

FAST MOVING TECHNOLOGY

STÄUBLI

Your partner for connecting energies

Solutions overview





3 activities

Stäubli is an international group that drives innovation every day in its three divisions dedicated to mechatronics:

- programming and automation systems for **textile** machinery
- **connectors** for all types of energy
- industrial **robotics**



Connectors: a key link in energy circuits

As an expert in fluid and energy connections, Stäubli Connectors offers a range of standard and specific products:

- quick-release couplings for all types of fluid: compressed air, heat transfer fluids, hydraulics, fuel, etc.
- electrical connectors
- multi-coupling systems for simultaneous connection of your circuits
- quick mould change solutions for the plastics industry
- robotic tool changers

Stäubli, an international group and business network

With 14 industrial production sites, presence in 24 countries with sales and customer service subsidiaries and a distribution network in 50 countries, Stäubli enjoys a close and attentive relationship with its customers.

Thanks to its knowledge of industrial applications and collaboration with your technicians, it can provide precise and well-documented solutions to your standard applications and more specific requirements:

- active collaboration in the definition of specifications
- drafting of quality plans
- definition and implementation of quality testing

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Innovating with Stäubli R&D

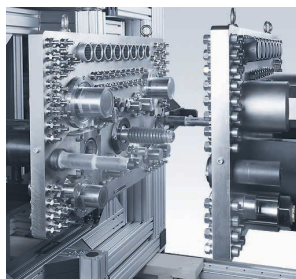
The **Research and Development department** injects its experience into your projects.

Supported by a high performance team and resources, our R&D satisfies your current requirements and pre-empts the issues of the future:

- in-depth analysis of your needs
- integration of your technical and economic requirements
- active technological monitoring
- compliance with your priorities in terms of safety, productivity, sealing, ergonomics, etc.

Our daily commitment: quality and performance

Through adapted and rigorous quality procedures, **Stäubli delivers consistent quality** certified by various organisations.



Powerful CAD systems, rapid prototyping machines, test and cycling benches, etc.

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Supported by the group's in-house organisation, each department at Stäubli - sales, R&D, methods, production, logistics - acts as the customer's partner.

From quick-release couplings to complete systems: solutions tailored to your needs

Unique experience across a broad spectrum

Working in direct contact with a constantly changing industrial world, Stäubli Connectors anticipates new issues by developing a general and relevant range:

- quick-release couplings
- complete systems
- standard and customised solutions

Its connection experience satisfies customer requirements both for business and the environment.

Standard connections

Do your processes need reliable and high performance connections?

The Stäubli standard range of solutions offers several configurations to find the right solution for your requirements:

- several passage diameters to ensure the necessary flow rate
- materials adapted to the environment and various pressure levels (low, medium and high pressure, primary vacuum): high-yield stainless steel, anti-corrosion treatment, etc.
- a wide range of seals, depending on the type of fluid and the temperature of use: Nitrile, Fluorocarbon, Ethylene-Propylene, Perfluorinated, Fluorosilicone, Chloroprene, PTFE...
- safety systems: visual identification of circuits, mechanical foolproof matching, locking keys, anti-hose whip safety system, etc.
- different locking technologies: ball, bayonet, claw, etc.
- single, double shut-off or full flow
- non-spill flush face technology for perfect seal on connecting and disconnecting: no spillage, no pollution of circuits or the work area



The opportunity to spend less and contribute to a sustainable development programme.

With Stäubli, you can rely on the performance of your equipment, reliability of long-term investments, no workplace pollution.

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Complete systems

Do your processes combine different energies? To meet your specific needs, Stäubli develops complete hi-tech solutions to enhance your productivity and safety:

- for centralised energy connections: couplings for all types of fluids and electric connectors for power and information, flush face technology, guiding systems, removal of alignment faults, manual or automatic locking...
- for loading and clamping of moulds in the plastics industry
- for robotic tool changers

Customised programmes

Because some of your requirements do not have standard solutions, because some of your projects need an all-embracing approach, Stäubli offers you its analytical capacity and expertise. Its specialists accompany you in the search for and implementation of customised solutions guaranteeing optimal performance and safety for your staff.

Customised follow-up

Your projects are entrusted to connector specialists who are also experts in your field.

- Automotive industry
- Motorsports
- Aerospace, transportation and logistics
- Alternative energies:
 - Alternative fuels
 - Connectors for photovoltaic systems
- Railway
- Pharmaceuticals and life science
- Steel industry
- Plastics industry
- Food-processing
- Nuclear
- Oil and gas

Your Stäubli contact can always propose adapted standard solutions or support you in the definition of a 100% bespoke product.

COMPRESSED AIR

Anti-hose whip safety system and controlled tightness



A full range:

- quick-release couplings
- fitted pipes
- blowguns
- pipework
- filtering of compressed air

Operator safety

- Anti-hose whip safety system (ISO 4414) with two-phase disconnection
- Standardised plug profile (ISO 6150C)

100% verification of couplings

The Stäubli compressed air range delivers the best performance and safety features:

- unit tightness and connection testing on all couplings
- stainless steel is the base material in all Stäubli couplings
- excellent flow rate in all ranges (homogeneity of diameters)

Easy handling and ergonomics

- Light couplings
- One-handed connection
- Rotating coupling (360°)
- Non-scratch material

Dedicated to assembly and mounting tools

- Screwing, polishing, painting, etc.
- Blow-cleaning
- Multi-sector: construction, household electrics, automotive, micropneumatics, dimensional control, etc.



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Active safety coupling - RSI



Stäubli invents 3-in-1 active safety against the risks of violent hose ejection under pressure. With this technology, RSI couplings provide a totally safe solution to operators' most demanding needs.

Applications: spurs on pipework, fittings on extension hoses, pneumatic tool connections, blowguns and automatic systems on machines, etc.

 up to 16 bar - 

Ø (mm)
06
08
11



Non-scratch active safety coupling - NSI



Designed to care for fragile surfaces, the NSI range is perfectly adapted to applications prone to scratching. Fitted with a 3-in-1 active safety feature against the risk of violent hose ejection under pressure, it guarantees safety and performance.

Applications: quick and direct connecting of pneumatic tools.

Sectors: painting, body shops, aviation, final automotive assembly lines, etc.

 up to 12 bar - 



Ø (mm)
06
08

Compact safety coupling - RCS



Pleasant to handle, easy to connect and disconnect, the RCS coupling enhances operators' comfort and reactivity. With its anti-hose whip safety technology, it guarantees totally safe use. Its "parking" position keeps the disconnected plug on "standby" in the coupling and prevents it from falling to the ground.

Applications: spurs on pipework, pneumatic tool connections, blowguns and automatic systems on machines, fittings on extension hoses, etc.

 up to 16 bar - 

Ø (mm)
06
08
11



Non-scratch active safety coupling - ERS



With its non-scratch design and anti-hose whip safety system, the ERS coupling is the ideal tool for applications having to satisfy today's quality requirements in assembly and finishing workshops.

Applications: quick and direct connecting of pneumatic tools.

Sectors: painting, body shops, aviation, final automotive assembly lines, etc.

 up to 12 bar - 



Ø (mm)
06
08

High flow safety coupling - ADS



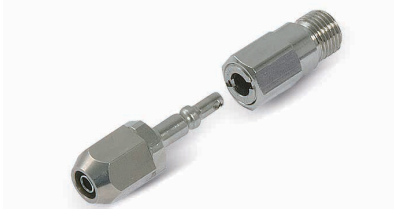
Dedicated to high flow circuits, ADS couplings actively contribute to the efficiency and safety of pneumatic installations. The internal design and materials chosen guarantee perfect and durable tightness.

Applications: connection of large flexible hoses to pipework, supply of manifolds, large pneumatic tools, pneumatic control machinery such as presses and production machines. Specific version for compressed air applications in the nuclear industry.

 up to 16 bar - 


Ø (mm)
11
19

Quick-release micro-coupling - MCR



Choosing the smallest coupling in our compressed air range means opting for easy handling. Its no-lock design offers effortless one-handed connection and disconnection, by simply pushing or pulling on the hose. Its very small size allows easy use, even in the most confined areas, making it the ideal partner for small depression circuits.

Applications: control circuits for fluid and pneumatic logic simulators, pneumatic controls, small vacuum systems: dental equipment, neutral gases.

up to 10 bar - 

Ø (mm)
2.3

Compact safety blowgun - SBG



Transform your quick coupling into a blowgun. Compatible with all compressed air Stäubli couplings Ø 6mm, the new SBG blowgun has 4 models of nozzles according to the desired blowing type. Impact resistant and scratchproof, it is also very ergonomic.

