System solutions, networked mobile systems

TEL600 service vehicles

EOD robots

Service worldwide

Cobham Mission Equipment
Unmanned Systems

T: +49 (711) 3 41 02 0
E: telerob@telerob.de

www.cobham.com/missionequipment
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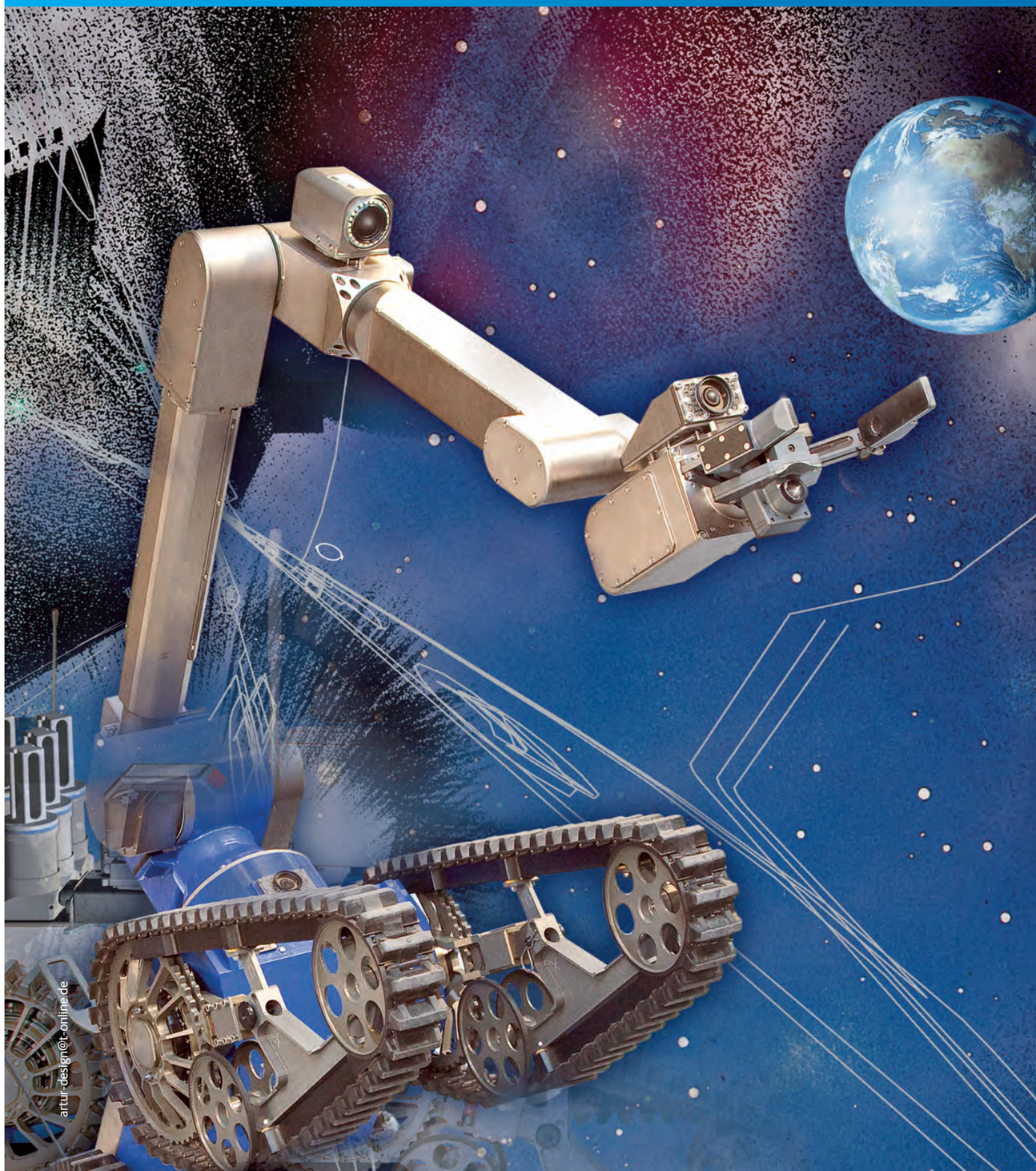
Unmanned Systems
EOD robots

