



Snap-Trap[®]+ Tube Clamp Systems

Instrumentation Tubing Solutions

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



ENGINEERING YOUR SUCCESS.

Snap-Trap[®]+ Tube Clamps

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WARNING

FAILURE, IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

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Introduction:

Snap-Trap®+ Tube Clamp Systems

Snap-Trap®+ is an innovative clamp, designed to radically simplify the installation and maintenance of instrumentation tubing. It is an ideal solution for customers who are looking at corrosion resistant alloys to extend field operation for instrumentation equipment. The tube clamp perfectly complements Parker's corrosion resistant alloy offering of two ferrule compression fittings and instrumentation grade tube.

Its unique one-piece design, primarily manufactured from 6Mo, allows quick and easy fitting to cable trays, brackets and angle iron alike. The Snap-Trap®+ will fit slotted cable trays with dimensions as indicated on page 9. It can also be mounted to any other design of trays with the aid of brackets as shown in the examples on page 8.

Snap-Trap®+ fully complies with the Norwegian offshore standards "NORSOK". Section 7.3 of the NORSOK standard Z-CR-010 which covers the installation of instrumentation tubing states that: Tubing clamps shall be made of non-corrosive material, stainless steel AISI 316 or flame retardant plastic.



Snap-Trap®+ Tube Clamps

Snap-Trap®+ is a clamp which radically simplifies the installation and Values

- Simple and quick to assemble
- Complies fully to NORSOK standard Z-CR-010
- Compact clamp in 6Mo (316 also available)
- No loose parts
- Snap-Trap®+ tubing clamp is erected without using traditional tools - (No slippage of spanners on nut or bolt hexagons)
- No bolts to be fastened to the ladder/ tray etc
- No additional spare parts need to be ordered
- Snap-Trap®+ tubing clamp is available in 5 sizes which covers both metric and imperial tubing
- Minimal contact points reduces the risk of crevice corrosion
- Significant reduction in installation time < 2 minutes

The arm grips tubes by means of a ratchet-style mechanism - there are no nuts or bolts to tighten. A tube can be clamped in a second - and the flexibility of this 'snap' action allows Snap-Trap®+ to accommodate two sizes of tube per clamp. The action locks tubing securely; steel would have to shear before it could break free. A tool is available for ensuring the ratchet closes to the optimum tightness.



