

Solutions for the healthcare industry

Connectors | Connections for life

EN



Product portfolio for the healthcare and medical market

In the healthcare and medical markets, the absolute reliability of all components is extremely important. Electrical, hybrid and modular connectors are no exception: their constant availability and fail-safe operation are essential.

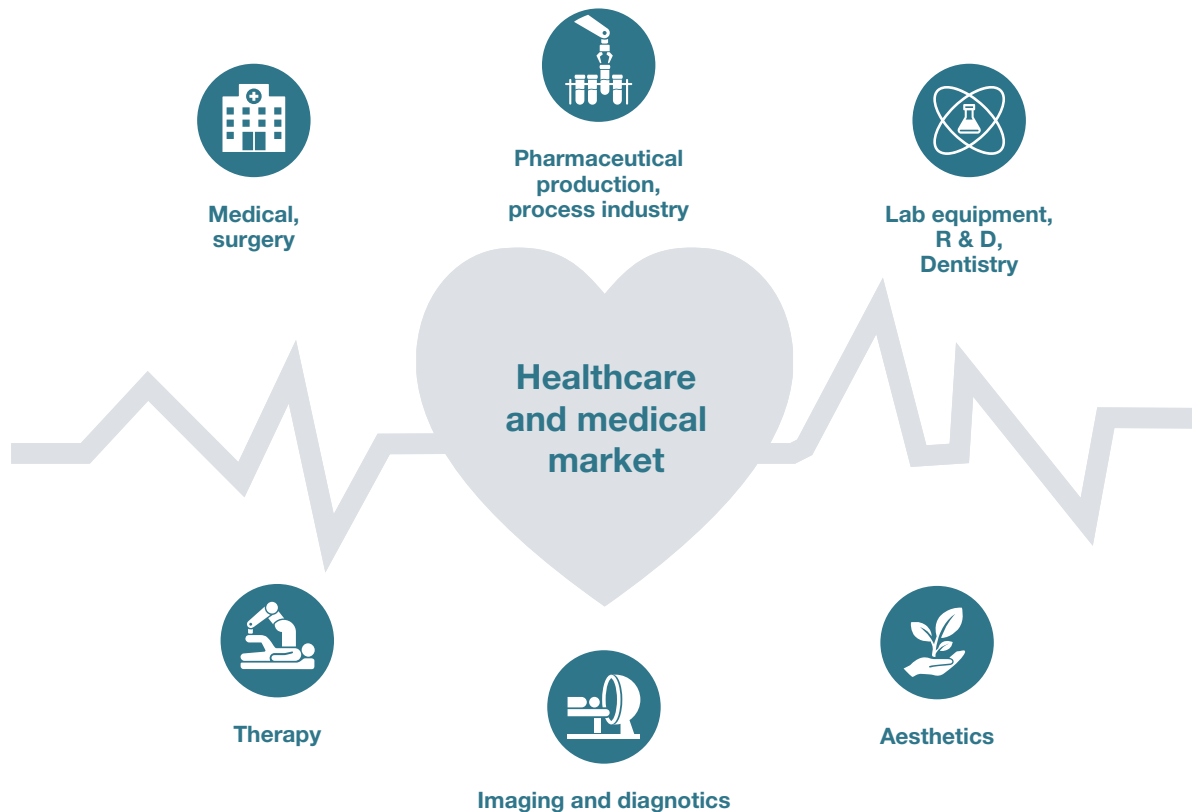
Whether used in therapeutic and aesthetic applications, in pharmaceutical and process engineering production or R&D, in diagnostics/imaging machine and operating rooms/medical applications, con-

nectors must be easy to use and safe to connect.

For more than 60 years, Stäubli has been producing a wide range of connectors, contact elements, potential equalization solutions and modular connectors for medical and healthcare applications. With Stäubli, you can rely on a competent partner whose products and know-how will always help you find an optimal solution, even for the most demanding applications.

