

# PRODUCTS

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Quality made in Germany



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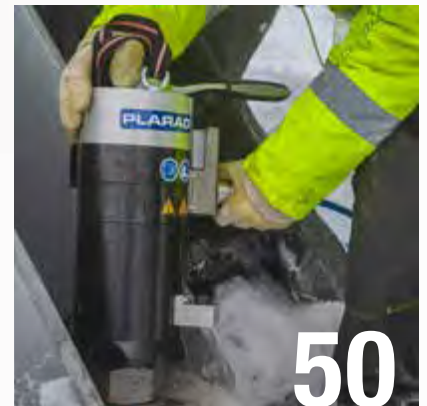
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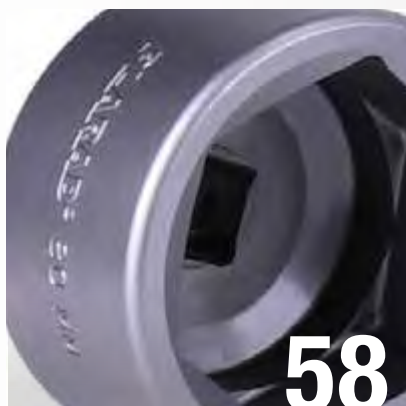


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# NTENT







# **PLARAD<sup>®</sup>**

**Torque & Tension Systems**



## **MASCHINENFABRIK WAGNER**

### **FIRST-CLASS BOLTING TECHNOLOGY UP TO 150,000 Nm**

As a manufacturer of torque wrenches since 1962, we proudly look back on a rich history marked by continuous innovation and dependable products in the field of bolting technology.

Offering a diverse range of products across eight product lines, from manual torque multipliers to fully automated bolting systems, we provide comprehensive solutions for every need.

With the Plarad brand, Maschinenfabrik Wagner stands for unmatched quality, innovation, and reliability in fastening technology, with capabilities up to 150,000 Nm.

You benefit from seamlessly integrated devices and enjoy the convenience of sourcing all products and services for your bolting applications from a single trusted provider.

With a global presence and deep industry expertise, Maschinenfabrik Wagner has established itself as a leader in bolting technology and a reliable partner for tailor-made solutions.

Our wide-ranging services, including training, on-site support, bolting analysis, and expert advice, complete our offering, ensuring you have everything you need.





PRODUCT LINK

## SYSTEM VARIANTS

# BATTERY NUTRUNNER

## FEATURES AT A GLANCE

Plarad products for all applications – suitable for your task

### POWER

Robust and user-friendly tools of the next generation

These tools set new standards in terms of precision, speed and ergonomics



Torque mode

### DOCU

The upgrade to the docu version:

Documents the bolting results



Documentation



Wi-Fi capable



Torque mode

### CONTROL

Also features torque, angle of rotation mode



Torque/angle of rotation mode



Rotation angle mode



Documentation



Wi-Fi capable



Torque mode









# DA2<sup>power</sup>

## THE EXPERT FOR FAST AND MOBILE WORKING

The compact powerhouse. Strong and reliable, it masters all challenges and can be upgraded to the *docu* and *control* model variants.



1

### SPEED

4 gears for optimum working speed

2

### ERGONOMIC

360° swivel joint without locking steps  
0% kickback at end of force

3

### BATTERY LIMIT CONTROL

Proactive torque and battery monitoring  
of the 5.2 Ah Lithium-Ion high-power batteries.  
6.0 Ah available on request



Also available  
as an angle version

## + RELIABLE

- ▶ More powerful loosening stages for stubborn bolts
- ▶ Rust-free gearbox thanks to nickel-plated surface
- ▶ FEIN drive and battery technology ensures quality and the possibility of worldwide procurement



## + BATTERY

- ▶ 5.2 Ah Li-Ion high-power batteries, 6.0 Ah available on request
- ▶ Full battery charge in under 30 minutes thanks to High-Performance Charger
- ▶ Battery charge level indicator
- ▶ Charger shows battery status to plan your next job more reliably

