



Declaration of Performance

No. 004

1. **Product type:** Type AF
2. **Type, batch or serial no.:** AF12/AF16/AF20/AF24
Batch no. See product packaging
3. **Intended use:** A High Slip Resistance clamp used to clamp together steel components.
4. **Manufacturer:** Lindapter International
Lindsay House,
Brackenbeck Road
Bradford,
West Yorkshire
BD7 2NF
5. **Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2):** NA
6. **System of assessment and Verification of constancy of performance:** System 2+
7. **In case of the declaration of performance concerning a construction product covered by a harmonised standard:** NA
8. **In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued, technical assessment body:** Technicky a zkusebni ustav stavebni Praha, s.p.
Prosecka 811/76a
190 00 Prague
Czech Republic
issued: ETA 20/0918
on the basis of: EAD No. 330080-00-0602 High Slip Resistance clamp (HSR) and Girder Clamp assembly
performed: Element Materials Technology Rotterdam B.V.,
Zekeringstraat 33, 1014 BV, Amsterdam, Netherlands has performed the initial inspection of the factory and the factory production control and performs the continuous surveillance, assessment and approval of the factory production control
Notified Body No. 2812
under system: 2+
and issued the Factory Production Control certificate number: 2812-CPR-1140


9. Declared performance

Essential Characteristic	Performance	Harmonised technical specification																																																																																																																																
Mechanical Resistance	<table border="1" data-bbox="451 331 1182 763"> <thead> <tr> <th rowspan="2">Product</th> <th rowspan="2">Bolt property class</th> <th colspan="2">Slip resistance F_s, R_k (4 bolts) (kN)</th> <th rowspan="2">Tension resistance F_t, R_k (4 bolts) (kN)</th> </tr> <tr> <th>Painted*</th> <th>Galvanised</th> </tr> </thead> <tbody> <tr> <td>AF12</td> <td>8.8</td> <td>12</td> <td>14</td> <td>136</td> </tr> <tr> <td>AF16</td> <td>8.8</td> <td>25</td> <td>30</td> <td>214</td> </tr> <tr> <td>AF20</td> <td>8.8</td> <td>50</td> <td>60</td> <td>460</td> </tr> <tr> <td>AF24</td> <td>8.8</td> <td>80</td> <td>96</td> <td>700</td> </tr> <tr> <td colspan="5"> </td> </tr> <tr> <td>AF12</td> <td>10.9</td> <td>16</td> <td>20</td> <td>160</td> </tr> <tr> <td>AF16</td> <td>10.9</td> <td>42</td> <td>44</td> <td>284</td> </tr> <tr> <td>AF20</td> <td>10.9</td> <td>75</td> <td>90</td> <td>520</td> </tr> <tr> <td>AF24</td> <td>10.9</td> <td>110</td> <td>140</td> <td>750</td> </tr> </tbody> </table> <p data-bbox="451 792 1182 853">*Shot blast to Swedish standard SA2½, then painted one coat oxide primer</p> <p data-bbox="451 887 1121 947">Allowable maximum forces for tension resistance for dynamic loading</p> <p data-bbox="451 981 1010 1010">Allowable maximum forces for tension (k=0)</p> <p data-bbox="451 1043 1070 1072">Design resistance in tension for dynamic loading</p> <table border="1" data-bbox="451 1102 1182 1794"> <thead> <tr> <th colspan="2" rowspan="2">Number of cycles</th> <th colspan="4">Design resistances $F_{t,Rd}$ (tension) per 4 bolt connection (Property class 8.8)</th> </tr> <tr> <th>AF12 (kN)</th> <th>AF16 (kN)</th> <th>AF20 (kN)</th> <th>AF24 (kN)</th> </tr> <tr> <th>from</th> <th>up to</th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td></td> <td>1 x 10⁴</td> <td>108.00</td> <td>171.00</td> <td>368.00</td> <td>560.00</td> </tr> <tr> <td>1 x 10⁴</td> <td>2 x 10⁴</td> <td>78.26</td> <td>145.75</td> <td>227.44</td> <td>327.70</td> </tr> <tr> <td>2 x 10⁴</td> <td>6 x 10⁴</td> <td>54.26</td> <td>101.05</td> <td>157.69</td> <td>227.20</td> </tr> <tr> <td>6 x 10⁴</td> <td>2 x 10⁵</td> <td>36.32</td> <td>67.65</td> <td>105.57</td> <td>152.10</td> </tr> <tr> <td>2 x 10⁵</td> <td>6 x 10⁵</td> <td>25.19</td> <td>46.91</td> <td>73.20</td> <td>105.46</td> </tr> <tr> <td>6 x 10⁵</td> <td>2 x 10⁶</td> <td>16.86</td> <td>31.40</td> <td>49.00</td> <td>70.60</td> </tr> <tr> <td>2 x 10⁶</td> <td>5 x 10⁶</td> <td>14.43</td> <td>23.14</td> <td>36.11</td> <td>52.03</td> </tr> <tr> <td>5 x 10⁶</td> <td>1 x 10⁷</td> <td>10.81</td> <td>20.13</td> <td>31.42</td> <td>45.27</td> </tr> <tr> <td>1 x 10⁷</td> <td>1 x 10⁸</td> <td>9.41</td> <td>17.53</td> <td>27.35</td> <td>39.41</td> </tr> <tr> <td>Greater than</td> <td>1 x 10⁸</td> <td>6.82</td> <td>12.70</td> <td>19.83</td> <td>28.56</td> </tr> </tbody> </table>	Product	Bolt property class	Slip resistance F_s, R_k (4 bolts) (kN)		Tension resistance F_t, R_k (4 bolts) (kN)	Painted*	Galvanised	AF12	8.8	12	14	136	AF16	8.8	25	30	214	AF20	8.8	50	60	460	AF24	8.8	80	96	700						AF12	10.9	16	20	160	AF16	10.9	42	44	284	AF20	10.9	75	90	520	AF24	10.9	110	140	750	Number of cycles		Design resistances $F_{t,Rd}$ (tension) per 4 bolt connection (Property class 8.8)				AF12 (kN)	AF16 (kN)	AF20 (kN)	AF24 (kN)	from	up to						1 x 10 ⁴	108.00	171.00	368.00	560.00	1 x 10 ⁴	2 x 10 ⁴	78.26	145.75	227.44	327.70	2 x 10 ⁴	6 x 10 ⁴	54.26	101.05	157.69	227.20	6 x 10 ⁴	2 x 10 ⁵	36.32	67.65	105.57	152.10	2 x 10 ⁵	6 x 10 ⁵	25.19	46.91	73.20	105.46	6 x 10 ⁵	2 x 10 ⁶	16.86	31.40	49.00	70.60	2 x 10 ⁶	5 x 10 ⁶	14.43	23.14	36.11	52.03	5 x 10 ⁶	1 x 10 ⁷	10.81	20.13	31.42	45.27	1 x 10 ⁷	1 x 10 ⁸	9.41	17.53	27.35	39.41	Greater than	1 x 10 ⁸	6.82	12.70	19.83	28.56	EAD No. 330080-00-0602 ETA – 20/0918 Section 3.1 Annex 9 & 10
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Dimensional Stability	The tolerances for dimensions / size are defined in the ETA.	EAD No. 330080-00-0602 ETA – 20/0918 Annex 3																																																																																																																																
Reaction to fire	A1 (Steel)	EN 13501-1																																																																																																																																

Durability	Corrosivity Class	Galvanised Steel	ISO 9223
	C1	More than 50 years	
	C2	More than 50 years	
	C3	More than 20 years	
Product identification	Each product shall be identified by way of a label affixed to each packaging of fastener assemblies as defined in the ETA.		EAD No. 330080-00-0602 ETA – 20/0918 Annex 3

10. The performance of the product identified above is in conformity with the declared performance identified in the point 9.

Signed for on behalf of Lindapter International by:



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Michael Norris Managing Director

Bradford UK, 1st March 2022

Place and date of issue

