

**Product Announcement**

March 3rd, 2020

Subject: DLT Tools

Permaswage is pleased to announce that we are no longer taking new orders for Generation 1 DLT tools. Any new orders will be for Generation 2 tools, which are safer, more reliable and easier to maintain while keeping the same envelope dimensions.

Custom designed tools have been, and will continue to be, available upon request. For years to come, we will continue to innovate and design solutions for our customers to ensure individual needs are met.

Permaswage will continue to maintain and service all Generation 1 tools.

Power Unit		Head Assembly	
Old Model	New Model	Old Model	New Model
DLT05MAPW0000	DLT06MAPW0000	DLT05PSHA3003	DLT06PSHA3003
DLT10MAPW0000	DLT11MAPW0000	DLT05PSHA3004	DLT06PSHA3004
DLT20MAPW0000	DLT21MAPW0000	DLT10PSHA3005	DLT11PSHA3005
DLT30MAPW0000	DLT31MAPW0000	DLT10PSHA3006	DLT11PSHA3006
DLT40MAPW0000	DLT41MAPW0000	DLT20PSHA3008	DLT21PSHA3008
		DLT20PSHA3010	DLT21PSHA3010
		DLT30PSHA3020	DLT31PSHA3012
		DLT40PSHA3016	DLT41PSHA3016
		DLT40PSHA3020	DLT41PSHA3020
		DLT40PSHA4024	DLT41PSHA4024

Tool Kit numbers shall remain the same, but the internal components and functions have been improved. The document attached with this letter provides further details.

Best Regards,



Adam Senta  
Director of Engineering, Marketing, External Sales

**Your Contact : Sébastien Maredj, Technical Sales Engineer France**  
**Stock Available on some references @ Orkal FL**  
**A Leading Stocking/Distributor of Tube Connection & Fluid Fitting Products**  
**Authorized Permaswage Distributor & Certified Installation Tool Repair Station**  
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# DLT2 vs DLT1

## Same Envelope, Safer, More Ergonomic, Easier Maintenance, & Stronger

### Safety Shroud

- Physically contain the assembly
- Prevent damage from catastrophic failures due to improper use or lack of maintenance

### Lower Block Die Clip

- Simplified assembly and disassembly for easier maintenance
- More room for the operator to see the swaging mark
- Less stress on die block

### End Plate & Pin Design

- Plate designed to “fail first” to prevent other failure points
- Easily replaceable
- Readily Available

### Lower Die Block

- Simplified design
- No threads
- Eliminate high stress area due to threads

### Larger Piston Stem

- Lower stress in piston
- Reduces chance of tip breaking

### Internal Physical Stop

- Improves safety and protects tool if is activated improperly
- Less stress on the cylinder

### Round/Square Cylinder slots

- Guarantees correct head assembly orientation
- Less stress on cylinder

### Groove and Ring

- Replaces “drill and pin” design
- Simplified assembly and disassembly for easier maintenance
- Eliminates stress point of the drilled hole

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## Many more improvements!

# 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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**Fully authorized & preferred tooling repair station for all range of DLT/DAT/DET**