## + SAFETY

- ▶ Safety and ergonomics thanks to automatic release of the reaction arm after bolting procedure
- ▶ Protection and ease of use thanks to automatic locking at end of force



## POWER

Robust and user-friendly tools of the next generation



## DOCU

The smart upgrade to the *power* version:

Documents and analyses the tightening results



## CONTROL

Also features combined torque, rotation angle and test mode





# DA2docu

## THE SMART SPECIALIST FOR SEAMLESS DOCUMENTATION

Your device for documentation and analysis. In addition to the extensive functions of the DA2power, the DA2docu saves the tightening results incl. location and sends them to a smart device via Wi-Fi.

Documentation, bolted joint management and torque lock can be easily controlled via app.



1

### BOLTING COUNTER

Integrated gear and torque-dependent bolting counter

2

### PROCESS SECURITY

Tightening management and torque lock

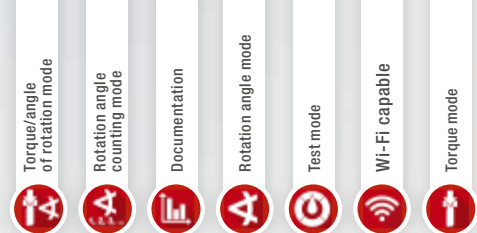
3

### DA2DOCU-APP

Android® app with comprehensive documentation (time stamp, user, GPS coordinates, up to 10,000 memory locations) for easy tracking. (Tablet not included in the scope of delivery)



# DA2control



## PERFECT CONTROL THANKS TO ROTATION ANGLE MODE

The new DA2control cordless nutrunner enables precise tightening for every application, due to its integrated torque and rotation angle feature as well as direction of rotation recognition.

Thanks to its intuitive handling and over-the-air updates, your device is always up-to-date – for maximum performance and reliability.

### + LCD DISPLAY

All important bolting parameters at a glance

### + UP-TO-DATE

Updates automatically on-site (over-the-air [OTA])

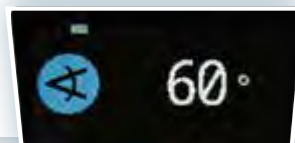
**INTUITIVE**  
menu control  
via start-up and  
direction buttons



## COMBINED TORQUE / ANGLE OF ROTATION MODE

### F E A T U R E S

- ▶ Torque/angle of rotation mode
- ▶ Tightening parameters can be set directly on the tool
- ▶ Detects the direction of rotation





# DA2*safety*

## THE SAFETY AND HANDLING EXPERT

Safety-conscious design for demanding applications. The DA2*safety* offers maximum protection thanks to its two-handed operation. With swivelling additional handle for comfortable use and unrestricted operability, even when wearing gloves.

Ideal for left- and right-handed users. All DA2 models can be upgraded.

1

### FLEXIBLE

Rotatable and fixable additional handle

2

### SAFETY START TRIGGER (SST)

The device stops automatically when one of the two triggers has been deactivated



### FEATURES

- ▶ Minimising the risk of injury
- ▶ Improved handling when moving on several bolts
- ▶ Enhanced carrying comfort
- ▶ High level of user-friendliness for left- and right-handers
- ▶ Suitable for construction sites: unrestricted handling with gloves
- ▶ Comfortable use thanks to additional handle
- ▶ The DA2-05 to DA2-36 models can be upgraded to DA2*safety* 2.0 and the DA2-48 and DA2-80 models to DA2*safety* 1.1

