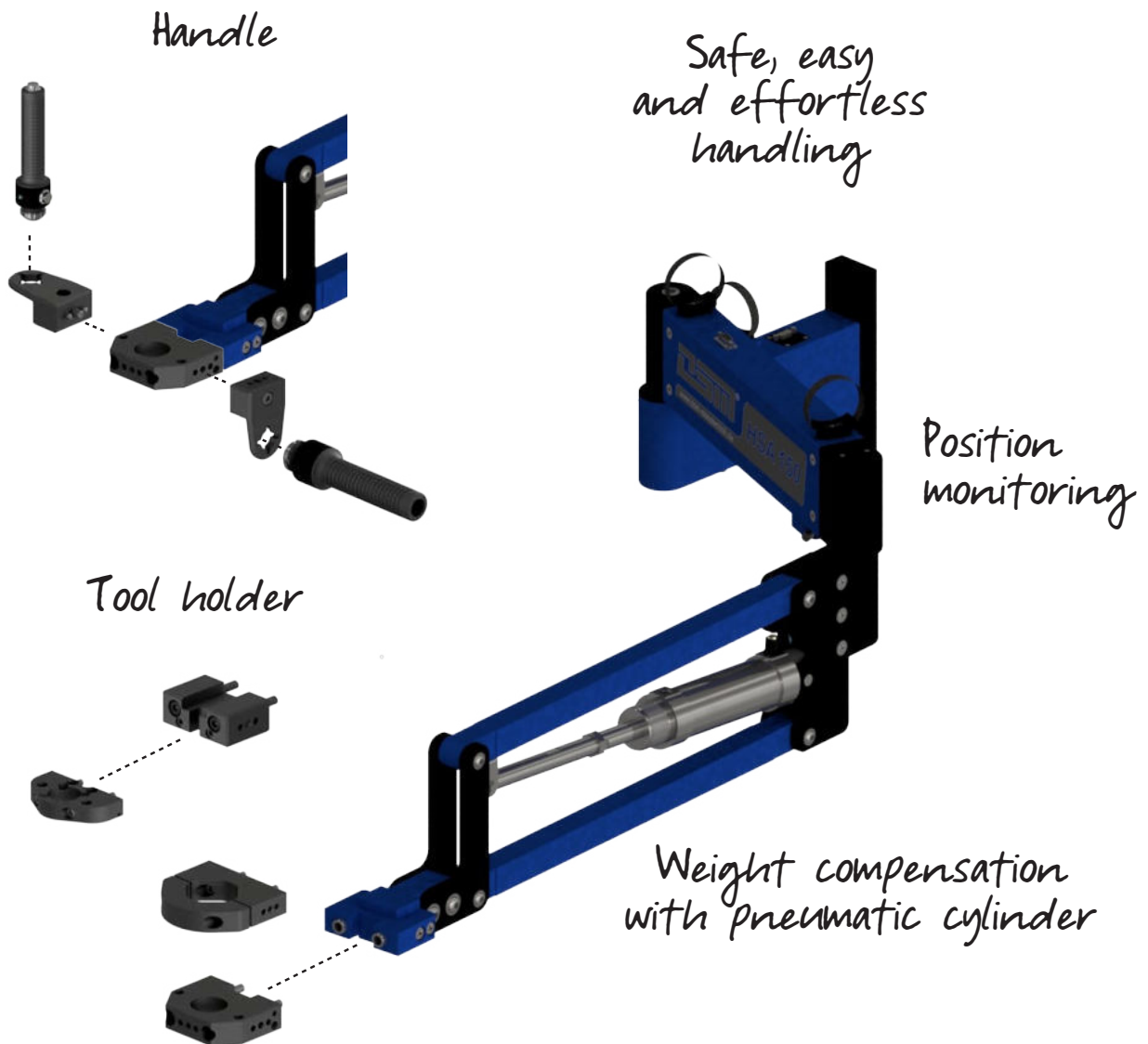


Handling swivel arm HSA

Simply working better – handling systems from DSM



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!

A torque support with weight compensation is essential for fatigue-free work in assembly. The additional control of the position of the tool enables cost-effective monitoring of complex tightening sequences in the manual assembly.

Handling swivel arm HSA

Advanced handling – precise, reaction-free and clever

With the HSA series, DSM offers advanced handling devices for the tasks and applications of manually guided and semi-automated assembly.

Equipped with XY-sensor technology and integrated position electronics the handling swivel arm HSA extend the functionality of your tightening system. The positioning electronic PoSys in conjunction with a higher-level control system check whether a defined sequence of operations is maintained.

No screw will be forgotten and even complex tightening sequences can be specified and monitored – or call up the corresponding sequence in your DSM control system via the screw position.



