suoritettu.

PT

Teste de pressão falhou → Voltar a instalar o acessório → Teste OK → Instalação terminada.

ES

Test de Presion Fallo → Reinstalar el accesorio TEST OK → Instalacion completada

IT

Se test negativo → Reinstallare. Se test positivo → Installazione finita.

GR

Σε περίπτωση που η εγκατάσταση αποτύχει και υπάρχει διαρροή στη σύνδεση → Επανα-εγκαταστήσετε το σύνδεσμο. Σε περίπτωση που η δεν παρατηρηθεί διαρροή στη σύνδεση → η εγκατάσταση του συνδέσμου επί του αγωγού έχει ολοκληρωθεί με επιτυχία.

CZ

Tlaková zkouška není OK → tvarovku znovu namontovat. Tlaková zkouška OK → konec instalace.

HU

Nyomás próba sikertelen → végezze el újra az idom felhelyezését. Próba sikeres → felhelyezés befejezve.

RO

Daca testul de presiune esueaza → Se reinstaleaza fittingul. Daca rezultatul testului este OK → Instalare terminata.

PL

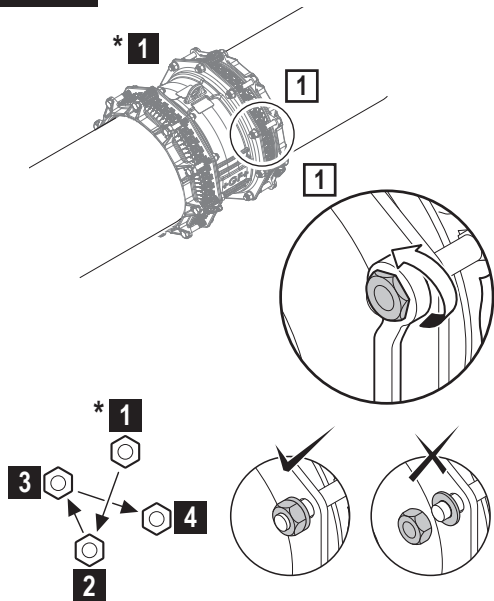
Nieudana próba → Ponowny montaż łącznika. Udana próba → montaż zakończony.

RUS

Опрессовка не пройдена → Установить фитинг снова. Опрессовка пройдена → Установка завершена.

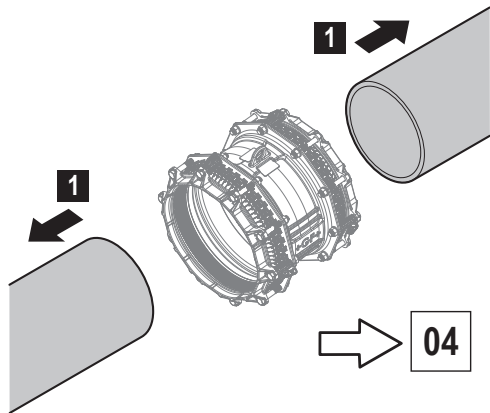
17

DISASSEMBLY



18

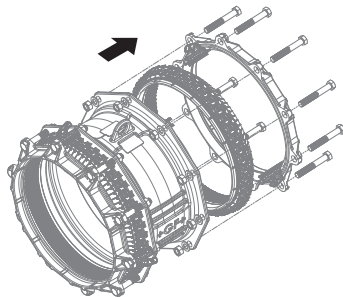
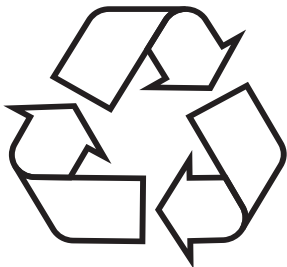
DISASSEMBLY





19
20
21

REUSE



D Wiederverwendung

NL Hergebruik

F Réutilisation

NO Gjenbruk

SE Återanvända

DK Genbrug

FIN Uudelleen käyttö

PT Reutilização

ES Reutilizar

IT Riutilizzo

GR Επαναχρησιμοποίηση

CZ Opětovné použití

HU Újra felhasználás

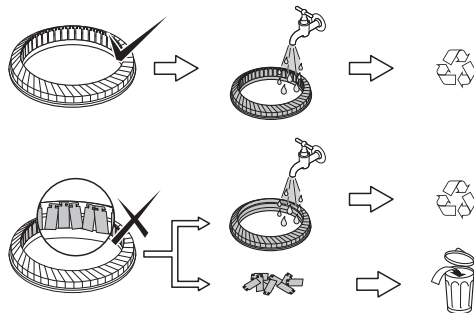
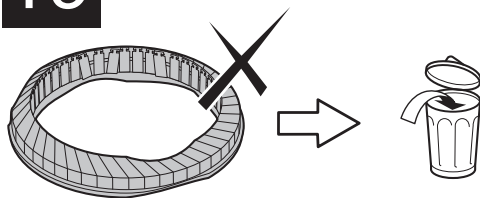
RO Reutilizarea

PL Ponowne użycie

RUS Повторное использование

19

CHECK "FIKSERS" AND GASKET CONDITION.



