



NEOPHIX
CLAMPING & CONNECTING TECHNOLOGY



PRODUCT CATALOGUE

CLAMPING & CONNECTING TECHNOLOGY

NEOPHIX ENGINEERING

Since its formation in 1976 both the reputation of Neophix Engineering and its range of products have grown steadily. The company's technical excellence and commitment to quality were quickly recognised and production capacity steadily increased.

The Company's technical excellence and commitment to quality were quickly recognised and production capacity steadily increased. Larger premises were acquired in 1984 and these have since been extended to cope with the ever increasing demand for our products.

In the early days, Neophix Engineering made only Heavy Duty Commercial Moving Equipment

Hose Clamps for the Vehicle and Earth manufacturers.

Now the ever widening range of Neophix products are used in many different applications as diverse as Food Processing, Telecommunication, Marine Engines, Nuclear, Mining and Petrochemical industries.

Accredited to ISO9001 and the automotive standard TS16949 as well as holding several second party manufacturing approvals from our impressive world-class customer base.



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V-CLAMPS

"V" Profile Clamps are utilised in a wide variety of industries and environments and are used to draw together and seal two circular flanges. The diversity of industries where "V" Clamps are used is extensive from Diesel Engines, Aerospace, Food Processing, Filter, Petrochemical, Exhaust and Catalysts, Turbo Charger, Telecommunication in fact anywhere where two vessels or pipes need connecting "V" Clamps can be the economical answer.

In conjunction with the appropriate flanges and gaskets they ensure a highly reliable joint and result in a much, easier to fit and maintain unit and use much less space than conventional bolted flanges. They can function reliably and safely under conditions involving stress, fluctuating temperature, pressure and corrosive environments.

The Neophix range is comprehensive, both in terms of "V" profile and diameters that can be manufactured. There is a variety of fastening mechanisms available from the standard "T" bolt to latch and over centre quick release mechanisms which suit frequent assembly and disassembly of units. As standard V-Clamps are manufactured using a combination of grade 304 & 303 stainless steels, for marine applications grade 316 & 316Ti is commonly used and parts are regularly manufactured using more exotic grades such as Inconel & Titanium.

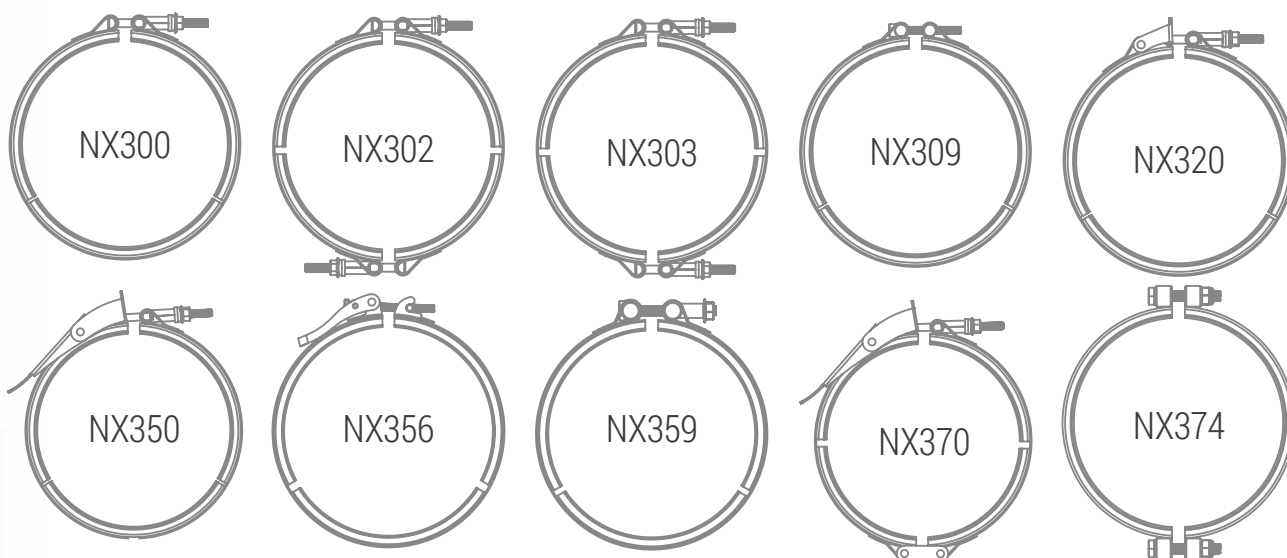
In addition to our existing range of over 200 'V' profiles, Neophix are equipped to produce special purpose Profile Clamps to meet customers' individual requirements. Our Design Engineers have many years experience in the industry and are always available to give customers advice on the design of clamps for individual applications.



