



Tooling Sales and Service

Maintenance Repair and Overhaul
for ALL Installation
Tooling Systems

- Permaswage: DLT / PLT
- PermaLite: DAT
- SAE AS Axially: DAT
- DME/PME: DET



Sell & Repair Tooling Components & Kits

- Power Units
- Head Assemblies
- Die Sets
- End Plates
- Inspection Gages
- Marking Tools
- Pumps (Manual, Pneumatic and Electric)
- Tool Assemblies
- Marking Gages/Templates
- Inspection Gages
- Stem Assemblies
- Chipless Cutters
- Deburring Tools

Délais, stock, devis... (France Belgique)

Sébastien Maredj, M : +33 (0)6.51.19.11.67

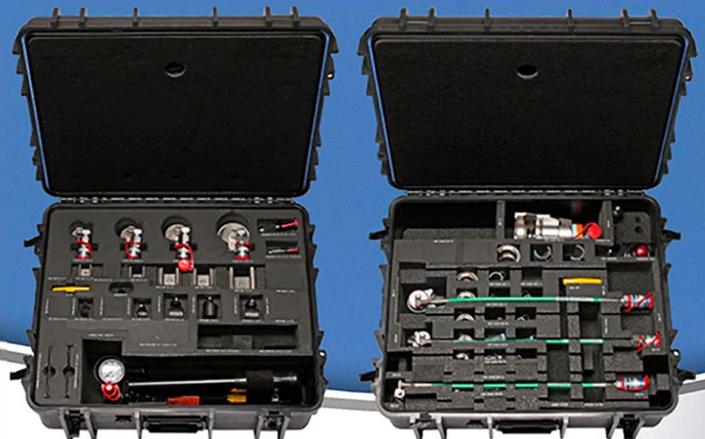
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Technical Sales Engineer France ORKAL Industries LLC

Fully authorized & preferred tooling repair station for DLT/DAT/DET

Certified
ISO9001/AS/EN9100 & 9120

Orkal Industries, LLC
Factory Authorized Distributor
for Sales & Service



PERMASWAGE® RADIAL (DLT) TOOLING

These high compression, lightweight, portable, DLT swaging tools are used in concert with Permaswage® Radial fittings to join aircraft hydraulics, fuel, pneumatic, and metallic tube systems to form a complete, reliable, leak-free fitting joint.

Design was developed through extensive use of finite element analysis, enabling Permaswage® engineers to reduce maintenance, size and weight while extending service life. The features incorporated into DLT series tools reduce tube system production time by over 50%. Metallic tube joints assembled with Permaswage® fittings and tooling are guaranteed for the life of the tube.

DLT TOOLING

Designed and qualified in 1972

- Lightweight and portable
- Manufactured using “super alloy” materials.
- Ideal for production and in-situ field repair
- Compact for use in tight areas
- Supports tube sizes 3/16”-1 1/2” (OD 03-24)



DLT (SECOND GENERATION) TOOLING

Design and qualified in 2011

Inclusive of new design features

- DLT2 Safety Features:

- Head Assembly

- Yoke die end plate screws replaced with Dowel pins to decrease stress risers
- Protective shroud encapsulates yoke components as a safety guard

- Power Unit

- Enhanced load distribution
- Internal stop prevents the springs from collapsing
- Bottom cap uses a retaining ring

- DLT Enhancements

- Improved durability
- Increased reliability
- Quicker operation
- Lower dye block quick fit die retainer

FIELD REPAIR KIT

Sizes: 1/4” - 1 1/2” OD (04-20)

Offers all the tools and accessories required to repair aircraft tubing lines in one kit, including the pump.



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PERMALITE® AXIAL (DAT) TOOLING

Permalite® DAT tooling performs in either push or pull mode. Designed for specific axial swage fittings, allowing for 180 degree access. DAT tooling is manufactured from forgings in order to reduce the weight and tooling envelope dimensions ease of access in aircraft applications.

Sizes: 3/16" to 1-1/2" OD (03-24)

Tool Kits Include: Tube cutting tools, deburring tools, inspection and marking gages, hand pump and hose.

Axial Standard Permalite

Aluminum 1,500 PSI (DAT06AETA1000 series, Green Band)

Titanium/CRES 3,000 to 4,000 PSI (DAT06AE-TA4000 series, Black Band)

Titanium 5,000 PSI (DAT06AETA5000 series, Blue Band)



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MINIATURE END (DET) TOOLING

Miniature End Fitting (DME) tooling offers several advantages, including the shortest length and lightest tooling weight available on the Aerospace market today. The installation process is repeatable, reliable, and extremely simple. The tool is multi-functional and can be used hand-held or bench mounted.

