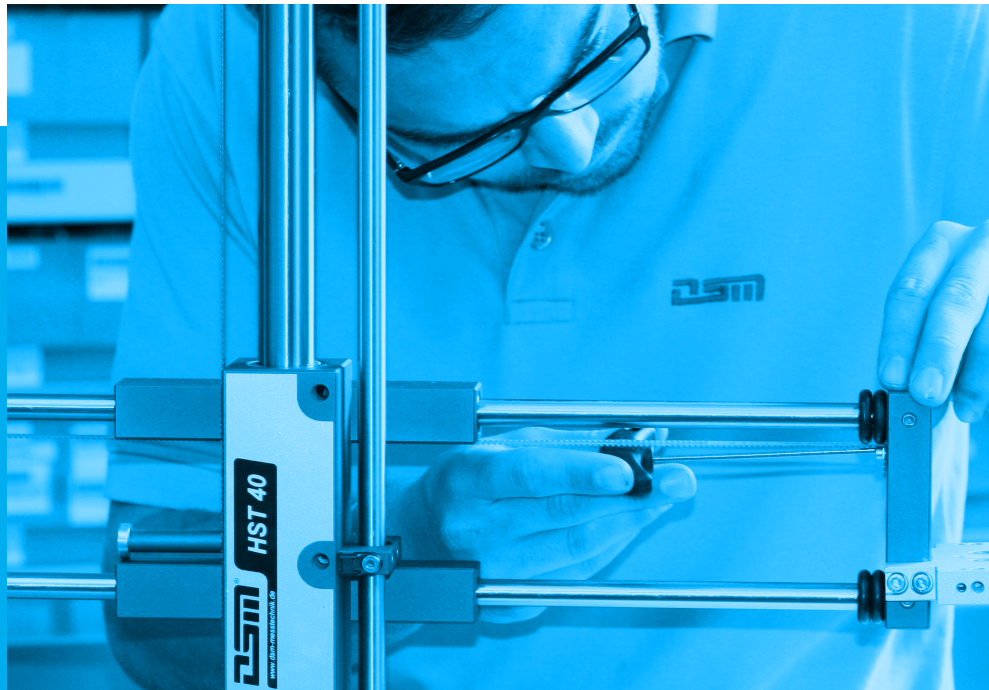


# DSM HANDLING SYSTEMS

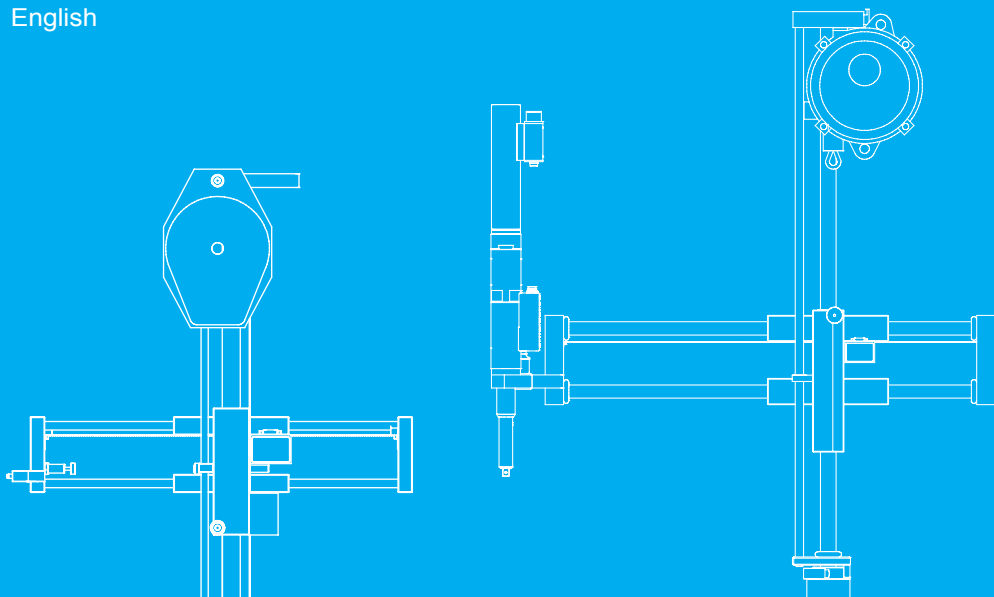
Product catalogue 2018



DSM HANDLING – TO WORK MORE IMPROVED.  
EXACT, RELIABLE, INDIVIDUAL CUSTOMISABLE.



English



[www.dsm-messtechnik.de](http://www.dsm-messtechnik.de)

*Tightening Technique  
Press-in Technique  
Measuring Technique*

## Our partner ...

### ■ Austria

MTP Montagetechnik  
Ing. Markus Purwitzer  
5201 Seekirchen  
Mühlbachstraße 29a

Telephone +43 6212 7988 0  
Telefax +43 6212 7988 14  
mtp@mtp.at  
www.mtp.at

### ■ Brasil

QS Machines Ltda.  
Carlos Pestana Jr.  
Rua Dakar, 86  
04730-040-Santo Amaro  
Sao Paulo - Brazil

Telephone +55 (11) 5681 8759  
Mobile +55 (11) 7817 2280

### ■ China

Shanghai B.I.W Mech Electrical Co.,Ltd  
First Shanghai Plaza 6  
Room 501  
Shanghai Zhangjiang Hi-Tech Park&  
Bisheng Road 299  
201204 Shanghai

Telephone +86 21 502 77 248 Ext. 808  
Telefax +86 21 502 77 247  
pan.frank@biw.net.cn  
www.biw.net.cn

### ■ Czech Republic / Slovakia

LK Machines, s.r.o.  
Jičínská 226/17  
130 00 Praha 3

Telephone +42 0 728 255 969  
obchod@lk-machines.cz  
www.lk-machines.cz

### ■ France

Outils Pneumatiques GLOBE  
143 avenue du Général de Gaulle B.P.  
102  
92252 La Garenne-Colombes Cedex

Telephone +33 1 41 19 33 33  
Telefax +33 1 41 19 33 19  
contact@opglobe.com  
www.opglobe.com

### ■ HUNGARY

Mint East europe Kft.  
Péter Kovács  
Köér u. 16  
1103 Budapest

Telephone +36 30 910 0398  
Telefax +36 1 431 8937  
kovacs@mint.hu  
www.mint.hu

### ■ Italy

RDB soluzione industriali ergonomiche  
Ing. Claudio Motta  
Via Pacchiotti, 123  
10146 Torino

Telephone +39 0 114 120 771  
Telefax +39 0 114 120 779  
rdb@avvitare.it  
www.avvitare.it

### ■ Poland

OK Strojserwis Polska Sp. z o.o.  
ul. Technologiczna 2 A  
45-839 Opole

Telephone +48 690 368 321  
info@ok-strojserwis.pl  
www.ok-strojserwis.pl

### ■ Romania

S.C. ARDASIA SRL  
Str. Aurora, nr. 4  
410547 Oradea

Telephone +40 359 810 633  
info@ardasia.ro  
www.ardasia.ro

### ■ Spain

GIRA Automation, S.L.  
Parque Empresarial Las Rozas  
C/ A. Pérez Esquivel, 3 - Oficina 27  
28232 Las Rozas (Madrid)

Telephone +34 91 636 63 49  
Telefax +34 91 636 63 50  
comercial@giraautomation.com  
www.dsm-messtechnik.de

### ■ Türkiye (Middle East)

Gemasis Makina Ltd. Şti.  
Esenşehir Mah. Natoyolu  
Cad. Atılım Sok. No:41  
Ümraniye 34776 İstanbul -Türkiye

Telephone +90 216 456 0147  
Telefax +90 216 456 0148  
info@gemasis.com  
www.gemasis.com

### ■ United Kingdom

AFTSL Aluminium Frames and  
Tooling Solutions Ltd  
Unit 7 Queensway Link  
Stafford Park 17  
Telford Shropshire  
TF3 3DN

Telephone +44 1952 550 037  
Telefax +44 1952 551 183  
sales@aftsl.co.uk  
www.aftsl.co.uk

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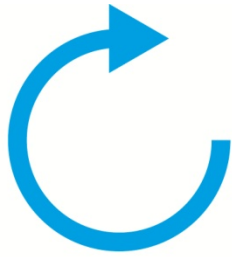
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0,01 up to 2400 Nm  
Torque

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**Individual customised technology  
for millions of precise connections.**

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50 up to 120 000 N  
Press-in force



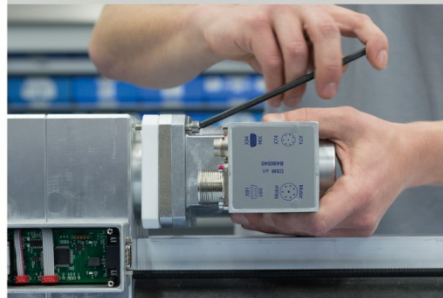
## Tightening technique

- Hand-held nutrunners
- Built-in nutrunners
- Tightening control systems
- Handling systems
- Tightening working stations



## Press-in technique

- Press-in units
- Press-in control systems
- Press-in working stations



## Measuring technique

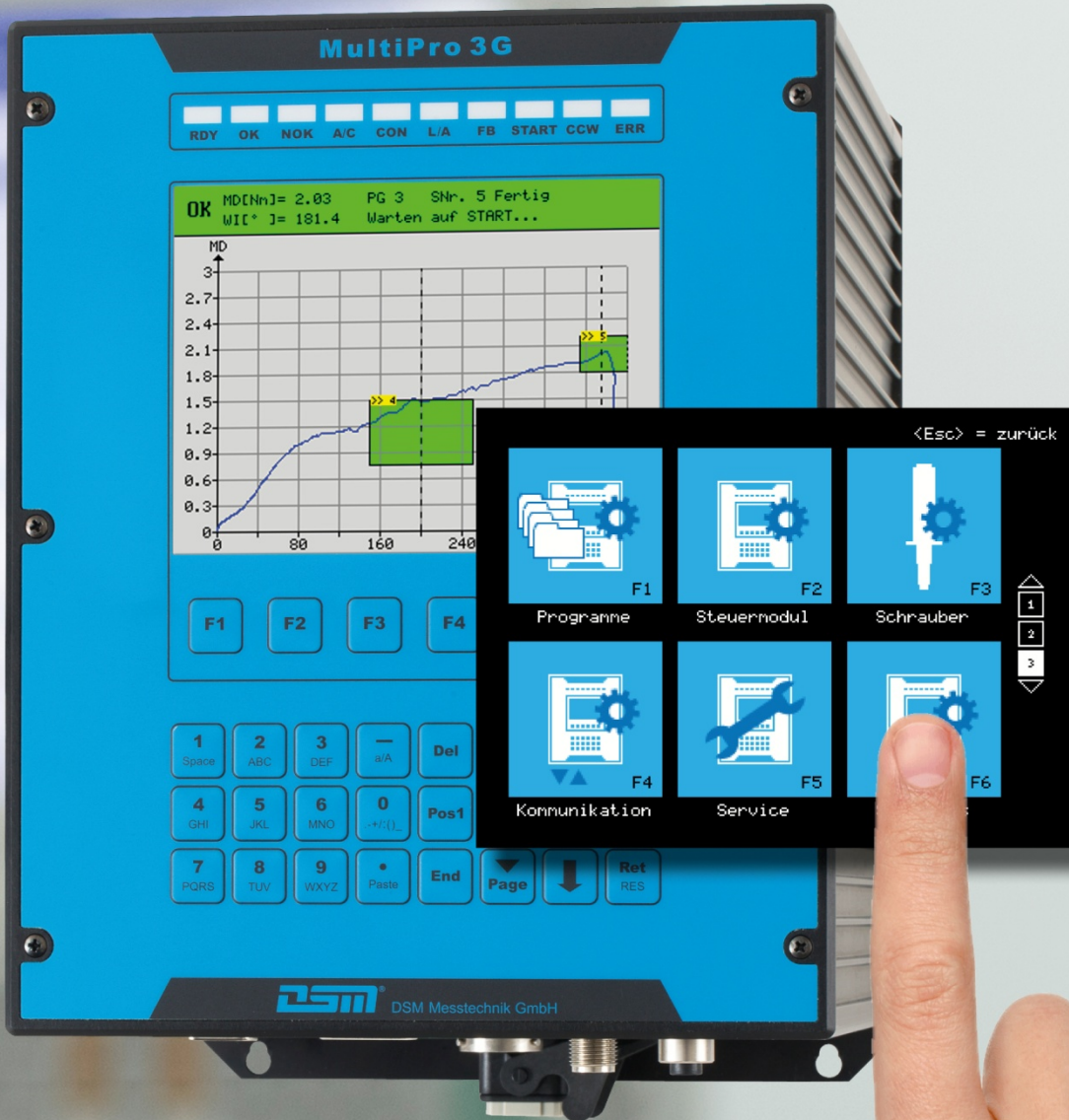
- QS reference measurement system for calibration and monitoring
- DAkkS accredited calibration laboratory



The company DSM Messtechnik GmbH was established in 1982 and represents than 35 years efficient products, excellent quality and elaborate special solutions in the sectors tightening technology, press-in technology and measuring technology. Good and reliable products don't arise by accident, but are always the result of remarkable planning and a brilliant manufacturing quality. As owner managed company we're currently among the global leading suppliers. We mainly deal with the automotive sectors but provide solutions to quite a few other industries as well.

More than a thousand companies in Europe, South America and Asia are our customers. Our strength is the permanent continued development of our technologies and to customise these to individual requirements. So are e.g. in the tightening technique ten patents applied for DSM. We use our innovation to implement customised solutions for you or also to develop completely new solutions, if required. All DSM products are developed and manufactured at our head office in Aalen, Germany.

Customer demands, discovered by e.g. our sales representatives on site, are an incentive for our electrical, mechanical and software engineers. They shortly turn these into marketable products. This image brochure introduces you the versatile standard product range of DSM. Should you have further demands, we're looking forward to your inquiry. Get to know the DSM Messtechnik a little more detailed – you will see, it will be profitable!



## MultiPro 3G

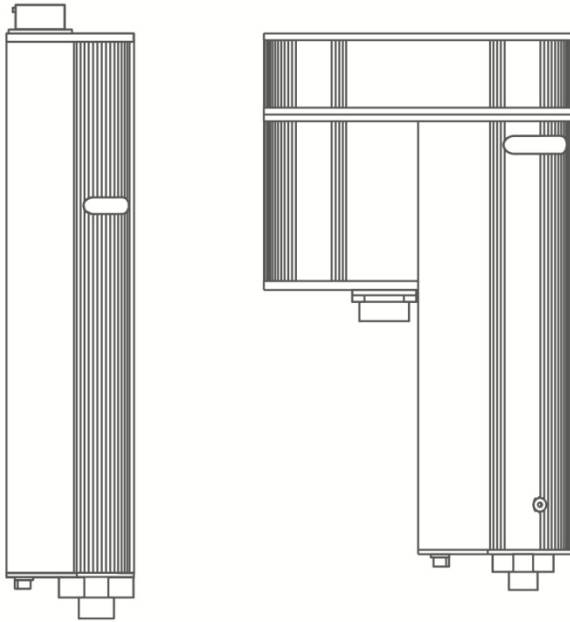
Tighten / Press-in  
One system for your assembly.

Plug-ins and hardware option modules for solution  
of process-specific requirements.

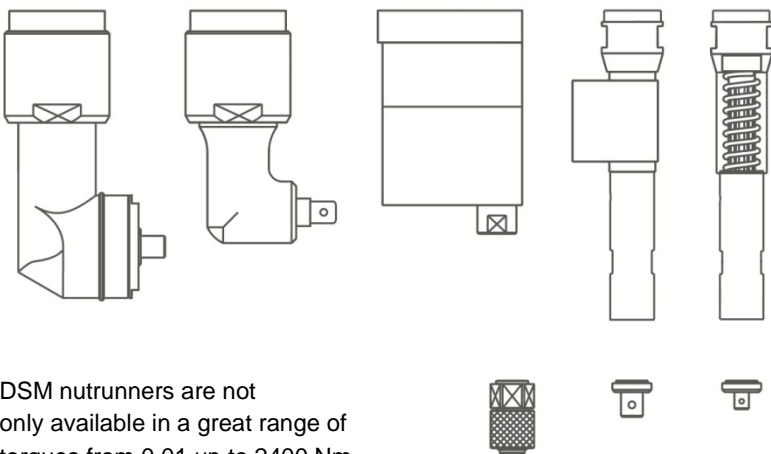


# Modular design – custom-fit technique.

## Motor modules



## Output modules








DSM nutrunners are not only available in a great range of torques from 0,01 up to 2400 Nm, but also with various modules of motors and outputs.  
If is there for possible to receive the DSM high technology for nearly every application.






DSM offers electrical hand-held nutrunners and those nutrunners to be installed for manual, automated and fully automated assembly processes. They are characterised by their proliferation of options, highest reliability and precision.

The data transfer is made digitally by nutrunners of the **DS series**. The advantage: The nutrunner has an independent decentred intelligence and to that, only one connection cable is needed in the power class up to 60 Nm. Further distinctive details are the LED's at the nutrunner. These show the status of the tightening. The control electronic and the servo controller are in the same case. Thanks to the plaintext menu navigation, the programming of the tightening control systems is especially easy to handle.

## Hand-held nutrunners DS series

				
DSH 26	DSH 34	DS 34-P	DSH 44	DS 44-P
0,5/1/2/4 Nm	5/10/20 Nm	2,5/5/10/15 Nm	20/30/40/60 Nm	2,5/5/10/20/35 Nm

## Built-in nutrunners DS series

		
DS 26	DS 34	DS 44
0,5/1/2/4 Nm	2,5/5/10/15 Nm	2,5/5/10/20/35 Nm

## MultiPro 3G – easy to use and flexible

From the combination of intuitive operator convenience and of a modular hardware and software concept a forward-looking basis has been created which meets the current requirements in the tightening technology.

Equipped with a lot of functions, the scope of work of the MultiPro 3G can be formed individually.

DSM puts special process specific requirements customer-focussed and competent into practice – a new generated function is easily integrated as add-on into the control system.

### Built-in nutrunners DS series



DS 57

50/70/90/140 Nm



DS 80

220/300/420/500/600 Nm



DS 80-130

900/1000/1500/2000/2400 Nm

### Tightening control systems

- CPU 4 -



MultiBasic Blue TA



MultiBasic TA



MultiClassic TA



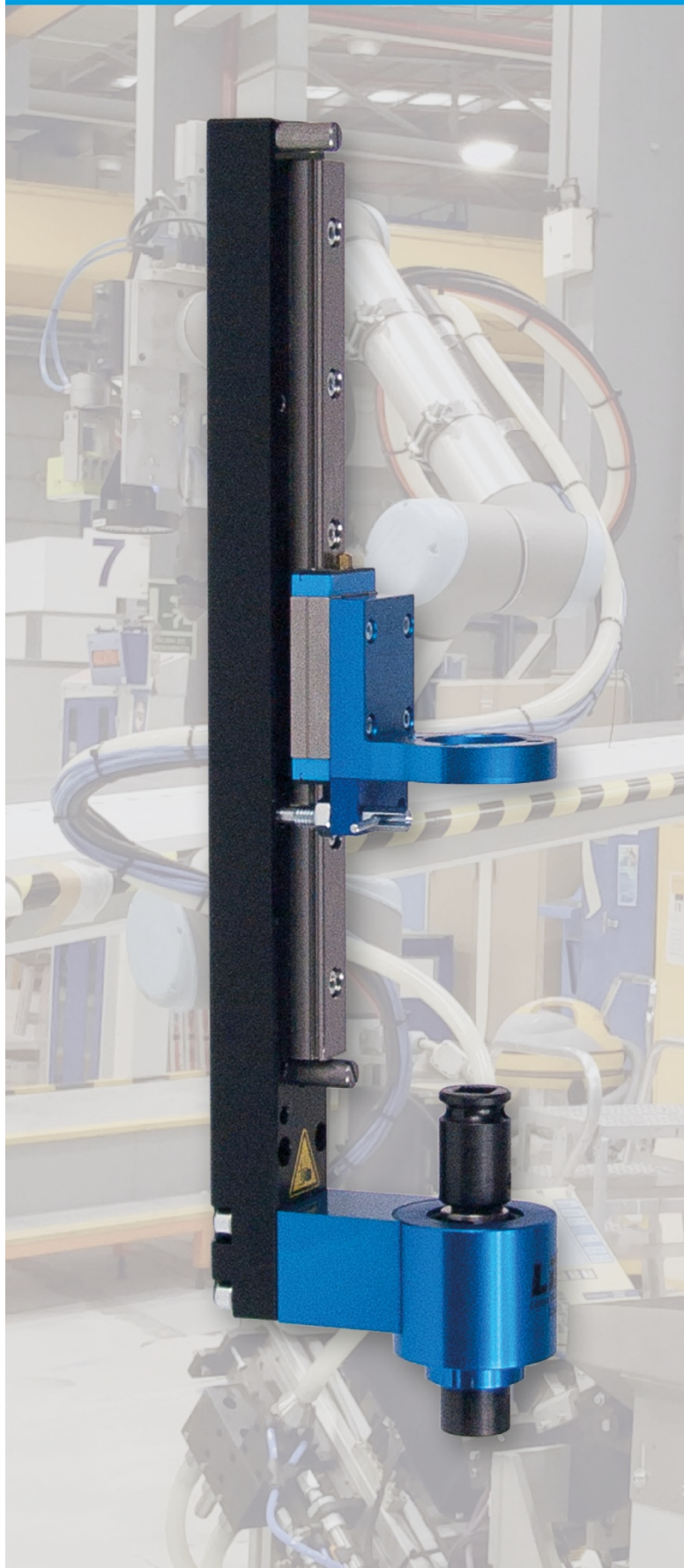
MultiPro TA

- CPU 5 -



MultiPro 3G

# Assemble test equipment without using tools – no long process interruption.

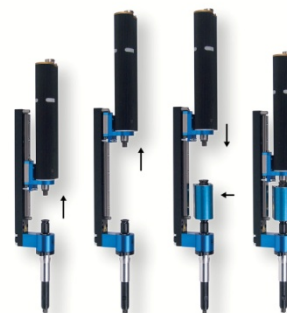


DSM linear modules for the assembly of test equipment (rotating torque transducers) to the DSM nutrunner of the DS 34 / DS 44 series without using tools and without long process interruption.

In basic position the nutrunner is fixed by a locking device at the output. The nutrunner can be manually moved with the linear slide by pulling the locking bolt and can be fixed on two further snap-in points for the integration / assembly of the torque transducer. Precondition for this is a firm connection between linear module and output (e.g. spring output) as well as the direct mounting of the nutrunner at the linear slide.