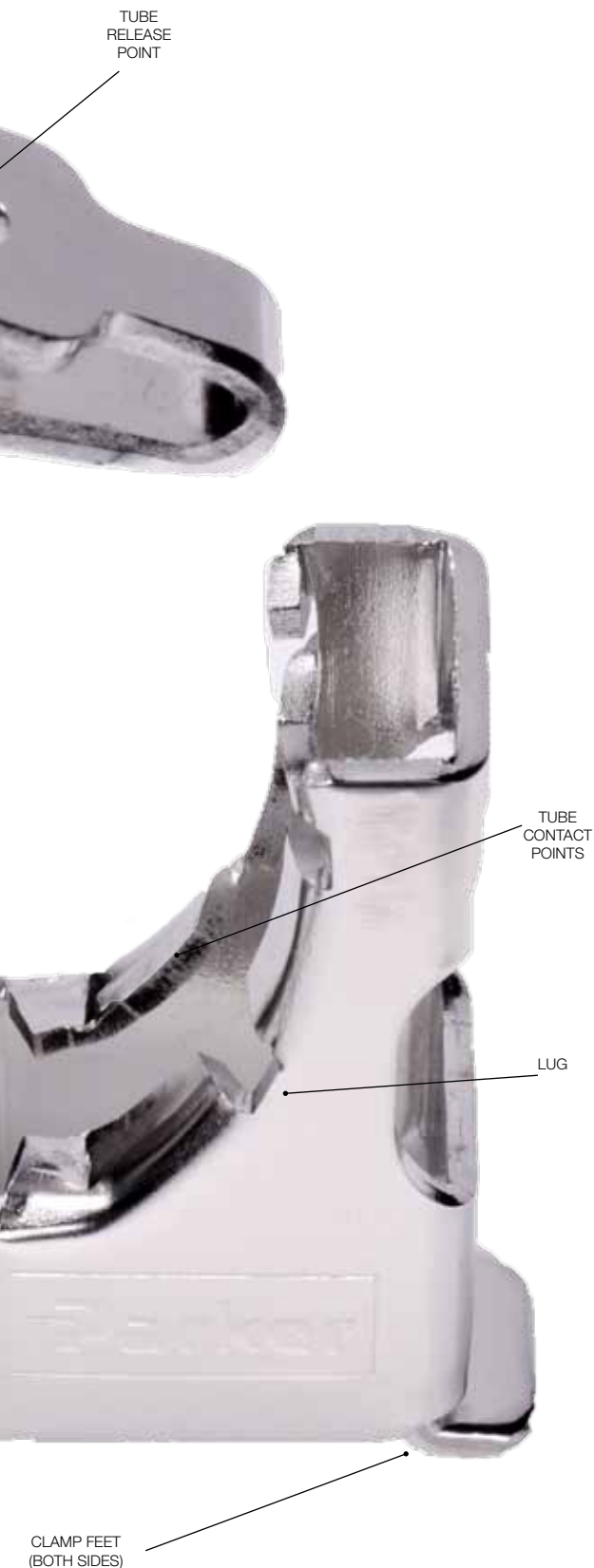
Snap-Trap®+ delivers immediate savings, minimizing purchasing overheads and cutting assembly labour costs by as much as 80%! Savings multiply throughout the life-cycle of Snap-Trap®+:



Snap-Trap®+ mounts directly on popular field ladders and trays. A hinge allows the feet to move together before locking the clamp in place. Repositionable in seconds. Repairs, refurbishment or routine maintenance may be accomplished much quicker.



maintenance of instrumentation tubing.



Parker Innovation

Our company philosophy Smarter, Faster, Safer, Cleaner really comes down to our belief that we can make the world a better, safer place through engineering excellence. Whether you want to reduce energy usage, reduce pollution and leakages, or increase your environmental standards, Parker is working on a unique solution that can help you achieve your goals.

Smarter:

Designed by an offshore contractor; Snap-Trap®+ is a field proven solution with over one million installed worldwide.

Faster:

Using Snap-Trap®+ means quicker installation, compared to traditional style clamps on the market, meaning less downtime

Safer:

Choosing smarter solutions like Snap-Trap®+, Parker grade tube and instrumentation fittings as well as selecting the correct materials for the application means a much safer operating environment.

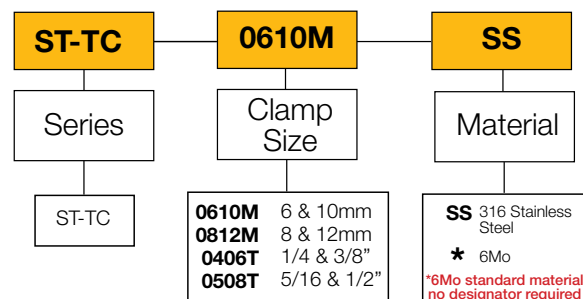
Cleaner:

Corrosion between tubing and the support system is avoided

How to Order - Tube Clamps

The correct part number is easily derived from the following number sequence.

The three product characteristics required are coded as shown opposite.



WHAT COULD CORROSION COST YOU?

According to a US report, corrosion costs industry **\$276 billion every year**. Understanding how to control it is paramount to running a safe, productive and cost-effective operation.

What is corrosion?

Corrosion is the deterioration of a substance or its properties because of a reaction with its environment. There are various kinds of corrosion, including uniform, galvanic, crevice, pitting, intergranular, and stress. Of these, crevice and pitting are among the most prevalent and problematic – particularly for marine-based industries.