V-CLAMPS | SPECIFICATION

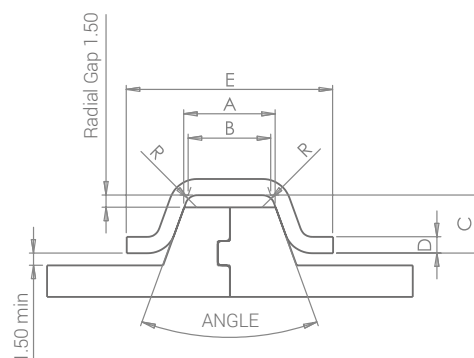
We currently manufactured over 200 different profiles and over 50 styles with diameters ranging from 40mm to 2000mm. Some of our more popular profiles and styles can be seen below.

POPULAR STYLES



TECHNICAL INFORMATION

Profile Reference	'A' Flange Tip Width mm	"B" Tip Width mm	"C" Retainer Depth mm	"D" Material Thickness mm	"E" Overall Width mm	"R" Radius	Internal Angle
A	6.35	5.26	7.14	1.5	19.05	1.5	40
D	7.4	6.65	3.58	1.22	16.0	0.41	40
E	11.25	10.16	7.14	1.22	25.4	0.8	40
S	11.25	10.16	7.14	2.0	25.4	1.5	40
LL	9.3	8.2	12.5	2.5	30.0	2.5	40
MM	15.1	14.0	20.0	3.0	45.0	3.0	40
AS	8.1	7.0	7.14	2.0	25.4	1.5	40
AX	15.6	14.5	7.0	1.5	22.8	1.5	40
BA	9.0	7.9	5.2	1.5	15.0	1.0	40
BP	10.25	9.14	7.75	2.0	25.5	2.0	40



T-BOLT HOSE / BAND CLAMPS

Our most popular NX2 range takes over from where the traditional worm drive clips leave off!

Used extensively in the automotive industry, particularly the commercial vehicle, passenger transport and earth moving equipment sectors the Neophix NX2 & NX3 band clamps provide a quality, affordable and leak-proof solution in applications where other clamps would fail.

Such is the strength inherent in Neophix's unique strap design that the clamp can withstand tightening torque's well in excess of 8.0Nm (70 lbs.in.) as against the usual 4.5Nm (40 lbs.in.) of inferior designed clamps.

The basic clamp comprises of an austenitic grade 304 stainless steel band and

tongue which is 19.05mm wide x 0.56mm thick and is supplied temper rolled in the half hard condition as well as being edge dressed to protect even the most delicate hose. The T-bolt is manufactured using high tensile carbon steel heat treated to obtain 65-70 tonnes tensile strength and zinc plated. The trunnion is a Zamak 3 zinc alloy die casting and the nut is a nylon inserted self locking type. The NX3 style has an identical build apart from an increase in band thickness to 1.22mm for applications where a more robust clamping solution is required.

Variations in material and/or construction can be incorporated to meet customers' individual requirements where high corrosive or high temperature conditions exist. The parts can be manufactured using all the 300 grade stainless steels with Inconel & Titanium being regularly used. The full clamp can also be supplied in a full stainless steel construction with various locking nut styles readily available.

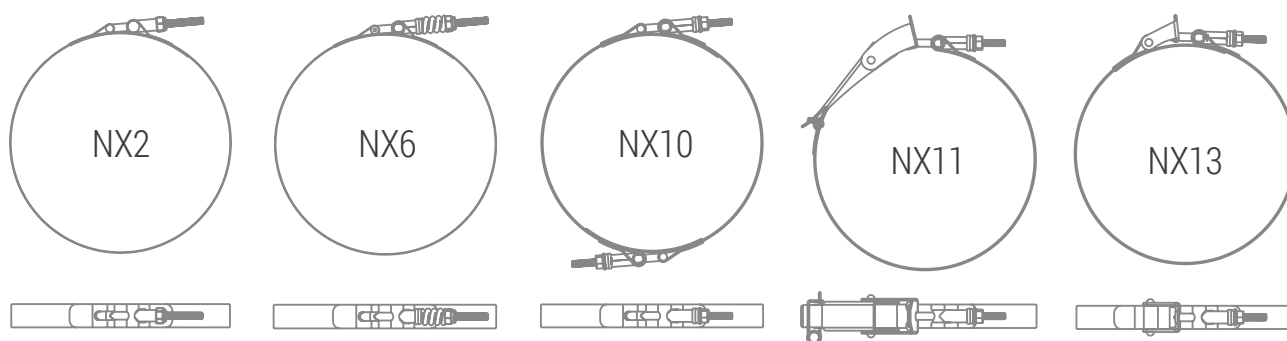


T-BOLT HOSE / BAND CLAMPS | SPECIFICATION

Neophix Band Clamps can be supplied in any diameter over 40mm and the adjustment range for diameters between 40.0mm and 60.0mm is $\pm 3.0\text{mm}$ and for clamps over 60.0mm it is - 3.0mm and + 8.0mm on nominal diameter.

