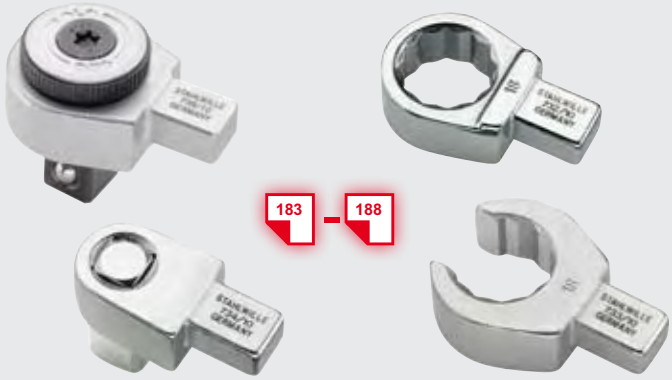
Torque tools,
Torque testers

Torque family
Overview



MANOSKOP® 714

Electromechanical torque and angle-controlled wrench

Benefits at a glance

- **Up to 200 joints**
  can be programmed in up to 25 sequences

- **The wrench reminds the user automatically**
  when calibration is due – either by the number of joints or the time interval

- **Display deviation value**
  ± 2 % for torque and
  ± 1% for angle

168

- **Fully-automated calibration and adjustment of torque and angle**
  using the perfectControl calibrating unit No 7794-3

- **In a sturdy plastic case with foam inlays**
  (size 40 in steel case)

- **Supplied with a 4 AAA 1.5 V batteries.**
  1.2 V AAA NiMH rechargeable batteries can also be used.

- **Optional extras:**
  Li-Ionen battery No 7195-2 and charger No 7160

No 7195-2

No 7160

- **Indicating and with cut-out**
- **4 measuring methods (torque, angle, torque backed up by angle, angle backed up by torque)**
- **High-definition graphical colour display with additional side-mounted indicator lamps**
- **Freely configurable menu structure**
- **Includes Sensomaster software for easy configuration of the tool**
- **3 function modes: cut-out, peak (indicating mode displaying peak reading) and track (indicating mode displaying current value)**
- **Angle-controlled measurement without a reference arm**
- **Data storage (≤ 2,500 tightening jobs)**
- **Acoustic and visual assessment of the joint**
- **Clockwise and anticlockwise tightening**
- **Tactile, visual and acoustic trigger signals**
- **Torque and angle are simultaneously visible**
- **All readings are independent of the point of application of force with sizes 1, 2 and 4**

Individually configurable menus

Automatic key-lock
prevents inadvertent changes

Fast, accurate setting
via keypad

Indicator lamps clearly visible from all sides
Yellow light: advance warning threshold reached
Green light: within the target range
Red light: reading is outside the tolerance range

With certificate

Own ident number
can be stored in the wrench

Micro USB interface

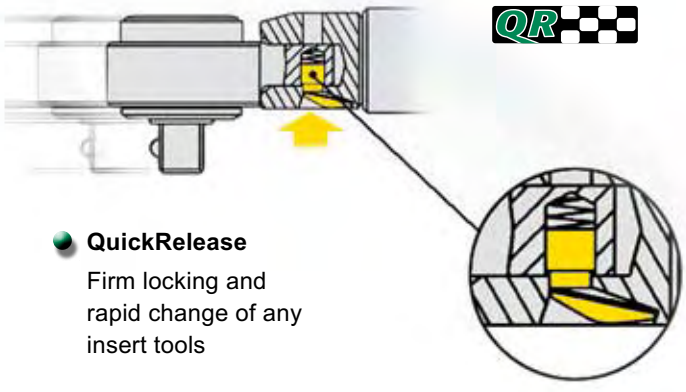
Battery compartment
with smooth-action bayonet fitting

Sensotork® 713R

Electronic torque wrench/angle-controlled wrench

Benefits at a glance

S/e/n/s/o/t/o/r/k/®



QuickRelease
Firm locking and rapid change of any insert tools

Easy extension setting
Where the insert tool requires an extension adjustment, simply enter the new value. Recalculation using complicated formulae is no longer necessary.

- **Angle-controlled measurements without a reference arm**
- **Broad measuring range** (5% – 100% of rated value)
- **Extremely wide range of angle measurement**
- **Units of measurement** N m / ft.lb / in.lb
- **Clockwise and anticlockwise use**
- **For use with all insert tools 9x12 and 14x18**
- **QuickSelect** rapid recall of predefind sets of operating parameters
- **Defined sequence**
  A number of repeated joints can be grouped as a defined sequence
- **Readings** can either be directly stored, transmitted to the PC or simply displayed
- **Password protection** tamper proof use
- **Freely selectable names for each series of test**
- **Various languages** available
- Works-specific **identifier**
- **Programmable** via PC
- **Resistant to oils, grease, fuels, brake fluids and Skydrol**
- **Wide range of application**: –20°C to +60°C
- **Meets requirements of DKD-R 3-7, Class 2**
- **Deviation of indication ± 1%**

- **Amazingly simple handling**
  All functions are selected using the arrow keys. The visual guidance system makes operation a simple matter.

- **Measurements independent of the point of application of force**
  (sizes 6 and 20)

- **Data output**
  USB interface

- **Warning signals**
  Can be selected as either acoustic (buzzer), tactile (vibration in the handle), visual (LEDs and display) or a combination of these. The point at which the warning signal is triggered can be freely set.

MANOSKOP® 730D

Electromechanical torque wrench

Benefits at a glance

QR

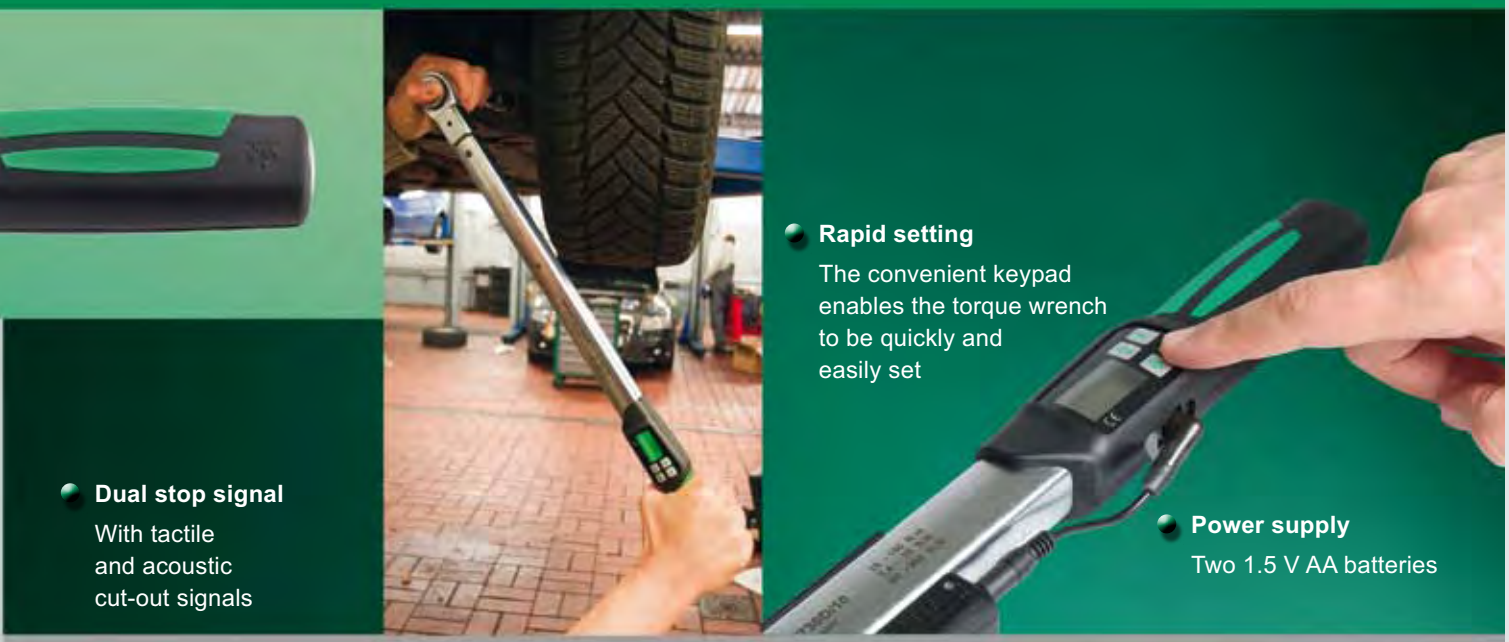
- **QuickRelease safety lock**

No 7395-1

- **The square drive**
  Enables a broad range of insert tools

- **Measure, cut-out and record:**
  When the preset torque is reached, the torque wrench cuts out and indicates this fact to the user via a definite tactile and audible signal. The tightening torques are stored. The data can be transferred to a PC for evaluation and documentation.

- **Cut-out and indicating**
- **Displays the torque actually applied** after the wrench cuts out. In this way, the user has the opportunity to optimise his or her working methods.
- **Units of measurement:** N m / ft.lb / in.lb
- **Automatic keypad lock**
- **Display also works for anticlockwise torque**
- **Angle-controlled measurement without a reference arm** using a supplementary module
- **Overload protection** by means of acoustic and visual signals
- **Automatic compensation to achieve correct tightening torque** even if a changed extension is entered
- **Different tolerance limits** can be set for each joint
- **Visual red and green signals** in the display confirm the status of the joint
- **Additional security for presets** using PIN code
- **Automatic notification of the next calibration date**
- **Calibration** with perfectControl calibrating and adjusting unit No 7794-2
- **Deviation of indication ± 2%**



Dual stop signal
With tactile and acoustic cut-out signals

Rapid setting
The convenient keypad enables the torque wrench to be quickly and easily set

Power supply
Two 1.5 V AA batteries

Easy-to-read display

Angle controlled tightening
Simply attach the Angle Module No 7395-1 and connect the cable to the interface

Data output
USB interface

2-component handle
Has ergonomically designed, green softer layers and is resistant to oils, grease, fuels, brake fluids and Skydrol.

MANOSKOP® 730N

Mechanical torque wrench

Benefits at a glance

The square drive
Enables a broad range of tightening tools

Protected mechanism
Extremely resistant to mechanical wear, protected against dirt inside the outer housing

172

Integrated clockwise and anticlockwise operation
Simply by turning over the wrench and insert tool

QuickRelease safety lock
Firm locking and rapid change of insert tools thanks to the QuickRelease safety lock

- Accurate **one-handed setting** – quick & easy control using the knob at the end of the handle
- **Audible setting positions**
- **Fail-safe setting mechanism** in the knob
- Clearly readable **twin scale** (N m and ft.lb)
- Noticeable **double signals** when the preset torque is reached
- Square drives with **QuickRelease safety locks –** for 9x12 mm and 14x18 mm
- **Handle** is resistant to oils, grease, fuels, brake fluids and Skydrol
- **Deviation of indication ± 3%**

- **Two-component handle**
  Made of extremely tough, impact resistant plastic with a kind-to-the-hands softer layer

- **QuickSelect Rapid setting:**
  Pull, set, lock. All using the one setting knob

- **No need for manual reset to zero**
  Thanks to the wear-free triggering cam system. The measuring element is only under load while force is being applied.

- **Ring scale with fine settings**
  For the black measuring range on the twin scale

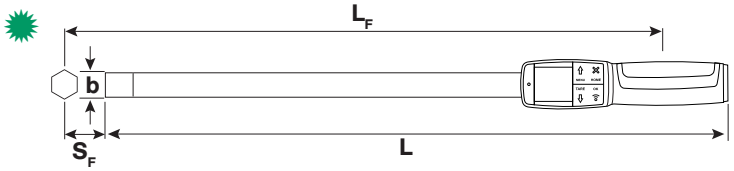
- **Easily readable double scale**
  The colour differentiation between the N m and ft.lb scales simplifies fine setting

- **Rapid adjustment**
  From outside, no disassembly of the torque wrench

MANOSKOP® 714 – indicating and cut-out Electromechanical torque and angle-controlled wrench

- 4 measuring modes (torque, angle, torque backed up by angle, angle backed up by torque)
- high-definition colour display with additional side-mounted indicator lamps
- freely configurable menu structure
- Optionally: Li-ion battery No 7195-2 and charger No 7160
- 3 function modes: cut-out, peak (indicating mode with peak value) and track (indicating mode with current value)
- Micro USB 2.0 interface
- bayonet connection for battery compartment
- QuickRelease safety lock change system for insert tools 182 – 188
- angle-controlled measurement without a reference arm
- data storage (≤2500 tightening jobs)
- as many as 200 joints can be programmed in up to 25 preset sequences.
- different tolerance limits can be set for each joint
- acoustic and visual assessment of the joint
- rapid, accurate setting via keypad
- the automatic keypad lock prevents inadvertent changes
- overload protection by means of acoustic and visual signals and a fail-safe system (clockwise)
- automatic notification of the next calibration date, either by the number of joints or the time interval
- fully automated calibrating and adjusting using the perfectControl calibrating and adjusting unit No 7794-2 (torque) or 7794-3 (torque and angle)
- units of measure: N m, ft.lb, in.lb.
- tightening torque is automatically corrected if a deviating extension is entered
- immediately reusable after release
- clockwise and anticlockwise tightening – it may be necessary to refit the insert tool rotated through 180° for anticlockwise tightening in the cut-out mode
- tactile, visual and acoustic trigger signal.
- torque and angle are simultaneously visible
- all readings are independent of the point of application of force (with sizes 1, 2 and 4)
- safe handling due to ergonomically designed handle (resistant to oils, grease, fuels, brake fluid and Skydrol)
- 2 certificates (torque, angle)
- in sturdy plastic case (size 40 in steel case)
- design patent, other patents applied for
- supplied with Sensomaster software, USB cable, 4 AAA/LR03 micro-batteries, 1.5 V. AAA, 1.2 V, micro NiMH rechargeable batteries can be used
- display resolution, angle 0.1°
- display deviation value, angle ±1%, ±1 digit
- display resolution, torque (≤40 N m: 0.01 N m; >40 N m: 0.1 N m
- display deviation value, angle ±2%, ±1 digit

714 Basic wrenches with tool carrier for insert tools



Code	size				mm	b mm	h mm	L mm	L_F mm	S_F mm	g	g with box
9650090 1	1	1–10 N m	0.75 –7.5 ft.lb	9–90 in.lb	9x12	28	23	226	188	17.5	370	795
9650090 2	2	2–20 N m	1.5–15 ft.lb	18–180 in.lb	9x12	28	23	226	188	17.5	380	805
9650090 4	4	4–40 N m	3–30 ft.lb	36–360 in.lb	9x12	28	23	252	214	17.5	420	845
9650090 6	6	6–60 N m	4.5–45 ft.lb	54–540 in.lb	9x12	28	23	393	355	17.5	810	1235
9650091 0	10	10–100 N m	7.5–75 ft.lb	90–900 in.lb	9x12	28	23	466	428	17.5	1085	1510
9650092 0	20	20–200 N m	15–150 ft.lb	180–1800 in.lb	14x18	28	23	547	516	25	1361	1896
9650094 0	40	40–400 N m	30–300 ft.lb	360–3600 in.lb	14x18	28	23	687	656	25	1765	5155

714R Basic wrenches with ratchet insert tool

714R/2

714R/20

Code	size				mm	■ "	g	g with box
96501001	**1**	1–10 N m	0,7–7,5 ft.lb	9–90 in.lb	9x12	1/4	432	857
96501002	**2**	2–20 N m	1,5–15 ft.lb	18–180 in.lb	9x12	1/4	442	867
96501004	**4**	4–40 N m	3–30 ft.lb	36–360 in.lb	9x12	1/4	482	907
96501006	**6**	6–60 N m	4,5–45 ft.lb	54–540 in.lb	9x12	3/8	965	1390
96501010	**10**	10–100 N m	7,5–75 ft.lb	90–900 in.lb	9x12	1/2	1232	1657
96501020	**20**	20–200 N m	15–150 ft.lb	180–1800 in.lb	14x18	1/2	1663	2198
96501040	**40**	40–400 N m	30–300 ft.lb	360–3600 in.lb	14x18	3/4	2275	5665