Applications: workstation cleaning, blow-down of machined parts, removing dust and drying parts in all types of industries; mechanical, electrical, automotive, pharmaceutical, wood, plastic...

up to 12 bar

Ø (mm)
06

Self-storing connection unit - HJP



Consisting of a high quality spiral hose (silicone-free) and Stäubli couplings, HJP connection units are ready to connect. Indispensable in high-performance workshops, they save time and offer flexibility and safety at work.

Applications: quick connection in all types of industry.

up to 10 bar

Tube Ø (mm)
8 x 12
9 x 13
11 x 16

Blowing unit with blowgun in composite material - HJP with STA blowgun



With this complete blowing unit, Stäubli combines the qualities of a robust, economic and non-scratch safety blowgun with the performance of a coiled hose, while improving the ergonomics of the workstation. Much appreciated by operators, this product is a very practical addition to the workshop.

Applications: cleaning the workstation, blowing of the machining device, dusting and drying of parts, etc. In all types of industry: automotive, electric, mechanical, laboratories, wood, etc.

up to 10 bar

Tube Ø (mm)
5 x 8
6.5 x 10

Blowing unit with steel blowgun - HJP with PML blowgun



This blowing unit consisting of a coiled hose and steel blowgun is ready to be connected. Flexible and practical to use with its long lever, the PML blowgun is also particularly tough due to its all-steel construction.

Applications: blowing in mechanical, electrical, wood or plastic industry workshops.

up to 10 bar

Tube Ø (mm)
5 x 8
6.5 x 10



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Full flow coupling - GPL



Protected sealing and locking, shock resistance, ergonomic shape for easy handling... with its specific qualities, the GPL range is perfectly adapted to demanding conditions of use. Automatic connection/disconnection offers easy maintenance for the user and reduction of assembly time even when connecting in difficult to access areas.

Applications: all types of industry. Available in a dedicated railway version for body to bogey and interbody pneumatic connections on trains and high speed trains.

 up to 10 bar - 



Ø (mm)
15
20
25
33

Full flow coupling for severe conditions of use - RTD



RTD couplings have all the qualities needed for use in very demanding situations: protected sealing and locking elements, toughness, ergonomic and semi-automatic locking sleeve for easy handling. The long guiding of the plug into the coupling guarantees constant sealing even under vibratory stress.

Applications: All types of industry. Body to bogey and interbody pneumatic connections on underground or difficult locations in the rail sector.

 up to 10 bar - 


Ø (mm)
11
19

Air treatment unit - FRL



The Stäubli air treatment unit is a customised solution to optimise air input and treatment in all locations. With its modular construction, it is possible to customise units in complete safety by sizing them according to needs and applications but also by adjusting pressure and lubrication, while guaranteeing optimal tightness.

Applications: filtering, regulation and lubrication of the network from a shared compressed air network.

 up to 16 bar


End connections
G 1/4
G 1/2
G 1

Submicronic filter - FSB



Because it is necessary to filter compressed air, Stäubli has developed FSB filters. Designed to obtain perfect air quality, they deliver very high performance filtering and reliably protect systems. They are ideal for networks and applications requiring enhanced oil filtering.

Sectors: automation, measuring, pneumatic control and regulation, paint booth, laboratory, breathing air, etc.

 up to 16 bar

End connections
From G 1/4 to G 3

Equipment for compressed air - Additional accessories



Stäubli also offers a range of other products and accessories for compressed air such as hose extensions, reels, bleeders, silencers, etc.

Please feel free to contact us.

THERMOREGULATION

Plastics, steel industry, machine tools



Temperature is regulated by cold or hot fluid circuits integrated into the production process. Stäubli contributes its expertise to this decisive phase in production.

Stäubli's commitments

- Reducing machine tool change times
- Allowing optimal flow of fluids (choice of appropriate design and materials)
- Facilitating the installation of products: improving ergonomics and visual identification of circuits
- Maintaining temperature throughout the production process

Reliable technology

- Quick-release non-spill flush face couplings
- Perfect sealing during connection and disconnection
- Very easy to handle even in difficult locations: blind connections (grip rings, extensions, automatic one-handed locking)
- Resistance to strong mechanical stress (vibration, oscillation, etc.)

Centralised connections: safety and rapidity

Stäubli recommends multi-coupling systems adapted to each work environment. Coupling plates connect several circuits in one single operation without risk of error. With their modular system, NDI manifolds group together fluid connections in one place.

All these products fall into line with a workshop automation strategy. Benefits can be measured in terms of rapidity, safety and regular production.


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Full flow quick-release coupling - RPL



Economic and efficient, the RPL range is also very complete: simple sockets, bridge pieces, extensions, elbows... Red or blue rings are used for simple and rapid identification of hot or cold water circuits.

Applications: connection of temperature control circuits, in particular moulds on injection presses.

up to 10 bar - 

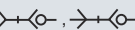
Ø (mm)
06
08
12

Single or double shut-off coupling - RMI



With seven passage diameters and two types of shut-off, the RMI range adapts to the customer process, for example eliminating the need to bleed circuits. The toughness of materials, excellent flow rate and locking quality make it a reliable and efficient solution.

Application: connection of low pressure temperature control circuits both on the tool (small diameters) and on the supply (high flow rate).

up to 16 bar - 


Ø (mm)
06
09
12
16
20
25
37

Non-spill flush face coupling - CBI



CBI couplings are designed to resist strong mechanical stress (vibration, oscillation, etc.). Their technology stops spillage for the safety of operators and protects the integrity of fluids (no impurities in the circuits). Capable of being locked to allow blind

connection in difficult to access areas. **Application:** connection of temperature control circuits in demanding conditions of use.

up to 50 bar - 

Ø (mm)
03
06
09
12
16
25


High temperature quick coupling - HTI



In response to demanding requirements in plastic injection, Stäubli developed the HTI, a new coupling that can withstand temperatures up to 300°C. HTI couplings meet all safety requirements and feature a double-action locking system. Designed to be maintenance free, the quick coupling does not have a seal in the fluid stream.

This technology is also available in multicouplings manual plate version.

Application: Temperature control in a variety of sectors including plastic injection moulds, metallurgical (die casting, iron and steel), glass, composites, aluminum and magnesium, pressure die-casting and more.

up to 12 bar - 

Ø (mm)
09
12

Manifold - NDI



The NDI manifold gives added value to the distribution function: ergonomic swivelling modules, coloured rings to identify circuits, bespoke composition to adapt to all environments and needs. You choose the number of modules (2 to 16) and fit them with a choice of threaded plugs, elbows, full flow or flush face quick-release couplings, etc.

Highly efficient NDI solutions guarantee sealing at all levels (inside connections, between connections and the manifold, between each module).

Applications: distribution of temperature control circuits on injection presses.

up to 10 bar





Ø (mm)
inlet/ outlet:
25 to 38
module couplings:
08 to 16

Multi-coupling plates - Centralised connection of control circuits



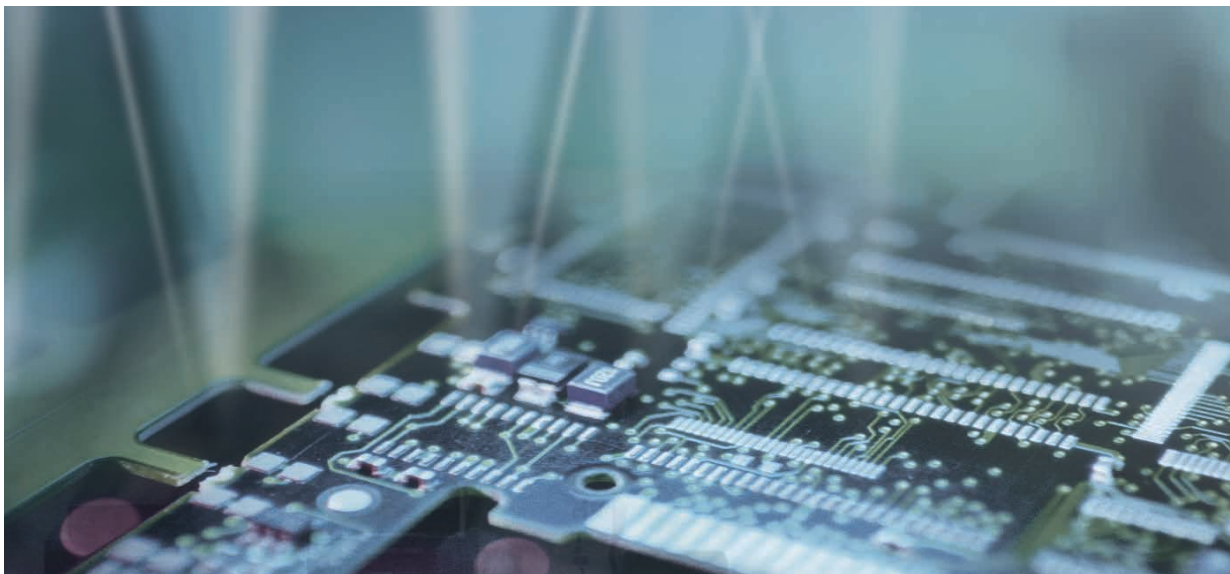
To connect temperature control circuits at the same time, use Stäubli solutions combining efficient mono and multi-connecting expertise.