*Standard use of the nutrunner in the assembly process*



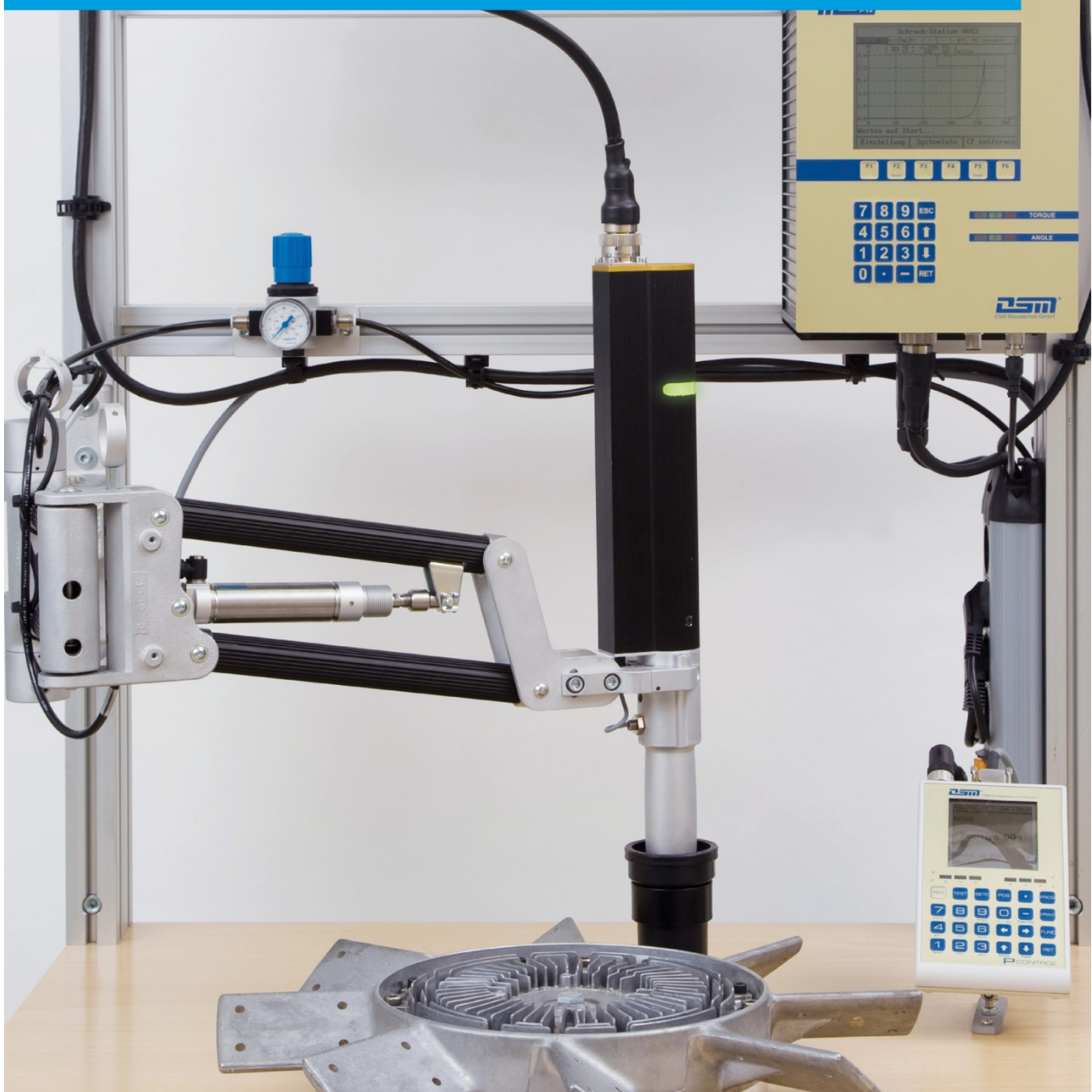
*Assemble torque transducer without using tools*



*Measure via a reference measuring system during the production process and record the data, e.g. with the DSM QS-Box*



## Fatigue-free working without error – DSM technology for manual assembly.



Handling devices are essential for the tasks and the applications of the hand-guided and the semi-automated assembly.

Daily recurring operations makes the tool with time heavier and heavier for the user - if you also considers the reaction torque and incorrect holding of the tool, a disorder of the hand-arm-shoulder system cannot be excluded.

Preserve the health of your employees!

The weight of the tool is balanced by the DSM handling system, so that a safe, easy and effortless handling is guaranteed.

Equipped with positioning-electronic and sensors for the XY(Z) coordinates the position of the tool can be monitored.

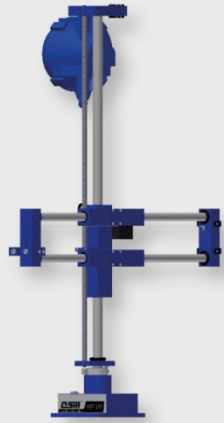
No screw will be forgotten - even complex tightening sequences can be specified and monitored.



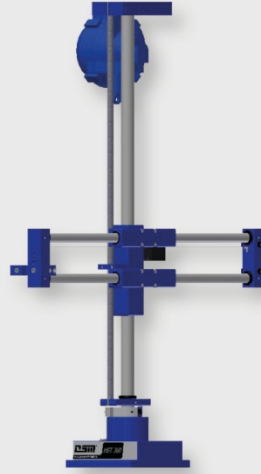
## Handling stand HST



HST 40



HST 150



HST 300



HST 600

## Handling stand POSI 1



POSI 1 GG-40



POSI 1 GG-150



POSI 1 GG-300



PosiControl



PosiControl4

## Handling swivel arm POSI 2



POSI 2



PosiControl



PosiControl4

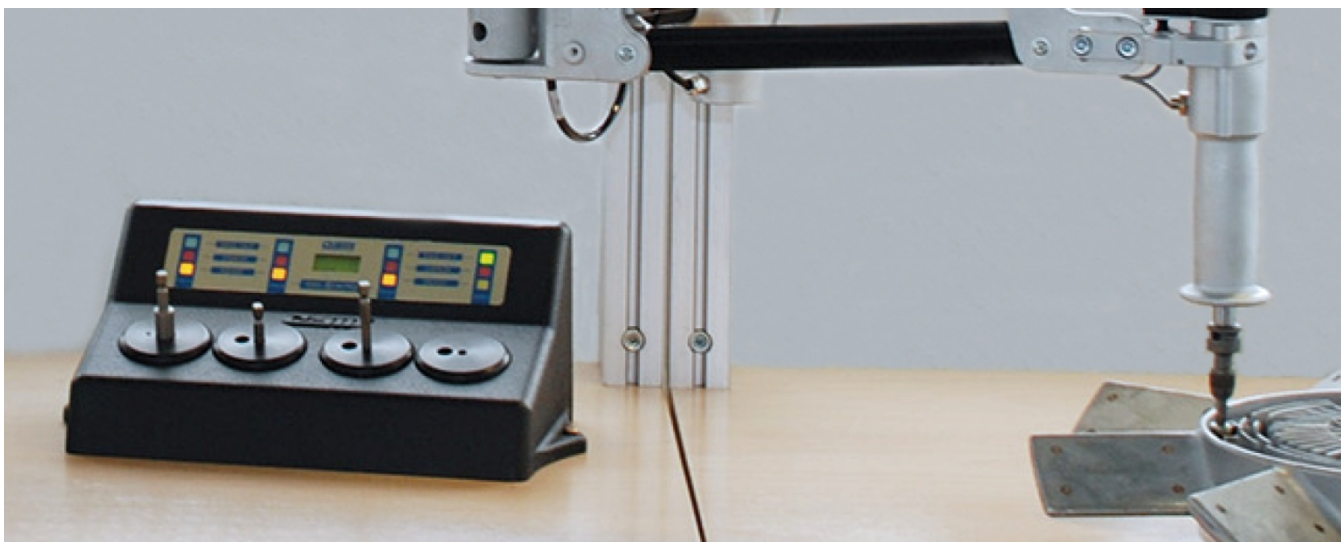
## Advanced handling – precise, reaction-free and clever.



DSM offers with the HST series advanced handling devices.

The model series is available in 4 sizes as pure handling stand or in the execution with integrated position monitoring – positioning controller is installed in the pedestal.

Thanks to the modular design of both versions and the variety of innovative equipment options allows to realise modern and ergonomically structured workplaces.



## ToolControl – the intelligent socket box.

If a tool is taken out, ToolControl automatically calls up the correct sequence program. After appropriate activation, ToolControl shows the operator the tool that is required for the current assembly process.

### Features ToolControl

- Processor monitored tool removal
- Status reports via LCD plain text display
- Status indication for each tool
- Available with two, four or eight tool inserts
- Cascatable up to 32 tools
- Connection to the control unit by a systembus cable
- Optional interfaces: Profibus, Ethernet for the integration in a PLC
- Stable aluminium pressure die housing with mounting plate
- Customised tool inserts made of synthetic material

### ToolControl



TC2 TC4 TC8  
Basic system



TC2-E TC4-E  
Expansion system





In the sector of electro-mechanical presses, DSM covers a range of 50 N up to 120 000 N press-in force.

As required, we equipped the press with a stroke extension or with an electro-mechanical brake.

Our own production enables customer-specific versions at any given time.

DSM offers two series for digital press-in technology:

The QMP series and the SMP series.

DSM precision presses of the **QMP series** are construed for press and pull forces.

They are designed very slim in a square-cut stainless steel case.

This results in a low permanent weight of the press unit, so that consequently high increases in speed, speeds and cycle time can be implemented.

The digital load cell (measuring accuracy 0,5 % of the final value), which is protected against overload, is located directly in the plunger. Length/stroke measurement is carried out by a absolute length/stroke measuring system with a resolution of 0,002 mm. LED status report at the press unit show the operating status and the result.

Precision presses of the **SMP series** are construed only for press forces. They are designed very robust and low-maintenance. The simple construction convinced in the rough industrial environment.

The digital load cell (measuring accuracy 1 % of the final value) is located directly near the plunger.

Length/stroke measurement is carried out by a absolute length/stroke measuring system with a resolution of 0,003 mm.

The press units of the SMP series cannot equipped with optional accessories.

The control electronic and the servo controller are in the same case. Thanks to its plaintext menu navigation, the programming of the QMP / SMP control systems is especially easy to handle.

QMP press-in units		
		
QMP 80	QMP 100	QMP 140
2,5/5/10/20 kN	30/40/50/60 kN	70/100/120 kN
200/300/500 mm	200/300/500 mm	200/300/500 mm





## MultiPro 3G – easy to use and flexible



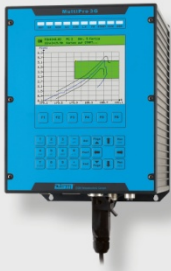
From the combination of intuitive operator convenience and of a modular hardware and software concept a forward-looking basis has been created which meets the current requirements in the press-in technology.

Equipped with a lot of functions, the scope of work of the MultiPro 3G can be formed individually.

DSM puts special process specific requirements customer-focussed and competent into practice

– a new generated function is easily integrated as add-on into the control system.

SMP press-in units			
			
SMP 300	SMP 300	SMP 400	SMP 500
0,5 kN	1/2 kN	5/10 kN	20/30/50/70 kN
100/200/400 mm	100/200/400 mm	100/200/400 mm	100/200/400 mm

Press-in control systems		
- CPU 4 -		- CPU 5 -
		
MultiClassic FL	MultiPro FL	MultiPro 3G



Next to single components for the tightening technique and press-in technique, DSM also offers complete single work stations and rebuilding for existing stations. Our long-time experience on this sectors assures you a cost-effective and technical projecting overall solution, at which all components are ideal harmonised on each other.

All dimensions can be specified individually. We equipped your work station with required DSM products and, if necessary, also with components of other manufacturers. The personnel safety with the applicable standard for example is assured by a two-hand control, a lockable automatic lift door or a light curtain.

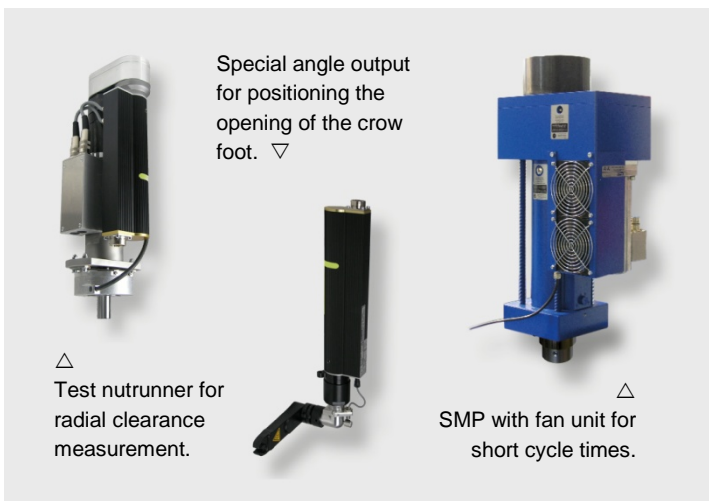


DSM assembly station for the automated tightening of thread nuts.



DSM press-fit station with protected working space for caulking of bushings.

## Special solutions



△ Test nutrunner for radial clearance measurement.

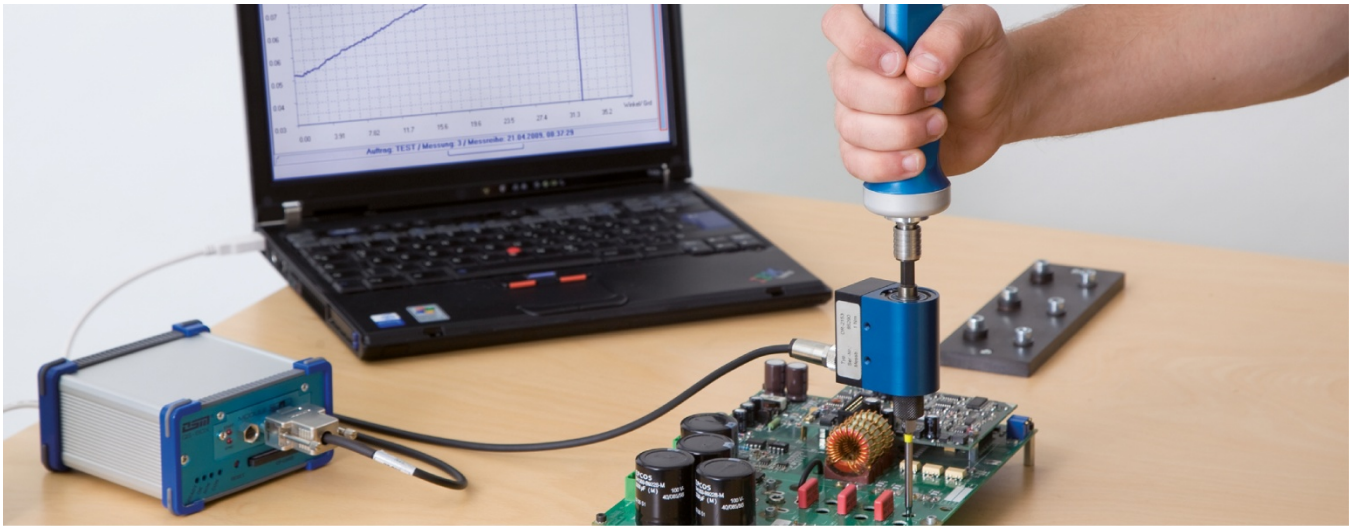
Special angle output for positioning the opening of the crow foot. ▽

△ SMP with fan unit for short cycle times.

Individual technical solutions for hardware and software, are our strength. Beyond our versatile standard product proposal, we produce special designs and completely new products for you. In close cooperation with you, we develop customised solutions for the application ranges tightening technique, press-in technique and quality assurance.



# Measuring technique



## Reference measuring system

The QS-Box is a compact, extremely versatile reference measuring system. It processes analogue as well as digital measuring signals. All established measuring sensors can be connected with corresponding plug-in modules. The channel DSM-Digital offers you all the options of a modern, digital measuring system with the QS-Box.

### Features QS-Box

- Exchangeable plug-in modules for analogue and digital measuring signals: DSM-Digital,  $\pm 1$  mV/V,  $\pm 2$  mV/V, 4-20 mA,  $\pm 5$  V,  $\pm 10$  V,  $\pm 15$  V
- Measurements possible in online and offline mode
- Exchangeable CF data storage
- Synchronisation input for angle of rotation and length/stroke control
- Recording of measurements with graphics monitoring
- Interfaces: USB, RS232, TCP/IP, Profibus (optional)

### DSM Digital plug-in module

The QS-Box unfolds its complete potential with DSM-Digital:

- Insensible signal transfer
- Direct status report at the measuring sensor
- QS-Box-Software for administration, parameterisation and evaluation
- Automatic recording of the sensor data's
- Automatic adjustment of the measuring parameters
- Data transfer and remote control via TCP/IP



### SCI module

We convert your analogue sensors: Equipped with a SCI module, every existing transducer can be connected to the digital-interface of the QS-Box. This allows you to use all advantages of the digital system cost-effectively.

## Measuring sensors

According to requirements, DSM delivers analogue and digital measuring sensors of any type: e.g. force load cell, length/stroke sensors, length/stroke measuring sensors, torque transducers and temperature sensors.



Torque transducer



Force load cells



# Play it safe right from the beginning with the experts service of DSM.

## DAkKS accredited calibration laboratory

DSM runs a calibration laboratory, which is accredited and controlled from the DAkKS (German Accreditation Body) and is also a member of the DKD. We check your measuring system and your measuring sensors in our calibration lab in Aalen, Germany, or at your place. Of course, we calibrate older DSM products as well as nutrunners and measuring sensors of a lot of other manufacturers.

The calibration certificates, issued by DSM, are a confirmation for the traceability to the national standards.

## Commissioning and maintenance

DSM escorts you during the complete life time cycle of your product. Whether it is initial commissioning, extension or rebuilding – we take care of the perfect integration of DSM products into your applications on site. Experienced DSM specialists support you by starting your plant, by the process specification and by the training of your employees. With unbureaucratic assistance, we care fore, to get the operations running quickly again in very urgent situations.

## Training

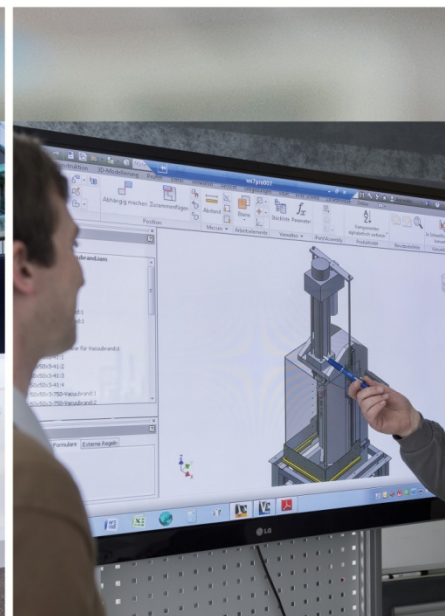
In our training centre in Aalen, Germany, we offer you the most modern technology and a comfortable ambience. There, all DSM products are at the participants disposal. To that, we also provide units for tightening as well as press-in technology and for calibration by trainings at your place. Our experts not only communicate the professional handling with DSM products, but also their long-time experience in tightening and press-in processes. The contents of the trainings are tailored especially to the requirements of the participants.



Calibrations conforming to standards: The DSM calibration laboratory in Aalen, Germany, is accredited acc. to DAkKS.



Expert advice and service at your place – we're always on the go.



The operation of the DSM products can be practised under competent instruction in the DSM training centre.

DSM

Custom-made innovative tools

■ ■ ■ made in Germany

Company headquarters in Aalen, Dieselstraße 16  
Development, production, administration and sales





ADVANCED HANDLING –  
PRECISE, REACTION-FREE, CLEVER.



## HANDLING SYSTEMS HST series

DSM offers with the HST series advanced handling devices for the tasks and the applications of the hand-guided and the semi-automated assembly.

Preserve the health of your employees! Daily recurring operations makes the tool with time heavier and heavier for the user – if you also considers the reaction torque and incorrect holding of the tool, a disorder of the hand-arm-shoulder system cannot be excluded. The weight of the nutrunner respectively the tool is balanced by the DSM handling stand, so that a safe, easy and effortless handling is guaranteed.

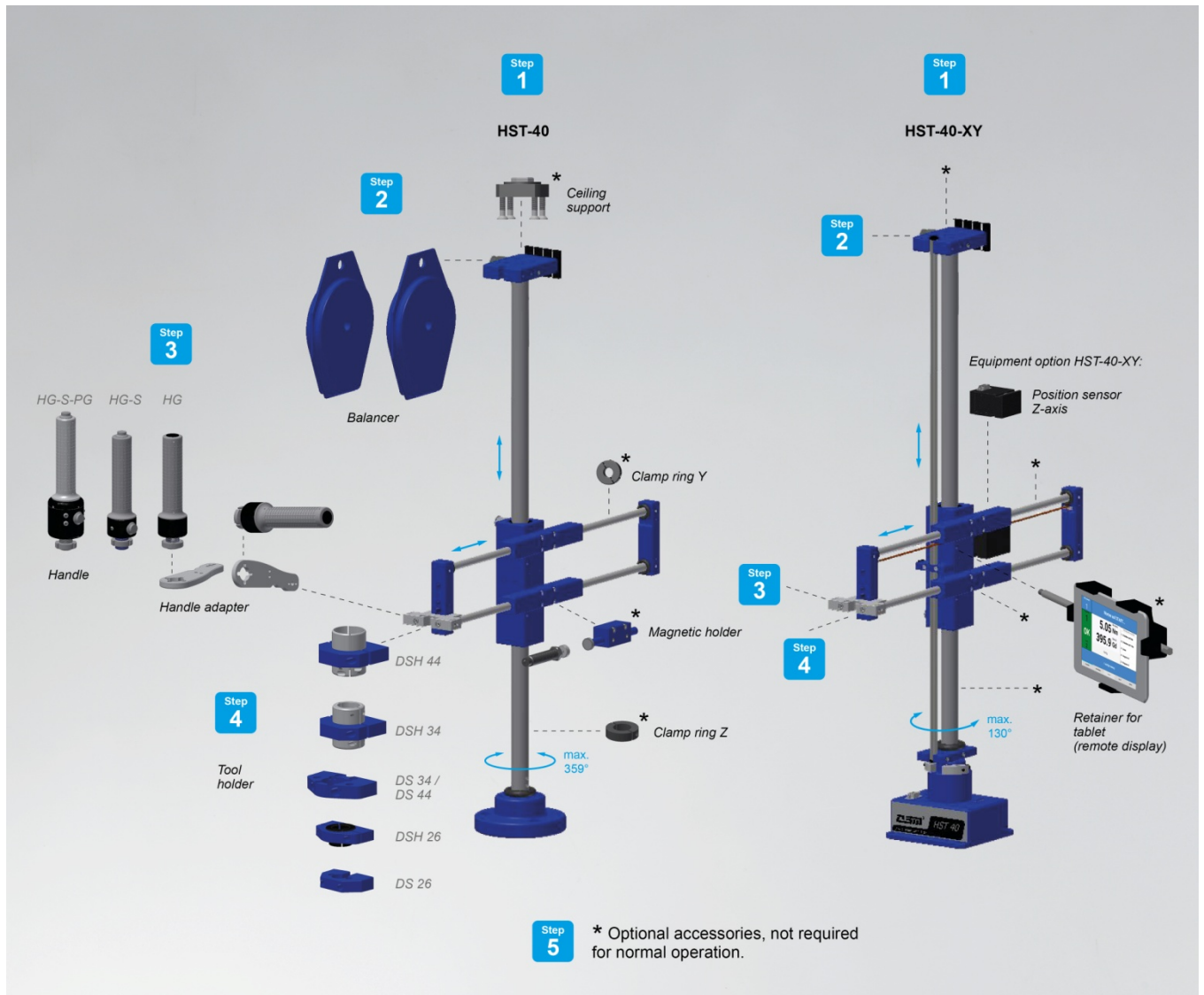
The series is divided into 4 sizes and available as pure handling stand (without sensor) or in the execution "HST-XY" with integrated position monitoring. Thanks to the modular design of both versions and the variety of innovative equipment options allows to realise modern and ergonomically structured workplaces.