7195-2 Li-ion battery for No 714

Code	g
54101195	100

7160 Charger for Li-ion battery No 7195-2

Code	g
54100060	200

Service work & series production MANOSKOP® – indicating and cut-out

182 – 188

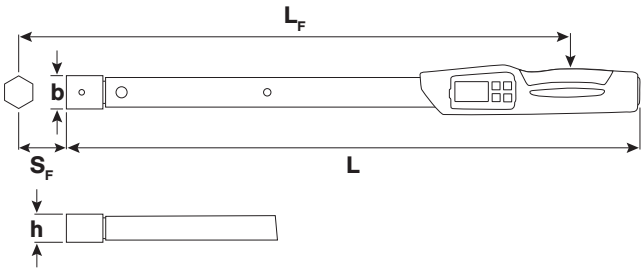
- tactile and acoustic trigger signal
- mount for interchangeable insert tools
- QuickRelease safety lock
- fast setting using convenient keypad
- automatic compensation to achieve correct tightening torque even if a changed extension is entered
- overload protection by means of acoustic and visual signals
- automatic keypad lock prevents inadvertent changes
- angle-controlled measurements without a reference arm using Angle Module No 7395-1 (refer to page 171)
- display also works for anticlockwise torque
- units of measurement: N m, ft.lb, in.lb
- different tolerance limits can be set for each joint
- visual red and green signals in the display confirm the status of the joint
- additional security for presets (function mode, trigger or preset value, unit of measurement, tolerance, save, deviating extension) using PIN code
- up to 7.500 measurements can be stored
- USB interface
- automatic notification of the next calibration date
- calibration using perfectControl calibrating unit No 7794 or calibration system No 7706
- two-component handle with ergonomically designed green softer layers (resistant to oils, grease, fuels, brake fluids and Skydrol)
- with certificate
- in sturdy plastic case (sizes 40 and 65 in steel case)
- patents applied for
- supplied with two 1.5 V AA batteries. AA/LR6, 1.2 V rechargeable cells may also be used.
- display deviation value ± 2%

5

730D Basic wrenches with tool carrier for insert tools

730D/20

QR



Code	size				Setting/display resolution Nm	ft.lb	in.lb	mm	b mm	h mm	L mm	L_F mm	S_F mm	g	g with box
96501710	**10**	10–100 N m	7.4–75 ft.lb	90–900 in.lb	0.2/0.1	0.2/0.1	2/1.0	9x12	28	23	467	426.5	17.5	1085	1510
96501720	**20**	20–200 N m	15–150 ft.lb	180–1800 in.lb	0.5/0.1	0.5/0.1	5/1.0	14x18	28	23	548	515	25	1361	1896
96501740	**40**	40–400 N m	30–300 ft.lb	360–3600 in.lb	1.0/0.1	1.0/0.1	10/1.0	14x18	28	23	688	655	25	1765	5155
96501765	**65**	65–650 N m	48–480 ft.lb	580–5800 in.lb	1.0/0.1	1.0/0.1	10/1.0	14x18	30.6	25.6	870	837	25	3300	6000

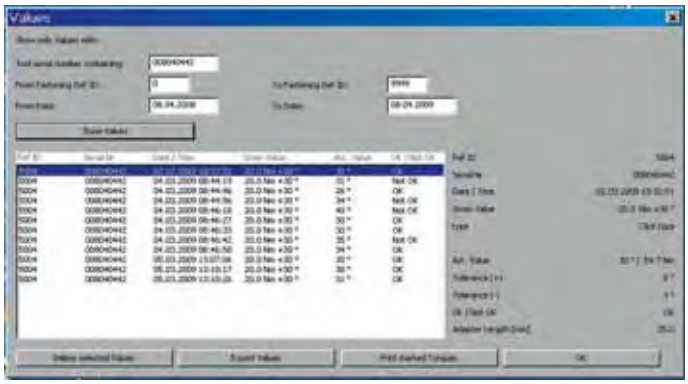
730DR Basic wrenches with ratchet insert tool

Code	size				Setting/display resolution NM	ft.lb	in.lb	mm	"	g	g with box
96501810	**10**	10–100 N m	7.4–75 ft.lb	90–900 in.lb	0.2/0.1	0.2/0.1	2/1.0	9x12	1/2	1232	1657
96501820	**20**	20–200 N m	15–150 ft.lb	180–1800 in.lb	0.5/0.1	0.5/0.1	5/1.0	14x18	1/2	1663	2198
96501840	**40**	40–400 N m	30–300 ft.lb	360–3600 in.lb	1.0/0.1	1.0/0.1	10/1.0	14x18	3/4	2232	4722
96501865	**65**	65–650 N m	48–480 ft.lb	580–5800 in.lb	1.0/0.1	1.0/0.1	10/1.0	14x18	3/4	3767	6530

7759-3 USB adaptor, jack cable and software No 7732 for No 730D

Documentation and management of readings on a PC
• Read out stored wrench data and joint readings:
- Joint identifier
- Tool serial number
- Date and time of tightening operation
- Target torque or target angle
- Torque level at which the tool cuts out
- Tightening torque or angle reached
- Tolerances
- Joint evaluation
• Storage of joint data in a database
• Delete or print highlighted joints from the database
• Export displayed joint data to a CSV file (compatible with Excel)
• 13 languages
• User management
• Define new PIN
• Delete joint data stored in wrench

System requirements:
• PC
• Microsoft Windows 98 SE or compatible operating system with USB support
• USB connection
• Installed ODBC driver for Access data



Code	L m	⚖ g
96 58 36 27	1.5	137

7395-1 Angle Module for No 730D

Patents applied for, angle-controlled measurement without a reference arm. For torque wrench No 730D from software release 1.5.8. Torque wrenches No 730D fitted with older releases of the software can be upgraded. Simply attach the module and connect to the torque wrench interface and the No 730D can be used for angle controlled tightening. The measurements are read off and settings made via the torque wrench. When the preset snug point is reached, the torque wrench automatically switches over to angle-controlled measurement in degrees. Depending on the options selected, the torque wrench will either cut out when the preset angle is reached or an alarm is heard. One 1.5 V battery is included in the package. Deviation of indication ± 1%.

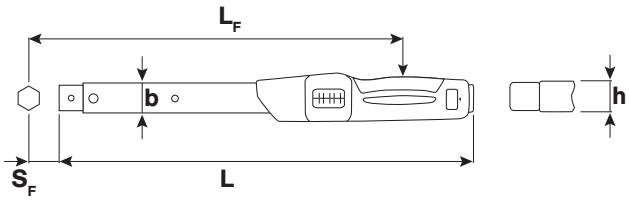
Code	⚖ g
96 58 36 28	387

Service MANOSKOP® 730N

182 – 188

- cut-out type
- mount for interchangeable insert tools
- QuickRelease safety lock
- fast, accurate setting thanks to QuickSelect quick-action adjuster
- dual stop signal
- easy-to-read double scale with colour coding to differentiate between N m and ft.lb scales
- the measuring element is only under load while force is being applied, no need for manual reset to zero
- can be applied for either clockwise or anticlockwise tightening by turning the inserts over
- any force applied to the tool after the 'click' or applied in the opposite direction to the current function – e.g. forcible loosening of a jammed screw - does not act on the trigger mechanism and cannot cause damage to it.
- two-component handle with ergonomically designed green softer layers (resistant to oils, grease, fuels, brake fluids and Skydrol)
- calibration using perfectControl calibrating unit No 7794 or calibration system No 7706. Adjustment without disassembly.
- with certificate
- registered design
- display deviation value ± 3%

730N Basic wrenches with tool carrier for insert tools



730N/10

QR

Code	size					Fine scale	mm	b mm	h mm	L mm	L_F mm	S_F mm	g
50 18 10 02	2	2–20 N m	20–180 in.lb	1 N m	10 in.lb	0.2 N m	9x12	28	23	275	226	17.5	737
50 18 10 05	5	10–50 N m	7–37 ft.lb	5 N m	1 ft.lb	0.25 N m	9x12	28	23	330	280.5	17.5	831
50 18 10 10	10	20–100 N m	15–75 ft.lb	10 N m	2.5 ft.lb	0.5 N m	9x12	28	23	386	336	17.5	988
50 18 10 12	12	25–130 N m	20–95 ft.lb	10 N m	2.5 ft.lb	0.5 N m	14x18	28	23	421	379	25	1128
50 18 10 20	20	40–200 N m	30–150 ft.lb	10 N m	5 ft.lb	1 N m	14x18	28	23	467	424.5	25	1264
50 18 10 40	40	80–400 N m	60–300 ft.lb	20 N m	10 ft.lb	2 N m	14x18	28	23	607	564.5	25	1655
50 18 10 65	65	130–650 N m	100–480 ft.lb	50 N m	20 ft.lb	2.5 N m	14x18	30.6	25.6	890	848	25	3231
50 58 10 02	a/2	20–180 in.lb	1.5–15 ft.lb	10 in.lb	0.5 ft.lb	2 in.lb	9x12	28	23	275	226	17.5	737
50 58 10 05	a/5	90–450 in.lb	7–37 ft.lb	50 in.lb	1 ft.lb	2.5 in.lb	9x12	28	23	330	280.5	17.5	831
50 58 10 10	a/10	180–900 in.lb	15–75 ft.lb	100 in.lb	2.5 ft.lb	5 in.lb	9x12	28	23	386	336	17.5	988
50 58 10 20	a/20	350–1800 in.lb	30–150 ft.lb	100 in.lb	5 ft.lb	10 in.lb	14x18	28	23	467	424.5	25	1264
50 58 10 40	a/40	60–300 ft.lb	800–3600 in.lb	20 ft.lb	100 in.lb	2 ft.lb	14x18	28	23	607	564.5	25	1655

730NR Torque wrenches with permanently installed ratchet

in sturdy plastic case (size 65 in steel case). Deviation of indication ± 4%.

730NR/20QR FK

730NR/40 FK

Code	size					Fine scale	■ "	b_1 mm	b_2 mm	h_1 mm	h_2 mm	L mm	L_F mm	g	g with box
96 50 21 05	5QR FK*	10–50 N m	7–37 ft.lb	5 N m	1 ft.lb	0.25 N m	3/8	28	29	23	14.5	372.5	291	961	1386
96 50 21 10	10QR FK*	20–100 N m	15–75 ft.lb	10 N m	2.5 ft.lb	0.5 N m	1/2	28	29	23	14.5	428.5	346.5	1129	1554
96 50 21 20	20QR FK*	40–200 N m	30–150 ft.lb	10 N m	5 ft.lb	1 N m	1/2	28	41	23	18	526	438	1589	2014
96 50 21 40	40 FK	80–400 N m	60–300 ft.lb	20 N m	10 ft.lb	2 N m	3/4	28	50	23	30.7	657	564.5	2122	2657
96 50 22 65	65 FK-HD**✹	130–650 N m	100–480 ft.lb	50 N m	20 ft.lb	2.5 N m	3/4	30.6	50	25.6	30.7	940	915	3698	6188

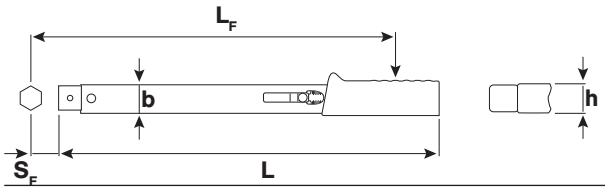
* Ratchet has quick-release safety lock QR
** available from spring 2013

Service MANOSKOP® 730

- cut-out type
- mount for interchangeable insert/shell tools
- QuickRelease safety lock (sizes 5–65)
- rapid setting (sizes 2–65)
- dual stop signal
- twin scales N m/ft.lb and N m/in.lb (sizes 5–80)
- the measuring element is only under load while force is being applied, no need for manual reset to zero
- can be applied for either clockwise or anticlockwise tightening by turning the inserts over
- any force applied to the tool after the 'click' or applied in the opposite direction to the current function – e.g. forcible loosening of a jammed screw - does not act on the trigger mechanism and cannot cause damage to it.
- calibration using perfectControl calibrating unit No 7794 or calibration system No 7706. Adjustment without disassembly.
- with certificate
- display deviation value ± 4%

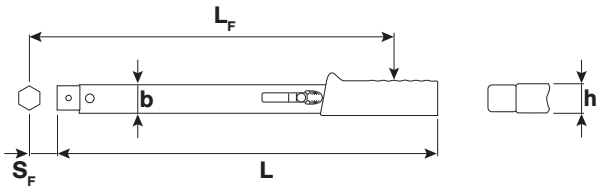
182 – 188

730 Basic wrenches with tool carrier for insert tools



730/2

Code	size			mm	b mm	h mm	L mm	L_F mm	S_F mm	g
50 18 00 02	2	4–20 N m	0.5 N m	9x12	27.5	23	178.5	174	17.5	315
50 18 00 04	4	8–40 N m	1 N m	9x12	27.5	23	222	218	17.5	395
50 58 00 01	a/2-1	17.5–87.5 in.lb	2.5 in.lb	9x12	27.5	23	178.5	174	17.5	315
50 58 00 02	a/2	30–175 in.lb	5 in.lb	9x12	27.5	23	178.5	174	17.5	315
50 58 00 04	a/4	70–350 in.lb	10 in.lb	9x12	27.5	23	222	218	17.5	395

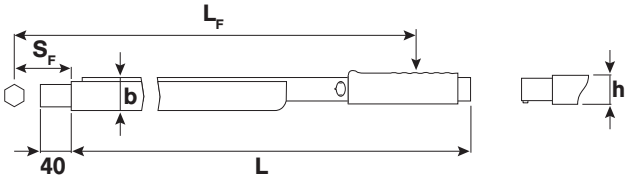


730/5

QR

Code	size					mm	b mm	h mm	L mm	L_F mm	S_F mm	g
50 18 00 05	5	6–50 N m	5–36 ft.lb	2 N m	1 ft.lb	9x12	28	23	315	288	17.5	805
50 18 00 10	10	20–100 N m	15–72.5 ft.lb	2.5 N m	2.5 ft.lb	9x12	28	23	370	343	17.5	965
50 18 00 12	12	25–130 N m	20–95 ft.lb	2.5 N m	2.5 ft.lb	14x18	28	23	410	390	25	1100
50 18 00 20	20	40–200 N m	30–145 ft.lb	5 N m	5 ft.lb	14x18	28	23	455	435	25	1250
50 18 00 40	40	80–400 N m	60–300 ft.lb	10 N m	10 ft.lb	14x18	28	23	590	570	25	1880
50 18 00 65	65	130–650 N m	100–480 ft.lb	20 N m	20 ft.lb	14x18	30.6	25.6	875	855	25	3280
50 58 00 05	a/5	6–50 N m	50–440 in.lb	2 N m	10 in.lb	9x12	28	23	315	288	17.5	805
50 58 00 10	a/10	20–100 N m	180–880 in.lb	2.5 N m	20 in.lb	9x12	28	23	370	343	17.5	965
50 58 00 12	a/12	25–130 N m	225–1150 in.lb	2.5 N m	25 in.lb	14x18	28	23	410	390	25	1100
50 58 00 20	a/20	40–200 N m	350–1750 in.lb	5 N m	50 in.lb	14x18	28	23	455	435	25	1250

730 Basic wrench with tool carrier for shell tools



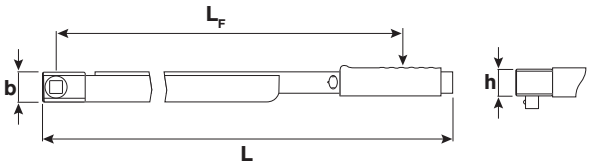
Code	size					mm	b mm	h mm	L mm	L_F mm	S_F mm	g
50 18 00 80	80	160–800 N m	120–600 ft.lb	20 N m	20 ft.lb	24,5x28	46	43	970	990	95	5377

Use shell adaptor No 7370/80 to make 14 x 18 mm insert tools fit.

