TRIMOS

C-Line 3D

CNC Portable Coordinate Measuring Machine (CMM) designed for the Workshop



Swiss Measuring Instruments

1.

PRESENTATION

Trimos new C-Line is the
the workshop. This proc



- Portable for the maxi
- Fully CNC combined
- Ethernet or wireless c
- Small footprint, for a
- Designed for worksh
- High precision, thank
- Ease of use thanks to
- Offline programming
- Logical 3D complem

Portable

At only 13,5 kg, the CN
are you required to take
in the manufacturing pro

Easy-to-Use

The C4 is the easiest pc
the intention of loweri
operate and even pro
mechanics to the softw
and ease-of-use.

Software

The C-Line is delivered
you to perform many ty
To take full advantage
Aberlink software, 3D s
measurement software a

In North America the C-Line is commercialized under the Z Cat model name.

2.

MODELS

The C4 has 4 axes motorized (X, C, Z, P), it allows high performance measurements in 3D.

Its special probing module, equipped with a vertical and horizontal stylus, considerably increases the possibilities of measurement, notably reducing the repositioning of the measurand.



3.

FLEXIBILITY AND PORTABILITY

The C4 is equipped by default with a lithium-ion battery system, which gives it an autonomy of min. 4 hours under normal conditions of use.

Moreover, in addition to a wired Ethernet connection, the C4 can be equipped with a Bluetooth or Wifi wireless device and thus offer a complete autonomy.

Its lighter weight of 13.5 kg and ergonomic handle allow the C4 to increase the autonomy, making it unequalled on its market.











4.

COMPONENTS AND ACCESSORIES

Standard delivery

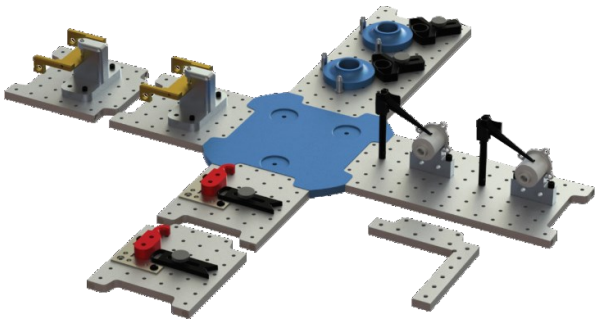
- C-Line CNC CMM
- Probe module type TP20 (M2) special C-Line, with vertical and horizontal probes Ø 2 [mm]
- Calibration sphere
- Charger with power supply
- Protective cover
- Shipping box and inserts
- Trimos Calibration Certificate

Accessoires

- Ethernet, Bluetooth or Wifi adapter
- Probe module type TP20 (M2) special C-Line, with vertical and horizontal probes Ø 1 [mm].
- Probe module type TP20 (M2) special C-Line, with vertical probe Ø 2 [mm].
- Probe module type TP20 (M2) special C-Line, with horizontal probe Ø 2 [mm].
- Probe module type TP20 (M2) special C-Line, with carbon fiber probe Ø 6 [mm], L=75 [mm].
- Spare stylus, in ruby, Ø 2 [mm], L=20 [mm]
- Modular laying systems (set of 6 or 8 plates)
- Fastening systems (set of 62, 82 or 158 pieces)



Test piece



Optional modular laying system



Trigger probe module type TP20 special C-Line



Fixation system (model of 82 pieces)

5.