Crevice corrosion

This is an electrochemical oxidation-reduction process, which occurs within localised volumes of stagnant solution trapped in pockets, corners or beneath a shield (seal, deposit of sand, gasket or fastener, for instance). It is considered much more dangerous than uniform corrosion as its rate can be up to 100 times higher.

Pitting corrosion

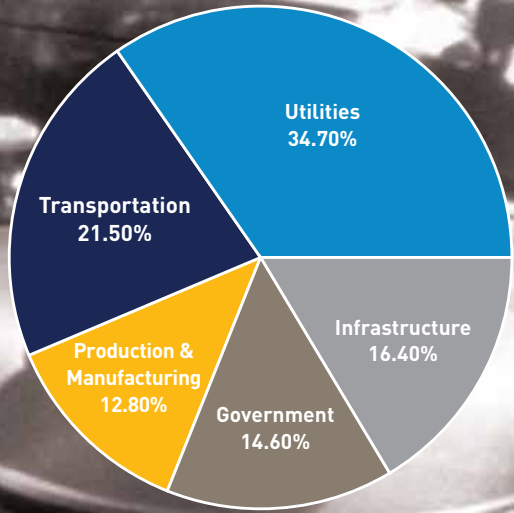
Pitting is characterised by a localised attack in the form of deep and narrow holes that can penetrate inwards extremely rapidly while the rest of the surface remains intact. It is most aggressive in solutions containing chloride, bromide or hypochlorite ions. The presence of sulphides and H₂S can also promote it. Stainless steels are particularly sensitive to pitting corrosion in seawater environments.

Costs derived from corrosion

- Replacing damaged equipment
- Overdesign
- Preventive maintenance
- Shutdown
- Contamination
- Decreased efficiency
- Failure of adjacent equipment
- Human lives



- Hazardous Materials Transportation
 - Ships & Aircrafts
 - Railroad & Vehicles
- Chemical, Petrochemical & Pharmaceutical
 - Food Processing
 - Pulp & Paper
 - Oil & Gas Exploration
 - Petroleum Refining
- Defence
 - Nuclear Waste Storage



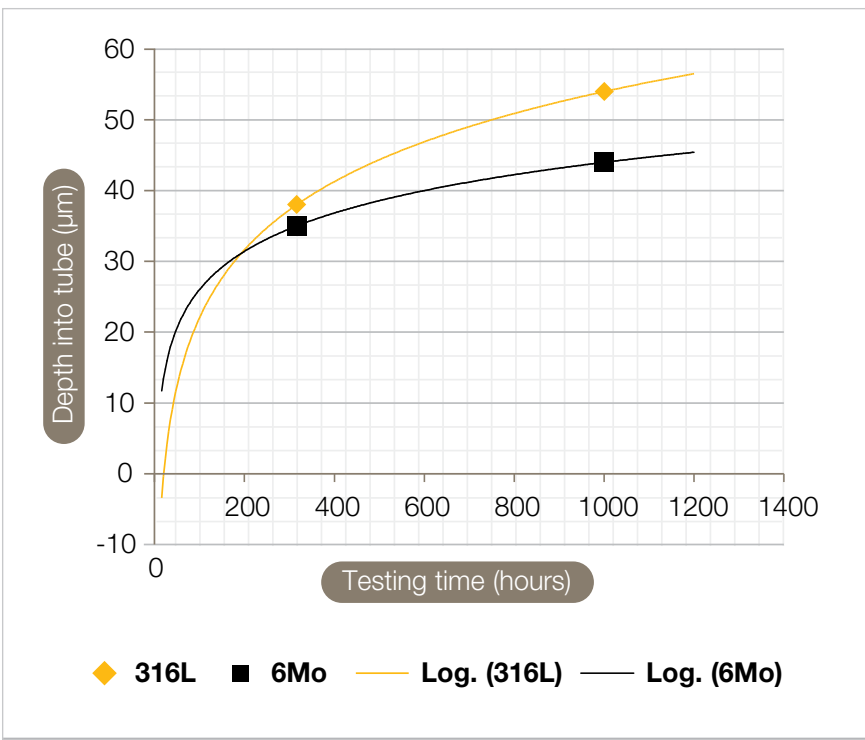
- Drinking Water & Sewerage
 - Gas Distribution
 - Electrical Utilities
- Gas & Liquid Transmission
 - Airports
 - Waterways & Ports