Standard MANOSKOP® 720Nf

- cut-out type
- easy setting
- dual stop signal
- twin scales N m/ft.lb
- anticlockwise torquing thanks to swap-over square drive
- all the sensitive components are protected by the sturdy tubular steel housing in the U-shaped aluminium profile
- calibration using perfectControl calibrating unit No 7794 or calibration system No 7706. Adjustment without disassembly.
- with certificate
- display deviation value ± 4%

720Nf Torque wrench with square drive

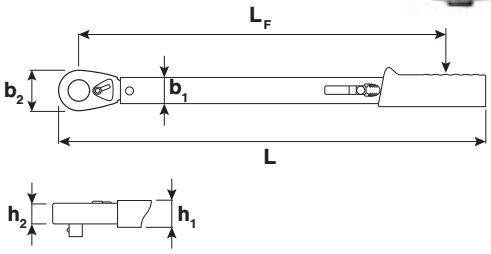


Code	size					■ "	b mm	h mm	L mm	L_F mm	S_F mm	g
50190081	**80**	160–800 N m	120–600 ft.lb	20 N m	20 ft.lb	3/4	45	42	1034	938	0	6102

Standard MANOSKOP® 721

- cut-out type
- rapid setting
- dual stop signal
- twin scales N m/ft.lb
- the measuring element is only under load while force is being applied, no need for manual reset to zero
- any force applied to the tool after the “click” or applied in the opposite direction to the current function – e.g. forcible loosening of a jammed screw – does not act on the trigger mechanism and cannot cause damage to it.
- all the sensitive components are protected by the sturdy tubular steel housing
- calibration using perfectControl calibrating unit No 7794 or calibration system No 7706. Adjustment without disassembly.
- with certificate
- display deviation value ± 4%

721 Torque wrenches with reversible ratchet



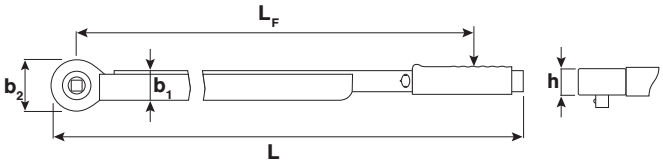
Code	size					■ "	b_1 mm	b_2 mm	h_1 mm	h_2 mm	L mm	L_F mm	g
50200005	**5**	6–50 N m	5–36 ft.lb	2 N m	1 ft.lb	3/8	28	27.5	23	14.5	352	293	900
50200015	**15**	30–150 N m	25–110 ft.lb	5 N m	5 ft.lb	1/2	28	41	23	18	452	387	1395
50200030	**30**	60–300 N m	50–220 ft.lb	10 N m	10 ft.lb	1/2	28	44	23	27.5	553	486	1720

size 30 with push through square drive (spare square drive, refer to page 189)

Standard MANOSKOP® 721Nf

- cut-out type
- easy setting
- dual stop signal
- twin scales N m/ft.lb
- anticlockwise torquing thanks to swap-over square drive
- all the sensitive components are protected by the sturdy tubular steel housing in the U-shaped aluminium profile
- calibration using perfectControl calibrating unit No 7794 or calibration system No 7706. Adjustment without disassembly.
- with certificate
- display deviation value ± 4%

721Nf Torque wrenches with ratchet



Code	size					■ "	b_1 mm	b_2 mm	h mm	L mm	L_F mm	g
50200081	**80**	160–800 N m	120–600 ft.lb	20 N m	20 ft.lb	3/4	46.5	76	42	1051	938	7222
96502001	**100**	200–1000 N m	150–725 ft.lb	25 N m	25 ft.lb	3/4	46.5	76	42	1504	1365	7005

Industrial MANOSKOP® 755

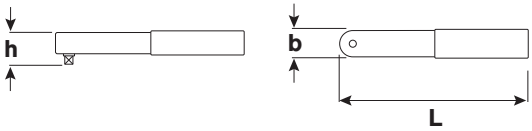
For work on production lines or series production. No setting scale; have to be set with a tester such as the STAHLWILLE No 7707 W tester or the No 7794, No 7706 calibration system.

- cut-out type
- mount for interchangeable insert tools
- dual stop signal
- particularly light and easy to handle
- handle and shank are made of square tubular steel
- any force applied to the tool after the “click” or applied in the opposite direction to the current function (up to the max. of the wrench's range) does not act on the trigger mechanism and cannot cause damage to it.
- anticlockwise torquing thanks to swap-over insert tools
- with preset cut-out value on request (price on application)
- display deviation value ± 4%

182 – 188

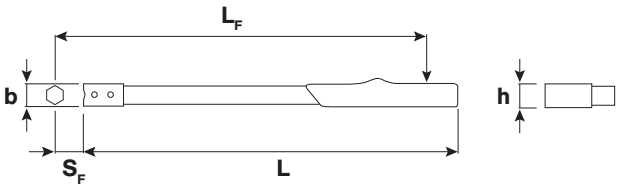
755R/1 Industrial MANOSKOP®

Torque wrench with built-in ratchet, irrespective of the point of application of force, dual stop signal and cut-out. Deviation of indication ± 4%.
Cut-out setting with aid of Setting Gauge.



Code			■ "	b mm	h mm	L mm	g
50100001	1.5–12.5 N m	1.0–9.0 ft.lb	¼	22	18	173.5	335

755 Basic wrenches with tool carrier for insert tool



Code	size			mm	b mm	h mm	L mm	L_F mm	S_F mm	g
50010004	**4**	4–40 N m	4–30 ft.lb	9x12	22	18	201	172	17.5	522
50010010	**10**	20–100 N m	15–74 ft.lb	9x12	28	24	318	289	17.5	635
50010020	**20**	40–200 N m	30–147 ft.lb	14x18	28	24	457	435	25	1060
50010030	**30**	60–300 N m	40–220 ft.lb	14x18	28	24	609	587	25	1210

Plastic case, empty

for safe storage and transport of torque wrenches (please order inlays separately).
Supplied without torque wrench.

Code	No	for torque wrenches No	L mm	g
81370002	**7301**	712R/6; 713R/6; 714/1; 714/2; 714/4; 714/6; 714/10; 721/5; 721/15; 730/5; 730/10; 730/12; 730/20; 730a/5; 730a/10; 730a/12; 730a/20; 730N/5; 730N/10; 730N/12; 730N/20; 730Na/5; 730Na/10; 730Na/20; 730D/10	550	425
81370003	**7302**	713R/20; 714/20; 721/30; 730/40; 730N/40; 730Na/40; 730D/20	680	535

Inlays for plastic case

Code	for torque wrenches No	g
83071004	712R/6; 713R/6; 721/5; 721/15; 730/5; 730/10; 730/12; 730/20; 730a/5; 730a/10; 730a/12; 730a/20; 730N/5; 730N/10; 730N/12; 730N/20; 730Na/5; 730Na/10; 730Na/20; 730D/10	88
83071002	713R/20; 721/30; 730/40; 730N/40; 730Na/40; 730D/20	113

1299 BITS

for inside hexagon screws, for operating the adjusting screws on torque wrenches No 720, 721, 730 and 730N.

Code	mm	outside ⬢	"	L mm	g	
08090002	2	C 6.3	¼	34	4	10

outside ⬢ DIN 3126/ISO 1173

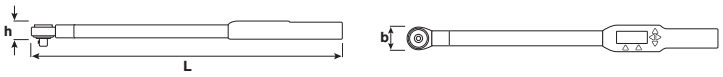
Indicating torque wrenches

Electronic angle-controlled torque wrench Sensotork® 713

- simple, flexible operation thanks to operator guidance on large-format display
- very broad measuring range (5% to 100% of rated value)
- supplied with insert tool reversible ratchet, more insert tools 182 – 188
- QuickRelease safety lock
- for clockwise and anticlockwise torquing
- measurements independent of the point of application of force (sizes 6 and 20)
- units of measurement: N m, ft.lb, in.lb
- advance warning points programmable for visual, tactile and acoustic signals
- torque and angle are simultaneously visible
- convenient angle measurement across a very wide angle range without a reference arm
- insert tool lengths can be individually set
- maintenance friendly due to easy adjustment and automatic reminder of next calibration date
- repeated joints can be collated to form a single menu-guided sequence
- individual identification markings possible
- password protection to prevent inadvertent changes and make the tool tamper-proof
- meets requirements of DKD-R 3-7, Class 2
- with certificate
- in sturdy plastic case (size 40 in tough steel case)
- supplied with three 1.5 V AA batteries. AA/LR6, 1.2 V NiMH rechargeable cells may also be used.
- fully automated calibration (torque) using perfectControl calibrating unit No 7794-2. Adjustment without disassembly.
- registered design
- display deviation value for angle ± 1%
- display deviation value ± 1%

713R Electronic angle-controlled torque wrenches Sensotork®

QR



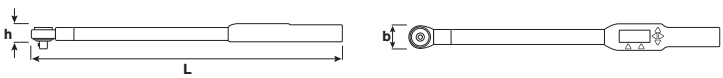
Code	size			■ "	mm	b mm	h mm	L mm	g	g with box
96 50 16 06	**6**	3–60 N m	2.5–44 ft.lb	3/8	9x12	50	33.5	378	856	1500
96 50 16 20	**20**	10–200 N m	7–148 ft.lb	1/2	14x18	50	33.5	608	1552	2430
96 50 16 40	**40**	20–400 N m	15–296 ft.lb	3/4	14x18	50	33.5	838	2332	5555

Electronic torque wrench Sensotork 712®

712R/6 Electronic torque wrench Sensotork®

QR

Registered design, electronic torque wrench with option of attaching interchangeable insert tools, same design as No 713 but without angle function.



Code			■ "	mm	b mm	h mm	L mm	g	g with box
96 50 15 06	3–60 N m	2.5–44 ft.lb	3/8	9x12	50	33.5	378	856	1500

Accessories for electronic angle-controlled torque wrench Sensotork® No 713 and electronic torque wrench Sensotork® No 712

7759-1 USB adaptor, jack cable and software Sensomaster for No 712R, 713R

for documenting and managing readings on a PC and carrying out statistical analyses.

- Read out stored wrench data and joint readings: Joint identifier, Tool serial number, Target torque or target angle, Torque level at which the tool cuts out, Tightening torque or angle reached, Tolerances, Joint evaluation
- Storage of joint data in a database
- Delete or print highlighted joints from the database
- Export displayed joint data to a CSV file (compatible with Excel)
- 13 languages
- User management
- Define new PIN
- Delete joint data stored in wrench

System requirements:

- PC
- Microsoft Windows 98 SE or compatible operating system with USB support
- USB connection
- Installed ODBC driver for Access data

Code	L m	g
96583625	1.5	137

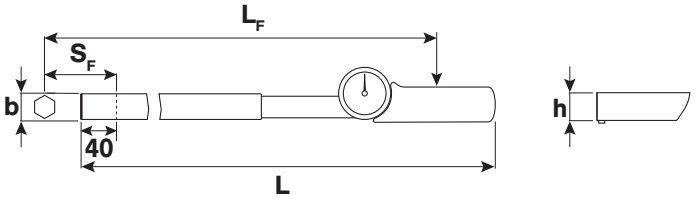
5

MANOSKOP® 71

182 – 188

- indicating type
- mount for interchangeable shell tools
- all 14 x 18 mm insert tools can also be used with insert tool adaptor No 7370/80 (max. 650 N m)
- trailing pointer dial
- twin scales N m/ft.lb
- scale is made of luminescent light yellow special film enabling clear readings even in poor light conditions
- handle with integrated force compensator
- measuring element is a bending plate housed in the handle
- with overload protection
- can be applied for either clockwise or anticlockwise tightening by turning the wrench over
- calibration using perfectControl calibrating unit No 7794 No 7794 or calibration system No 7706. Adjustment without disassembly.
- with certificate
- display deviation value ± 4%

71/80 MANOSKOP® 71 with integrated force compensator

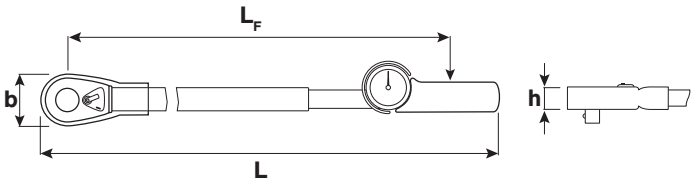


Code					mm	b mm	h mm	L mm	L_F mm	S_F mm	g
50030080	160–800 N m	120–600 ft.lb	10 N m	10 ft.lb	24,5x28	28	24	1048	1050	95	2360

MANOSKOP® 71 with permanently installed reversible ratchet

- indicating type
- trailing pointer dial
- twin scales N m/ft.lb
- scale is made of luminescent light yellow special film enabling clear readings even in poor light conditions
- additional protection for the gauge by the protective ring
- not for anticlockwise measurement
- calibration using perfectControl calibrating unit No 7794 or calibration system No 7706. Adjustment without disassembly.
- with certificate
- display deviation value ± 4%

71aR/80 MANOSKOP® 71 with integrated force compensator

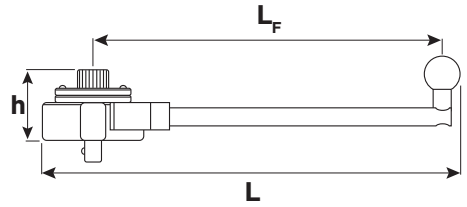


Code					■ "	b mm	h mm	L mm	L_F mm	g
50450080	100–600 ft.lb	160–800 N m	10 ft.lb	10 N m	¾	70	30	1152	1060	4280

Friction gauge

- indicating type
- permanently installed square drive
- trailing pointer dial
- no “needle wobble” during measurements
- lighter construction due to use of aluminium
- with certificate
- display deviation value ± 4%

73Nm/15 Friction gauge



Code			■ "	b mm	h mm	L mm	L_F mm	S_F mm	g
50240015	2–15 N m	0.5 N m	½	72	50	298.5	250	0	775

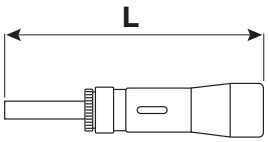
5

Torque screwdriver

TORSIOMAX 775

- cut-out type
- for torque-controlled bolt tightening in the cN m and in.lb ranges
- for one-off or production runs
- measuring element is a screw compression spring
- anticlockwise and clockwise tightening
- with 1/4" internal hex drive (F 6.3 DIN 3126/ISO1173)
- infinitely variable via micrometer scale (twist scale)
- disengaging clutch coupling prevents the preset value being exceeded
- the shape of the handle and its surface texture ensure safe and accurate transmission of torque
- insert tools: For all 1/4" hex E 6.3, Phillips-head screws, POZIDRIV / SUPADRIV®, straight-slot, TORX®, hex BITS (see pp. 155, 156). For very small joints, BITS with a 4 mm hex drive and an adapter No 3115/2 for BITS screwdriver inserts, Type C4, and external hex 1/4" (E 6.3 DIN 3126/ISO 1173) are required (refer to pages 150, 153).
- with certificate
- display deviation value ± 6%

775 **Torque screwdriver TORSIOMAX**




775/3


775/12


775/30


775/50


775/100

Code	size			inside O	L mm	g
51060003	**3[1])**	2–30 cN m	0.2 cN m	F 6.3	105	99
51060012	**12[2])**	20–120 cN m	1 cN m	F 6.3	157	192
51060030	**30[2])**	40–300 cN m	1 cN m	F 6.3	160	214
51060050	**50[2])**	100–500 cN m	2.5 cN m	F 6.3	205	436
51060100	**100[3])**	400–1000 cN m	5 cN m	F 6.3	235	762
51460003	**a/3[1])**	0.2–3 in.lb	0.02 in.lb	F 6.3	105	99
51460012	**a/12[2])**	2–12 in.lb	0.1 in.lb	F 6.3	157	192
51460050	**a/50[2])**	10–50 in.lb	0.25 in.lb	F 6.3	205	436

[1]) with a swivelling handle-end to improve tool control; and with a clamping screw for locking the preset.
[2]) with an additional locking mechanism to prevent the selected torque being inadvertently adjusted.
[3]) with screw-on handles for increasing the force applied for large torques.

