

FAST MOVING TECHNOLOGY

**STÄUBLI**

# Quick Mould Change

PITC Telford | 18<sup>th</sup> April 2018 | Ian Matthews



# Staubli Agenda, Technivation @ PITC 2018

- 1 Introduction to Staubli
- 2 Quick release Mono connections
- 3 Multiple connections for thermal regulation
- 4 Multiple connections for hydraulics, electrics and valve gates
- 5 Manual and automatic multiple connection systems
- 6 Clamping systems
- 7 Loading systems
- 8 Questions

# Innovative mechatronic solutions for higher productivity

- **Dynamic:** We are forward-thinking, on a continual quest for the next innovation.
- **Cooperative:** We partner with our customers to provide the most efficient solution for their application.
- **Reliable:** Founded in 1892 and still family-owned, we are rooted in a proud heritage of quality craftsmanship.



## KEY FIGURES

# Group at a glance



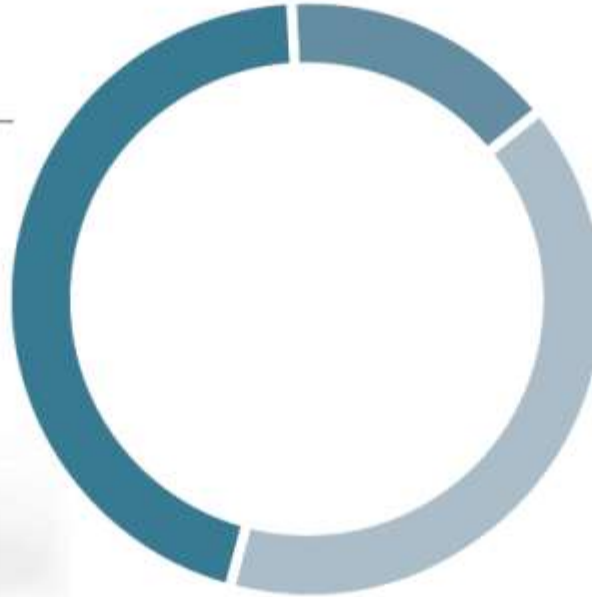
# Three activities – four divisions

## Connectors

Fluid Connectors  
Electrical Connectors



## Robotics

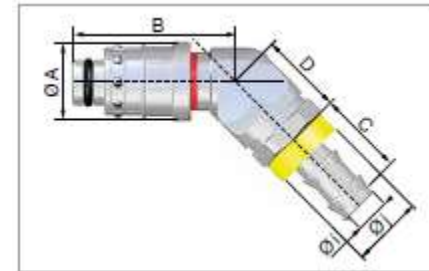
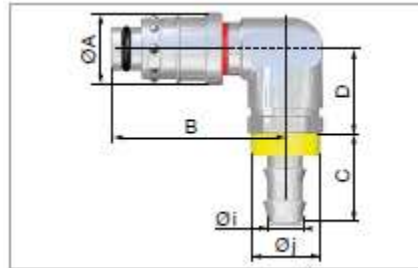


## Textile



# Quick release Mono connections for thermal regulation.

Product: RPL



## Composition

- outer cover in rubber NBR/PVC striped blue, red or green
- polyamide intermediate braid
- inner tube in black NBR/PVC.