The handling stands of the HST series can be used with all DSM built-in nutrunners and DSM hand-held nutrunners. Of course, it is also possible to assemble tools of other manufacturers.

### Overview sizes

Type	Stroke vertical	Stroke horizontal	Max. reaction torque	Max. tool weight
> HST 40	400 mm	300 mm	40 Nm	5 kg
> HST 150	720 mm	450 mm	150 Nm	15 kg
> HST 300	850 mm	600 mm	300 Nm	30 kg
> HST 600	750 mm	550 mm	600 Nm	40 kg

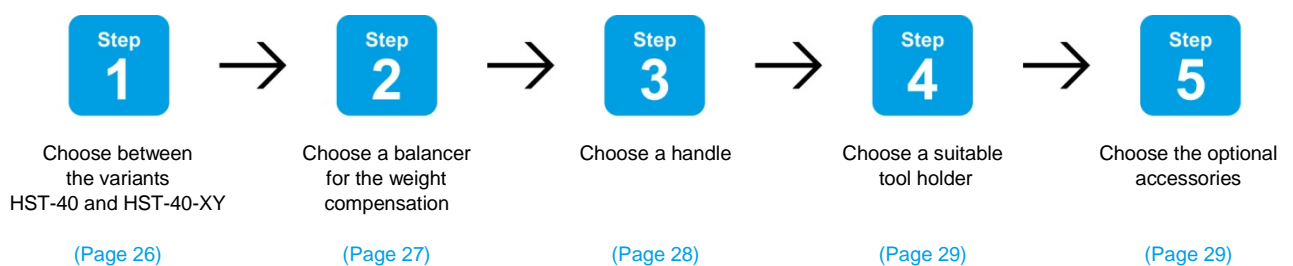




## Handling stand HST 40

Precise, reaction-free and extremely light handling in the entire workspace. Absorption of all reaction forces and compensation of **torques up to 40 Nm**. Optimal smooth-running weight compensation with a maximum **tool weight of 5 kg**. Extensive range of equipment options for the models **HST-40** (without sensor) and **HST-40-XY** (with integrated position monitoring) available.

Use the following steps for the compilation of your handling stand to select the optimum components from the series HST 40 for your application.



Step 1 Handling stand Version HST 40			
Type		HST-40	HST-40-XY
Absolute position sensor technology XY		--	✓
Positioning controller integrated in the pedestal		--	✓
Vertical stroke (Z)	[mm]	400	400
Horizontal stroke (Y)	[mm]	300	300
Swivel angle	[°] max.	359	130
Reaction torque	[Nm] up to max.	40	40
Tool weight	[kg] max.	5	5
Height of vertical stand	[mm]	840	890
Length of horizontal arm (without tool holder)	[mm]	550	550
Weight horizontal arm	[kg]	2,5	2,5
Weight handling stand	[kg]	16	16
<b>Article number</b>		<b>H-6002040</b>	<b>H-6002045</b>

### HST-40 | HST-40-XY – Robust designed handling stand

Pedestal with mounting holes, vertical stand with precision shaft, horizontal arm with precision double shaft as well as guides with smooth-running industrial bearings. Construction to accommodate torsion forces with fixing points for balancer and cable, prepared for the mounting of tool holder and handle.

### HST-40-XY – Position monitoring of assembly tool

Fixed sequences have to be observed by a lot of applications of the hand-guided and the semi-automated assembly. Equipped with an XY sensor system (Z sensor optional) and with an position controller integrated in the pedestal, the HST-40-XY extends the functionality of your tightening system. The position electronic monitors in conjunction with a higher-level control system that the required sequence is observed. No screw will be forgotten – even complex tightening sequences can be specified and monitored. Or you select the corresponding sequence program on your DSM tightening control system via the screw position.

Other features:

- Absolute XY position measurement – in the rotation axis and in the horizontal arm
- Position input via teach-in, storage up to 200 positions
- Position monitoring
- Reporting of the stored positions "Pos reached"
- Direct output mode as "XY position"
- DSM software for programming and configuration of the positioning controller
- USB interface for connection with the DSM application software, incl. USB cable
- System bus interface for communication with the DSM tightening control system, power supply via control system or AC adapter
- TCP/IP interface for communication with the DSM application software
- Optional Profibus interface or Profinet interface for connection to a higher-level control system

### Handling stand HST-40-XY Equipment option

Type		Article number
HST-40-Zsens	Position sensor Z-axis, incl. Y connection cable	H-6006012

## Positioning controller Equipment options

Type	Article number
Evaluation unit with Profibus interface and TCP/IP interface	<b>H-6009500</b>
Evaluation unit with Profinet interface and TCP/IP interface	<b>H-6009600</b>
BT module for the execution Profinet, enables the communication with Bluetooth® devices	Available soon
AC adapter (plug-in power supply)* AC 230 V / 50 Hz   DC 24 V / 1 A	<b>DSM-600611</b>

\* For the use without DSM control system.

## System bus Accessories

Type	Article number
System bus cable 2 m	<b>MS-1003002</b>
System bus cable 5 m	<b>MS-1003005</b>
System bus terminating resistor	<b>MS-1003030</b>
T-piece for system bus connection	<b>DSM-200722</b>

Step  
**2**

## Handling balancer for version HST 40

Type	Ideal for DSM nutrunner	Weight counterbalance, load capacity adjustable	Article number
HBA-2---3,5-kg	DSH 26 / DS 26 / DSH 34 / DS 34	from 2 kg up to 3,5 kg	<b>H-6008004</b>
HBA-5---8,5-kg	DSH 44 / DS 44	from 5 kg up to 8,5 kg	<b>H-6008009</b>

When choosing a balancer, take into account the tool weight and the weight of the horizontal arm.

Step  
3

## Handle

Type		Article number
HG	Standard handle	<b>H-6007805</b>
HG-S	Handle with start button (double)	<b>H-6007810</b>
HG-S-PG	Handle with start button (double) and program switchover	<b>H-6007815</b>

Ergonomically formed handles for the precision guidance of the nutrunner. Versatile mounting possibilities via handle adapter. Execution with start button for the direct forwarding of the start signal to the control system. Handle version with turn-switch for switching between the pre-selected program and an alternative program.

Handle adapter  
for version HST 40

Type		Article number
HG-A-H40	Handle adapter kit HST 40	<b>H-6007886</b>

Standard adapter for the vertical and horizontal assembly of the handle (HG, HG-S, HG-S-PG). The installation can be made on the right side as well as on the left side of the tool holder.

Choose the cable depending on the use of the handle.

If you are using a nutrunner of the DS 34 or DS 44 series the connection to the DSM control unit occurs via the bus line of the DS nutrunner – the handle cable is plugged into the SB socket at the nutrunner. The cable is available in two different lengths suitable for the respective assembly situation.

Alternatively, the handle can be connected directly with the control system or with a higher-level control system.

Corresponding cables for this can be found in the table below.

Handle cables  
for version HST 40

Type	Connection		Cable length	Article number
HG-K-DS34-44-160	from HG-S to DS 34 / DS 44		160 mm	<b>H-6007940</b>
HG-K-DS34-44-300	from HG-S to DS 34 / DS 44		300 mm	<b>H-6007941</b>
HG-K-24V-4.XX	from HG-S to Basic / Classic / Pro		5 m	<b>H-6007905</b>
HG-K-24V-5.XX	from HG-S to Pro 3G		5 m	<b>H-6007910</b>
HG-K-24-oK	from HG-S to ...	open cable ends	5 m	<b>H-6007915</b>
HGPG-K-DS34-44-160	from HG-S-PG to DS 34 / DS 44		160 mm	<b>H-6007744</b>
HGPG-K-DS34-44-300	from HG-S-PG to DS 34 / DS 44		300 mm	<b>H-6007745</b>
HGPG-K-24-oK	from HG-S-PG to ...	open cable ends	2 m	<b>H-6007720</b>



Step  
4**Tool holder  
for version HST 40**

Type	Tool holder for	Article number
HWA-40-DS26	DS 26 nutrunner	<b>H-6008426</b>
HWA-40-DSH26	DSH 26 hand-held nutrunner	<b>H-6008427</b>
HWA-40-DS34/DS44	DS 34 / DS 44 nutrunner	<b>H-6008434</b>
HWA-40-DSH34	DSH 34 hand-held nutrunner	<b>H-6008234</b>
HWA-40-DSH44	DSH 44 hand-held nutrunner	<b>H-6008244</b>
HWA-40-Uni-36-42	36 - 42 mm clamping diameter, universal tool fitting	<b>H-6008405</b>

Customer-specific adaptations for non-DSM products are available upon request.

Step  
5**Handling stands HST 40  
Optional accessories**

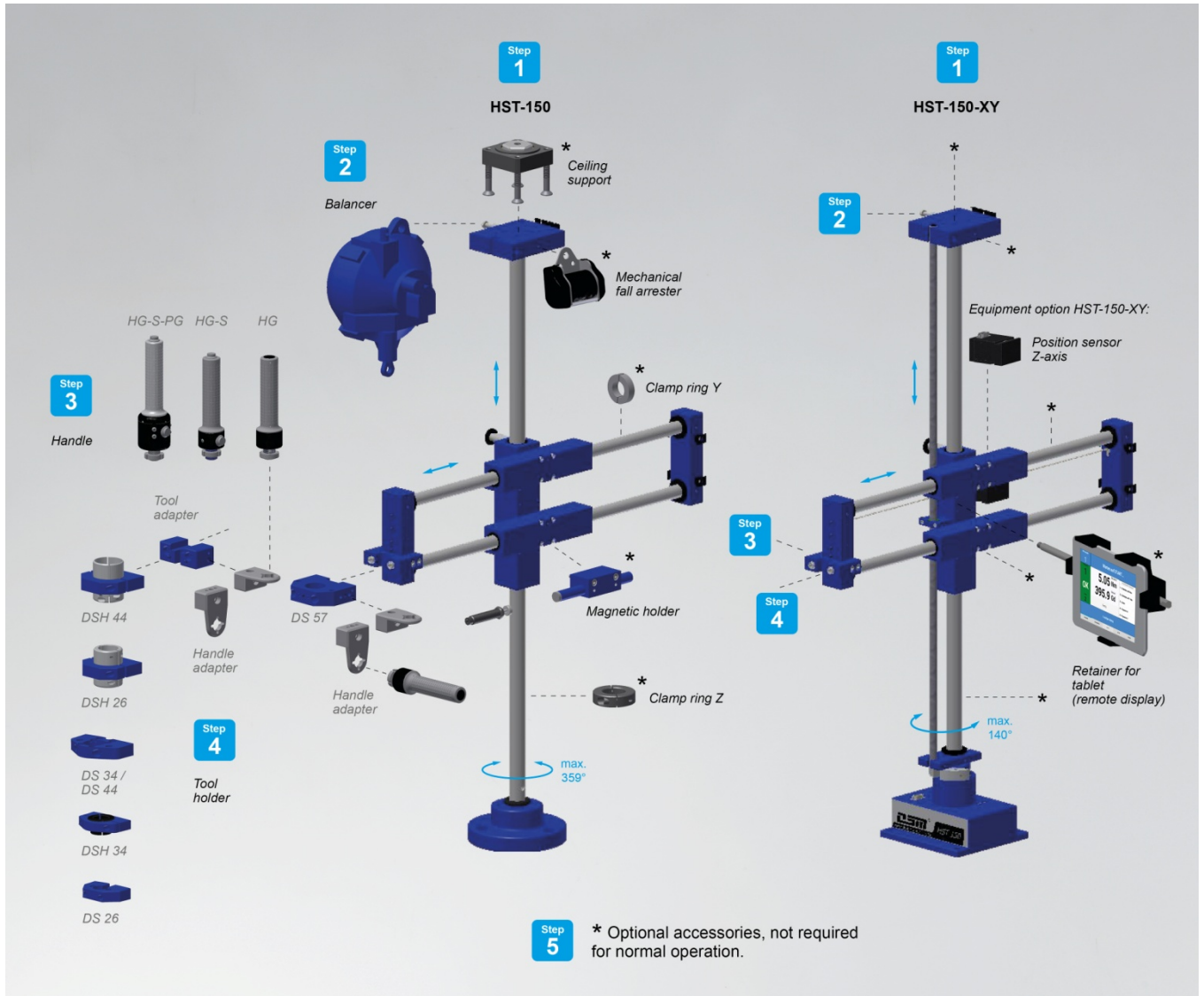
Type		Article number
HST-40-MH	Magnetic holder Magnetically holding device for the Y-axis to fix the nutrunner / tool in park position	<b>H-6006405</b>
HST-40-DA	Ceiling support Additional fixing of the handling stand via a pivoted support designed to improve the load carrying capacity	<b>H-6006410</b>
HST-40-KL-Y	Clamp ring for Y-axis Variable positionable limiter of the horizontal stroke for the fast reaching of the tool position	<b>H-6006420</b>
HST-40-KL-Z-150-KL-Y	Clamp ring for Z-axis Variable positionable limiter of the vertical stroke for the fast reaching of the tool position	<b>H-6006430</b>
HST-40-SWA*	Stops for swivel angle limitation (rotation axis) Two circle segments with rubber stops for the limitation of the swivel angle adjustable in steps of 30 degrees (min. 20° / max. 130°)	<b>H-6006440</b>
HST-FA	Retainer for tablet (remote display) Adjustable retainer for the remote display HMI 7" incl. assembly kit; Remote display only in conjunction with MultiPro 3G (BT module) usable	<b>H-6006005</b>

Accessories for individual adaptation of the handling stand for your application. Optional accessories are not required for normal operation.

\* Standard on execution HST-40-XY.

[> to the technical drawings \(page 62, 63\)](#)

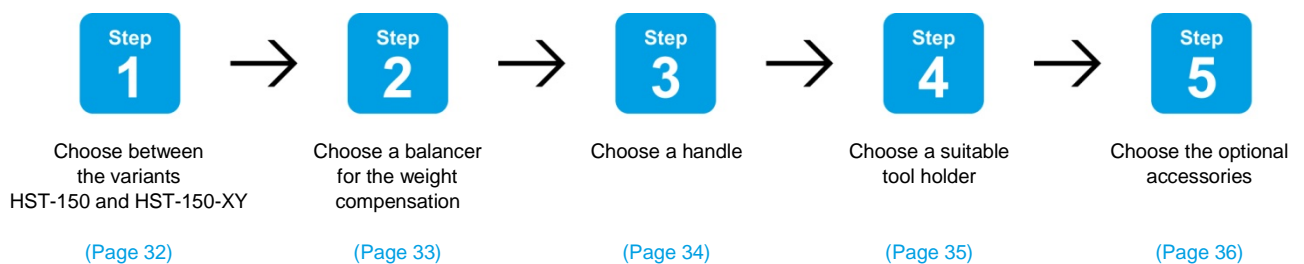




## Handling stand HST 150

Precise, reaction-free and extremely light handling in the entire workspace. Absorption of all reaction forces and compensation of **torques up to 150 Nm**. Optimal smooth-running weight compensation with a maximum **tool weight of 15 kg**. Extensive range of equipment options for the models **HST-150** (without sensor) and **HST-150-XY** (with integrated position monitoring) available.

Use the following steps for the compilation of your handling stand to select the optimum components from the series HST 150 for you application.



Step 1 Handling stand Version HST 150			
Type		HST-150	HST-150-XY
Absolute position sensor technology XY		--	✓
Positioning controller integrated in the pedestal		--	✓
Vertical stroke (Z)	[mm]	720	720
Horizontal stroke (Y)	[mm]	450	450
Swivel angle	[°] max.	359	140
Reaction torque	[Nm] up to max.	150	150
Tool weight	[kg] max.	15	15
Height of vertical stand	[mm]	1150	1200
Length of horizontal arm (without tool holder)	[mm]	800	800
Weight horizontal arm	[kg]	14	14
Weight handling stand	[kg]	35	35
<b>Article number</b>		<b>H-6002150</b>	<b>H-6002155</b>

### HST-150 | HST-150-XY – Robust designed handling stand

Pedestal with mounting holes, vertical stand with precision shaft, horizontal arm with precision double shaft as well as guides with smooth-running industrial bearings. Construction to accommodate torsion forces with fixing points for balancer and cable, prepared for the mounting of tool holder and handle.

### HST-150-XY – Position monitoring of assembly tool

Fixed sequences have to be observed by a lot of applications of the hand-guided and the semi-automated assembly. Equipped with an XY sensor system (Z sensor optional) and with an position controller integrated in the pedestal, the HST-150-XY extends the functionality of your tightening system. The position electronic monitors in conjunction with a higher-level control system that the required sequence is observed. No screw will be forgotten – even complex tightening sequences can be specified and monitored. Or you select the corresponding sequence program on your DSM tightening control system via the screw position.

Other features:

- Absolute XY position measurement – in the rotation axis and in the horizontal arm
- Position input via teach-in, storage up to 200 positions
- Position monitoring
- Reporting of the stored positions "Pos reached"
- Direct output mode as "XY position"
- DSM software for programming and configuration of the positioning controller
- USB interface for connection with the DSM application software, incl. USB cable
- System bus interface for communication with the DSM tightening control system, power supply via control system or AC adapter
- TCP/IP interface for communication with the DSM application software
- Optional Profibus interface or Profinet interface for connection to a higher-level control system

### Handling stand HST-150-XY Equipment option

Type		Article number
HST-150-300-600-Zsens	Position sensor Z-axis, incl. Y connection cable	<b>H-6006014</b>

## Positioning controller Equipment options

Type	Article number
Evaluation unit with Profibus interface and TCP/IP interface	<b>H-6009500</b>
Evaluation unit with Profinet interface and TCP/IP interface	<b>H-6009600</b>
BT module for the execution Profinet, enables the communication with Bluetooth® devices	Available soon
AC adapter (plug-in power supply)* AC 230 V / 50 Hz   DC 24 V / 1 A	<b>DSM-600611</b>

\* For the use without DSM control system.

## System bus Accessories

Type	Article number
System bus cable 2 m	<b>MS-1003002</b>
System bus cable 5 m	<b>MS-1003005</b>
System bus terminating resistor	<b>MS-1003030</b>
T-piece for system bus connection	<b>DSM-200722</b>

Step  
**2**

## Handling balancer for version HST 150

Type	Ideal for DSM nutrunner	Weight counterbalance, load capacity adjustable	Article number
HBA-15---22-kg	DSH 34 / DS 34 / DSH 44 / DS 44	from 15 kg up to 22 kg	<b>H-6008022</b>
HBA-22---30-kg	DS 57	from 22 kg up to 30 kg	<b>H-6008030</b>

When choosing a balancer, take into account the tool weight and the weight of the horizontal arm.

Step  
3

## Handle

Type		Article number
HG	Standard handle	<b>H-6007805</b>
HG-S	Handle with start button (double)	<b>H-6007810</b>
HG-S-PG	Handle with start button (double) and program switchover	<b>H-6007815</b>

Ergonomically formed handles for the precision guidance of the nutrunner. Versatile mounting possibilities via handle adapter. Execution with start button for the direct forwarding of the start signal to the control system. Handle version with turn-switch for switching between the pre-selected program and an alternative program.

Handle adapter  
for version HST 150

Type		Article number
HG-A-H150-300-600	Handle adapter kit HST 150 / HST 300 / HST 600	<b>H-6007885</b>

Standard adapter for the vertical and horizontal assembly of the handle (HG, HG-S, HG-S-PG). The installation can be made on the right and the left side as well as on the front of the tool holder.

Choose the cable depending on the use of the handle.

If you are using a nutrunner of the DS 34, DS 44 or DS 57 series the connection to the DSM control unit occurs via the bus line of the DS nutrunner – the handle cable is plugged into the SB socket at the nutrunner. The cable is available in two different lengths suitable for the respective assembly situation.

Alternatively, the handle can be connected directly with the control system or with a higher-level control system.

Corresponding cables for this can be found in the table below.

Handle cables  
for version HST 150

Type	Connection		Cable length	Article number
HG-K-DS34-44-160	from HG-S to DS 34 / DS 44		160 mm	<b>H-6007940</b>
HG-K-DS34-44-300	from HG-S to DS 34 / DS 44		300 mm	<b>H-6007941</b>
HG-K-DS57-80-160	from HG-S to DS 57 / DS 80		160 mm	<b>H-6007958</b>
HG-K-DS57-80-300	from HG-S to DS 57 / DS 80		300 mm	<b>H-6007959</b>
HG-K-DS57-80-500	from HG-S to DS 57 / DS 80		500 mm	<b>H-6007960</b>
HG-K-24V-4.XX	from HG-S to Basic / Classic / Pro		5 m	<b>H-6007905</b>
HG-K-24V-5.XX	from HG-S to Pro 3G		5 m	<b>H-6007910</b>
HG-K-24-oK	from HG-S to ...	open cable ends	5 m	<b>H-6007915</b>
HGPG-K-DS34-44-160	from HG-S-PG to DS 34 / DS 44		160 mm	<b>H-6007744</b>
HGPG-K-DS34-44-300	from HG-S-PG to DS 34 / DS 44		300 mm	<b>H-6007745</b>
HGPG-K-24-oK	from HG-S-PG to ...	open cable ends	2 m	<b>H-6007720</b>
HGPG-K-DS57-80-160	from HG-S-PG to DS 57 / DS 80		160 mm	<b>H-6007755</b>
HGPG-K-DS57-80-300	from HG-S-PG to DS 57 / DS 80		300 mm	<b>H-6007756</b>
HGPG-K-DS57-80-500	from HG-S-PG to DS 57 / DS 80		500 mm	<b>H-6007757</b>

Step  
4**Tool holder  
for version HST 150**

Type	Tool holder for	Article number
HWA-150-DS57	DS 57 nutrunner	<b>H-6008157</b>

**Tool holder adapter  
for version HST 150**

Type	Article number
HWA-150-AD	Tool holder adapter HST 40 onto HST 150 <b>H-6008415</b>

**Tool holder  
for version HST 40 (usable with adapter HWA-150-AD)**

Type	Tool holder for	Article number
HWA-40-DS34/DS44	DS 34 / DS 44 nutrunner	<b>H-6008434</b>
HWA-40-DSH34	DSH 34 nutrunner	<b>H-6008234</b>
HWA-40-DSH44	DSH 44 nutrunner	<b>H-6008244</b>

Customer-specific adaptations for non-DSM products are available upon request.