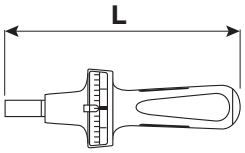
Note!

Torque tightening tools are measuring instruments.
They must be regularly calibrated with suitable instruments and adjusted accordingly (see DIN EN ISO 6789, 5.3 Recalibrating).

TORSIOMETER 760

- indicating type
- the measuring element is a torsional leaf spring
- clockwise tightening (with trailing pointer) and anticlockwise tightening
- with 1/4" internal hex drive (F 6.3 DIN 3126)
- comparative scale in in.lb and cursor
- inserts and adaptors with external hex E 6.3 (1/4") DIN 3126/ISO 1173 are securely held and firmly controlled in the mounting shaft (for BITS screwdriver inserts, refer to pages 155, 156).
- to attach 1/4" sockets, please order adaptor No 3115 (refer to page 154)
- display deviation value ± 4%

760 Torque screwdrivers TORSIOMETER



Code	size				inside ○	L mm	g
51040007	**7.5**	15–75 cN m	1.5–6.5 in.lb	2.5 cN m	F 6.3	185	225
51040015	**15**	30–150 cN m	3–13 in.lb	5 cN m	F 6.3	185	225
51040030	**30**	60–300 cN m	6–26 in.lb	10 cN m	F 6.3	185	230
51040060	**60**	120–600 cN m	12–52 in.lb	20 cN m	F 6.3	185	230

Which insert tool for which torque wrench?

714 Electromechanical torque and angle-controlled wrench MANOSKOP®, cut-out, indicating

713R Electronic angle-controlled Torque Wrench Sensotork®, indicating

730D Service/Industrial MANOSKOP®, cut-out, indicating

730N Service MANOSKOP®, cut-out

730 Service MANOSKOP®, cut-out

755 Industrial MANOSKOP®, cut-out

71 Torque Wrench MANOSKOP®, indicating

5

size	size	No mm	725QR/4	725QR/5	725QR/10	725QR/20	725B	725L/5	725/4	735/5	735/10	735/20	735/40	735/65	735/80	734/4	734/5	734/10	734/20	734/40	734/80
1	–	9x12	●	●	●		●	●	●	●	●					●	●	●			
2	a/2	9x12	●	●	●		●	●	●	●	●					●	●	●			
4	a/4	9x12	●	●	●		●	●	●	●	●					●	●	●			
5	a/5	9x12	●	●	●		●	●	●	●	●					●	●	●			
6	–	9x12	●	●	●		●	●	●	●	●					●	●	●			
10	a/10	9x12		●	●			●		●	●						●	●			
12	a/12	14x18				●						●	●	●					●	●	
20	a/20	14x18				●						●	●	●					●	●	
30	–	14x18				●							●	●					●	●	
40	a/40	14x18											●	●						●	
65	–	14x18												●						●	
80	–	24.5x28													●						●

size	size	No mm	734F	734L/5	731/10	731/40	731/80	732/10	732/40	732/80	732G/10	732TX/10	732TX/40	733/10	736/10	736/40	737/10	737/40
1	–	9x12	●	●	●			●			●	●		●	●		●	
2	a/2	9x12	●	●	●			●			●	●		●	●		●	
4	a/4	9x12	●	●	●			●			●	●		●	●		●	
5	a/5	9x12	●	●	●			●			●	●		●	●		●	
6	–	9x12	●	●	●			●			●	●		●	●		●	
10	a/10	9x12	●	●	●			●			●	●		●	●		●	
12	a/12	14x18				●			●				●			●		●
20	a/20	14x18				●			●				●			●		●
30	–	14x18				●			●				●			●		●
40	a/40	14x18				●			●				●			●		●
65	–	14x18				●			●				●			●		●
80	–	24.5x28					●			●								

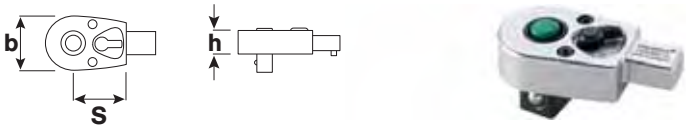
Insert/shell tools for torque wrenches

Output square drive ■ in accordance with DIN 3120

725QR QuickRelease ratchet insert tool

QR

reversible, with QuickRelease safety lock, size 4: 22 teeth, sizes 5 and 10: 30 teeth, size 20: 36 teeth.

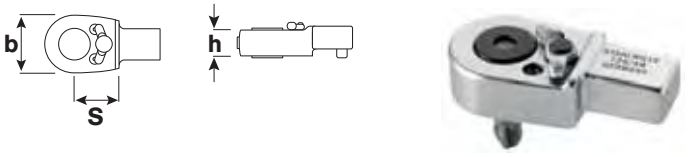


Code	size	■ "	mm	b mm	h mm	S mm	M N m	g
58253004	4	1/4	9x12	22	14.5	17.5	40	60
58253005	5	3/8	9x12	29	14.5	28*	100	130
58253010	10	1/2	9x12	29	14.5	28*	100	141
58253020	20	1/2	14x18	41	18	38.5*	200	325

Long-term loading of the input and output square drive is in accordance with DIN EN ISO 6789:2003.
This limit must not be exceeded if larger torque wrenches and tool holders are used.
* Caution! Modified settings on torque wrench (refer to note on page 204).

725B Bit ratchet insert tool

reversible, with inside hexagon, 1/4" or 5/16", DIN 3126/ISO 1173 D 6.3 or D8, for direct acceptance of bits 1/4" or 5/16" outside hexagon C 6.3 (size 4: 22 teeth, size 5: 30 teeth). Internal hex drive with a collar-thrust spring. Bits are easy to insert, lock securely in position and can be removed just as easily; even hex bits with a wide groove (Type E, DIN 3126/ISO 1173). Supplied without bits.

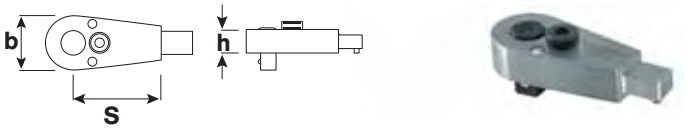


Code	size	inside ○ "	mm	b mm	h mm	S mm	g
58255004	4	1/4	9x12	22	14	17.5	54
58255005	5	5/16	9x12	29	14.5	28*	117

* Caution! Modified settings on torque wrench (refer to note on page 204)

725L/5 Ratchet insert tool

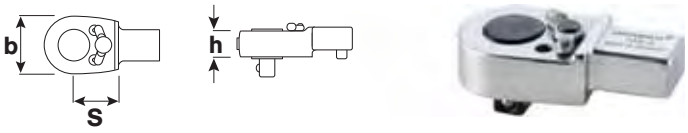
reversible, 30 teeth.
Caution! Modified settings on torque wrench (refer to note on p. 204).
This ratchet insert tool has the same extension length as ring insert tool No 732G/10 (see p. 186) and square drive insert tool No 734L/5 (see p. 184).



Code	■ "	mm	b mm	h mm	S mm	g
58151005	3/8	9x12	27.5	14.5	45	164

725/4 Ratchet insert tool

reversible, 22 teeth.



Code	■ "	mm	b mm	h mm	S mm	M N m	g
58254004	1/4	9x12	22	14.5	17.5	40	62

Long-term loading of the input and output square drive is in accordance with DIN EN ISO 6789:2003. This limit must not be exceeded if larger torque wrenches and tool holders are used.

735 Ratchet insert tools, fine tooth

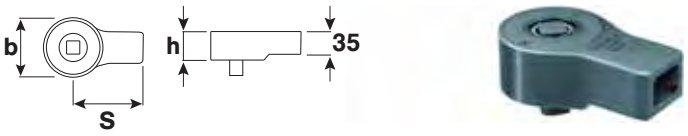
reversible, 60 teeth.

Code	size	■ "	mm	b mm	h mm	S mm	M N m	g
58250005	5	3/8	9x12	33	24	17.5	100	155
58250010	10	1/2	9x12	33	24	17.5	100	147
58250020	20	1/2	14x18	43	26	25	300	302
58250040	40	3/4	14x18	50	32	25	400	510
58250065	40HD	3/4	14x18	58	36	30*	650	737

Long-term loading of the input and output square drive is in accordance with DIN EN ISO 6789:2003.
This limit must not be exceeded if larger torque wrenches and tool holders are used.
* Caution! Modified settings on torque wrench (refer to note on page 204).

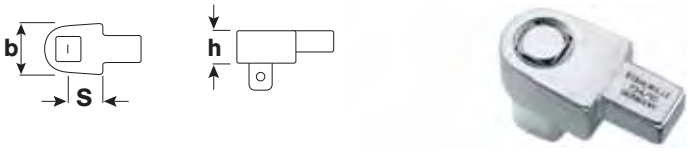
735/80 Ratchet shell tool

with push through square drive, 30 teeth.



Code	■ "	mm	b mm	h mm	S mm	g
58250080	3/4	24,5x28	76	43	95	2000

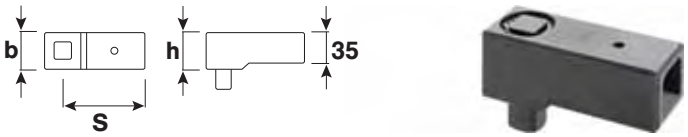
734 Square drive insert tools



Code	size	■ "	mm	b mm	h mm	S mm	M N m	g
58240004	4	1/4	9x12	20	14	17.5	40	71
58240005	5	3/8	9x12	20	14	17.5	80	76
58240010	10	1/2	9x12	20	14	17.5	100	82
58240020	20	1/2	14x18	27	18	25	300	203
58240040	40	3/4	14x18	40	25	25	650	396

Long-term loading of the input and output square drive is in accordance with DIN EN ISO 6789:2003.This limit must not be exceeded if larger torque wrenches and tool holders are used.

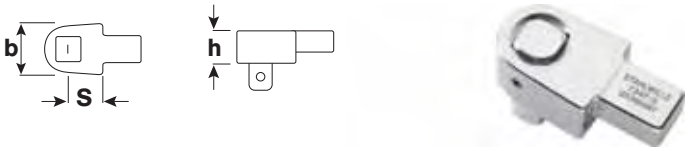
734/80 Square drive shell tool



Code	■ "	mm	b mm	h mm	S mm	g
58240080	3/4	24,5x28	42	42	95	1200

734F Square drive insert tools

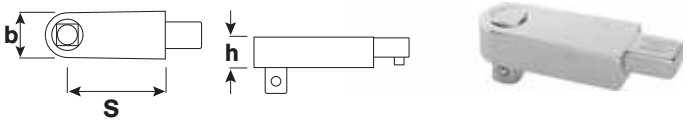
with permanently attached, captive square drive.



Code	size	■ "	mm	b mm	h mm	S mm	g
58241004	4	1/4	9x12	22	14	17.5	72
58241005	5	3/8	9x12	22	14	17.5	75

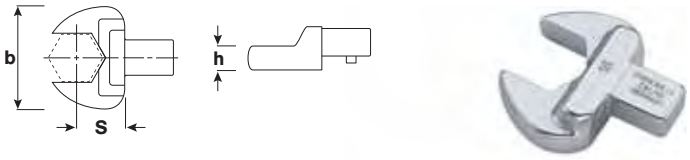
734L/5 Square drive insert tool

Caution! Modified settings on torque wrench (refer to note on p. 204). This square-drive insert tool has the same extension length as ring insert tool No 732G/10 (see p. 186) and ratchet insert tool No 725L/5 (see p. 183).



Code	■ "	mm	b mm	h mm	S mm	g
58242005	3/8	9x12	20	14	45	141

731/10 Open ended insert tools



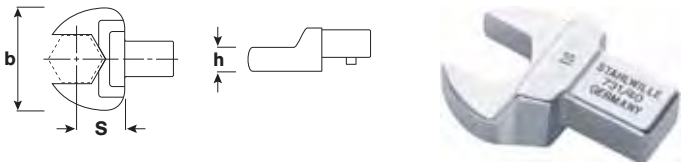
Code	mm	mm	b mm	h mm	S mm	g
58211007	7	9x12	22	5	17.5	40
58211008	8	9x12	22	5	17.5	39
58211009	9	9x12	26	5.5	17.5	38
58211010	10	9x12	26	5.5	17.5	42
58211011	11	9x12	26	5.5	17.5	41
58211012	12 [1])	9x12	30	7	17.5	43
58211013	13	9x12	30	7	17.5	48
58211014	14	9x12	35	8	17.5	52
58211015	15	9x12	35	8	17.5	51
58211016	16	9x12	38	8.5	17.5	58
58211017	17	9x12	38	8.5	17.5	60
58211018	18	9x12	42	9	20*	71
58211019	19	9x12	42	9	20*	74

[1]) For flare nuts of hydraulic pipes on French vehicles

731a/10 Open ended insert tools

Code	"	mm	b mm	h mm	S mm	g
58611016	1/4	9x12	22	5	17.5	36
58611020	5/16	9x12	22	5	17.5	53
58611024	3/8	9x12	26	5.5	17.5	38
58611028	7/16	9x12	26	5.5	17.5	37
58611032	1/2	9x12	30	7	17.5	44
58611034	9/16	9x12	35	8	17.5	49
58611036	5/8	9x12	38	8.5	17.5	64
58611038	11/16	9x12	42	9	20*	76
58611040	3/4	9x12	42	9	20*	73

731/40 Open ended insert tools



Code	mm	mm	b mm	h mm	S mm	g
58214013	13	14x18	30	7	25	128
58214014	14	14x18	35	8	25	129
58214015	15	14x18	35	8	25	132
58214016	16	14x18	38	9	25	140
58214017	17	14x18	38	9	25	136
58214018	18	14x18	42	10	25	147
58214019	19	14x18	42	10	25	145
58214021	21	14x18	50	11	25	171
58214022	22	14x18	50	11	25	165
58214024	24	14x18	53	12	25	167
58214025	25	14x18	53	12	25	170
58214027	27	14x18	60	13	30*	219
58214030	30	14x18	66	14	30*	245
58214032	32	14x18	66	14	32.5*	246
58214034	34	14x18	66	14	32.5*	239
58214036	36	14x18	74	15	32.5*	275
58214038	38	14x18	74	15	32.5*	265
58214041	41	14x18	82	15	36.5*	307

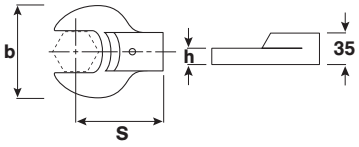
* Caution! Modified settings on torque wrench (refer to note on page 204)

