DINSE

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Manufacture of plasma vessel Wendelstein 7-X

MIG/MAG

LASER

SYSTEMS

PLASMA

TIG

SCHWEISSEN — WELDING — SCHWEISSEN — WELDING — SCHWEISSEN

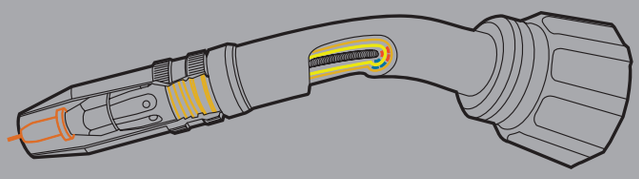
Perfect welding systems from a single source for any procedure and any robot.

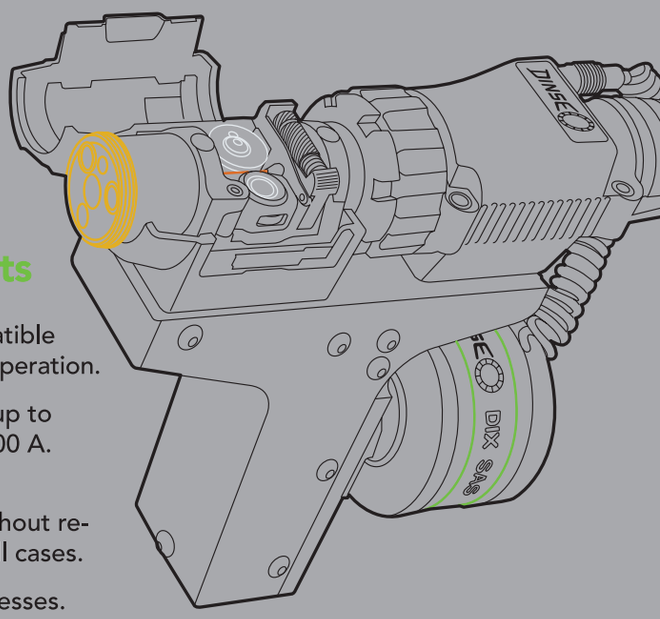
MIG/MAG and TIG technologies, LASER and PLASMA systems for cost-effective welding and brazing to fit the application – DINSE provides you with intelligent, complete solutions, from the torch head and wire feeder to the power source.

Achieving the highest quality, compatibility and reproducibility on all system elements is the hallmark of DINSE. The ease with which DINSE welding systems can be adapted to all of the commonly used types of robots ensures maximum availability for your operations.

gas-cooled

liquid-cooled





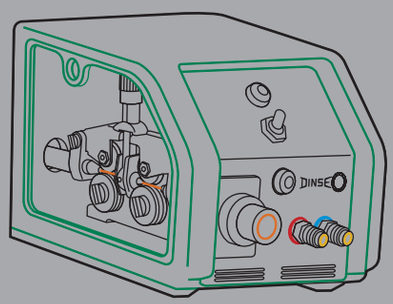
Tried and tested DINSE components

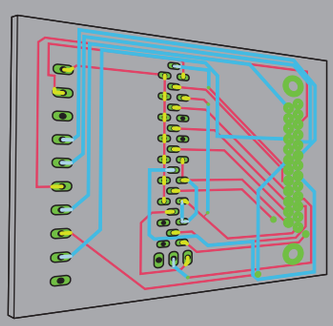
- 100% duty cycle: The modular and mutually compatible DINSE system components guarantee continuous operation.
- Two efficient cooling systems: DINSE gas-cooling up to 300 A, DINSE double-circuit liquid cooling up to 500 A. The application determines the equipment.
- Fast switching between gas and liquid cooling, without re-programming, is possible with a standard TCP in all cases.
- Universal compatibility between the different processes.
- The well established tools and replacement part system of the DINSE brand ensures minimal wear and a significantly reduced need for storage.

Precision drive concepts

For precision wire feed, DINSE provides three powerful drive variants – from the PUSH drive solution and the PUSH-PULL concept with two coupled drive units to the complex drive structure of the PUSH-PUSH technology.

Depending on the welding task, the DINSE GREENline wire feeder modules are available directly on the robot in combination with a spool holder or as a separate unit on a large spool housing or bulk wire pack.

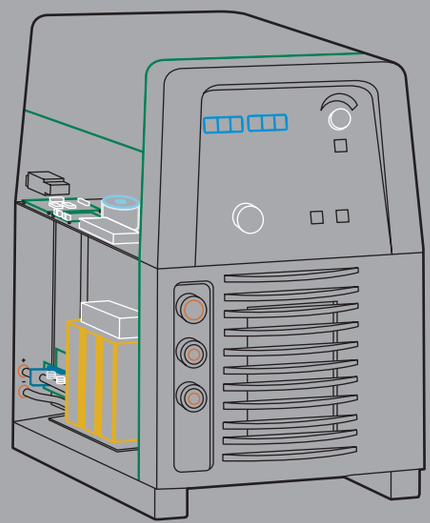




Specific power sources

DINSE's complete offer includes a power source that is ideally suited for your requirements.