TECHNICAL SPECIFICATIONS

Dimensions



Working volume



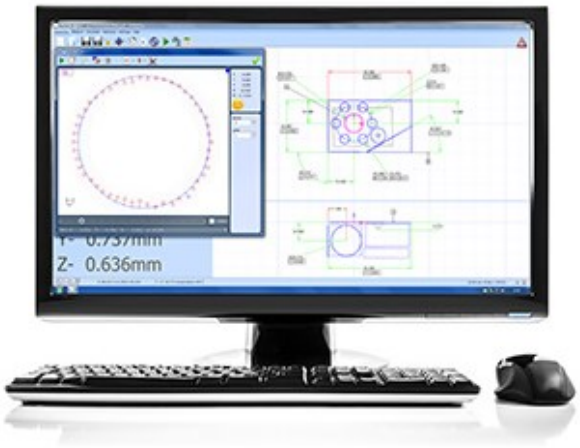
C4		
Working volume	mm	X and Y Ø 720, Z 250
MPE_E	µm	8.0
Fixturing accuracy requirement	mm	5
Machine speed	mm/s	User controlled to 150
Machine air requirement		None required
Construction		Stainless steel for all structural components
Machine power requirements		100-240 V AC±10%, 50-60Hz
Autonomy	h	Normal: 4 /peak: 3
Power consumption	W	Normal: 10 / Peak 15
Manual motion control		User controlled by hand movement of probe
Controller		Onboard PCB provides motion control, error mapping, I++ interface and ControlCAT metrology software
Probe Type		Renishaw TP20 probe
Machine weight	kg (lbs)	13.5 (30)
Machine dimensions (W x D x H)	mm	420 x 172 x 620
Operational Temperature	°C	+10 ÷ +40
Storage Temperature	°C	+10 ÷ +40
Relative Humidity (operation and storage)	%	HR 5 ÷ 75% (non-condensing)

** Specifications subject to change without notice*

6.

SOFTWARE

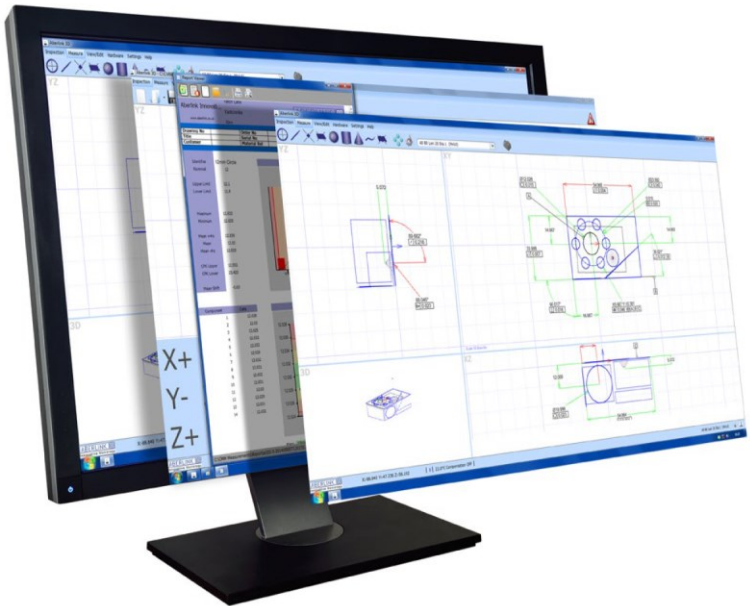
The C-Line works with the following softwares: Aberlink, CMM Manager, Verisurf, PolyWorks…



Aberlink 3D Measurement Software

It corresponds to the software used with the TRIMOS 3D product family. Aberlink's philosophy is to facilitate measurements. The Aberlink 3D software was written to set the industry standard for easy-to-use software.

Designed around a graphical interface, Aberlink 3D can work in 2D or 3D, on manual or CNC CMMs and is equally at home when used with either touch, scanning or vision systems.

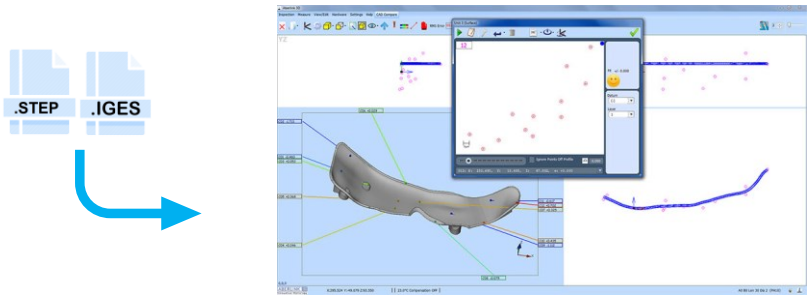


Main window with projections: XY – YZ – XZ – 3D

Modules Aberlink 3D supplémentaire :