The most important thing we build is trust



The EOD robot **tEOD*or***

Distance means safety

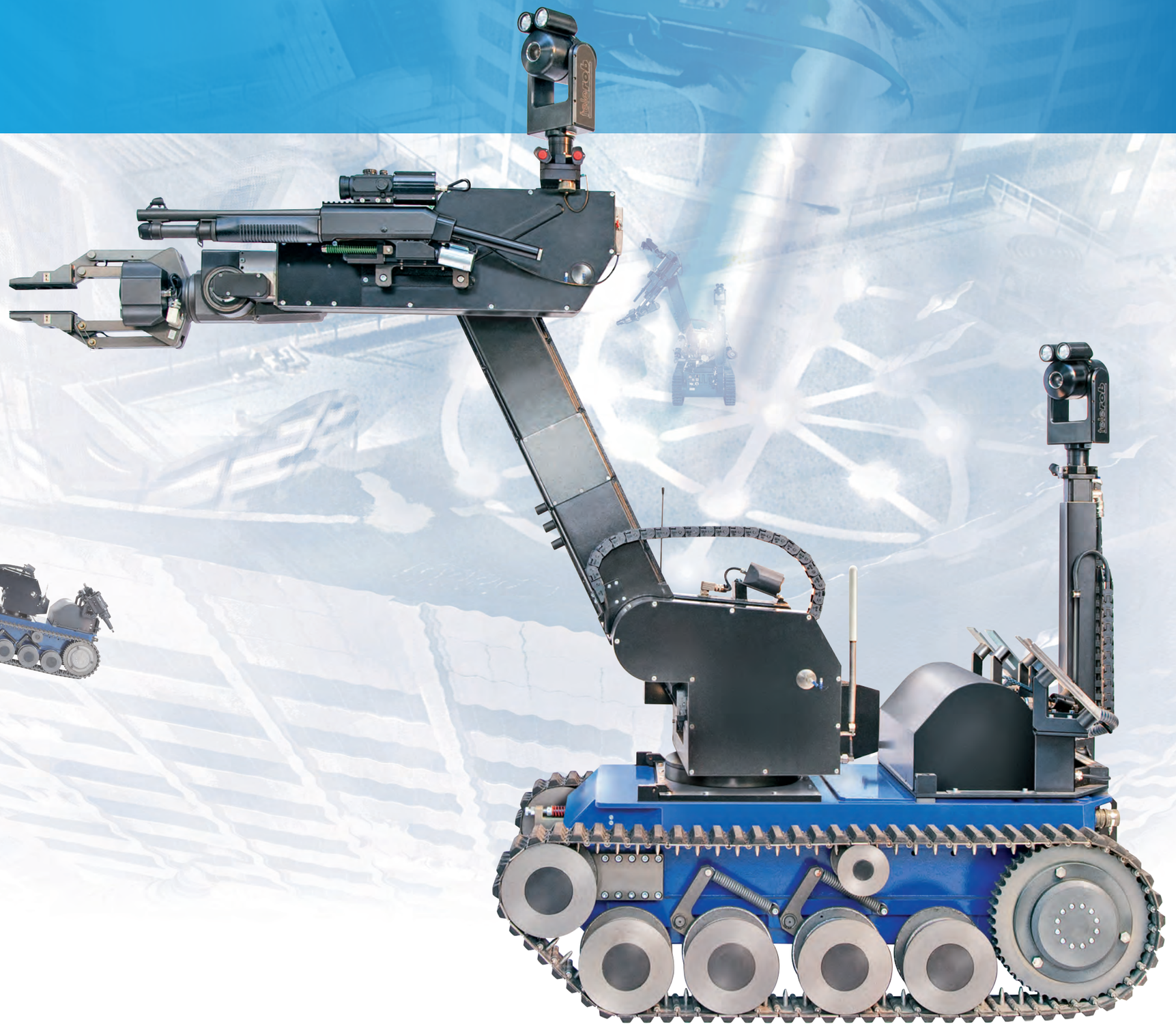
This basic rule with regard to disarming explosive devices means that bomb disposal officers increasingly prefer EOD robots as their tool of choice.

The **T**elerob **E**xplosive **O**rdnance **D**isposal and **o**bservation **r**obot sets the standard worldwide. Robust, reliable and flexible in use, the innovative bomb disposal system provides a maximum degree of safety and protection.

More than **400** units in **41** countries help daily to prevent harm to people and the environment.
A total of **20** NATO countries place their trust in the superior reliability of the most widely sold EOD robot of recent years.

The highlights:

- Programmable 6-axis manipulator with linear axis
- Magazine for three additional EOD devices, with automatic tool change
- Parallel operation of up to five firing systems with a maximum of ten separate shots
- Universal interfaces to connect to all current firing systems
- Built-in diagnostic system with remote maintenance module
- Long list of accessories (more than 40 systems and devices)
- Can be used under all ambient conditions from –20°C to +60°C



The EOD robot **tEODor**

Technical Data

Vehicle

Length / Width / Height:	1 300 / 685 / 1 240 mm
Weight:	375 kg
Speed (infinitely):	max. 3 km/h
Climbing ability:*	45°
Turning circle:	1 460 mm
Payload:	350 kg
Towing capacity:	3000 N
Reach vertical / horizontal:	2 860 / 1 860 mm