Our product portfolio:

- Modular connector system CombiTac
- Round connectors, single- and multi-pole connector systems
- Plugs, sockets and leads for medical equipment
- POAG (Potential equalization)





Experts in the healthcare
and medical market



Aesthetics and therapy

A preferred partner of aesthetic and therapeutic equipment manufacturers

Today, clinics and laboratories are increasingly using medical aesthetic devices for cosmetic treatments and non-invasive procedures. The reasons for users to undergo such treatments vary: the desire for an improved appearance, body shaping, hair removal, scar treatment, tightening of the skin and others. Modern treatment methods that involve devices are more and more replacing traditional invasive treatment methods. As a result, there is growing acceptance among patients and customers for these safe machine-assisted procedures.

Therapeutic equipment is widely used in physical therapy, sports medicine, chiropractic and other fields. Applications include relieving pain and inflammation, promoting

cell regeneration, stimulating muscle contraction, increasing blood flow or breaking down scar tissue and adhesions.

Stable connections are essential for the efficient operation of aesthetic and therapy equipment. Stäubli has been the preferred partner for many manufacturers in this growing market. There are good reasons for this:

- Safe and stable connectors allow high current and voltage capability.
- Leakage-free fluid and pneumatic couplings facilitate smooth operation of the machines.
- Compact signal and data solutions enable flexible use in small spaces.
- Manufacturers can choose from a variety of housings.

- Easy and safe handling for trouble-free use in clinics and laboratories.

Stäubli's robust connections allow an extended service-life of the equipment. This also increases the value of the equipment for aesthetic and therapeutic users.

Our partners' challenges continuously inspire us to develop customized and unique connection solutions.

Legolaser – medical aesthetic devices

Highly specialized Spanish company, develops and produces aesthetic medical equipment applied to healthcare and beauty.

Stäubli CombiTac provides a high quality, reliable connection between the main machine and handpiece.

- Non-spill fluid couplings
- Power contacts
- Signal contacts
- White aluminum housing



Opphalo – Aesthetic laser equipment

Spanish manufacturer of high-quality aesthetics apparatus.

Stäubli CombiTac provides a high quality and reliable connection between the main machine and the arm placed on the patient.

- Non-spill fluid couplings
- Power contacts
- Signal contacts
- Plastic housing



Lab and hospital equipment, process industry and pharmaceutical production



Quality connections with added value

Our professional connection solutions not only enable fail-safe operation. We offer our technically sophisticated products to our customers with a special added value of services. These include individual analysis and consulting, testing, training, after-sales service and much more.

All connectors for the process industry, production plants and machines are subject to the highest standards and requirements for quality and efficiency. This is how we ensure the integrity of operators, products, and the environment. At the same time, we always keep standards and legislations as well as the specific requirements of our customers in mind when developing our innovative connection solutions.

Stäubli is the partner of choice for manufacturers of laboratory and hospital equipment, the process industry and customers in pharmaceutical production:

- Wide selection thanks to broad modular portfolio
- High-quality, UL certified components for safe practical use
- Robust components suitable for harsh environments
- Leakage-free pneumatic and fluid couplings for smooth operation
- Long service life thanks to very high mating cycles

Stäubli has decades of experience in providing high-quality connection solutions for numerous industries. Thanks to a thorough understanding of these industries requirements, we are constantly adapting to their challenges. This is precisely why we have enjoyed the highest level of trust from our customers for such a long period of time.



Safe and reliable
connection for both
power contacts and compressed air



SmartDock system: connection solutions for filling and emptying big bags and drums

The patented SmartDock system from the Swiss company Rubitec AG is used by leading chemical and pharmaceutical manufacturers worldwide.

The efficient system allows a single operator to fill and empty big bags and drums in just three minutes. Stäubli's CombiTac connections make an important contribution to the low-maintenance SmartDock system by

enabling precise and reliable signal transmission during the handling of the large bags and drums.

CombiTac key facts

- reliable
- robust
- leakage free pneumatic contacts
- modular configuration offering unlimited options

Benefits

Swift and safe replacement of containments in customer production facilities. Safe, reliable connection for both power contacts and compressed air.