DN425-600

D Die Dichtung und die Fikser überprüfen, ob diese in unbeschädigten, neuwertigem Zustand sind.

NL Controleer de conditie van de "Fiksers" en de afdichtingsring.

F Vérifiez l'état des "Fiksers" et du joint.

NO Kontrollér "Fikserne" og pakningens stand.

SE Kontrollera "Fiksers" och tätningars kondition.

DK Kontrollér "Fiksernes" og tætningsringens tilstand.

FIN Tarkista "Fikseri" ja tiiviste kunto.

PT Ver o estado dos Fiksers" e do anel.

ES Revisar los "Fiksers" y la Junta.

IT Controllare gli inserti antisfilo "Fiksers" e la guarnizione.

GR Ελέγξτε την κατάσταση στην οποία βρίσκονται τα εξαρτήματα αγκύρωσης που διαθέτει ο σύνδεσμος "Fiksers" και τα παρεμβύσματα.

CZ Zkontrolovat stav fixerů a těsnění.

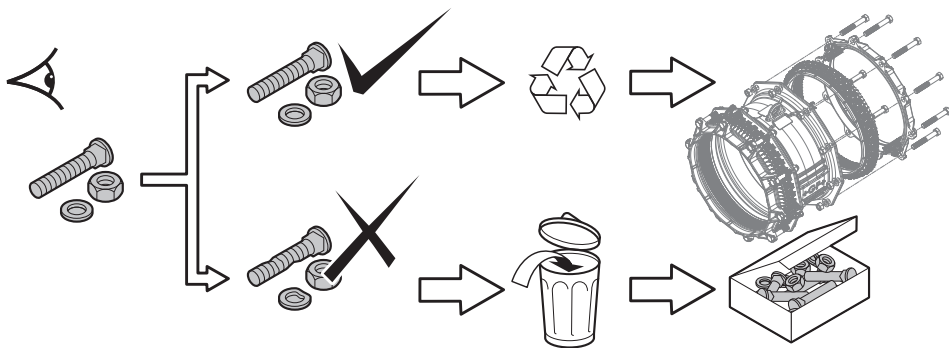
HU Ellenőrizze a "Fikser"-ek és a tömítés állapotát.

RO Se verifica starea elementele de fixare "Fiksers" si a garniturilor.

PL Sprawdzić stan blaszek i uszczelki.

RUS Проверить состояние "Fiksers" (металлических фиксаторов) и резинового уплотнения.

CHECK BOLTS, WASHERS AND NUTS.



D

Die Schrauben, Unterlegscheiben und Muttern auf Gebrauchstauglichkeit überprüfen.

NL

Controleer bouten, moeren en onderlegingen.

F

Vérifiez l'état des vis, des rondelles et des écrous.

NO

Kontroller skiver, mutter og bolter.

SE

Kontrollera bultar, brickor och muttrar.

DK

Kontroller bolte, skiver og møtrikker.

FIN

Tarkista lukko, prikka ja mutteri.

PT

Ver o estado dos parafusos, arruelas e porcas.

ES

Revisar los tornillos, arandelas y tuercas.

IT

Controllare viti, dadi e rondelle.

GR

Ελέγξτε την κατάσταση των βιδών, των παξιμαδιών και των περικοχλίων αν έχουν εφαρμόσει σωστά.

CZ

Zkontrolovat šrouby, podložky a matky.

HU

Ellenőrizze a csavarokat, anyákat és alátéteket.

RO

Se verifica suruburile si piulitele.

PL

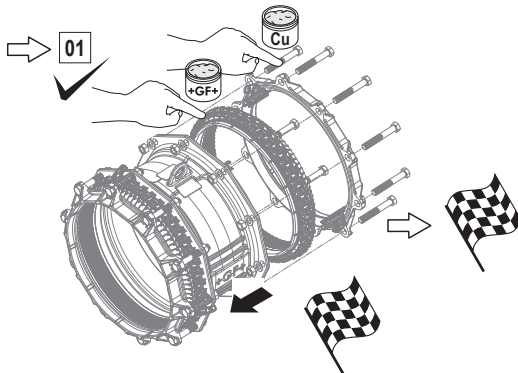
Sprawdź śruby, nakrętki i podkładki.