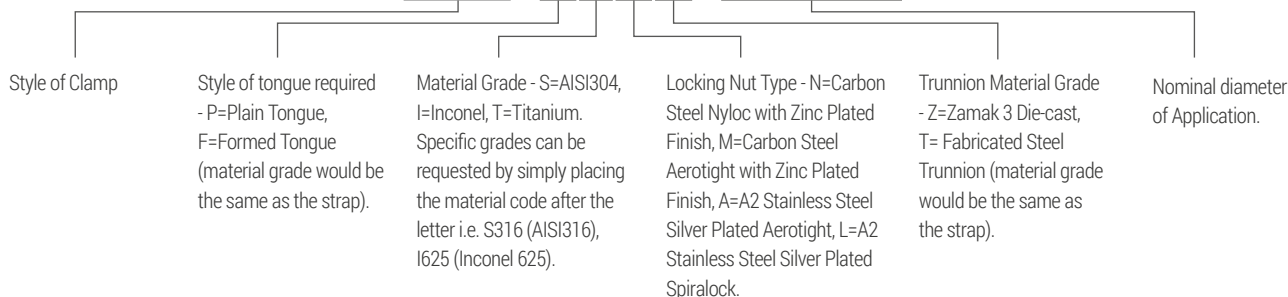
In applications where changes in temperature and pressure cause hose lines to expand and contract the NX6 constant torque band clamp can be utilised. The addition of a spring and all metal locking nut assures that the clamps adjust accordingly to provide constant tension on the hose.

POPULAR STYLES



PART NUMBER CONFIGURATION

NX2 - SPZN - 100mm



HEAVY DUTY BAND CLAMPS

Used extensively on exhaust systems, silencers and fuel tanks our Heavy Duty range of Band Clamps provide increased strength for the most robust application.

Sharing many of the same qualities of the T-bolt Hose Clamps the increase in material thickness and width allows the use of larger fittings and in turn higher tightening torque. With material thicknesses ranging from 1.22mm to 3.0mm, widths of 25mm to 76mm & over 50 different styles there is a solution for any application.

Where space constraints do not allow the use of T-bolt fittings a Capscrew & Trunnion style (NX14) can be utilised with the added benefit of all fittings being removable and replaceable. This style can also encompass a quick release machined trunnion (NX14QR), which reduces the fitting time in applications where the clamp is removed and reapplied numerous times.

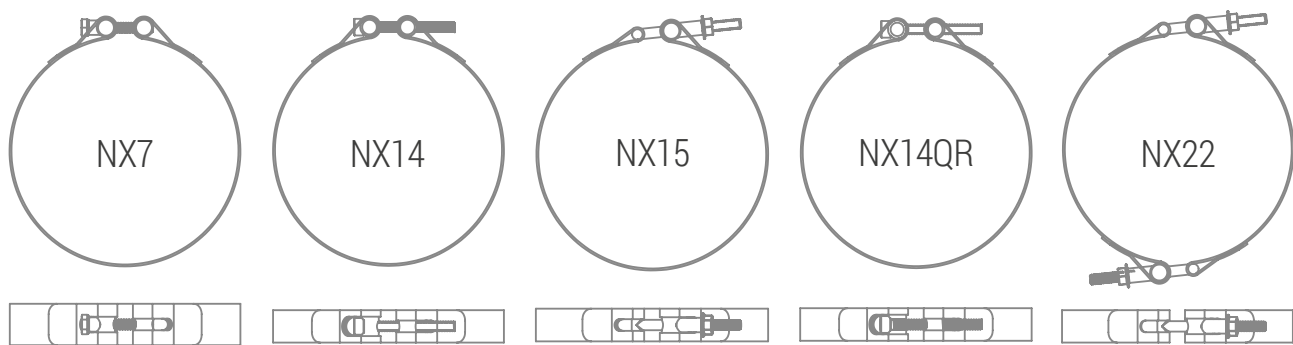
The possibilities are endless with quick release levers, latches, links and hinges all available. If any further help is required then a member of our Technical Team is always on hand to advise on the correct product.



HEAVY DUTY BAND CLAMP | SPECIFICATION

There are over 50 different styles manufactured, some of the most popular can be seen below along with further technical information and part number configuration.

