

NATIONAL DECLARATION OF PERFORMANCE

No. 04/2025

1. Name and trade name of the construction product:

- LUW duct brackets,
- LPST pipe clamps,
- LPSTG pipe clamps,
- HOBBY HUPG and HOBBY XPHUPG pipe clamps,
- HOBBY HUPZ and HOBBY XPHUPZ pipe clamps,
- BINCO UPGB pipe clamps,
- ANTIQ pipe clamps,
- DN-V, DN-F and DN-F-V pipe clamps,
- ZPFV and ZPV pipe loops,
- WESTA UPGSW pipe clamps,
- BACO UPGSB pipe clamps,
- EXPERT UPG, OGUPG, XPUPG, SILUPG, SILOGUPG and SILXPUPG pipe clamps,
- EXPERT UPGE and XPUPGE pipe clamps,
- EXPERT UPZ, OGUPZ and XPUPZ pipe clamps,
- EXPERT UPZE and XPUPZE pipe clamps,
- EXPERT NUPZ pipe clamps,
- EXPERT NUPG pipe clamps,
- DUO UPZD and XPZD pipe clamps,
- DUO NPZD pipe clamps,
- DUO UPGD, XPGD, SILUPGD and SILXPGD pipe clamps,
- DUO NPGD pipe clamps,
- L2, L4 and L6 thermal insulation clamps,
- LX13, LX19 and LX25 thermal insulation clamps,
- PX13, PX20, PX30 and PX50 thermal insulation clamps,
- UDG double pipe clamps,
- NUDG double pipe clamps,
- UPGM pipe clamps,
- UDGM double pipe clamps,
- UDZ double pipe clamps,
- PST and OGPST pipe clamps,
- NPST pipe clamps,
- PSF and OGPSF pipe clamps,
- PSFUC,
- PSFUS,
- PSFUC fixture of fix point,
- UWG, OGUWG and XPUWG pipe clamps,
- NUWG pipe clamps,

- UWX pipe clamps,
- UWL duct bracket,
- NUWL duct bracket,
- UWZ duct bracket,
- NUWZ duct bracket
- UWV duct bracket
- NUWV duct bracket,
- WTBK and OGWTBK trapeze hangers,
- NWTBK trapeze hanger,
- UWT perforated bands,
- Trapeze hanger WTAM with vibration damper,
- WTDBK and XPWTDBK trapeze hangers,
- WT and OGWT trapeze hangers,
- NWT trapeze hangers,
- WTV and OGWTV trapeze hangers,
- HT hook fastener for trapeze metal sheets,
- SZM trapeze sheet pipe supports channel,
- KB and XPKB U-bolts,
- DN solid pipe clamps,
- ZP pipe loops

2. Construction product type description:

Product description consists:

- Product type designation, e.g. UPG
- Size designation
- Product designation
- Example of product identification:

UPG1BK

PIPE CLAMP EXPERT 1 (34-39MM) BK

3. Intended use(s):

Elements of the NICZUK system are intended to be used for the fixing of installation lines, to the extend resulting from the performance characteristics.

4. Name and address of the manufacturer and production site of the product:

THALE sp. z o.o. sp. k. , 11-041 Olsztyn, Wilimowo 2

5. Name and address of the authorised representative, where applicable:

None

6. National system used for assessment and verification of constancy of performance:

3

7. National technical specification:

7a. Polish product standard:

None

Name of accredited certification body, number of accreditation and number of national certificate or name of accredited laboratory/laboratories and number of accreditation:

None

7b. National Technical Assessment:

ITB-KOT-2020/1561 edition 2

Technical Assessment Body/National Technical Assessment Body:

Instytut Techniki Budowlanej, ul. Filtrowa 1, 00-611 Warszawa

Name of accredited certification body, number of accreditation and number of certificate:

None

8. Declared performance:

8a. Durability

Table 1. Materials and protective coatings of NICZUK system components

Name	Material	Protective coating
LUW duct brackets	DX51D steel acc. to PN-EN 10346:2015	zinc (Sendzimir method) $\geq 12 \mu\text{m}$
LPST pipe clamps	clamp: S235JR steel acc. to PN-EN 10025-2:2019	electroplated zinc $\geq 12 \mu\text{m}$
	connecting bolts: steel of mechanical properties class at least 8.8 acc. to PN-EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$
LPSTG pipe clamps	clamp: S235JR steel acc. to PN-EN 10025-2:2019	electroplated zinc $\geq 12 \mu\text{m}$
	connecting bolts: steel of mechanical properties class at least 8.8 acc. to PN-EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$
	rubber profile: EPDM	-
HOBBY HUPG pipe clamps	clamp: DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 12 \mu\text{m}$
	rubber profile: EPDM	-
	connecting bolts: steel of mechanical properties class at least 5.8 acc. to PN-EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$
HOBBY XPHUPG pipe clamps	clamp: DC01 steel acc. to PN-EN 10130:2009	zinc flake $\geq 10 \mu\text{m}$
	rubber profile: EPDM	-
	connecting bolts: steel of mechanical properties class at least 5.8 acc. to PN-EN ISO 898-1:2013	zinc flake $\geq 5 \mu\text{m}$
HOBBY HUPZ pipe clamps	clamp: DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 12 \mu\text{m}$
	connecting bolts: steel of mechanical properties class at least 5.8 acc. to PN-EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$