## DA2

Typ Type	Drehmoment Max. torque		L1		D1		H1		Drehzahl Speed max.		Gewicht* Weight*		Vierkant Squaredrive	
	Nm	ft-lbs	mm	inch	mm	inch	mm	inch	U/min	rpm	kg	lbs	Zoll	inch
DA2-05	550	410	365	14.4	68,5	2.70	253	10.0	71,6	5,3	11.7	3/4"		
DA2-10	1.000	740	365	14.4	68,5	2.70	253	10.0	48,0	5,3	11.7	3/4"		
DA2-20	2.000	1,480	405	15.9	80,0	3.15	253	10.0	24,6	6,8	15.0	1"		
DA2-30	3.000	2,210	405	15.9	80,0	3.15	253	10.0	20,9	6,8	15.0	1"		
DA2-36	3.600	2,660	405	15.9	80,0	3.15	253	10.0	15,3	6,8	15.0	1"		
DA2-48	4.800	3,540	437	17.2	86,0	3.39	253	10.0	12,9	7,8	15.0	1 1/2"		
DA2-80	8.000	5,900	521	20.5	101,0	3.98	253	10.0	5,7	12,5	27.6	1 1/2"		



## MODELS // DATA

### DA2 ANGLE VERSION

Typ Type	Drehmoment Max. torque		L1		H1		H2		D1		Drehzahl Max. speed		Gewicht* Weight*		Vierkant Squaredrive	
	Nm	ft-lbs	mm	inch	mm	inch	mm	inch	mm	inch	U/min	rpm	kg	lbs	Zoll	inch
DA2-05-W	550	410	305,25	14.4	253	10.0	245,0	9.65	68,5	2.70	71,6	6,2	13.7	3/4"		
DA2-10-W	1.000	740	305,25	14.4	253	10.0	245,0	9.65	68,5	2.70	48,0	6,2	13.7	3/4"		
DA2-20-W	2.000	1,480	311,00	15.9	253	10.0	285,0	11.22	80,0	3.15	24,6	7,8	17.2	1"		
DA2-30-W	3.000	2,210	311,00	15.9	253	10.0	285,0	11.22	80,0	3.15	20,9	7,8	17.2	1"		
DA2-36-W	3.600	2,660	311,00	15.9	253	10.0	285,0	11.22	80,0	3.15	15,3	7,8	17.2	1"		
DA2-48-W	4.800	3,540	314,00	17.2	253	10.0	316,5	12.44	86,0	3.39	12,9	9,5	20.9	1 1/2"		
DA2-80-W	8.000	5,900	321,50	20.5	253	10.0	400,5	15.77	101,0	3.98	5,7	13,5	29.8	1 1/2"		



### DA2 SAFETY

Typ Type	L2		H1		D1	
	mm	inch	mm	inch	mm	inch
DA2-05-SST 2.0	343	13.50	344	13.54	68,5	2.70
DA2-10-SST 2.0	343	13.50	344	13.54	68,5	2.70
DA2-20-SST 2.0	343	13.50	344	13.54	80,0	3.15
DA2-30-SST 2.0	343	13.50	344	13.54	80,0	3.15
DA2-36-SST 2.0	343	13.50	344	13.54	80,0	3.15
DA2-48-SST 1.1	auf Anfrage					
DA2-80-SST 1.1	auf Anfrage					



FOR  
FURTHER  
DETAILS  
SEE DA2

Repeat accuracy: ≤ 4%, depending on the bolting case. Technical data without guarantee.  
\*Specification without reaction arm and battery. Battery weight: 0.75 kg



# DA2*motion*

## THE BATTERY-POWERED VALVE ACTUATOR FOR EVERY ROTATIONAL MOVEMENT

In the water or energy industry, in transport or in the chemical industry, the DA2*motion* guarantees fast and safe work.

With the high output speed of the DA2*motion*, you can achieve fast results thanks to its 4-speed gearbox. A patented fully automatic locking mechanism and the digital counter ensure precision and safety.

The stop buffer on the reaction arm and 'smooth start and stop feature' guarantee gentle and quiet handling. Ideal for all industries thanks to precisely fitting accessories and high mobility.