RUS

Проверить наличие болтов, шайб и гаек.

21

APPLY (COPPER) GREASE ONLY IF THREAD IS DAMAGED.



D Die Schrauben nur mit (Cu-)Fett versehen wenn Gewinde beschädigt ist.

NL Smeer alleen in met koperpasta/geschikt vet indien de draad beschadigd is.

F Appliquez uniquement de la pâte (à base de cuivre) si le filetage est endommagé.

NO Bruk (kobber)fett.

SE Applicera (koppars)fett.

DK Påfør (kobber)fedt.

FIN Lisää (kupari) rasva.

PT Aplicar lubrificante.

ES Aplicar grasa (de cobre).

IT Applicare grasso.

GR Τοποθετήστε επιπρόσθετη λιπαντική ουσία μετά τη σύσφιξη στα μηχανικά μέρη του συνδέσμου.

CZ Použít měděné mazivo.

HU Használjon rézpasztát.

RO Se lubrifiază cu pasta (de cupru).

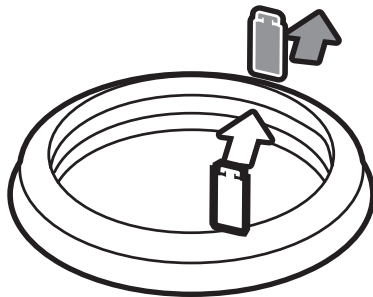
PL Nałożyć na śruby warstwę smaru.

RUS Нанести медную смазку.



22 25
23 26
24

INSTALLATION/REMOVAL OF “FIKSERS”



D Montage/Demontage der Fikser

NL Fiksers monteren/verwijderen

F Mise en place / Dépose des “Fiksers”

NO Montering/fjerning av “Fiksere”

SE Installation/borttagande av “Fiksers”

DK Installation/demontering af fiksert

FIN “Fikserien” asennus / poisto

PT Instalação/Retirar los Fikser

ES Instalación/Retirar los Fikser

IT Installazione/rimozione “Fiksers”

GR Εγκατάσταση/απομάκρυνση των εξαρτημάτων αγκύρωσης “Fiksers”

CZ Instalace/odstranění fixerů

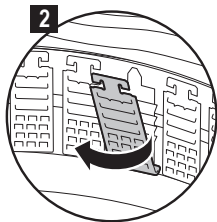
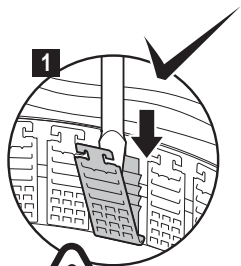
HU “Fikser”-ek behelyezése/eltávolítása

RO Intalarea/Indepartarea elementelor de fixare “Fiksers”

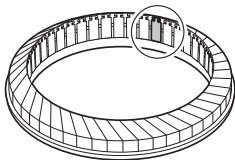
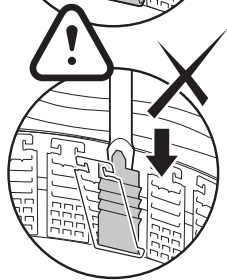
PL Montaż/demontaż blaszek “Fiksers”

RUS Установка/снятие фиксаторов

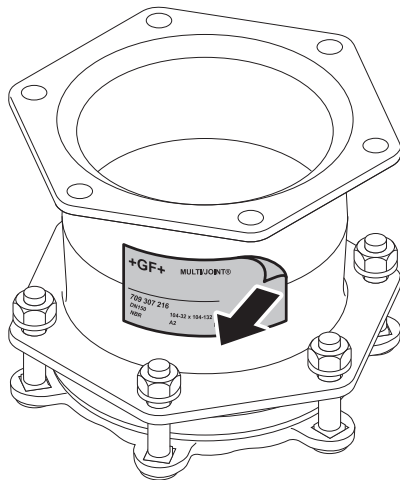
22



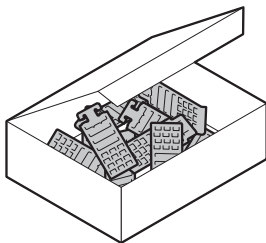
DN425-600



23



CHECK TABLE FOR CORRECT NUMBER OF "FIKSERS" PER DN.



	mm
DN50	46-71
DN65	69-90
DN80	84-105
DN100	104-132
DN125	132-155
DN150	154-192
the maximum torque -	