Step  
**5****Handling stand HST 150**  
Optional accessories

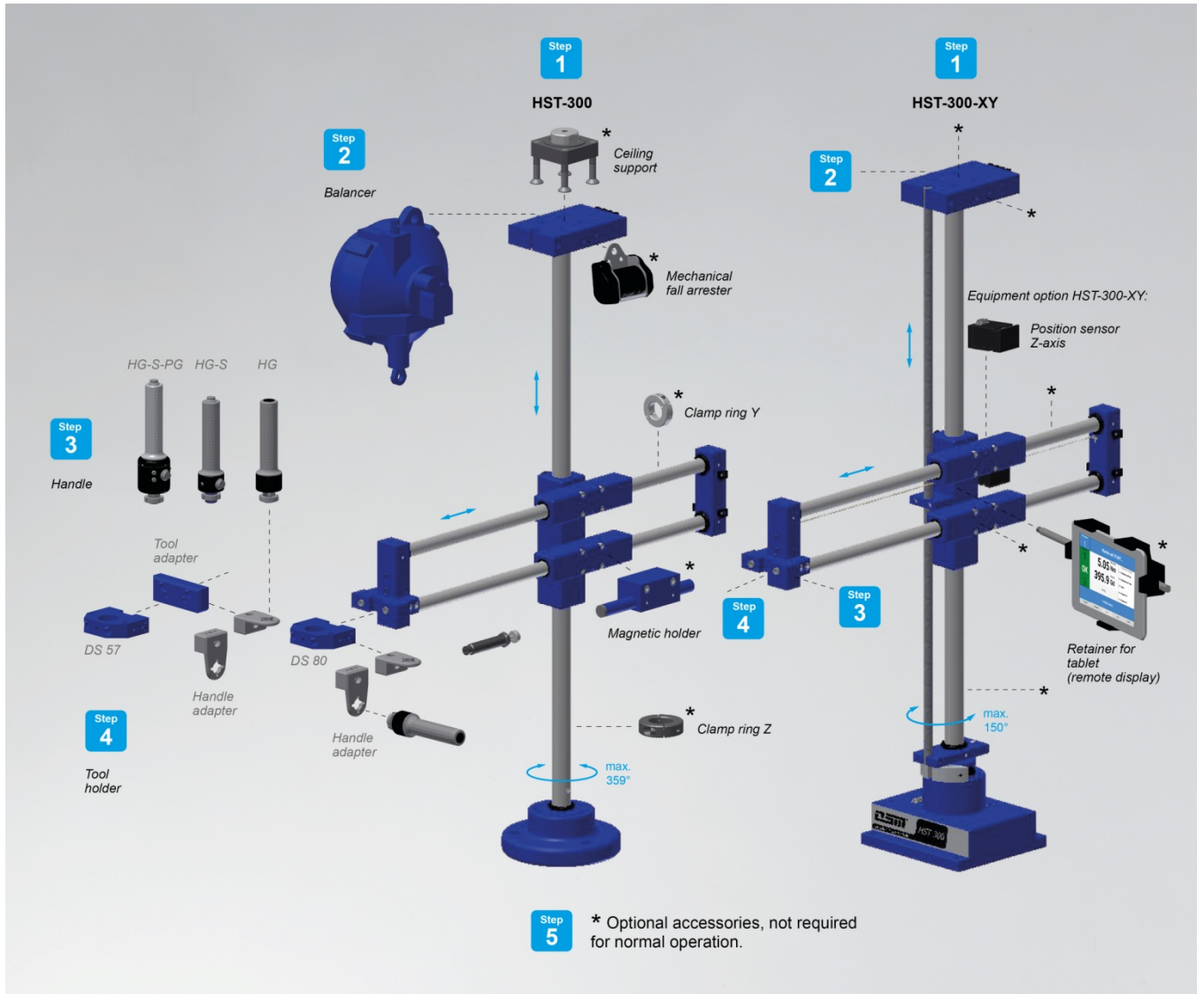
Type		Article number
HST-150-MH	Magnetic holder Magnetically holding device for the Y-axis to fix the nutrunner / tool in park position	<b>H-6006155</b>
HST-150-DA	Ceiling support Additional fixing of the handling stand via a pivoted support designed to improve the load carrying capacity	<b>H-6006105</b>
HST-40-KL-Z-150-KL-Y	Clamp ring for Y-axis Variable positionable limiter of the horizontal stroke for the fast reaching of the tool position	<b>H-6006430</b>
HST-150-KL-Z-300-KL-Y	Clamp ring for Z-axis Variable positionable limiter of the vertical stroke for the fast reaching of the tool position	<b>H-6006330</b>
HST-150-300-FS	Mechanical fall arrester Fall protection for the horizontal arm to avoid damages in a case of defective of the weight counterbalance system	<b>H-6006315</b>
HST-150-SWA*	Stops for swivel angle limitation (rotation axis) Two circle segments with rubber stops for the limitation of the swivel angle adjustable in steps of 30 degrees (min. 20° / max. 140°)	<b>H-6006415</b>
HST-FA	Retainer for tablet (remote display) Adjustable retainer for the remote display HMI 7" incl. assembly kit; Remote display only in conjunction with MultiPro 3G (BT module) usable	<b>H-6006005</b>

Accessories for individual adaptation of the handling stand for your application. Optional accessories are not required for normal operation.

\* Standard on execution HST-150-XY.

[> to the technical drawings \(page 64, 65\)](#)

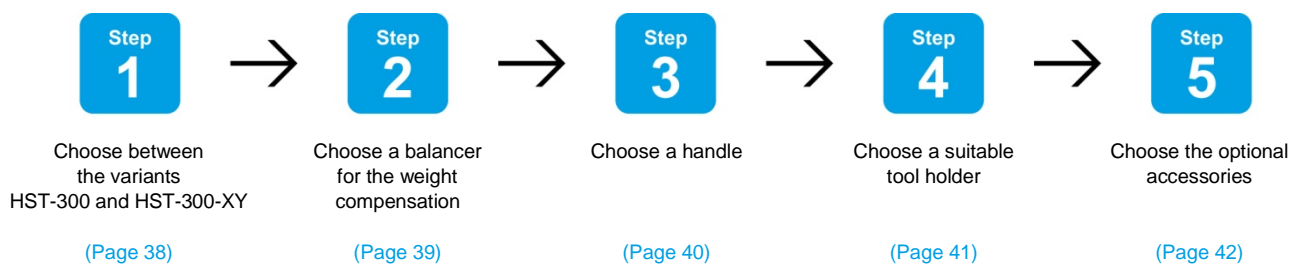




## Handling stand HST 300

Precise, reaction-free and extremely light handling in the entire workspace. Absorption of all reaction forces and compensation of **torques up to 300 Nm**. Optimal smooth-running weight compensation with a maximum **tool weight of 30 kg**. Extensive range of equipment options for the models **HST-300** (without sensor) and **HST-300-XY** (with integrated position monitoring) available.

Use the following steps for the compilation of your handling stand to select the optimum components from the series HST 300 for you application.



Step 1 Handling stand Version HST 300			
Type		HST-300	HST-300-XY
Absolute position sensor technology XY		--	✓
Positioning controller integrated in the pedestal		--	✓
Vertical stroke (Z)	[mm]	850	850
Horizontal stroke (Y)	[mm]	600	600
Swivel angle	[°] max.	359	150
Reaction torque	[Nm] up to max.	300	300
Tool weight	[kg] max.	30	30
Height of vertical stand	[mm]	1320	1390
Length of horizontal arm (without tool holder)	[mm]	980	980
Weight horizontal arm	[kg]	21	21
Weight handling stand	[kg]	60	60
<b>Article number</b>		<b>H-6002157</b>	<b>H-6002156</b>

### HST-300 | HST-300-XY – Robust designed handling stand

Pedestal with mounting holes, vertical stand with precision shaft, horizontal arm with precision double shaft as well as guides with smooth-running industrial bearings. Construction to accommodate torsion forces with fixing points for balancer and cable, prepared for the mounting of tool holder and handle.

### HST-300-XY – Position monitoring of assembly tool

Fixed sequences have to be observed by a lot of applications of the hand-guided and the semi-automated assembly. Equipped with an XY sensor system (Z sensor optional) and with an position controller integrated in the pedestal, the HST-300-XY extends the functionality of your tightening system. The position electronic monitors in conjunction with a higher-level control system that the required sequence is observed. No screw will be forgotten – even complex tightening sequences can be specified and monitored. Or you select the corresponding sequence program on your DSM tightening control system via the screw position.

Other features:

- Absolute XY position measurement – in the rotation axis and in the horizontal arm
- Position input via teach-in, storage up to 200 positions
- Position monitoring
- Reporting of the stored positions "Pos reached"
- Direct output mode as "XY position"
- DSM software for programming and configuration of the positioning controller
- USB interface for connection with the DSM application software, incl. USB cable
- System bus interface for communication with the DSM tightening control system, power supply via control system or AC adapter
- TCP/IP interface for communication with the DSM application software
- Optional Profibus interface or Profinet interface for connection to a higher-level control system

### Handling stand HST-300-XY Equipment option

Type		Article number
HST-150-300-600-Zsens	Position sensor Z-axis, incl. Y connection cable	<b>H-6006014</b>

## Positioning controller Equipment options

Type	Article number
Evaluation unit with Profibus interface and TCP/IP interface	<b>H-6009500</b>
Evaluation unit with Profinet interface and TCP/IP interface	<b>H-6009600</b>
BT module for the execution Profinet, enables the communication with Bluetooth® devices	Available soon
AC adapter (plug-in power supply)* AC 230 V / 50 Hz   DC 24 V / 1 A	<b>DSM-600611</b>

\* For the use without DSM control system.

## System bus Accessories

Type	Article number
System bus cable 2 m	<b>MS-1003002</b>
System bus cable 5 m	<b>MS-1003005</b>
System bus terminating resistor	<b>MS-1003030</b>
T-piece for system bus connection	<b>DSM-200722</b>

Step  
**2**

## Handling balancer for version HST 300

Type	Ideal for DSM nutrunner	Weight counterbalance, load capacity adjustable	Article number
HBA-30---40-kg	DS 57 / DS 80	from 30 kg up to 40 kg	<b>H-6008040</b>

When choosing a balancer, take into account the tool weight and the weight of the horizontal arm.

Step  
3

## Handle

Type		Article number
HG	Standard handle	<b>H-6007805</b>
HG-S	Handle with start button (double)	<b>H-6007810</b>
HG-S-PG	Handle with start button (double) and program switchover	<b>H-6007815</b>

Ergonomically formed handles for the precision guidance of the nutrunner. Versatile mounting possibilities via handle adapter. Execution with start button for the direct forwarding of the start signal to the control system. Handle version with turn-switch for switching between the pre-selected program and an alternative program.

Handle adapter  
for version HST 300

Type		Article number
HG-A-H150-300-600	Handle adapter kit HST 150 / HST 300 / HST 600	<b>H-6007885</b>

Standard adapter for the vertical and horizontal assembly of the handle (HG, HG-S, HG-S-PG). The installation can be made on the right and the left side as well as on the front of the tool holder.

Choose the cable depending on the use of the handle.

If you are using a nutrunner of the DS 57 or DS 80 series the connection to the DSM control unit occurs via the bus line of the DS nutrunner – the handle cable is plugged into the SB socket at the nutrunner. The cable is available in two different lengths suitable for the respective assembly situation.

Alternatively, the handle can be connected directly with the control system or with a higher-level control system.

Corresponding cables for this can be found in the table below.

Handle cables  
for version HST 300

Type	Connection		Cable length	Article number
HG-K-DS57-80-160	from HG-S to DS 57 / DS 80		160 mm	<b>H-6007958</b>
HG-K-DS57-80-300	from HG-S to DS 57 / DS 80		300 mm	<b>H-6007959</b>
HG-K-DS57-80-500	from HG-S to DS 57 / DS 80		500 mm	<b>H-6007960</b>
HG-K-24V-4.XX	from HG-S to Basic / Classic / Pro		5 m	<b>H-6007905</b>
HG-K-24V-5.XX	from HG-S to Pro 3G		5 m	<b>H-6007910</b>
HG-K-24-oK	from HG-S to ...	open cable ends	5 m	<b>H-6007915</b>
HGPG-K-24-oK	from HG-S-PG to ...	open cable ends	2 m	<b>H-6007720</b>
HGPG-K-DS57-80-160	from HG-S-PG to DS 57 / DS 80		160 mm	<b>H-6007755</b>
HGPG-K-DS57-80-300	from HG-S-PG to DS 57 / DS 80		300 mm	<b>H-6007756</b>
HGPG-K-DS57-80-500	from HG-S-PG to DS 57 / DS 80		500 mm	<b>H-6007757</b>

Step  
**4****Tool holder  
for version HST 300**

Type	Tool holder for	Article number
HWA-300-DS80	DS 80 nutrunner	<b>H-6008380</b>

**Tool holder adapter  
for version HST 300**

Type	Article number
HWA-300-AD	Tool holder adapter HST 150 onto HST 300 <b>H-6008153</b>

**Tool holder  
for version HST 150 (usable with adapter HWA-300-AD)**

Type	Tool holder for	Article number
HWA-150-DS57	DS 57 nutrunner	<b>H-6008157</b>

Customer-specific adaptations for non-DSM products are available upon request.

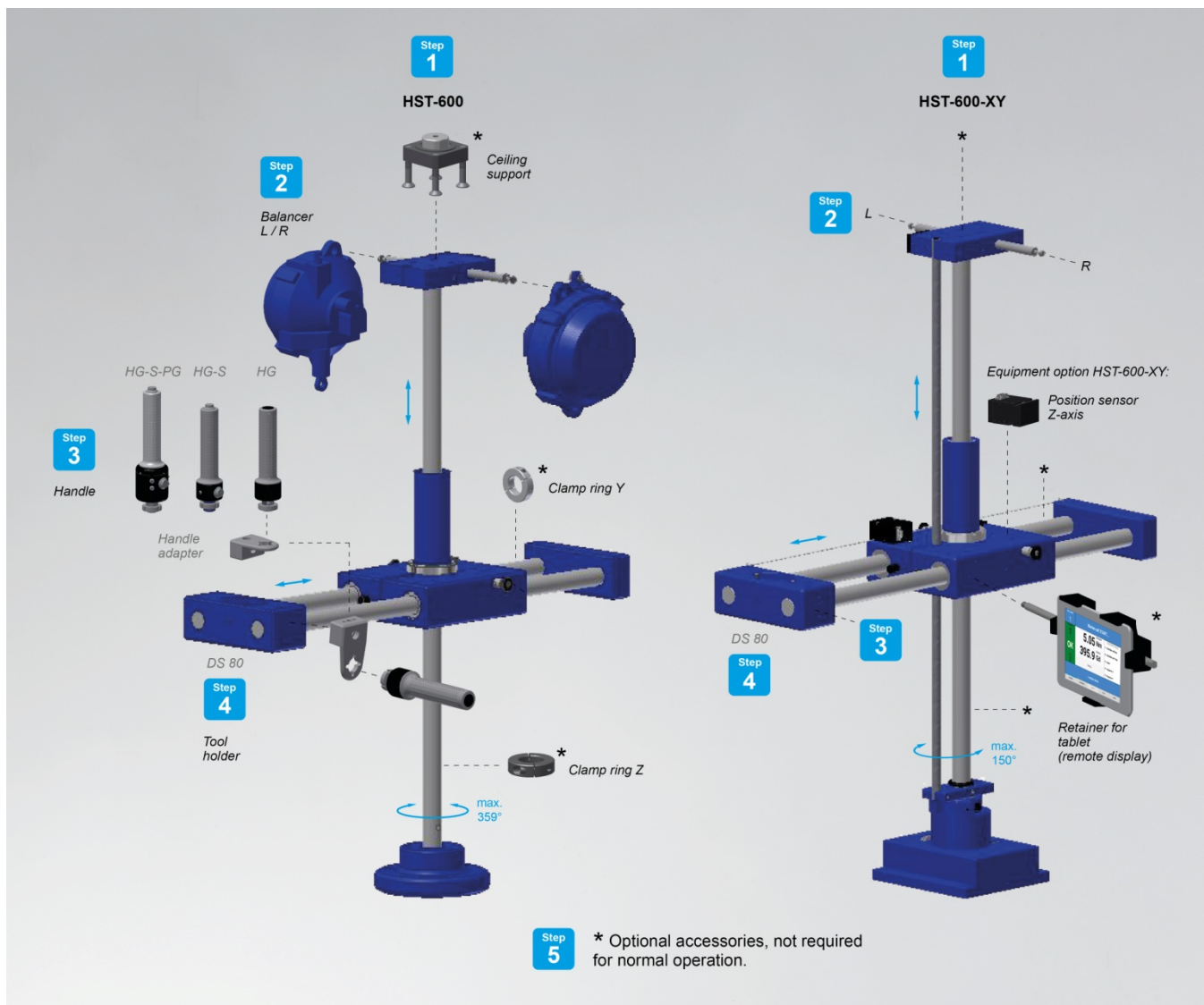
Step  
5Handling stand HST 300  
Optional accessories

Type		Article number
HST-300-MH	Magnetic holder Magnetically holding device for the Y-axis to fix the nutrunner / tool in park position	<b>H-6006305</b>
HST-300-600-DA	Ceiling support Additional fixing of the handling stand via a pivoted support designed to improve the load carrying capacity	<b>H-6006310</b>
HST-150-KL-Z-300-KL-Y	Clamp ring for Y-axis Variable positionable limiter of the horizontal stroke for the fast reaching of the tool position	<b>H-6006330</b>
HST-300-KL-Z-600-KL-YZ	Clamp ring for Z-axis Variable positionable limiter of the vertical stroke for the fast reaching of the tool position	<b>H-6006340</b>
HST-150-300-FS	Mechanical fall arrester Fall protection for the horizontal arm to avoid damages in a case of defective of the weight counterbalance system	<b>H-6006315</b>
HST-300-600-SWA*	Stops for swivel angle limitation (rotation axis) Two circle segments with rubber stops for the limitation of the swivel angle adjustable in steps of 30 degrees (min. 20° / max. 150°)	<b>H-6006320</b>
HST-FA	Retainer for tablet (remote display) Adjustable retainer for the remote display HMI 7" incl. assembly kit; Remote display only in conjunction with MultiPro 3G (BT module) usable	<b>H-6006005</b>

Accessories for individual adaptation of the handling stand for your application. Optional accessories are not required for normal operation.

\* Standard on execution HST-300-XY.

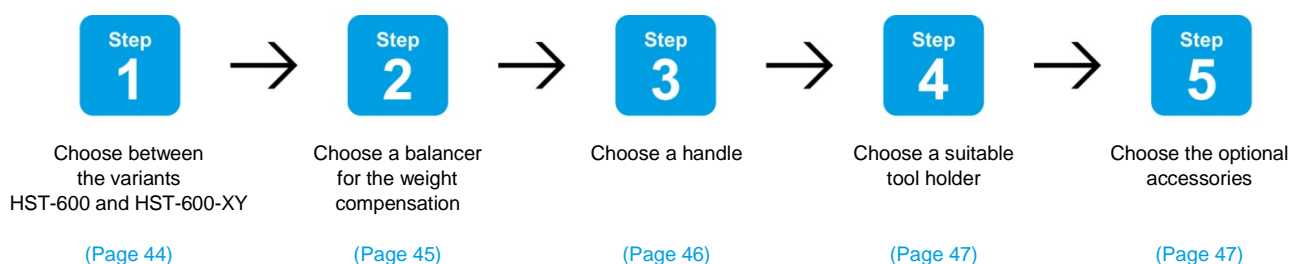
[> to the technical drawings \(page 66, 67\)](#)



## Handling stand HST 600

Precise, reaction-free and extremely light handling in the entire workspace. Absorption of all reaction forces and compensation of **torques up to 600 Nm**. Optimal smooth-running weight compensation with a maximum **tool weight of 40 kg**. Extensive range of equipment options for the models **HST-600** (without sensor) and **HST-600-XY** (with integrated position monitoring) available.

Use the following steps for the compilation of your handling stand to select the optimum components from the series HST 600 for you application.



Step 1 Handling stand Version HST 600			
Type		HST-600	HST-600-XY
Absolute position sensor technology XY		--	✓
Positioning controller integrated in the pedestal		--	✓
Vertical stroke (Z)	[mm]	750	750
Horizontal stroke (Y)	[mm]	550	550
Swivel angle	[°] max.	359	150
Reaction torque	[Nm] up to max.	600	600
Tool weight	[kg] max.	40	40
Height of vertical stand	[mm]	1320	1390
Length of horizontal arm	[mm]	1050	1050
Weight horizontal arm	[kg]	45	45
Weight handling stand	[kg]	90	90
<b>Article number</b>		<b>H-6002600</b>	<b>H-6002605</b>

### HST-600 | HST-600-XY – Robust designed handling stand

Pedestal with mounting holes, vertical stand with precision shaft, horizontal arm with precision double shaft as well as guides with smooth-running industrial bearings. Construction to accommodate torsion forces with fixing points for balancer and cable, prepared for the mounting of tool holder and optional accessories.

### HST-600-XY – Position monitoring of assembly tool

Fixed sequences have to be observed by a lot of applications of the hand-guided and the semi-automated assembly. Equipped with an XY sensor system (Z sensor optional) and with an position controller integrated in the pedestal, the HST-600-XY extends the functionality of your tightening system. The position electronic monitors in conjunction with a higher-level control system that the required sequence is observed. No screw will be forgotten – even complex tightening sequences can be specified and monitored. Or you select the corresponding sequence program on your DSM tightening control system via the screw position.

Other features:

- Absolute XY position measurement – in the rotation axis and in the horizontal arm
- Position input via teach-in, storage up to 200 positions
- Position monitoring
- Reporting of the stored positions "Pos reached"
- Direct output mode as "XY position"
- DSM software for programming and configuration of the positioning controller
- USB interface for connection with the DSM application software, incl. USB cable
- System bus interface for communication with the DSM tightening control system, power supply via control system or AC adapter
- TCP/IP interface for communication with the DSM application software
- Optional Profibus interface or Profinet interface for connection to a higher-level control system

### Handling stand HST-600-XY Equipment option

Type		Article number
HST-150-300-600-Zsens	Position sensor Z-axis, incl. Y connection cable	H-6006014



### Positioning controller Equipment options

Type	Article number
Evaluation unit with Profibus interface and TCP/IP interface	<b>H-6009500</b>
Evaluation unit with Profinet interface and TCP/IP interface	<b>H-6009600</b>
BT module for the execution Profinet, enables the communication with Bluetooth® devices	Available soon
AC adapter (plug-in power supply)* AC 230 V / 50 Hz   DC 24 V / 1 A	<b>DSM-600611</b>

\* For the use without DSM control system.

### System bus Accessories

Type	Article number
System bus cable 2 m	<b>MS-1003002</b>
System bus cable 5 m	<b>MS-1003005</b>
System bus terminating resistor	<b>MS-1003030</b>
T-piece for system bus connection	<b>DSM-200722</b>

Step  
**2**

### Handling balancer set for version HST 600

Type	Ideal for DSM nutrunner	Weight counterbalance, load capacity adjustable	Quantity	Article number
HBA-30---40-kg	DS 80	from 30 kg up to 40 kg	2	<b>H-6008050</b>

When choosing a balancer, take into account the tool weight and the weight of the horizontal arm.

Step  
3

## Handle

Type		Article number
HG	Standard handle	<b>H-6007805</b>
HG-S	Handle with start button (double)	<b>H-6007810</b>
HG-S-PG	Handle with start button (double) and program switchover	<b>H-6007815</b>

Ergonomically formed handles for the precision guidance of the nutrunner. Versatile mounting possibilities via handle adapter. Execution with start button for the direct forwarding of the start signal to the control system. Handle version with turn-switch for switching between the pre-selected program and an alternative program.

Handle adapter  
for version HST 600

Type		Article number
HG-A-H150-300-600	Handle adapter kit HST 150 / HST 300 / HST 600*	<b>H-6007885</b>
HG-A-H600-hor	Handle adapter kit HST 600**	<b>H-6007889</b>

\* Adapter for the vertical assembly / \*\* Adapter for the horizontal assembly of the handle (HG, HG-S, HG-S-PG).  
The installation can be made on the right side as well as on the left side of the tool holder.