### FLEXIBLE

Two versions,  
up to 550 Nm or 1000 Nm



### FAST

High output speed



### ERGONOMIC

360° swivel joint without detent steps  
0% kickback at end of force



### PRECISE FIT

Telescopic reaction arm  
with digital counter

Hardcase trolley,  
protection class IP 67

## + ERGONOMIC

- ▶ Low-vibration and low-noise operation thanks to brushless precision drive
- ▶ Reaction arm with stop buffer: Pressure-sensitive surfaces are protected



## + PERFORMANCE

- ▶ Patented fully automatic swivel joint lock: Prevents blows to the wrist or arms, no tearing of the nutrunner
- ▶ Precisely fitting accessories for every application thanks to extensive extension packs
- ▶ Fast working thanks to 4-speed gearbox

## + SAFETY

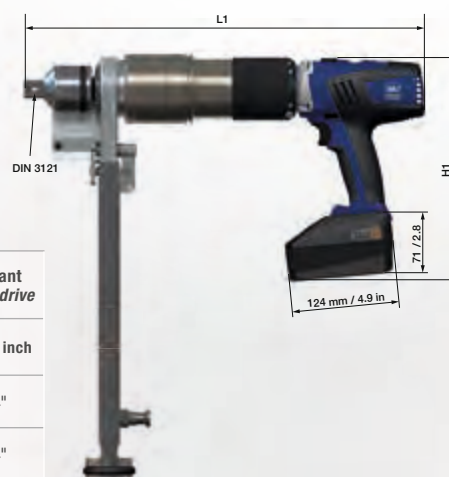
- ▶ Smooth starting and braking behaviour
- ▶ No damage to surfaces
- ▶ Digital counter with high resolution avoids damage



## DATA // MODELS

Typ Type	Drehmoment Max. torque		L1		H1		Drehzahl Max. speed		Gewicht* Weight*		Vierkant Squaredrive	
	Nm	ft-lbs	mm	inch	mm	inch	U/min	rpm	kg	lbs	Zoll	inch
DA2-05motion	550	410	395	15.55	253	9.96	11,1		5,1	11.2	3/4"	
DA2-10motion	1.000	740	395	15.55	253	9.96	6,8		5,9	13.0	3/4"	

Technical data without guarantee. \*Details without reaction arm and battery. Battery weight: 0.75 kg







PRODUCT LINK

## SYSTEM VARIANTS





# ELECTRIC NUTRUNNERS

## FEATURES AT A GLANCE

Plarad products for all areas of application - to suit your requirements

### DOCU








Documents the bolting results

-  Documentation
-  Test mode
-  Wi-Fi capable
-  Torque mode



### DOCU PLUS

Also features torque, angle of rotation and test mode

-  Torque/angle of rotation mode
-  Rotation angle counting mode
-  Rotation angle mode
-  Documentation
-  Test mode
-  Wi-Fi capable
-  Torque mode





# DE1docu

## DRIVEN BY POWERFUL FEATURES

The detailed solution – for demanding applications up to 8,000 Nm. High torque accuracy is achieved by compensating for voltage fluctuations and temperature changes. The DE1docu automatically switches to the available mains frequency (e.g. 50 Hz or 60 Hz).

Rotation angle mode



Test mode



Wi-Fi capable



Torque mode



### + DISPLAY

Clear presentation of all bolting information via multifunctional OLED display

### + SMART DEVICE

Seamless documentation of your tightening results via Wi-Fi on mobile devices (not included in the scope of delivery)



### + PRECISION

- ▶ The DE1docu has torque-controlled bolting processes
- ▶ High repetition accuracy is achieved through state-of-the-art motor control

### + SAFETY

- ▶ The motor temperature is monitored. The motor switches off automatically in the event of overheating
- ▶ Low-vibration technology protects muscles and joints

### + DISPLAY

- ▶ The two-digit torque code 00-99 can be set using the selector buttons.
- ▶ Includes silicone display protection

YOUR ADVANTAGES



# DE1 *docu plus*



## THE FULL SCOPE OF WHAT IS POSSIBLE

The DE1control sets standards in precision and versatility: The innovative software enables additional features in the area of different bolting methods.