HSA-40 | HSA-40-XY

Long execution

up to 40 Nm

Tool weight max. 5 kg

Work radius min. 391 mm

Work radius max. 883,5 mm

Stroke ↑ max. 269 mm

Stroke ↓ max. 283 mm



HSA-40 | HSA-40-XY

Short execution

up to 40 Nm

Tool weight max. 5 kg

Work radius min. 262 mm

Work radius max. 717,5 mm

Stroke ↑ max. 61 mm

Stroke ↓ max. 99,5 mm



HSA-150 | HSA-150-XY

Long execution

up to 150 Nm

Tool weight max. 15 kg

Work radius min. 491 mm

Work radius max. 1151 mm

Stroke ↑ max. 317 mm

Stroke ↓ max. 260 mm



HSA-300 | HSA-300-XY

Long execution

up to 300 Nm

Tool weight max. 25 kg

Work radius min. 637 mm

Work radius max. 1500 mm

Stroke ↑ max. 351 mm

Stroke ↓ max. 426 mm

HSA-40

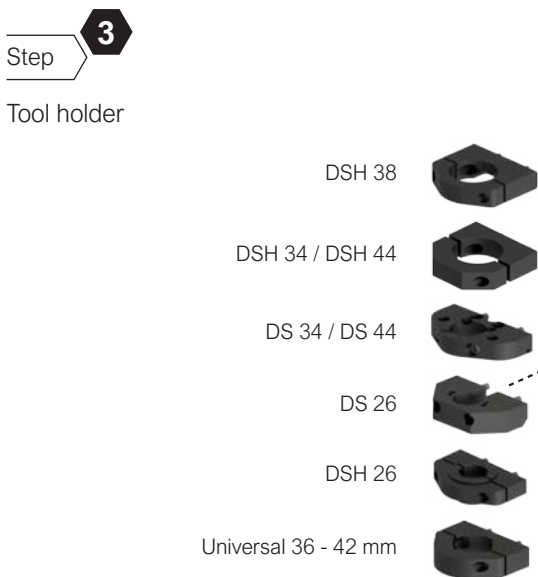
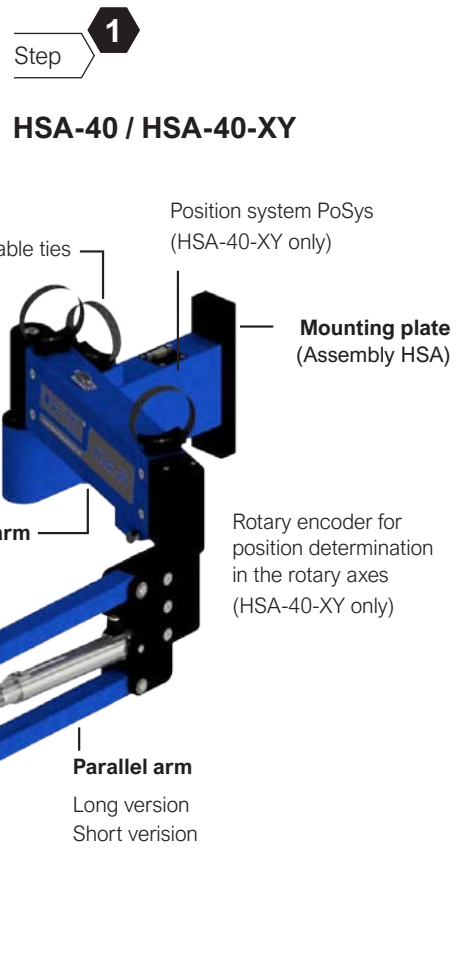
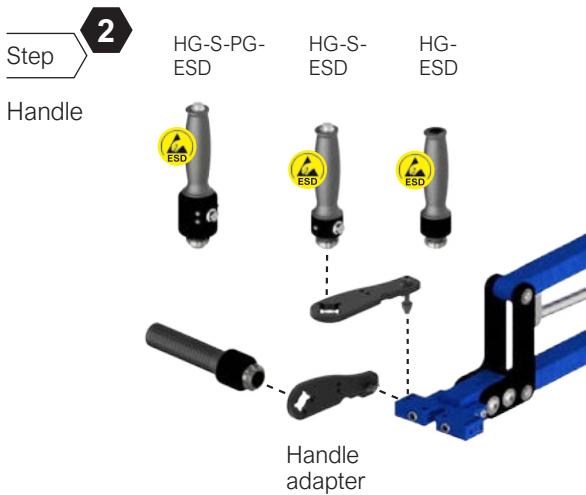
Precise, reaction-free and extremely light handling in the entire workspace.

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**.

Designed as pure handling swivel arm **HSA-40** (without sensors) or as **HSA-40-XY** with sensors and integrated position monitoring (PoSys).

Available in the variant with short or long parallel arm.



Use the following steps to assemble your handling swivel arm and select the optimal components from the HSA-40 series for your application.

Step 1 Page 4

Choose between the variant HSA-40 and HSA-40-XY

Step 2 Page 7

Choose a handle

Step 3 Page 8

Choose a tool holder

Step **1**
Variant of the handling swivel arm (Size HSA-40) – Long version

			HSA-40	HSA-40-XY
Absolute XY position sensor			--	✓
Position controller (PoSys) integrated in the bracket			--	✓
Working radius	[mm]	min.	391	391
see Page 6	[mm]	max.	883,5	883,5
Lifting height ↑	[mm]	max.	269	269
Lifting height ↓	[mm]	max.	283	283
Weight of handling swivel arm	[kg]	approx.	7,0	7,3
Reaction torque	[Nm]	up to max.	40	40
Tool weight	[kg]	max.	5	5
Operating pressure (weight compensation)	[bar]	max.	6	6
Article number			H-6001045	see Page 5

Variant of the handling swivel arm (Size HSA-40) – Short version

			HSA-40-K	HSA-40-K-XY
Absolute XY position sensor			--	✓
Position controller (PoSys) integrated in the bracket			--	✓
Working radius	[mm]	min.	262	262
see Page 6	[mm]	max.	717,5	717,5
Lifting height ↑	[mm]	max.	61	61
Lifting height ↓	[mm]	max.	99,5	99,5
Weight of handling swivel arm	[kg]	approx.	6,4	6,7
Reaction torque	[Nm]	up to max.	40	40
Tool weight	[kg]	max.	5	5
Operating pressure (weight compensation)	[bar]	max.	6	6
Article number			H-6001055	see Page 5

HSA-40 | HSA-40-XY – Robust designed handling swivel arm

The HSA swivel arm is made up of 3 main elements: Bracket, Rotary arm and Parallel arm.

The swivel arm is assembled with the mounting plate located on the bracket. Bracket and parallel arm are connected to each other via the front and rear rotary axis of the swivel arm. This design allows the comfortable reachability of the positions located in the working area of the swivel arm.

The weight compensation is carried out by the pneumatic cylinder attached to the parallel arm and is connected to a pressure reducer on the customer's side. The compressed air setting for the weight compensation depends on the design of the swivel arm as well as on the installed tool (nutrunner).

The swivel arm is prepared for mounting a tool holder and a handle.

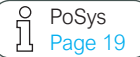
HSA-40-XY – Position monitoring of assembly tool

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 and with an position controller (PoSys) integrated in the bracket, the HSA-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 control system via the screw position.