Name	Material	Protective coating
HOBBY XPHUPZ pipe clamps	clamp: DC01 steel acc. to PN-EN 10130:2009	zinc flake $\geq 10 \mu\text{m}$
	connecting bolts: steel of mechanical properties class at least 5.8 acc. to PN-EN ISO 898-1:2013	zinc flake $\geq 5 \mu\text{m}$
BINCO UPGB pipe clamps	clamp: DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 12 \mu\text{m}$
	rubber profile: PVC	-
	connecting bolts: steel of mechanical properties class at least 5.8 acc. to PN-EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$
ANTIQ pipe clamps	clamp: DC01 steel acc. to PN-EN 10130:2009	zinc flake $\geq 10 \mu\text{m}$
	rubber profile: EPDM micro-rubber	-
	connecting bolts: steel of mechanical properties class at least 5.8 acc. to PN-EN ISO 898-1:2013	zinc flake $\geq 5 \mu\text{m}$
DN-V, DN-F and DN-F-V pipe clamps	clamp: Q235B steel acc. to GB/T 3274-2017	electroplated zinc $\geq 12 \mu\text{m}$
	connecting bolts: steel of mechanical properties class at least 8.8 acc. to EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$
ZPFV and ZPV pipe loops	DX51D steel acc. to PN-EN 10346:2015	zinc (Sendzimir method) $\geq 12 \mu\text{m}$
WESTA UPGSW pipe clamps	clamp: DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 12 \mu\text{m}$
	rubber profile: EPDM	-
	connecting bolts: steel of mechanical properties class at least 5.8 acc. to PN-EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$
BACO UPGSB pipe clamps	clamp: DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 12 \mu\text{m}$
	rubber profile: EPDM	-
EXPERT UPG pipe clamps	clamp: DX51D steel acc. to PN-EN 10346:2015	zinc (Sendzimir method) $\geq 12 \mu\text{m}$
	or DD11 steel acc. to PN-EN 10111:2009	electroplated zinc $\geq 12 \mu\text{m}$
	or DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 12 \mu\text{m}$
	rubber profile: EPDM	-
	connecting bolts: steel of mechanical properties class at least 5.8 acc. to PN-EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$

Name	Material	Protective coating
EXPERT OGUPG pipe clamps	clamp: DD11 steel acc. to PN-EN 10111:2009 or	hot-dip zinc $\geq 45 \mu\text{m}$
	DC01 steel acc. to PN-EN 10130:2009	hot-dip zinc $\geq 45 \mu\text{m}$
	rubber profile: EPDM	-
	connecting bolts: steel of mechanical properties class at least 5.8 acc. to PN-EN ISO 898-1:2013	zinc flake $\geq 5 \mu\text{m}$
EXPERT XPUPG pipe clamps	clamp: DD11 steel acc. to PN-EN 10111:2009	zinc flake $\geq 10 \mu\text{m}$
	or DC01 steel acc. to PN-EN 10130:2009	zinc flake $\geq 10 \mu\text{m}$
	rubber profile: EPDM	-
	connecting bolts: steel of mechanical properties class at least 5.8 acc. to PN-EN ISO 898-1:2013	zinc flake $\geq 5 \mu\text{m}$
EXPERT SILUPG pipe clamps	clamp: DX51D steel acc. to PN-EN 10346:2015	zinc (Sendzimir method) $\geq 12 \mu\text{m}$
	or DD11 steel acc. to PN-EN 10111:2009	electroplated zinc $\geq 12 \mu\text{m}$
	or DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 12 \mu\text{m}$
	rubber profile: silicone	-
	connecting bolts: steel of mechanical properties class at least 5.8 acc. to PN-EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$
EXPERT SILOGUPG pipe clamps	clamp: DD11 steel acc. to PN-EN 10111:2009	hot-dip zinc $\geq 45 \mu\text{m}$
	or DC01 steel acc. to PN-EN 10130:2009	hot-dip zinc $\geq 45 \mu\text{m}$
	rubber profile: silicone	-
	connecting bolts: steel of mechanical properties class at least 5.8 acc. to PN-EN ISO 898-1:2013	zinc flake $\geq 5 \mu\text{m}$
EXPERT SILXPUPG pipe clamps	clamp: DD11 steel acc. to PN-EN 10111:2009	zinc flake $\geq 10 \mu\text{m}$
	or DC01 steel acc. to PN-EN 10130:2009	zinc flake $\geq 10 \mu\text{m}$
	rubber profile: silicone	-
	connecting bolts: steel of mechanical properties class at least 5.8 acc. to PN-EN ISO 898-1:2013	zinc flake $\geq 5 \mu\text{m}$

Name	Material	Protective coating
EXPERT UPGE pipe clamps	clamp: DD11 steel acc. to PN-EN 10111:2009	electroplated zinc $\geq 12 \mu\text{m}$
	or DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 12 \mu\text{m}$
	rubber profile: EPDM	-
	connecting bolts: steel of mechanical properties class at least 4.8 acc. to PN-EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$
EXPERT XPUPGE pipe clamps	clamp: DD11 steel acc. to PN-EN 10111:2009	zinc flake $\geq 10 \mu\text{m}$
	or DC01 steel acc. to PN-EN 10130:2009	zinc flake $\geq 10 \mu\text{m}$
	rubber profile: EPDM	-
	connecting bolts: steel of mechanical properties class at least 4.8 acc. to PN-EN ISO 898-1:2013	zinc flake $\geq 5 \mu\text{m}$
EXPERT UPZ pipe clamps	clamp: DX51D steel acc. to PN-EN 10346:2015	zinc (Sendzimir method) $\geq 12 \mu\text{m}$
	or DD11 steel acc. to PN-EN 10111:2009	electroplated zinc $\geq 12 \mu\text{m}$
	or DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 12 \mu\text{m}$
	connecting bolts: steel of mechanical properties class at least 5.8 acc. to PN-EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$
OGUPZ pipe clamps	clamp: DD11 steel acc. to PN-EN 10111:2009	hot-dip zinc $\geq 45 \mu\text{m}$
	or DC01 steel acc. to PN-EN 10130:2009	hot-dip zinc $\geq 45 \mu\text{m}$
	connecting bolts: steel of mechanical properties class at least 5.8 according to PN-EN ISO 898-1:2013	zinc flake $\geq 5 \mu\text{m}$
EXPERT XPUPZ pipe clamps	clamp: DD11 steel acc. to PN-EN 10111:2009	zinc flake $\geq 10 \mu\text{m}$
	or DC01 steel acc. to PN-EN 10130:2009	zinc flake $\geq 10 \mu\text{m}$
	connecting bolts: steel of mechanical properties class at least 5.8 acc. to PN-EN ISO 898-1:2013	zinc flake $\geq 5 \mu\text{m}$
EXPERT UPZE pipe clamps	clamp: DD11 steel acc. to PN-EN 10111:2009	electroplated zinc $\geq 12 \mu\text{m}$
	or DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 12 \mu\text{m}$
	connecting bolts: steel of mechanical properties class at least 4.8 acc. to PN-EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$