Consult the "centralised" section on page 28.

: maximum pressure (according to the model) - Shut-off types: double  , single  , full flow 

THERMAL MANAGEMENT AND AIR-CONDITIONING

Cooling with water- or oil-based coolants: Stäubli solutions



Cooling of electronic components

With the addition of increasingly powerful electronic functions in systems, new component cooling requirements have emerged. Stäubli couplings allow manufacturers to design rapid access to different parts of equipment that have become very compact and simplify maintenance for end users.

Fields of application

- Aerospace (control electronics, radar)
- Medical (medical imagery)
- Telecommunications (broadcasting)
- Data Centres (data management, supercalculators)

Air-conditioning of areas and vehicles

To maintain constant temperature in industrial installations and vehicles, Stäubli has developed a wide range of high performance quick-release couplings:

- frequent connections/disconnections without addition of coolant
- different types of seals
- quick and secure locking
- easy cleaning flush faces before connection
- easy maintenance by end users

Fields of application

- Automotive industry
- Motorsports
- Aeronautics
- Plastics (targeted mould cooling)

Advantages of Stäubli quick-release couplings

- Non-spill sealing (clean break flush face couplings)
- Compact and light (materials in special aluminium alloys)
- Operator safety (disconnection without spillage)

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

Non-spill couplings adapted to blind connections - CGO and CGD



At the heart of electronic systems, the non-spill technology of CGO and CGD couplings guarantees perfect sealing during operation and connection/disconnection. Mounted on rackable systems, these couplings are designed to compensate for alignment faults: up to 0.5 mm with

the CGO's oscillation technology and up to 1 mm with the CGD's displacement technology.

Electronic cooling: converter, data centre, radar, medical imagery, etc.

 up to 16 bar -  - 

Ø (mm)
03
05
08
12




Non-spill coupling with bayonet locking - SPH/CG



This highly robust bayonet locking system takes two movements to disconnect the coupling, thus eliminating any risks of accidental disconnection due to vibrations. Non-spill flush face technology prevents spillage when disconnecting

circuits: a decisive advantage in the electrical or high voltage environment.

Electronic cooling: converter, data centre, radar, medical imagery, etc.

 up to 80 bar -  - 




Ø (mm)
03
05
08
10
12
16

Non-spill coupling with ball locking - SPT/CG



Through non-spill technology on disconnection, the SPT range is ideal for electrical and high voltage environments. With a large number of balls, locking is extremely robust.

Electronic cooling: converter, data centre, radar, medical imagery, etc.

 up to 40 bar -  - 

Ø (mm)
05
08
10
12
17
20
25




Quick-release coupling for temperature control - RME



RME couplings are designed so that sealing takes place before the opening of the valve, ensuring leak-tight connection. The choice of materials guarantees enhanced resistance to corrosion in the presence of liquids and cooling fluid additives. The version with the protector protects

sealing and locking elements from external agents (water, dust, etc.).

Applications: cooling circuits, motors, bleeds, filling.

 up to 16 bar -  - 




Ø (mm)
06
09
12
16
20
25

Quick-release coupling for cooling lines - SPF



The double sealing barrier on SPF couplings allows frequent connections/disconnections of air-conditioning systems without having to refill circuits with coolant. Screw-in locking guarantees perfect safety of connections which may be reinforced with a pin in the case of vibrations.

Sectors: automotive, motorsports, etc.

 up to 80 bar (disconnected) -  - 




Ø (mm)
06
09
14
17

Quick-release coupling for filling of air-conditioning circuits - RPE







Depending on the fluid used, Stäubli has developed two versions of RPE couplings (RPE 12 and 13 for filling with HFO 1234 fluid, RPE 11 and 14 for filling with R134A coolant). These ergonomic couplings can be connected and disconnected with one hand (raised button) and are adapted to difficult to access locations.

Applications: filling of air-conditioning circuits with coolants according to the SAEJ 639 standard in the automotive industry.

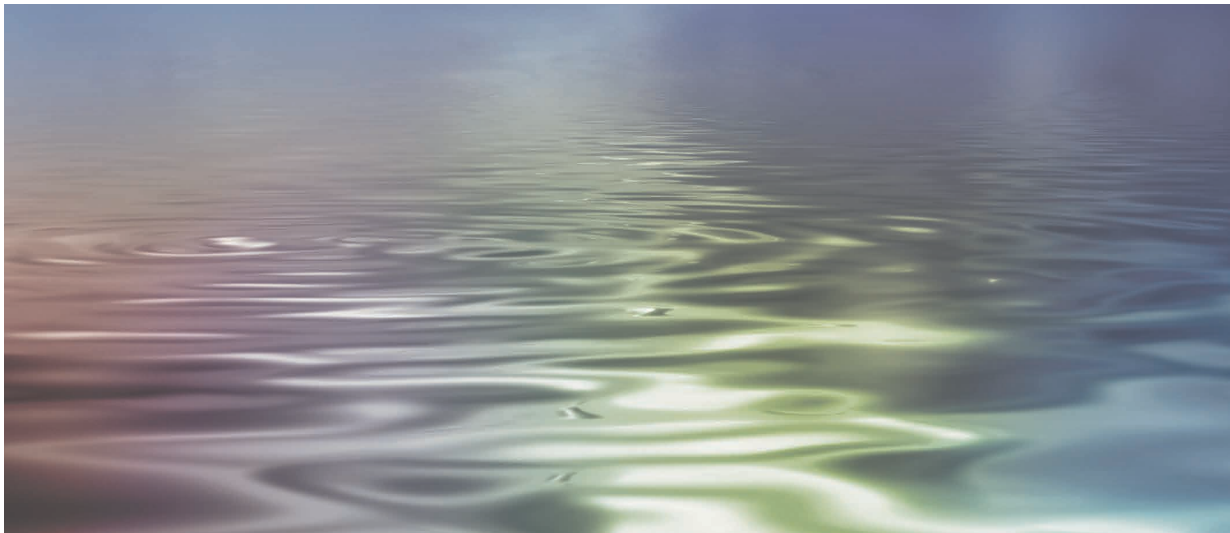
 up to 18 bar Socket -  -  (customer plug)

Ø (mm)
12
13 (HFO 1234)
11
14 (R134A)

 : maximum pressure (according to the model) - Shut-off types: double  , single  , full flow 

ALL FLUIDS

A wide range of solutions based on a long-established partnership with manufacturers



Designed for use in different sectors, Stäubli all-fluid couplings can be modulated to the type of fluid conveyed, service pressure and work environment.

Modularity

Type of connection, choice of material, type of seal:

Stäubli satisfies the demands of each application.

- Standard or specific safety locking
- Maximum sealing for optimal flow
- Flush faces to protect users and the work environment (non-spill, sterile environment, etc.)
- Simple use for the operator (visual identification with coloured disks)
- Locking keys to prevent any inversion or accidental connections

In direct contact with customers

With their comprehensive industrial knowledge of connections, Stäubli sales staff offer their customers their full expertise with this very modular range of all-fluid couplings.

This knowledge enables them to advise on the most appropriate choices, including in such specific areas as biotechnology, pharmaceuticals, chemicals, air gases (nitrogen, helium, argon, etc.).

A versatile range

Often consulted for specific applications, the Stäubli R&D department is capable of providing the right innovative solution, like a material change (anti-corrosion in aggressive environment) or miniaturisation adapted to modern-day equipment (compactness, lightness, new components).




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Modular coupling with push button - RBE



Entirely modular, the RBE range offers a wide choice of materials for metal components and seals, 3 types of shut-off options and various options to construct the right system according to the application and features of the conveyed fluid.