Other features:

- XY position sensors integrated in the rotary axes
- 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 DSM control system, for power supply via control system or plug-in power supply unit
- TCP/IP interface for communication with the DSM application software
- Optional Profibus interface, Profinet interface or EtherCAT interface for connection to a higher-level control system



HSA-40-XY equipped with position controller PoSys | Executions

Type		Article number
HSA-40-XY-PB	Handling swivel arm with XY sensors and integrated PoSys with Profibus interface	H-6001041
HSA-40-XY-PN	Handling swivel arm with XY sensors and integrated PoSys with Profinet interface	H-6001040
HSA-40-XY-EC	Handling swivel arm with XY sensors and integrated PoSys with EtherCAT interface	H-6001042

HSA-40-K-XY equipped with position controller PoSys | Executions

Type		Article number
HSA-40-K-XY-PB	Handling swivel arm (Short) with XY sensors and integrated PoSys with Profibus interface	H-6001051
HSA-40-K-XY-PN	Handling swivel arm (Short) with XY sensors and integrated PoSys with Profinet interface	H-6001050
HSA-40-K-XY-EC	Handling swivel arm (Short) with XY sensors and integrated PoSys with EtherCAT interface	H-6001052

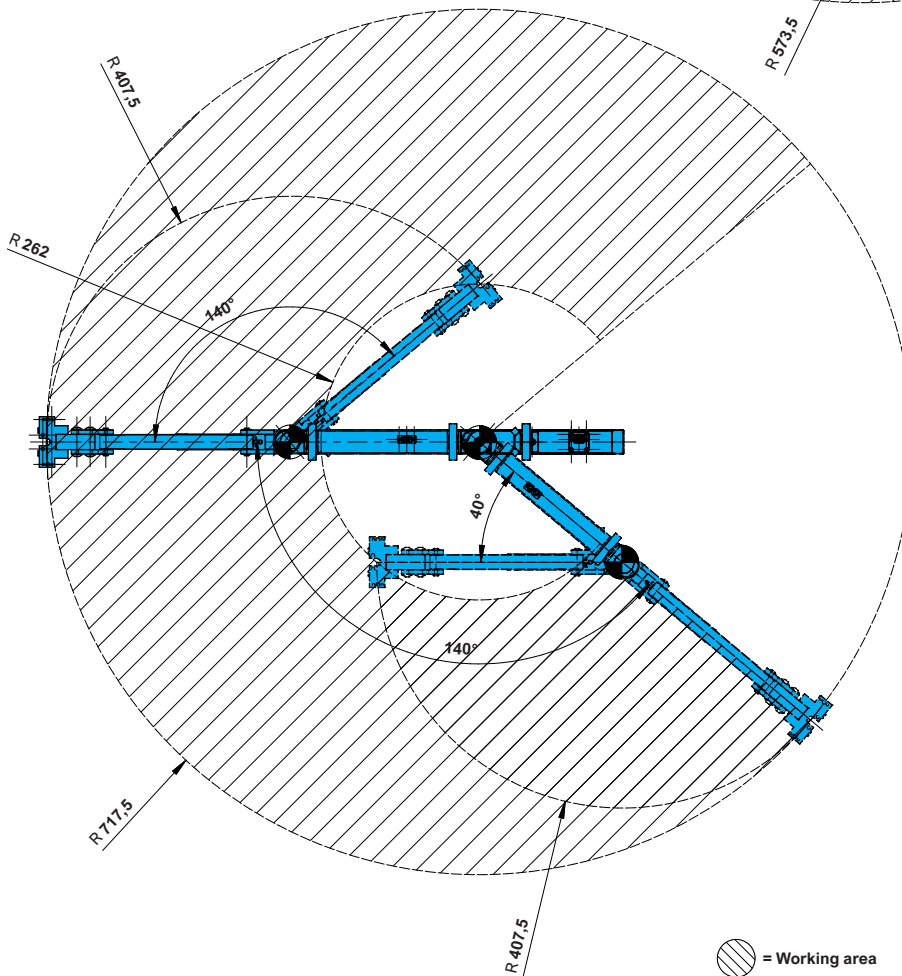
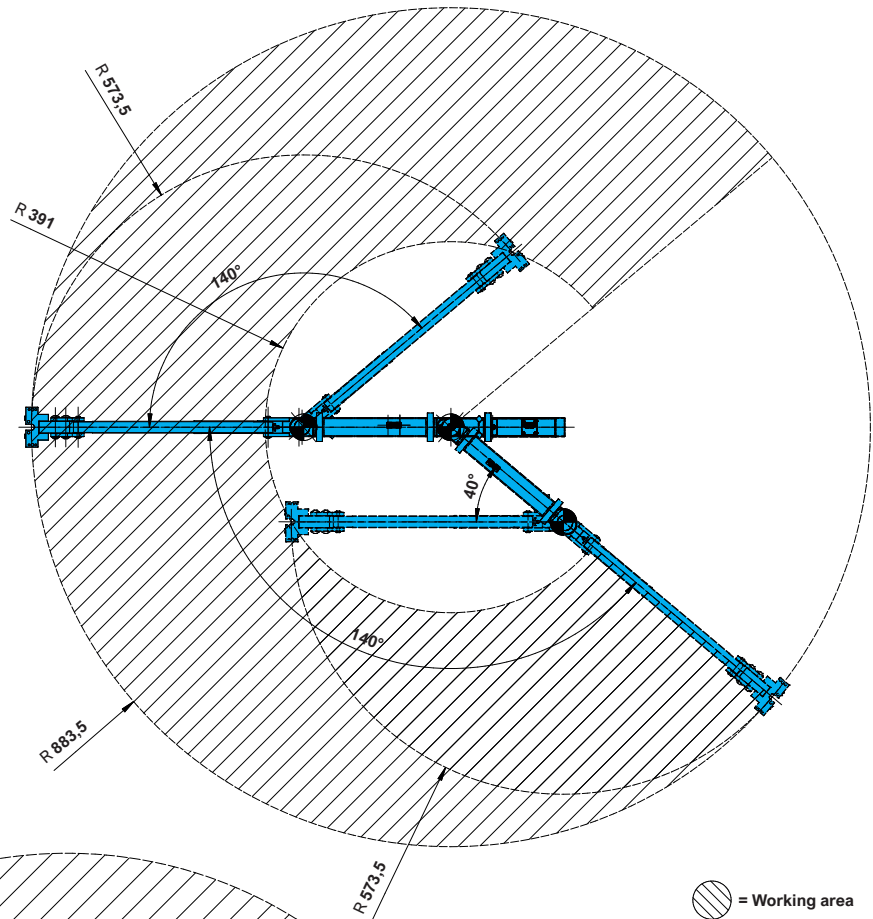
Equipment option