Name	Material	Protective coating
EXPERT XPUPZE pipe clamps	clamp: DD11 steel acc. to PN-EN 10111:2009	zinc flake $\geq 10 \mu\text{m}$
	or DC01 steel acc. to PN-EN 10130:2009	zinc flake $\geq 10 \mu\text{m}$
	connecting bolts: steel of mechanical properties class at least 4.8 acc. to PN-EN ISO 898-1:2013	zinc flake $\geq 5 \mu\text{m}$
EXPERT NUPZ pipe clamps	clamp: 1.4301 steel acc. to PN-EN 10088-1:2024	-
	connecting bolts: steel of mechanical properties class at least A2-70 acc. to PN-EN ISO 3506-1:2020	-
EXPERT NUPG pipe clamps	clamp: 1.4301 steel acc. to PN-EN 10088-1:2024	-
	rubber profile: EPDM	-
	connecting bolts: steel of mechanical properties class at least A2-70 acc. to PN-EN ISO 3506-1:2020	-
DUO UPZD pipe clamps	clamp: DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 12 \mu\text{m}$
	connecting bolts: steel of mechanical properties class at least 4.8 acc. to PN-EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$
DUO XPZD pipe clamps	clamp: DC01 steel acc. to PN-EN 10130:2009	zinc flake $\geq 10 \mu\text{m}$
	connecting bolts: steel of mechanical properties class at least 4.8 acc. to EN ISO 898-1:2013	zinc flake $\geq 5 \mu\text{m}$
DUO NPZD pipe clamps	clamp: 1.4301 steel acc. to PN-EN 10088-1:2024	-
	connecting bolts: steel of mechanical properties class at least A2-70 acc. to PN-EN ISO 3506-1:2020	-
DUO UPGD pipe clamps	clamp: DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 12 \mu\text{m}$
	rubber profile: EPDM	-
	connecting bolts: steel of mechanical properties class at least 4.8 acc. to PN-EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$
DUO XPGD pipe clamps	clamp: DC01 steel acc. to PN-EN 10130:2009	zinc flake $\geq 10 \mu\text{m}$
	rubber profile: EPDM	-
	connecting bolts: steel of mechanical properties class at least 4.8 acc. to PN-EN ISO 898-1:2013	zinc flake $\geq 5 \mu\text{m}$

Name	Material	Protective coating
DUO SILUPGD pipe clamps	clamp: DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 12 \mu\text{m}$
	rubber profile: silicone	-
	connecting bolts: steel of mechanical properties class at least 4.8 acc. to PN-EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$
DUO SILXPGD pipe clamps	clamp: DC01 steel acc. to PN-EN 10130:2009	zinc flake $\geq 10 \mu\text{m}$
	rubber profile: silicone	-
	connecting bolts: steel of mechanical properties class at least 4.8 acc. to PN-EN ISO 898-1:2013	zinc flake $\geq 10 \mu\text{m}$
DUO NPGD pipe clamps	clamp: 1.4301 steel acc. to PN-EN 10088-1:2024	-
	connecting bolts: steel of mechanical properties class at least A2-70 acc. to PN-EN ISO 3506-1:2020	-
L2, L4 and L6 thermal insulation clamps	clamp: DX51D steel acc. to PN-EN 10346:2015	zinc (Sendzimir method) $\geq 12 \mu\text{m}$
	or DD11 steel acc. to PN-EN 10111:2009	electroplated zinc $\geq 12 \mu\text{m}$
	or DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 12 \mu\text{m}$
	cladding: PET with a density of 100 kg/m^3 , FEF rubber foam in accordance with EN 14304:2016, aluminium sheet 0.8 mm thick grade EN AW-3105 acc. to EN 485-2+A1:2018, state H42, H44 and H46. acc. to PN-EN 515:2017	-
	connecting bolts: steel of mechanical properties class at least 4.8 acc. to PN-EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$

Name	Material	Protective coating
LX13, LX19 and LX25 thermal insulation clamps	clamp: DX51D steel acc. to PN-EN 10346:2015	zinc (Sendzimir method) $\geq 12 \mu\text{m}$
	or DD11 steel acc. to PN-EN 10111:2009	electroplated zinc $\geq 12 \mu\text{m}$
	or DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 12 \mu\text{m}$
	cladding: PE, FEF rubber foam acc. to EN 14304:2016	-
	connecting bolts: steel of mechanical properties class at least 4.8 acc. to PN-EN ISO 898- 1:2013	electroplated zinc $\geq 5 \mu\text{m}$
PX13, PX20, PX30 and PX50 thermal insulation clamps	clamp: DX51D steel acc. to PN-EN 10346:2015	zinc (Sendzimir method) $\geq 12 \mu\text{m}$
	or DD11 steel acc. to PN-EN 10111:2009	electroplated zinc $\geq 12 \mu\text{m}$
	or DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 12 \mu\text{m}$
	cladding: PUR with a density of 80 kg/m^3 in a sheath from black aluminium foil, grade AL99.5 acc. to EN 485-2+A1:2018	-
	connecting bolts: steel of mechanical properties class at least 4.8 acc. to PN-EN ISO 898- 1:2013	electroplated zinc $\geq 5 \mu\text{m}$
UDG double pipe clamps	clamp: DX51D steel acc. to PN-EN 10346:2015	zinc (Sendzimir method) $\geq 12 \mu\text{m}$
	or DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 12 \mu\text{m}$
	rubber profile: EPDM	-
	connecting bolts: steel of mechanical properties class at least 5.8 acc. to PN-EN ISO 898- 1:2013	electroplated zinc $\geq 5 \mu\text{m}$
NUDG double pipe clamps	clamp: 1.4301 steel acc. to PN-EN 10088-1:2024	-
	connecting bolts: steel of mechanical properties class at least A2-70 acc. to PN-EN ISO 3506-1:2020	-
UPGM pipe clamps	clamp: DX51D steel acc. to PN-EN 10346:2015	zinc (Sendzimir method) $\geq 12 \mu\text{m}$
	or DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 12 \mu\text{m}$
	rubber profile: foamed polyethylene	-
	connecting bolts: steel of mechanical properties class at least 4.8 acc. to PN-EN ISO 898- 1:2013	electroplated zinc $\geq 5 \mu\text{m}$