Its original automatic built-in button locking system is very easy to handle.
Sectors: all industrial and research sectors.

 up to 450 bar
-○-+○-, >+○-, >+<-


Ø (mm)
03
06
08
11
19

Non-spill flush face coupling - NCB



Our flat face NCB range allows non-spill, clean break connections and disconnections, while the coupling's internal design offers excellent flow rate. Along with standard automatic locking, the NCB is also available in a screw locking version for on-board applications.

Applications: Production processes, test benches, sampling, cooling of electronic connections...
Sectors: chemical, aeronautics, marine, railway and other industries...

 up to 160 bar - ○-+○-


Ø (mm)
04
08
12
20

Non-spill coupling with bayonet - HCB



The simple and robust bayonet locking system on the HCB range is very easy to handle and highly reliable. Mainly in stainless steel 316 serie, HCB couplings are ideal for applications in aggressive work environments.

Their non-spill design protects the work environment and the quality of the fluid transfer.

 up to 350 bar - ○-+○-


Ø (mm)
03
05
08
12
16
20

Full flow couplings - UPA and UPB



UPA and UPB full flow couplings mainly in stainless steel 316 serie are economic and efficient solutions. The quality of the surface in the fluid's vein (Ra 0.8) allows easy and effective cleaning. These couplings are designed to meet the requirements of the food processing and pharmaceuticals industry (FDA and USP options).

Applications: quick-release fluid circuit connections on manifolds, fillers, in washing plants, fluid transfer, draining and filling.

 up to 30 bar - >+<-


Ø (mm)	
UPA	UPB
08	25
12	33
20	50

Stainless steel non-spill coupling - MCB



The MCB coupling combines non-spill design, automatic ball locking and high performance. Its compact design allows use in small spaces.

Applications: production processes, test benches, chemical fluid sampling, etc.

 up to 100 bar - ○-+○-


Ø (mm)
03
05
08
12
16

High pressure coupling - RBL



With its high quality locking and its mainly stainless steel 301 and 316 serie construction, the RBL range guarantees reliable connection of high pressure liquid and gas circuits, including in corrosive environments. Automatic button locking allows one-handed connection and disconnection.

Applications: high pressure hydrogen circuits, high pressure circuits in corrosive atmospheres, high pressure cleaning in the food processing industry, laboratories, high pressure gas filling.

 up to 450 bar
>+<-, >+○-, ○-+○-

Ø (mm)
03
06
08
11

HYDRAULICS

Stäubli solutions for low, medium or high pressure hydraulics



Adapted to high pressure constraints, Stäubli quick-release couplings guarantee reliable and securely sealed connections. Dedicated to mineral, synthetic or organic oils, they are designed to facilitate maintenance and improve the longevity of installed machines.

An adapted design

- High-yield steel (high pressure)
- Seals in fluorocarbon for high temperatures
- Optimal flow rate without pressure loss at the end of line
- Robust locking: balls or claw (resistant to vibrations)
- Possibility of connection under residual pressure
- Compatible with all oils

Non-spill technology

- Non-spill flush face couplings
- Adapted to environmental quality requirements
- Economic as there is no need to treat oil rejects

Operator safety

- Secured locking
- High resistance materials
- Sealing (clean work environment)

Uses

- **Plastics industry:** injection presses, core pulling circuits, etc. Objectives: frequent mould change, quick extraction by ejectors
- **Steel industry:** continuous casting, rod and wire mills, profiles and flat products, etc. Imperatives: quick maintenance, control of material wear and production costs

STÄUBLI



Non-spill flush face coupling - MPX



Designed for quick connection of hydraulic circuits, the MPX range satisfies industrial demands: non-spill circuits and respect for the environment, safety, performance and compliance with the ISO 16 028 hydraulic standard. Locked by a simple rotation, its safety system

prevents accidental reversal of the locking sleeve.

Industrial hydraulics: connection of machines, injection presses, core pulling circuits, etc.

 up to 315 bar - 

Ø (mm)
06
10
12
16
19
25



Compact non-spill couplings - CBX



The very compact design and automatic locking of CBX couplings makes them ideal for repeated, blind or difficult-to-access connections. They can be connected under residual pressure (PA option) and fitted with protective dust caps.

For test circuits, they are also available in a brass-free version.

Sectors: connection of hydraulic circuits in plastics and in industry in general.

 up to 450 bar - 

Ø (mm)
03
06
09
12
16



High yield flush face connections - SPX - THX



Clean break, robust and easy to handle, SPX couplings are ideal for hydraulic connections in difficult environments. This very comprehensive range offers several options: visual identification of circuits by colour coding, anti-dust protection, metal protective dust caps, possible connection under residual pressure, panel mount version, stainless steel

quality aimed at off-shore applications and all applications in highly corrosive environments.

Sectors: steel industry, off-shore.

 SPX: up to 450 bar
THX: up to 700 bar




Ø (mm)	
SPX	THX
06	06
08	08
12	12
16	

Heavy duty screw-on couplings - HPX



The screw-on locking system with claw safety feature guarantees extremely robust connections, even those subjected to pulsating or vibrating cycles. Optional coloured metal caps allow instant visual identification of circuits and, for easier handling, plugs can be fitted with a hand wheel.

Applications: steel industry (rolling mills), road-making, aeronautics (endurance testing, launch pads), automotive (foundry tools) mechanical construction (hydroforming, cutting, etc.).

 up to 500 bar - 



Ø (mm)
08
12
16
20
25
33

High pressure test bench coupling - THL



The THL range is ideal for frequent uses: up to 10,000 non-pressurised connections. With automatic connection and disconnection by simply pushing on the raised locking button, it is possible to link up series of tests without wasting time.

The couplings' high level of sealing through their metal/metal interface offers a controlled, even and reliable link between Stäubli couplings and the customer's interface, indispensable for high pressure applications.

 up to 1000 bar - 



Ø (mm)
03

Non-spill coupling for applications with vibrations - SVX



With a screw locking version, the SVX couplings are easily connected even when access is difficult. Moreover, this robust locking technology can be enhanced with a safety pin: high strength solution in case of strong vibrations.

Applications: connection of hydraulic circuits on machines, on public works vehicles...

 up to 350 bar - 

Ø (mm)
08
12
20

FILLING AND DRAINING

Quick-release couplings for fluid installations



Similar constraints for different sectors

To fill containers, cisterns and tanks with corrosive, chemical or food fluids, the following features are required:

- operator safety
- respect for the environment
- resistance to corrosion (stainless steel)
- easy cleaning
- material traceability

In the chemicals industry,

Stäubli provides specific solutions satisfying, for example, non-spill requirements or integration in explosive atmospheres.

In mechanical processes, the use of cisterns, oil pans, gear boxes and reducers imposes other requirements:

- prevention of any oil spills when disconnecting
- non-introduction of air at each connection

Complete solutions with the Stäubli range

- Full flow couplings
- Single or double shut-off couplings
- Flush face couplings
- Special couplings (railway, medical, aerospace sectors, etc.)

Sectors involved

- Chemicals (odorous gases, inerting, sampling)
- Pharmaceuticals (transfer of liquids)
- Medical (samples)
- Food processing (transfer of products)
- Hydraulics (braking circuits, pumps, supply of jacks, etc.)
- Automotive (braking circuits, engine bench tests, tool changes)
- Fluid logistics




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Stainless steel high flow non-spill coupling - HCB large diameter



This range dedicated to high flow rates is characterised by its excellent durability. It permanently ensures perfect sealing during connection and disconnection and has a particularly robust bayonet lock. Its ergonomic design makes handling easy (hand wheel, automatic locking at end of process).

Applications: loading and transfer of chemical products (fluids for batteries, resins, etc.).

up to 50 bar - 


Ø (mm)
28 (DN 40)
37 (DN 50)
50 (DN 80)

STANAG 3756 high flow coupling - TTX



This range of dry disconnect couplings based on STANAG 3756 standard offers an optimum high flow rate, non-spill technology with disc valve design that ensures sealing during connection and disconnection.

The modular build-up allows quickest maintenance and the ergonomic design ensures easy handling. Stäubli's high flow connectors provide safety and efficiency for a wide variety of industries and media.

up to 25 bar - 


Ø (mm)
20 (DN 25)
30 (DN 50)
45 (DN 65)
60 (DN 80)
65 (DN 100)

Stainless steel high pressure non-spill coupling - HCB



The bayonet lock makes the HCB coupling particularly resistant to constraints during use such as vibrations, stress on pipes, etc.

It is the solution for applications requiring non-spill processes, resistance to high pressure and severe environments.

up to 350 bar - 

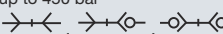
Ø (mm)
03
05
08
12
16
20

Modular coupling with push button - RBE



The highly modular RBE design offers a very wide range of options, materials and shut-offs. Due to this modularity, it adapts to all fluids and applications that specifically require: stainless steel, safety locking keys, panel-mounting, etc.