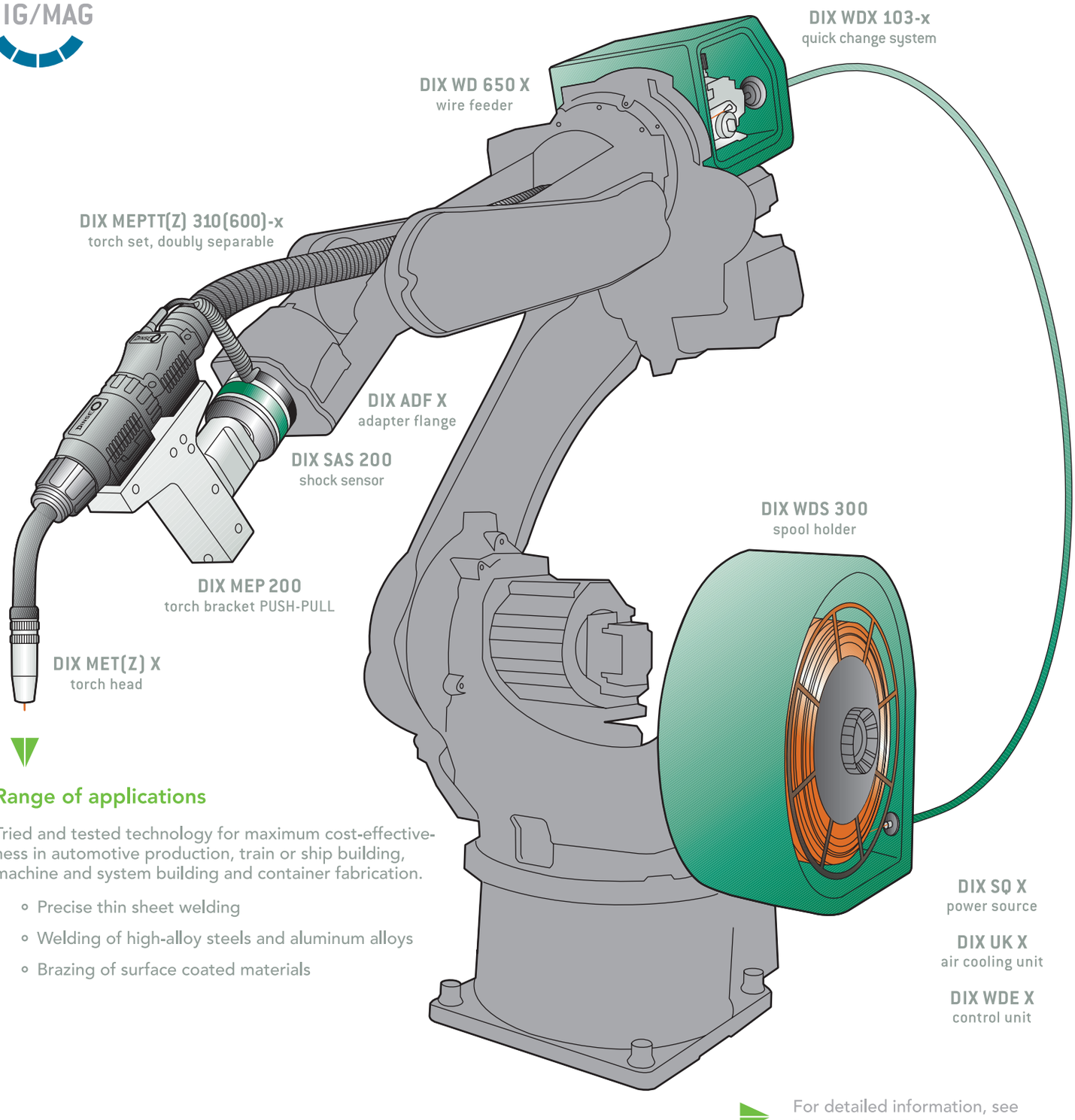
The DINSE robot interface offers options for analog, digital or industrial bus interfacing.



DINSE MIG/MAG PUSH-PULL – for welding robots with a hollow wrist.

The standardized interfaces of all DINSE components ensure maximum flexibility and productivity during gas metal-arc welding. This allows the doubly separable DINSE MIG/MAG torch sets to be mounted on both standard and hollow wrist robots. It also allows the use of all DINSE torch heads and the variable use of gas or liquid cooling.

This is a sound investment and a sensible solution for PUSH-PULL applications, providing reliable handling of wire that is susceptible to kinking.



Range of applications

Tried and tested technology for maximum cost-effectiveness in automotive production, train or ship building, machine and system building and container fabrication.

- Precise thin sheet welding
- Welding of high-alloy steels and aluminum alloys
- Brazing of surface coated materials