POPULAR STYLES



TECHNICAL INFORMATION

Diameter Range	Materials available	Application Temperatures	Maximum Bolt Tightening Torque
40mm to 2500mm	CR4 (finishes available), Aluzink, Aludip, AISI304, AISI316, AISI316Ti, AISI321, Inconel 625, Inconel 718 & Titanium 6AL4V.	Up to 1000°C	M8 AISI302 - 20.3N/m M8 Grade 8.8 - 25.3N/m M8 Grade 12.9 - 42.7N/m M10 Grade 8.8 - 50.9N/m M10 Grade 12.9 - 86.8N/m

NX15-W25-SPTN-M8-100mm

Style of Clamp	Strap width (mm)	Material Grade - S=AISI304, I=Inconel, T=Titanium. Specific grades can be requested by simply placing the material code after the letter i.e. S316 (AISI316), I625 (Inconel 625).	Style of tongue required - P=Plain Tongue, F=Formed Tongue (material grade would be the same as the strap).	Trunnion Material Grade - Z=Zamak 3 Die-cast, T= Fabricated Steel Trunnion (material grade would be the same as the strap). I625 (Inconel 625).	Locking Nut Type - N=Carbon Steel Nyloc with Zinc Plated Finish, M=Carbon Steel Aerotight with Zinc Plated Finish, A=A2 Stainless Steel Silver Plated Aerotight, L=A2 Stainless Steel Silver Plated Spirallock, S= A2 Stainless Steel Staytite. *(not required with certain styles e.g. Capscrew/Trunnion Types).	Bolt thread size *(M8 & above not available with strap widths below 22mm).	Nominal diameter of Application. *(range will vary dependant on nominal diameter and style). *Part number configurations can change slightly depending on the style chosen; a member of our technical team can advise.
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TANK STRAPS

Neophix Tank Straps are used extensively throughout the commercial vehicle, passenger transport and earth moving equipment industries. The range covers a wide spectrum of applications - the mounting of fuel tanks, reservoirs, alternators, silencers and EGR devices to name but a few.

Straps can be manufactured in a variety of designs and we can also offer a wide range of securing bolts, although the most popular is our T-Bolt Style 'T100' which, being captive in a slotted loop, can swivel through more than 100° and thus eliminate the risk of fracture through vibration. There are over 50 different configurations of fastener types currently manufactured with the number continually rising as we continue to develop styles to satisfy customer requirements. Some of our more popular styles can be seen on this page.

As with all our products the straps can be manufactured using a number of different materials such as AISI304, AISI316, AISI316Ti, Carbon Steels (various plating & powder coating available), titanium & Inconel. Nitrile extrusions can also be applied to reduce vibration and protect even the most delicate of applications.

There is no restraint on the length of strap produced, for certain applications some styles can be joined together to produce the desired length.