Corrosion control

Certain measures, such as avoiding stagnant areas, installing draining systems or using cathodic protection, can help avoid both crevice and pitting corrosion. Perhaps more critical is choosing the best possible components for the given application and environment.

Parker 6Mo Snap-Trap[®]+ tube clamps have minimal tube contact points, making them a much better solution for avoiding crevice corrosion compared to traditional clamps, particularly in marine environments. And **Parker 6Mo tubing** is more resilient to uniform and pitting corrosion, with every batch tested as per the ASTM G48 standard. Together with Parker's 6Mo fittings, they give you far greater confidence in your long-term corrosion control.



Tested, trusted

- An independent testing house performed a salt spray test of Parker tubing and clamps of different sizes and material combinations
- The test was performed according to ASTM B-117 / ISO 9227 which is testing in salt fog containing 5% NaCl and has a temperature of 35°C
- The testing time was 312 hours (13 days). This corresponds to about 5 years of vibration on an offshore platform. A second test lasting 1000 hours was also conducted as a comparison
- The 6Mo and 316L clamps and tube were attached to a common canal of AISI 316 and exposed to vibrations during the whole testing period
- The results clearly show no ill effects on the 6Mo tube from the clamp regardless of time spent under vibration

Snap-Trap®+ Tube Clamps

Clamps, Keys, Brackets and Cable Trays

Description	Size*	Part Number**
Tube Clamp to suit 6 & 10mm tube	6mm & 10mm	ST-TC0610M
Tube Clamp to suit 8 & 12mm tube	8mm & 12mm	ST-TC0812M
Tube Clamp to suit 1/4" & 3/8" tube	1/4" & 3/8"	ST-TC0406T
Tube Clamp to suit 5/16" & 1/2" tube	5/16" & 1/2"	ST-TC0508T
Snap-Trap®+ assembly key for ST-TC	Small clamp key	TC-01-KEY
Small bracket for use with ST-TC Clamps	75 x 40mm	ST-MC-S
Double bracket for use with ST-TC Clamps	75 x 75mm	ST-MC-D
Side rail cable ladder bracket	75 x 53mm	ST-TUB

* Large clamps available on request with sizes up to 25mm & 1"

** Please note that these clamps come in 6Mo as standard, to order stainless steel version please add "-SS" suffix to the end of the part number