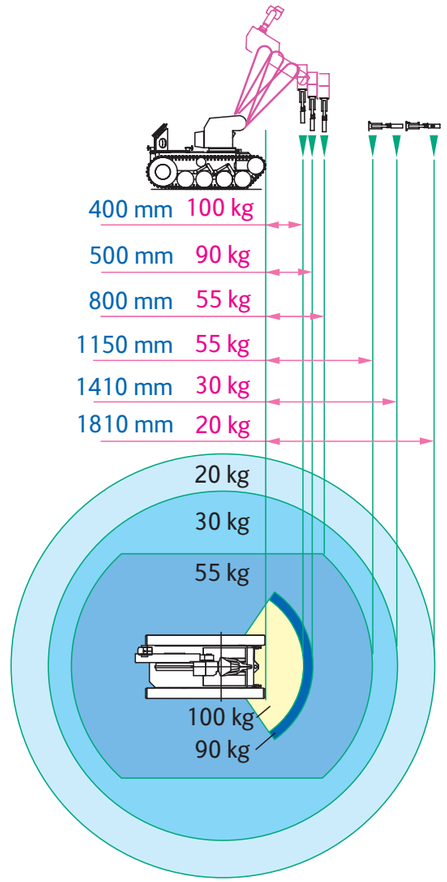
Manipulator

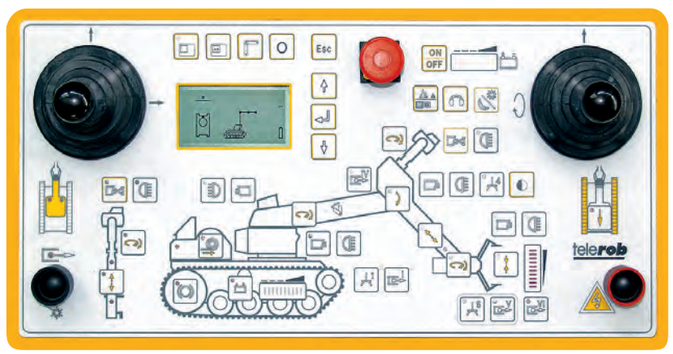
Turret rotation:	± 205°
Upper arm incline:	+ 144°, - 85°
Lower arm incline:	± 110°
Lower arm extension:	0 - 390 mm
Gripper incline:	+ 120°, - 95 °
Gripper rotation:	± endless
Gripper open/close:	300 mm
Gripper force:	600 N