Life-saving mission: Flídr Medical field hospitals rely on Stäubli's CombiTac system

The technical equipment of field hospitals is an essential part of civil protection. In the Czech Republic, this includes contamination workstations, which are developed and

managed by the specialized VTÚ institute. Flídr medical s.r.o. is the supplier of medical equipment for such field hospitals. Stäubli's CombiTac connectors are used in the inten-

sive care units of field hospitals, where every connection can be life-saving.



Medical devices and imaging

Excellent connection performance in medical applications

Medical devices for X-ray, ultrasound, CT, MRI or LASIK surgery are used in many areas of the healthcare industry. These medical and imaging applications assist hospitals, clinics and other healthcare facilities to diagnose and treat diseases more efficiently. MRI machines, X-ray machines, CT scanners, infusion pumps or PET scanners can only deliver the result expected from them with stable connection solutions. Safety and

reliability are therefore crucial, especially in medical applications on and with humans. Stäubli products are installed in numerous medical and imaging devices. Its connectors deliver superior performance and are easy to use. In addition, they provide downtime protection and reliable performance.

Stäubli is the ideal partner for medical and imaging applications. Some key facts about

Stäubli connectors:

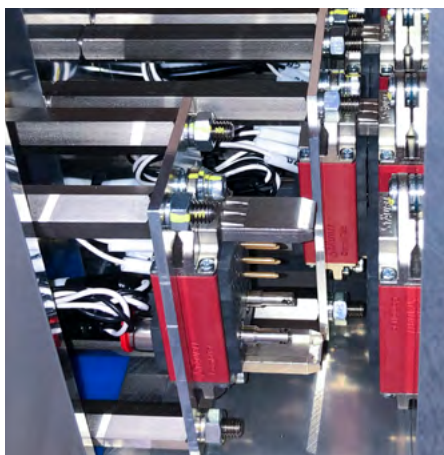
- High current and voltage capability
- Leakage-free fluid and pneumatic couplings
- High-quality and reliable components
- Precise signal and high-speed data transmission
- Customized development possibilities



EB Neuro

Powerful repetitive transcranial magnetic stimulator (rTMS) intended for the stimulation of cortical and peripheral nerves for diagnostic, therapeutic purposes, and scientific research.

CombiTac is used to provide high voltage from the control console to the coil placed onto the patient.



Hitachi Healthcare

Hitachi provides minimally invasive cancer treatment solutions (proton, heavy-ion and more) with lower radiation exposure.

CombiTac connects the cards adjusting the ion beam level, thanks to electrical and pneumatic filters.

The machine shown in the left photo is not from Hitachi.



Cefla

Cefla develops and manufactures high performance and versatile dentistry surgical carts that can be moved from one surgery room to the other.

The mobile surgical carts are connected thanks to CombiTac to a floor mounted connection box, supplying the carts with power, signal, compressed air and fluids.



CombiTac direct – plug into simplicity

CombiTac direct is the latest generation of Stäubli connectors for manual and automatic connection with up to 10,000 mating cycles. The new user-friendly, tool-free click-and-connect system allows you to assemble your modular connector system in the simplest and most time-saving way. CombiTac's outstanding quality and long service life help you achieve high productivity and lower maintenance costs with maximum operator safety.

- Signal, current, data and pneumatic
- Housing and panel-mounting design
- Click-and-connect system
- Tool-free assembly
- High safety
- Guaranteed 10,000 mating cycles

Each CombiTac direct connector is equipped with individual contact modules configured in a single size-adjustable frame or housing.

The click-and-connect system enables tool-free assembly of your modular connector system. Carriers and contacts can be removed quickly and easily with a standard screwdriver. Enjoy more flexibility and simplicity.

CombiTac direct contacts include current up to 350 A, signals, data and leakage-free pneumatics (15 bar).



Modular system

Individual contact modules



Click-and-connect system

Quick and easy tool-free assembly



Contacts

10,000 mating cycles



CombiTac uniq – plug into customization

CombiTac uniq connectors are the expert choice for applications requiring modular, space-saving all-in-one connectors. They are suitable for high current and voltage levels, as well as for a high number of mating cycles. In addition, they guarantee long-term high performance even under the most demanding mechanical and environmental conditions.