Type		Article number
Plug-in power supply unit AC 230 V / 50 Hz DC 24 V / 1 A (for use without DSM control system)		DSM-600611

System bus accessories

Type		Article number
System bus cable 2 m		MS-1003002
System bus cable 5 m		MS-1003005
System bus terminating resistor		MS-1003030
Y-piece for system bus connection		MS-1003046

Working area
HSA-40 / HSA-40-XY
Long version



Working area
HSA-40-K / HSA-40-K-XY
Short version

Step **2**

Ergonomically formed handles for precise guidance of the tool (nutrunner). Versatile mounting possibilities via handle adapter. Execution with start button for the direct forwarding of the start signal to the control system. Variant with rotary switch for switching between the preselected sequence programme and an alternative sequence.

Handle

Type		Article number
HG-ESD	Standard handle in ESD-compliant design	H-6007820
HG-S-ESD	Handle with start button (double) in ESD-compliant design	H-6007825
HG-S-PG-ESD	Handle with start button (double) and programme switchover in ESD-compliant design	H-6007830

Standard adapter for the vertical and horizontal assembly of the handle. The installation can be made on the right side as well as on the left side on the counter piece of the tool holder of the handling swivel arm.

Handle adapter for the HSA-40 series

Type		Article number
HG-A-H40	Handle adapter kit HSA-40	H-6007886

Choose the appropriate 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 is made 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 the HSA-40 series

Type	Connection	Cable length	Article number
HG-K-DS34-44-160	from HG-S-ESD to DS 34 / DS 44	160 mm	H-6007940
HG-K-DS34-44-300	from HG-S-ESD to DS 34 / DS 44	300 mm	H-6007941
HG-K-24V-4.XX	from HG-S-ESD to MultiBasic / MultiClassic / MultiPro	5 m	H-6007905
HG-K-24V-5.XX	from HG-S-ESD to MultiPro 3G	5 m	H-6007910
HG-K-24-oK	from HG-S-ESD to ... (open cable ends)	5 m	H-6007915
HGPG-K-DS34-44-160	from HG-S-PG-ESD to DS 34 / DS 44	160 mm	H-6007744
HGPG-K-DS34-44-300	from HG-S-PG-ESD to DS 34 / DS 44	300 mm	H-6007745
HGPG-K-24-oK	from HG-S-PG-ESD to ... (open cable ends)	2 m	H-6007720

Step **3**

The tool / nutrunner is attached to the handling swivel arm with a suitable holder. Tool holders adapted to the size of the DSM nutrunners that can be used can be selected here. Adaptation of third-party products is made with the universal tool holder or a customised solution on request.

Handling tool holder for the HSA-40 series

Type	Tool holder for	Article number
HWA-40-DS26	DS 26 Built-in nutrunner	H-6008426
HWA-40-DSH26	DSH 26 Hand-held nutrunner	H-6008427
HWA-40-DS34/DS44	DS 34 / DS 44 Built-in nutrunner	H-6008434
HWA-40-DSH34	DSH 34 Hand-held nutrunner	H-6008234
HWA-40-DSH38	DSH 38 Hand-held nutrunner	H-6008238
HWA-40-DSH44	DSH 44 Hand-held nutrunner	H-6008244
HWA-40-Uni-36-42	36 - 42 mm clamping diameter, Universal tool holder	H-6008405