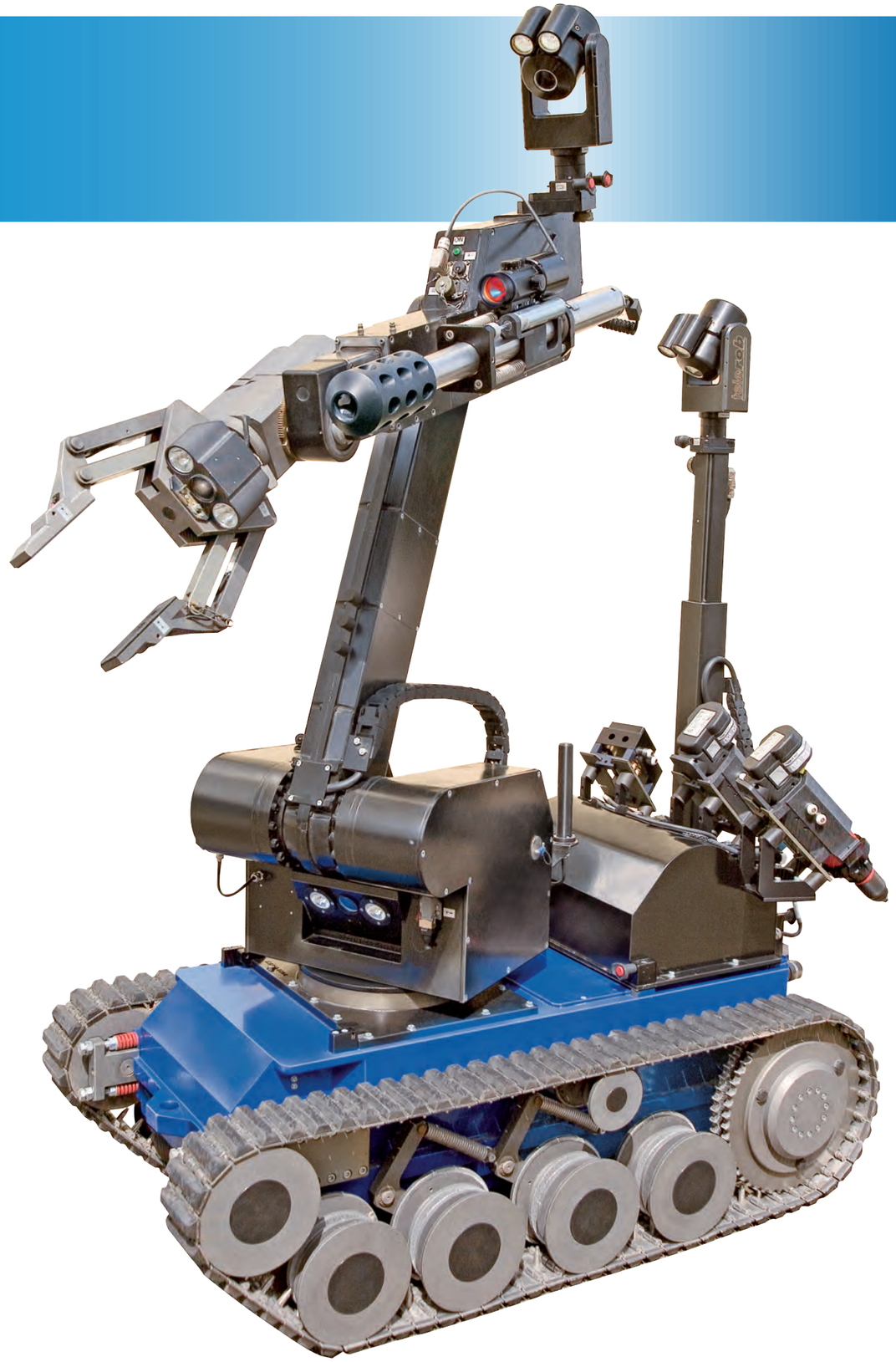
Control panel

Width / Height / Depth:	440 / 350 / 310 mm
Weight:	9 kg

**Depending on ground and friction. Trained operators under ideal conditions may achieve even more by using specific arm configurations.*







Diagnostic System
No. 301969

Remote Diagnostic System
No. 302928

CAT Software
No. 303607

Simulation / Training

– 40°C to + 60°C
extended temperature range
No. 304717

17" Monitor
No. 306062

PiP Function
No. 302349

Quadcopter

Holder
PROPARMS 12.5 RC
No. 305514

Holder
PROPARMS 20 Neutrex
No. 305087

Holder
PROPARMS 20 RC
No. 305514

Control station — Robot

2-way audio
(Transmitter)
No. 305743

Digital video
(Receiver)
No. 305582

Holder
PIGSTICK
No. 305160

Holder
HOTROD
No. 300736

Holder
NEEDLE (double)
No. 305389

Holder
ABL 2000
No. 305595

Holder
ABL 3000
No. 305596

Holder
RE 12g mini
No. 303566

Holder
RE 70 M3 Plus
No. 303565

Holder
TELEJET-short
No. 304430

Holder
MULTIBLOCK
No. 305297

Holder
MULTIBLOCK
No. 305297

Spring hook
No. 207033

Magnetic clamp
No. 206251

Window breaker
No. 210524

Tearing hook
No. 206700

AQUASET
No. 15

Grinder
No. 304703

Right angle drill
No. 304702

Saw
No. 304704

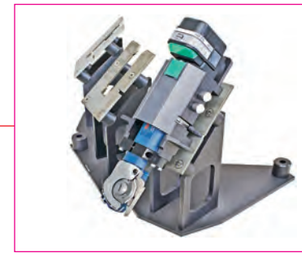
Shear
No. 303962

Hammer drill
No. 304701

Impact wrench
No. 304700

DemiMod / **MiniMod**
Water charge
No. 305560

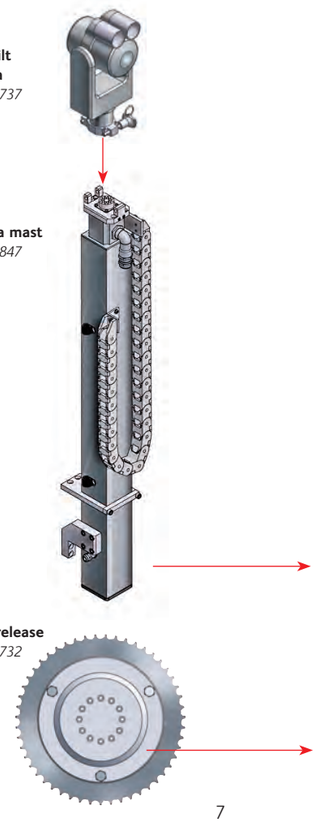
Mini Mace
Jet cutting system
No. 305057



Pan / Tilt camera
No. 301737

Camera mast
No. 302847

Brake release
No. 301732

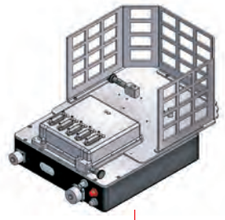


LIN
Freezing system
No. 301499

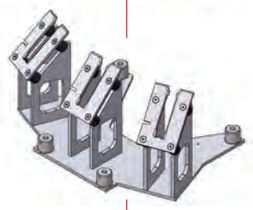
Sensor platform
No. 306016

Sensors:
- **GPS**
  No. 305342
- **X-am 7000**
  No. 305361
- **RadEye-PRD**
  No. 305360