Choose the cable depending on the use of the handle.

If you are using a nutrunner of the DS 80 series the connection to the DSM control unit occurs via the bus line of the DS nutrunner – the handle cable is plugged into the SB socket at the nutrunner. The cable is available in two different lengths suitable for the respective assembly situation.

Alternatively, the handle can be connected directly with the control system or with a higher-level control system. Corresponding cables for this can be found in the table below.

Handle cable  
for version HST 600

Type	Connection		Cable length	Article number
HG-K-DS57-80-160	from HG-S to DS 57 / DS 80		160 mm	<b>H-6007958</b>
HG-K-DS57-80-300	from HG-S to DS 57 / DS 80		300 mm	<b>H-6007959</b>
HG-K-DS57-80-500	from HG-S to DS 57 / DS 80		500 mm	<b>H-6007960</b>
HG-K-24V-4.XX	from HG-S to Basic / Classic / Pro		5 m	<b>H-6007905</b>
HG-K-24V-5.XX	from HG-S to Pro 3G		5 m	<b>H-6007910</b>
HG-K-24-oK	from HG-S to ...	open cable ends	5 m	<b>H-6007915</b>
HGPG-K-24-oK	from HG-S-PG to ...	open cable ends	2 m	<b>H-6007720</b>
HGPG-K-DS57-80-160	from HG-S-PG to DS 57 / DS 80		160 mm	<b>H-6007755</b>
HGPG-K-DS57-80-300	from HG-S-PG to DS 57 / DS 80		300 mm	<b>H-6007756</b>
HGPG-K-DS57-80-500	from HG-S-PG to DS 57 / DS 80		500 mm	<b>H-6007757</b>

Step  
4**Tool holder  
for version HST 600**

## Type

Tool holder for DS 80 nutrunner, permanently connected with HST 600

Customer-specific adaptations for non-DSM products are available upon request.

Step  
5**Handling stand HST 600  
Optional accessories**

Type		Article number
HST-600-MH	Magnetic holder Magnetically holding device for the Y-axis to fix the nutrunner / tool in park position	<b>H-6006605</b>
HST-300-600-DA	Ceiling support Additional fixing of the handling stand via a pivoted support designed to improve the load carrying capacity	<b>H-6006310</b>
HST-300-KL-Z-600-KL-YZ	Clamp ring for Y-axis Variable positionable limiter of the horizontal stroke for the fast reaching of the tool position	<b>H-6006340</b>
HST-300-KL-Z-600-KL-YZ	Clamp ring for Z-axis Variable positionable limiter of the vertical stroke for the fast reaching of the tool position	<b>H-6006340</b>
HST-300-600-SWA*	Stops for swivel angle limitation (rotation axis) Two circle segments with rubber stops for the limitation of the swivel angle adjustable in steps of 30 degrees (min. 20° / max. 150°)	<b>H-6006320</b>
HST-FA	Retainer for tablet (remote display) Adjustable retainer for the remote display HMI 7" incl. assembly kit; Remote display only in conjunction with MultiPro 3G (BT module) usable	<b>H-6006005</b>

Accessories for individual adaptation of the handling stand for your application. Optional accessories are not required for normal operation.

\* Standard on execution HST-600-XY.

[> to the technical drawings \(page 68, 69\)](#)



TO WORK MORE IMPROVED –  
HANDLING SYSTEMS FROM DSM.



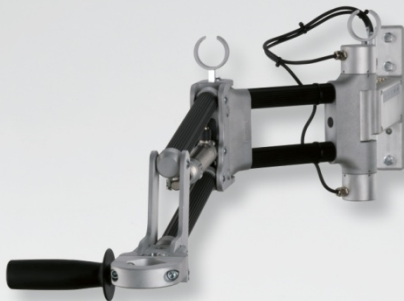
POSI 1 GG-40



POSI 1 GG-150



POSI 1 GG-300



POSI 2



PosiControl



PosiControl4

## HANDLING SYSTEMS POSI series

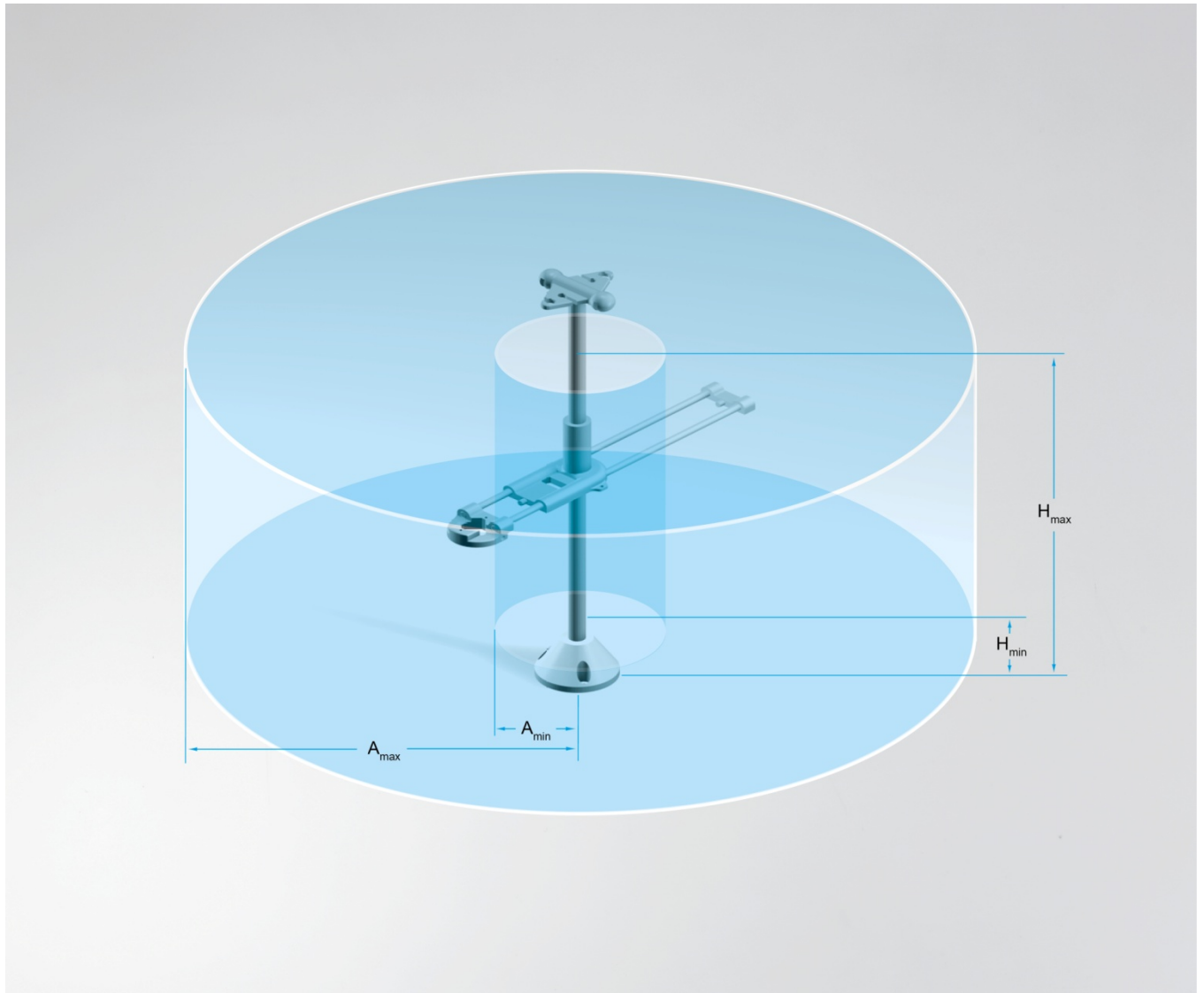
### Handling stand POSI 1

Pedestal out of aluminium die casting, rods out of stainless steel. Ears for the cable guide are integrated. Weight counterbalance via adjustable balancer. Universal tool holder with three threaded holes for assembly of handles. The fixing is made by the stand with three fixing holes or by the space to be clamped.

### Handling swivel arm POSI 2

As basis the POSI 2 has a mounting flange, parallel motions out of drawn aluminium, pneumatic cylinder for the weight counterbalance, guidances and mounting surfaces out of aluminium as well as articulated joints (ball bearing guided) out of stainless steel. The tool holder is exchangeable. The result out of the combination of stainless steel and aluminium is a robust and still very light construction.





## Handling stand POSI 1

Handling stand POSI 1					
Type			GG-40	GG-150	GG-300
Reaction torque	[Nm]	up to max.	40	150	300
Tool weight	[kg]	max.	3	8	18
Height of vertical stand ( $H_v$ )	[mm]		830	1020	1250
Length of horizontal arm (L)	[mm]		570	860	943
Tool diameter	[mm]		36–42	56–62	80–95
Working stroke (horizontal)	[mm]		300	500	500
Min. working height $H_{min}$	[mm]		110	165	180
Max. working height $H_{max}$	[mm]		520	450	515
Min. stroke $A_{min}$	[mm]		155	205	250
Max. stroke $A_{max}$	[mm]		455	705	750
Article number			DSM-600140	DSM-600139	DSM-600138



## POSI 1 balancer set



Type	Ideal for handling stand	Weight counterbalance kg	Quantity	Article number
BA2	GG-40	2 – 3,5	2	<b>DSM-600302</b>
BA3	GG-150	5 – 8,5	2	<b>DSM-600303</b>
BA4	GG-300	9 – 15	2	<b>DSM-600305</b>

## Complete control via XYZ

Fix sequences have to be observed by a lot of assembly works. The integration of the transmitter-sensoric XY and of the Z-axis-sensoric into the POSI 1 enables the control of the operational procedures. Every position in the operating distance of the torque reaction arm can be controlled (theoretical possible positioning resolution < 0,2 mm in a stiff system).

By mistake not handled assembly positions as well as from this resulting quality defects are therewith part of the past.

A retrofitting of the position monitoring is possible at any time. The sensorics are only for the determination of the positions.

Therefore e.g. a switch-off on depth with the Z-axis is not possible.

## POSI 1 encoder sensor system XY– incremental



Type	Components	Article number
For handling stand GG-40 and GG-150	Radial sensor 360°, horizontal sensor	<b>DSM-600120</b>
For handling stand GG-300	Radial sensor 360°, horizontal sensor	<b>DSM-600145</b>

## POSI 1 balancer with Z-axis sensor



Type	Ideal for handling stand	Weight counterbalance kg	Quantity	Article number
BA2 with Z-axis sensor	GG-40	2 – 3,5	1	<b>DSM-600321</b>
BA3 with Z-axis sensor	GG-150	5 – 8,5	1	<b>DSM-600322</b>
BA4 with Z-axis sensor	GG-300	9 – 15	1	<b>DSM-600324</b>

Repeat accuracy  $\pm 0,5\text{mm}$

Z-axis sensor only in conjunction with encoder sensor system and PosiControl usable.

**POSI 1 ergo handle  
for GG-40 / GG-150 / GG-300**


Type	Article number
Ergo handle	<b>DSM-600251</b>

**POSI 1 ergo handle with start button  
for GG-40 / GG-150 / GG-300**


Type	Article number
Ergo handle with start button	<b>DSM-480013</b>

**POSI 1 self-starter handle  
for GG-40 and nutrunner DS-44**


Type	Article number
Self-starter handle	<b>DSM-400214</b>

**POSI 1 half-shell pair for reduction  
of the tool fitting**


Type	Article number
For handling stand GG-40	<b>DSM-600159</b>
For handling stand GG-150	<b>DSM-600164</b>
For handling stand GG-300	<b>DSM-600170</b>

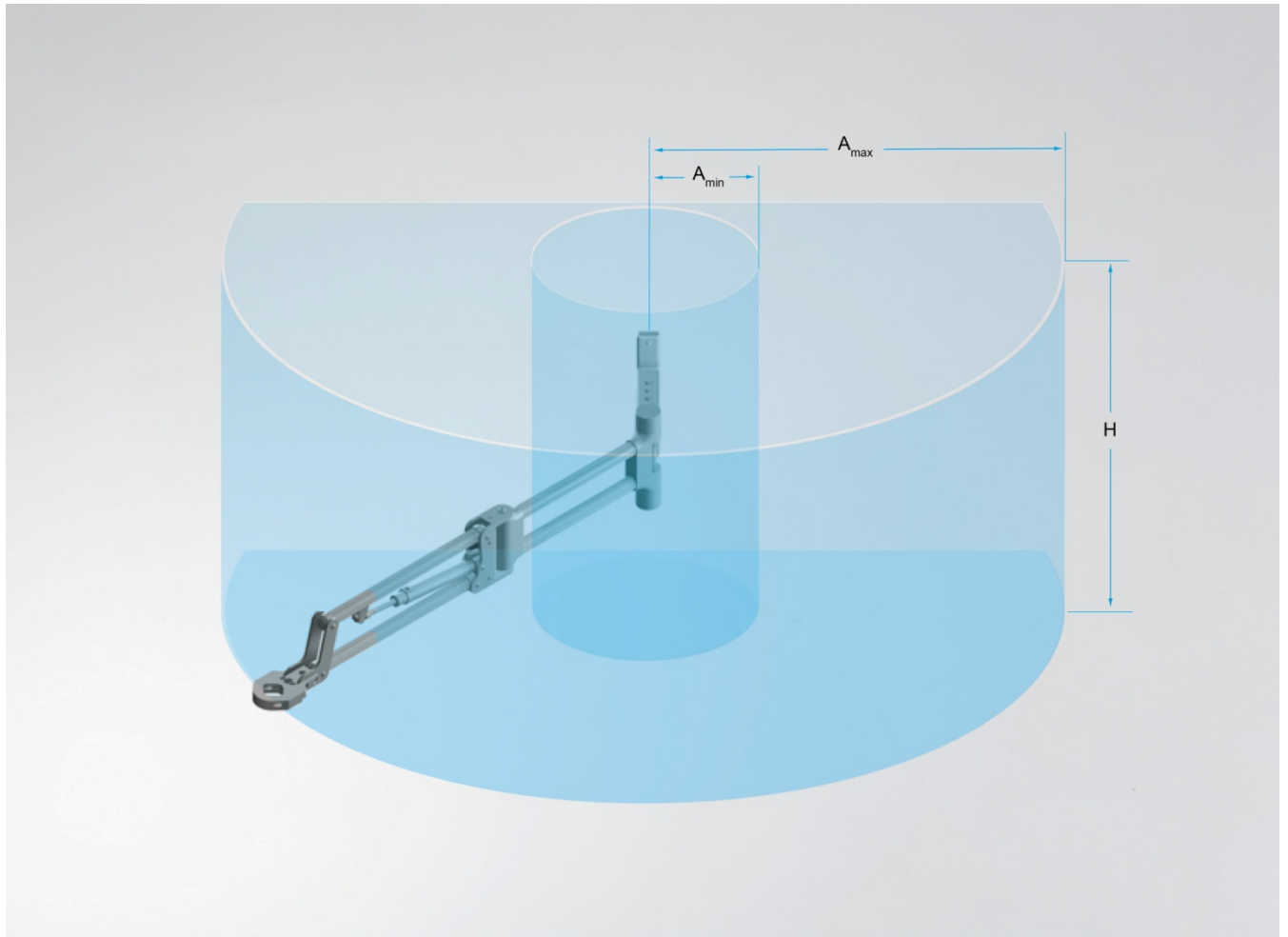
Diameter acc. to customers specification

**POSI 1 cable**

Type	Cable length	Article number
Cable for connection between sensor system XY and PosiControl	3 m	<b>DSM-600173</b>
Y cable for connection between sensor system XY, Z sensor and PosiControl	2 x 0,3 m	<b>DSM-600181</b>
Y cable from PosiControl to self-starter handle and tightening control system (Basic, Classic, Pro)	5 m	<b>DSM-600154</b>

[> to the technical drawings \(page 71\)](#)





## Handling swivel arm POSI 2

POSI 2 swivel arms are available with or without position monitoring. The monitoring of the working positions is made in the XY coordinates with absolute encoder (theoretical possible positioning resolution < 0,2 mm in a stiff system).

POSI 2 swivel arm – long execution				
Type			with position control XY	without position control
Reaction torque	[Nm]	max. up to	40	40
Tool weight	[kg]	max.	3,5	3,5
Min. stroke $A_{min}$	[mm]		555	555
Max. stroke $A_{max}$	[mm]		915	915
Stroke height, working area H	[mm]		530	530
<b>Article number</b>			<b>DSM-600601</b>	<b>DSM-600600</b>

POSI 2 swivel arm – short execution				
Type			with position control XY	without position control
Reaction torque	[Nm]	max. up to	40	40
Tool weight	[kg]	max.	3,5	3,5
Min. stroke $A_{min}$	[mm]		405	405
Max. stroke $A_{max}$	[mm]		610	610
Stroke height, working area H	[mm]		230	230
<b>Article number</b>			<b>DSM-600615</b>	<b>DSM-600614</b>

**POSI 2 tool holder**



Type	Article number
Universal tool holder for diameter from 36 up to 42 mm	<b>DSM-600660</b>
Tool holder for DS 34 / DS 44	<b>DSM-600662</b>
Tool holder for DS 57	<b>DSM-600665</b>

**POSI 2 ergo handle**



Type	Article number
Ergo handle with holding device	<b>DSM-600253</b>

**POSI 2 ergo handle with start button**



Type	Article number
Ergo handle with start button	<b>DSM-600257</b>

**POSI 2 double handle with start buttons**



Type	Article number
Double handle with start buttons	<b>DSM-600258</b>

**POSI 2 self-start handle for DS 44**



Type	Article number
Self-start handle for DS 44	<b>DSM-440210</b>

**POSI 2 cable**

Type	Cable length	Article number
Cable for connection between sensor system XY and PosiControl	3 m	<b>DSM-600650</b>
Cable for connection between sensor system XY and PosiControl4	3 m	<b>DSM-600658</b>

[> to the technical drawings \(page 74\)](#)





PosiControl

## PosiControl

The positioning control electronic PControl checks if a defined operation sequence is maintained and makes sure that no position will be forgotten. Because of its small size, the unit only requires less space. The handling is made menu and user guided.

The input of the positions is made very easy by Teach-In, i.e. it's driven to the required positions and stored via keystroke. Changes of the sequence of the order or of the flow are quickly possible at any time.

As standard the unit offers eight inputs and four outputs. Further inputs and outputs for arbitrary switching jobs can be set by corresponding IO-Extension modules, which are available as option.

### Features

- PVC desk housing, double insulated
- Keypad for data input
- Graphics display illuminated
- Permanent status report in clear text
- 8 inputs, 4 outputs (upgradeable via IO-Extension)
- In-/output pre-allocation, predefined seizures of the in- and outputs; several choices
- Manual in-/output pre-allocation, all available in-/outputs can be specified by an in-/output chart
- Programming wizard
- Storage of up to 31 programs (work pieces)
- Context-sensitive programming
- Input of positions via Teach-In during the programming
- Storage of up to 200 positions
- RS232 interface
- Print function, output of all entered data
- System bus interface for communication with the control unit (Basic, Classic, Pro) and for connection of the IO-Extension

## PosiControl



Type	Article number
PosiControl control unit	<b>DSM-600610</b>
DSM USB module RS232   USB	<b>DSM-210100</b>

## Universal bracket for assembly to wall or table



Type	Article number
Universal bracket	<b>DSM-600612</b>

AC adapter (plug-in power supply)  
AC 230 V / 50 Hz | DC 24 V / 1 A

Type	Article number
AC adapter	<b>DSM-600611</b>

A plug-in power supply isn't needed by connection to a control system (Basic, Classic, Pro).

System bus  
Accessories

Type	Article number
System bus cable 1 m	<b>MS-1003001</b>
System bus cable 2 m	<b>MS-1003002</b>
System bus cable 5 m	<b>MS-1003005</b>
System bus terminating resistor	<b>MS-1003030</b>
T-piece for system bus connection	<b>DSM-200722</b>
Y-piece for system bus connection	<b>DSM-200724</b>

IO-Extension  
System bus unit for additional inputs and outputs

Type	Inputs / outputs	Article number
IO-Extension 4/4S with terminal block	4IN, 4OUT	<b>MS-1003044</b>
IO-Extension 4/4C with M8 circular plug-in connector	4IN, 4OUT	<b>MS-1003144</b>
IO-Extension 8/8S with terminal block	8IN, 8OUT	<b>MS-1003088</b>
IO-Extension 8/8C with M8 circular plug-in connector	8IN, 8OUT	<b>MS-1003188</b>

[> to the technical drawings \(page 78\)](#)



PosiControl4

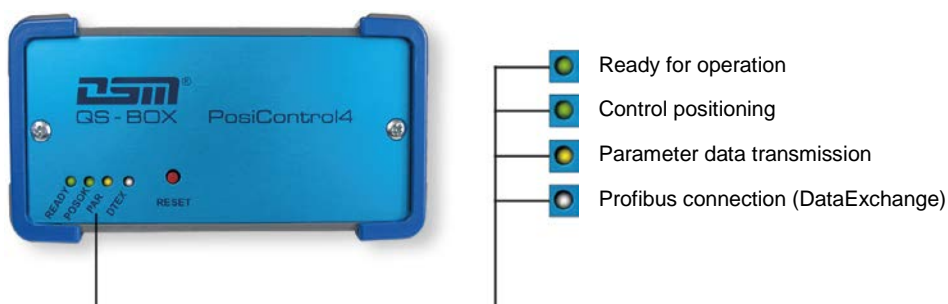
## PosiControl4

In combination with a superordinated control the positioning-electronic PosiControl4 checks, if a defined operation sequence is followed and makes sure, that no position will be forgotten. For this, the PosiControl4 provides a storage capacity for up to 200 positions. The configuration of the hardware as well as the administration of the positions is made by the application software.

The input of the positions is made very easy by Teach-In, i.e. it's driven to the required positions and stored via keystroke. Changes of the sequence of the order or of the flow are quickly possible at any time.

### Features

- Aluminium tube case, impact resistant plastic cover
- Data input via PC software
- 4 LED Status indication
- Input of positions via Teach-in during the programming
- Storage of up to 200 positions
- Positions monitoring
- Report mode of the stored positions
- Direct output mode as "X/Y position"
- USB interface for configuration via PC
- Systembus interface for communication with DSM tightening control system (Basic, Classic, Pro)
- Profibus DP-Slave interface for the integration in a PLC system
- Option: TCP/IP module for network connection



## PosiControl4



Type	Article number
PosiControl4 electronic including USB connection cable 1,8 m	<b>DSM-600635</b>
Ethernet TCP/IP module	<b>DSM-161905</b>

## Universal bracket for assembly to wall or table



Type	Article number
Universal bracket	<b>DSM-600612</b>

AC adapter (plug-in power supply)  
AC 230 V / 50 Hz | DC 24 V / 1 A

Type	Article number
AC adapter	<b>DSM-600611</b>

A plug-in power supply isn't needed by connection to a control system (Basic, Classic, Pro).

