

Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
R 50044289

Blatt *Page*
0001

Ihr Zeichen *Client Reference*
EAG

Unser Zeichen *Our Reference*
01-YC- 17700601 002

Ausstellungsdatum
24.06.2004

Date of Issue
(day/mo/yr)

Genehmigungsinhaber *License Holder*

Grainger Tubolt Limited
T/A Interclamp
Llanion Works, Llanion Park
Pembroke Dock
Pembrokeshire
SA72 6DY
United Kingdom

Prüfzeichen *Test Mark*

Geprüft nach *Tested acc. to*
2 PfG 1230/06.03



Zertifiziertes Produkt *(Geräteidentifikation)*
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

Rohrverbinder (Interclamp Handrail Fittings)

Type Designation	: 101	104	116	119	125	128	8
	129	130	131	132	135	143	6
	144	145	146	147	148	149	6
	150	152	153	154	155	156	6
	158	161	165	167	168	169	6
	173	176					2

Sizes : B34 C42 D48 E60
Tubes D mm : 33.7 42.4 48.3 60.3
Tube Thickness mm : 3.2 3.2 3.2 3.6
Clamp screw : 1/4" 3/8" 3/8" 3/8"

Range of application: e.g. handrails, fences, milking parlours, railway guardrailing, garment racking, market stalls. The fittings are not suitable for use in scaffolding.

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ANLAGE (Appendix): 1.1

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde.
Das Produkt entspricht den o.g. Anforderungen, die Herstellung wird überwacht.
This certificate is based on our Testing and Certification Regulation. The product fulfills above-mentioned-requirements, the production is subject to surveillance.

TÜV Rheinland Product Safety GmbH, Am Grauen Stein, D-51105 Köln

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Zertifizierungsstelle

F. Nispel
Dipl.-Ing. F. Nispel



Constructional Data Form (Page 2 of 2)

Table of max. load

Type	Size	Max. bending load (kNm)	Max. slip load		Max. tensile load	
			1 cs-g-p (kN)	2 cs-g-p (kN)	1 cs-g-p (kN)	2 cs-g-p (kN)
101	B34,C42,D48	0,6 / 1,1 / 1,4	7 / 8 / 8		7 / 8 / 8	
104	B34,C42,D48	0,7 / 1,1 / 1,4			7 / 8 / 8	
116	B34,C42,D48	0,6 / 1,0 / 1,4	8 / 8 / 8		7 / 8 / 8	
119	B34,C42,D48	0,6 / 1,0 / 1,4	7 / 8 / 8		7 / 8 / 8	
125	B34,C42,D48	0,6 / 1,0 / 1,1			7 / 8 / 8	
128	B34,C42,D48	0,6 / 1,1 / 1,1			7 / 8 / 8	
129	B34,C42,D48	0,6 / 0,9 / 1,5	7 / 8 / 8		6 / 7 / 7	
130	B34,C42,D48	0,7 / 1,0 / 1,2	4 / 5 / 5		7 / 8 / 8	
131	B34,C42,D48	1,2 / 1,5 / 2,0			5 / 5 / 6	
132	B34,C42,D48,E60	1,0 / 1,9 / 2,3 / 2,8				10 / 10 / 10 / 9
135	B34,C42,D48	0,8 / 1,0 / 1,85	8 / 8 / 9		7 / 8 / 8	
143	B34,C42,D48		7 / 8 / 8			
144	C42,D48	1,2 / 1,4				10 / 10
145	B34,C42,D48	0,8 / 1,0 / 1,2				10 / 10 / 9
146	B34,C42,D48	0,9 / 1,8 / 2,0				10 / 10 / 9
147	B34,C42,D48	0,6 / 1,1 / 1,5	7 / 8 / 8			
148	B34,C42,D48			8 / 9 / 9	7 / 7 / 7	
149	B34,C42,D48	0,6 / 0,9 / 1,2			7 / 8 / 8	
150	B34,C42,D48				2 / 2,5 / 2,5	
152	D48	1,5				9
153	D48	1,4	8		7	
154	D48	1,4			7	
155	D48	1,4			7	
156	D48	1,3	7		7	
158	B34,C42,D48	0,8 / 1,2 / 1,5		8 / 9 / 9	7 / 8 / 8	
161	B34,C42,D48	0,6 / 1,0 / 1,2	7 / 8 / 8			
165	B34,C42,D48	0,7 / 1,2 / 1,5	8 / 8 / 8		7 / 8 / 8	
167	B34,C42,D48		8 / 9 / 9		7 / 8 / 8	
168	B34,C42,D48		8 / 9 / 9		7 / 8 / 8	
169	B34,C42,D48				7 / 8 / 8	
173	B34,C42,D48		8 / 9 / 9		7 / 8 / 8	
176	B34,C42,D48	0,6 / 1,1 / 1,5	7 / 8 / 8		7 / 8 / 8	

Cologne, Yang Chuan 2004.06.16

TÜV Rheinland Product Safety GmbH Am Grauen Stein D-51105 Köln	Zertifikat Nr. <i>Certificate No.</i> R 50044289 0001	Unser Zeichen <i>Our Reference</i> 01-YC- 17700601 002	Anlage <i>Appendix</i> 1.1
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Constructional Data Form (Page 1 of 2)

1.1 License Holder: <small>(full name and address)</small>	Grainger Tubolt Limited T/A Interclamp Llanion Works, Llanion Park, Pembroke Dock, Pembrokeshire, SA72 6DY United Kingdom
1.2 Factory: <small>(full name and address)</small>	
1.3 Product Identification:	Interclamp Handrail Fittings
1.4 Type Designation:	101; 104; 116; 119; 125; 128; 129; 130; 131; 132; 135; 143; 144; 145; 146; 147; 148; 149; 150; 152; 153; 154; 155; 156; 158; 161; 165; 167; 168; 169; 173; 176
2.1 Material	Material of handrail fittings: Fittings body: Malleable iron KT350-10 (GB/T 9440-1988) Clamp screw: Stainless steel 2Cr13 (GB/T 1220-1992)
2.2 Starting torque of screw	40 Nm
2.3 Scope/requirements	The permissible loads are based on tests with steel pipes with outer diameter of 33.7 mm to 60.3 mm with wall thickness of 3.2 mm to 3.6 mm
2.4 Safety factor	2.0
2.5 Safety notes	<p>The permissible working load of the set screws, fixings and building materials must be considered when selecting the type of mounting for the flanges of guard railings.</p> <p>Only on the condition that the fittings with bottom and wall flanges are mounted on a plane underground the allowed bending moments applies.</p> <p>Due to dynamic load influence screwed connections may loosen. The tight fit of all screw connections must be checked at regular intervals and tightened up if necessary. The interval depends on the respective use and must be laid down by the operator.</p>
2.6 Tensile and slip loads notes	The permissible tensile and slip loads are differentiated between pipes with one and/or two clamp screws gripping on the pipe.
2.7 Abbreviations	The following abbreviations are used in the table: 1 clamp screw, gripping of the pipe: 1 cs-g-p 2 clamp screw, gripping of the pipe: 2 cs-g-p

Cologne. *Yang Anson* 2007.06.16

TÜV Rheinland Product Safety GmbH