Snap-Trap®+ Tube Clamp



Snap-Trap®+ Tube Clamp



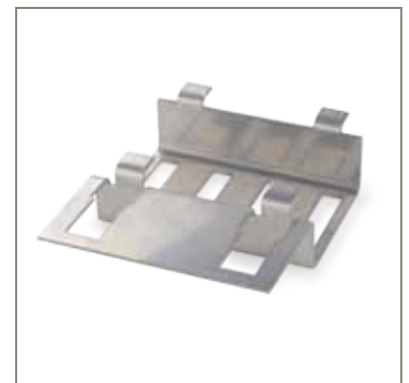
Snap-Trap®+ Assembly Key



Small Bracket



Double Bracket



Side Rail Ladder Bracket

Cable Trays 20mm high x 3 metres long

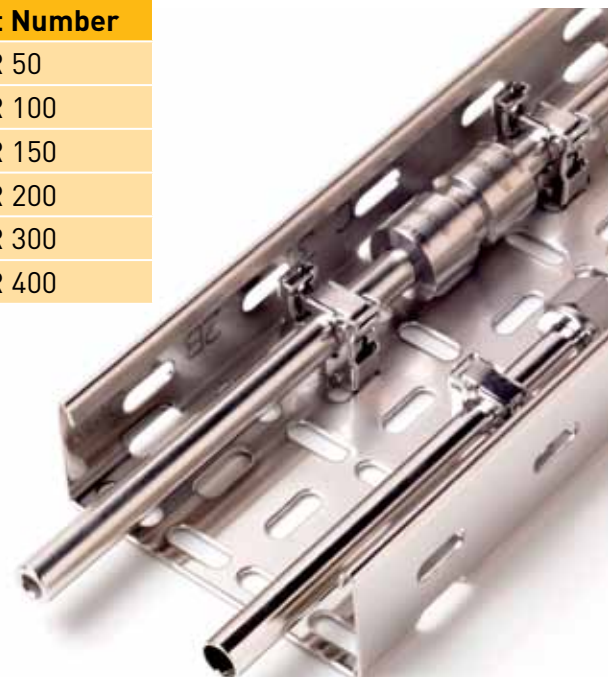
Description	Size	Part Number
CT Type Cable Tray	50mm w x 20mm h	KB 50/20
CT Type Cable Tray	100mm w x 20mm h	KB 100/20
CT Type Cable Tray	150mm w x 20mm h	KB 150/20
CT Type Cable Tray	200mm w x 20mm h	KB 200/20
CT Type Cable Tray	300mm w x 20mm h	KB 300/20
CT Type Cable Tray	400mm w x 20mm h	KB 400/20
CT Type Cable Tray	500mm w x 20mm h	KB500/20
CT Type Cable Tray	600mm w x 20mm h	KB600/20

Cable Trays 40mm high x 3 metres long

Description	Size	Part Number
CT Type Cable Tray	50mm w x 40mm h	KB 50/40
CT Type Cable Tray	100mm w x 40mm h	KB 100/40
CT Type Cable Tray	150mm w x 40mm h	KB 150/40
CT Type Cable Tray	200mm w x 40mm h	KB 200/40
CT Type Cable Tray	300mm w x 40mm h	KB 300/40
CT Type Cable Tray	400mm w x 40mm h	KB 400/40

Cable Trays 40mm high with return flange x 3 metres long

Description	Size	Part Number
CTR Type Cable Tray with return flange	50mm w x 40mm h	KBR 50
CTR Type Cable Tray with return flange	100mm w x 40mm h	KBR 100
CTR Type Cable Tray with return flange	150mm w x 40mm h	KBR 150
CTR Type Cable Tray with return flange	200mm w x 40mm h	KBR 200
CTR Type Cable Tray with return flange	300mm w x 40mm h	KBR 300
CTR Type Cable Tray with return flange	400mm w x 40mm h	KBR 400



Snap-Trap®+ Tube Clamps

Accessories



Pan Head Screw



Locking Bolt



Hexagon Head Set Screw



Plain Nut



Flange Nut



Flat Washer



Lock Washer



Star Washer

Description	Size	Part Number
Locking bolt	M6 x 16mm long	M6LBX16-316
Locking bolt	M6 x 20 mm long	M6LBX20-316
Pan head screw	M6 x 16mm long	M6PHSX16-316
Pan head screw	M6 x 20mm long	M6PHSX20-316
Pan head screw	M6 x 25mm long	M6PHSX25-316
Pan head screw	M6 x 30mm long	M6PHSX30-316
Hexagon head set screw	M6 x 16mm long	M6HHSSX16-316
Hexagon head set screw	M6 x 20mm long	M6HHSSX20-316
Hexagon head set screw	M6 x 25mm long	M6HHSSX25-316
Plain nut	M6	M6PLNUT-316
Flange nut	M6	M6FLNUT-316
Flat washer	M6	M6FLWASHER-316
Lock washer	M6	M6LKWASHER-316
Star washer	M6	M6STWASHER-316