Applications: inerting, gases, fluids, vacuum, high pressure...

up to 450 bar


Ø (mm)
03
06
08
11
19

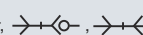
Quick-release couplings for use in engine testing - RPE



Designed to meet specifications, RPE couplings can be connected to all types of engine connections. They are compact and offer easy handling even in difficult to access environments, in particular during engine testing.

Sector: automotive industry.

Applications: hot and cold engine test benches, individual testing of engine components, diesel start at the end of assembly line.

up to 3 bar, 


Ø (mm)
03 to 65

Non-spill quick-release coupling for hydraulic unit - SBA/CN



Reliable, quick, with flush faces, SBA/CN couplings eliminate all risks of fluid and environmental pollution on connection and disconnection. Labels identify filling and draining circuits.

Application: draining, filling and oil filtering operations on hydraulic units combined with a machining unit, injection press, cutting or die-stamping.

up to 10 bar - 

Ø (mm)
11

FUEL CIRCUITS

Diesel, kerosene, petrol circuits: secured transfers and connections



For fuel supply of vehicle fleets and fuel logistics, Stäubli supports users in their requirement for maintenance, safety and cleanliness.

- Large volume fuel transfer: large diameter quick-release couplings between storage and refuelling units and the zones to be supplied
- Refuelling with electric pumps: safe unlocking, non-spill performance
- Refuelling by gravity during endurance races
- Connections inside the vehicle: quick assembly/dismantling operations between the engine and the tank

A wide range of solutions

- Electric pumps
- Distribution systems
- Collapsible storage tanks
- Mobile fuelling systems

Advantages of Stäubli quick-release couplings

- Facilitate internal vehicle servicing: quick, non-spill dismantling (tank, engine, etc.)
- Easy filling: quick connection of supply hoses with the different filling guns
- Avoid pollution of fuel circuits (non-spill flush face couplings)
- Secure operation (venting retrieval, locking systems, etc.)
- Guaranteed long-term reliability (technology and materials used)



Fields of application

- Light and heavy utility vehicles
- Motorsports
- Aircraft fuelling units

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FILLING AND TRANSFER


High flow symmetrical couplings - VSU



The compact, full flow VSU coupling offers an excellent flow/volume ratio. Perfectly symmetrical, it is not necessary to have a specific hose direction (same coupling at each end). The claw locking system combined with a valve opening and shutting system which guarantees total safety on connection and disconnection.

Applications: fitted on fuelling vehicles, electric pumps, distribution systems, collapsible storage tanks.



up to 10 bar - 

Ø (mm)
25
38
50


Non-spill coupling with bayonet locking - HCB 28/L



Ideal for refuelling, the HCB coupling guarantees clean, non-spill disconnections. In high-yield aluminium alloy, it is lightweight and fitted with a hand wheel for easy handling.

Characteristic: perfectly adapted to different filling interfaces (guns, hose end couplings).



up to 10 bar - 

Ø (mm)
28


Filling system during pit stops - SAF



With its very high flow rate, the SAF can fill a tank very rapidly and shorten pit stops. Safety is guaranteed by a sequenced connection that prevents any fuel release until the socket is fully connected to the plug. There is also a so-called "dead man" FIA-approved safety feature.

Application: quick fuel filling during endurance car and motorcycle races.



gravity - 

Ø (mm)
45

INTERNAL CONNECTIONS


Non-spill quick-release couplings for fuel lines - SPT



SPT couplings combine high flow performance with non-spill safety. Compact and light, they fit into all types of vehicle.

Applications: connections to fuel lines with break-away option. FIA-approved sampling. Refuelling of rally vehicles.



up to 40 bar - 

Ø (mm)
05
08
12


Full flow coupling for internal connection to the tank - DMR



The automatic bayonet lock on DMR couplings ensures resistance of the connection even when subjected to vibrations. Compact and light, DMR couplings are ideally suited for on-board applications.

Applications: connection inside the tank (full flow coupling).



up to 30 bar - 

Ø (mm)
06
10
17
25
32
37

FILLING SYSTEMS FOR ALTERNATIVE FUELS

Stäubli solutions for NGV or LPG vehicles



Designed for refuelling requirements at service stations or equipment manufacturers, Stäubli couplings for alternative fuels offer a wide range of solutions for:

- all types of vehicles (heavy/light)
- slow or fast refuelling (NGV)
- all filling methods (vehicle fleets/self-service)



Refuelling for vehicle fleets, private or public pumps.

Comfort of use

Light and ergonomic nozzles, easy handling and silent.

Safety of installations

In addition to the filling system, the Break-Away safety feature acts as a mechanical safety valve so in the event of accidental departure of the vehicle, without disconnection from the refuelling station, the Break-Away will:

- automatically cut-off the gas
- disconnect without tearing

Reliability of Stäubli solutions

With their adapted materials and technical features, Stäubli filling lines are designed to resist shocks, corrosion and dust.

Compliance with applicable standards

- NGV filling: nozzles compatible with NGV 1 and ISO14469 receptacles
- LPG filling: nozzles compatible with EN13760 standards
- Stäubli NGV and LPG solutions comply with DESP 2014/68/EU directives and can be integrated into ATEX 2014/34/EU environments.

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Self-service refuelling nozzles for NGV vehicles - GMV type 1



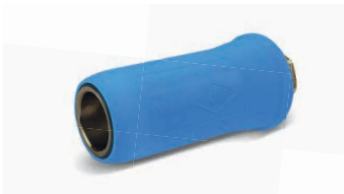
GMV nozzles combine easy use and safety: just turn the lever and open the circuit in one single movement. An integrated decompression system allows perfectly safe disconnection.

Application: fast filling of light and heavy vehicles solution recommended for self-service stations. Complies with regulations relating to NGV use. Compatible with NGV 1, ISO 14469 receptacles.



Ø (mm)
06
09

Fleet refuelling nozzle - CMV type 2-3



CMV 08 nozzles offer a simple and economic solution for refuelling vehicle fleets. Automatic locking allows very quick connection of the nozzle. The low connecting effort makes them ergonomic. No reception deformation on the filling receptacles due to the original locking system created by the large contact surface area.

Application: fast or slow filling of vehicle fleets. Complies with regulations relating to NGV use. Compatible with NGV 1, ISO 14469 receptacles.



Ø (mm)
08

NGV

NGV in-line safety break-away - BRW 02 and 08



Positioned in the refuelling hose, Break-Away systems ensure that the hose will break away and close the circuit if the car drives away with the nozzle connected (automatic disconnection whether the system is pressurised or not). These genuinely reusable safety valves can be reconnected over again.

Applications:

- BRW 02: safety for slow filling of light vehicles or on venting lines
- BRW 08: safety for fast filling of light or heavy vehicles.



Ø (mm)
02
08

Vehicle receptacle - GMV 08 and 09



GMV receptacles comply with NGV 1, ISO 14469 profiles. Their internal technology allows silent filling for better comfort of use. The quality of their construction and choice of materials guarantee reliability and longevity.

Application: receptacle to fill light and heavy vehicles. Assembled on vehicle according to repository ISO TS 16 949.




Ø (mm)
08
09

Refuelling nozzle for LPG vehicles - GPV 14



Light and easy-handling, the LPG nozzle is as easy to use as a petrol gun. It has been designed to offer totally safe manoeuvrability: no risk of burning due to gas venting and completely automatic operation excluding any risks of incorrect handling.

Application: refuelling of LPG vehicles. Complies with regulations relating to LPGc use.  Connecting profile complies with the EN 13760 standard.



Ø (mm)
14

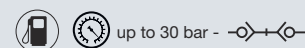
LPG

LPG in-line safety break-away - BRW 11



The Break-Away instantly disconnects and automatically cuts off the circuit if the supply hose is pulled. It protects vehicles and installations and ensures user safety by preventing gas venting into the atmosphere.

No risk of accidental disconnection, easy to install and reconnect, it prevents long down-times at stations following accidental hose pulling.