- 100 % customizable
- All-in-one space-saving modular connectors
- Guaranteed long-lasting performance for the most demanding mechanical and environmental conditions
- 100,000 mating cycles
- High current over 400 A
- Power, signal, data, thermocouple, coaxial, fiber optic, fluid and pneumatic

Each CombiTac uniq connector is equipped with individual contact modules configured in a single size-adjustable frame or housing.

The 100 % customizable modular connector offers global design support and is supplied with or without pre-assembled cables as required.

CombiTac uniq includes contacts for currents and voltages over 400 A and 5 kV, high-density signals, 10 Gbit Ethernet, coaxial and fiber optic contacts, thermocouples, and leakage-free liquid and pneumatic connections (15 bar).



Modular system
Individual contact modules



100 % customizable
Modular



Worldwide design support



Pre-assembled cables
Possible ex works

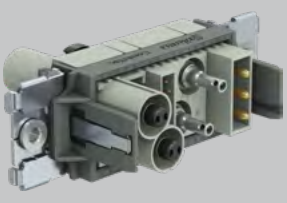
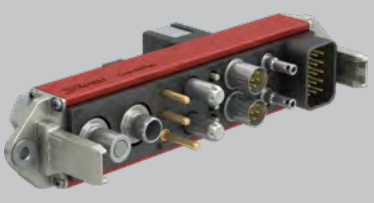


Contacts
100,000 mating cycles

CombiTac overview – products and features

CombiTac direct

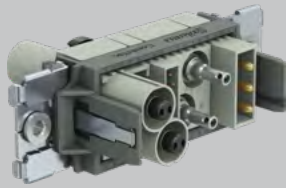
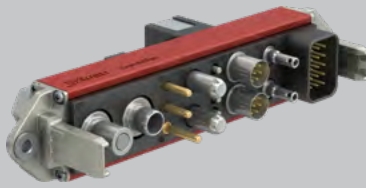


CombiTac uniq

		
Sizes Panel mount	4 standard frame sizes	18 mm to 180 mm (in 2 mm steps) Additional lengths available upon request
Housing sizes	6	6
Aluminum housings IP65, IP67, IP68/69K	✓	✓
Plastic housings IP65	✓	✓
Light housing		✓
Housing PE module		✓
Power	✓ (up to 350 A)	✓ (up to 430 A)
High Voltage (up to 5 kV)		✓
Signal	✓	✓
Last mate first break (monitoring)	✓	✓
Data	✓	✓
Ethernet	✓ (up to 1 Gbit)	✓ (up to 10 Gbit)
Coaxial	✓	✓
Fiberoptic		✓
Thermocoupling		✓
Pneumatic	✓	✓
Fluid		✓



CombiTac direct

CombiTac uniq

		
Mating cycles	10,000	100,000
Temperature range (°C)	-40 to +125	-40 to +90
Carrier material	PA	PA, EPTR, PEEK
Railway fire & smoke compliance	✓	✓
Vibrations & shock resistance	✓	✓
Contact termination type	Crimp, PCB	Crimp, PCB, Screw
Delivery	Assembled (contacts separate)	Assembled (contacts separate)
Requires contact insertion tools		Stäubli tools ¹⁾
Carrier removal tools	Standard flat screwdriver	
Contact removal tools	Standard flat screwdriver	Stäubli tools ¹⁾
Cable assembly	✓	✓
Customization		✓
More information		

¹⁾ depending on contact type

SIMPLY CONFIGURE IT YOURSELF

CombiTac Configurator

With its modular design, you can configure CombiTac both easily and precisely to your technical and dimensional requirements thanks to the practical online configurator.

Our convenient online configurator gives you all the choices you need.