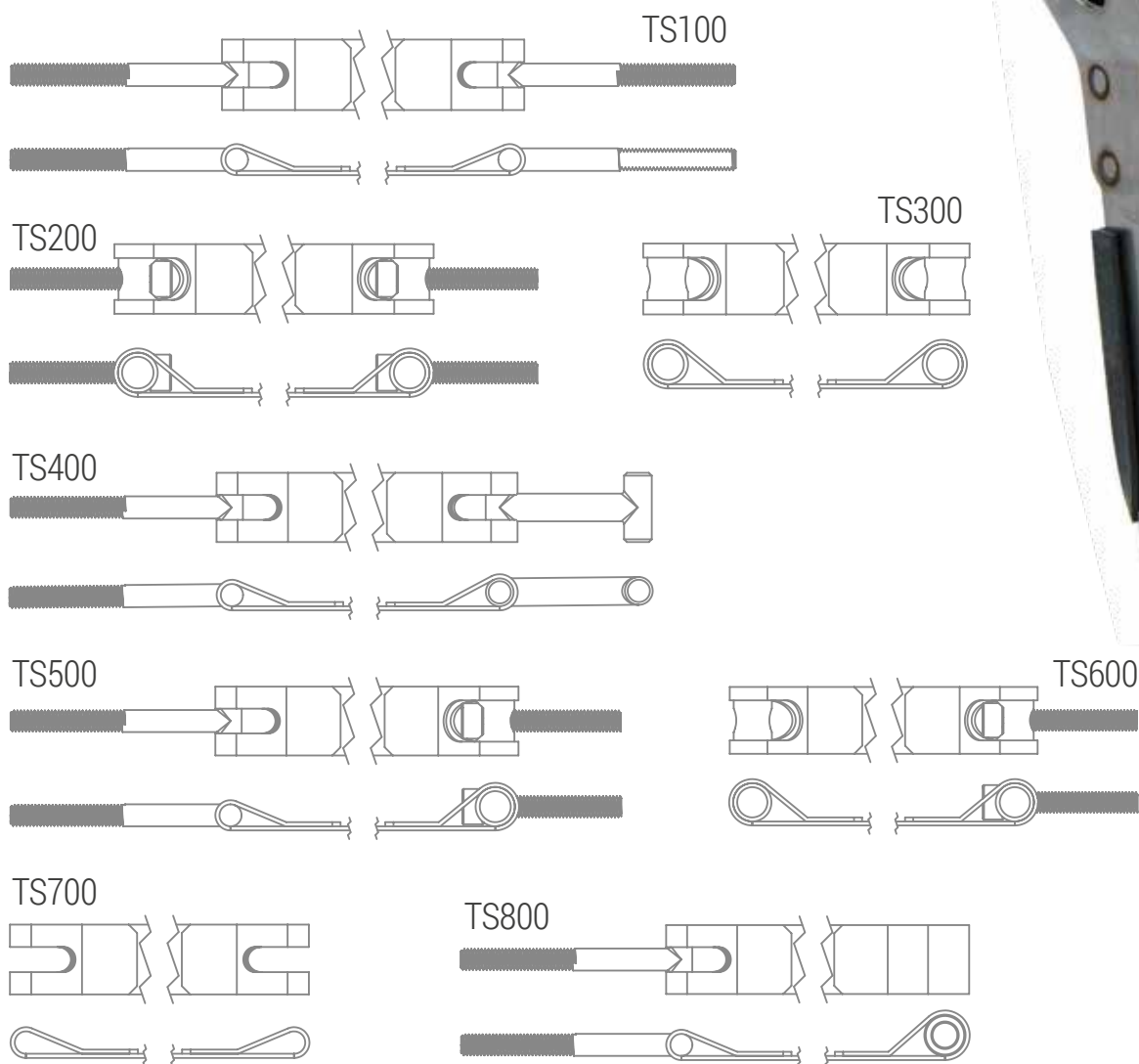
TECHNICAL INFORMATION

Grade	Tensile Strength (Mpa) min	Yield Strength 0.2% Proof (Mpa) min	Elongation (% in 50mm) min	Hardness Brinell (HB) max	Why Use?
304 / 1.4301	515	205	40	201	Excellent forming & bending characteristics, great corrosion resistance.
316 / 1.4404	485	170	40	217	When higher resistance to pitting and crevice corrosion is required, in chloride environments.
321 / 1.4541	515	205	40	217	When higher resistance to temperatures of around 600-900°C is needed. 321 has higher hot strength.
316Ti / 1.4571	500	200	40	215	Titanium stabilised grade 316, when a higher operating temperature and resistance to pitting and crevice corrosion is required.

TANK STRAPS | SPECIFICATION

In addition to our existing ranges, Neophix are equipped to produce special purpose Tank Straps to meet customers' individual requirements. Our Design Engineers have many years experience in the industry and are always available to give customers advice on the design of clamps for individual applications.

POPULAR STYLES



MOUNTING BANDS

Whilst the most widespread application for Neophix Mounting Bands is the mounting of air cleaners on commercial vehicles the Neophix designs can readily be adapted for various uses on many other types of equipment such Diesel Oxidation Chambers (DOC), Catalytic Converters, Generators & Compressors.

Mounting Bands can be manufactured using a range of different materials and finished to meet any requirement. The most popular construction is a CR4 steel band and foot bracket secured with the use of spotwelding on the three contact areas and finished with an electrostatic powder coating.

As well as the parts shown on this page they can be supplied in a comprehensive range of diameters and a variety of base bracket designs to meet customers' individual requirements. If you have an application which requires a part different in size to the ones shown please contact a member of our technical team who will be able to advise the correct part.