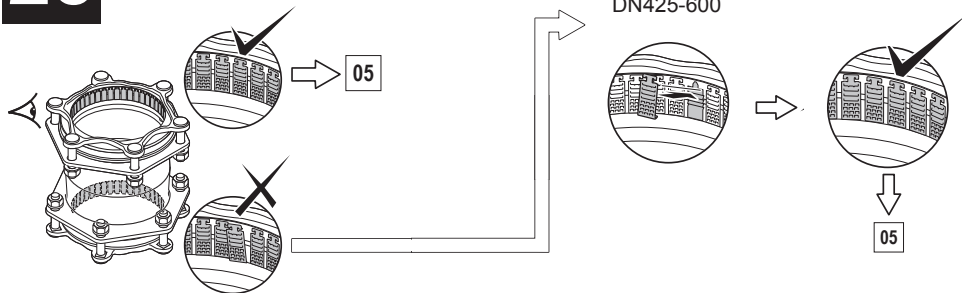
DN	Uni/Fikser
DN425	84
DN450	88
DN475	93
DN500	97
DN550	105
DN600	115

- D** Die Anzahl (laut Tabelle) der Fikser überprüfen.
- NL** Zie de tabel voor juiste aantal "Fiksers" per DN.
- F** Vérifiez dans le tableau le nombre exact de "Fiksers" à installer par DN.
- NO** Sjekk tabell vedrørende antall "Fiksere" mot DN.
- SE** Kontrollera i tabellen för korrekt antal "Fiksers" per DN.
- DK** Kontroller det korrekte antal "Fiksers" pr. DN med tabellen.
- FIN** Tarkista taulukosta oikea "Fikserien" lukumäärä per DN.
- PT** Ver na tabela o numero de "Fiksers" para cada diâmetro.

- ES** Ver Tabla para instalar el numero apropiado de Fiksers por DN.
- IT** Controllare in tabella il numero di "Fiksers" per DN.
- GR** Ελέγξτε από τον πίνακα αν ο σύνδεσμος διαθέτει τον κατάλληλο αριθμό εξαρτημάτων αγκύρωσης "Fiksers" ανάλογα με τη διάμετρό του (DN).
- CZ** V tabulce zkontrolovat správný počet fixerů v závislosti na DN.
- HU** Ellenőrizze a táblázatot a megfelelő számú "Fikser" per DN érdekében.
- RO** Se verifica in tabel numarul recomandat de elemente de fixare "Fiksers" pentru un anumit DN
- PL** Odczytaj z tabeli liczbę blaszek przypadających na daną wartość DN.
- RUS** Проверить по таблице количество фиксаторов для данного DN.

25

CHECK IF “FIKSERS” (METAL GRIPPERS) POSITION IS CORRECT.



D Sicherstellen, dass alle Fikser richtig positioniert sind.

NL Controleer de juiste positie van de “Fiksers”.

F Assurez-vous que les “Fiksers” (les mors métalliques) sont correctement positionnés.

NO Kontrollere at “Fikserne” er i riktig posisjon.

SE Kontrollera om “Fiksers” position är korrekt.

DK Kontrollere om “Fikernes” placering er korrekt.

FIN Tarkista “Fikseri”, että asento on oikein.

PT Ver se a posição dos “Fiksers” é correcta.

ES Revise si los “Fiksers” se encuentran en la posición correcta.

IT Controllare gli inserti antisfilo “Fiksers” sono OK.

GR Ελέγξτε αν τα εξαρτήματα αγκύρωσης που διαθέτει ο σύνδεσμος “Fiksers” έχουν αγκυρώσει σωστά πάνω στον αγωγό.

CZ Zkontrolovat správnou polohu fixerů.

HU Ellenőrizze, hogy a “Fikser”-ek megfelelő helyzetben vannak-e.

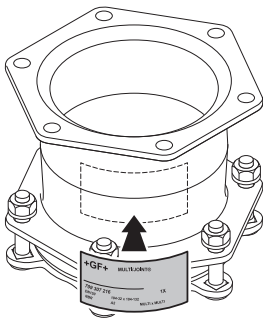
RO Se verifica dacă poziția elementelor de fixare “Fiksers” este corectă.

PL Sprawdź poprawność ułożenia blaszek.

RUS Убедиться в правильности установки “Fiksers” (металлических фиксаторов).

26

ATTACH NEW STICKER.



D Neues Etikett am Fittingskörper anbringen.

NL Plaats een nieuwe sticker.

F Collez la nouvelle étiquette.