The torque/angle of rotation mode (combined process) can be carried out in a single work step. Alternatively, the joining torque and the subsequent further rotation angle can be applied in pure rotation angle mode.



COMBINED  
TORQUE / ANGLE  
OF ROTATION  
MODE



### FEATURES

- ▶ Intuitive operating menu
- ▶ Display shows all values for measured mains voltage, mains frequency and motor temperature
- ▶ Comprehensive documentation of your bolting results via Wi-Fi on mobile devices
- ▶ Also available as an angle version
- ▶ Numerous additional features in the symbol-guided menu (e.g. button lock, locking of individual setting levels and release mode)
- ▶ Drive 360° rotatable
- ▶ Memory space for 50 programmable bolting cases



## + TORQUE MODE

- ▶ Two-digit torque code 00-99 can be set via push buttons
- ▶ Set torque (according to the enclosed torque chart) can be displayed optionally

## + ANGLE OF ROTATION MODE

- ▶ Limitation of the maximum total torque (protection of the tool, protection of the bolted joint against overtightening) is possible
- ▶ Adjustment of the joining torque in 100 setting steps according to the torque table
- ▶ Continuous setting of the rotation angle 0 until 999°

## + TORQUE/ANGLE OF ROTATION MODE

- ▶ Adjustment of the joining torque in 100 setting steps according to the torque table
- ▶ Continuous setting of the rotation angle 0 until 999°

## + ROTATION ANGLE COUNTING MODE

- ▶ Torque-controlled switch-off of the tool
- ▶ Rotation angle is counted from the minimum torque (level 00) of the respective power class and serves as a reference value

## + TEST MODE

- ▶ Checking pre-tightened bolts without overtightening

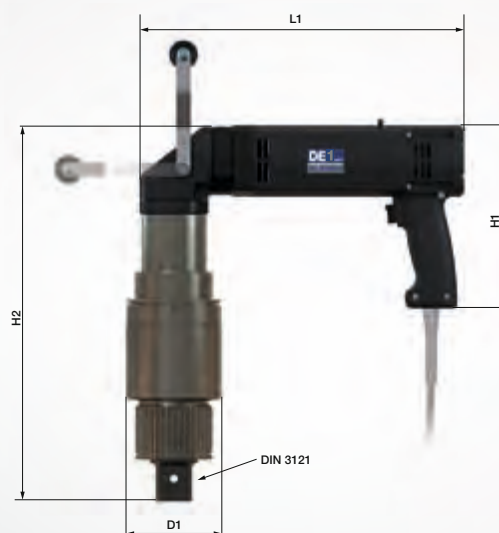


# MODELS // DATA



## DE1

Typ Type	Drehmoment Max. torque		L1		H1		D1		Drehzahl Max. speed		Gewicht* Weight*		Vierkant Squaredrive	
	Nm	ft-lbs	mm	inch	mm	inch	mm	inch	U/min 110 V	rpm 230 V	kg	lbs	Zoll	inch
DE1-10	1.000	740	425	16.73	195	7.68	68,5	2.70	9,0	12,0	5,9	13.0	3/4"	
DE1-20	2.000	1,480	449	17.68	195	7.68	80,0	3.15	5,9	8,0	7,0	15.4	1"	
DE1-30	3.000	2,210	465	18.31	195	7.68	80,0	3.15	4,5	5,2	7,2	15.9	1"	
DE1-36	3.600	2,660	465	18.31	195	7.68	80,0	3.15	3,5	4,6	7,2	15.9	1"	
DE1-48	4.800	3,540	497	19.57	195	7.68	86,0	3.39	2,0	2,5	9,1	20.1	1 1/2"	
DE1-80	8.000	5,900	565	22.24	195	7.68	101,0	3.98	0,7	0,7	13,2	29.1	1 1/2"	