TECHNICAL INFORMATION

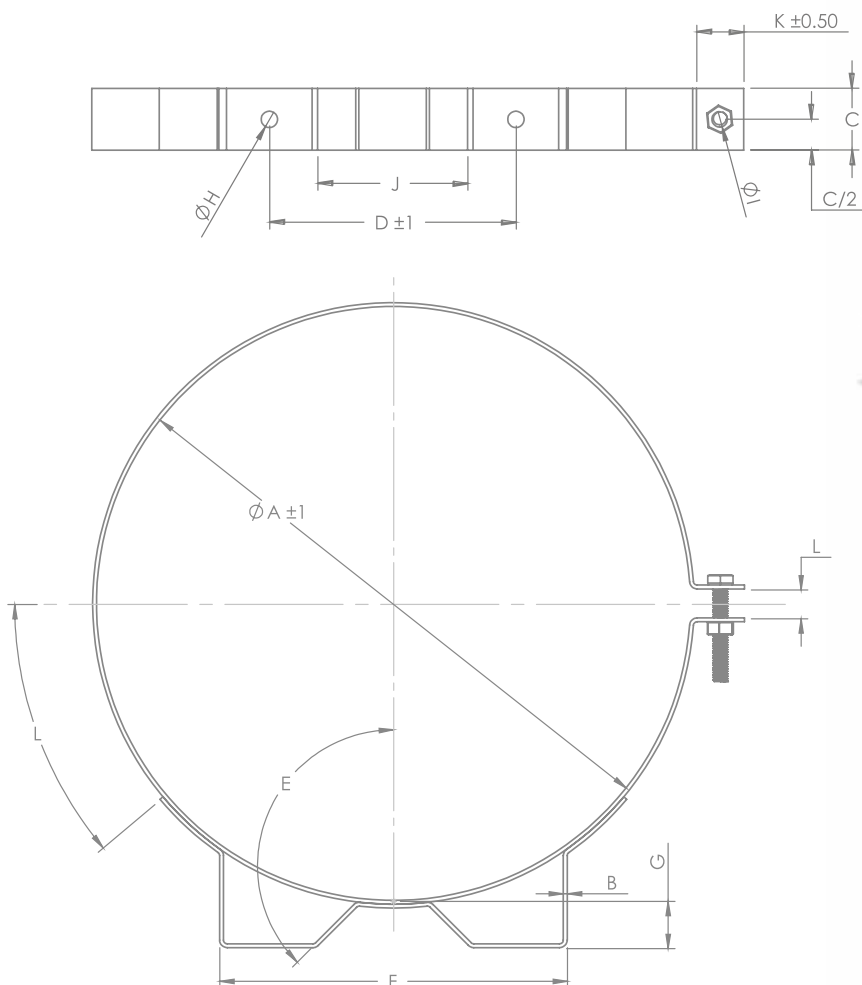
Part Number	A	B	C	D	E	F	G	H	I	J	K	L	Electrostatic Coating	Hexbolt
NMB100	177.8	2.0	20.0	111.2	135	137.0	13.9	10.0	8.5	24	26	28	Black	M8x40mm
NMB101	203.2	2.0	32.0	108.0	135	159.0	22.3	10.3	8.5	25	26	22	Marine Grey	M8x40mm
NMB102	307.5	2.0	32.0	152.4	135	180.0	24.5	9.0	8.5	97	26	40	Black	M8x40mm
NMB103	355.6	3.0	32.0	203.2	135	279.5	26.9	12.0	10.6	30	30	28	Black	M10x50mm
NMB104	408.0	3.0	32.0	254.0	135	279.5	22.3	10.3	10.6	83	30	28	Black	M10x50mm
NMB105	408.0	3.0	32.0	203.2	135	279.5	22.3	10.3	10.6	83	30	28	Black	M10x50mm
NMB106	408.0	3.0	32.0	203.2	135	279.5	22.3	10.3	10.6	83	30	28	Marine Grey	M10x50mm
NMB107	460.2	3.0	38.0	203.2	135	279.5	26.9	12.0	10.6	30	30	43	Black	M10x50mm
NMB108	460.2	3.0	38.0	203.2	135	279.5	26.9	12.0	10.6	30	30	43	Black	M10x50mm
NMB109	460.2	3.0	38.0	400.0	135	460.0	6.0	14.0	10.6	150	30	0	Black	M10x50mm
NMB110	545.7	3.0	50.0	544.0	135	544.0	6.0	14.0	10.6	180	30	0	Black	M10x50mm
NMB111	460.2	3.0	38.0	279.5	135	279.5	26.9	12.0	10.6	80	30	40	Black	M10x50mm
NMB112	203.2	2.0	32.0	159.0	135	159.0	22.3	10.3	8.5	25	26	23	Black	M8x40mm

MOUNTING BANDS | SPECIFICATION

The drawing below and the corresponding table show the most popular style & sizes of Mounting Bands that we manufacture.

The material thickness increases as the diameter does; ensuring that the Mounting Bands remain strong enough for more robust applications where weight would otherwise be an issue.

PART DIAGRAM



CONNECTING CLAMPS

There are two Neophix Connecting Clamp ranges - both designed originally to ensure leak proof joints in exhaust pipes but they are suitable for many other pipe work applications.

"Neoflex" Clamps are used to lap joint flexible metallic hose to a rigid pipe. Incorporated in each clamp is a light alloy sealing strip which is individually machined to fit exactly to each application thus ensuring a leak proof fit, this ingenious sealing strip is exclusive to the Neoflex Clamp.

The "Neoflex" Clamp comprises a 76.2mm wide (3") in 0.4mm thick type 304 stainless steel. It has a stepped form running it's full circumference which is 5mm larger than the nominal diameter, together with the individually machined sealing strip ensures a full 360° location and seal.



CONNECTING CLAMPS | SPECIFICATION



The Clamp is secured by 2 high tensile socket head cap screws (Zinc Plated) which pass through a clear cylindrical trunnion at one side and a tapped cylindrical nut on the other. For applications in confined spaces where reaching the cap screws could prove difficult the trunnions can be simply reversed to ensure quick and easy fitting. The Neoflex Clamp can be supplied in any diameter from 2.5" upwards. A fully Stainless Steel version is also available fitted with 18/8 cap screws, cylindrical nuts and trunnions. Imperial or metric fittings are optional.