NO Monter nytt klistremerke.

SE Sätt på ny sticker.

DK Påsæt ny etiket.

FIN Attach new sticker.

PT Colocar etiqueta nova.

ES Adjuntar una nueva pegatina.

IT Attaccare.

GR Επικολήστε καινούριο αυτοκόλλητο σήμανσης στον αγωγό μετά τη τοποθέτηση.

CZ Nalepit nový štítek.

HU Ragasszon fel új címkét.

RO Se lipeste o eticheta noua.

PL Przylep nową naklejkę.

RUS Нанести новую наклейку.



Georg Fischer Waga N.V.
Lange Veenteweg 19, 8161 PA, Netherlands
P.O. box 290, 8160 AG Epe, Netherlands
T +31 (0) 578 678 378 / F +31 (0) 578 620 848
waga.ps@georgfischer.com
www.waga.nl / www.multijoint.nl

+GF+

Instructions in English, Dutch and German prevail.
Other languages informative only!

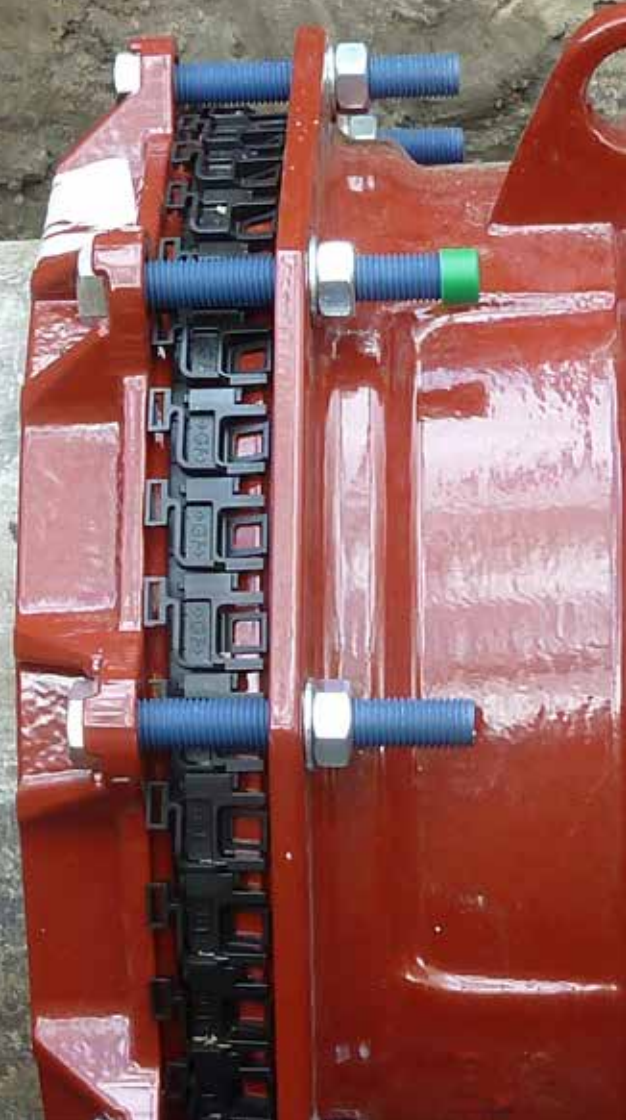
The connection for all pipe diameters
Restraint - non restraint
DN50 - DN600

MULTI/JOINT[®] 3000 Plus



MULTI/JOINT® 3000 Plus

In your daily work you may encounter pipe systems of various materials in the ground. You will need to connect these with new pipe materials and preferably have a restraint joint. Well known jointing methods, such as collars, flanging, welding and the use of thrust blocks can be very time consuming. Would you prefer to work fast and reduce costs? The reliable MULTI/JOINT® 3000 Plus system is your answer! Our wide range fittings allow you to quickly make a restraint connection between all pipe materials, without special tools!



Wide range restraint fittings up to DN600

Unique sealing system

The MULTI/JOINT® 3000 Plus system comprises wide range fittings, flange adaptors, reduction pieces, bends, duck foot bends and end caps in the ranges DN50 - DN600. Thanks to the unique wide range sealing system all fittings can be made restraint as long as the nominal diameters are the same. All you need to know is the outside diameter of the pipe, the medium and the working pressure.