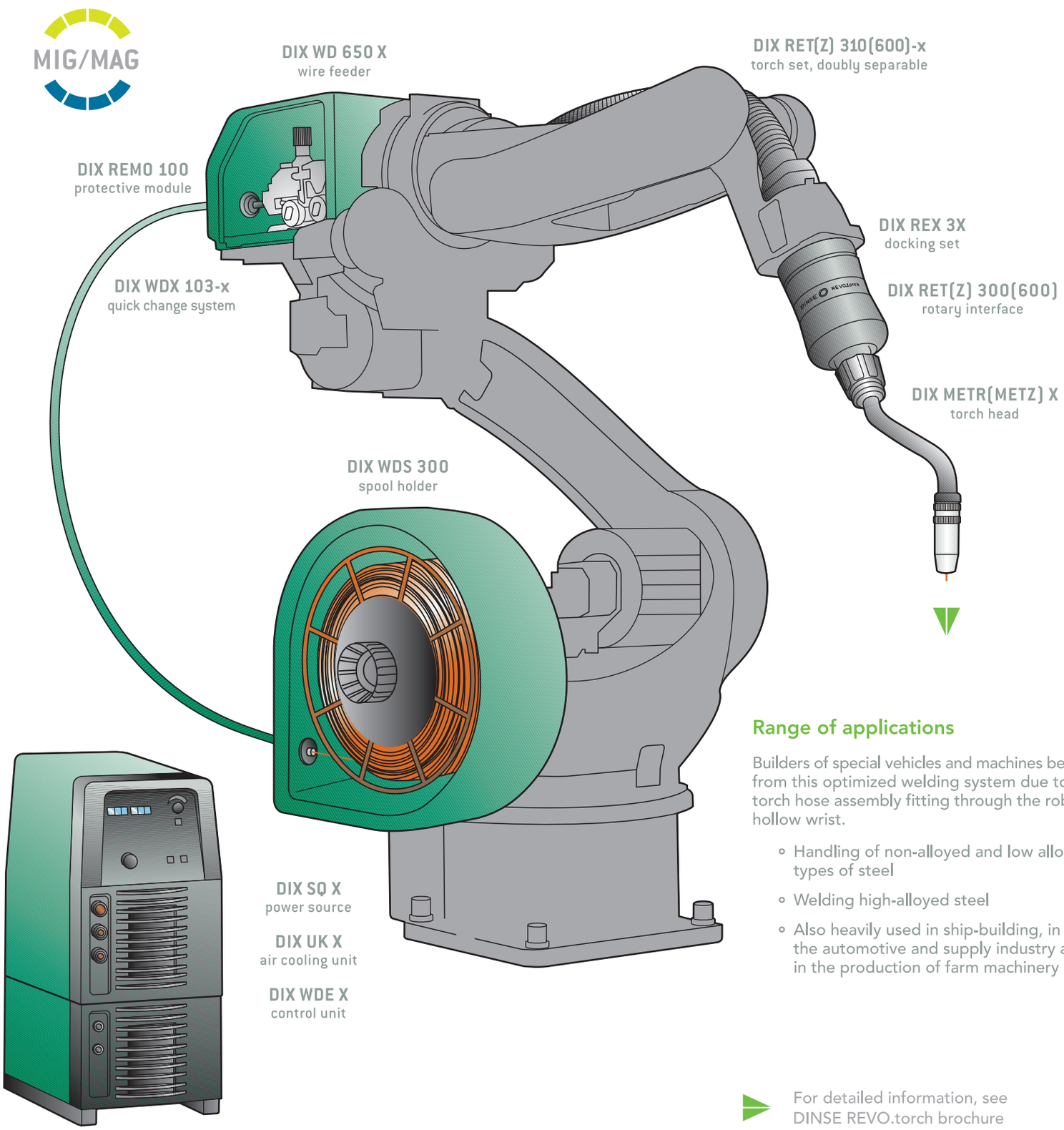
For detailed information, see DINSE ROBOTIC brochure

DINSE MIG/MAG REVO.torch – endless rotation with integrated welding cable.

This innovative DINSE technology gives a new dimension to conventional MIG/MAG welding. Thanks to endless rotation, DINSE REVO.torch guarantees significantly shorter welding cycles. The programming cost for complex sections, including return paths, is a thing of the past. Another advantage: A considerably longer lifespan for the welding torch hose assembly which is free from torsion.

DINSE REVO.torch can be adapted to all of the commonly used hollow wrist robots, with the specially developed swan-neck torch head allowing optimal access to the component.

MIG/MAG



Range of applications

Builders of special vehicles and machines benefit from this optimized welding system due to the torch hose assembly fitting through the robotic hollow wrist.

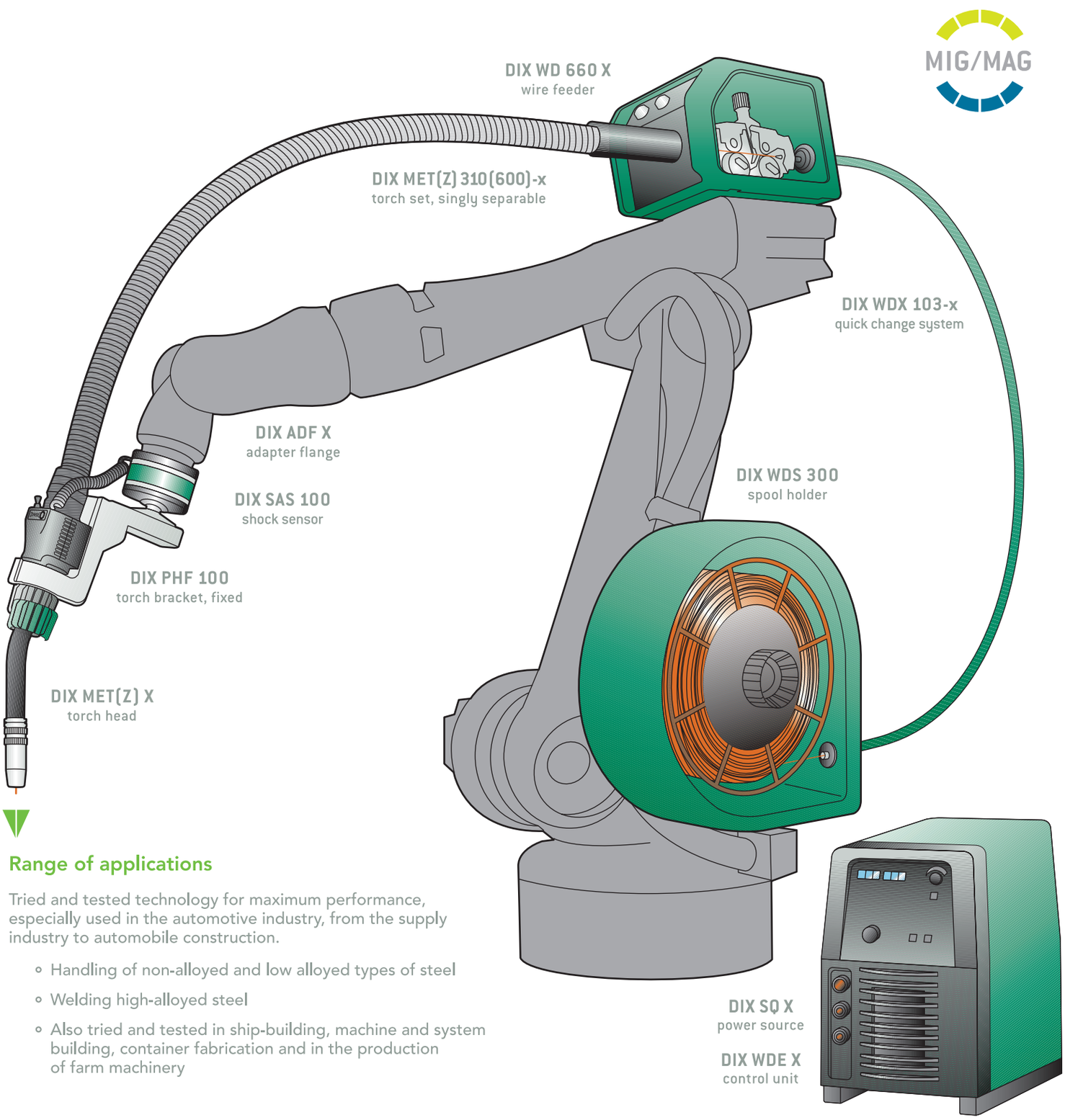
- Handling of non-alloyed and low alloyed types of steel
- Welding high-alloyed steel
- Also heavily used in ship-building, in the automotive and supply industry and in the production of farm machinery