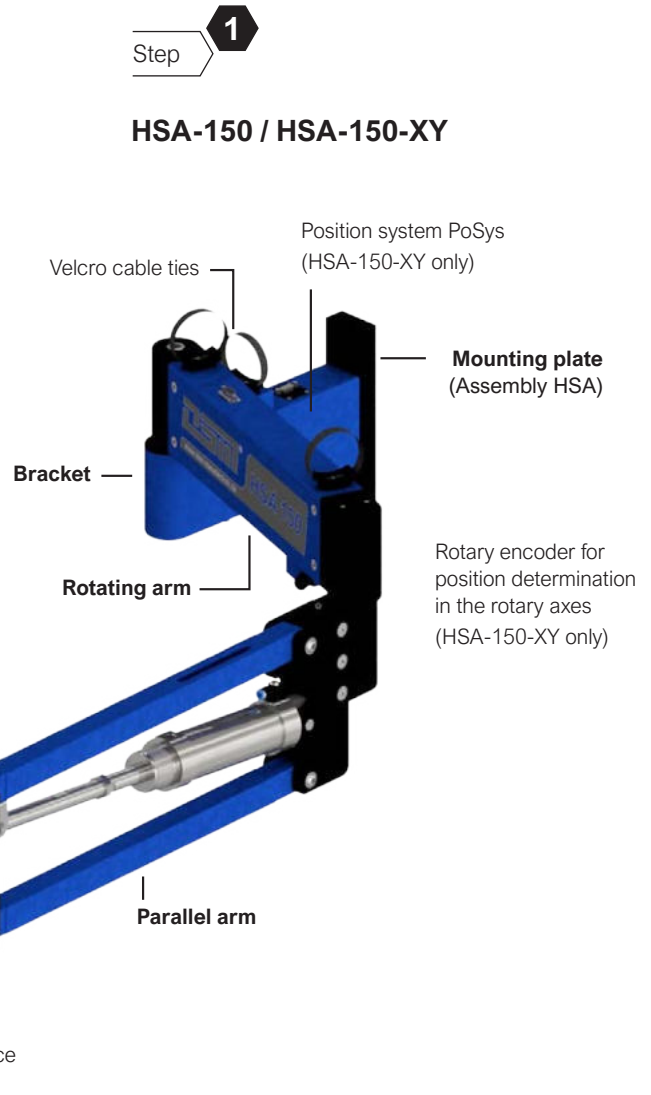
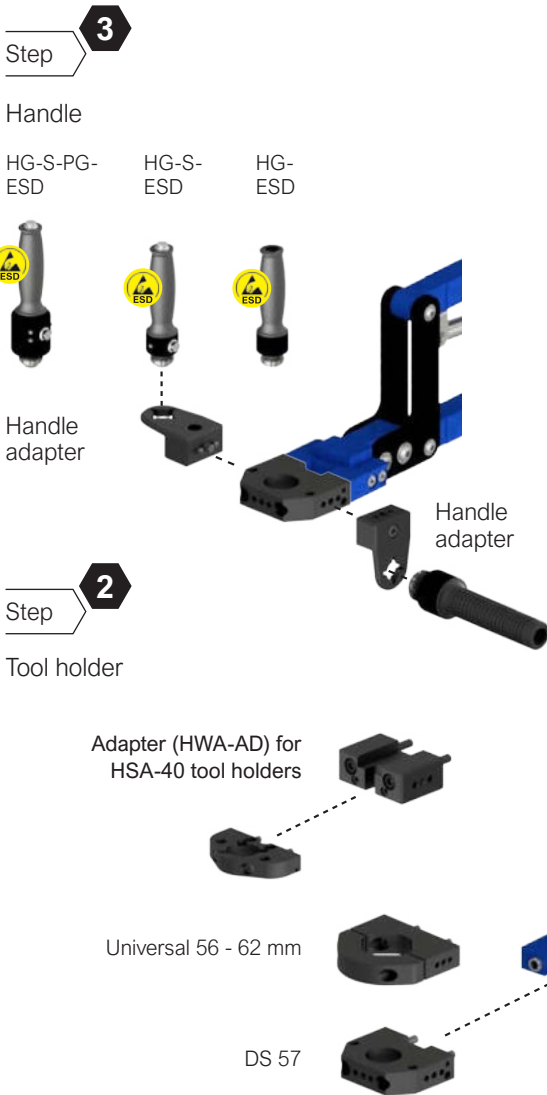
HSA-150

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**.

Designed as pure handling swivel arm **HSA-150** (without sensors) or as **HSA-150-XY** with sensors and integrated position monitoring (PoSys).



Use the following steps to assemble your handling swivel arm and select the optimal components from the HSA-150 series for your application.

Step 1 Page 10

Choose between the variant HSA-150 and HSA-150-XY

Step 2 Page 12

Choose a tool holder

Step 3 Page 13

Choose a handle

Step **1**
Variant of the handling swivel arm (Size HSA-150)

			HSA-150	HSA-150-XY
Absolute XY position sensor			--	✓
Position controller (PoSys) integrated in the bracket			--	✓
Working radius	[mm]	min.	491	491
see Page 11	[mm]	max.	1151	1151
Lifting height ↑	[mm]	max.	317	317
Lifting height ↓	[mm]	max.	260	260
Weight of handling swivel arm	[kg]	approx.	15,4	15,7
Reaction torque	[Nm]	up to max.	150	150
Tool weight	[kg]	max.	15	15
Operating pressure (weight compensation)	[bar]	max.	6	6
Article number			H-6001245	see Page 11

HSA-150 | HSA-150-XY – Robust designed handling swivel arm

The HSA swivel arm is made up of 3 main elements: Bracket, Rotary arm and Parallel arm.

The swivel arm is assembled with the mounting plate located on the bracket. Bracket and parallel arm are connected to each other via the front and rear rotary axis of the swivel arm. This design allows the comfortable reachability of the positions located in the working area of the swivel arm.

The weight compensation is carried out by the pneumatic cylinder attached to the parallel arm and is connected to a pressure reducer on the customer's side. The compressed air setting for the weight compensation depends on the design of the swivel arm as well as on the installed tool (nutrunner).

The swivel arm is prepared for mounting a tool holder and a handle.

HSA-150-XY – Position monitoring of assembly tool

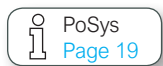
Fixed sequences have to be observed by a lot of applications of the hand-guided and the semi-automated assembly.

Equipped with an XY sensor system and with an position controller (PoSys) integrated in the bracket, the HSA-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 control system via the screw position.

Other features:

- XY position sensors integrated in the rotary axes
- 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 DSM control system, for power supply via control system or plug-in power supply unit
- TCP/IP interface for communication with the DSM application software
- Optional Profibus interface, Profinet interface or EtherCAT interface for connection to a higher-level control system