- Available for uniq and direct
- Animated 3D rotation
- Including a transparency view
- Easy and fast assembly, with dimensions
- Simple to add features or modify configurations etc.
- Including spare parts and more



Easy and fast

with dimensions and transparency view



Extra services

Including spare parts and more



3D

Animated rotation



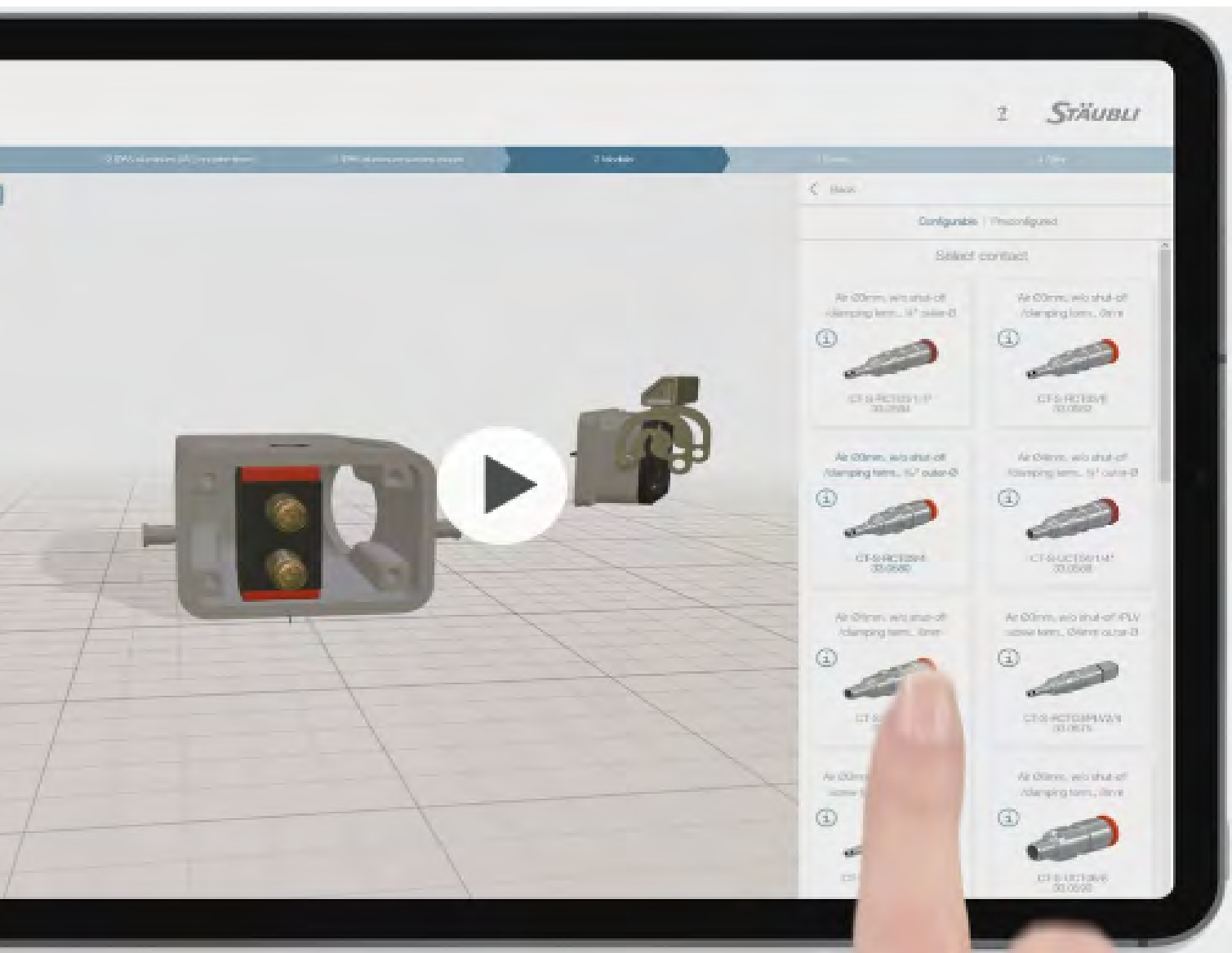
Simple

Add features
Modify configurations



Integration in your models

Step-Files available



„In order to configure the required modular connectors for our specialized installations, we have been using the Online CombiTac Configurator from Stäubli Electrical Connectors for many years.“

Alexander Vogt

Team leader electrical plant engineering, Rubitec AG, CH-Bennwil

Touch-protected connectors

Highest safety standards in small details



Anyone who handles cables knows how important product quality and safety are. Electricians hold cables in their hands every day for tests and measurements. Medical professionals touch cables when making diagnoses using equipment and taking measurements on the human body. In actual fact, human lives may depend on the quality and safety of products.