Name	Material	Protective coating
UDGM double pipe clamps	clamp: DX51D steel acc. to PN-EN 10346:2015	zinc (Sendzimir method) $\geq 12 \mu\text{m}$
	or DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 12 \mu\text{m}$
	rubber profile: foamed polyethylene	-
	connecting bolts: steel of mechanical properties class at least 5.8 acc. to PN-EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$
UDZ double pipe clamps	clamp: DX51D steel acc. to PN-EN 10346:2015	zinc (Sendzimir method) $\geq 12 \mu\text{m}$
	or DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 12 \mu\text{m}$
	connecting bolts: steel of mechanical properties class at least 5.8 acc. to PN-EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$
PST pipe clamps	clamp: S235JR steel acc. to PN-EN 10025-2:2019	electroplated zinc $\geq 12 \mu\text{m}$
	connecting bolts: steel of mechanical properties class at least 8.8 acc. to PN-EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$
OGPST pipe clamps	clamp: S235JR steel acc. to PN-EN 10025-2:2019	hot-dip zinc $\geq 45 \mu\text{m}$
	connecting bolts: steel of mechanical properties class at least 8.8 acc. to PN-EN ISO 898-1:2013	zinc flake $\geq 5 \mu\text{m}$
NPST pipe clamps	clamp: 1.4301 steel acc. to PN-EN 10088-1:2024	-
	connecting bolts: steel of mechanical properties class at least A2-70 acc. to PN-EN ISO 3506-1:2020	-
PSF pipe clamps	clamp: S235JR steel acc. to PN-EN 10025-2:2019	electroplated zinc $\geq 12 \mu\text{m}$
	connecting bolts: mechanical properties class steel at least 8.8 acc. to PN-EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$
OGPSF pipe clamps	clamp: S235JR steel acc. to PN-EN 10025-2:2019	hot-dip zinc $\geq 45 \mu\text{m}$
	connecting bolts: steel of mechanical properties class at least 8.8 acc. to PN-EN ISO 898-1:2013	zinc flake $\geq 5 \mu\text{m}$
PSFUC	clamp: S235JR steel acc. to PN-EN 10025-2:2019	electroplated zinc $\geq 8 \mu\text{m}$
	cantilever: steel of mechanical properties class at least 4.8 acc. to PN-EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$

Name	Material	Protective coating
PSFUS	clamp: S235JR steel acc. to PN-EN 10025-2:2019	electroplated zinc $\geq 8 \mu\text{m}$
	connecting bolts: steel of mechanical properties class at least 5.8 acc. to PN-EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$
PSFUC fixture of fix point	fixture of fix point: S235JR steel acc. to PN-EN 10025-2:2019	electroplated zinc $\geq 8 \mu\text{m}$
UWG pipe clamps	clamp: DX51D steel acc. to PN-EN 10346:2015	zinc (Sendzimir method) $\geq 8 \mu\text{m}$
	or DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 8 \mu\text{m}$
	rubber profile EPDM / PVC	-
	connecting bolts: steel of mechanical properties class at least 5.6 acc. to PN-EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$
OGUWG pipe clamps	clamp: DC01 steel acc. to PN-EN 10130:2009	hot-dip zinc $\geq 45 \mu\text{m}$
	rubber profile: EPDM / PVC	-
	connecting bolts: steel of mechanical properties class at least 5.6 acc. to PN-EN ISO 898-1:2013	zinc flake $\geq 5 \mu\text{m}$
XPUWG pipe clamps	clamp: DC01 steel acc. to PN-EN 10130:2009	zinc flake $\geq 8 \mu\text{m}$
	rubber profile: EPDM / PVC	-
	connecting bolts: steel of mechanical properties class at least 5.6 acc. to PN-EN ISO 898-1:2013	zinc flake $\geq 5 \mu\text{m}$
NUWG pipe clamps	clamp: 1.4301 steel acc. to PN-EN 10088-1:2024	-
	rubber profile: EPDM / PVC	-
	connecting bolts: steel of mechanical properties class at least A2-70 acc. to PN-EN ISO 3506-1:2020	-
UWX pipe clamps	clamp: DX51D steel acc. to PN-EN 10346:2015	zinc (Sendzimir method) $\geq 6 \mu\text{m}$
	rubber profile: PVC	-
	connecting bolts: steel of mechanical properties class at least 4.8 acc. to EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$