The "Neorigid" Clamp comprises of a 76.2mm x 0.91mm band but without the stepping of the Neoflex Clamp. The Neorigid Band is available in both stainless steel and zinc plated mild steel as shown in the part configuration adjacent. Both parts can also be manufacturing using grades 316 & 316Ti as well as more exotic grades such as Inconel 625 & 6AL 4V Titanium.

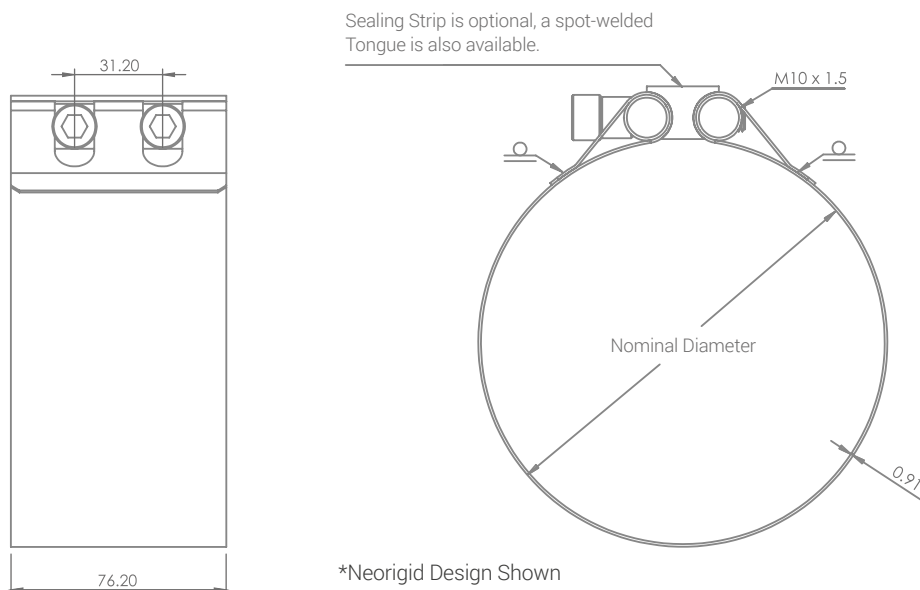


PART NUMBER CONFIGURATION

The “Neoflex” Clamps are designated NF, whilst the “Neorigid” Clamps are designated NR.

Product Reference	Product Description
NF100-Dia	AISI304 Bright Annealed Stainless Steel band with 230M07 Zinc plated fittings
NF200-Dia	AISI304 Bright Annealed Stainless Steel band with AISI303 Trunnions & 18/8 Capscrews
NR100-Dia	Zinc Plated CR4 Mild Steel Band with 230M07 Zinc plated fittings
NR200-Dia	AISI304 Stainless Steel band with AISI303 Trunnions & 18/8 Capscrews
NR300-Dia	AISI304 Stainless Steel band with 230M07 Zinc plated fittings

Dia = The nominal outside diameter of the pipe.



P-CLIPS

Neophix P-Clips can be manufactured to various sizes, shapes and specifications and come with the option of having a 1.5mm thick Nitrile lining to improve grip, reduce vibration and protect delicate applications.

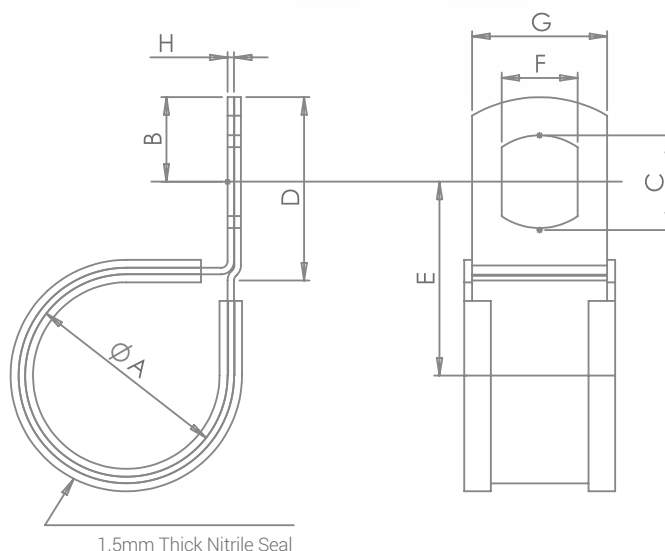
They are suitable for many kinds of applications such as pipe work, ducting, cables and hoses and can be manufactured from a variety of different steels.

If you require any further information please contact a member of our technical team who can advise on the correct part to suit your requirements.