Ø (mm)
11

BREATHING AIR

Safety at all times: nuclear, medical research, chemicals and pharmaceuticals



The Stäubli breathing air range

- Quick-release couplings for breathing air network tapping, direct connection to personal protective equipment, etc.
- Multi-operator manifolds
- Steel reels with “breathing air” hoses
- Filter units

Operator safety

The Research and Development department designs solutions to comply with safety requirements:

- two distinct actions to disconnect a suit at the belt
- double cleaning of coupling components before assembly
- special lubrication: food-safe quality
- specific profile of AQR plugs to prevent any connection with other gases or liquids

Quality criteria

Stäubli ensures compliance of the range with applicable standards:

- monitoring of normative and statutory texts
- EN 14593, EN 14594 compliance
- resistance of stainless steel materials

Control criteria

- Visual identification (blue colour)
- Mechanical foolproof matching of circuits
- 100% unit check of couplings (operating and sealing test)
- Production traceability: batch allocation



STÄUBLI

Quick-release safety coupling for breathing air - AQR



Because each application is different, the AQR range satisfies all your needs. Fitted with a specific connection profile, mechanical foolproof matching and anti-hose whip safety, this range of couplings meets all your safety requirements.

Applications: spur on breathing air networks, direct connection to PPE, connections to air treatment units and distribution units.

 up to 10 bar - 


Ø (mm)
06
08
11
19

Final air treatment unit - BQR



Fitted with a submicronic filter and activated carbon filter, BQR units prevent any absorption of particles, aerosols, oil vapour and odours. They provide genuine safety support to operators and are suitable for all types of industry: nuclear, chemicals, pharmaceuticals, shipbuilding and asbestos removal.

Application: final treatment of air between the breathing air circuit and operators.

 up to 10 bar


Maximum flow (NI/min)
3000

Breathing air hose fitted with AQR quick-release couplings - TQR



With their easy handling, anti-static quality and heat resistance, TQR hoses offer a high quality solution in the supply of breathing air to operators.

Applications: supply of breathing air between spurs on networks, distribution manifolds and personal protective equipment.

 up to 10 bar


Hose Ø (mm)
10 x 16
13 x 20
19 x 28

Coiled hose fitted with AQR quick-release couplings - HQR



Enjoying excellent plastic memory, coiled hoses return to their initial position after extension, thus taking up minimal space. Compliant with the requirements of breathing air circuits, they are the ideal complement to the TQR hose range.

Application: supply of breathing air from ceiling-mounted systems.

 up to 10 bar


Hose Ø (mm)
9 x 13

Open hose reel - EQR



Indispensable in workshops, the Stäubli automatic reel supplies breathing air in complete safety to operators: time and space-saving, comfort.

Application: spur on breathing air networks.

 up to 10 bar


Hose Ø (mm)
10
13
19

Breathing air manifold - DQR



The ideal ally of mobile sites, the Stäubli transportable manifold can supply up to 6 operators from one single general supply hose.

Application: simultaneous supply of breathing air to several personal protection equipments.

 up to 10 bar

Coupling Ø (mm)
08

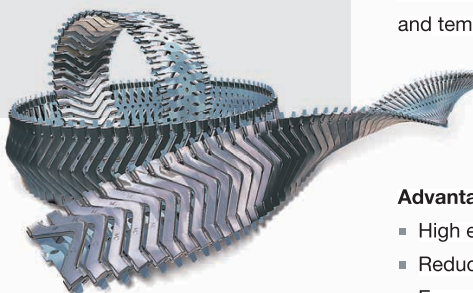
ELECTRICAL CONNECTORS

Multilam technology contacts and simultaneous energy connection



Some of the industrial areas in which electrical connection is of prime importance are power and signal, fibre optics, data transfer (co-axial cables, Ethernet) connections and thermocouple measuring.

Stäubli are able to deliver its combined expertise in energy connection and the design of electrical connectors.



Multilam technology: performance and resistance

Pioneering technology for power and signals, Multilam connection ensures robust and high quality conductivity in electrical assemblies. This 360° Multilam system provides a large contact area and its flexibility allows a permanent electrical flow, which prevents accidental power line disturbances. This makes it suitable for work environments prone to vibrations and temperature variations.

Advantages

- High electrical conductivity
- Reduced heat production
- Energy savings
- Long-term resistance

CombiTac and REP: the modular connector

The CombiTac centralises fluid, electric power and signals in the same unit and connects circuits in one single move. Pre-equipped modules are assembled according to the user's specifications. Completely electrical REP multi-connection plates offer several configuration possibilities.

Advantages

- Time-savings and rapid use
- Precise connection (guiding columns)
- Safe operations: inversions are impossible (foolproof matching system)
- Remarkable life cycle and number of connections
- Dust and water projection protection on the CombiTac

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Modular multi-coupling for fluid and electrical circuits - CombiTac



The CombiTac concept connects all energy circuits in one single move. Depending on the application, solutions are built to specifications, through the assembly of independent and dedicated modules:

- compressed air and industrial vacuum
- cooling fluids
- electrical power circuits
- signal connections (thermo-couples, fibre optics, Ethernet, etc.)

The quality of construction, in standard housing or rackable versions, ensures reliable connections.

Applications: process and maintenance equipment in all industries.

Fluid couplings Ø (mm)	Electrical contacts Ø (mm)
03 to 08	0.6 to 12

Centralised modular connection for electrical applications - REP



Highly modular REP solutions consist of pre-fitted plates with 1, 2, 3 or 4 housings. Male or female electrical inserts can be mounted on the fixed or mobile plate. For perfect integration into the customer's environment, outlets can be swivelled, straight or at 90°. Electrical connections are secured by their design which prevents inversion of circuits and a pin coding system removes all risk of cross connection between similar plates.

Applications: process equipment in all types of industry especially in plastics and on test benches. Ø 1.5 to 6 mm contacts, thermo-couples, co-axial cables and fibre optics.

Number of contacts	Electrical contacts Ø (mm)
2 to 36 poles + earth	1.5 to 6
by insert	

Electrical connectors for batteries and power - CEB



With their Multilam technology, CEB electrical connectors create permanent electrical contact, even in vibrating environments. Their sealed housing, designed to resist shocks and hydrocarbons, guarantees long-term performance.

Applications: Battery connection on all types of vehicle (24 V). Power connection on hybrid and electric vehicles (1000 V).

Maximum voltage: up to 1000 V

Cable sections (mm ²)
6 to 50

Stäubli electrical programme

Stäubli Electrical provides a wide range of connectors based on the patented Multilam technology:

- connectors for all types of applications in industrial environments
- connectors for automated systems: robotics, welding guns, tool changers and multiconnection systems

- connectors and accessories for the medical industry
- connectors, cables and junction boxes for photovoltaic and solar panel systems
- connectors for test and measuring accessories
- connectors for electrical and electronic engineering equipment

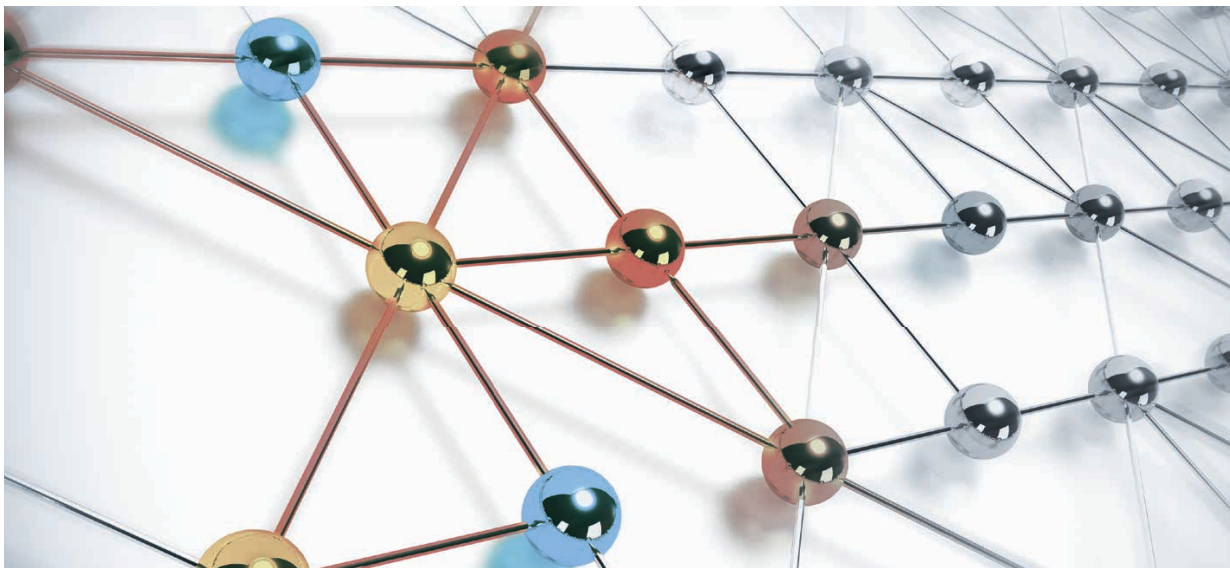
- connectors for laboratories and educational equipment

These reliable and innovative solutions, whether standard or customised, have excellent performance and quality features.