731a/40 Open ended insert tools

Code	"	mm	b mm	h mm	S mm	g
58614028	7/16	14x18	30	7	25	127
58614032	1/2	14x18	30	7	25	125
58614034	9/16	14x18	35	8	25	129
58614036	5/8	14x18	38	9	25	136
58614038	11/16	14x18	42	10	25	148
58614040	3/4	14x18	42	10	25	144
58614042	13/16	14x18	50	11	25	171
58614044	7/8	14x18	50	11	25	165
58614046	15/16	14x18	53	12	25	177
58614048	1	14x18	60	13	30*	224
58614052	1 1/8	14x18	66	14	30*	258

* Caution! Modified settings on torque wrench (refer to note on page 204)

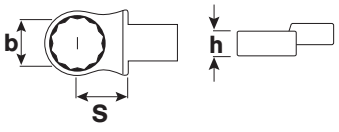
731/80 Open ended shell tools



Code	mm	mm	b mm	h mm	S mm	g
58218024	24	24,5x28	50	13	95	601
58218027	27	24,5x28	56	14	95	620
58218030	30	24,5x28	63	15	95	655
58218032	32	24,5x28	67	15	95	670
58218034	34	24,5x28	72	15	95	699
58218036	36	24,5x28	74	15	95	740
58218041	41	24,5x28	84	16	95	810
58218046	46	24,5x28	94	17	95	867
58218050	50	24,5x28	104	18	95	1010
58218055	55	24,5x28	114	19	95	1150
58218060	60	24,5x28	124	20	95	1330

732/10 Ring insert tools

AS-drive



Code	mm	mm	b mm	h mm	S mm	g
58221007	7	9x12	13	8	17.5	37
58221008	8	9x12	14.2	8	17.5	40
58221010	10	9x12	17.2	9	17.5	44
58221011	11	9x12	18.5	9	17.5	41
58221012	12	9x12	20.5	11	17.5	49
58221013	13	9x12	21.5	11	17.5	55
58221014	14	9x12	22.5	11	17.5	52
58221015	15	9x12	24.5	12	17.5	52
58221016	16	9x12	26	12	17.5	54
58221017	17	9x12	27	13	17.5	59
58221018	18	9x12	28	13	17.5	56
58221019	19	9x12	30.5	13	17.5	65
58221021	21	9x12	33	15	17.5	71
58221022	22	9x12	34.5	15	17.5	74

732a/10 Ring insert tools

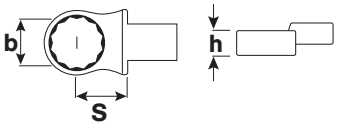
AS-drive

Code	"	mm	b mm	h mm	S mm	g
58621016	1/4	9x12	13	8	17.5	36
58621020	5/16	9x12	14.2	8	17.5	37
58621024	3/8 [1]	9x12	17.2	9	17.5	37
58621028	7/16	9x12	18.5	9	17.5	40
58621032	1/2	9x12	21.5	11	17.5	53
58621034	9/16	9x12	22.5	11	17.5	52
58621036	5/8	9x12	26	12	17.5	54
58621038	11/16	9x12	28	13	17.5	58
58621040	3/4	9x12	30.5	13	17.5	58
58621042	13/16	9x12	33	15	17.5	68
58621044	7/8	9x12	34.5	15	17.5	69

[1]) For Volvo aero-engines, types "JAS"

732/40 Ring insert tools

AS-drive



Code	mm	mm	b mm	h mm	S mm	g
58224013	13	14x18	22.5	11	25	130
58224014	14	14x18	23	11	25	123
58224015	15	14x18	24	11	25	128
58224016	16	14x18	25.5	12	25	133
58224017	17	14x18	27	12	25	135
58224018	18	14x18	29	13	25	134
58224019	19	14x18	30.5	13	25	138
58224021	21	14x18	33	15	25	144
58224022	22	14x18	34.5	15	25	145
58224024	24	14x18	37.5	15	25	153
58224027	27	14x18	42.5	17	25	162
58224028	28	14x18	45.5	19	25	175
58224030	30	14x18	46	19	25	182
58224032	32	14x18	47.5	19	25	181
58224034	34	14x18	52	19	28*	210
58224036	36	14x18	54	19	28*	203
58224041	41	14x18	60	20	30*	240

* Caution! Modified settings on torque wrench (refer to note on page 204).

732a/40 Ring insert tools

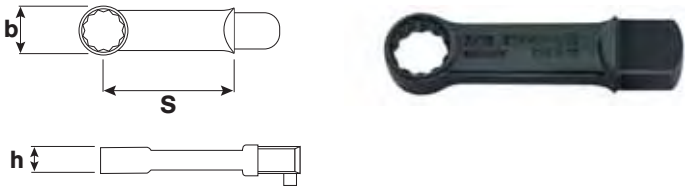
AS-drive

Code	"	mm	b mm	h mm	S mm	g
58624032	1/2	14x18	22.5	11	25	122
58624034	9/16	14x18	23	11	25	122
58624036	5/8	14x18	25.5	12	25	134
58624038	11/16	14x18	29	13	25	132
58624040	3/4	14x18	30.5	13	25	138
58624042	13/16	14x18	33	15	25	142
58624044	7/8	14x18	34.5	15	25	147
58624046	15/16	14x18	37.5	15	25	151
58624048	1	14x18	41	17	25	160

732G/10 Ring insert tools

AS-drive HPQ

Caution! Modified settings on torque wrench (refer to note on p. 204). This insert tool has the same extension length as insert tool No 725L/5 (see p. 183) and square-drive insert tool No 734L/5 (see p. 184); HPQ® high performance steel, gunmetal finish.



Code	mm	mm	b mm	h mm	S mm	g
58620007	**7**	9x12	11.5	6	45	31
58620008	**8**	9x12	12.4	6	45	33
58620009	**9**	9x12	14	8	45	40
58620010	**10**	9x12	15.6	8	45	44
58620013	**13**	9x12	19.3	9.2	45	60

732aG/10 Ring insert tools

AS-drive HPQ

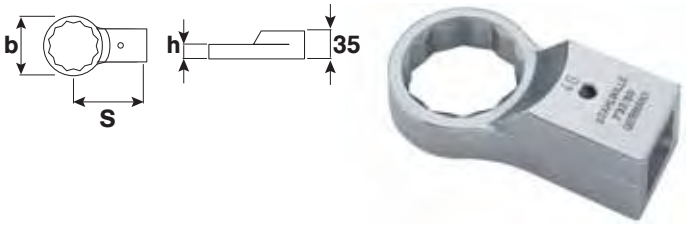
Caution! Modified settings on torque wrench (refer to note on p. 204). This insert tool has the same extension length as insert tool No 725L/5 (see p. 183) and square-drive insert tool No 734L/5 (see p. 184); HPQ® high performance steel, gunmetal finish.

Code	"	mm	b mm	h mm	S mm	g
58621216	1/4	9x12	10.4	6	45	28
58621220	5/16	9x12	12.4	6	45	31
58621224	3/8	9x12	14.9	8	45	42
58621228	7/16	9x12	17	8	45	43
58621232	1/2	9x12	19	9.2	45	58
58621234	9/16	9x12	21	9.2	45	58
58621236	5/8	9x12	23	12	45	74

for assembling and dismantling aero-engines.

732/80 Ring shell tools

AS-drive



Code	mm	mm	b mm	h mm	S mm	g
58228024	**24**	24,5x28	36	15	95	605
58228027	**27**	24,5x28	40.5	15	95	610
58228030	**30**	24,5x28	46	16	95	630
58228032	**32**	24,5x28	49	16	95	635
58228034	**34**	24,5x28	52	17	95	650
58228036	**36**	24,5x28	54	17	95	650
58228041	**41**	24,5x28	61	18	95	675
58228046	**46**	24,5x28	66	19	95	720
58228050	**50**	24,5x28	75	20	95	803
58228055	**55**	24,5x28	84	21	95	889
58228060	**60**	24,5x28	93	22	95	995

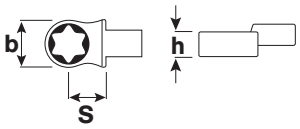
732a/80 Ring shell tools

AS-drive

Code	"	mm	b mm	h mm	S mm	g
58628046	15/16 [1])	24,5x28	36	14	95	604
58628050	1 1/16 [1])	24,5x28	40.5	14	95	608

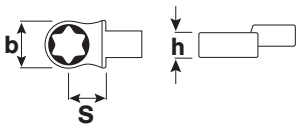
[1]) for jet engine pins (Airbus A320/A321)

732TX/10 TORX® insert tools



Code	size	mm	b mm	h mm	S mm	g
58291006	**E6**	9x12	13	8	17.5	40
58291008	**E8**	9x12	14.2	8	17.5	45
58291010	**E10**	9x12	17.2	9	17.5	45
58291012	**E12**	9x12	18.5	9	17.5	50
58291014	**E14**	9x12	21.5	11	17.5	60

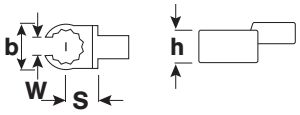
732TX/40 TORX® insert tools



Code	size	mm	b mm	h mm	S mm	g
58294014	**E14**	14x18	22.5	11	25	130
58294018	**E18**	14x18	24	11	25	135
58294020	**E20**	14x18	29	13	25	150
58294024	**E24**	14x18	30.5	13	25	150

733/10 Open ring insert tools

AS-drive



Code	mm	mm	b mm	h mm	W mm	S mm	g
58231010	**10**	9x12	21.5	11	7.1	17.5	57
58231011	**11**	9x12	22.5	11	8.6	17.5	55
58231012	**12**	9x12	24.5	12	9	17.5	59
58231013	**13**	9x12	26	12	10	17.5	55
58231014	**14**	9x12	27	13	11	17.5	60
58231016	**16**	9x12	30.5	13	13	17.5	65
58231017	**17**	9x12	31.5	13	14	17.5	64
58231018	**18**	9x12	33	15	14.8	17.5	74
58231019	**19**	9x12	34	15	15.8	17.5	80
58231021	**21**	9x12	38.5	15	16.2	20*	88
58231022	**22**	9x12	39.5	15	17	20*	92
58231024	**24**	9x12	40	15	18	20*	75

* Caution! Modified settings on torque wrench (refer to note on page 204)

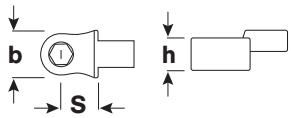
733a/10 Open ring insert tools

AS-drive

Code	⬡ "	■ mm	b mm	h mm	W mm	S mm	g
58631024	3/8	9x12	21.5	11	7.1	17.5	55
58631028	7/16	9x12	22.5	11	8.6	17.5	56
58631032	1/2	9x12	26	12	9.5	17.5	58
58631034	9/16	9x12	27.5	13	11	17.5	59
58631036	5/8	9x12	30.5	13	12.7	17.5	61
58631038	11/16	9x12	33	15	14	17.5	48
58631040	3/4	9x12	34	15	15.8	17.5	76

736 BIT holder insert tools

Internal hex drive with a collar-thrust spring. Bits are easy to insert, lock securely in position and can be removed just as easily; even hex bits with a wide groove (Type E, DIN 3126/ISO 1173).

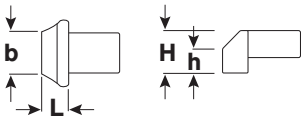


Code	size	inside ○	"	■ mm	b mm	h mm	S mm	g
58261010	10	D 8	5/16	9x12	16	12.5	17.5	47
58262610	10-1	D 6.3	1/4	9x12	14	10	17.5	45
58261040	40	D 8	5/16	14x18	16	12.5	25	112

inside ○ DIN 3126/ISO 1173

737 Blank end insert tools

gunmetal finish. To prevent damage from excessive temperatures, the locking pin, spring and washer are not fitted until the welding work has been completed. Instructions are supplied.

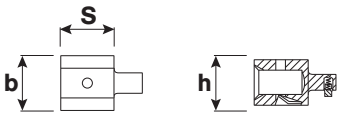


Code	size	Welding surface h x b mm	■ mm	H mm	L mm	g
58270010	10	8 x 14	9x12	14.5	8	35
58270040	40	11 x 25	14x18	21.5	12	98

7370/10 Adaptor

QR

for using insert tools with an outer square drive of 14 x 18 mm on torque wrenches with an internal square drive of 9 x 12 mm.
Caution! Modified settings on torque wrench (refer to note on p. 204).

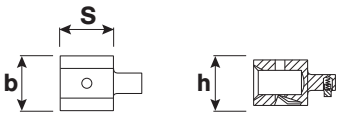


Code	■ mm	○ mm	b mm	h mm	S mm	g
58290010	9x12	14x18	31	26	30.5	114

7370/40 Adaptor

QR

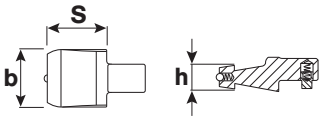
for using insert tools with an outer square drive of 9 x 12 mm on torque wrenches with an internal square drive of 14 x 18 mm.
Caution! Modified settings on torque wrench (refer to note on p. 204).



Code	■ mm	○ mm	b mm	h mm	S mm	g
58290040	14x18	9x12	28	21	21.5	115

7370/10-2 Adaptor

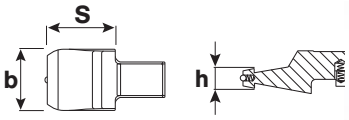
for use with insert tools with a lateral dovetail profile in torque wrenches with 9 x 12 mm internal square drives.
Caution! Modified settings on torque wrench (refer to note on p. 204).



Code	■ mm	b mm	h mm	S mm	g
58290012	9x12	23.5	9.5	24	51

7370/40-2 Adaptor

for use with insert tools with a lateral dovetail profile in torque wrenches with 14 x 18 mm internal square drives.
Caution! Modified settings on torque wrench (refer to note on p. 204).

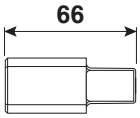


Code	■ mm	b mm	h mm	S mm	g
58290042	14x18	31.5	9.5	34.6	138

5

7370/40-1 Adaptor

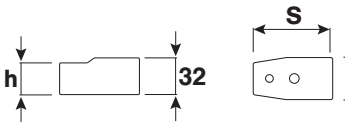
for using shell tools with an internal square drive of 24.5 x 28 mm on torque wrenches with an internal square drive of 14 x 18 mm.
Caution! Modified settings on torque wrench (refer to note on p. 204).



Code	■ mm	■ mm	b mm	h mm	g
58290041	14x18	24,5x28	28	24	251

7370/80 Shell adaptor

for attaching 14 x 18 mm insert tools.
Caution! Modified settings on torque wrench (refer to note on p. 204).



Code	O mm	O mm	b mm	h mm	S mm	g
58290080	24,5x28	14x18	36	26	70	281

730R/40/32 Torque wrench set

32 pieces, in steel case, for general service work.
Content:
1 SERVICE-MANOSKOP® No 730/40, 80–400 N m
1 ratchet insert tool No 735/20, reversible, 1/2" ■-drive
1 square drive insert tool No 734/20, 1/2" ■-drive
7 o/e insert tools No 731/40, sizes 13, 15, 17, 19, 22, 27, 30 mm
1 No 731/40 size 24 mm;
7 ring insert tools No 732/40, sizes 13, 15, 17, 19, 22, 24, 27 mm
10 sockets, bi-hexagon No 50, sizes 13, 14, 15, 17, 19, 22, 24, 27, 30, 32 mm
4 accessories, 1/2" O-drive:
1 T-handle No 506
1 extension 255 mm No 509/10
1 extension 130 mm No 509/5
1 extension 55 mm No 509/2

Code	g	
96502053	9739	1

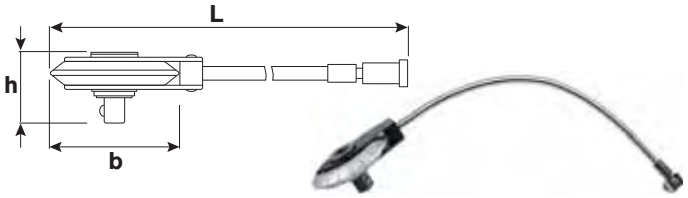
Tool holder

with tool carrier to receive insert/shell tools (without torque function).