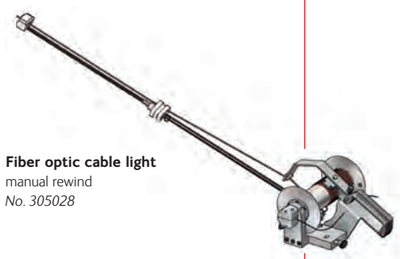
Other sensors upon request



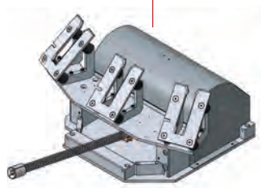
Tool magazine
No. 206227



Fiber optic cable light
manual rewind
No. 305028

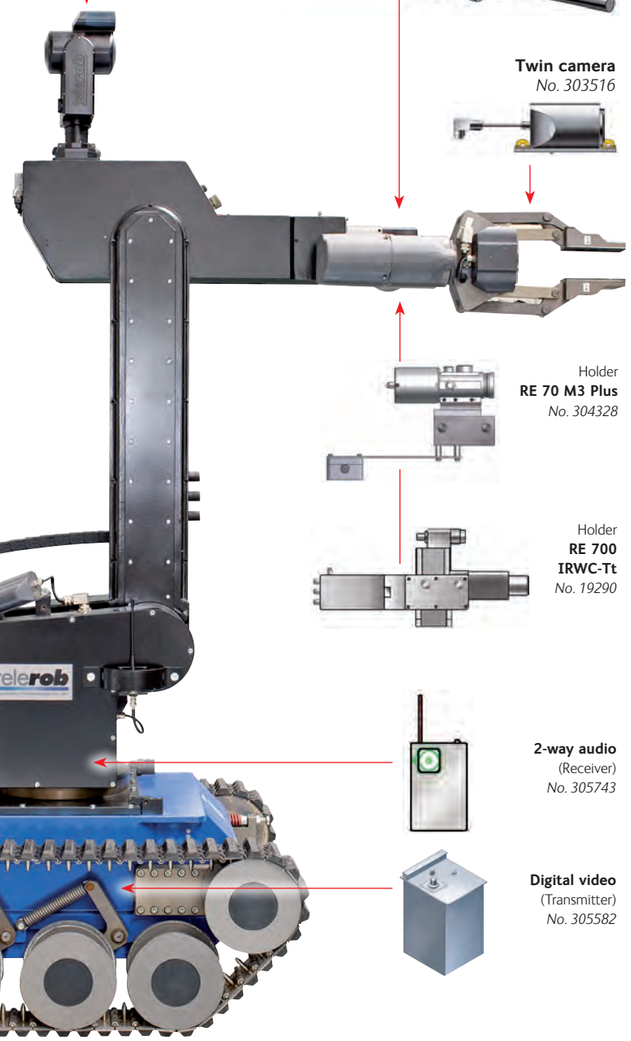


Fiber optic cable
automatic rewind
with integrated tool magazine
No. 305533

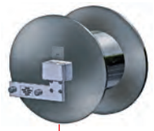


Automatic hitch
No. 304027

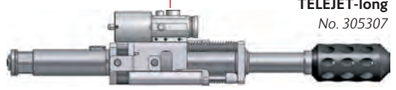
P/T night vision camera
No. 305770



Ignition cable drum
No. 207101

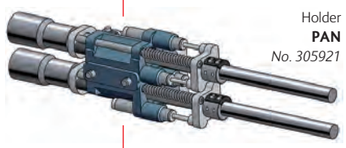


TELEJET-long
No. 305307



BENELLI M4 Super 90
No. 305148

Holder
PAN
No. 305921



Twin camera
No. 303516

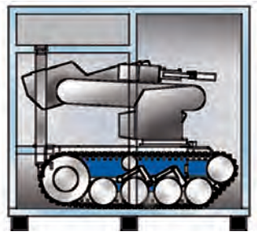
Holder
RE 70 M3 Plus
No. 304328

Holder
RE 700 IRWC-Tt
No. 19290

2-way audio
(Receiver)
No. 305743

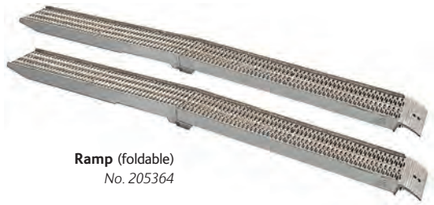
Digital video
(Transmitter)
No. 305582

Transport container Robot
No. 207031



Transport container Control station
No. 207030

Ramp (foldable)
No. 205364



Car-towing device
No. 210065

Prism gripper
No. 201221

Large gripper
No. 206252

X-ray mounting frame
XR150, XR200 or XRS3
No. 301597

TELEVIS
No. 301513

VISICONSULT

Holder
Image plate

XR150
No. 301495

XR200
No. 301496

XRS3

Spare parts package
electronic
No. 302490

Spare parts package
mechanical
No. 303718

Spare parts package
batteries
No. 301924

The EOD robot tele**max**

Sometimes less is more

This basic principle applies with special force if the situation involves working in confined spaces.
In all cases where the big robot **tEOD*or*** cannot be used its little brother **tele*max*** provides that vital distance between the bomb disposal engineer and the explosive device that can mean the difference between life and death: in **aircraft**, in **subways**, in **buses** or other means of public transport.