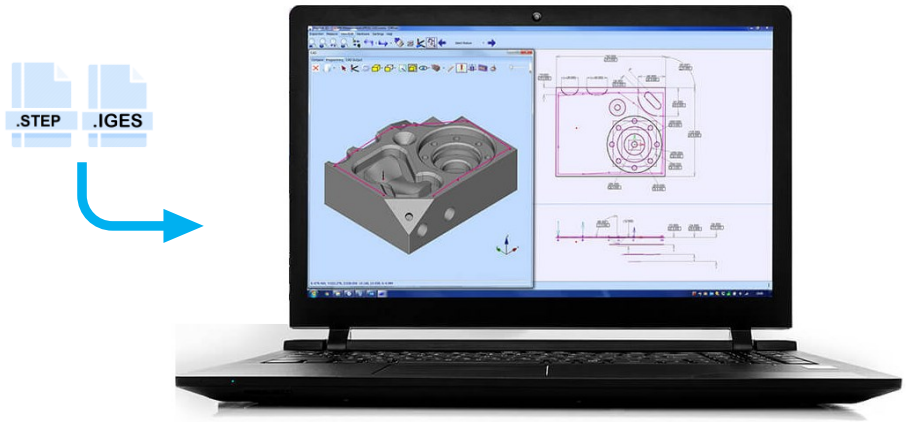
CAD Comparision

The CAD Comparison module gives the capability to compare measured points to a CAD model. This is the best way to measure complex geometries, or to inspect parts for which drawings do not exist.



Programming from CAD

This module allows the generation of measurement programs from a CAD model (.step, .iges) without physically needing the part. Instead of taking measurement points on a component, you can simply click on the surface of the model where you want the points to be taken.

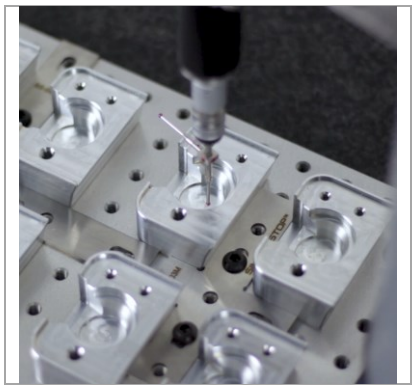


Key Features

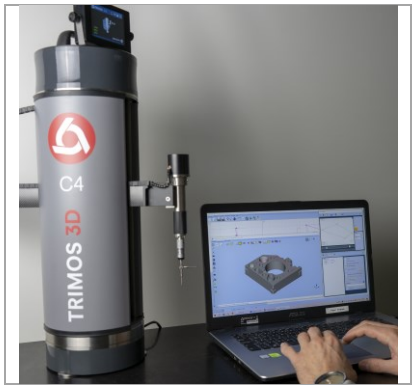
Inspection :	Programming :	Report Formats :
• Automatic measurement routines • Powerful interactive graphics window • Automatic feature recognition • 2D and 3D inspection • Geometric feature inspection • Free form curve inspection • Export .dxf	• Intuitive programming • Drag and drop program editor • Run programs from any point • Measure a subset of features • Simple object-based programming • No complex programming language	• Engineering drawing GD&T • Simple PASS/FAIL • Form plots • Batch summary • Tabulated reports • Graphical fly-out labels • Drag & drop reporting • Real-time SPC • Export to Excel • Historical data reporting

7.

APPLICATIONS

















Trimos S.A.
5 avenue de Longemalle
CH-1020 Renens
Tél. : +41 21 633 01 01
info@trimos.ch
www.trimos.com