HSA-150-XY equipped with position controller PoSys | Executions

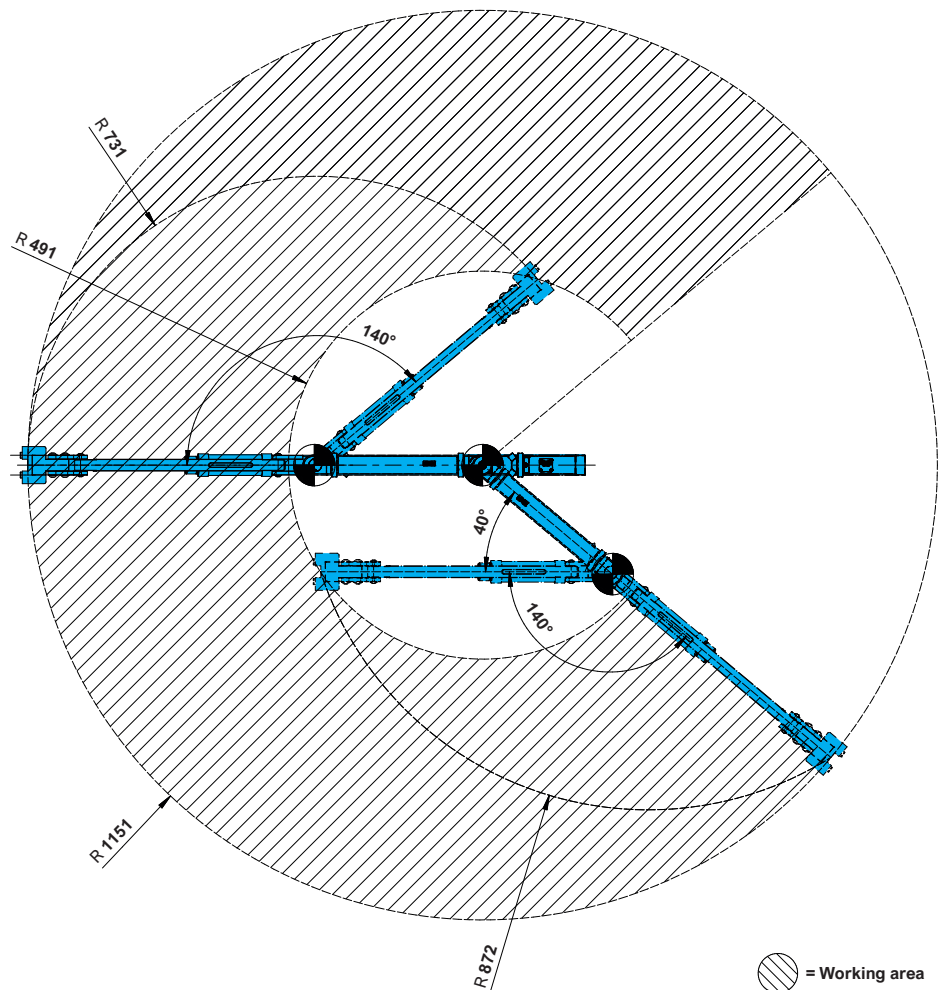
Type		Article number
HSA-150-XY-PB	Handling swivel arm with XY sensors and integrated PoSys with Profibus interface	H-6001241
HSA-150-XY-PN	Handling swivel arm with XY sensors and integrated PoSys with Profinet interface	H-6001240
HSA-150-XY-EC	Handling swivel arm with XY sensors and integrated PoSys with EtherCAT interface	H-6001242

Equipment option

Type		Article number
Plug-in power supply unit AC 230 V / 50 Hz DC 24 V / 1 A (for use without DSM control system)		DSM-600611

System bus accessories

Type		Article number
System bus cable 2 m		MS-1003002
System bus cable 5 m		MS-1003005
System bus terminating resistor		MS-1003030
Y-piece for system bus connection		MS-1003046

Working area
HSA-150 / HSA-150-XY


Step **2**

The tool / nutrunner is attached to the handling swivel arm with a suitable holder. Tool holders adapted to the size of the DSM nutrunners that can be used can be selected here. Adaptation of third-party products is made with the universal tool holder or a customised solution on request.

Handling tool holder for the HSA-150 series

Type	Tool holder for	Article number
HWA-150-DS57	DS 57 Built-in nutrunner	H-6008157
HWA-150-Uni-56-62	56 - 62 mm clamping diameter, Universal tool holder	H-6008155

The tool holders of the HSA-40 can be attached to the handling swivel arm HSA-150 with the help of a tool holder adapter.

Handling tool holder adapter for the HSA-150 series

Type		Article number
HWA-150-AD	Adaptation of tool holders type „HWA-40“ to HSA-150	H-6008415

Handling tool holder for size HSA-40 for use with adapter HWA-150-AD

Type	Tool holder	Article number
HWA-40-DS34/DS44	DS 34 / DS 44 Built-in nutrunner	H-6008434
HWA-40-DSH34	DSH 34 Hand-held nutrunner	H-6008234
HWA-40-DSH38	DSH 38 Hand-held nutrunner	H-6008238
HWA-40-DSH44	DSH 44 Hand-held nutrunner	H-6008244
HWA-40-Uni-36-42	36 - 42 mm clamping diameter, Universal tool holder	H-6008405

Step **3**

Ergonomically formed handles for precise guidance of the tool (nutrunner). Versatile mounting possibilities via handle adapter. Execution with start button for the direct forwarding of the start signal to the control system. Variant with rotary switch for switching between the preselected sequence programme and an alternative sequence.

Handle

Type		Article number
HG-ESD	Standard handle in ESD-compliant design	H-6007820
HG-S-ESD	Handle with start button (double) in ESD-compliant design	H-6007825
HG-S-PG-ESD	Handle with start button (double) and programme switchover in ESD-compliant design	H-6007830

Standard adapter for the vertical and horizontal assembly of the handle. The installation can be made on the right side as well as on the left side of the tool holder of the handling swivel arm.

Handle adapter for the HSA-150 series

Type		Article number
HG-A-H150-300-600	Handle adapter kit HSA-150 / HSA-300 / HSA-600	H-6007885

Choose the appropriate 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 is made 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 the HSA-150 series

Type	Connection	Cable length	Article number
HG-K-DS34-44-160	from HG-S-ESD to DS 34 / DS 44	160 mm	H-6007940
HG-K-DS34-44-300	from HG-S-ESD to DS 34 / DS 44	300 mm	H-6007941
HG-K-DS57-80-300	from HG-S-ESD to DS 57 / DS 80	300 mm	H-6007959
HG-K-DS57-80-500	from HG-S-ESD to DS 57 / DS 80	500 mm	H-6007960
HG-K-24V-4.XX	from HG-S-ESD to MultiBasic / MultiClassic / MultiPro	5 m	H-6007905
HG-K-24V-5.XX	from HG-S-ESD to MultiPro 3G	5 m	H-6007910
HG-K-24-oK	from HG-S-ESD to ... (open cable ends)	5 m	H-6007915
HGPG-K-DS34-44-160	from HG-S-PG-ESD to DS 34 / DS 44	160 mm	H-6007744
HGPG-K-DS34-44-300	from HG-S-PG-ESD to DS 34 / DS 44	300 mm	H-6007745
HGPG-K-24-oK	from HG-S-PG-ESD to ... (open cable ends)	2 m	H-6007720
HGPG-K-DS57-80-300	from HG-S-PG-ESD to DS 57 / DS 80	300 mm	H-6007756
HGPG-K-DS57-80-500	from HG-S-PG-ESD to DS 57 / DS 80	500 mm	H-6007757

HSA-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 25 kg**.