In its Test and Measurement sector, Stäubli offers a wide portfolio of handheld leads

and sockets with the most stringent safety standards. Good insulation and safety standards for handheld test leads according to IEC 61010-031 ensure that the human body does not come into contact with currents and voltages in the cables. In healthcare applications with low voltages and currents, these leads can be used with 2 mm diameter plugs and sockets. These high safety products have a spring-loaded male plug on the lead and a rigid socket in the device or instrument.

For leads that transmit body action voltages such as ECG or a heart monitor, Stäubli also offers special products according to the DIN 42802 standard.

It is actually simple: connect a single plug to a single socket. But here, too, high quality and safety with a long service life are key. The reliable Stäubli connectors protect nothing less than human life.



POAG

Connection leads for potential equalization according to DIN 42801

The use of high-quality components ensures dependable potential equalization in places where it is particularly important: in hospital facilities and medical practices.

In every group 1 and group 2 medical locations, additional protective potential equalization must be established in accordance with IEC 60364-7-710. Additional potential equalization has two purposes: To equalize potentials between different metal parts that can be touched at the same time, or to reduce potential differences that can occur during operation between the bodies of medical electrical equipment and conductive parts of other objects.

Our POAG socket is designed for screw lead termination, therefore no special tool (crimping pliers) is required. We supply the new POAG socket both separately for self-assembly of potential equalization lines and ready-assembled lines fitted with this socket. The features of the new POAG socket at a glance:

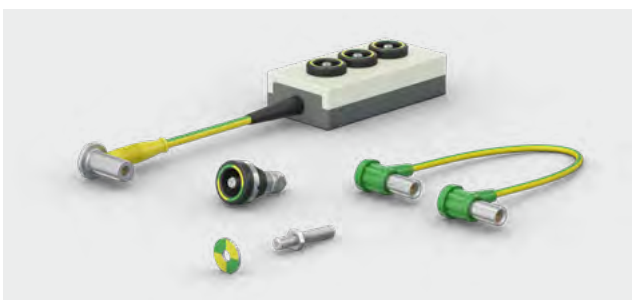
- Screw connection is simple with a standard Allen key (no special tool required)
- Good price-performance ratio of POAG sockets and assembled leads
- Nickel-plated socket and gold-plated MULTILAM for reliable, durable contact
- Design according to DIN 42801-2



Type Approved
Safety
Regular Production
Surveillance



www.tuv.com
ID 1111209317



Connectors, sockets, connecting leads and multiple-pole connectors for the reliable connection of medical devices.

Engineering experts at your service

Take advantage of our worldwide network of 28 business units and the proximity of our 2300 sales and service engineers for all your customization needs:



Customer specific electrical connectors

We analyze your needs and requirements, advise you on-site and work with you to develop ideas and concepts that best meet your requirements. Our experts accompany you from the initial idea through prototyping to implementation and support.

As an example of a customer-specific solution, we worked on a custom development of contacts with **Bien-Air Dental SA** in Switzerland in their widely used electric micro-motor for dental care instruments as well as in their connecting hoses.



Customized modular connector

Each CombiTac can be 100 % customized to meet your exact dimensional and technical specifications. This may include dimensioning to exact size specifications, use of special resistant carrier materials, customer

specific labellings or integration of customer specific parts in your CombiTac solution (special enclosures, handles, etc.).



Cable assembly

Upon request, we offer you complete solutions including cable assembly which significantly reduce assembly costs and simplify logistics. Cables of your choice are assembled on your CombiTac at our factory

and tested before delivery.

- Single source supplier
- 100 % tested solution
- State-of-the-art production facilities





● Stäubli Units ○ Representatives/Agents

Global presence of the Stäubli Group

www.staubli.com