TRIMOS

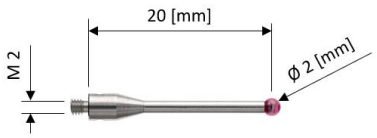
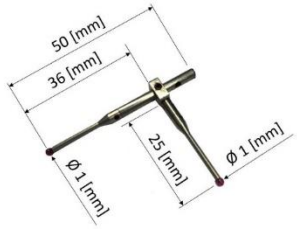
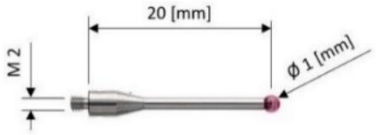
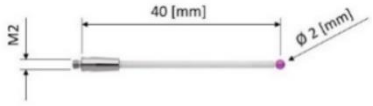
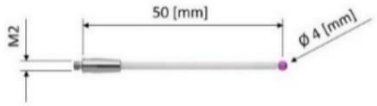
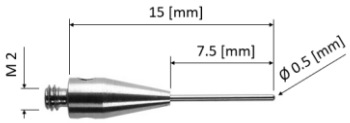
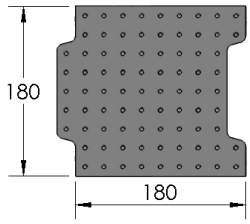
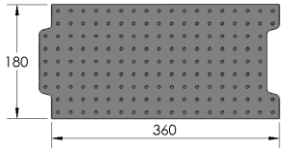
Accessoires | Zubehör | Accessories

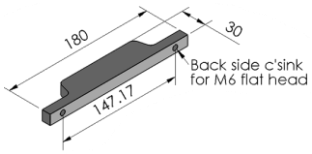
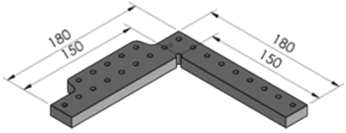
C-Line

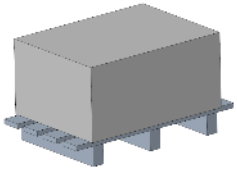
Machine de mesure tridimensionnelle (MMT) portable
Tragbares Koordinaten-Messmaschine (KMG)
Portable coordinate measuring machine (CMM)

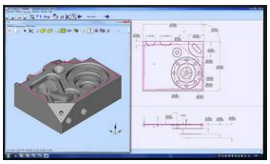
Swiss Measuring Instruments

	**TA-EL-904** 334 0054	Adaptateur Sub-D/Ethernet Adapter Sub-D/Ethernet Adaptateur Sub-D/Ethernet
	**TA-EL-906** 332 04 0003	Câble Ethernet 2m Ethernet Kable 2 m Ethernet cable 2 m
	**TA-EL-903** 334 0058	Adaptateur Sub-D/WIFI pour C-Line Adapter Sub-D/WIFI für C-Line Adaptor Sub-D/WIFI for C-Line
	**TA-MS-905** 709 02 901	Palpeur à stylets vertical & horizontal Ø2 mm Vertikaler und horizontaler Messtaster Ø2 mm Probe set with vertical & horizontal stylus Ø2 mm
	**TA-MS-903** 709 02 900	Palpeur à stylets vertical & horizontal Ø1 mm Vertikaler und horizontaler Messtaster Ø1 mm Probe set with vertical & horizontal stylus Ø1 mm
	**TA-MS-906** 709 02 903	Module de palpage TP20 Force Standard Tastsystem-Modul TP20 Standardstärke TP20 probing module standard force
	**TA-MS-904** 709 02 902	Module de palpage TP20 Force Faible Tastsystem-Modul TP20 Geringestärke TP20 probing module Low Force
	**TA-MI-905** 709 05 902	Stylets vertical & horizontal Ø2 mm Vertikaler und horizontaler Tasterein Ø2 mm Stylus vertical & horizontal Ø2 mm