Marking: Stäubli CALORLOCK Ø/COULEUR EAU-WATER-WASSER PMS=X BAR - +3 à +90°C

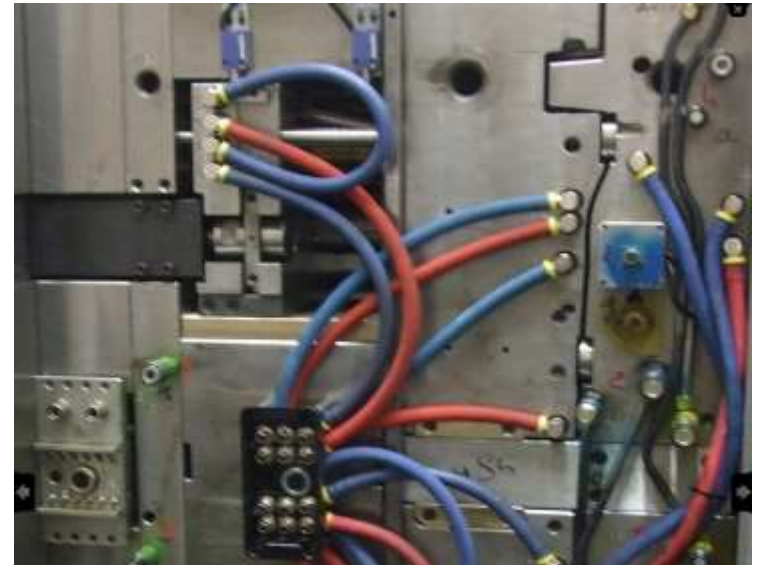
- A simple cost effective solution to connecting tool water circuits to the injection moulding machine. Available in three diameters 6mm, 8mm, 12mm.
- The example shown utilises self locking Staubli 'Calorlock' hose (no need for Jubilee clips or ear clamps) Guaranteed leak free for applications from +3 degrees celcius to +90 degrees celcius



# Multi couplings for thermal Regulation :

## Product: RMI Multi

- Options of valved or un-valved versions
- No connection error possible
- Up to 10 circuits (20 connections) per plate
- Available in 4 diameters : 06 ,09,12,16mm



# Multiple water circuits connected simultaneously





# Hydraulic core circuits, connected simultaneously

## Product: RMP49



- 3 Circuits per block
- 180 Bar maximum pressure
- Flat faced non-spill connection
- Connection under residual pressure option available.

# All electrical circuits connected simultaneously

## Product: REP



- Hotrunner load connections
- Hotrunner thermocouple connections
- Tool core signals
- Limit switches
- Up to 36 + earth pins per plug
- 6 different pin diameters
- IP75 Rated

# Sequential valve gate connections

## Product: SPC203, 205



- Non spill flat faced connections
- Up to 8 valve gates (16 connections)
- Two bore sizes available (3, 5 mm)
- Up to 100 Bar pressure

# Connecting all energies simultaneously

## Product: Manual or Automatic MCS

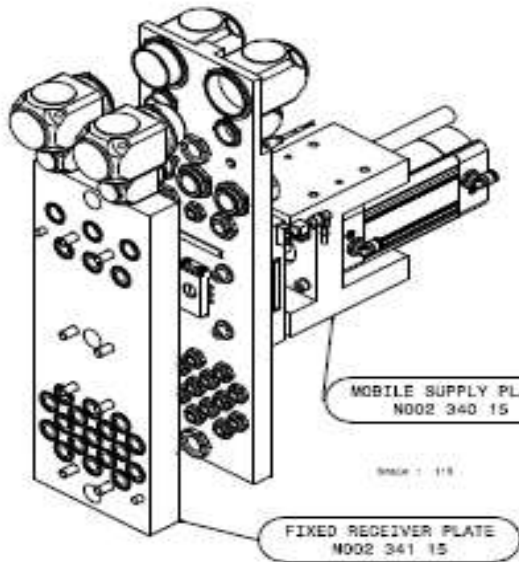


This is where all energies:

- Hydraulic
- Pneumatic
- Thermal regulation
- Electrical and sensing

are Incorporated into a bespoke pair of plates and connected in one action.

Movement of the supply plate can be either manual or automatic



# Types of Quick Clamping

## Staubli supply 3 main types of Clamping:

- Mechanical (up to 250/300 tonne IMM's)
- Magnetic (typically from 200 tonne IMM's, can go smaller)
- Hydraulic (typically from 500 tonne upwards)





# Types of tool loading systems– Single station 'pass through' version



# Types of automatic tool loading systems -2x50T loading table c/w manual pre-heating station.



2 x 50T loading table c/w manual pre-heating station.