Name	Material	Protective coating
UWL duct bracket	duct bracket: DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 8 \mu\text{m}$
	damper: EPDM	-
NUWL duct bracket	duct bracket: 1.4301 steel acc. to PN-EN 10088-1:2024	-
	damper: EPDM	-
UWZ duct bracket	duct bracket: DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 8 \mu\text{m}$
	damper: EPDM	-
NUWZ duct bracket	duct bracket: 1.4301 steel acc. to PN-EN 10088-1:2024	-
	damper: EPDM	-
UWV duct bracket	duct bracket: DC01 steel acc. to EN 10130:2009	electroplated zinc $\geq 8 \mu\text{m}$
	damper: EPDM	-
NUWV duct bracket	duct bracket: 1.4301 steel acc. to PN-EN 10088-1:2024	-
	damper: EPDM	-
WTBK trapeze hangers	DX51D steel acc. to PN-EN 10346:2015	zinc (Sendzimir method) $\geq 8 \mu\text{m}$
	DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 8 \mu\text{m}$
OGWTBK trapeze hangers	DC01 steel acc. to PN-EN 10130:2009	hot-dip zinc $\geq 45 \mu\text{m}$
NWTBK trapeze hanger	1.4301 steel acc. to PN-EN 10088-1:2024	-
UWT perforated bands	DX51D steel acc. to PN-EN 10346:2015	zinc (Sendzimir method) $\geq 8 \mu\text{m}$
Trapeze hanger WTAM with vibration damper	hanger: DX51D steel acc. to PN-EN 10346:2015	zinc (Sendzimir method) $\geq 4 \mu\text{m}$
	damper: PVC	-
WTDBK trapeze hangers	S235JR steel acc. to PN-EN 10025-2:2019	electroplated zinc $\geq 8 \mu\text{m}$
XPWTDBK trapeze hangers	S235JR steel acc. to PN-EN 10025-2:2019	zinc flake $\geq 8 \mu\text{m}$
WT trapeze hangers	S235JR steel acc. to PN-EN 10025-2:2019	electroplated zinc $\geq 8 \mu\text{m}$
OGWT trapeze hangers	S235JR steel acc. to PN-EN 10025-2:2019	hot-dip zinc $\geq 45 \mu\text{m}$
NWT trapeze hangers	1.4301 steel acc. to PN-EN 10088-1:2024	-
WTV trapeze hangers	DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 8 \mu\text{m}$
OGWTV trapeze hangers	DC01 steel acc. to PN-EN 10130:2009	hot-dip zinc $\geq 45 \mu\text{m}$
HT hook fastener for trapeze metal sheets	S235JR steel acc. to PN-EN 10025-2:2019	electroplated zinc $\geq 8 \mu\text{m}$
SZM trapeze sheet pipe supports channel	mounting channel: S250GD steel acc. to EN 10346:2015	zinc (Sendzimir method) $\geq 12 \mu\text{m}$
	bail, hook: S235JR steel acc. to PN-EN 10025-2:2019	electroplated zinc $\geq 5 \mu\text{m}$
	nuts: steel of mechanical properties class at least 6 acc. to PN-EN ISO 898-2:2023	electroplated zinc $\geq 5 \mu\text{m}$

Name	Material	Protective coating
KB U-bolts	u-bolt: S235JR steel acc. to PN-EN 10025-2:2019	electroplated zinc $\geq 5 \mu\text{m}$
	nuts: steel of mechanical properties class at least 5 acc. to PN-EN ISO 898-2:2023	electroplated zinc $\geq 5 \mu\text{m}$
XPKB U-bolts	u-bolt: S235JR steel acc. to PN-EN 10025-2:2019	zinc flake $\geq 5 \mu\text{m}$
	nuts: steel of mechanical properties class minimum 5 acc. to PN-EN ISO 898-2:2023	zinc flake $\geq 5 \mu\text{m}$
DN solid pipe clamps	clamp: DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 12 \mu\text{m}$
	or S235JR steel acc. to PN-EN 10025-2:2019	electroplated zinc $\geq 12 \mu\text{m}$
	connecting bolts: steel of mechanical properties class at least 5.8 acc. to PN-EN ISO 898-1:2013	electroplated zinc $\geq 5 \mu\text{m}$
ZP pipe loops	loop: DC01 steel acc. to PN-EN 10130:2009	electroplated zinc $\geq 12 \mu\text{m}$
	nut: steel of mechanical properties class at least 5 acc. to PN-EN ISO 898-2:2023	electroplated zinc $\geq 5 \mu\text{m}$

8b. Design resistances

Table 2. Design resistances of NICZUK system components

Name	Design resistance [kN]
LUW duct brackets	LUWL
	LUWV
	LUWZ
LPST pipe clamps	3/8"
	1/2"
	25
	3/4"
	1"
	35
	1 1/4"
	1 1/2"
	54
	57
	2"
	64
	70
	2 1/2"
	3"
	4"
	114

Name		Design resistance [kN]
LPSTG pipe clamps	1/4"	2,50
	3/8"	2,50
	1/2"	2,50
	25	2,50
	3/4"	2,50
	1	2,50
	1 1/4"	2,50
	45	2,50
	1 1/2"	2,50
	54	2,50
	57	3,00
	2"	3,00
	64	3,00
	2 1/2"	3,00
	3"	3,00
	4"	3,00
HOBBY HUPG and HOBBY XPHUPG pipe clamps	114	3,00
	3/8"	0,80
	1/2"	0,80
	3/4"	0,80
	1"	0,80
	1 1/4"	0,80
	1 1/2"	0,80
	54"	0,80
	2"	0,80
	2 1/2"	1,40
	3"	1,40
	4"	1,80
	125	1,80
	5"	2,10
HOBBY HUPZ and HOBBY XPHUPZ pipe clamps	6"	2,10
	3/8"	0,80
	1/2"	0,80
	3/4"	0,80
	1"	0,80
	1 1/4"	0,80
	1 1/2"	0,80
	54"	0,80
	2"	0,80
	2 1/2"	1,40
	3"	1,40
	4"	1,80
BINCO UPGB pipe clamps	6"	2,10
	10	0,70
	1/4"	0,70
	3/8"	0,70
	1/2"	0,70
	3/4"	0,70
	1"	0,70
	1 1/4"	0,70
	1 1/2"	0,70
	54	0,70
	2"	0,70

Name		Design resistance [kN]
ANTIQ pipe clamps	2"	2,40
	2 1/2"	2,40
	4"	2,40
	125	2,40
	5"	2,40
	6"	3,90
	200	3,90
	210	3,90
DN-V, DN-F and DN-F-V pipe clamps	1/2"	3,10
	3/4"	3,10
	1"	3,10
	1 1/4"	3,10
	1 1/2"	3,10
	2"	3,10
	2 1/2"	4,50
	3"	4,50
	100	5,20
	4"	5,20
	120	5,20
	5"	5,80
	159	6,90
	6"	6,90
	8"	8,20
ZPFV and ZPV pipe loops	25	2,00
	32	2,00
	40	2,00
	50	2,00
	65	3,50
	80	3,50
	100	3,50
	125	5,00
	150	5,00
	200	8,50
WESTA UPGSW pipe clamps	1/4"	0,35
	3/8"	0,35
	1/2"	0,35
	3/4"	0,35
	1"	0,40
	1 1/4"	0,40
	1 1/2"	0,40
	54	0,40
	2"	0,40
BACO UPGSB pipe clamps	10	0,25
	12	0,25
	15	0,25
	3/8"	0,25
	1/2"	0,25
	3/4"	0,25
	1"	0,30
	1 1/4"	0,30
	1 1/2"	0,30