The highlights:

- Programmable manipulator with Tool Center Point control
- Excellent mobility through 4-track running gear with **²DRIVE** technology
- 7-axis manipulator with rotating turret and linear axis
- Very high reach through the telescope and chassis that can be adjusted for height
- Two tool magazines with automatic tool change
- IATA-conforming Li-ion battery system (in compliance with UN 38.3)
- Interfaces for: **AQUASET**, **ABL 2000**, **PROPARMS 12.5 RC**, **PROPARMS 20 RC**, **RE 70 M3**, **RE 12g Mini**, **BENELLI M4 Super 90**, **NEEDLE and DemiMod**
- Universal charger with intelligent battery management for Li-ion and NiMh technology
- Hybrid drive featuring fuel cells for long endurance missions

The EOD robot tele**max**

Technical Data

Length: 800 mm*
Width: 400 mm*
Height: 750 mm*
**Stowed position*

Vertical reach (stretched): 1955 mm (2 400 mm)
+ 290 mm telescope

Horizontal reach
front: 1530 mm
+ 290 mm telescope

Gripper payload: 5 kg

Speed:
Standard speed version: 4 km/h (track)
High speed version: 10 km/h (wheel)

Climbing ability: 45°
Obstacle ability: 500 mm
Ambient conditions:
Temperature: -20 to +60°C
Protection: IP 65

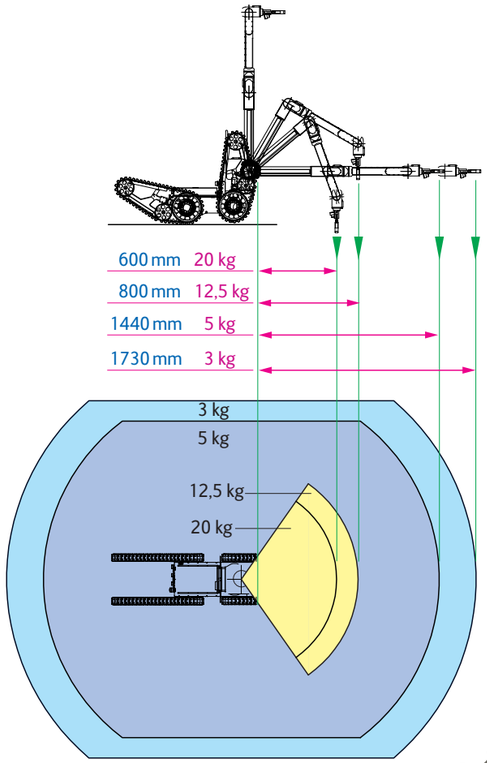
Two men portability acc. to MIL STD 1472E

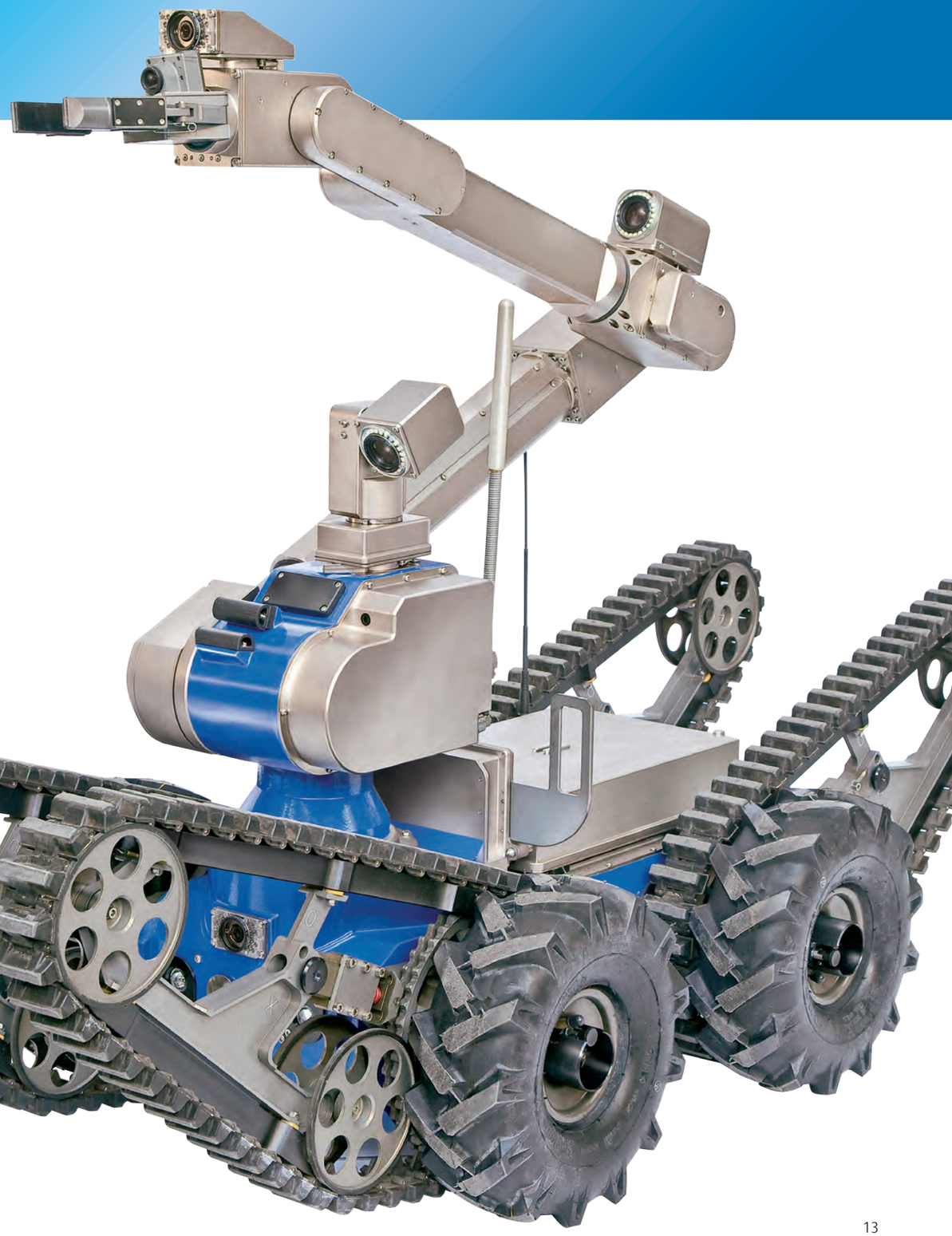
Chassis: 4-track system,
²**DRIVE**-Technology
optional 4 wheels