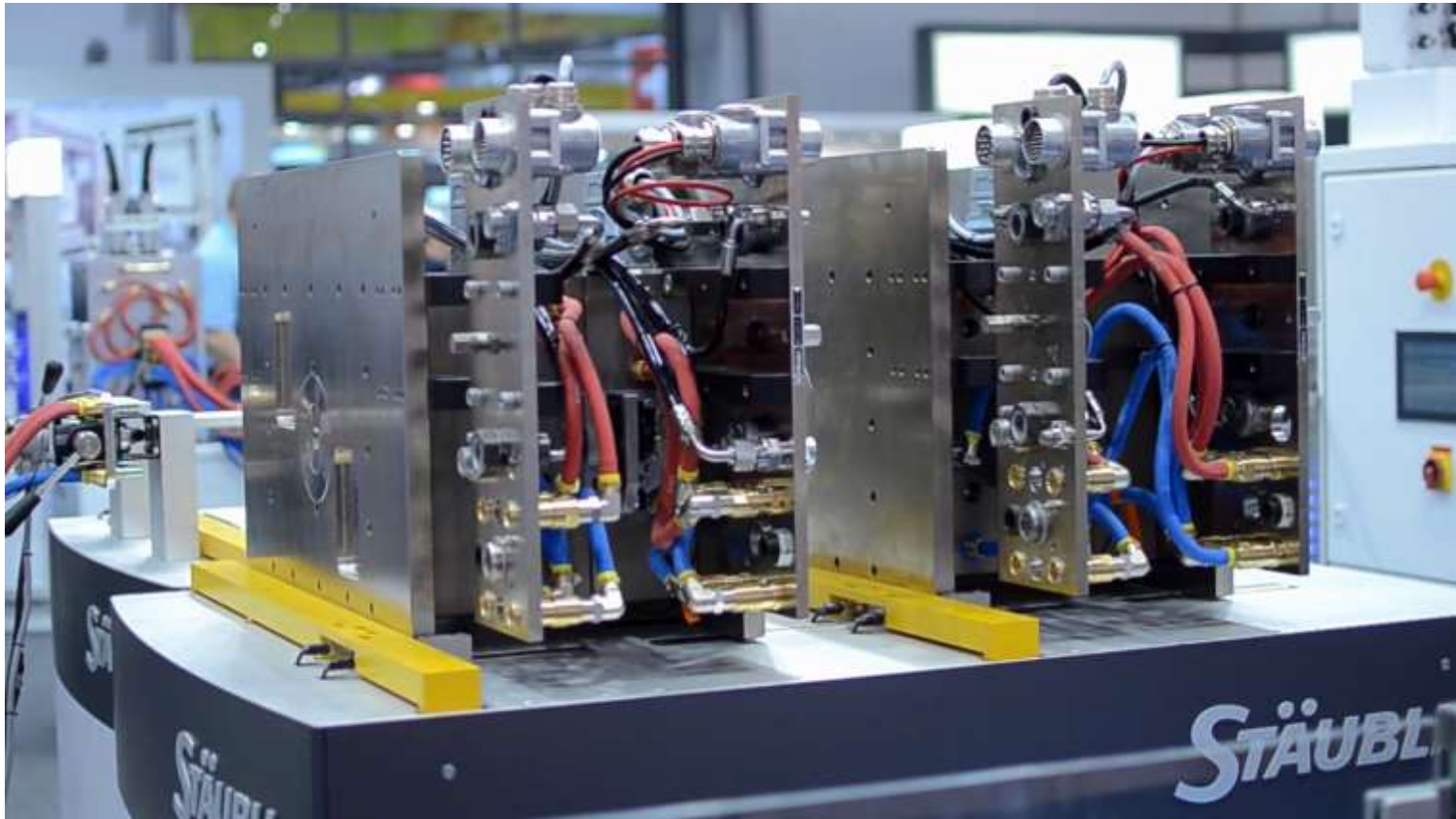




2 x 2 tonne tools, table on rails, pre-heat station.

Full Industry 4 example as shown at Interplas last year

Shot to Shot mould change, including robot head change, in **59 seconds!!!**



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Thank you for your attention! Any Questions?

[www.staubli.com](http://www.staubli.com)