Name		Design resistance [kN]
EXPERT UPG, OGUPG, XPUPG, SILUPG, SILOGUPG and SILXPUPG pipe clamps	3/8"	2,00
	1/2"	2,00
	3/4"	2,00
	1"	2,00
	1 1/4"	2,00
	1 1/2"	2,00
	54	2,00
	2"	2,00
	2 1/2"	2,15
	80	2,15
	3"	2,15
	100	2,15
	4"	2,15
	114	2,15
	125	2,15
	5"	2,15
	139	3,90
	6"	3,90
	168	3,90
	188	3,90
	200	3,90
	210	3,90
	8"	3,90
	250	3,90
	273	4,50
	280	4,50
	315	4,50
	324	4,50
	355	4,50
	400	4,50
	450	4,50
	500	4,50
EXPERT UPGE and XPUPGE pipe clamps	3/8"	0,80
	1/2"	0,80
	3/4"	0,80
	1"	0,80
	1 1/4"	0,80
	1 1/2"	1,10
	54	1,10
	2"	1,10
EXPERT UPZ, OGUPZ and XPUPZ pipe clamps	10	2,00
	3/8"	2,00
	1/2"	2,00
	3/4"	2,00
	1"	2,00
	1 1/4"	2,00
	1 1/2"	2,00
	2"	2,00
	2 1/2"	2,40
	3"	2,40
	100	2,40
	4"	2,40
	114	2,40
	120	2,40

Name		Design resistance [kN]
EXPERT UPZ, OGUPZ and XPUPZ pipe clamps	125	2,40
	5"	2,40
	150	3,90
	6"	3,90
	172	3,90
	188	3,90
	200	3,90
	8"	3,90
	250	3,90
	273	4,50
	280	4,50
	315	4,50
	324	4,50
	355	4,50
	400	4,50
	450	4,50
	500	4,50
EXPERT UPZE and XPUPZE pipe clamps	3/8"	0,80
	1/2"	0,80
	3/4"	0,80
	1"	0,80
	1 1/4"	0,80
	1 1/2"	1,10
	54	1,10
	2"	1,10
EXPERT NUPZ pipe clamps	10	2,00
	3/8"	2,00
	1/2"	2,00
	3/4"	2,00
	1"	2,00
	1 1/4"	2,00
	1 1/2"	2,00
	2"	2,00
	2 1/2"	2,40
	3"	2,40
	100	2,40
	4"	2,40
	114	2,40
	120	2,40
	125	2,40
	5"	2,40
	150	3,90
	6"	3,90
	172	3,90
	188	3,90
	200	3,90
	8"	3,90
	250	3,90
	273	4,50
	280	4,50
	315	4,50
	324	4,50
	355	4,50
	400	4,50

Name		Design resistance [kN]
EXPERT NUPG pipe clamps	54	0,80
	2 1/2"	1,10
	80	1,10
	3"	1,10
	100	1,10
	4"	1,10
	114	1,10
	125	1,10
	5"	1,70
	139	3,60
	6"	3,60
	168	3,60
	200	3,60
	8"	3,60
	250	3,60
	273	4,50
	315	4,50
	324	4,50
	400	4,50
DUO UPZD and XPZD pipe clamps	3/8"	0,90
	1/2"	0,90
	3/4"	0,90
	28	1,20
	1"	1,20
	1 1/4"	1,20
	1 1/2"	1,20
	54	1,20
	58	1,20
	2"	1,20
	70	1,60
	2 1/2"	1,60
	80	1,60
	3"	1,60
	95	2,20
	100	2,20
	4"	2,20
	114	2,20
	125	2,20
	5"	2,20
	145	2,20
	150	2,20
	160	2,20
	6"	2,20
DUO NPZD pipe clamps	3/8"	0,80
	1/2"	0,80
	3/4"	0,80
	28	0,80
	1"	0,80
	1 1/4"	0,80
	1 1/2"	0,80
	54	0,80

Name		Design resistance [kN]
DUO NPZD pipe clamps	58	0,80
	2"	0,80
	70	1,20
	2 1/2"	1,20
	80	1,20
	3"	1,20
	95	1,80
	100	1,80
	4"	1,80
	114	1,80
	125	1,80
	5"	1,80
	145	2,00
	150	2,00
	160	2,00
	6"	2,00
DUO UPGD, XPGD, SILUPGD and SILXPGD pipe clamps	12	0,80
	1/4"	0,80
	3/8"	0,80
	1/2"	0,80
	3/4"	0,80
	1"	0,80
	40	0,80
	1 1/4"	0,80
	1 1/2"	0,80
	54	0,80
	2"	0,80
	70	1,40
	2 1/2"	1,40
	80	1,40
	3"	1,40
	95	1,40
	105	1,40
	4"	1,80
	120	1,80
	125	1,80
	5"	2,10
	145	2,10
	160	2,10
	6"	2,10
	200	2,10
DUO NPGD pipe clamps	12	0,60
	1/4"	0,60
	3/8"	0,60
	1/2"	0,60
	3/4"	0,60
	1"	0,60
	40	0,60
	1 1/4"	0,60
	1 1/2"	0,60
	54	0,60
	2"	0,60
	70	0,80
	2 1/2"	0,80

Name		Design resistance [kN]
DUO NPGD pipe clamps	80	0,80
	3"	0,80
	95	1,20
	105	1,20
	4"	1,20
	120	1,20
	125	1,20
	5"	1,20
	145	1,80
	160	1,80
	6"	1,80
	200	1,80