[> to the technical drawings \(page79\)](#)

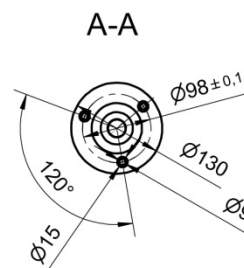
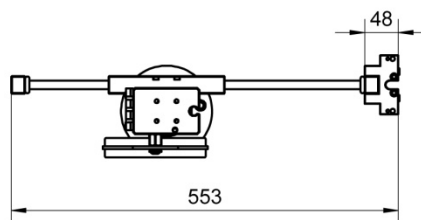
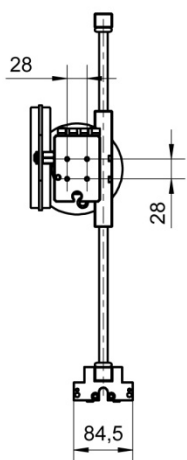
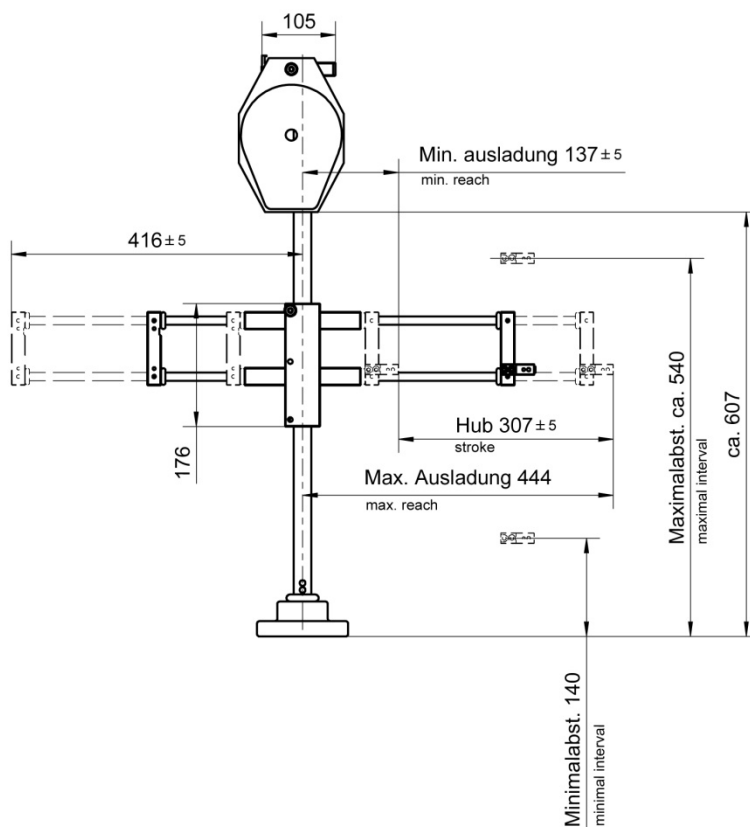
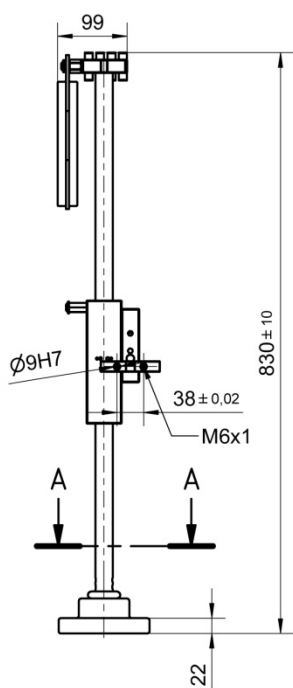
Handling systems HST series	Page
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Handling systems POSI series	Page
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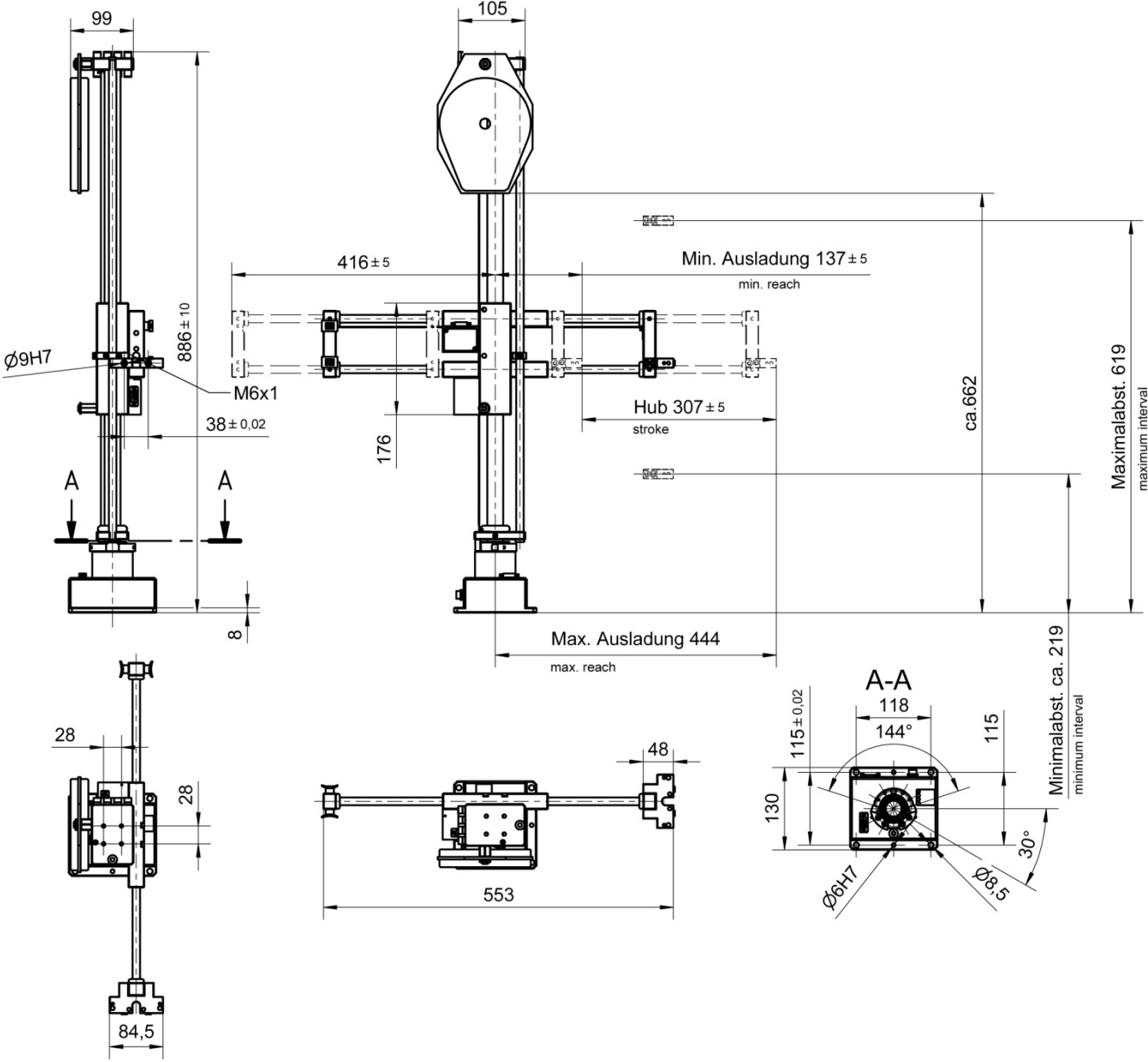


# Handling systems HST series

## HST-40

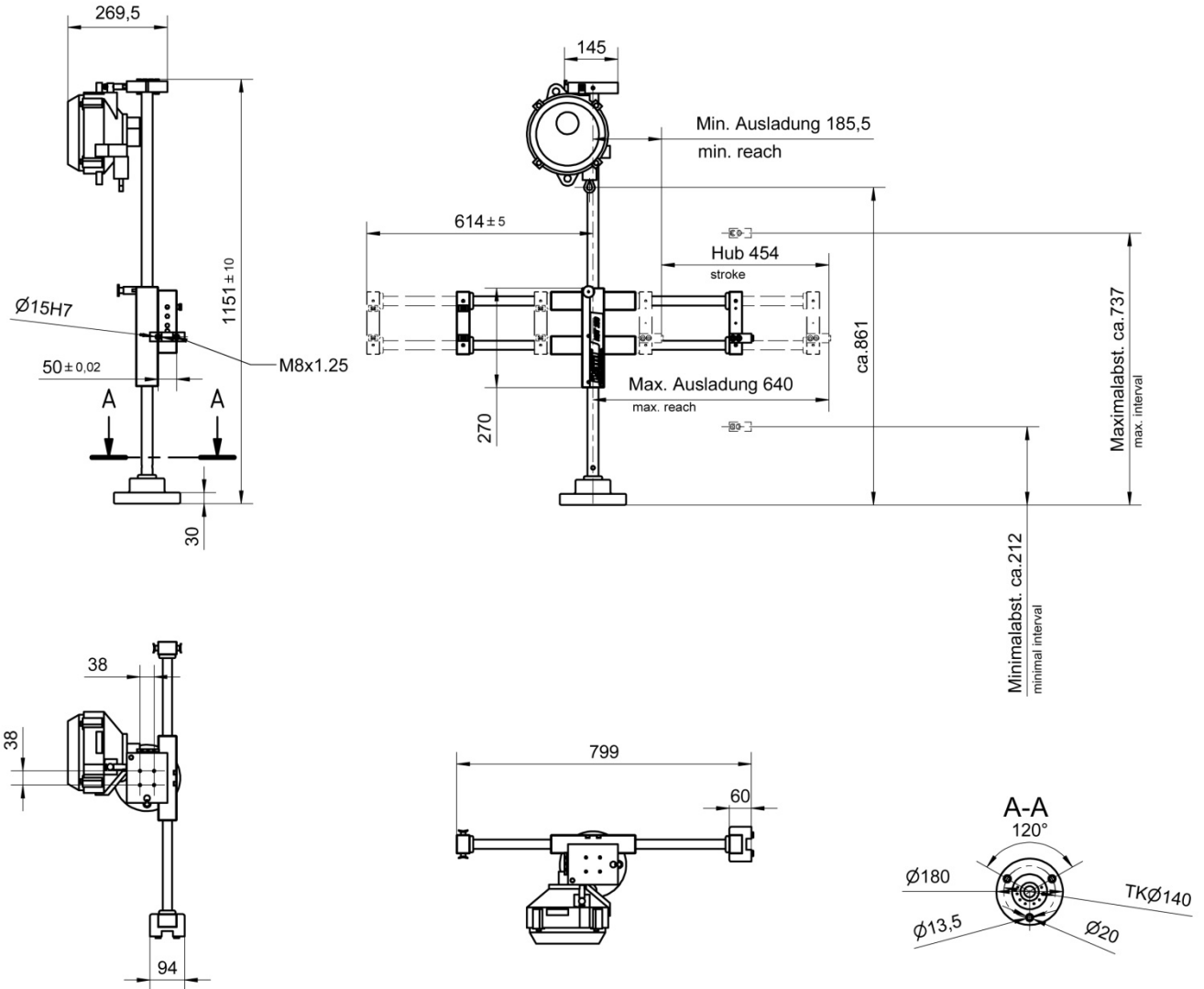


[> to the product description \(page 25\)](#)

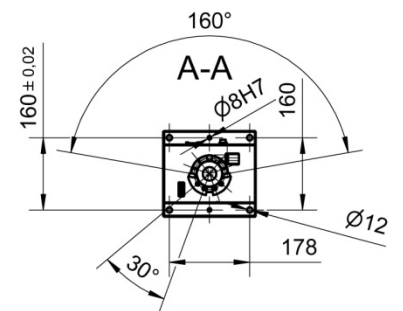
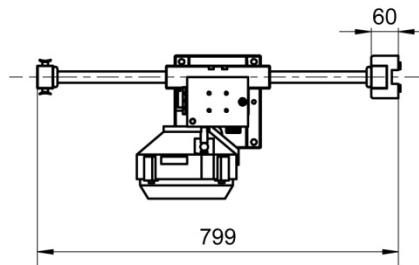
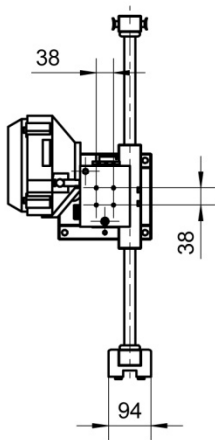
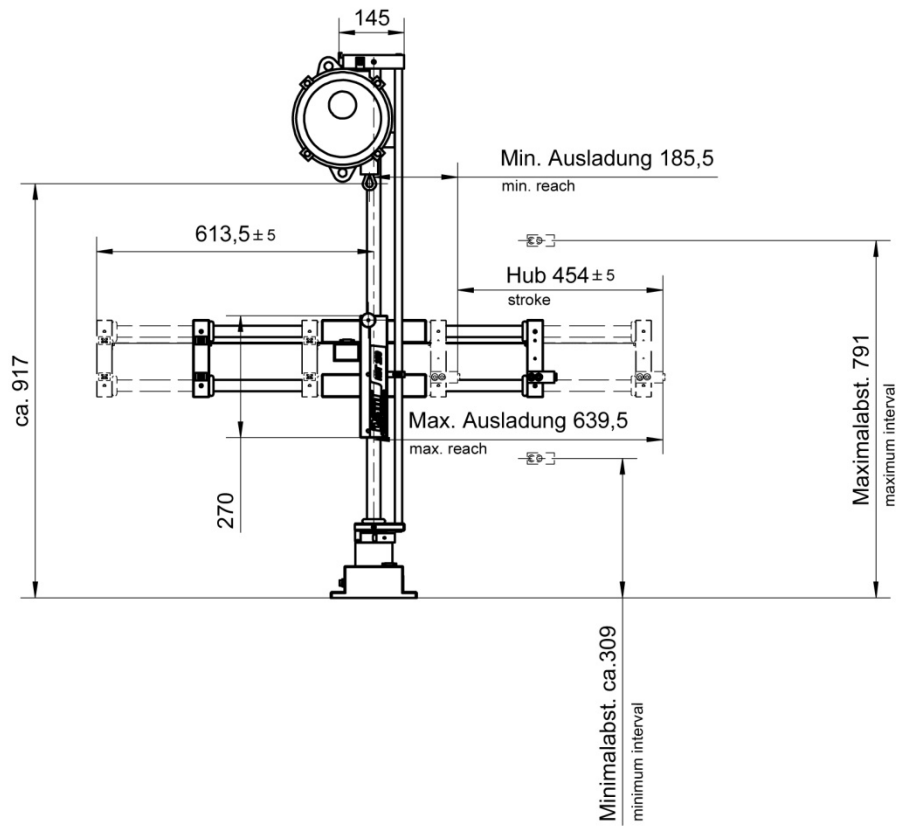
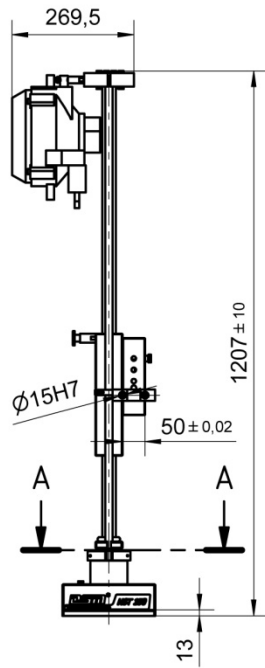


> to the product description (page 25)

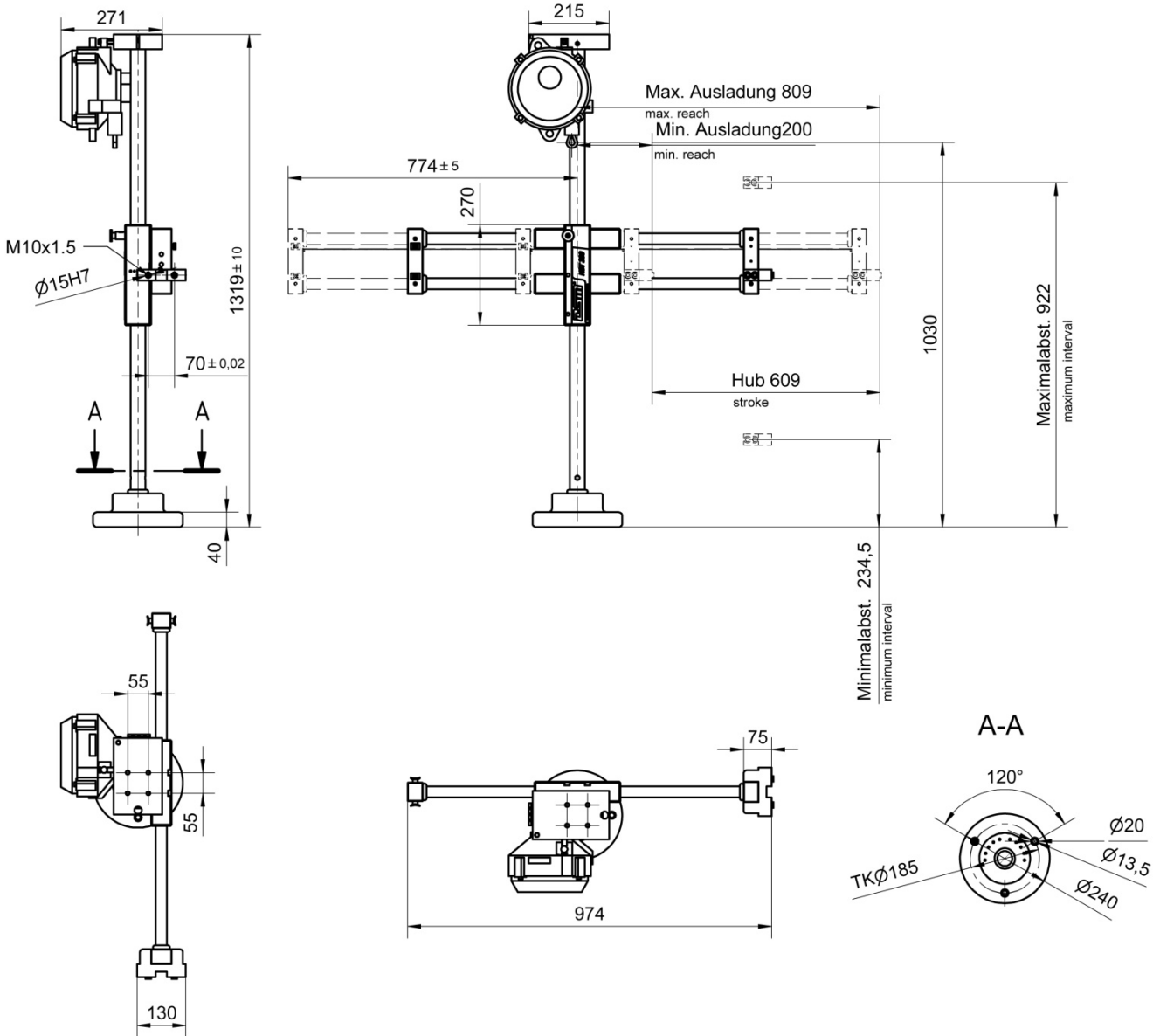
# HST-150



[> to the product description \(page 31\)](#)

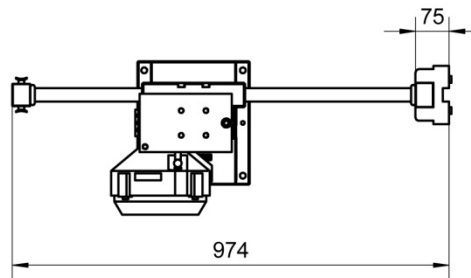
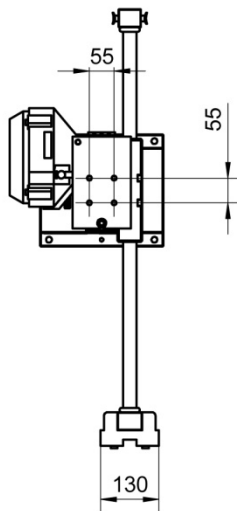
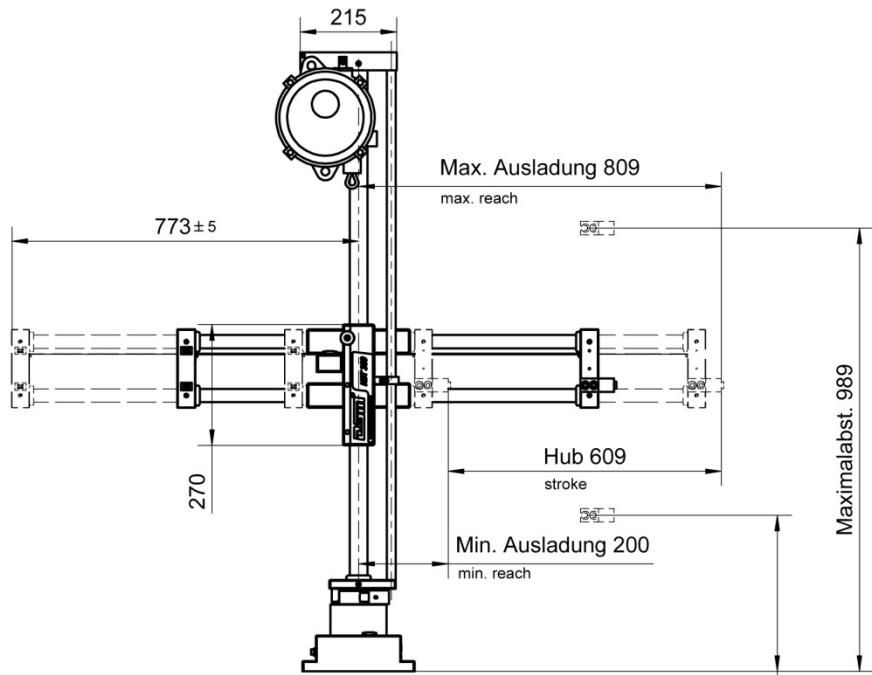
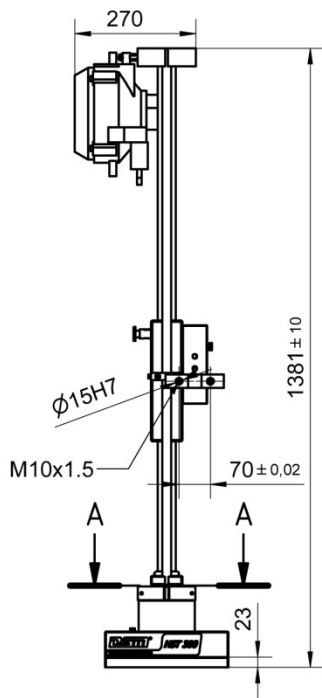


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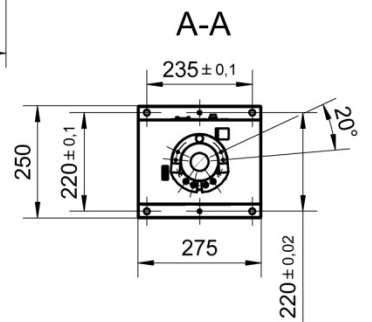