For detailed information, see DINSE REVO.torch brochure

DINSE MIG/MAG BASIC –
the well established standard solution for robotic welding.

In this tried and tested welding system, the powerful feeder on the robot ensures precise feeding of the wire. A wide selection of torch heads and singly and doubly separable fittings ensure the greatest possible flexibility for applications. The required TCP can be achieved via fixed or adjustable brackets.

All of the DINSE torch heads are available in various angles, which allow the welding equipment to be quickly and easily adapted to changing tasks.



Range of applications

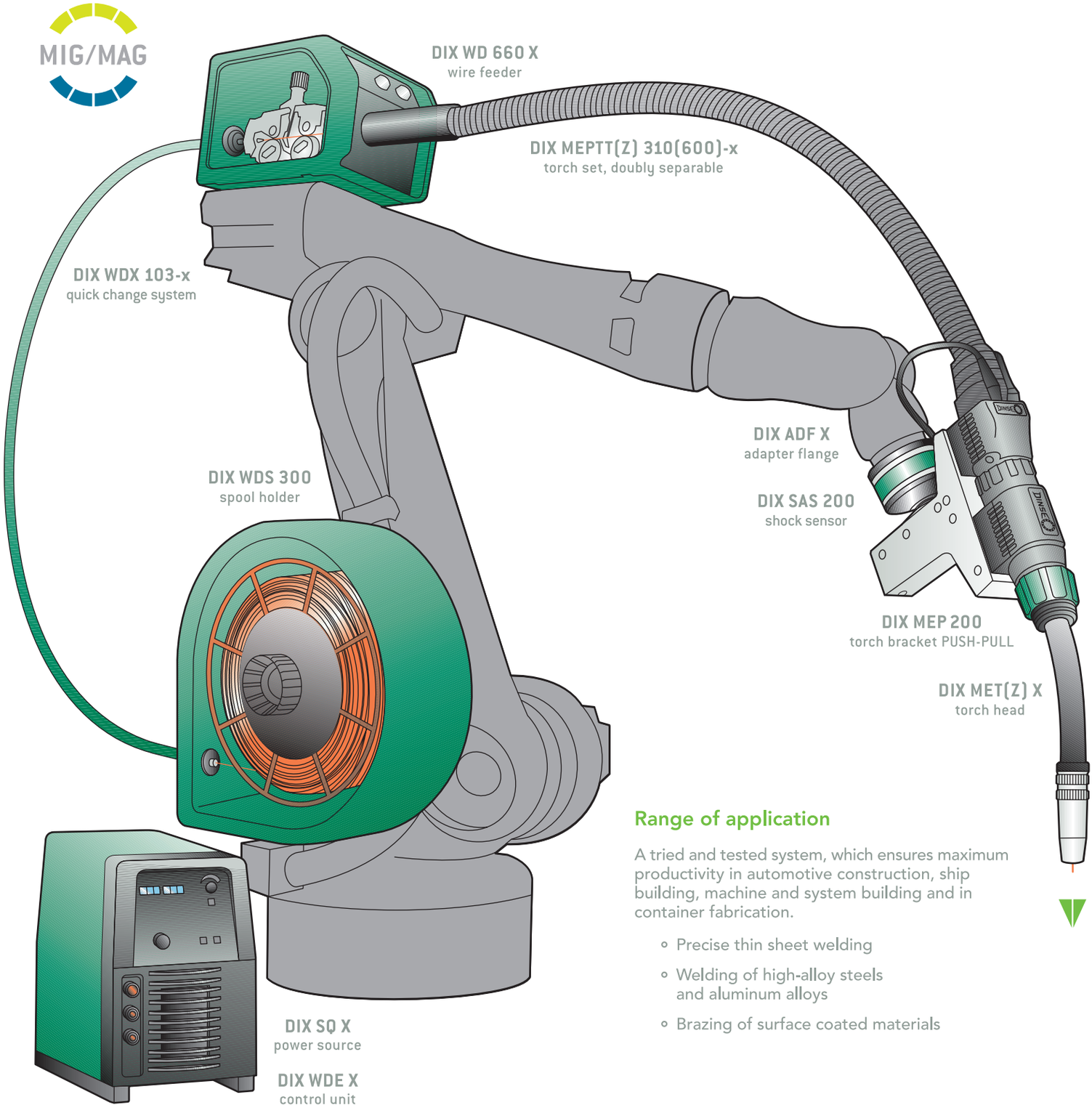
Tried and tested technology for maximum performance, especially used in the automotive industry, from the supply industry to automobile construction.