Table 3. Design resistances of NICZUK system elements

Name		Insulation thickness G [mm]	Design resistance [kN]
L2 thermal insulation clamps	12	12	1,20
	15	12	1,20
	21/22	12	1,20
	26/28	12	1,20
	33/35	14	1,20
	42	14	1,60
	48	14	2,15
	54	14	2,15
	57	14	2,15
	60	14	2,15
	63/64	14	2,15
	70	14	2,15
	76	14	2,15
	80	14	2,15
	89	15	2,15
	101	15	2,15
	108	16	2,15
	114	15	2,15
	125	15	3,90
	133	16	3,90
	139	16	3,90
	159/160	16	3,90
L4 thermal insulation clamps	12	18	1,20
	15/18	18	1,20
	21/22	19	1,20
	26/28	20	1,60
	33/35	22	2,15
	38	22	2,15
	42	22	2,15
	44	21	2,15
	48	22	2,15
	54	22	2,15
	57	22	2,15

Name		Insulation thickness G [mm]	Design resistance [kN]
L4 thermal insulation clamps	60	23	2,15
	63/64	23	2,15
	70	23	2,15
	76	23	2,15
	80	23	2,15
	89	24	2,15
	101	25	3,90
	108	24	3,90
	114	24	3,90
	125	24	3,90
	133	25	3,90
	139	25	3,90
	159/160	25	3,90
	165	25	3,90
	168	25	3,90
	204	27	3,90
	216	25	4,50
	219	25	4,50
	254	27	4,50
	267	25	4,50
	273	25	4,50
L6 thermal insulation clamps	15	30	2,15
	17/18	30	2,15
	21/22	30	2,15
	25	30	2,15
	26/28	32	2,15
	30	33	2,15
	33/35	35	2,15
	38	35	2,15
	42	35	2,15
	44	35	2,15
	48	35	2,15
	54	36	2,15
	57	36	2,15
	60	37	2,15
	63/64	37	2,15
	70	37	2,15
	76	38	3,90
	80	38	3,90
	89	39	3,90
	101	40	3,90
	108	40	3,90
	114	41	3,90
	125	41	3,90
	133	43	3,90
	139	43	3,90
	159/160	44	3,90
	165	45	3,90
	168	45	3,90
	204	50	4,50
	216	50	4,50
	219	50	4,50
	273	50	4,50

Name	Insulation thickness G [mm]	Design resistance [kN]
LX13 thermal insulation clamps	10	0,80
	12	0,80
	15	0,80
	18	0,80
	22	0,80
	25	0,80
	28	0,80
	30	0,80
	35	0,80
	42	0,80
	48	0,80
	54	1,40
	60	1,40
	64	1,40
	70	1,40
	76	1,40
	89	1,80
LX19 thermal insulation clamps	10	0,80
	12	0,80
	15	0,80
	18	0,80
	22	0,80
	25	0,80
	28	0,80
	30	0,80
	35	0,80
	42	1,40
	48	1,40
	54	1,40
	60	1,40
	64	1,40
	70	1,80
	76	1,80
	89	1,80
LX25 thermal insulation clamps	10	0,80
	12	0,80
	15	0,80
	18	0,80
	22	0,80
	25	1,40
	28	1,40
	30	1,40
	35	1,40
	42	1,40
	48	1,40
	54	1,40
	60	1,80
	64	1,80
	70	1,80
	76	1,80
	89	1,80

Name		Insulation thickness G [mm]	Design resistance [kN]
PX13 thermal insulation clamps	10	13	0,80
	12	13	0,80
	15	13	0,80
	17	13	0,80
	21	13	0,80
	26	13	0,80
	33	13	0,80
	42	13	0,80
	48	13	1,40
	54	13	1,40
	60	13	1,40
	63	13	1,40
	76	13	2,20
	88	13	1,80
	108	13	2,20
	114	13	2,20
	133	13	2,20
	139	13	2,2
PX20 thermal insulation clamps	10	20	0,8
	12	20	0,8
	15	20	0,8
	17	20	0,8
	21	20	0,8
	26	20	0,8
	33	20	1,4
	42	20	1,4
	48	20	1,4
	54	20	1,4
	57	20	1,4
	60	20	1,4
	63	20	2,2
	76	20	1,8
	88	20	2,2
	108	20	2,2
	114	20	2,2
	133	20	2,2
PX30 thermal insulation clamps	139	20	3,9
	159	20	3,9
	168	20	3,9
	15	30	1,4
	17	30	1,4
	21	30	1,4
	26	30	1,4
	33	30	1,4
	42	30	2,2
	48	30	1,8
	54	30	1,8
	57	30	2,2
	60	30	1,8
	63	30	1,8
	76	30	1,8
	88	30	2,2
	108	30	2,2
	114	30	2,2
	133	30	3,9

Name		Insulation thickness G [mm]	Design resistance [kN]
PX30 thermal insulation clamps	139	30	3,9
	159	30	3,9
	168	30	3,9
	219	30	4,5
	273	30	4,5
PX50 thermal insulation clamps	15	50	1,8
	17	50	1,8
	21	50	1,8
	26	50	2,2
	33	50	1,8
	42	50	2,1
	48	50	2,1
	54	50	2,2
	57	50	2,1
	60	50	2,1
	63	50	2,1
	76	50	2,2
	88	50	3,9
	108	50	3,9
	114	50	3,9
	133	50	3,9
	139	50	3,9
	159	50	3,9
	168	50	4,5
	180	50	4,5
	219	50	4,5
	273	50	4,5
	324	50	4,5
	356	50	4,5

Table 4. Design resistances of NICZUK system components

Name		Design resistance [kN]
UDG double pipe clamps	3/8"	0,3
	1/2"	0,3
	3/4"	0,3
	1"	0,3
NUDG double pipe clamps	3/8"	0,3
	1/2"	0,3
	3/4"	0,3
	1"	0,3
UPGM pipe clamps	12	1
	15	1
	18	1
	22	1
UDGM double pipe clamps	15	0,3
	18	0,3
	22	0,3
UDZ double pipe clamps	3/8"	0,3
	1/2"	0,3
	3/4"	0,3
	1"	0,3
PSFUC	110	20
	125/127	20
	125	20