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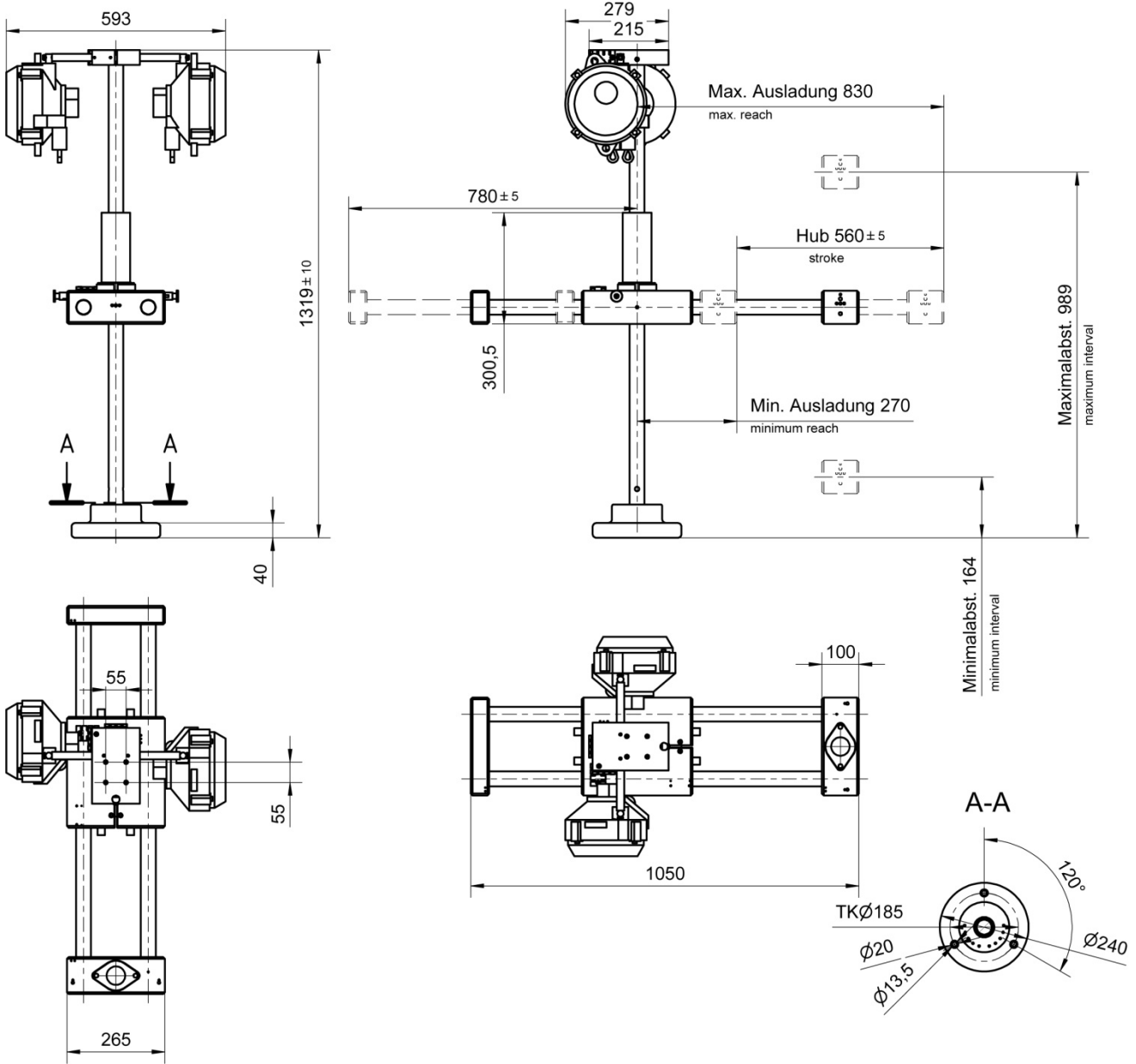




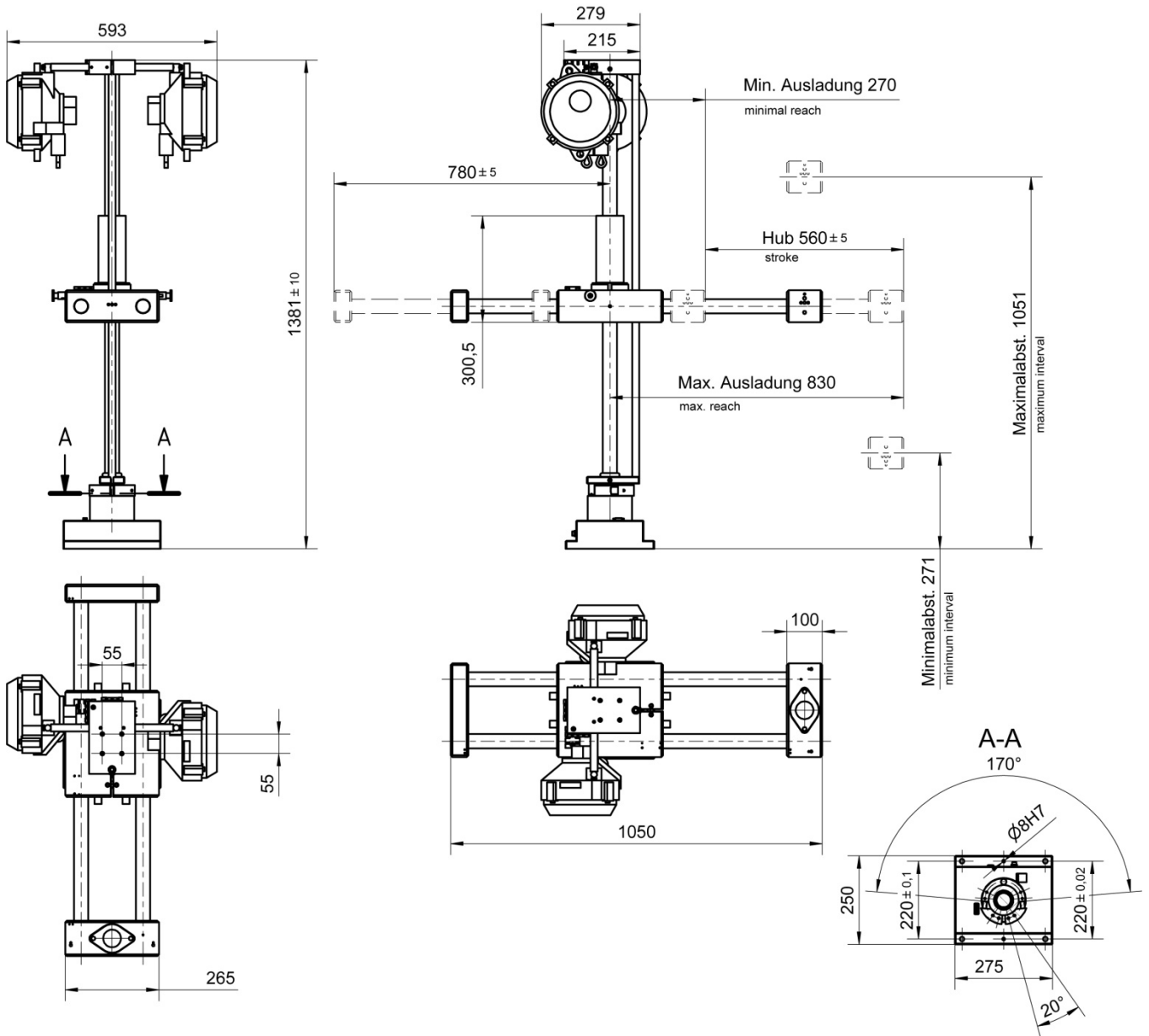
Minimalabst. 348  
minimum interval



# HST-600

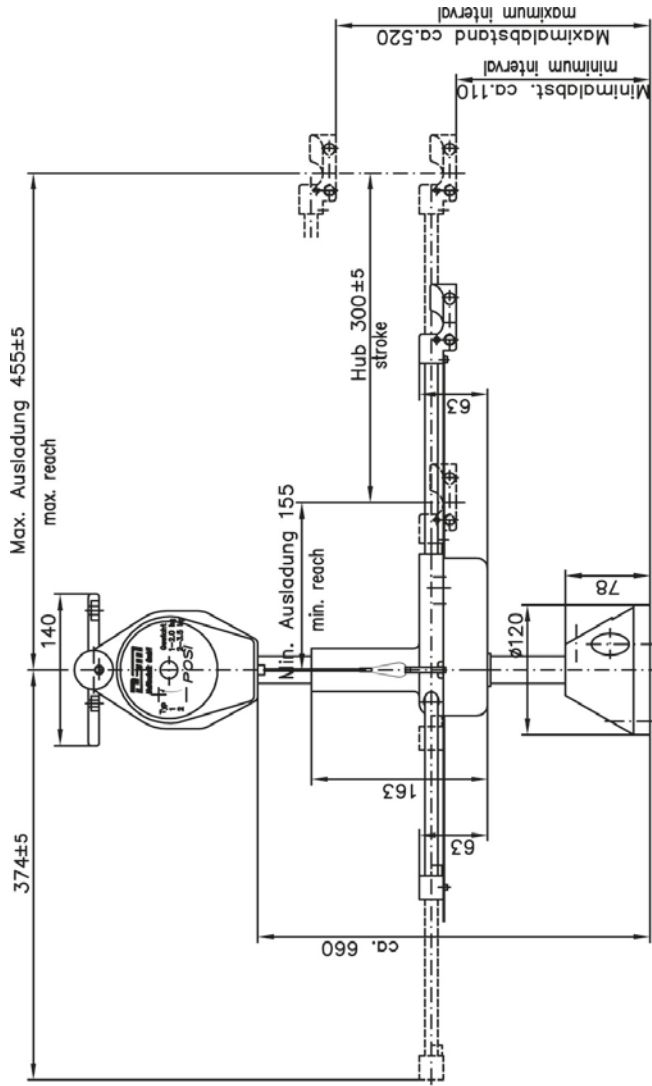


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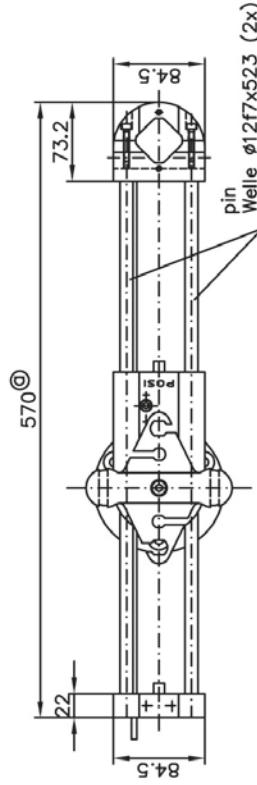


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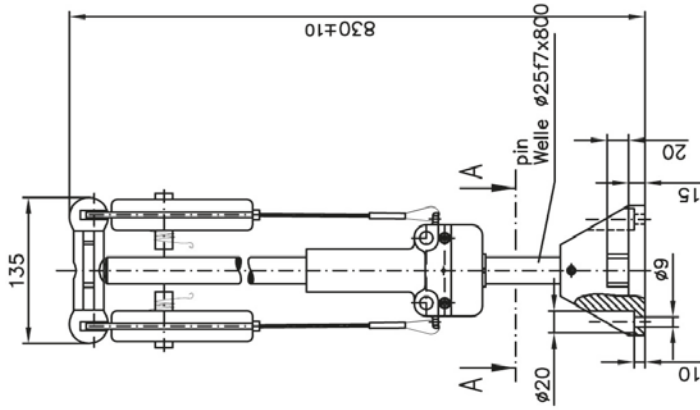
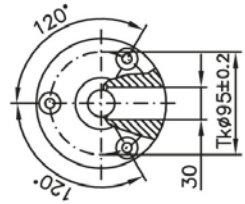




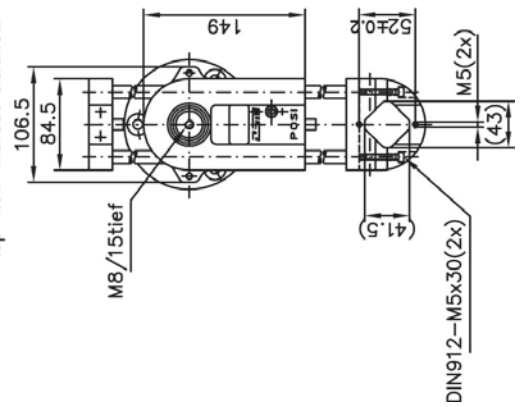
Draufsicht ohne Balancer  
top view without balancer



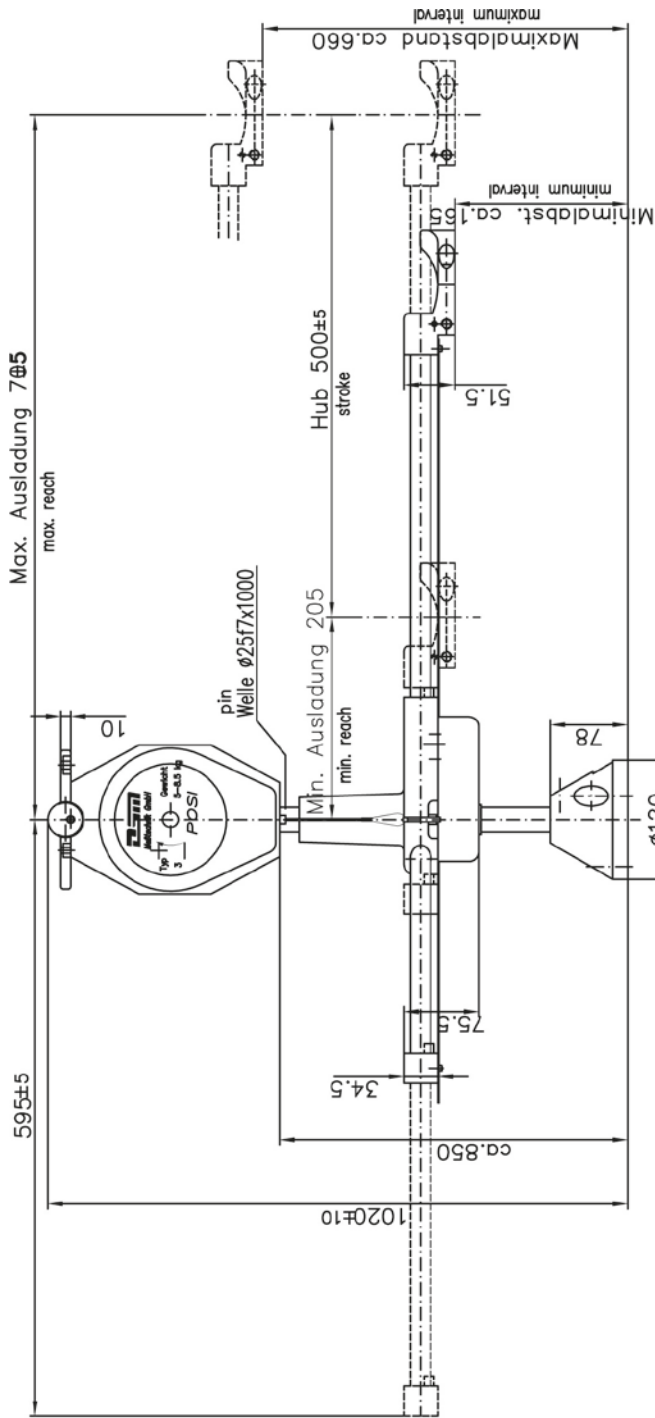
Schnitt A-A  
cutaway view



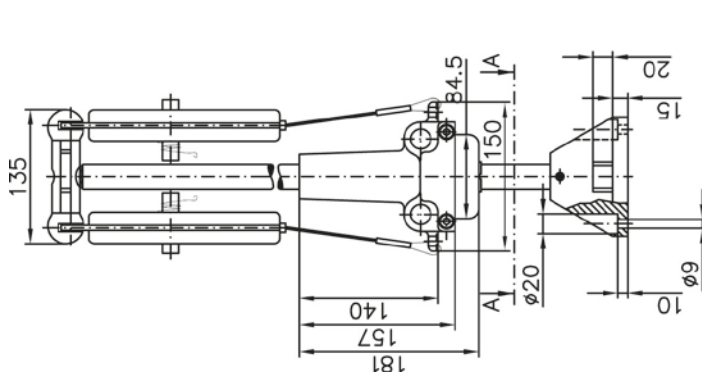
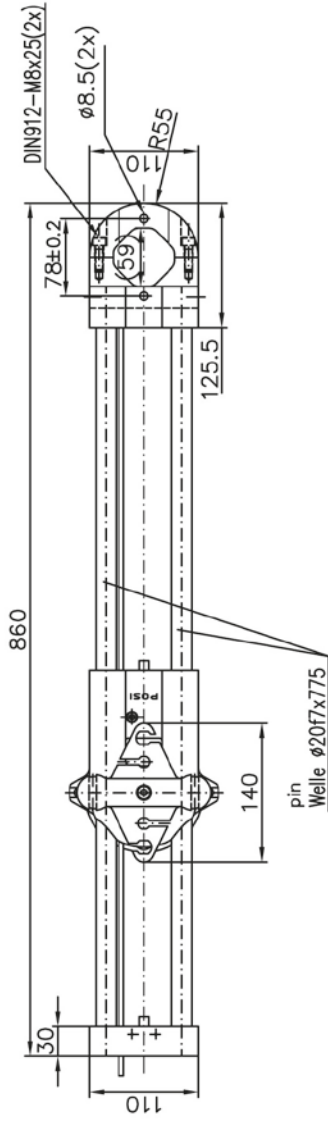
Draufsicht ohne Balancer  
top view without balancer



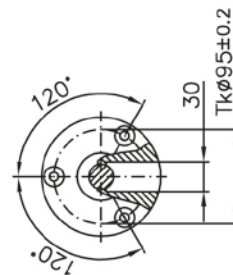
# POSI 1 GG-150



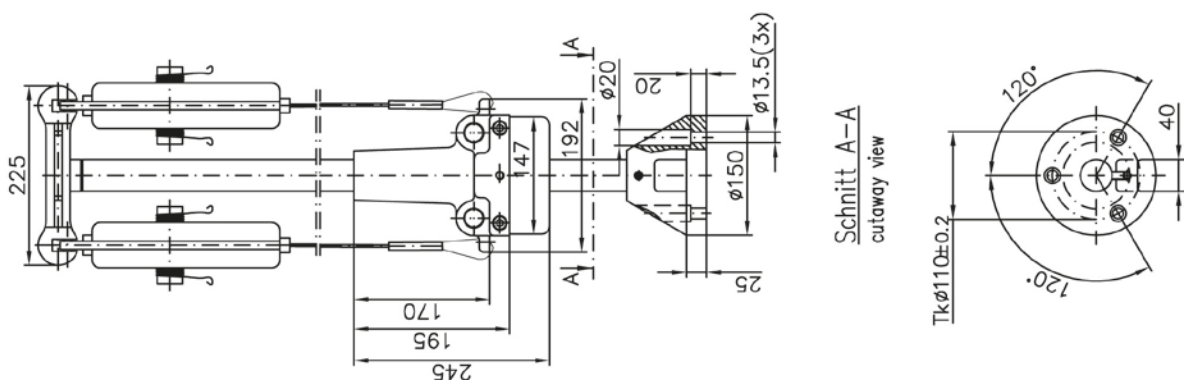
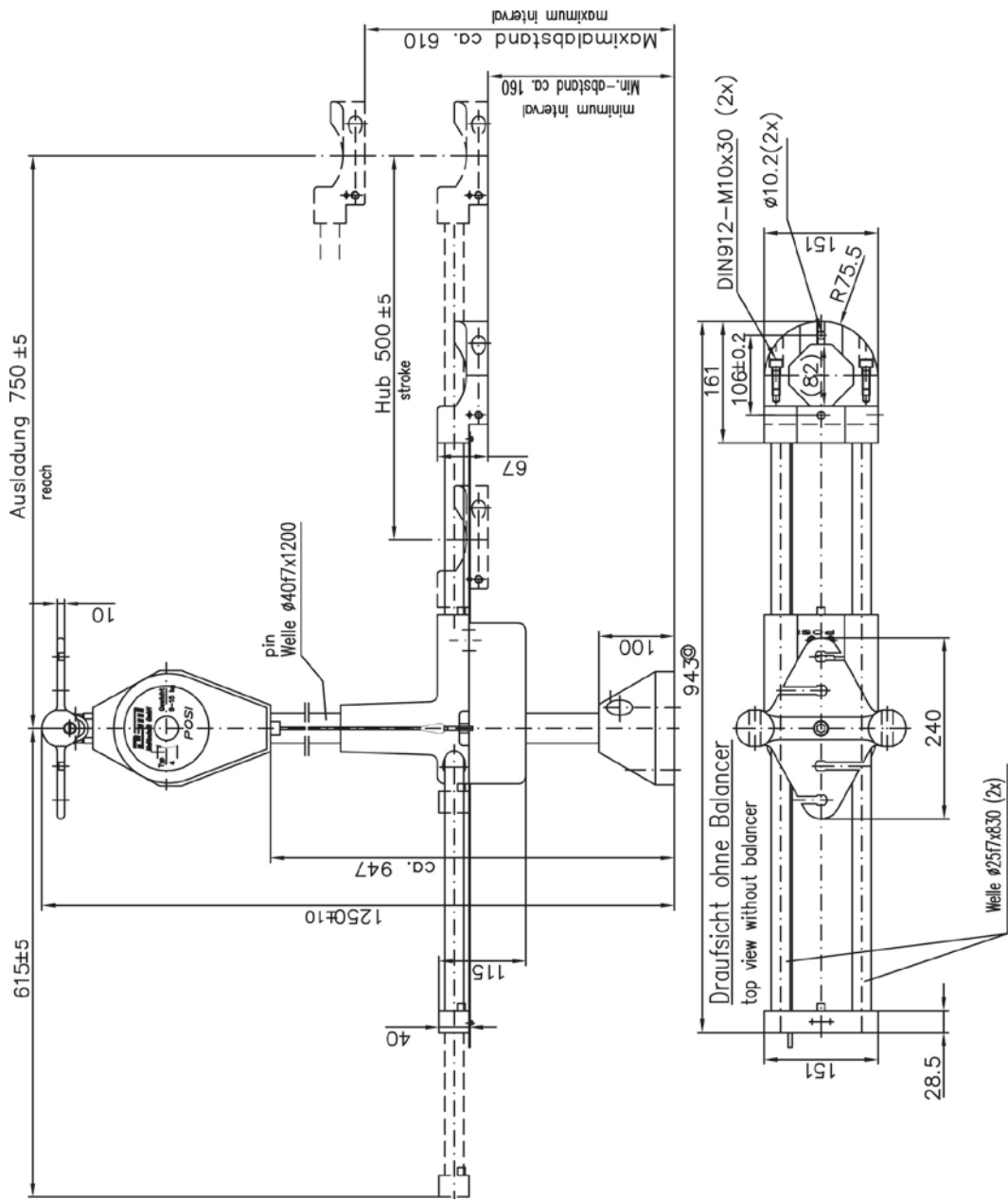
**Draufsicht ohne Balancer**  
top view without balancer