- Handling of non-alloyed and low alloyed types of steel
- Welding high-alloyed steel
- Also tried and tested in ship-building, machine and system building, container fabrication and in the production of farm machinery

DINSE MIG/MAG PUSH-PULL –
the drive concept for wire that is susceptible to kinking.

When a high degree of precision is required while performing MIG/MAG welding and brazing with wires that are difficult to feed, the DINSE PUSH-PULL method of operation is highly recommended. The electronically coupled drives located in the wire feeder and directly on the welding torch ensure that the filler wire is repeatably fed through the torch set. This guarantees uniform feeding of the wire.

This protects particularly pliable and sensitive wire against buckling and ensures problem-free production.



Range of application

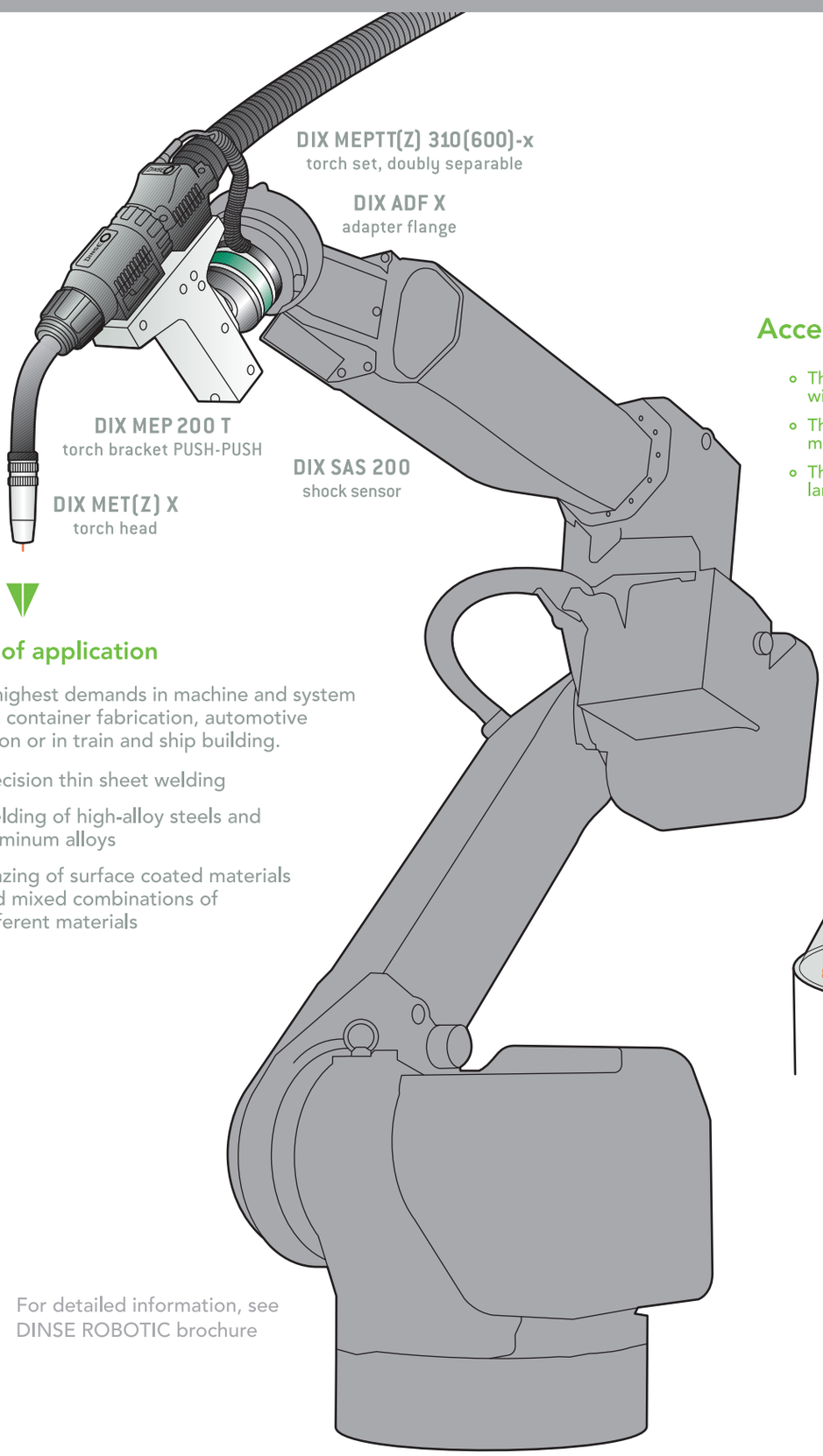
A tried and tested system, which ensures maximum productivity in automotive construction, ship building, machine and system building and in container fabrication.

- Precise thin sheet welding
- Welding of high-alloy steels and aluminum alloys
- Brazing of surface coated materials

DINSE MIG/MAG PUSH-PUSH – constant wire feeding over long distances.

In the DINSE PUSH-PUSH technology, two completely uncoupled drive units ensure the most precise wire feeding possible, regardless of torsion, bending and the length of the torch set. The adjustable maximum torque of the rear motor prevents the filler wire in the torch set from buckling out. The front, speed-controlled motor precisely adjusts the quantity of wire needed for the process.

Very low frictional forces minimize the amount of feeding required, either when being used with standard robots or hollow wrist robots.