Proven quality

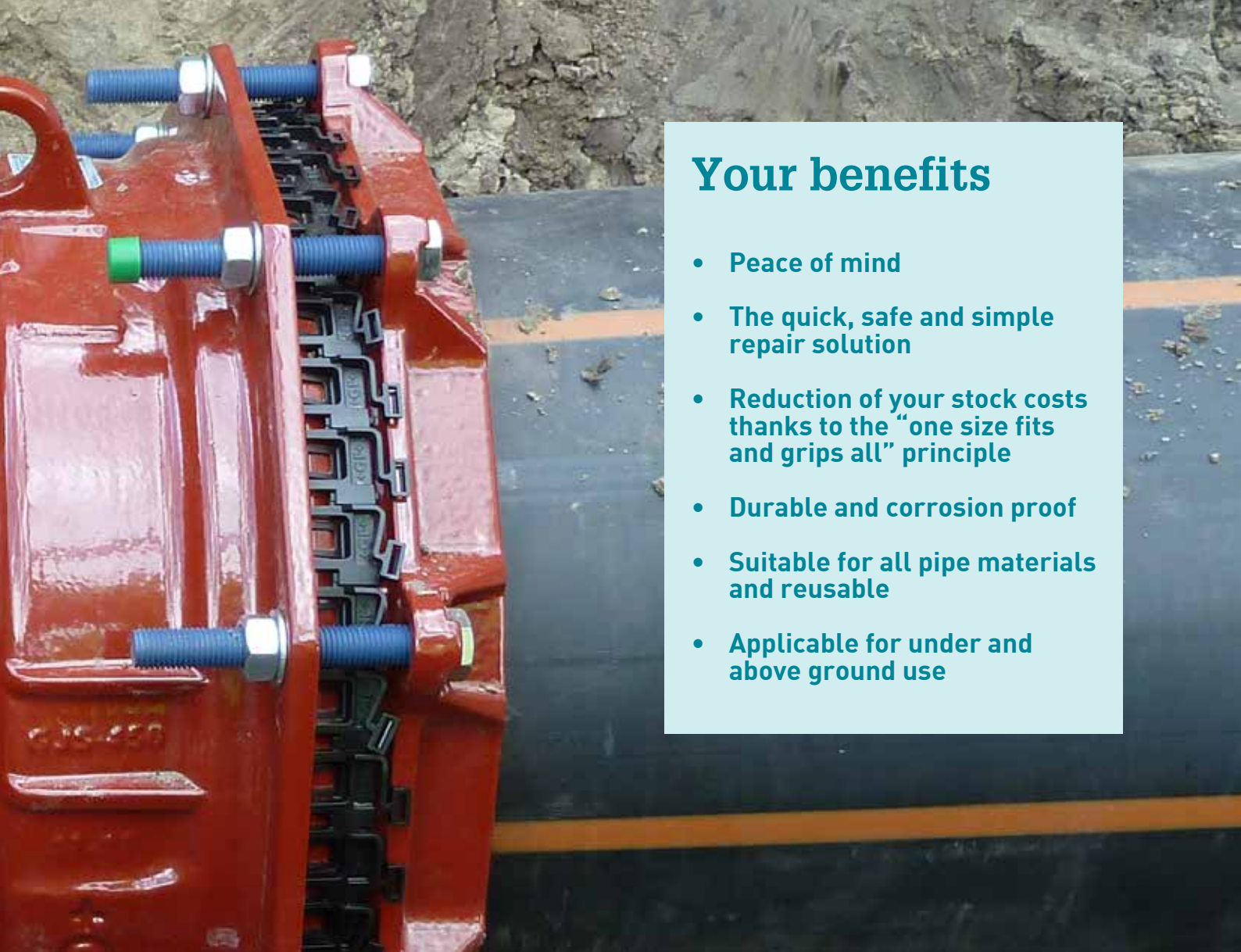
The MULTI/JOINT® 3000 Plus system has a range up to 43 mm and connects pipes from 46 - 637 mm. The restraint fittings are suitable for applications in water up to 16 bar and in gas up to 8 bar. The MULTI/JOINT® system has earned its reputation for quality on the international market over the past 25 years.

Save time and stock

The MULTI/JOINT® 3000 Plus fittings can basically be installed under all conditions and are easy to install. There is no need for special tools which saves you a lot of time during installation. Thanks to the "one size fits and grips all" principle you can also save on your stock costs.