CENTRALISED CONNECTION

Quality, productivity, safety



Multi-connection: the MCS programme

With the MCS (Multi Connect System) programme, different sources of energy can be connected in one single move, in one single point.

There are many advantages for manufacturers: productivity gains, optimised space and operator and installation safety (it is impossible to invert circuits).

Besides its range of standard plates, Stäubli is capable of designing a solution adapted to each customer's needs, based on its specifications.

A multi-coupling plate for each application

With its comprehensive catalogue, Stäubli delivers efficient and competitive products within short deadlines.

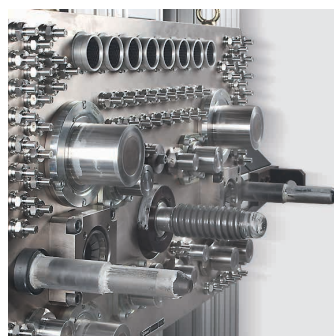
Modular configuration possibilities allow easy integration into customers' environment. They cover:

- the number of couplings
- flow rate
- pressure
- type of fluid
- diameter

Automating processes

Opting for automated connection with the MCS product family provides many advantages:

- productivity gains (reduced manufacturing times)
- constant quality improvement
- reliability (reduced maintenance)
- operator safety, especially in dangerous environments (steel or chemical plants, medical, etc.)



Sectors involved

All industries, in particular:

- automotive
- steel
- plastics
- aeronautics
- railway
- nuclear

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Centralised connection of temperature regulation circuits - RMI



RMI plates connect all temperature control circuits of moulds in one single move and in complete safety. Their design prevents circuit connection errors and removes all risks of wrong connection between similar plates.

There are many configurations e.g. number of couplings fitted onto the plate or the choice of diameters, in order to adapt to each application.

—○—+—○— or —+—○—

	Ø (mm)	Number of couplings
RMI 206	06	6
RMI 209	09	6 - 10 - 12 - 20
RMI 212	12	12 - 20
RMI 216	16	10 - 12

Centralised flush face connection for temperature control circuits - MCI



MCI non-spill plates ensure the integrity of fluids and the environment during connection and disconnection operations. The different configurations allow their use on 4 legs or mounted directly on the tool. Stäubli innovation: an interface added to the plate whereby plugs can be dismantled without the need to disconnect the hoses.

MCI solutions offer a wide range of benefits to boost efficiency and safety.

Application: centralised connection of mould temperature control circuits on injection presses.

—○—+—○—

Ø (mm)	Number of couplings
09	6
	10
	12
	20

Centralised connection for high pressure hydraulic circuits - RMP 49



RMP plates offer excellent yield with a high flow rate and fluid speed reaching up to 30 m per second. They are ideal for core-pulling applications. The flush face design guarantees no spillage on circuits or the work environment.

Applications: high pressure hydraulic circuits, supply of ejection jacks, core-pulling, etc.

—○—+—○—

Ø (mm)	Number of couplings
09	2
	4
	6

Centralised connection of hydraulic circuits for sequential injection - SPC



Specifically designed for sequential injection, SPC plates are both compact and highly efficient in terms of flow rate. Circuits can be connected by rigid tubes on the side or directly on the underside of the fixed plate.

Non-spill flush face technology preserves integrity of fluids on connection and disconnection.

Application: centralised supply of hydraulic control of valve gate cylinders and closure of sequential injection circuits on hot channels.

—○—+—○—

	Ø (mm)	Number of couplings
SPC 203	03	4
SPC 205	05	8
		12
		16

Centralised connection for high temperatures circuits - HTM



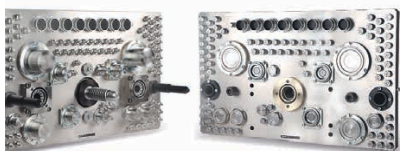
The manual plate HTM is dedicated to very high temperatures applications until 300°C. Its control lever allows for a fast, safe, centralised connection of energies. No seal in the fluid stream, no heavy maintenance and no pause adds up to a real asset in this industrial environment.

Applications: connection of high temperature cooling circuits for composites, thermoplastic injection, die-cast alloys.

—○—+—○—

Ø (mm)	Number of couplings
9	12
12	

Customised multi-coupling - MCS



From customer specifications, Stäubli constructs the solution adapted to requirements to connect all circuits: pneumatic, gas, low and high pressure hydraulic, power and electrical signals.

The environment is rigorously accessed leading to a perfectly honed solution: performance and durability testify to the Stäubli group's commitment.

Applications: engine test benches, reactors, mould temperature regulation, rolling mills, power converter cooling, etc.

MOULD LOADING AND CLAMPING SYSTEMS

Plastics industry: reducing mould installation times to gain productivity savings



QMC solutions dedicated to the plastics industry

Because changing a mould requires a set of operations that impacts on production time, Stäubli Quick Mould Change (QMC) systems are designed to satisfy plastic injection requirements by setting up SMED or Lean Manufacturing.

Loading tables: optimise production cycles

In order to drastically reduce tool loading time and ease handling of large sized or heavy moulds, the Stäubli engineering office defines technical solutions meeting your specifications, even in small spaces, e.g.

- loading table dedicated to one machine
- multi-station loading tables
- rail guided carts
- movable carts
- vertical loading, etc.

Stäubli's 3 QMC clamping solutions

A Stäubli specialist firstly audits your technical, economic and production constraints and then guides you towards the best choice adapted to your applications:

- magnetic clamping: strong flexibility
- manual bayonet clamping: an economic solution
- hydraulic clamping: a particularly robust procedure

In standard or specific version, your Stäubli partner proposes the most efficient solution for your work environment.

Industrial sectors involved

- Automotive equipment
- Household electrics
- Electronics
- IT
- Industrial hardware
- Designer furniture
- Sports equipment
- Composite materials, etc.

- **Mould transfer**
- **Loading on machine**
- **Clamping**
- **Energy connection**
- **Automation of a process**
- **etc.**

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Magnetic clamping - QMC 122

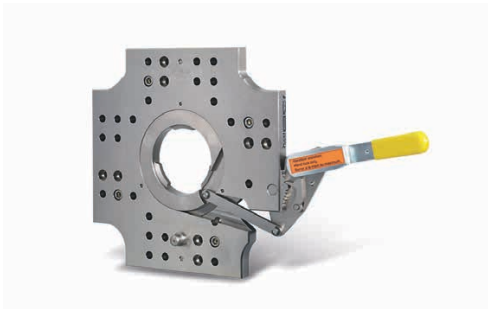


Quick and safe magnetic clamping requires no modification of your current machine tools and is ideal for frequent production changes. It is suitable for moulds with a contact temperature lower than 100°C and with a base plate in low alloy steel.

Each plate is designed according to the press to be fitted but also available moulds for optimised performance. Active safety, interactivity with the operator and measurement of clamping force are all innovative functions that IMAG technology, developed by Stäubli, has made possible.



Mechanical clamping - QMC 105 and 106



The installation is very easy and needs no connection to the hydraulic or electric interface of the machine. It is designed for medium or small presses (up to 200 tonnes) and can be used at up to 200°C. It can be installed in production workshops with moulds weighing less than 2 tonnes.

Easy to implement:

- on the mould side: quick and easy installation of the QMC centring ring
- on the press side: assembly of bayonet locking plates
- locking in one single move with the removable hand lever.

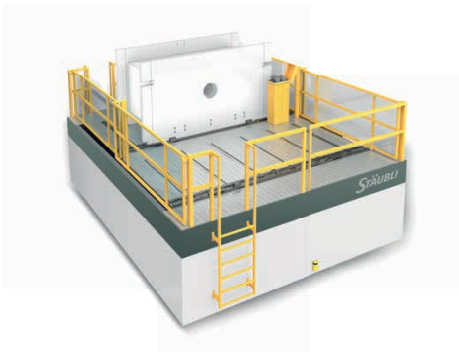
Hydraulic clamping - QMC 100 and 101



This clamping system is used on standard rear plates as well as a safety interface with the machine.

Designed for a wide range of presses, it is also suitable for severe conditions of use and high temperatures.

Mould loading tables and vehicles



For each request, Stäubli, in partnership with the customer, defines the loading solution most adapted to the features of the moulds, machines and, more generally, all production factors.

Whether dedicated to a machine or movable, manual or automatic, Stäubli systems considerably reduce mould change times and increase safety.