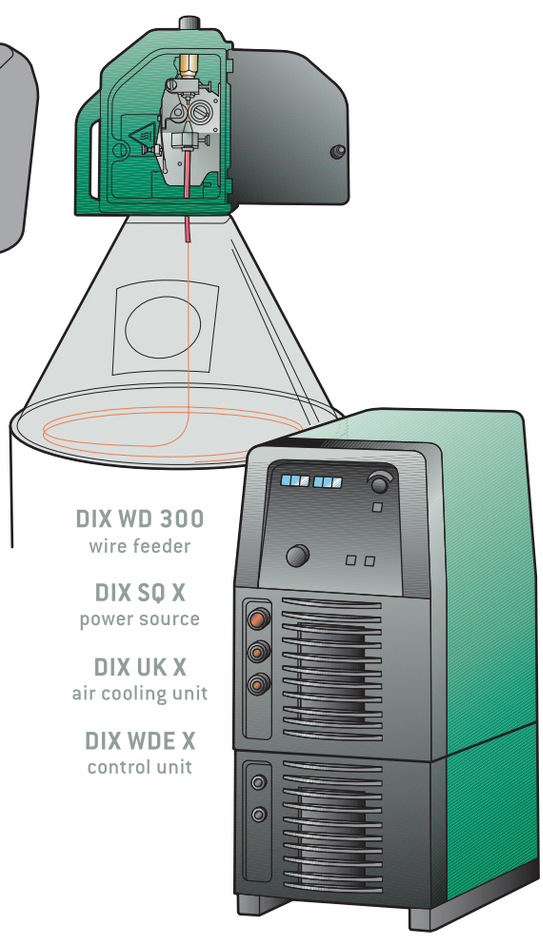
Accessibility and service – perfect!

- The robot is not burdened by an additional wire feeder, nor is it limited in its movement.
- The drive unit is easily accessible and maintenance-friendly.
- The feeder can be flexibly mounted on large spool housings or a bulk wire pack.

Range of application

For the highest demands in machine and system building, container fabrication, automotive production or in train and ship building.

- Precision thin sheet welding
- Welding of high-alloy steels and aluminum alloys
- Brazing of surface coated materials and mixed combinations of different materials



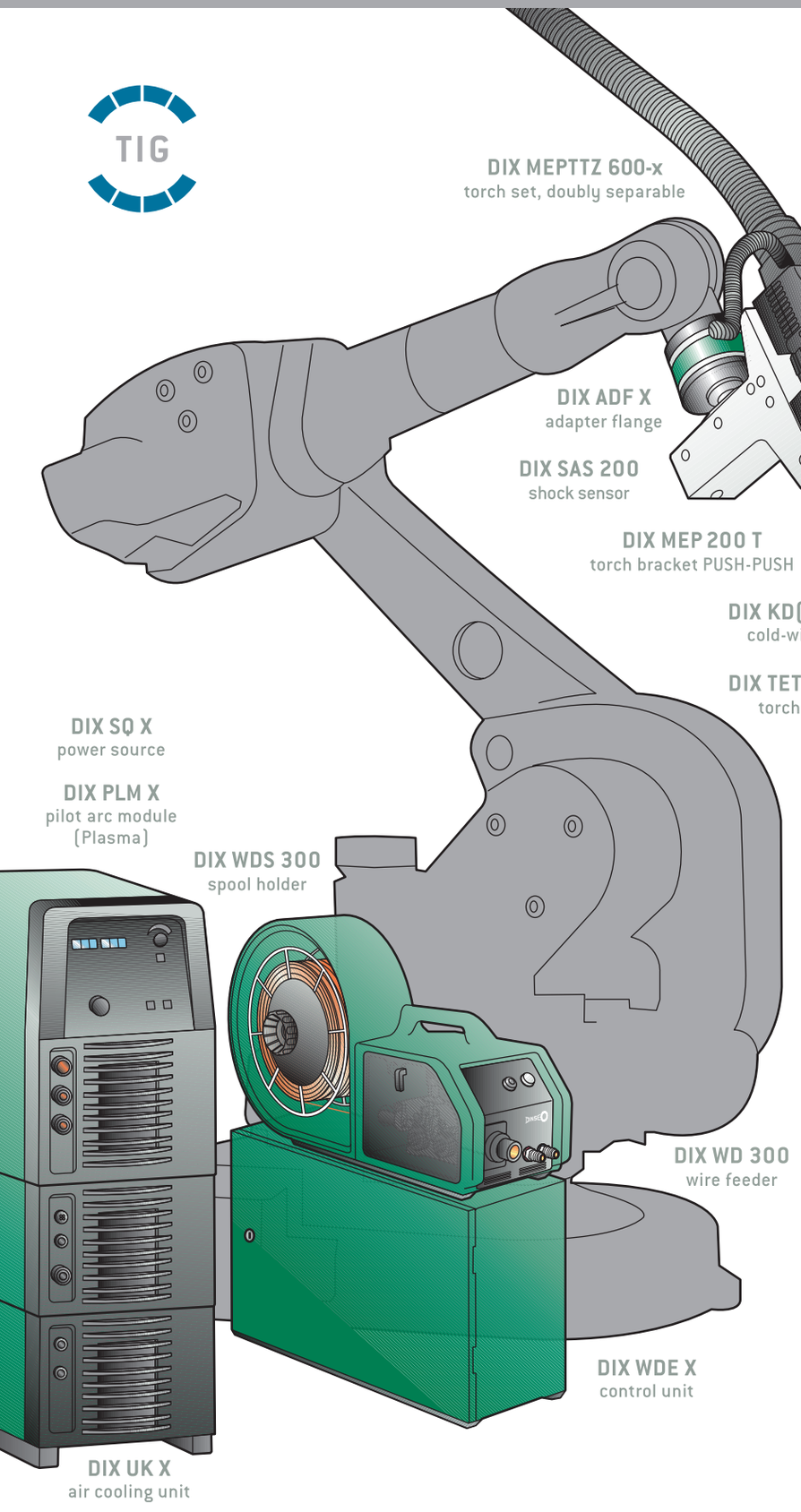
For detailed information, see DINSE ROBOTIC brochure

DINSE TIG PUSH-PUSH – spatter-free welding in series.