**Schnitt A-A**  
cutaway view



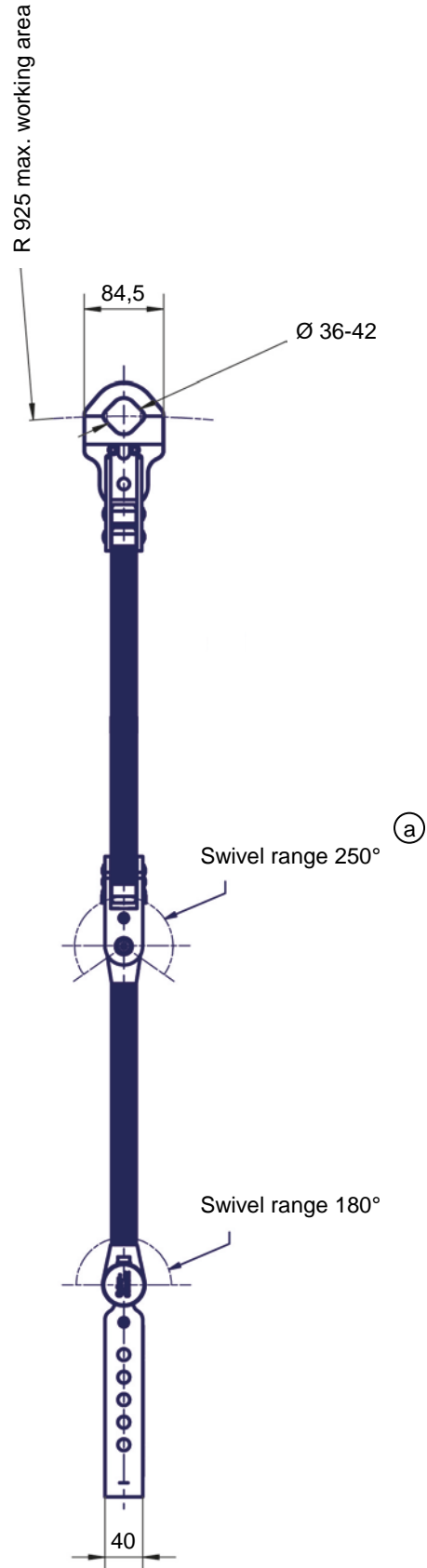
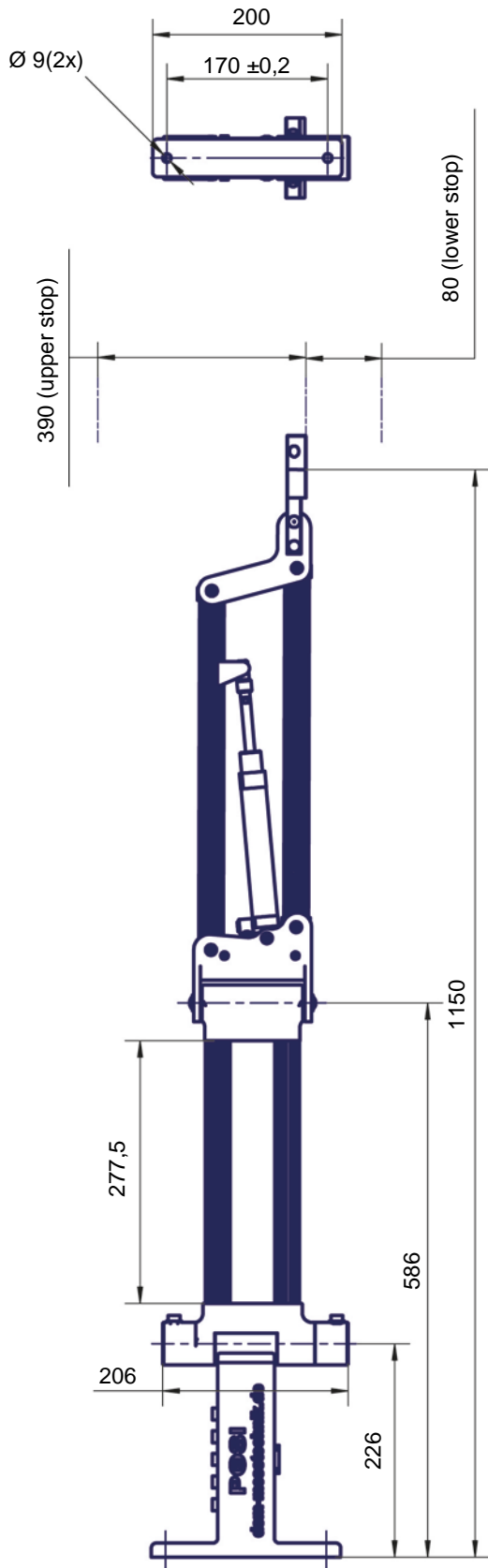




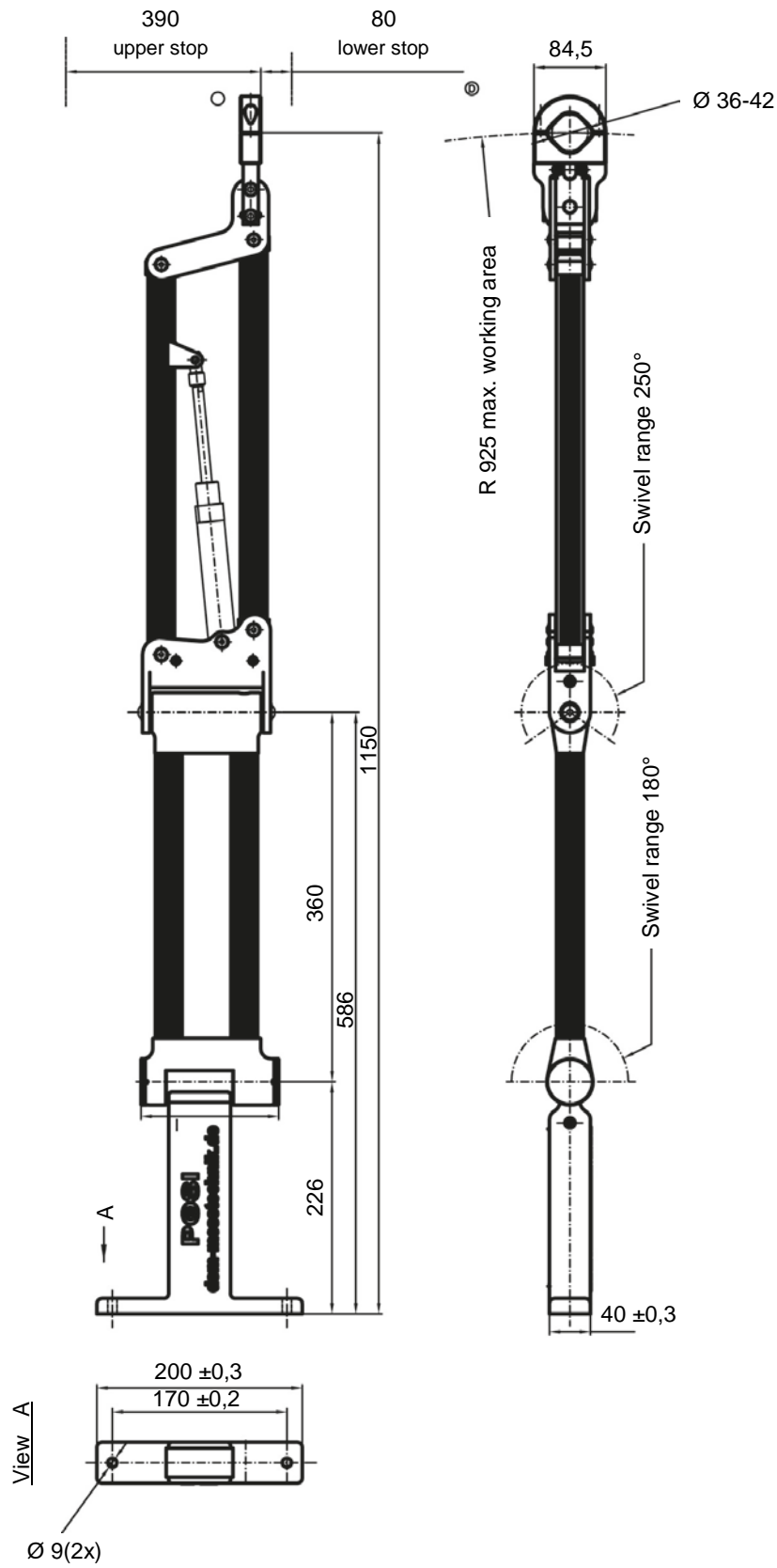
> to the product description (page 51)

# POSI 2 – long execution

with position control XY

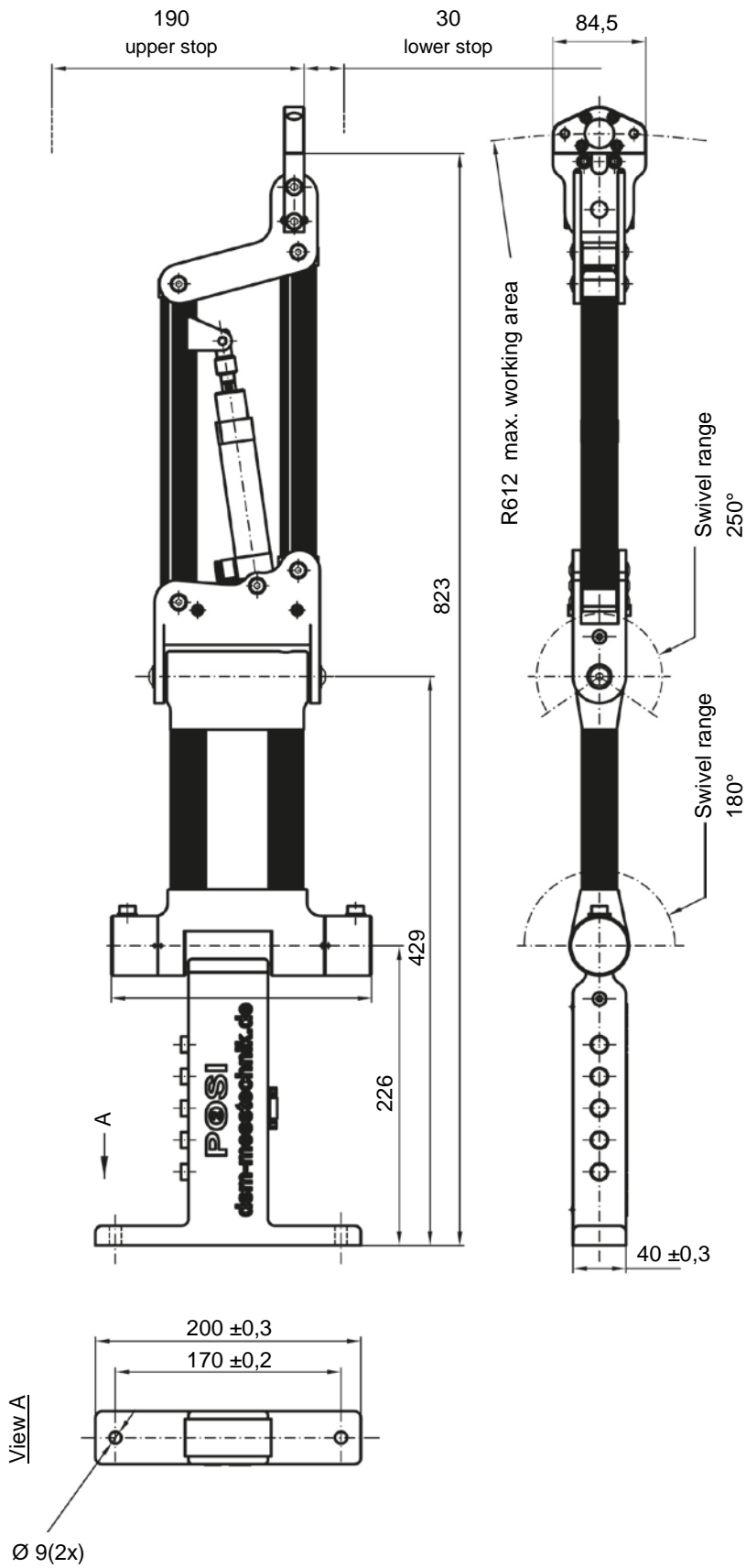


without position control

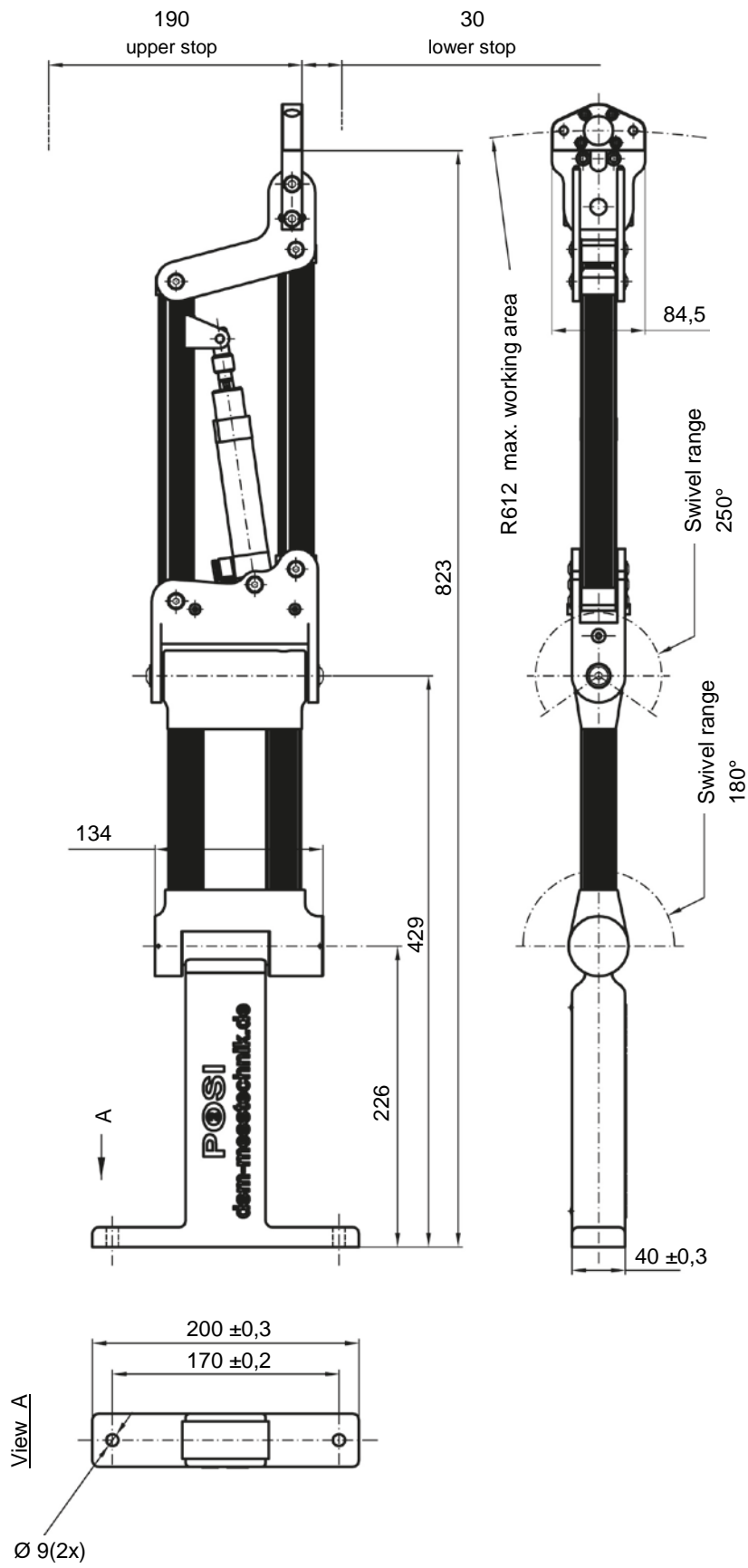


# POSI 2 – short execution

with position control XY

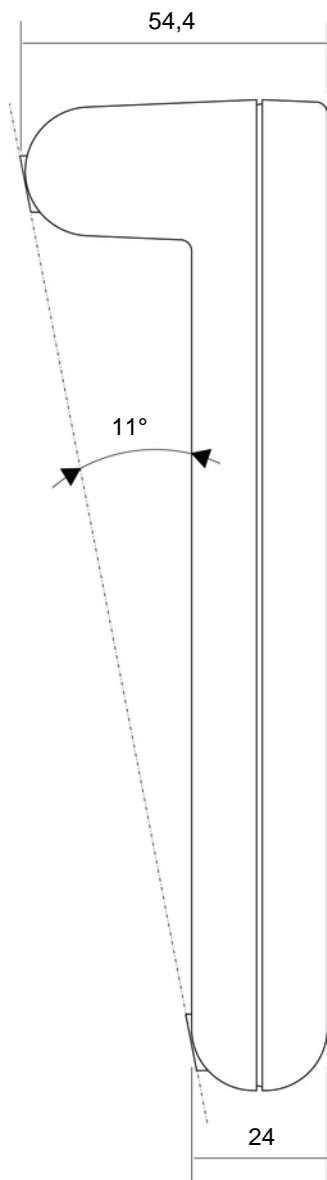


without position control

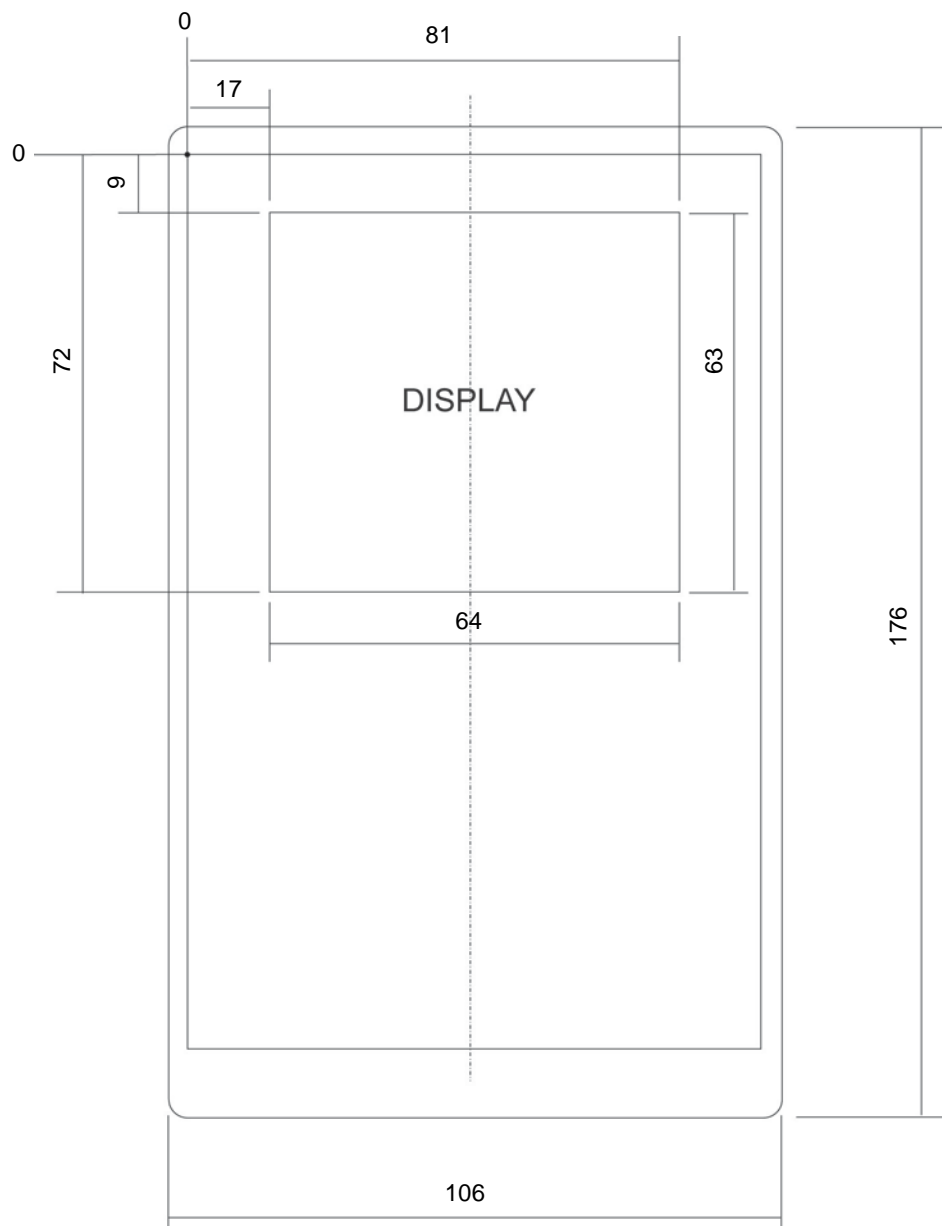


> to the product description (page 55)

Side view

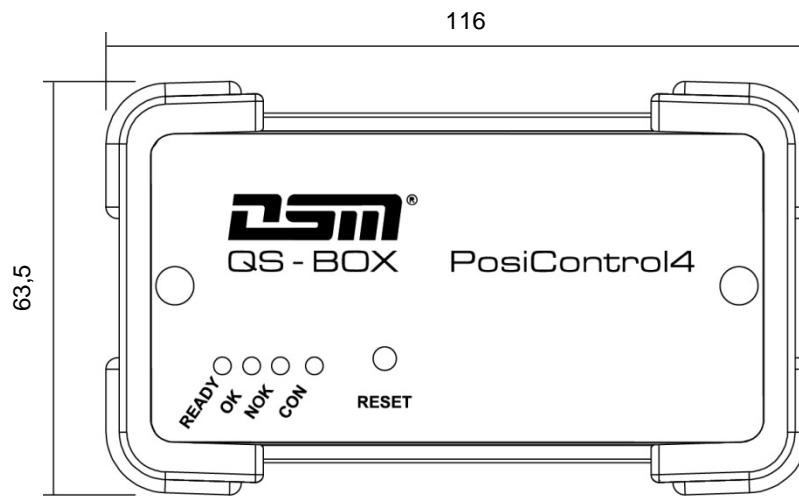


Front view

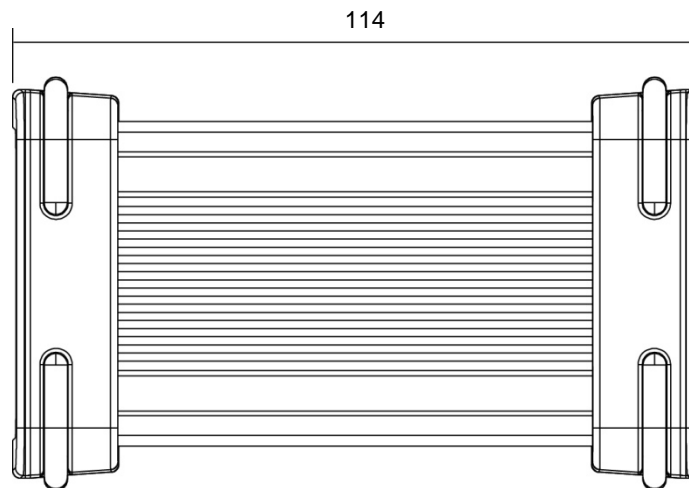




Front view



Side view



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**DSM Messtechnik GmbH**

Dieselstraße 16  
73431 Aalen  
Germany

Phone +49 (0) 7361 5717 0  
Telefax +49 (0) 7361 5717 33

info@dsm-messtechnik.de  
www.dsm-messtechnik.de

Register Court Aalen, No. B 431-A  
Place of Business: Aalen  
Managing Director: Raimund Wilhelm  
VAT-No. DE144633038



Article number



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