Name		Design resistance [kN]
PSFUC	150	20
	160	20
	200	20,94
	250	20,5
	300	20
	350	20
	400	20
PSFUS	15	32,4
	20	32,86
	25	27,4
	32	29,66
	40	27,88
	50	20
	68/72	20
	65	20
	80	20
PSFUC fixture of fix point - channel length 500 mm	110	20
	125/127	20
	125	20
	150	20
	160	20
	200	20,94
	250	20,5
PSFUC fixture of fix point - channel length 1000 mm	110	20
	125/127	20
	125	20
	150	20
	160	20
	200	20,94
	250	20,5
UWG, OGUWG and XPUWG pipe clamps	100	1,9
	125	1,9
	150	1,9
	160	1,9
	180	1,9
	200	1,9
	225	1,9
	250	1,9
	280	2,2
	315	2,2
	355	2,2
	400	2,2
	450	1,35
	500	1,35
	560	1,35
	630	1,35
	710	1,35
	800	2,5
	900	2,5
	1000	2,5
	1120	2,5
	1250	2,5
	1400	2,5

Name		Design resistance [kN]
NUWG pipe clamps	100	0,33
	125	0,6
	150	0,6
	160	0,6
	180	0,6
	200	0,6
	225	0,6
	250	0,6
	280	0,6
	315	0,75
	355	0,75
	400	1,2
	450	1,2
	500	1,2
	560	1,45
	630	1,45
	710	1,45
	800	4
	900	4
	1000	4
	1120	4
	1250	4
	1400	4
UWX pipe clamps	80	1
	100	1
	125	1
	150	1
	160	1
	180	1
	200	1
	225	1
	250	1
	280	1,2
	315	1,2
	355	1,2
	400	1,2
UWL duct bracket	-	0,3
NUWL duct bracket	-	0,3
UWZ duct bracket	-	0,3
NUWZ duct bracket	-	0,3
UWV duct bracket	-	0,3
NUWV duct bracket	-	0,3
WTBK and OGWTBK trapeze hangers	10	4
	12	4
NWTBK trapeze hanger	10	4
UWT perforated bands	17	0,6
	25	1,5
Trapeze hanger WTAM with vibration damper	-	2
WTDBK and XPWTDBK trapeze hangers	-	2,5
WT and OGWT trapeze hangers	M8	4
	M10	4
NWT trapeze hangers	M8	4
	M10	4
WTV and OGWTV trapeze hangers	M8	1,3
	M10	1,3

Name		Design resistance [kN]
HT hook fastener for trapeze metal sheets	-	2
SZM trapeze sheet pipe supports channel	400	2,2
	450	2,2
	500	2,2
KB and XPKB U-bolts with M8 thread	1/2"	15
	3/4"	15
	1"	15
	1 1/4"	15
	1 1/2"	15
	2"	15
	2 1/2"	15
	3"	15
	4"	15
	133	15
KB and XPKB U-bolts with M10 thread	1"	23
	1 1/4"	23
	1 1/2"	23
	2"	23
	2 1/2"	23
	3"	23
	4"	23
	168	23
KB and XPKB U-bolts with M12 thread	139	25
	168	25
	200	25
	8"	25
	250	25
	10"	25
	12"	25
DN solid pipe clamps	1/2"	3,6
	3/4"	5,4
	1"	4,4
	1 1/4"	4,9
	1 1/2"	4,3
	2"	4,6
	2 1/2"	7,4
	3"	5,2
	100	6,4
	4"	6,4
	120	6,4
	133	5,1
	5"	3,1
	159	6,5
	6"	5,4
	8"	6
	10"	14
ZP pipe loops with M8 connection	1"	2,6
	1 1/4"	3,1
	1 1/2"	3,1
	2"	3,2

Name		Design resistance [kN]
ZP pipe loops with M10 connection	1"	3,4
	1 1/4"	2,8
	1 1/2"	3,3
	2"	3,5
	2 1/2"	3,6
	3"	3,4
	4"	3,3
ZP pipe loops with M12 connection	133	3,9
	5"	4
	159	3,4
	6"	4
ZP pipe loops with M16 connection	8"	5,7

Table 5 Design resistances of NICZUK system components

Name		Design resistance in the direction of the plastic pipe axis [kN].	Design resistance in the direction of the steel pipe axis [kN].
PST and OGPST pipe clamps	15	0,24	8,39
	20	0,37	12,34
	25	0,34	13,54
	32	0,39	7,09
	40	0,54	6,3
	54	0,54	6,3
	50	0,89	10,47
	64	0,89	10,47
	68/72	0,97	10,47
	65	0,97	11,09
	80	1,32	9,8
	110	1,47	12,63
	125/127	-	8,81
	125	-	8,81
	150	1,44	5,38
	160	1,44	5,38
	180	-	5,38
	198/203	-	5,38
	200	-	5,76
	225	-	4,76
	248/253	-	4,76
	250	-	4,76
	300	-	4,76
	350	-	4,76
	400	-	4,76
	450	-	4,76
	500	-	4,76
NPST pipe clamps	50	-	5,7
	54	-	5,7
	65	-	5,7
	80	-	7,5
	110	-	10,5
	125	-	10,5
	160	-	8,5

Name		Design resistance in the direction of the plastic pipe axis [kN].	Design resistance in the direction of the steel pipe axis [kN].
PSF and OGPSF pipe clamps	15	-	32,4
	20	-	32,86
	25	-	27,4
	32	-	29,66
	40	-	27,88
	54	-	27,88
	50	-	20
	64	-	20
	68/72	-	20
	65	-	20
	80	-	20
	110	-	20
	125/127	-	20
	125	-	20
	150	-	20
	160	-	20
	198/203	-	20
	200	-	20,94
	250	-	20,5
	300	-	20
	350	-	20
	400	-	20
	450	-	20
	500	-	20

9. The performance of the product identified above is in conformity with all declared performance in point 8. This national declaration of performance is issued in accordance with the act on construction products dated 16 April 2004 under the sole responsibility of the manufacturer.

Signed by: Piotr Hryniewicz, Construction Products Certification Coordinator
(name and position)

Wilimowo, 30.06.2025.
(place and date of issue)

Koordinator
ds. Certyfikacji
Wyrobów Budowlanych
Inż. Piotr Hryniewicz

(signature)