The TIG welding system designed by DINSE represents a cost-effective solution for series welding without finishing work. The TIG torch heads allow problem-free production, with or without the cold-wire set, thanks to their lightweight, compact design and high welding performance, even for components that are difficult to access. The pre-settable electrode guarantees absolute pin-point precision.

As with MIG/MAG welding, PUSH–PUSH technology ensures the most precise wire feeding possible in the DINSE TIG process as well.

TIG

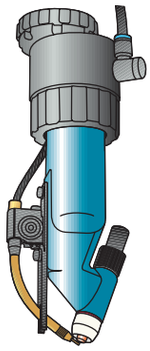


One piece of equipment – 3 processes

The DINSE models are uniformly mutually compatible and all of the components can be substituted in ideal ways. Changing from pin-point precision TIG welding in series to MIG/MAG or PLASMA applications in PUSH-PUSH mode only requires swapping out the torch head and the power source.

MIG/MAG

PLASMA



Range of application

Clean working with high production performance – perfect for manufacturing exhaust systems, pipe work, apparatus construction, container fabrication for the food and chemical industries and aircraft and turbine manufacturing.

- Small to large material thickness
- Welding high-alloyed steel
- Handling aluminum and nickel-based alloys

Range of application

Material-saving process with reduced heat effect and 100% successful ignition by means of pilot electric arc – especially for automotive and apparatus construction and medical technology.

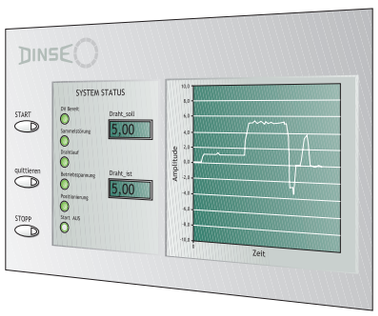
- Micro-welding of extremely thin sheets
- Welding of high-alloy steels and special alloys
- Brazing of surface coated materials

For detailed information, see DINSE ROBOTIC brochure

DINSE LASER PUSH-PUSH – for high-speed welding and brazing.

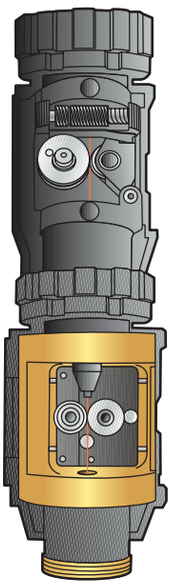
Maximum production reliability for demanding processes. The use of filler wire offers decisive technological advantages: Ideal alloying of materials, prevention of heat cracks when welding aluminum, reduced process temperatures when brazing and very wide tolerance range. Whether it is a cold-wire, hot-wire or hybrid solution, the modular design allows all three procedures.

DINSE's unique strengths: The wire feed sensor with integrated encoder for repeatable wire positioning and monitoring of the wire feed.