Designed as pure handling swivel arm **HSA-300** (without sensors) or as **HSA-300-XY** with sensors and integrated position monitoring (PoSys).

Step **3**

Handle

HG-S-PG-ESD

HG-S-ESD

HG-ESD



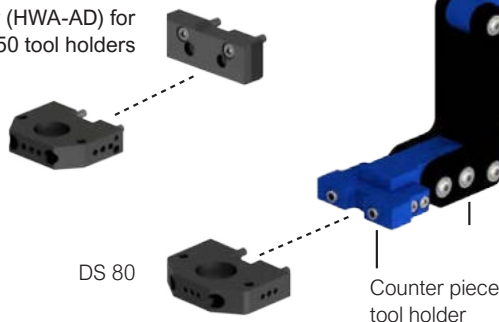
Step **2**

Tool holder

Adapter (HWA-AD) for HSA-150 tool holders

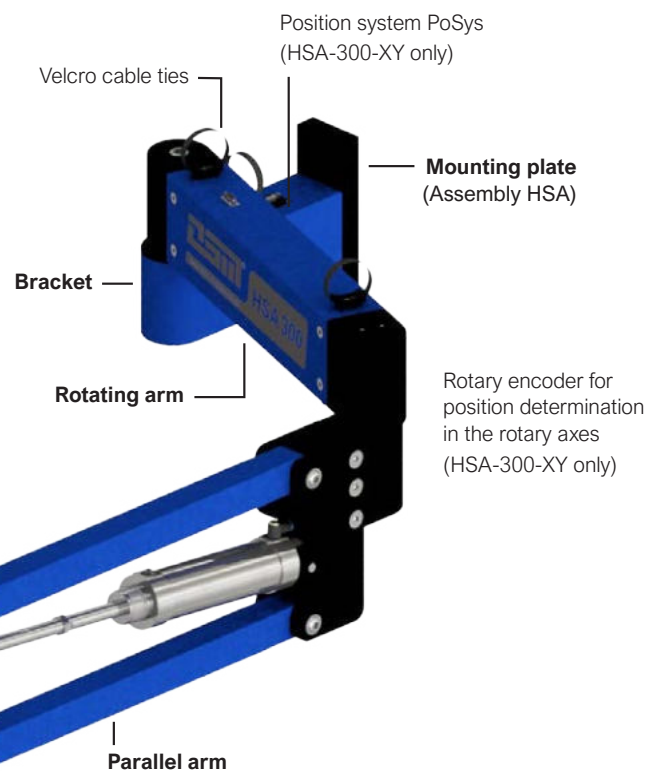
DS 80

Counter piece tool holder



Step **1**

HSA-300 / HSA-300-XY



Use the following steps to assemble your handling swivel arm and select the optimal components from the HSA-300 series for your application.

Step **1** [Page 15](#)

Choose between the variant HSA-300 and HSA-300-XY

Step **2** [Page 17](#)

Choose a tool holder

Step **3** [Page 18](#)

Choose a handle

Step 1

Variant of the handling swivel arm (Size HSA-300)

			HSA-300	HSA-300-XY
Absolute XY position sensor			--	✓
Position controller (PoSys) integrated in the bracket			--	✓
Working radius see Page 16	[mm]	min.	637	637
	[mm]	max.	1500	1500
Lifting height ↑	[mm]	max.	351	351
Lifting height ↓	[mm]	max.	426	426
Weight of handling swivel arm	[kg]	approx.	41,4	41,7
Reaction torque	[Nm]	up to max.	300	300
Tool weight	[kg]	max.	25	25
Operating pressure (weight compensation)	[bar]	max.	6	6
Article number			H-6001345	see Page 16

HSA-300 | HSA-300-XY – Robust designed handling swivel arm

The HSA swivel arm is made up of 3 main elements: Bracket, Rotary arm and Parallel arm.

The swivel arm is assembled with the mounting plate located on the bracket. Bracket and parallel arm are connected to each other via the front and rear rotary axis of the swivel arm. This design allows the comfortable reachability of the positions located in the working area of the swivel arm.

The weight compensation is carried out by the pneumatic cylinder attached to the parallel arm and is connected to a pressure reducer on the customer's side. The compressed air setting for the weight compensation depends on the design of the swivel arm as well as on the installed tool (nutrunner).

The swivel arm is prepared for mounting a tool holder and a handle.

HSA-300-XY – Position monitoring of assembly tool

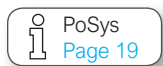
Fixed sequences have to be observed by a lot of applications of the hand-guided and the semi-automated assembly.

Equipped with an XY sensor system and with an position controller (PoSys) integrated in the bracket, the HSA-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 control system via the screw position.

Other features:

- XY position sensors integrated in the rotary axes
- 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 DSM control system, for power supply via control system or plug-in power supply unit
- TCP/IP interface for communication with the DSM application software
- Optional Profibus interface, Profinet interface or EtherCAT interface for connection to a higher-level control system



HSA-300-XY equipped with position controller PoSys | Executions

Type		Article number
HSA-300-XY-PB	Handling swivel arm with XY sensors and integrated PoSys with Profibus interface	H-6001341
HSA-300-XY-PN	Handling swivel arm with XY sensors and integrated PoSys with Profinet interface	H-6001340
HSA-300-XY-EC	Handling swivel arm with XY sensors and integrated PoSys with EtherCAT interface	H-6001342