DME 40 Series: Titanium tube up to 4,000 PSI

DME 30 Series: Stainless Steel tube up to 3,000 PSI, Aluminum tube up to 1,500 PSI,
Titanium tube up to 4,000 PSI

Tool Kits for DME 40 Series:

DET02AEKT4001 for sizes 04, 06 and 08
DET02AEKT4002 for sizes 10, 12, 14 and 16
DET02AEKT4003 for sizes 20 and 24

Tool Kits for DME 30 Series:

DET03AEKT3001 for sizes 04, 06 and 08
DET03AEKT3002 for sizes 10, 12, 14 and 16



Features:

- Available for tube sizes 3/16" to 1-1/2" OD (03-24)
- Supports multiple tube wall thicknesses and materials
- Bench mounted tools are available in 3 sizes to cover all tube sizes
- Tools are inexpensive compared to welding machines or internal swaging machines

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AS TITANIUM 5080 PSI SERIES(AXIAL) DAT TOOLING

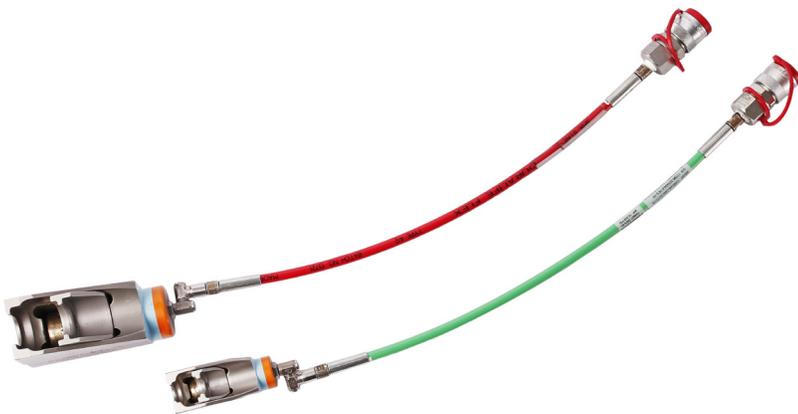
Permalite® DAT tooling performs in either push or pull mode. Designed for specific axial swage fittings, allowing for 180 degree access. DAT tooling is manufactured from forgings in order to reduce the weight and tooling envelope dimensions ease of access in aircraft applications.

Sizes: 3/16" to 1-1/2" OD (03-24)

Tool Kits Include: Tube cutting tools, deburring tools, inspection and marking gages, hand pump and hose.

Axial Standard Permalite

**AS Titanium 5,080 PSI (DAT08AETA5000 series);
Blue, Silver, Orange Band**



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HYDRAULIC PUMP KITS

All featured hydraulic pump kits support all Permaswage® tooling and fitting systems.

Pneumatic Air-Source Pump Kit

10,000 PSI; DLT02MAPP1000



Battery Operated Pump Kit

10,000 PSI; DLT06MAPE3000



Manual Pump Kit

10,000 PSI; DLT05MAPM1000



Battery Operated Pump



Manual Pump



Hose

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Technical Solutions with Comprehensive Services

- Annual Inspection & Preventative Maintenance to extend tooling life cycle (Reduces capital expenditures)
- Repair & Overhaul
- Tool kit and component sales
- Tool Audits for Safety, Functionality and Serviceability
- Installation Training – Onsite and Interactive
- Technical Support
- Inventory for quick turnaround



Orkal Tooling Repair Process | We Realize your tooling is very important and our goal is the prompt return of a serviceable item. Since these tools are complex in their design and construction, each item must be evaluated by our factory trained and certified technicians to determine the specific repair. Our process is as follows:

1. Contact Orkal and provide the item(s) Name, Part Number, Serial Number and a brief discrepancy description.
2. Orkal will issue a Tool Repair Order (TRO) Form with this information reflected and shipping instructions.
3. Ship the item(s) to Orkal Industries LLC **with the TRO Number reflected on the outside of the box.**
4. Orkal will evaluate the equipment and formulate a price to complete the repairs. This information will be sent as a quote
5. Once Orkal receives Purchase Order, we will complete the repair and return the items.

Please note: If you do not elect to proceed with repair, the processing fees are \$250.00 per component or \$750.00 per kit. Orkal reserves the right to return unserviceable and/or unsafe tooling in a dis-assembled state.

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Contact us
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orkal.com



Manufacturers & Authorized Distributorships

- AdelWiggins
- Permaswage DMC
- Spencer
- Aerofit
- Pamco
- HydroFitting
- Airdrome
- Nelson
- Faber
- United Supply
- Atlas
- Shur-Lok
- B&E Mfg
- Privateer
- HTS
- Voss

Product Lines

- Standard Fittings
- Beam Seal
- Tees/Elbows
- Port Lok/Rosan
- Nuts/Unions/Sleeves
- Orbital Weld
- Split Rings
- Radial Swage
- Charging Valves
- Die Blocks
- Reducers/Adapters
- Axial Swage
- Expanders
- Couplings/Ferrules
- OEM Proprietary
- Internal Swage
- Bushings
- Fluid ID Labels
- Blocks/Clamps
- Permalite

Standards and Customer Specifications

AN, AS, MS, NAS, LN, EN, DIN (Imperial & Metric), BAC, 7D, 7M, ST7M (Boeing), JN (Eurofighter), JSF, C, LS (Lockheed), S700 (Goodrich), O7A (Northrop), ASNA, ABS, NSA (Airbus), BO3 (Bombardier), J (GE)

Tailored Inventory Management Solutions

Kitting, Assembly, VMI Min/Max (JIT), Consignment (FSL), LTA's, Scheduled Deliveries, Kanban Solutions

Quality and Inspection

ISO9001/ AS9100 / AS9120 Certified ▪ Airbus GRAMS Compliant ▪ Rolls Royce SABRE Release
 ▪ Comprehensive Quality Lab for 100% Inspection

Service | Product Knowledge | Reliability | Performance