## DE1 ANGLE VERSION

Type	Drehmoment Max. torque		L1		H1		H2		D1		Drehzahl Max. speed		Gewicht* Weight*		Vierkant Squaredrive	
	Nm	ft-lbs	mm	inch	mm	inch	mm	inch	mm	inch	U/min 110 V	rpm 230 V	kg	lbs	Zoll	inch
DE1-10-W	1.000	740	342	13.46	195	7.68	253,0	9.96	68,5	2.70	9,0	12,0	7,1	15.6	3/4"	
DE1-20-W	2.000	1,480	342	13.46	195	7.68	277,5	10.92	80,0	3.15	5,9	8,0	8,3	18.3	1"	
DE1-30-W	3.000	2,210	342	13.46	195	7.68	293,5	11.55	80,0	3.15	4,5	5,2	8,6	18.9	1"	
DE1-36-W	3.600	2,660	342	13.46	195	7.68	293,5	11.55	80,0	3.15	3,5	4,6	8,6	18.9	1"	
DE1-48-W	4.800	3,540	342	13.46	195	7.68	326,0	12.83	86,0	3.39	2,0	2,5	10,2	22.5	1 1/2"	
DE1-80-W	8.000	5,900	342	13.46	195	7.68	393,0	15.47	101,0	3.98	0,7	0,7	14,5	31.9	1 1/2"	

Repeat accuracy: 4%, depending on the bolted joint.

Technical data without guarantee. \*Specification without reaction arm.





# DP2<sup>power</sup>

## IT DOESN'T BLOW BUBBLES – THE ERGONOMIC POWER NUTRUNNER

The DP2<sup>power</sup> pneumatic nutrunner is powerful, robust and easy to use: Simply set the pressure on the maintenance unit using the values in the torque chart and get straight to work.

With the DP2<sup>power</sup>, you have the perfect nutrunner at hand when it's not just about precision, but also about power and performance in continuous use.



### + POWER

Nominal torque at low pressure

### + COMPACT DESIGN

Especially compact and lightweight design

### + ERGONOMIC

Low-noise and low-vibration operation

ALSO  
AVAILABLE  
AS AN ATEX  
VERSION



II 2 G EX H IIB T6 GB  
II 2 D EX H IIIC DB 85 °C



### + POWER

- ▶ Torque up to 8,000 Nm
- ▶ Durable and robust thanks to high-quality components, suitable for continuous use
- ▶ Nominal torque is reached at low pressure

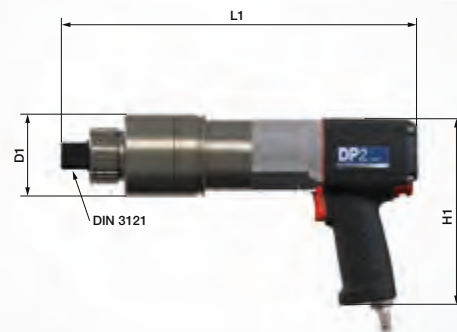
### + ERGONOMIC

- ▶ 360° rotatable drive
- ▶ Low noise and low vibration: Ergonomic working and minimal strain on the user
- ▶ Compact dimensions thanks to short drive unit – for low weight and high performance

### + BONUS

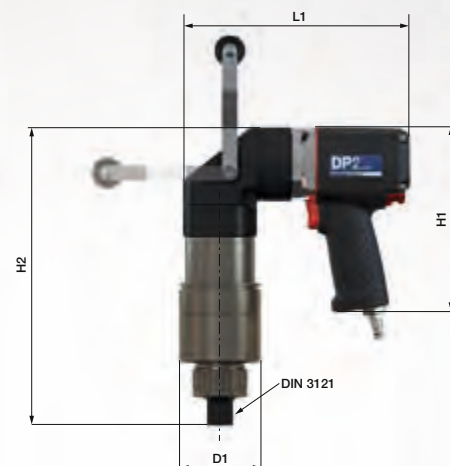
- ▶ Torque accuracy through compensation of pressure fluctuations
- ▶ Also available as an ATEX version for use in potentially explosive atmospheres