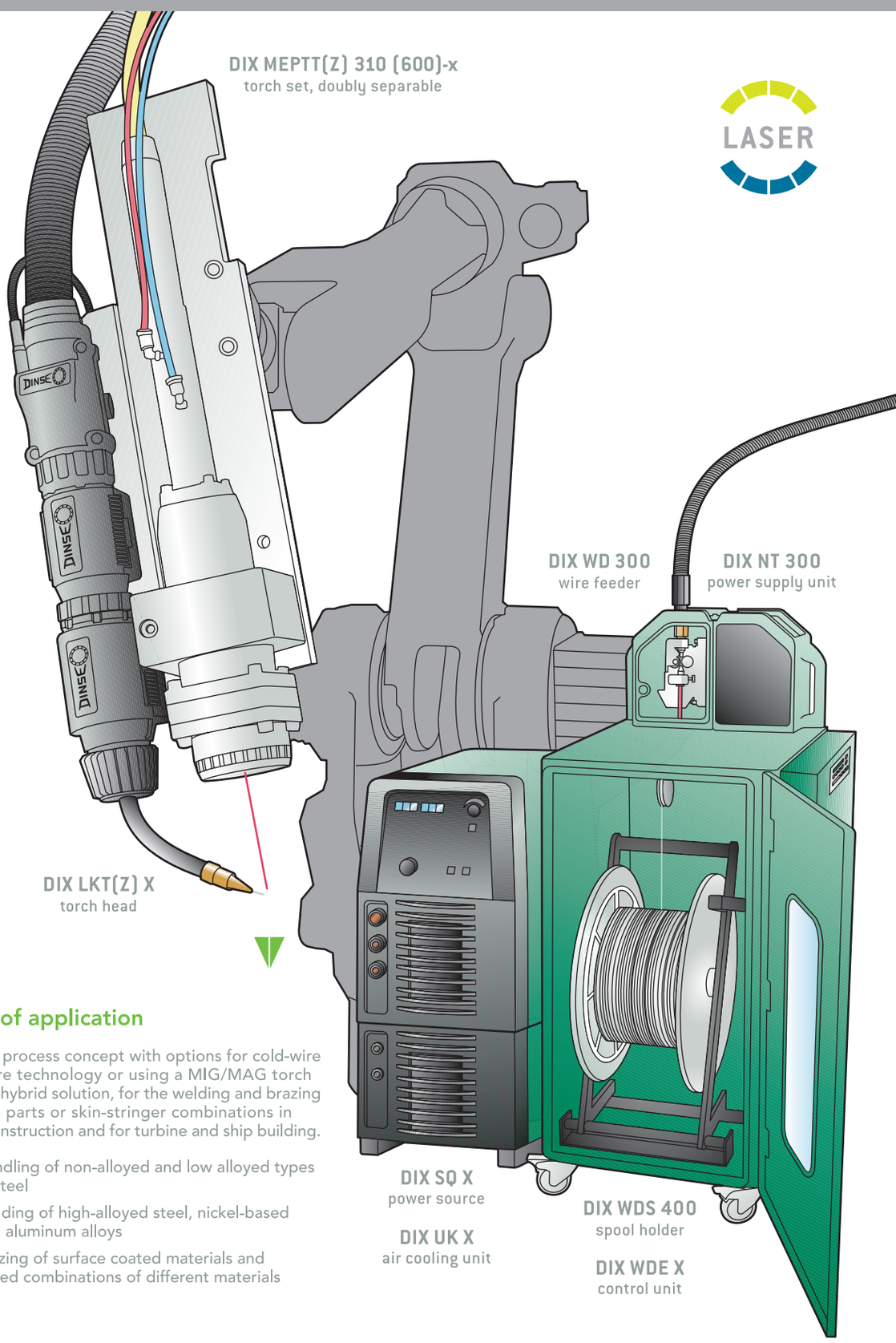
DINSE Process monitoring

- Unique to DINSE: A wire feed sensor ensures highly precise wire positioning before starting.
- Depending on the application, the exact quantity of filler material is freely programmable.
- The wire feed is monitored in near real-time.
- Software documentation records the process parameters.
- The microprocessor-based control system is conveniently operated via a display.



DIX LK 60 E
drive unit

DIX DLS 200
wire feed sensor



DIX MEPTT(Z) 310 (600)-x
torch set, doubly separable

DIX LKT(Z) X
torch head

DIX WD 300
wire feeder

DIX NT 300
power supply unit

DIX SQ X
power source

DIX UK X
air cooling unit

DIX WDS 400
spool holder

DIX WDE X
control unit

Range of application

A flexible process concept with options for cold-wire or hot-wire technology or using a MIG/MAG torch head as a hybrid solution, for the welding and brazing of vehicle parts or skin-stringer combinations in aircraft construction and for turbine and ship building.

- Handling of non-alloyed and low alloyed types of steel
- Welding of high-alloyed steel, nickel-based and aluminum alloys
- Brazing of surface coated materials and mixed combinations of different materials

DINSE

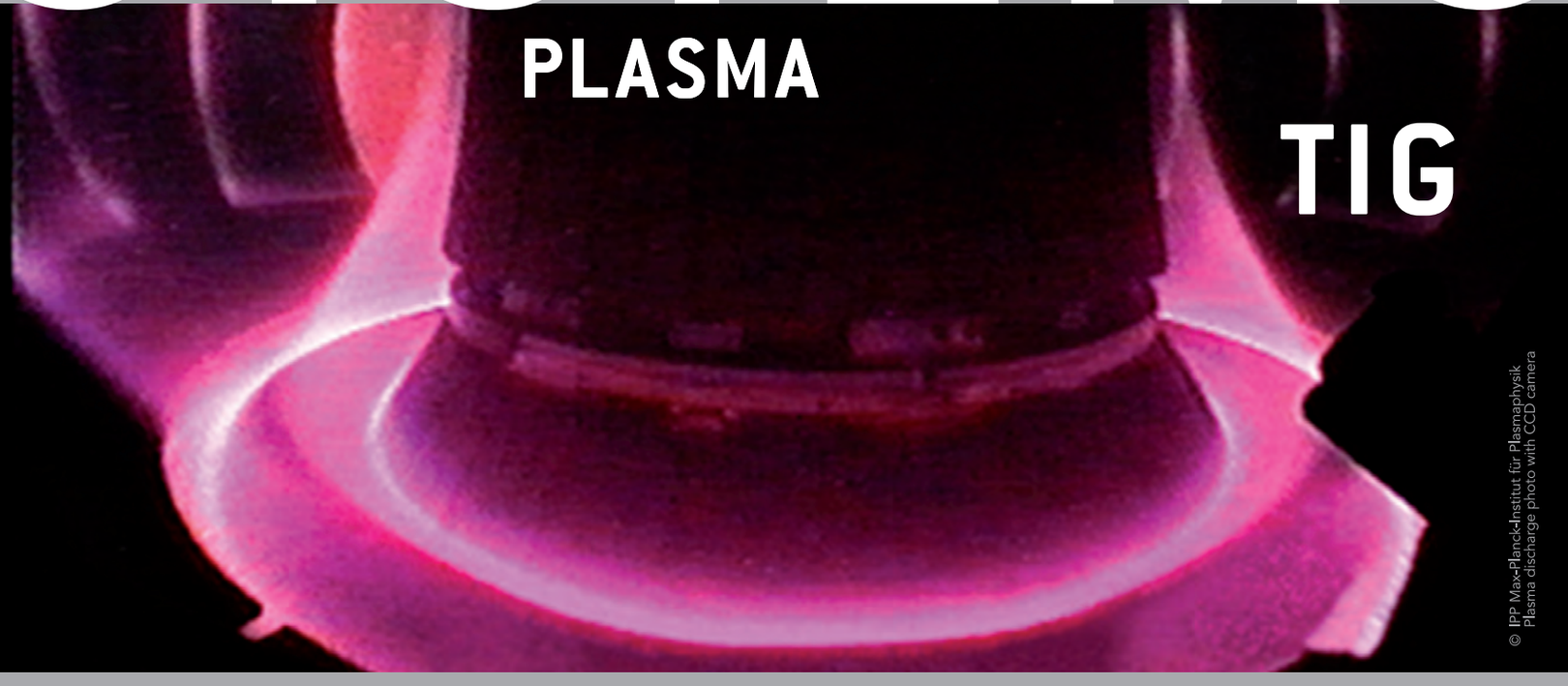
MIG/MAG

LASER

SYSTEMS

PLASMA

TIG



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Plasma vessel of the ASDEX Upgrade fusion device

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Plasma discharge photo with CCD camera

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ISO 9001:2000 SGS

SYSTEMS 9/2009
Subject to change

SCHWEISSEN — WELDING — SCHWEISSEN — WELDING — SCHWEISSEN