Code	No	mm	mm	L mm	g
18200001	**1820**	9x12	-	382.5	490
18210001	**1821**	14x18	-	575	720
18220003	**1822** ✹	-	24,5x28	1000	2000

7380N/7385N Torque angle gauges

for angle controlled bolt/screw tightening, with static read-off point. Read-off possible from any angle thanks to a pair of angled scales. Removable magnet for attaching sockets with 1/2" internal square drive. For use in conjunction with tightening tools such as Service MANOSKOP® No 730N. Since this tightening method requires a pre-determined snug torque to be applied, it is essential to choose a torque wrench covering both snug torque as well as maximum torque required to reach the recommended tightening angle. Whether 1/2" or 3/4" sq.dr. Torque Angle Gauge is used depends upon the square drive of the appropriate torque wrench employed.



Code	No	O "	■ "			b mm	h mm	L mm	g
54010001	**7380N**	1/2	1/2	± 360°	2°	78	43	416	494
54010002	**7385N**	3/4	3/4	± 360°	2°	78	76	416	720

Ratchet spare parts sets for torque wrenches No 721/5–80

Code	No	Content	g
59191005	**7210/5**	For ratchet/torque wrench No 721/5: 1 pinion, 1 pawl, 1 switch-over button and pin, 1 ball, 2 compression springs, 2 screws	53
19040000	**5120 + 7210/15**	For ratchet/torque wrench No 721/15: 1 pinion, 1 pawl, 1 lever, 1 lever pin, 1 ball, 2 compression springs, 2 screws	127
59191030	**7210/30**	For ratchet/torque wrench No 721/30: 1 pinion, 1 pawl, 1 lever, 1 lever pin, 1 ball, 2 compression springs, 2 screws	134
59191080	**7210/80**	For ratchet/torque wrench No 721Nf/80, 721Nf/100, 735/80: 1 pinion, 2 pawls, 2 spring contact points, 2 compression springs	448

Sets of spare parts for ratchet insert tools No 725QR, No 735

4150QR Spare parts set

QR

Content:
1 pinion; 1 pawl; 2 lever with pin; 1 ball; 2 compression springs;
2 screws M 1.7 x 8; 1 cover plate

Code	for No	g	
19011020	725QR/4	24	1

4350QR Spare parts set

QR

Content:
1 pinion, 1 pawl, 1 lever with pin, 1 ball, 2 compression springs, 2 screws

Code	for No	g	
19020020	725QR/5	51	1

7250QR/10 Spare parts set

QR

Content:
1 pinion, 1 pawl, 1 lever with pin, 1 ball, 2 compression springs, 2 screws

Code	for No	g	
19041020	725QR/10	64	1

5120QR Spare parts set

QR

Content:
1 pinion, 1 pawl, 1 lever with pin, 1 ball, 2 compression springs, 2 screws

Code	for No	g	
19040020	725QR/20	127	1

7350/5 Set of spare parts

Content:
1 pinion, 1 pawl, 1 switching disk, 1 spring, 3 screws.

Code	for No	g	
59251005	735/5	85	1

for ratchets from 12/97

7350/10 Set of spare parts

Content:
1 pinion, 1 pawl, 1 switching disk, 1 spring, 3 screws.

Code	for No	g	
59251010	735/10	96	1

for ratchets from 12/97

7350/20 Set of spare parts

Content:
1 pinion, 1 pawl, 1 switching disk, 1 spring, 3 screws.

Code	for No	g	
59251020	735/20	146	1

for ratchets from 4/96

7350/40 Set of spare parts

Content:
1 pinion, 1 pawl, 1 switching disk, 1 spring, 3 screws.

Code	for No	g	
59251040	735/40	219	1

for ratchets from 5/97

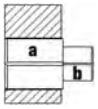
7350/40HD Set of spare parts

Content:
1 pinion, 1 pawl, 1 switching disk, 1 spring, 3 screws.

Code	for No	g	
59251065	735/40HD	300	1

70V Square drive units

for torque wrenches and insert tools.



Code	size	for No	a "	b "	L mm	g	
59010001	**1**	71...V/1	1/4	1/4	17.5	5	5
59010014	**11**	734/4	3/8	1/4	22	12	5
59010003	**3**	734/5	3/8	3/8	25.8	17	5
59010005	**5**	734/10	3/8	1/2	30	28	5
59010011	**502** 1/2	720/30; 734/20	1/2	1/2	33.5	39	5
59010007	**7**	721/30	1/2	1/2	44.3	52	5
59010008	**8**	734/40	3/4	3/4	52.2	138	5
59010015	**12**	720Nf/80; 721Nf/80+100	3/4	3/4	65	179	1
59010016	**16*** ✹	720Nf/80; 721Nf/80+100; 734/40; 734/80; 735/80	3/4	3/4	88	240	1

* extra-long, firmly locked, so usable from both sides

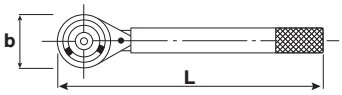
5

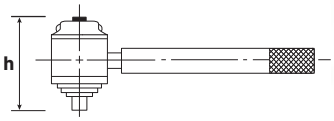
MULTIPOWER

Makes child's play of the largest torques.
Multipower – or really “tough work”.
STAHLWILLE Multipower torque multipliers with planetary gears take the fatigue out of tightening or loosening stiff or large bolt connections. A long lever is not necessary.
STAHLWILLE Multipower multiplies human strength; steady torque transfer is easy on nuts and bolts. Even the largest torques are transferred with ease and precision over long periods.
Accordingly, construction materials and workmanship are extremely robust.
When combined with STAHLWILLE torque wrenches, Multipower really shows its strength.
The Multipower range extends to 5000 N m/3687 ft.lb.
Multipower tools are also available on request up to 12000 N m/8850 ft.lb.
The Multipower from 2000 N m are fitted with an anti-backlash device.

MULTIPOWER

with overload protection and planetary gears, in carrying case, with spare hex. for overload device, deviation of indication ± 5%.






MP300-800


MP300-1350


MP300-2000


MP300-3000


MP300-5050

Code	No	N m[1])	ft.lb[1])	N m[2])	ft.lb[2])	Gear ratio	Torque ratio	○ "	■ "	b mm	h mm	L mm	g	g with box
53 03 08 00	**MP300-800**	800	590	229	169	4 : 1	1 : 3.5	1/2	3/4	66	85	215	2000	5838
53 03 13 50	**MP300-1350**	1350	996	375	277	4 : 1	1 : 3.6	3/4	3/4	90	106	265	3400	7500
53 03 20 00	**MP300-2000*)**	2000	1475	160	118	16 : 1	1 : 12.5	1/2	1	95	161	330	7000	11000
53 03 30 00	**MP300-3000*)**	3000	2212	240	177	16 : 1	1 : 12.5	3/4	1	95	161	330	7000	10805
53 03 50 00	**MP300-5000*)**	5000	3687	294	217	20 : 1	1 : 17.0	3/4	1 1/2	120	180	400	10400	14000

Multipower tools are also available on request up to 12000 N m/8850 ft.lb.
*) with anti-backlash device
[1]) max. output
[2]) max. input

Spares for Multipower

Sun wheel with overload cutout

Code	No	for No	g
59 03 08 00	**SR300-800**	MP300-800	45
59 03 13 50	**SR300-1350**	MP300-1350	106
59 03 20 00	**SR300-2000**	MP300-2000	120
59 03 30 00	**SR300-3000**	MP300-3000	130
59 03 50 00	**SR300-5000**	MP300-5000	127
59 30 00 39	**SR290N**	STW 290N	41
59 30 00 67	**SR295N**	STW 295N	95
59 30 00 68	**SR391N**	STW 391N	95
59 30 00 69	**SR392N**	STW 392N	105
59 30 00 70	**SR393N**	STW 393N	105

Replacement square drives

drilled, for STAHLWILLE Multipower STW 390–STW 393 (until 1996).

Code	No	g
59 30 39 11	**STW 391-700 ***	89
59 30 39 21	**STW 392-70**	232
59 30 39 31	**STW 393-70**	252

* also for STW 390

MP100-1500 MULTIPOWER

- particularly compact construction
- light and easy to handle
- with ratchet function
- working angle 8°
- with rotary scale
- for use with a torque wrench with a fixed 1/2" square drive
- patents applied for
- in carry-case
  included in the set: 3 hexagon inserts sizes 30; 32; 36 mm, 1 insert with 1" outer square drive, 1 reaction arm 400 mm
- display deviation value ± 5%

Code	N m[1])	ft.lb[1])	N m[2])	ft.lb[2])	Gear ratio	Torque ratio	⬡ "	b mm	h mm	L mm	g	g with box
96531500	1500	1106	300	221	5.62 : 1	1 : 5	½	105	30	165	1890	3630

[1]) max. output
[2]) max. input

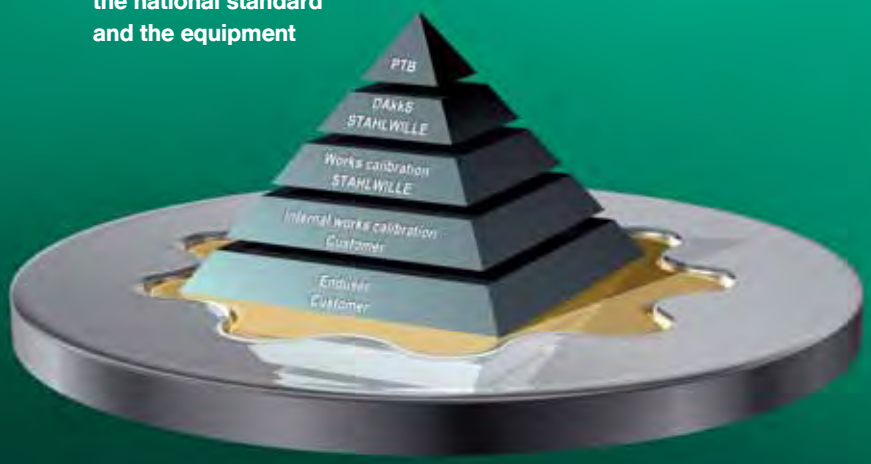
With STAHLWILLE as your preferred partner

**you can ensure controlled tightening,
record the results of tightening processes,
monitor torque tools.**

STAHLWILLE's DAkkS calibration laboratory for torque is accredited by the German Accreditation Body in accordance with DIN EN ISO/IEC 17025: 2005.
Which means the specific requirements listed in Technical Specification ISO/TS 16949 relating to testing laboratories are met.

Absolutely essential:
This is absolutely essential to all suppliers in the automotive sector!

Relationship between the national standard and the equipment



The transfer torque wrenches and torque transducers in use at STAHLWILLE's DAkkS calibration laboratory are subject to regular examination by the German Federal Physics Institute (PTB) in Braunschweig.

The **accuracy** of the torque wrenches must be proved in a series of steps and these must be traceable. Only in this way can the **reliability** of the readings be guaranteed.

During the first stage, the end-user checks the accuracy of the torque tools in-house using suitable calibrated testing equipment. At the next stage, this test equipment is checked in STAHLWILLE's DAkkS calibrating laboratory.

This accreditation by the German Accreditation Body (DAkkS) in accordance with DIN EN ISO/IEC 17025: 2005 guarantees the **direct link between the measuring equipment and the national standard** as laid down in DIN EN ISO 9001: 2008.

STAHLWILLE

Schlüssel zum Erfolg

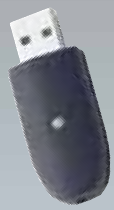
Complete calibration systems with matched components

perfect control®

Transducer

No 7721-1: 0.4 – 20 Nm
No 7722: 2 – 100 Nm
No 7723-2: 8 – 400 Nm
No 7723-3: 25 – 1100 Nm

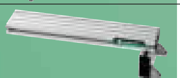
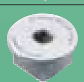
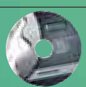
USB adapter
No 7757-1



PC –
not included
in the delivery

Printer –
not included
in the delivery

Complete calibration systems No:	7794-2/400	7794-2/1100	7794-1/400	7794-1/1100
Code	**96 52 10 78**	**96 52 10 79**	**96 52 10 76**	**96 52 10 77**
Weight/kg	61,9	69,6	53	60,7
Range/Nm	1–400	1–1000	1–400	1–1000

	Motorised calibrating tool	No 7794-2	No 7794-2	–	–
	Manual calibrating unit	–	–	No 7794-1	No 7794-1
	Extension unit	–	No 7791-1	–	No 7791-1
	Transducer	No 7727-1 (1–10 Nm) No 7727-6 (6–60 Nm) No 7727-40 (40–400 Nm)	No 7727-1 (1–10 Nm) No 7727-6 (6–60 Nm) No 7727-40 (40–400 Nm) No 7727-100 (100–1000 Nm)	No7727-1 (1–10 Nm) No 7727-6 (6–60 Nm) No 7727-40 (40–400 Nm)	No 7727-1 (1–10 Nm) No 7727-6 (6–60 Nm) No 7727-40 (40–400 Nm) No 7727-100 (100–1000 Nm)
	USB Adapter	No 7757-1	No 7757-1	No 7757-1	No 7757-1
	Jack cable	No 7751	No 7751	No 7751	No 7751
	Spiral cable	No 7752	No 7752	No 7752	No 7752
	Square drive adaptor	No 409M (1/4" ○ x 3/8" ■) No 7787 (1/4" ○ x 3/4" ■) No 7788 (3/8" ○ x 3/4" ■) No 7789 (1/2" ○ x 3/4" ■) No 7789-4 (1/4" ○ x 1/2" ■) No 7789-5 (3/8" ○ x 1/2" ■)	No 409M (1/4" ○ x 3/8" ■) No 7787 (1/4" ○ x 3/4" ■) No 7788 (3/8" ○ x 3/4" ■) No 7789 (1/2" ○ x 3/4" ■) No 7789-4 (1/4" ○ x 1/2" ■) No 7789-5 (3/8" ○ x 1/2" ■)	No 409M (1/4" ○ x 3/8" ■) No 7787 (1/4" ○ x 3/4" ■) No 7788 (3/8" ○ x 3/4" ■) No 7789 (1/2" ○ x 3/4" ■) No 7789-4 (1/4" ○ x 1/2" ■) No 7789-5 (3/8" ○ x 1/2" ■)	No 409M (1/4" ○ x 3/8" ■) No 7787 (1/4" ○ x 3/4" ■) No 7788 (3/8" ○ x 3/4" ■) No 7789 (1/2" ○ x 3/4" ■) No 7789-4 (1/4" ○ x 1/2" ■) No 7789-5 (3/8" ○ x 1/2" ■)
	Calibrating square drive insert tools	No 734K/4 (1/4" ■) No 734K/5 (3/8" ■) No 734K/20 (1/2" ■) No 734K/40 (3/4" ■)	No 734K/4 (1/4" ■) No 734K/5 (3/8" ■) No 734K/20 (1/2" ■) No 734K/40 (3/4" ■)	No 734K/4 (1/4" ■) No 734K/5 (3/8" ■) No 734K/20 (1/2" ■) No 734K/40 (3/4" ■)	No 734K/4 (1/4" ■) No 734K/5 (3/8" ■) No 734K/20 (1/2" ■) No 734K/40 (3/4" ■)
	Calibration software	TORKMASTER 4	TORKMASTER 4	TORKMASTER 4	TORKMASTER 4
	Works calibration Certificate	3	4	3	4

perfectControl®

7794-2 Motorised calibrating and adjusting tool from 1 to 400 N m

The electronic perfectControl calibrating unit with its electric drive considerably reduces the amount of effort and time required for calibration and adjustment tasks on torque wrenches.

product design award 2011

- measurement possible without moving the point of application of force.
- prevents faulty readings thanks to precision-mounted spindle and finely regulated motor.
- extremely accurate calibration thanks to optimised bearings and square drives for the transducers.
- rapid, easy change of transducers thanks to quick-release latching system.
- convenient pushbutton controls for clockwise and anticlockwise measurements with automatic speed compensation.
- saves time because the bridge support is locked in place using a single-handed eccentric lever.
- transmission of readings to a PC via USB interface for further processing, analysis and archiving.
- calibration certificates can be printed or saved as a PDF file after calibration.
- as found / as left calibrations can be documented.
- during calibration, DIN EN ISO 6789:2003 in numerous languages is supported. Additional standards and works standards are available on request.
- can be upgraded to perfectControl calibrating unit No 7794-3 for angle-controlled wrenches.
- **calibration up to 1100 N m is possible using the easily attached extension unit No 7791-1** (see p. 198)
- design patent, other patents applied for

Both clicking and indicating torque wrenches can be calibrated. Calibration of transducers is possible using reference torque wrenches No 7770-100 and 7770-1000, available on request. 4 calibrating square drive insert tools No 734K (sizes 4, 5, 20, 40), 6 square drive adaptors (No 409M, No 7787, No 7788, No 7789, No 7789-4, No 7789-5), 1 USB adaptor No 7757-1, software Torkmaster, 1 jack cable No 7751, 1 spiral cable No 7752, 1 low-temperature cable connector, 1 hexagon key wrench No 10760CV size 2 mm are included. The unit is supplied without the torque wrench, transducers or notebook.