TECHNICAL INFORMATION

Product Reference	A	B	C	D	E	F	G	H
NXPC12.7	12.7	12.7	12.7	27.0	22.2	10.3	19.05	0.91
NXPC14.4	14.4	12.7	12.7	27.0	25.4	10.3	19.05	0.91
NXPC16.7	16.7	12.7	12.7	27.0	22.6	10.3	19.05	0.91
NXPC19.0	19.1	12.7	12.7	27.0	23.8	10.3	19.05	1.22
NXPC21.0	21.0	12.7	12.7	27.0	24.6	10.3	19.05	1.22
NXPC23.0	23.0	12.7	12.7	27.0	25.8	10.3	19.05	1.22
NXPC24.2	24.2	12.7	12.7	27.0	26.2	10.3	19.05	1.22
NXPC27.0	27.0	12.7	12.7	27.0	27.8	10.3	19.05	1.22
NXPC31.3	31.3	15.9	17.4	33.3	32.9	14.3	25.4	1.22
NXPC38.1	38.1	15.9	17.4	33.3	36.5	14.3	25.4	1.22
NXPC39.3	39.3	15.9	17.4	33.3	36.9	14.3	25.4	1.22
NXPC44.5	44.5	15.9	17.4	33.3	39.7	14.3	25.4	1.22
NXPC50.8	50.8	15.9	17.4	33.3	42.8	14.3	25.4	1.22
NXPC57.2	57.2	15.9	17.4	33.3	46.0	14.3	25.4	1.22
NXPC69.9	69.9	15.9	17.4	33.3	52.4	14.3	25.4	1.22
NXPC73.0	73.0	15.9	17.4	33.3	54.0	14.3	25.4	1.22
NXPC90.5	90.5	15.9	17.4	33.3	62.7	14.3	25.4	1.22
NXPC63.5	63.5	15.9	17.4	33.3	46.8	14.3	25.4	1.22
NXPC41.9	41.9	15.9	17.4	33.3	36.0	14.3	25.4	1.22

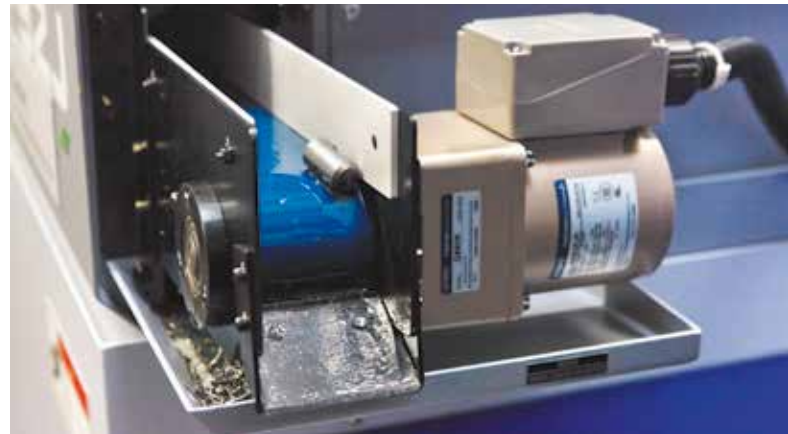


BESPOKE PRECISION TURNING

At Neophix we are constantly investing in the latest technology to not only improve our production but to ensure that our company is self sufficient for our fastening requirements.

To date all of our component parts are manufactured in-house using our Star Sliding Head Lathes with multi axis power driven tooling well known throughout the industry for their reliability, precision & flexibility to machine even the most complex of parts.

Our machines encompass "lights out technology" giving us the added benefit of running our machine shop unmanned 24 hours per day and as such we have the ability to manufacture & supply precision turned components in high volumes.



QUALITY ASSURANCE

Neophix has been manufacturing clamps and fastenings for over 40 years and is Britain's longest established manufacturer and market leader in this "niche" market. Quality is the cornerstone of our philosophy and has been the main contributor to our success and longevity.

Although often a small and relatively inexpensive part of the overall equipment their reliability and functionality are of paramount importance. All materials used by Neophix are certified and manufacturing quality is closely monitored throughout, using a combination of in process and final inspection testing. Neophix operates a stringent quality system, from the initial design conception right through the manufacturing process to final packing and indeed despatch.





COMPUTER AIDED DESIGN AND PRODUCTION CONTROL

Our design team has over 40 years experience in the design and manufacturing techniques, in fact we are saying that. The latest 3D design software and database techniques are used to ensure the optimum effective and efficient designs are generated. Where required F.E.A. Techniques can be applied to optimise clamp design and prototypes can be fully tested at our laboratory. All design and manufacturing details are entered into our integrated business system and customer requirements are added to our bespoke MRP system which generates material and manufacturing demand.



ACCREDITATIONS

Accredited with ISO9001 & the automotive standard TS16969 as well as holding several second part approvals from an impressive world class customer base.





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If you have any queries regarding this brochure or need further information on any of our products, please contact us using the details below.

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