Power: Battery NiMh 17Ah
Battery Li-ion 40Ah
Battery Li-ion 13.2 Ah

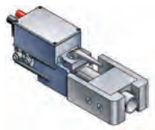
Operation time: approx. 2-4 hours

Subject to change without notice!





Holder
AQUASET
No. 305607



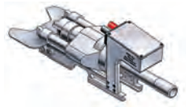
Holder
RE 12g Mini
with laser aiming device
No. 305681+ Nr. 305763

Holder
NEEDLE
No. 305768

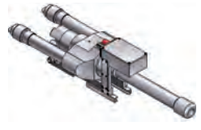
Holder
ABL 2000
No. 305766

Holder
RE 70 M3
with laser aiming device
No. 305776 + Nr. 305762

Holder
PROPARMS 12.5 RC
No. 305679

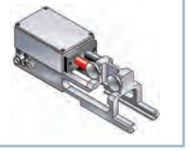


Holder
PROPARMS 20 RC Mk3
No. 305680

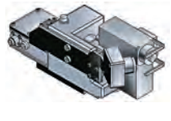


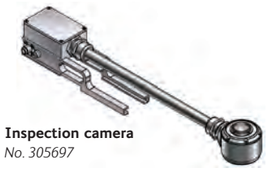
Holder
DemiMod
Water charge
No. 305700

DemiMod kit
No. 305705



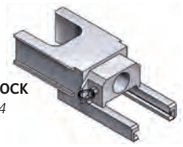
Holder
Fido
Explosives sensor
No. 305537