Transducers laboratory No 7727 (see p. 195).

7794-2

Code	Capacity N m	for transducer No	for torque wrenches with functional length (L_F) max. mm	Profile width mm	b mm	h mm	L mm	kg
96521093	1–400	7727-1 (sizes 1-100)	815	180	640	328	1060	57

7794-1 Manual calibrating unit from 1 to 400 N m

As for perfectControl No 7794-2, but the drive is via an ergonomically designed handwheel.
Can be upgraded to perfectControl calibrating unit No 7794-2 with an electric drive.

Calibration up to 1100 N m is possible using the easily attached extension unit No 7791-1 (see p. 198). Patents applied for. 4 calibrating square drive insert tools No 734K (sizes 4, 5, 20, 40), 6 square drive adaptors (No 409M, No 7787, No 7788, No 7789, No 7789-4, No 7789-5), 1 USB adaptor No 7751, software Torkmaster, 1 jack cable No 7751, 1 spiral cable No 7752, 1 low-temperature cable connector, hexagon key wrench No 10760CV size 2 mm are included. Supplied without torque wrench, transducer or notebook.

Transducers laboratory No 7727 (see p. 195).

7794-1

Code	Capacity N m	for transducer No	for torque wrenches with functional length (L_F) max. mm	Profile width mm	b mm	h mm	L mm	kg
96521092	1–400	7727 (sizes 1-100)	815	180	705	355	1060	47

7794-3 Automated calibrating and adjusting unit from 1 to 400 N m

Fully automatically calibrates electronic torque and angle-controlled wrenches made by STAHLWILLE
Design patent, other patents applied for.
Model is the same as perfectControl No 7794-2, except it is additionally suited to calibrating angle-controlled wrenches. Optimum adaptation to working height with motorised height adjustment.
4 calibrating square drive insert tools No 734K (sizes 4, 5, 20, 40), 6 square drive adaptors (No 409M, No 7787, No 7788, No 7789, No 7789-4, No 7789-5), 1 USB adaptor No 7751, software Torkmaster, 1 jack cable No 7751, 1 spiral cable No 7752, 1 low-temperature cable connector, hexagon key wrench No 10760CV size 2 mm are included.
Supplied without torque wrench, transducer or notebook.

Code	Capacity N m	for transducer No	for torque wrenches with functional length (L_F) max. mm	Profile width mm	b mm	h mm	L mm	kg
96 52 10 94	1–400	7727 (sizes 1-100)	815	180	640	884-1134	1060	230

7727 Transducers laboratory

QR

patented, for laboratory environments, with optimised measuring range, for calibration of torque wrenches and torque screwdrivers, for use together with perfectControl calibrating unit No 7794 or calibration system No 7706. High degree of accuracy thanks to conversion and digitization of readings within the transducer itself. Not susceptible to lateral forces due to low-profile construction.
With certificate. Supplied in sturdy plastic case.

Code	size	Capacity N m	Capacity ft.lb	Capacity in.lb	"	g
96 52 10 11	**1S** [1])	1–10	0.74–7.4	8.9–88.5	1/4	1735
96 52 10 01	**1**	1–10	0.74–7.4	8.9–88.5	1/4	1735
96 52 10 02	**2**	2–20	1.5–15	18–177	1/4	1735
96 52 10 04	**4**	4–40	3–30	35–354	3/8	2486
96 52 10 06	**6**	6–60	4.5–45	53–531	3/8	2486
96 52 10 10	**10**	10–100	7–74	89–885	3/8	2486
96 52 10 20	**20**	20–200	15–148	177–1770	1/2	2983
96 52 10 40	**40**	40–400	30–295	354–3540	3/4	3134
96 52 10 65	**65**	65–650	48–479	575–3540	3/4	3134
96 52 20 80	**80**	80–800	59–590	708–7081	3/4	3134
96 52 11 00	**100**	100–1000	74–812	885–9736	3/4	3134
96 52 13 00	**300**	300–3000	221–2214	2655–26553	1 1/2	10500

[1]) for calibrating torque screwdrivers

STAHLWILLE as your partner

Calibration
Calibration is the regular examination of the accuracy and reliability of torque tools.

This is done using special-purpose calibrating equipment which is subject to stringent monitoring.

This is essential because torque tools are precision instruments which are very often in use in safety-relevant environments. They are expected to provide the same level of accuracy in their readings reliably over long periods of time.

In order to ensure these standards are guaranteed, it is essential that examination by means of calibration takes place at regular intervals and is documented.

At the very least, a calibration system must include the following components.

1.

1. Mechanical loader
The mechanical loader is required for rapid, accurate fixing and operation of the torque wrench. The mechanical loader also ensures that the DIN EN ISO 6789 requirement for clicking torque wrenches is fulfilled, i.e. that, above 80 % of the final torque value, the force is applied slowly and steadily within a period of 0.5 to 4 seconds.

2.

2. Transducer
The torque applied using the torque wrench is digitalised within the transducer and transmitted via USB cable to the PC, which ensures error-free transmission.

3. USB hub and USB cable
Up to 5 transducers can be connected to the USB hub. From here, the data are transferred to the PC.

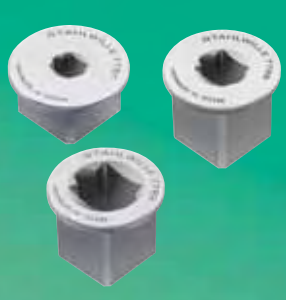
3.

4. Cable
You will require 1 cable fitted with jack plugs for each transducer which is permanently connected up.

4.

5. Square drive adapter
The set includes the square drive adapters necessary to make full use of the measuring range of the transducers; e.g. for transducer No 7723-3 (internal square drive 3/4”), square drive adapter No 7787 (1/4” female to 3/4” male), No 7788 (3/8” female to 3/4” male) and No 7789 (1/2” female to 3/4” male).

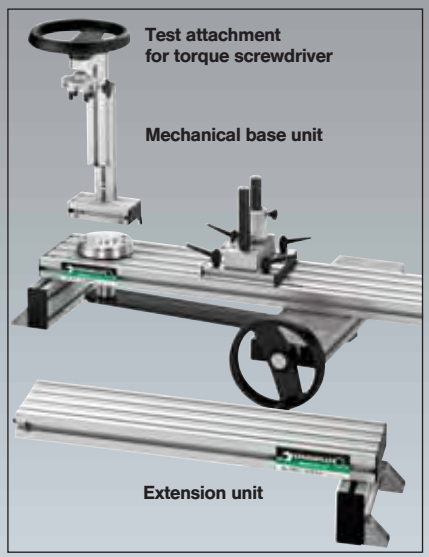
5.



6. Software
The data received in this way can then be used to issue a calibration certificate in accordance with DIN/ISO 6789.

6.

Complete calibration systems with matched components



Complete calibration systems No:		7706-8 PC	7706-9 PC	7706-10 PC	7706-11 PC
Code		96 52 10 68	96 52 10 69	96 52 10 70	96 52 10 74
Weight/kg		14,2	67,6	70,6	108,4
Range/Nm		1–10	2–100	2–1000	20–3000
	Mechanical loader	–	No 7791	No 7791	No 7792
	Stand alone test attachment for torque screwdrivers	No 7790	–	–	–
	Test attachment for torque screwdrivers	–	No 7791-2	–	–
	Extension unit	–	–	No 7791-1	No 7792-1
	Transducer	No 7727-1S (1–10 Nm)	No 7727-2 (2–20 Nm) No 7727-10 (10–100 Nm)	No 7727-2 (2–20 Nm) No 7727-10 (10–100 Nm) No 7727-40 (40–400 Nm) No 7727-100 (100–1000 Nm)	No 7727-20 (20–200 Nm) No 7727-100 (100–1000 Nm) No 7727-300 (300–3000 Nm)
	USB hub (incl. cable for connection to PC)	–	No 7753	No 7753	No 7753
	USB adapter	No 7757-1	–	–	–
	Jack cable (connection between transducer and USB hub)	No 7751	2 x No 7751	2 x No 7751	2 x No 7751
	Square drive adaptor	No 431 (3/8" O x 1/4" ■)	No 431 (3/8" O x 1/4" ■) No 409M (1/4" O x 3/8" ■)	No 7787 (1/4" O x 3/4" ■) No 7788 (3/8" O x 3/4" ■) No 7789 (1/2" O x 3/4" ■) No 409M (1/4" O x 3/8" ■)	No 7787 (1/4" O x 3/4" ■) No 7788 (3/8" O x 3/4" ■) No 7789 (1/2" O x 3/4" ■) No 7789-2 (3/4" O x 1½" ■) No 7789-3 (1" O x 1½" ■) No 7789-4 (1/4" O x 1/2" ■) No 7789-5 (3/8" O x 1/2" ■)
	Calibrating square drive insert tools	–	No 734K/4 (1/4" ■) No 734K/5 (3/8" ■)	No 734K/4 (1/4" ■) No 734K/5 (3/8" ■) No 734K/20 (1/2" ■) No 734K/40 (3/4" ■)	No 734K/4 (1/4" ■) No 734K/5 (3/8" ■) No 734K/20 (1/2" ■) No 734K/40 (3/4" ■)
	Adaptors	No 3115 (1/4" ■ x 1/4" ⬢ E 6,3) No 3115/1 (1/4" ■ x 1/4" ⬢ C 6,3)	No 3115 (1/4" ■ x 1/4" ⬢ E 6,3) No 3115/1 (1/4" ■ x 1/4" ⬢ C 6,3)	–	–
	Calibration software	TORKMASTER 3	TORKMASTER 3	TORKMASTER 3	TORKMASTER 3
	Works calibration certificate	1	2	4	3

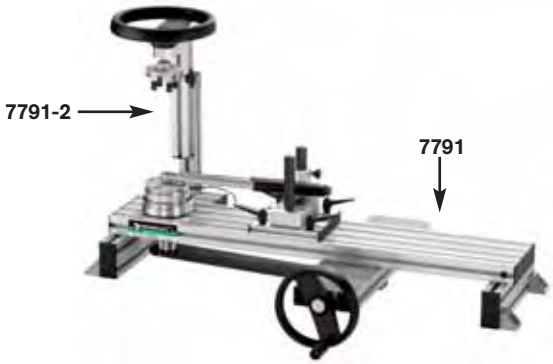
Manutork®

Mechanical loaders for torque wrenches and torque screwdrivers

Thanks to the modular design, end users can put together their own mechanical loader according to their specific requirements. Extensions with additional components are possible any time.
All the components are carefully matched to ensure compatibility and can be easily fitted.
This slot-in system is easy to use and has a very accurate fit.
The components can be quickly and easily locked together using the integrated screw joints.
The display unit can be attached at various points of the system via a holder.
In this way, every user can organise his or her work to suit themselves.

7791 Mechanical base unit from 1 to 400 N m

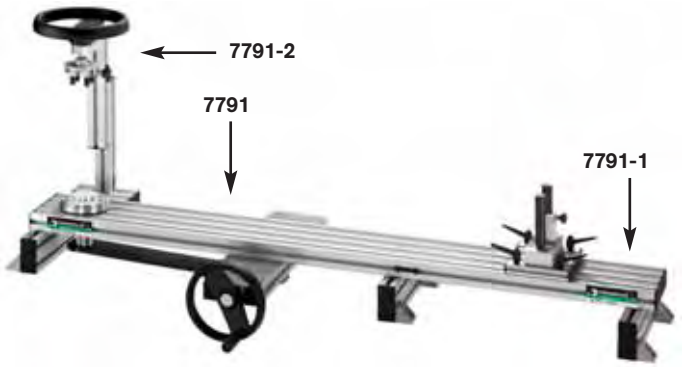
Measurement possible without moving the point of application of force.
Thanks to a specially designed force transmission system, mechanical loader No 7791 avoids the risk of the point of force application shifting during the calibration process. The lever below the test rail is actuated in a linear direction by the handwheel acting on a spindle. The linear motion is translated into a rotary movement which acts on the transducer. The torque wrench to be calibrated remains in the same position throughout the calibration process. This prevents measuring errors caused by the point of force application being moved. Thanks to a low-friction linear ball bearing, the torque wrench is automatically levelled as it is placed in the unit. A further linear ball bearing ensures the contact with the torque wrench is friction-free. The reduction in lateral forces acting on the transducer and in the friction on the point of contact with the torque wrench results in a corresponding reduction in mismeasurement.
Patents applied for.
Supplied without torque wrench, transducer, display unit and holder.



Code	Capacity N m	for transducer No	for torque wrenches with functional length (L_F) max. mm	Profile width mm	b mm	h mm	L mm	kg
52 110 091	1–400	7727 (sizes 1-40)	815	180	704	323	1069	26.5

7791-1 Extension unit for No 7791, 7794-1 and 7794-2 up to 1000 N m

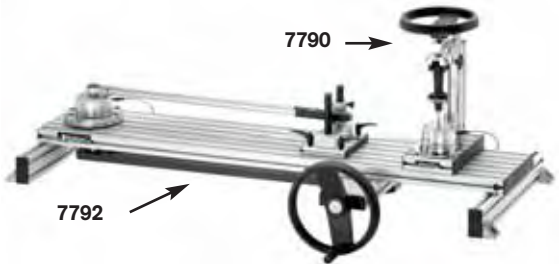
with one pair of adapter plates No 7770-3 for height compensation between extension unit No 7791-1 and perfectControl calibrating units No 7794-1 and No 7794-2.



Code	Capacity N m	for torque wrenches with functional length (L_F) max. mm	Profile width mm	b mm	h mm	L mm	kg
52 110 191	–1000	1390 (7791 + 7791-1)	180	308	135	673	5.4

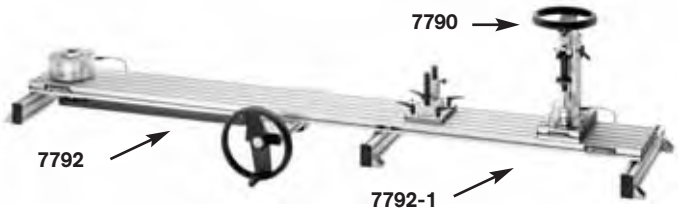
7792 Mechanical base unit from 20 to 1000 N m

Patents applied for.