	**TA-MI-901** 709 05 903	Stylet bille rubi Ø2 mm, tige acieR, L 20 mm Kugelschreiber rubi Ø2 mm, Schaft aus Stahl, L 20 mm Ruby ball Ø2 mm stylus, stainless steel stem, L 20 mm
	**TA-MI-906** 709 05 900	Stylets vertical & horizontal Ø1 mm Vertikaler und horizontaler Tasterein Ø1 mm Stylus vertical & horizontal Ø1 mm
	**TA-MI-902** 709 05 901	Stylet bille rubi Ø2 mm, tige carbure de tungstène, L 20 mm Kugelschreiber rubi Ø1 mm, Schaft aus Wolframkarbid, L 20 mm Ruby ball Ø1 mm stylus, tungstene carbide stem, L 20 mm
	**TA-MI-903** 709 05 904	Stylet bille rubi Ø2 mm, tige céramique, L 40 mm Kugelschreiber rubi Ø2 mm, Kermaische Schaft, L 40 mm Ruby ball Ø2 mm stylus, ceramic stem, L 40 mm
	**TA-MI-904** 709 05 905	Stylet bille rubi Ø4 mm, tige céramique, L 50 mm Kugelschreiber rubi Ø4 mm, Kermaische Schaft, L 50 mm Ruby ball Ø4 mm stylus, ceramic stem, L 50 mm
	**TA-MI-907** 709 05 906	Stylet cylindrique Ø0.5 mm en carbure de tungstène, L15 mm Zylinderstift Ø0.5 mm aus Wolframkarbid, L15 mm Cylindrical stylus Ø0.5 mm in tungstene carbide, L15 mm
	**TA-TO-903** 297 700100 001	Plaque de base C4 Loc-N-Load C4 Loc-N-Load-Grundplatte C4 Loc-N-Load Base Plate
	**TA-TO-909** 297 700100 007	Plaque de base M6, 180 x 180 mm Grundplatte M6, 180 x 180 mm Fixture plate M66, 180 x 180 mm
	**TA-TO-910** 297 700100 008	Plaque de base M6, 180 x 360 mm Grundplatte M6, 180 x 360 mm Fixture plate M6, 180 x 360 mm

	**TA-TO-911** 297 700100 009	Plaque d'adaptation 180 x 30 mm Adapter Platte 180 x 30 mm Adapter Plate 180 x 30 mm
	**TA-TO-912** 297 700100 010	Plaque d'angle/stop M6, 180 x 180 mm Eck-/Anschlagplatte M6, 180 x 180 mm Angle plate/stop M6, 180 x 180 mm
	**TA-TO-904** 297 700100 002	Set de bridage Loc-N-Load (6 pces) + kit de fixation (82 pces) Loc-N-Load Spannsatz (6 Stück) + Befestigungssatz (82 Stück) Loc-N-Load Bundled Systems (6 pcs) + fixture system (82 pces)
	**TA-TO-905** 297 700100 003	Set de bridage Loc-N-Load (8 pces) + kit de fixation (82 pces) Loc-N-Load Spannsatz (6 Stück) + Befestigungssatz (82 Stück) Loc-N-Load Bundled Systems (8 pcs) + fixture system (82 pces)
	**TA-TO-906** 297 700100 004	Kit de fixation d'initiation (62 pcs) Starter-Befestigungssatz (62 Stck.) Starter work-holding kit (62 pcs)
	**TA-TO-907** 297 700100 005	Kit de fixation complet (82 pcs) Montagesatz komplett (82 Stck.) Complete work-holding kit (82 pcs)
	**TA-TO-908** 297 700100 006	Kit de fixation multiple (158 pcs) **plaques de base non-inclues* Mehrfach-Befestigungskit (158 Stck.) **Grundplatten nicht enthalten* Multiple works-holding Kit (158 pcs) **fixture plates not included*
	**TA-TO-914** 297 700100 012	Jeu de V/colonnes magnétiques (23 pièces) **plaques de base non-inclues* Satz von V/magnetischen Säulen (23 Stück) **Grundplatten nicht enthalten* Magnetic riser set (23 pcs) **fixture plates not included*
	**TA-TO-915** 297 700100 013	Dispositif de positionnement (37 pièces) **plaques de base non-inclues* Positionierungsvorrichtung (37 Stück) **Grundplatten nicht enthalten* Stand-off & rest pad set (37 pcs) **fixture plates not included*