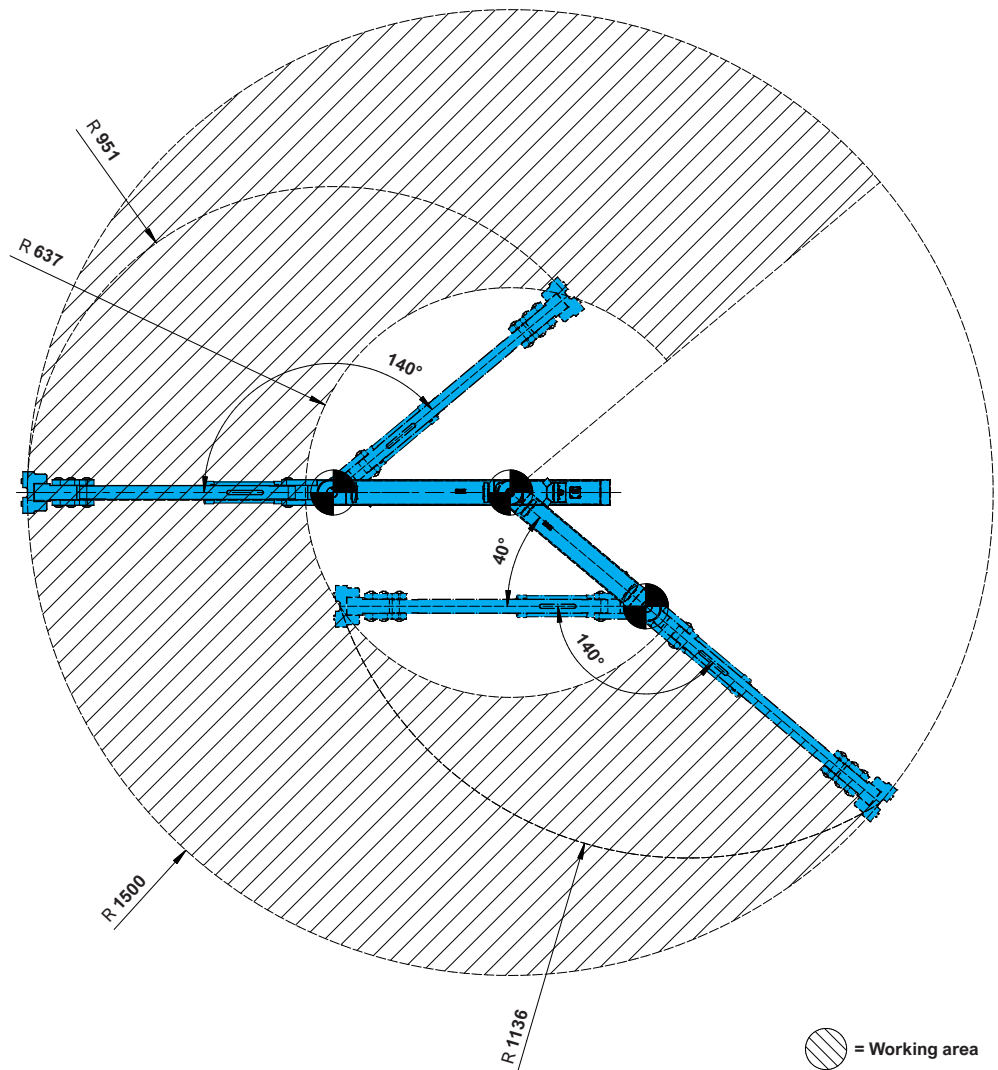
Equipment option

Type		Article number
Plug-in power supply unit AC 230 V / 50 Hz DC 24 V / 1 A (for use without DSM control system)		DSM-600611

System bus accessories

Type		Article number
System bus cable 2 m		MS-1003002
System bus cable 5 m		MS-1003005
System bus terminating resistor		MS-1003030
Y-piece for system bus connection		MS-1003046

**Working area
HSA-300 / HSA-300-XY**



Step **2**

The tool / nutrunner is attached to the handling swivel arm with a suitable holder. Tool holders adapted to the size of the DSM nutrunners that can be used can be selected here. Adaptation of third-party products is made with the universal tool holder or a customised solution on request.

Handling tool holder for the HSA-300 series

Type	Tool holder for	Article number
HWA-300-DS80	DS 80 Built-in nutrunner	H-6008380

The tool holders of the HSA-150 can be attached to the handling swivel arm HSA-300 with the help of a tool holder adapter.

Handling tool holder adapter for the HSA-300 series

Type		Article number
HWA-300-AD	Adaptation of tool holders type „HWA-150“ to HSA-300	H-6008153

Handling tool holder for size HSA-150 for use with adapter HWA-300-AD

Type	Tool holder for	Article number
HWA-150-DS57	DS 57 Built-in nutrunner	H-6008157
HWA-150-Uni-56-62	56 - 62 mm clamping diameter, Universal tool holder	H-6008155

Step **3**

Ergonomically formed handles for precise guidance of the tool (nutrunner). Versatile mounting possibilities via handle adapter. Execution with start button for the direct forwarding of the start signal to the control system. Variant with rotary switch for switching between the preselected sequence programme and an alternative sequence.

Handle

Type		Article number
HG-ESD	Standard handle in ESD-compliant design	H-6007820
HG-S-ESD	Handle with start button (double) in ESD-compliant design	H-6007825
HG-S-PG-ESD	Handle with start button (double) and programme switchover in ESD-compliant design	H-6007830

Standard adapter for the vertical and horizontal assembly of the handle. The installation can be made on the right side as well as on the left side of the tool holder of the handling swivel arm.

Handle adapter for the HSA-300 series

Type		Article number
HG-A-H150-300-600	Handle adapter kit HSA-150 / HSA-300 / HSA-600	H-6007885

Choose the appropriate 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 is made 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 the HSA-300 series

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

Position controller PoSys

Positioning electronics integrated in the pedestal of the **HST** (Fig.) as well as in the bracket of the **HSA**.

The position of the coordinates is entered using the teach-in procedure, whereby the corresponding position is approached with the handling system and stored in the position electronics with the PoSys software or via field bus.

The respective position is selected either via the system bus or from a PLC via field bus.

When the operator moves to the preselected position the PoSys positioning system reports this back via the system bus / field bus. The higher-level control system (DSM control system / PLC) can start the further processes.

The interaction of PoSys and the control system / PLC checks whether a defined operating sequence is maintained.