# MODELS // DATA



## DP2

Typ Type	Max. Drehmoment Max. torque		Max. Betriebsdruck Max. pressure		L1		H1		D1		Z	Drehzahl Max. speed		Gewicht* Weight*		Vierkant Square-drive	
	Nm	ft-lbs	bar	psi	mm	inch	mm	inch	mm	inch		U/min	rpm	kg	lbs	Zoll	inch
DP2-05	550	406	6	87	290	11.42	181	7.13	68,5	2.70	26	26,7		4,7	10.4	3/4"	
DP2-10	1.000	740	6	87	306	12.05	181	7.13	68,5	2.70	26	11,9		4,9	10.8	3/4"	
DP2-20	2.000	1,480	6	87	330	12.99	181	7.13	80,0	3.15	26	5,4		6,0	13.2	1"	
DP2-30	3.000	2,210	6	87	346	13.62	181	7.13	80,0	3.15	26	3,4		6,6	14.6	1"	
DP2-36	3.600	2,660	6	87	346	13.62	181	7.13	80,0	3.15	26	3,1		6,6	14.6	1"	
DP2-48	4.800	3,540	6	87	378	14.88	181	7.13	86,0	3.39	45	1,1		8,6	19.0	1 1/2"	
DP2-80	8.000	5,900	6	87	446	17.56	181	7.13	101,0	3.98	39	1,1		12,7	28.0	1 1/2"	



## DP2 ANGLE VERSION

Typ Type	Max. Drehmoment Max. torque		Max. Betriebsdruck Max. pressure		L1		H1		H2		D1		Z	Drehzahl Max. speed		Gewicht* Weight*		Vierkant Square-drive	
	Nm	ft-lbs	bar	psi	mm	inch	mm	inch	mm	inch	mm	inch		U/min	rpm	kg	lbs	Zoll	inch
DP2-05-W	550	406	6	87	220	8.66	181	7.13	237	X.XX	68,5	2.70	26	26,7		4,7	10.4	3/4"	
DP2-10-W	1.000	740	6	87	220	8.66	181	7.13	253	X.XX	68,5	2.70	26	11,9		4,9	10.8	3/4"	
DP2-20-W	2.000	1,480	6	87	226	8.90	181	7.13	277	X.XX	80,0	3.15	26	5,4		6,0	13.2	1"	
DP2-30-W	3.000	2,210	6	87	226	8.90	181	7.13	292	X.XX	80,0	3.15	26	3,4		6,6	14.6	1"	
DP2-36-W	3.600	2,660	6	87	226	8.90	181	7.13	292	X.XX	80,0	3.15	26	3,1		6,6	14.6	1"	
DP2-48-W	4.800	3,540	6	87	229	9.02	181	7.13	324	X.XX	86,0	3.39	45	1,1		8,6	19.0	1 1/2"	
DP2-80-W	8.000	5,900	6	87	236	9.29	181	7.13	392	X.XX	101,0	3.98	39	1,1		12,7	28.0	1 1/2"	

Repeat accuracy: ≤ 4%, depending on the bolted joint. Technical data without guarantee.

\*Specification without reaction arm.