TOOL CHANGING SYSTEMS FOR ALL ROBOTS

Optimising the use of robots by fitting them with MPS tool changers



Different types of locking, docking stations, fluid and electrical connections, data transfer modules.

Industrial sectors involved

- Automotive: stamping, body shop, assembly, engine
- Aeronautics: riveting, machining
- All industries: selecting and positioning objects, machine tools

Stäubli MPS Robotic tool changing systems

Acting as the interface between the robot and the tool, the MPS (Multi Prehensile System) system is used for very rapid and automated tool changing. It locks the tool on the robot and transfers energies such as compressed air, water, electrical signals, servo-controls and high pressures. Stäubli robotic tool changing systems reduce operators' involvement with the robot, optimise cycle times and reduce downtime during production. The systems are designed according to a modular product concept that guarantees variable multi-functionality and optimal integration into all industrial robot manufacturing processes. Payload-specific base units on the robot and tool side are the basis for the three Stäubli tool changing system solutions.

MPS COMPLETE

We can provide you with a ready-to-use robotic tool changing system. These preconfigured complete solutions can also be provided on short notice.

MPS MODULAR

Our individually configurable solutions offer you the full benefits of our modular system. This allows you to configure a robotic tool changer to your specific application.

MPS CUSTOMIZED

We produce customized tool changing systems for complex applications requiring special base units or extra equipment.

STÄUBLI

Multi-functionality – for diverse technology

Stäubli MPS systems can be equipped with a wide variety of transfer modules for different applications. This multifunctional design maximises production efficiency covering the entire range of industrial robot applications. The Stäubli MPS systems incorporate more than 60 years of expertise in coupling technology for electrical and fluid media utilising the full potential of robotic production technology.

Integrated tool storage providing flexibility and efficiency

The tool stand is consistent with Stäubli's modular tool changer concept. Its individual components are designed to provide maximum scope for flexibility:

- individual storage solutions through separate system components
- perfectly matched complete systems
- minimal load on the components thanks to floating bearing of the docking pin
- a protective cover which prevents any particles




Constant precision for millions of docking cycles

All the transfer modules and electrical connectors that are integrated into the various modules have “Floating Contact Technology” developed by Stäubli. It reduces wear to a minimum and ensures precise and reliable connections.

Certified safety technology for operators and facilities

Manufacturers and operators of robots and robotic devices have to ensure compliance with the ISO 10218-2 standard. Stäubli robotic tool changers satisfy the demanding requirements of “Performance Level d, Category 3”. The safety concept for the Stäubli MPS systems provides reliable protection for and safeguards process quality.

MPS tool changers

		Payload (kg)	Bending moment (static) (Nm)	Torsional moment (static) (Nm)	Interface with robot and tool according to DIN ISO 9409/1/
	MPS 020	20	30	30	A-40
	MPS 032	32	75	75	A-50
	MPS 130	100	900	800	A-100
	MPS 260	350	2000	2000	A-125
	MPS 631	630	5000	5000	A-160 A-200
	MPS 1530	1530	12500	12500	A-160 A-200

Stäubli: connection solutions adapted to the demands of each sector



Automotive

Die-stamping, body shop, painting, assembly, engine testing...
Stäubli is a privileged

partner for major automotive manufacturers with its range of high quality quick-release couplings.

Its expertise is based on innovative solutions at each manufacturing stage in order to improve processes and enhance productivity while ensuring operator safety. E.g.: centralised connection of energies on die-stamping presses, engine test benches, automation on body shop lines, compressed air supply of pneumatic tools, individual or centralised filling of liquids in the engine environment, integrated air-conditioning systems (SAEJ639 standards).



Rail

Stäubli quick-release coupling solutions, from their design stage, integrate performance

requirements (reduction of maintenance costs) and conditions of use (temperature, pressure, vibrations).

They satisfy end users' requirements in terms of ergonomics and safety and help to increase the life span of rolling stock (trains, locomotives, trams) on body-bogey applications, hydraulic braking systems and cooling circuits.

Stäubli is therefore a particularly reliable supplier to the rail industry and its quality insurance system is recognised by SNCF, Deutsche Bahn and others.



Nuclear

Strengthened by its experience going back to 1960 in the French nuclear industry, Stäubli

is involved in many international programmes in partnership with the key players in this sector.

Besides activities linked to electricity production, the group intervenes at each fuel cycle stage: uranium enrichment, production of assemblies, recycling of the fuel, waste management (barrel control and inerting), site dismantling (with breathing air solutions for operator safety).

With its quality assurance programme, Stäubli is capable of delivering its products conforming to nuclear requirements (RCC-M code, PMUC).



Machine tools

In order to rapidly change machining heads and electric spindles on machine tools, Stäubli

has developed automatic connection and centralised supply systems for all fluid and electric energies.

These innovative solutions take into account the space constraints of these interfaces and improve productivity and maintenance operations.

Fields of use: high speed machining centres, milling devices in the automotive, aeronautics, heavy mechanics sectors and various prototyping centres.



Plastics industry

The primary requirement of plastics manufacturers is reducing production change times as much

as possible. Production of small runs, fast mould change, optimisation of organisation methods (SMED): today, everything strives to differentiate product ranges by guaranteeing end customers optimal quality within short deadlines.

Stäubli supports manufacturers in their production processes with progressive or complete solutions.

Sectors: automotive equipment, pharmaceutical industry, household equipment, electronics/IT, aeronautics, etc.



Steel industry

With their resistant qualities and reliability, Stäubli couplings offer optimal connections for

steel production, continuous casting and hot or cold rolling mills.

Innovative solutions for power hydraulics perfectly meet production requirements for flat products (sheets and strips) and long (bars and sections): multi-couplings for changing the cast distributor or rod and wire roller chocks, opening and regulation of the slide gate operation, lubrication of bearings, segment levelling and cambering make up the foundations of the partnership between Stäubli and the steel industry.



Oil industry

Working closely with the engineering departments of equipment manufacturers for the

oil industry, Stäubli develops complete ranges adapted to customer applications. Several solutions developed for off-shore drilling demonstrate its expertise in quick-release coupling: sealing, corrosion resistance, high pressure resistance, pressure measuring, grouping of energies (MCS modules), connection of tools via tele-operation (ROV), etc.

All standard products may be enhanced with specific features for end users.



Pharmaceutical sectors

The Stäubli Group develops connection solutions in line with the

issues facing refined chemicals, pharmaceutical, biotechnology and cosmetology laboratories: integrity of products with quick-release sterilisable couplings without retention area, material adapted to corrosive atmospheres, installation and operator security (inerting of tanks, breathing air, foolproof mechanical matching, ergonomic connections, etc.).

Choosing Stäubli means taking advantage of its testing and qualification resources guaranteeing long-term performance of all its ranges.



Food processing

Receptive to the technical and economic requirements of the food processing industry,

Stäubli offers a vast range of connection solutions dedicated to production plants and staff safety: full flow couplings without retention area, high pressure cleaning and reels in stainless steel, compressed air networks, breathing air, temperature control for thermoforming presses etc.

Each coupling undergoes unit sealing and operational testing and may, if necessary, be tested for resistance to saline mist or helium.



Aerospace

Technology and electronics are constantly developing this sector. Quick-release couplings

allow end users to maintain their fleets more rapidly and improve the equipment availability rate.

Lightness of materials (aluminium, titanium), rapid dismantling, shock and dust resistance, etc.

Stäubli satisfies Aerospace manufacturers' requirements. It delivers its expertise to select ideal assembly of components according to the specific needs of each production.



Motorsports

Compact, light and non-spill Stäubli couplings meet manufacturers' specifications.

Performance and safety are a necessity: quality materials (aluminium, titanium), Clean Break connections, resistance to vibrations and shocks, rapid refuelling, rapid changing of brake hydraulic lines.

For operators, Stäubli satisfies security standards imposed by FIA rules and facilitates maintenance operations with its couplings for rapid bleeding or Airjack lifting systems. Fields: Formula 1, endurance, grand tourers; motorcycle circuits, Bol d'Or and Grand Prix.



Alternative energies

Alternative energies are booming and are appealing to a growing number of industrialists

for their equipment, companies for their vehicle fleets or municipalities for their various territorial development possibilities. Stäubli contributes its expertise in energy connection with complete and safe solutions dedicated to LPG and NGV fuels, power connectors for hybrid and electric vehicles, fluid connections (couplings for wind turbine cooling processes) and electric connectors aimed at photovoltaic use.



Global presence of the Stäubli Group

www.staubli.com