Code	Capacity N m	for transducer No	for torque wrenches with functional length (L_F) max. mm	Profile width mm	b mm	h mm	L mm	kg
52 11 00 92	20–1000	7727 (sizes 20; 100; 300)	1390	270	722	323	1668.5	57

7792-1 Extension unit for No 7792 up to 3000 N m



Code	Capacity N m	for torque wrenches with functional length (L_F) max. mm	Profile width mm	b mm	h mm	L mm	kg
52 11 01 92	–3000	2390 (7792 + 7792-1)	270	558	135	1073	23.9

Test attachments for torque screwdrivers

7791-2 Test attachment for torque screwdrivers

Can be bolted onto mechanical loader No 7791. The torque screwdriver to be calibrated is inserted in the square mount of the transducer and fixed using the universal central clamp. The handwheel ensures that the required force is applied in a controlled manner to the torque screwdriver.

Code	Capacity N m	b mm	h mm	t mm	kg
52 11 02 91	–10	250	442–593	351	3.9

7790 Stand alone test attachment for torque screwdrivers

Can be bolted to mechanical loader No 7792. The torque screwdriver to be calibrated is inserted in the square mount of the transducer and fixed using the universal central clamp. The handwheel ensures that the required force is applied in a controlled manner to the torque screwdriver. Supplied without transducer or torque screwdriver.

Code	Capacity N m	for transducer No	b mm	h mm	t mm	kg
58 52 10 90	–10	7727-1S	250	442–593	351	7.9

Accessory

7750-1 Holder

for display unit No 7750. Can be bolted to mechanical loaders and test attachments.

Code	g
52 10 10 50	165

5

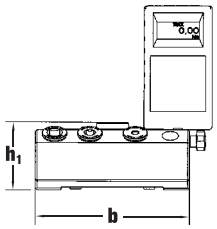
Electronic torque tester for torque wrenches Sensotork® 7707 W (For complete calibration systems, see p. 193, 197)

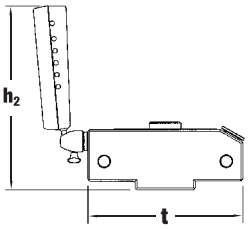
Compact workshop-based torque tester for easy adaptation by replacement of the transducers.
High degree of accuracy thanks to flat transducer and conversion and digitalisation of readings within the transducer (see p. 201).
High degree of safety through display showing actual torque read-off where clicking torque wrenches are used.

7707 W Workshop torque tester Sensotork®

Electronic workshop torque tester for torque wrenches, consisting of:
- transducer, patent
- holder
- display unit (registered design)
- tripod for display unit (with 1.5 m cable)
- spiral cable
- mains adaptor (110 V–230 V with interchangeable socket adaptors) or direct connection to 12 V in-car supply is possible
- square drive adaptor (No 7707-2W, No 7707-2-1W, No 7707-2-2W, No 7707-3W)
- kit for attaching the unit to a workbench or wall in a horizontal or vertical testing position

for clockwise and anticlockwise use. Units of measurement: N m, ft.lb, in.lb. The easily interchangeable transducers are attached to the holder by means of a QuickRelease safety lock. Low lateral forces thanks to low-profile transducers, automatic detection of the transducer, flexible and user friendly because the unit can be used horizontally or vertically and the display unit can be placed in many positions, additional tripod with 1.5 m cable for mounting the display unit to facilitate visual monitoring when using longer torque wrenches, especially broad measuring range from approx. 2% to 100% of rated value. The software No 7759-4, including USB hub and jack cable (see p. 202), enables readings to be transferred to the PC for documenting and for generating calibration certificates in accordance with DIN EN 6789:2003 (no separate power supply needed, power comes from PC). While individual transducers are being recalibrated, the torque tester itself remains on-site for further use. Wide range of application (-20°C to +60°C). Complies with DIN 51309: 2005, Class 2 and DKD-R 3-8: 2003. With certificate. Supplied in sturdy plastic case.





QR QuickRelease
Rapid change and firm locking of the transducers thanks to the QuickRelease safety lock. Interchangeable.

Square drive adapters:
A set of interchangeable square drive adapters are conveniently stored in the mounting block for a range of different drive sizes.

Code	No	Capacity N m	Capacity ft.lb	Capacity in.lb	▢ "	b mm	h_1 mm	h_2 mm	t mm	g	g with box
9652 1080	**7707-1W**	0.4–20	0.3–15	3.5–177	1/4	180	79	215	180	6255	9500
9652 1072	**7707-2W [1])**	2–100	1.5–74	18–885	3/8	180	79	215	180	7025	10300
9652 1083	**7707-2-1W [2])**	4–200	3–148	35–1770	1/2	180	79	215	180	7511	10975
9652 1084	**7707-2-2W [3])**	8–400	6–295	71–3540	3/4	180	79	215	180	7654	11100
9652 1082	**7707-3W [3])**	25–1100	18–812	221–9736	3/4	180	79	215	180	7495	11000

[1]) with square drive adaptor No 409M (1/4" ▢ x 3/8" ■)
[2]) with square drive adaptors No 7789-4 (1/4" ▢ x 1/2" ■), No 7789-5 (3/8" ▢ x 1/2" ■)
[3]) with square drive adaptors No 7787 (1/4" ▢ x 3/4" ■), No 7788 (3/8" ▢ x 3/4" ■), No 7789 (1/2" ▢ x 3/4" ■)

Which transducer is for which torque wrench?

(Calibration in accordance with DIN EN ISO 6789: 2003)

STAHLWILLE's recommendation:

+++ very well suited ++ well suited + suitable

No	7721-1	7722	7723-1	7723-2	7723-3
730D/10		+++			
730D/20			+++		
730D/40				+++	
730D/65					+++
730N/2	+++				
730N/5		+++			
730N/10		+++	++		
730N/12			+++		
730N/20			+++	++	
730N/40				+++	
730N/65					+++
730Na/2	+++				
730Na/5		+++			
730Na/10		+++	++		
730Na/20			+++	++	
730Na/40				+++	
730/2	+++	++	+		
730/4		+++	++	+	
730a/2	+++	++	+		
730a/4		+++	++	+	
730/5		+++	++		
730/10		+++	++	+	
730/12			+++	++	+
730/20			+++	++	+
730/40				+++	++
730/65					+++

No	7721-1	7722	7723-1	7723-2	7723-3	7724-1
730a/5		+++	++			
730a/10		+++	++	+		
730a/12			+++	++	+	
730a/20			+++	++	+	
730/80					+++	+
720Nf/80					+++	+
721/5		+++	++			
721/15			+++	++	+	
721/30				+++	++	
721Nf/80					+++	+
721Nf/100					+++	+
755R/1	+++					
755/4		+++	++			
755/10		+++	++	+		
755/20			+++	++	+	
755/30				+++	++	
71/40				+++	++	
71/80					+++	+
71aR/80					+++	+
73Nm/15	+++	++				
712R/6		+++				
712R/20			+++			
712R/40				+++		
713R/6		+++				
713R/20			+++			
713R/40				+++		

5

7721–7724 Transducers

QR

Patent, for calibration of torque wrenches and torque screwdrivers, high degree of accuracy thanks to conversion and digitization of readings within the transducer itself.
Not susceptible to lateral forces due to low-profile construction.
Can also be used as part of a calibration system (see p. 193, 197). With certificate. Supplied in sturdy plastic case.

Code	No	Measuring ranges deviation of indication: Display deviation value ± 1% of the reading N.m	ft.lb	in.lb	Display deviation value ± 0.5% of the reading N.m	ft.lb	in.lb	Display deviation value ± 0.25% of the reading N.m	ft.lb	in.lb	▢ "	⚖ g
96 52 10 21	**7721 [1])**	0.2–10	0.15–7.4	1.8–88.5	1–10	0.74–7.4	8.9–88.5	2–10	1.5–7.4	17.7–88.5	1/4	2398
96 52 10 00	**7721-0**	0.2–10	0.15–7.4	1.8–88.5	1–10	0.74–7.4	8.9–88.5	2–10	1.5–7.4	17.7–88.5	1/4	1735
52 10 00 26	**7721-1**	0.4–20	0.3–15	3.5–177	2–20	1.5–15	18–177	4–20	3–15	35–177	1/4	1735
96 52 10 22	**7722**	2–100	1.5–74	18–885	10–100	7–74	89–885	12–100	9–74	106–885	3/8	3060
96 52 10 23	**7723-1**	4–200	3–148	35–1770	20–200	15–148	177–1770	40–200	30–148	354–1770	1/2	3605
96 52 20 23	**7723-2**	8–400	6–295	71–3540	40–400	30–295	354–3540	80–400	59–295	708–3540	3/4	3134
96 52 10 28	**7723-3**	25–1100	18–812	221–9736	110–1100	81–812	974–9736	220–1100	162–812	1947–9736	3/4	3761
96 52 10 29	**7724-1 [2])**	150–3000	111–2214	1328–26553	300–3000	221–2214	2655–26553	600–3000	443–2214	5311–265531	1/2	12000

[1]) for calibrating torque screwdrivers
[2]) for use with mechanical loader No 7792 and 7792-1 (see p. 199)

Note!

Torque testers are measuring instruments! They have to be regularly calibrated and, where necessary, adjusted, using suitable calibration equipment. We recommend recalibrating every 12 months.

Accessories for workshop torque tester and calibration systems

7750 Display unit

registered design, for displaying the actual torque as measured. Units of measurement: N m, ft.lb, in.lb. Modes of operation: track, peak hold, first peak (only with manual operation), additional display of actual torque applied with clicking torque wrenches. Swivels to any desired position thanks to universal ball-joint.

Code	g
52 10 00 50	182

7759-4 USB adaptor, jack cable and software Torkmaster

Link between perfectControl or transducer and PC. For adjusting and calibrating torque wrenches and torque screwdrivers.
Produces calibration certificates in accordance with DIN EN ISO 6789: 2003, which can be printed out or saved as PDF files.

- as found / as left calibrations can be documented.
- graphical representation of the torque progression
- user management
- 17 languages
- equipment testing system

System requirements:
- PC
- Microsoft Windows XP SP3 or later operating system
- USB connection

Code	L m	g
96 58 36 29	1.5	137

7751 Jack cable

Connection between transducer and USB adaptor or display unit, with jacks at both ends, 90° angled.

Code	L m	g
52 11 00 51	1.5	50

7753 USB adaptor with USB cable

for connecting up to 5 transducers to the PC for evaluating your data.

Code	L mm	b mm	h mm	g
52 11 00 53	125	65	41	230

7752 Spiral cable

Connection between transducer and display unit or USB adaptor, with jacks at both ends, 90° angled.

Code	L max. mm	g
52 11 00 52	500	35

7760 Mains adaptor

Input:
110 V–230 V AC ,
Output: 12 V DC,
with interchangeable socket adaptors.

Code	Volt	g
52 11 00 56	110–230	385

409M Square drive adaptor

1/4" socket x 3/8" plug (6.3 x 10 mm).

Code	L mm	ø mm	g
11 03 00 10	13	25	14

7787 Square drive adaptor

1/4" socket x 3/4" plug (6.3 x 20 mm).

Code	L mm	ø mm	g
58 52 10 87	15.5	29	41

7788 Square drive adaptor

3/8" socket x 3/4" plug
(10 x 20 mm).

Code	L mm	ø mm	g
58521088	23.5	29	52

7789 Square drive adaptor

1/2" socket x 3/4" plug
(12.5 x 20 mm).

Code	L mm	ø mm	g
58521089	23.5	29	42

7789-2 Square drive adaptor

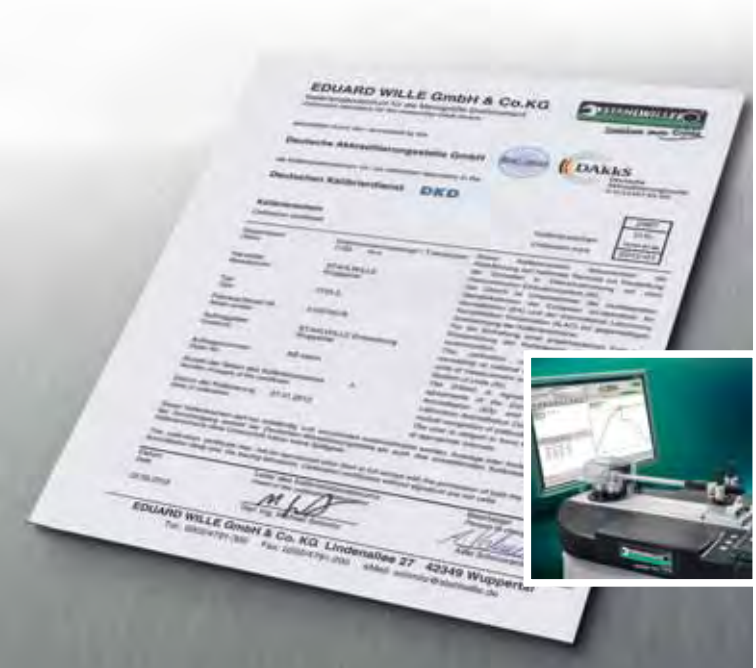
3/4" socket x 1 1/2" plug
(20 x 40 mm).

Code	L mm	ø mm	g
58523089	44	60	383

7789-3 Square drive adaptor

1" socket x 1 1/2" plug
(25 x 40 mm).

Code	L mm	ø mm	g
58524089	44	60	291



7789-4 Square drive adaptor

1/4" socket x 1/2" plug
(6.3 x 12.5 mm).

Code	L mm	ø mm	g
58524090	15.5	29	25

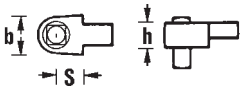
7789-5 Square drive adaptor

3/8" socket x 1/2" plug
(10 x 12.5 mm).

Code	L mm	ø mm	g
58524091	15.5	29	28

734K Calibrating square drive insert tools

Without a ball or pin (so not suitable for bolt tightening). Optimum measuring results during calibration thanks to reduced lateral forces.



Code	size	■ "	mm	b mm	h mm	S mm	g
58243004	**4**	1/4	9 x 12	20	14	17.5	76
58243005	**5**	3/8	9 x 12	20	14	17.5	80
58243020	**20**	1/2	14 x 18	27	18	25	218
58243040	**40**	3/4	14 x 18	40	25	25	410

70VK Calibrating square drive units

Without a ball or pin (so not suitable for bolt tightening). Optimum measuring results during calibration thanks to reduced lateral forces.

Code	size	for No	a "	b "	L mm	g	
59011014	**11**	734/4	3/8	1/4	24.7	15	5
59011003	**3**	734/5	3/8	3/8	27.6	20	5
59011011	**502 1/2**	734/20	1/2	1/2	36.9	60	5
59011008	**8**	734/40	3/4	3/4	52.2	147	5

STAHLWILLE is an accredited calibrating laboratory.

Controlled tightening is a must in terms of safety and the lifetimes of the screws and bolts.

STAHLWILLE has been awarded accreditation as a calibrating laboratory for torque by the German Accreditation Body (DAkkS) because of the Company's skills in the field of torque controlled tightening.

STAHLWILLE's calibration service
The STAHLWILLE calibration service is in a position to offer both the usual works calibration certificate and the DAkkS certificate.

Included in the price of calibration of STAHLWILLE products are the costs of any adjustment required and a second calibration operation.

In addition, the STAHLWILLE calibration service provides complete monitoring, documentation archiving and follow-up timing for torque wrenches and testers.

Additional information on these services is available on request.