Fields of application

- Water transport
- Water distribution
- Gas distribution
- Waste water
- Maintenance and repair
- Industrial applications



Your benefits

- Peace of mind
- The quick, safe and simple repair solution
- Reduction of your stock costs thanks to the “one size fits and grips all” principle
- Durable and corrosion proof
- Suitable for all pipe materials and reusable
- Applicable for under and above ground use

MULTI/JOINT® 3000 Plus because:

- the MULTI/JOINT® 3000 Plus fittings have **easily accessible misaligned bolts**. Installers can easily assess the correctness of their own installation in the trench
- the MULTI/JOINT® 3000 Plus fittings have **an angularity of $\pm 8^\circ$ per socket end**; for a coupling this means a total of maximum 16° angularity
- **the technical life expectancy** of all MULTI/JOINT® 3000 Plus products **is 50 years**
- the MULTI/JOINT® 3000 Plus has been **a proven quality connection for more than 25 years**
- the MULTI/JOINT® 3000 Plus has **an internationally proven track record**
- To work clean, safe and durable all MULTI/JOINT® 3000 Plus fittings **come with a hygiene protection** to prevent them from being contaminated or damaged

Unique sealing system, a reliable connection

When the quality standard is high, you need a reliable connection. The MULTI/JOINT® 3000 Plus system meets the demands and is suitable for applications in water and gas. The uniqueness of the system lies in the sealing which consists of a flexible ring (Uni/Fleks ring or Uni/Fiks ring) which consists of plastic segments and a rubber sealing ring (EPDM or NBR). The Uni/Fiks version is supplied with metal grippers which make the MULTI/JOINT® 3000 Plus restraint on all types of pipe materials.



Uni/Fiks ring

Varioseal:

rubber gasket
(EPDM or NBR)

Body:

ductile cast iron GGG45 EN-GJS-450-10
with Resicoat® epoxy powder coating
type RT 9000 R4

Nuts:

stainless steel A2 (AISI 304)
galvanised and passivated
or stainless steel A4 (AISI 316)
galvanised and passivated

Bolts:

stainless steel A2 (AISI 304) PTFE coated
or stainless steel A4 (AISI 316) PTFE coated





Easy installation

Uni/Fleks ring

The Uni/Fleks ring is a combination of a plastic ring, consisting of plastic segments, with a thin rubber sealing (Varioseal). This rubber sealing (available both in EPDM and NBR) is a reliable solution for both water and gas applications. The Uni/Fleks ring is non restraint.

Uni/Fiks ring

When metal grippers (Uni/Fiksers) are placed in the Uni/Fleks ring, the sealing system is restraint. The Uni/Fiks ring with the Uni/Fiksers makes a restraint connection up to an impressive 16 bar for water and 8 bar for gas, both on rigid and plastic pipes.

Progressive sealing and gripping mechanism

The plastic segments in the ring sizes DN50 – DN125 consist of one part, made of POM. Furthermore the design of the ring enables large range coverage in outside diameters. The plastic segments in the ring sizes DN150 – DN600 consist of two parts; the wedge and the topple. The wedge is made of POM and is in contact with the pipe material. The topple, made of polyamide, ensures the integrity of the ring. This combination results in a progressive sealing and gripping mechanism. In the ring sizes DN425 – DN600 a clip has been added to fixate the ring in the body of the fitting ensuring easy installation with no interference.

Uni/Fikser

The Uni/Fiksers ensure optimal restraint both on rigid pipe materials and on plastic pipes, without compromise.

Easy installation and reuse

The relatively long body of the MULTI/JOINT® 3000 Plus fittings offers a large insertion depth. This large installation length makes the installation easy, as you can use this length as desired. Moreover, the fittings are supplied with a clear installation manual.



Clamp ring:

ductile cast iron GGG45 EN-GJS-450-10
with Resicoat® epoxy powder coating
type RT 9000 R4

Uni/Fikser:

stainless steel A4 (AISI 316)

Hygiene protection

Ensures the fitting stays
clean from production
to point of use















(cap in the picture:
DN50 - DN400)

Washer:

stainless steel A2 (AISI 304)
or stainless steel A4 (AISI 316)

One complete system

Model		Type	
	Coupling	restraint	3007
		non restraint	3000
	Reduced coupling	restraint	3107
		non restraint	3100
	Flange adaptor	restraint	3057
		non restraint	3050
	Reduced flange adaptor	restraint	3157
		non restraint	3150
	End cap blind	restraint	3207 blind
		non restraint	3200 blind
	End cap 3/4" - 2" threaded	restraint	3207 3/4" - 2" threaded
		non restraint	3200 3/4" - 2" threaded
	PE adaptor	restraint	3067
	Spigot end	restraint	3087
		non restraint	3080
	Reduced spigot end	restraint	3187
		non restraint	3180
	Duckfoot	restraint	3457
		non restraint	3450
	Reduced duckfoot	restraint	3557
		non restraint	3550
	Bend	restraint	3407
		non restraint	3400

Since the fittings can easily be de-installed, the system is also suitable for temporary installation after which multiple reuse is possible.