Weld and Tray Rail Brackets

Description	Size	Part Number	Length "L" (mm)
Weld rail	44 x 27mm with 13mm return	ST-WR-0	57
Weld rail	44 x 27mm with 13mm return	ST-WR-1	217
Weld rail	44 x 27mm with 13mm return	ST-WR-2	297
Weld rail	44 x 27mm with 13mm return	ST-WR-3	3000
Tray rail	44 x 13mm with 13mm return	ST-TR-0	97
Tray rail	44 x 13mm with 13mm return	ST-TR-1	137
Tray rail	44 x 13mm with 13mm return	ST-TR-2	197
Tray rail	44 x 13mm with 13mm return	ST-TR-3	817
Splice plate	45 x 20mm x 200mm long	SP-SM/20	20
Splice plate	45 x 40mm x 200mm long	SP-SM/40	40



Weld Rail



Tray Rail



Splice Plate

Snap-Trap[®]+ Tube Clamps

Assembly Instructions



To open Snap-Trap[®]+

- Open clamp fully by simply squeezing the clamp at point A1 by hand
- Insert clamp feet into the slots on the bracket or trays
- Once feet are in position, simply snap the two clamp sides together
- Instructions can also be viewed on [YouTube.com/ParkerIPDE](https://www.youtube.com/ParkerIPDE)



To assemble Snap-Trap[®]+

- Position tubing into the clamp and hook the assembly key at the back of the clamp
- Apply pressure until the clamp top plate engages behind the lugs on the lug side of the clamp. Ensure that the top plate is located firmly against the tubing
- The top plate is designed to cater for any tolerance variants within the tube



Additional notes

- When mounting clamps in any tubing run, ensure all of the clamps are mounted with their hinges facing the same way. This will ensure there is no twist transmitted to the tubing run.

Time savings: on a witness trial against competitive systems, 3 tube runs requiring 6 Snap-Trap[®]+ fittings were completed in less than 2 minutes - compared with over 5 and 11 minutes - a remarkable gain in productivity.

	Clamp A	Clamp B	Snap-Trap [®] +
# parts for one tube size	12	7	1
# parts for range of tubing	29	12	2
typical assembly time for 6 clamps	11m 35s	5m 17s	1m 55s



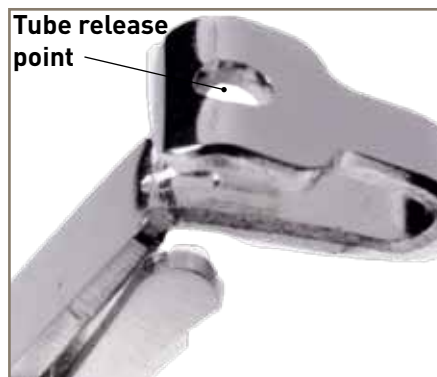
Scan this QR code to view
YouTube assembly videos