	**TA-TO-916** 297 700100 014	Ensemble de positionnement amélioré (16 pièces) **plaques de base non-inclues* Verbesserte Positionierungsbaugruppe (16 Stück) **Grundplatten nicht enthalten* Enhanced stand-off set (16 pcs) **fixture plates not included*
	**TA-MG-901** 278 900400 001	Pièce de test et d'étalonnage C-Line C-Line Test/Kalibration Block C-Line test/calibration block
	**TA–TO–902** 505 01100 023	Valise de démonstration C-Line Demokoffer C-Line Demo case C-Line
	**TA–TO–917** 605 06 024	Groupe carton Kartongruppe Cardboard group
	**TA–TO–901** 286 000400 001	Housse de protection C-Line Schutzabdeckung C-Line Protection cover C-Line
	**TA–EL–901** 357 0115	Chargeur AC/DC pour C-Line Ladegerät AC/DC für C-Line Charger AC/DC for C-Line
	**TA-DU-802** 616 40 028	PC Portable clavier US (autres claviers disponibles sur demande) PC Portable mit Tastatur US (andere Tastaturen auf Anfrage erhältlich) Laptop with keyboard US (other keyboards available on request)
	**TA-SW-826** 716 12 002	Logiciel de mesure Aberlink 3D; module de base pour MMT motorisée Messsoftware Aberlink 3D, Standard-Paket, für motorisiert KMG-Messung Measurement Software Aberlink 3D, standard package for motorized CMM
	**TA-SW-816** 716 12 003	Aberlink 3D; module de comparaison par CAO Aberlink 3D, CAD-Vergleich Modul Aberlink 3D, CAD Comparison module

ABERLINK Innovative Metrology	**TA-SW-817** 716 12 004	Aberlink 3D, licence offline du module de comparaison par CAO Aberlink 3D, Offline-Lizenz für das CAD-Vergleichsmodul Aberlink 3D, offline license for CAD comparison module
	**TA-SW-827** 716 12 005	Aberlink 3D, module programmation par CAO (inclus TA-SW-828) Aberlink 3D, CAD-Programmiermodul (inkl. TA-SW-828) Aberlink 3D, CAD programming module (TA-SW-828 included)
ABERLINK Innovative Metrology	**TA–SW–828** 716 12 006	Aberlink 3D, licence offline du module de programmation Aberlink 3D, Offline-Lizenz für das Programmiermodul Aberlink 3D, offline license for programming module
	**TA–SW–830** 716 12 007	Aberlink 3D, Interface d'Automatisation Aberlink 3D Automation Interface Aberlink 3D Automation Interface
PolyWorks Inspector PREMIUM	**TA-SW-824** 716 11 002	Polyworks Inspector Premium, pour CMM motorisée, manuelle et scanning Polyworks Inspector Premium, für motorisierte CMM, manuelle und Scanner Polyworks Inspector Premium, for motorized CMM, manual and scanning
PolyWorks Inspector PROBING++	**TA-SW-833** 716 11 004	Polyworks Inspector Probing++, pour CMM motorisées et manuelles Polyworks Inspector Probing++, für motorisierte, und manuelle CMM Polyworks Inspector Probing++, for motorized and manual 3D CMM

Trimos S.A.
Av.de Longemalle 5
CH-1020 Renens
T. +41 21 633 01 01
info@trimos.ch
www.trimos.com

C-LINE QUICK-SWAP FIXTURE SYSTEM

Loc-N-Load ™

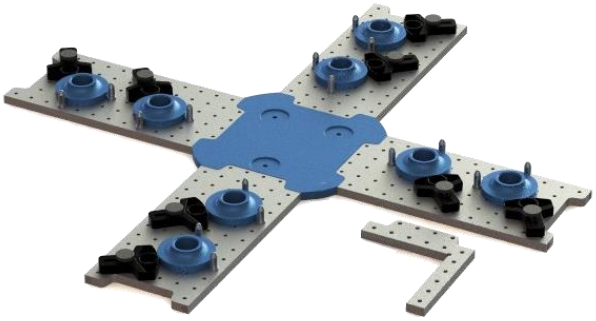


Further enhance the value of Trimos C-Line 3D CMM with the quick-swap Loc-N-Load™ fixture system. Install the C-Line onto the unique Loc-N-Load™ base and start inspecting on the shop floor or nearest conference table. Interlocking fixture plates quickly secure and release with the use of magnets creating highly repeatable setups.