Inspection camera
No. 305697

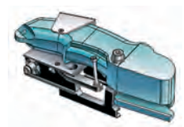
Holder
MULTIBLOCK
No. 305594



Key holder
No. 208211

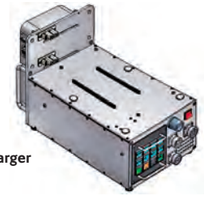
Tearing hook
No. 208210

Window breaker
No. 210453



Universal cutter
No. 305711

Wire cutter
No. 306053



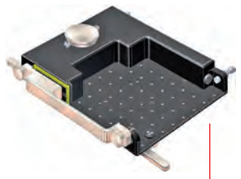
Universal charger
No. 305868

Wheel set
No. 305874

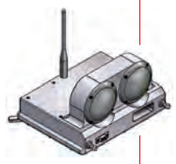
Sensor platform
No. 305876

Sensors:
- **X-am 7000**
- **RadEye-PRD**
- **BioBadge 100**
- **ChemPro 100**

Other sensors upon request

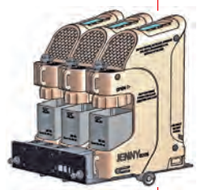


2-way audio system
Nr. 306006



Fiber optic cable
No. 305708

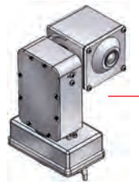
Fuel cell
No. 305857



Battery NiMh 24V/17Ah
No. 305804

Battery Li-ion 26V/40Ah
No. 305822

Battery Li-ion 26V/13.2Ah
No. 305817



P/T thermal image camera
No. 305980

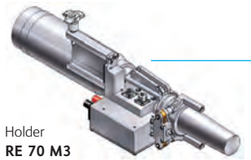
P/T zoom camera
No. 305978

P/T night vision camera
No. 305979

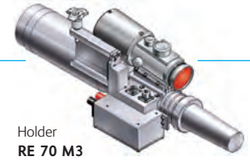
Diagnostic System
No. 305897

Remote Diagnostic System
No. 305898

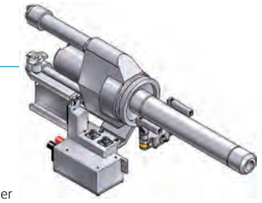
Light module
No. 305227



Holder
RE 70 M3
with laser aiming device
No. 305761

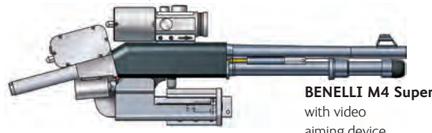


Holder
RE 70 M3
with video aiming device
No. 305687



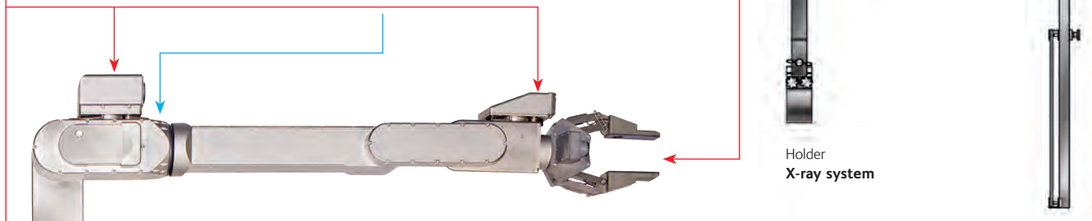
Holder
PROPARMS 20 RC Mk3
with laser aiming device
No. 305823 + No. 305762

Zoom camera
No. 305586



BENELLI M4 Super 90
with video
aiming device
No. 305683

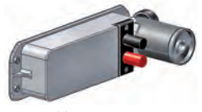
Fix-focus camera
No. 305219



Holder
X-ray system

Spare parts package
electronic

Spare parts package
mechanical



Holder
Sansolo Rapid Coil
No. 305777

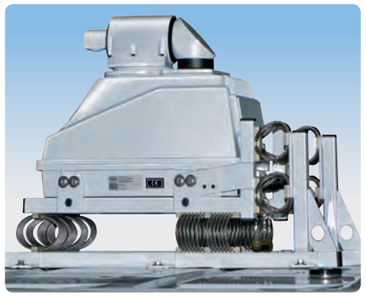
Digital video
(Transmitter)

Digital video
(Receiver)

TEL630 L

NBC detection EOD / IED response

Infrared stand-off detection system RAPID for automatical detection of chemical warfare agents and toxic industrial chemicals.



Mass spectrometer and gas chromatograph E2M for detection of substances in soil, liquid, air and on surfaces.

Ion mobility spectrometer RAID-S2 for detection of chemical warfare agents and toxic industrial chemicals in the environmental air.

One of the biggest challenges when protecting critical infrastructure is to deal with a potential threat from a **"dirty bomb"**. A "dirty bomb" is the term used to describe the result of adding radioactive, biological or chemical materials to an improvised explosive device. An explosion in urban areas in particular or in other sensitive areas of modern life would be disproportionately more severe due to the added substances being spread around.

Currently there are only very few systems in the world which can deal effectively with threats of this type. The armoured "Spürfuchs" vehicle that is used by the military is still the best known example. It can investigate CBRNE threats, initiate countermeasures and provide the highest possible degree of protection to the security personnel.

TEL600 NBC systems make use of this military capability for the first time in a civilian service vehicle. And they go another step further, a very big step.

EOD, chemical warfare and vehicle experts developed our special vehicles specifically to meet the challenge of finding a way to deal with a biological component. Using a glove box that is accessible from outside, you can identify the ten most commonly used and most dangerous biological agents directly after taking samples and right at the location concerned by means of suitable rapid tests.

Launching platform for quadcopter for aerial inspection of the area prior to the detection mission.

TEL630 L

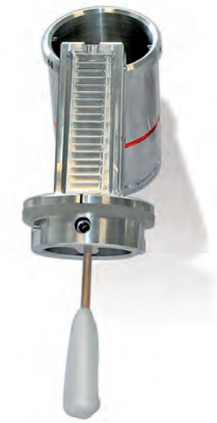
NBC detection EOD / IED response

A world first and still unique is that our TEL600 NBC vehicles can take the samples by using an NBC robot that operates completely independently. The NBC robot is controlled from the interior of the NBC vehicle. The latter has a filter unit and maintains an internal overpressure in use so that the security forces concerned do not need to leave the vehicle. At the same time, the unmanned reconnaissance system can also be used as an EOD robot and so prevent the detonation of improvised explosive devices.

Measuring equipment from the Bruker company (RAID, RAPID and EMC) that is already well known from its use in the Spürfuchs can quickly detect toxic or chemical adjuncts and feed the data into a computer-supported network of sensors in the NBC vehicle.

Using the NATO-certified analysis software from Bruhn Newtech, the data is combined with the meteorological measurements from the weather station, which is likewise integrated in the NBC vehicle, and thus a realistic hazard portfolio can be generated. A built-in video link then transfers the future propagation scenarios to the mobile or stationary operations center. The corresponding decisions can be made there and the appropriate countermeasures taken.

Sample container with shovel for taking granular substances.



Sample container using a cotton bud for taking liquids.

Sample container with swab to be used in ion-scanners.

Sample container with automatic graspf or picking various objects.