Disassembly Instructions



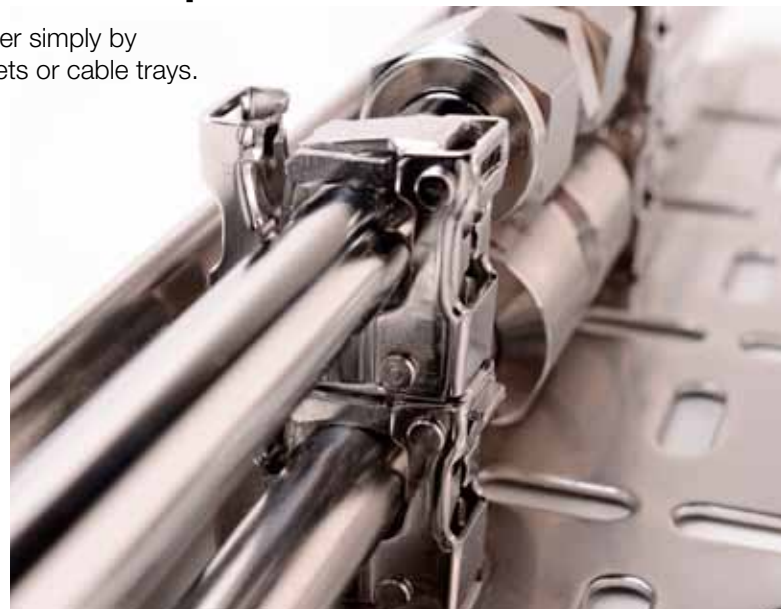
To disassemble Snap-Trap®+

- Using the assembly key, insert centre pin into the tube release point on the arm
- Apply pressure to ease the top plate away from the tube and the clamp lugs



To stack mount the Snap-Trap®+ tube clamp

Snap-Trap®+ tubing clamps can be stack mounted on to each other simply by following the same instructions as those for mounting on to brackets or cable trays.



Snap-Trap®+ Tube Clamps

Training - Small Bore Expert

The Right Tube + The Right Tubing Support + The Right Fitting + A Parker Trained Fitter = A High Integrity Solution

The course has been developed as an upgrade and replacement to our industry leading Safety at Work Programme, providing material that is relevant to your on site engineers.

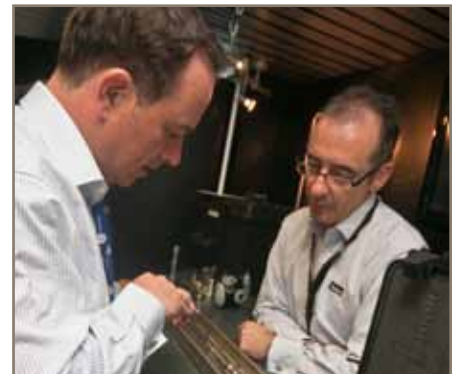
Some of the advantages over our existing programme are:

- Greater knowledge of small bore tubing systems
- Increased product familiarity
- Improved selling and presentation ability
- Increased skills and confidence in dealing with small bore systems
- Ability to deliver chargeable training

The benefits that your trained engineer will get, include:

- Increased understanding of their own systems and installation practices
- Improvements in the safety and integrity of their small bore tubing system
- Overall asset integrity improvement

This will be the only licensed and certified training course that we will allow to be run with our support



Notes

Parker Worldwide

AE – UAE, Dubai
Tel: +971 4 8875600
parker.me@parker.com

AR – Argentina, Buenos Aires
Tel: +54 3327 44 4129

AT – Austria, Wiener Neustadt
Tel: +43 (0)2622 23501-0
parker.austria@parker.com

AT – Eastern Europe,
Wiener Neustadt
Tel: +43 (0)2622 23501 970
parker.easteurope@parker.com

AU – Australia, Castle Hill
Tel: +61 (0)2-9634 7777

AZ – Azerbaijan, Baku
Tel: +994 50 2233 458
parker.azerbaijan@parker.com

BE/LX – Belgium, Nivelles
Tel: +32 (0)67 280 900
parker.belgium@parker.com

BR – Brazil, Cachoeirinha RS
Tel: +55 51 3470 9144

BY – Belarus, Minsk
Tel: +375 17 209 9399
parker.belarus@parker.com

CA – Canada, Grimsby, Ontario
Tel +1 905-945-2274
ipd_canada@parker.com

CH – Switzerland, Etoy
Tel: +41 (0) 21 821 02 30
parker.switzerland@parker.com

CN – China, Shanghai
Tel: +86 21 5031 2525

CZ – Czech Republic, Klecany
Tel: +420 284 083 111
parker.czechrepublic@parker.com