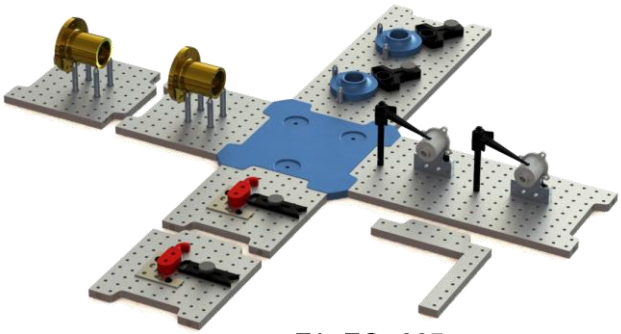
- Create multiple fast-swap setups for your C-Line
- Ready-made interlocking plates make low-cost fixtures
- Inspect more parts per shift, even with less-skilled inspectors
- Easily access your granite
- Use as dedicated tooling—add to job box

Get started with a pre-configured bundle and add plates as work requires.

Fixture sets



Ref : TA–TO–904



Ref : TA–TO–905

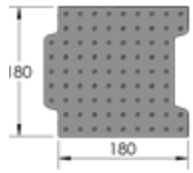
Reference	Set	Base	180x180 Plate	180x360 Plate	Angle Plate	82 pc Work Holding Kit
TA–TO–904	Base + Plates + Complete Set	1		4	1	1
TA–TO–905	Base + Plates + Complete Set	1	4	2	1	1
TA–TO–907	82 pcs Work Holding Clamps Set					1



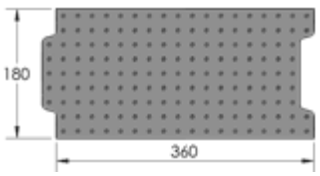
Ref : TA–TO–907

A Work Holding Clamps Kit with a variety of non-marring spring-action clamps, stand-offs, and low-profile stops and rails is included with each fixture system.

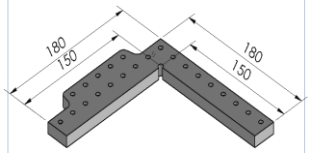
Fixture Plates and Adapter



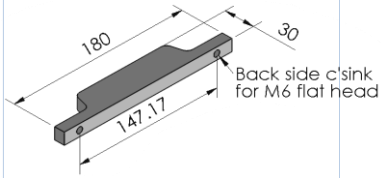
Ref : TA–TO–909



Ref : TA–TO–910

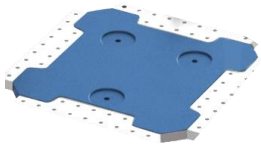


Ref : TA–TO–912



Ref : TA–TO–911

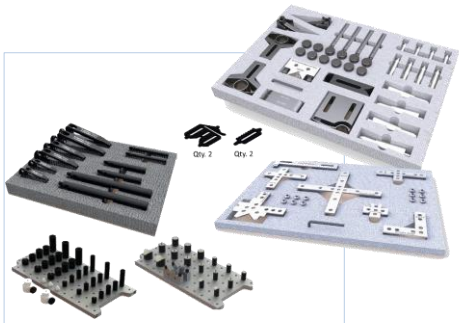
Reference	Fixture
TA–TO–903	Base Plate Only
TA–TO–909	Plate 180 x 180 mm
TA–TO–910	Plate 180 x 360 mm
TA–TO–911	Adapter Plate 180 x 180 mm
TA–TO–912	Angle Plate/Stop 180 x 180 mm


Ref : TA–TO–903

Work Holding Clamps Sets


Ref : TA–TO–906


Ref : TA–TO–907


Ref : TA–TO–908

Reference	Fixture
TA–TO–906	62 pcs Work Holding Clamps Set
TA–TO–907	82 pcs Work Holding Clamps Set
A–TO–908	158 pcs Work Holding Clamps Set

Stand-Off & Riser Sets


Ref : TA–TO–914


Ref : TA–TO–915


Ref : TA–TO–915

Reference	Fixture
TA–TO–914	23 pcs Magnetic Riser Set, Magnetic clamps (M6)
TA–TO–915	37 pcs Stand-Off & Rest Pad Set (M6)
TA–TO–916	16 pcs ENHANCED Stand-Off Set (M6)

Trimos S.A.
Av.de Longemalle 5
CH-1020 Renens
T. +41 21 633 01 01
info@trimos.ch
www.trimos.com

750 02 0084 03 – Version 1.0/2020-12 – Changes without prior notice