Long life expectancy

The ductile cast iron MULTI/JOINT® 3000 Plus products are supplied with a corrosion proof Resicoat® epoxy powder coating. This combination extends the life expectancy significantly.

The fittings are maintenance-free and have a designed life expectancy of 50 years. This is a clear advantage; after all, you want to be able to guarantee a constant supply of water and gas to the end user and prevent renewed maintenance and repair.



DN (mm)


range (mm)

DN50	46	-	71
DN65	63	-	90
DN80	84	-	105
DN100	104	-	132
DN125	132	-	155
DN150	154	-	192
DN200	192	-	232
DN225	230	-	268
DN250	267	-	310
DN300	315	-	356
DN350	352	-	393
DN400	392	-	433
DN425	432	-	464
DN450	450	-	482
DN475	481	-	513
DN500	500	-	532
DN550	548	-	580
DN600	605	-	637

+ Durable and reliable connections for a quick, safe and simple repair solution

Technical specifications

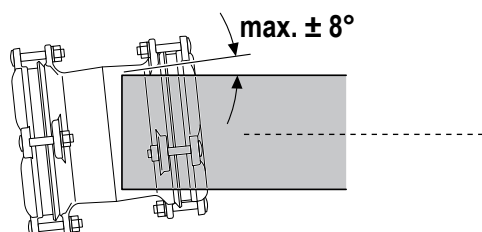
Specifications

Body	Ductile cast iron GGG45 in accordance with EN-GJS-450-10.
Clamp ring	Ductile cast iron GGG45 in accordance with EN-GJS-450-10.
Coating	 Resicoat® epoxy powder coating, type RT 9000 R4, meets the requirements of for example ACS, Belgaqua, KTW, NSF Standard 61, WRAS, KIWA. Colour red (RAL 3003). Minimum layer thickness 250 micron, in accordance with the GSK-register.
Varioseal rubber gasket	Potable water: EPDM in accordance with EN 681-1. Water and gas: NBR in accordance with EN 682.
Uni/Fiks and Uni/Fleks ring	POM (polyoxymethylene) and/or glass fiber filled Polyamide.
Uni/Fiksers	Stainless steel A4 (AISI 316).
Bolts and nuts	Stainless steel A2 (AISI 304) or stainless steel A4 (AISI 316). Bolts are PTFE coated, nuts are galvanised and passivated to prevent galling.
Washers	Stainless steel A2 (AISI 304) or stainless steel A4 (AISI 316).
Flanges	Drilling pattern PN10 or PN16 in accordance with EN 1092-2 or patterns in accordance with AWWA and Table D. DN450 - DN600 PN10 / PN16 drilled.
Working temperature	-5°C to +50°C.
Working pressure (PFA)*	Non restraint: up to PFA 25 bar water and up to 8 bar gas. Restraint: up to PFA 16 bar water and up to 8 bar gas. * For details see user manual or contact your supplier.
Certificates	ACS, Belgaqua, WRc, ÖVGW, SVGW, DVGW, WRAS, NSF and KIWA. EN 14525: ÖVGW, SVGW and KIWA.

Sealing system

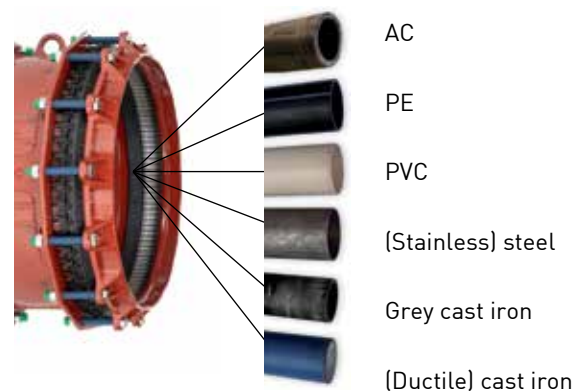


Nominal angularity*



* based on the middle of the range

Suitable for all pipe materials



Insert stiffener

In case of connecting PE or PVC pipes, install an insert stiffener.



Contact information

P.O. Box 290
8160 AG EPE
The Netherlands
T +31 578 678378
F +31 578 620848
waga.ps@georgfischer.com
www.waga.nl

The technical data are not binding and not expressly warranted characteristics of the goods. They are subject to change. Please consult our General Conditions of Supply.



WA2077/1116/EN

© Georg Fischer Waga N.V.

2016, printed in the Netherlands