DE – Germany, Kaarst
Tel: +49 (0)2131 4016 0
parker.germany@parker.com

DK – Denmark, Ballerup
Tel: +45 43 56 04 00
parker.denmark@parker.com

ES – Spain, Madrid
Tel: +34 902 33 00 01
parker.spain@parker.com

FI – Finland, Vantaa
Tel: +358 (0)20 753 2500
parker.finland@parker.com

FR – France, Contamine s/Arve
Tel: +33 (0)4 50 25 80 25
parker.france@parker.com

GR – Greece, Athens
Tel: +30 210 933 6450
parker.greece@parker.com

HK – Hong Kong
Tel: +852 2428 8008

HU – Hungary, Budapest
Tel: +36 1 220 4155
parker.hungary@parker.com

IE – Ireland, Dublin
Tel: +353 (0)1 466 6370
parker.ireland@parker.com

IN – India, Mumbai
Tel: +91 22 6513 7081-85

IT – Italy, Corsico (MI)
Tel: +39 02 45 19 21
parker.italy@parker.com

JP – Japan, Fujisawa
Tel: +(81) 4 6635 3050

KR – South Korea, Seoul
Tel: +82 2 559 0400

KZ – Kazakhstan, Almaty
Tel: +7 7272 505 800
parker.easteurope@parker.com

LV – Latvia, Riga
Tel: +371 6 745 2601
parker.latvia@parker.com

MX – Mexico, Apodaca
Tel: +52 81 8156 6000

MY – Malaysia, Shah Alam
Tel: +603-78490800

NL – The Netherlands,
Oldenzaal
Tel: +31 (0)541 585 000
parker.nl@parker.com

NO – Norway, Stavanger
Tel: +47 (0)51 826 300
parker.norway@parker.com

NZ – New Zealand, Mt Wellington
Tel: +64 9 574 1744

PL – Poland, Warsaw
Tel: +48 (0)22 573 24 00
parker.poland@parker.com

PT – Portugal, Leca da Palmeira
Tel: +351 22 999 7360
parker.portugal@parker.com

RO – Romania, Bucharest
Tel: +40 21 252 1382
parker.romania@parker.com

RU – Russia, Moscow
Tel: +7 495 645-2156
parker.russia@parker.com

SE – Sweden, Spånga
Tel: +46 (0)8 59 79 50 00
parker.sweden@parker.com

SG – Singapore,
Tel: +65 6887 6300

SK – Slovakia, Banská Bystrica
Tel: +421 484 162 252
parker.slovakia@parker.com

SL – Slovenia, Novo Mesto
Tel: +386 7 337 6650
parker.slovenia@parker.com

TH – Thailand, Bangkok
Tel: +662 717 8140

TR – Turkey, Istanbul
Tel: +90 216 4997081
parker.turkey@parker.com

TW – Taiwan, Taipei
Tel: +886 2 2298 8987

UA – Ukraine, Kiev
Tel: +380 44 494 2731
parker.ukraine@parker.com

UK – United Kingdom,
Warwick
Tel: +44 (0)1926 317878
parker.uk@parker.com

US – USA, Cleveland
Tel: +1 216 896 3000

VE – Venezuela, Caracas
Tel: +58 212 238 5422

ZA – South Africa,
Kempton Park
Tel: +27 (0)11 961 0700
parker.southafrica@parker.com

European Product Information Centre
Free phone: 00 800 27 27 5374
(from AT, BE, CH, CZ, DE, DK, EE, EI, ES, FI, FR, IT, NL,
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Parker Hannifin Manufacturing Ltd
Instrumentation Products
Division Europe
Riverside Road
Pottington Business Park
Barnstaple, Devon, EX31 1NP
United Kingdom
Tel.: +44 (0) 1271 313131
Fax: +44 (0) 1271 373636
www.parker.com/ipd

Parker Hannifin Corporation
Instrumentation Products Division
1005 A Cleaner Way
Huntsville
Alabama
AL 35805
USA
Tel: + 1 (256) 881-2040
Fax: + 1 (256) 881-5072
www.parker.com/ipdus Catalogue 4190-STTC