# REACTION ARMS

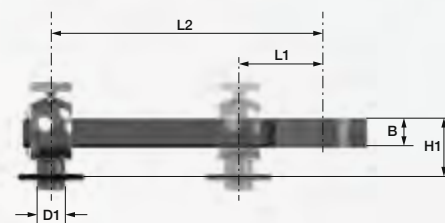
FOR NUTRUNNERS TYPES DA, DE AND DP

WIDE CHOICE OF STANDARD REACTION ARMS  
AND BESPOKE SOLUTIONS ON REQUEST

# MODELS // DATA

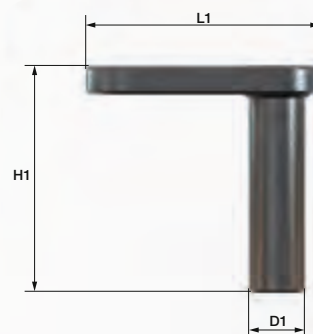
## SLIDING REACTION ARMS

Typ Type	L1		L2		H1		D1	B		Gewicht Weight	
	mm	inch	mm	inch	mm	inch		mm	inch	kg	lbs
DE/DA/DP-05	70	2.76	400	15.75	51,7	1,93	1"	25	0,98	3,2	7,05
DE/DA/DP-10	70	2.76	400	15.75	51,7	1,93	1"	25	0,98	3,2	7,05
DE/DA/DP-20	68	3.15	400	15.75	51,7	2,04	1"	25	0,98	2,5	7,72
DE/DA/DP-30	75	3.15	400	15.75	51,7	2,04	1"	25	0,98	2,4	7,72
DE/DA/DP-36	65	3.15	400	15.75	48,0	2,04	1"	25	0,98	5,5	8,16
DE/DA/DP-48	115	4.53	400	15.75	68,2	2,69	1 1/2"	30	1,18	5,6	12,13
DE/DA/DP-80	168	6.30	400	15.75	75	2,95	1 1/2"	50	1,97	-	-



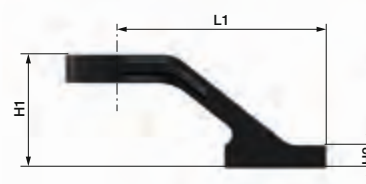
## PIN REACTION ARMS

Typ Type	L1		H1		D1		Gewicht Weight	
	mm	inch	mm	inch	mm	inch	kg	lbs
DE/DA/DP-05	250	9.84	220	8.66	20	0.79	3,3	5.5
DE/DA/DP-10	250	9.84	250	9.84	30	1.18	3,9	5,5
DE/DA/DP-20	250	9.84	250	9.84	40	1.57	4,5	5.5
DE/DA/DP-30	250	9.84	250	9.84	40	1.57	4,8	5.5
DE/DA/DP-36	250	9.84	250	9.84	50	1.97	5,6	5.5
DE/DA/DP-48	250	9.84	270	10.63	60	2.36	6,6	5.5
DE/DA/DP-80	on request							



## BASIC REACTION ARMS

Typ Type	L1		H1		H2		Gewicht Weight	
	mm	inch	mm	inch	mm	inch	kg	lbs
DE/DA/DP-05	150	5.90	80	3.15	15	0.59	1,2	2.64
DE/DA/DP-10	150	5.90	80	3.15	15	0.59	1,2	2.64
DE/DA/DP-20	150	5.90	100	3.94	20	0.79	1,9	4.19
DE/DA/DP-30	190	7.48	100	3.94	20	0.79	2,1	4.63
DE/DA/DP-36	210	8.27	130	5.12	15	0.59	2,9	6.39
DE/DA/DP-48	210	8.27	130	5.12	15	0.59	2,9	6.39
DE/DA/DP-80	250	9.84	165	6.50	25	0.98	6,6	14.55





# OFFSET GEARBOXES

FOR DA, DE AND DP SERIES NUTRUNNERS

# STX

COMPATIBLE  
WITH ALL PLARAD  
NUTRUNNERS  
FROM P. 8

## OFFSET GEARBOX FOR NUTRUNNERS UP TO 6,000 NM / SW 150

The STX offset gearbox has been specially designed to meet the needs of our customers.

Robust and powerful up to 6,000 Nm.

Classic applications are found in all bolting cases with long threaded rods such as plate heat exchangers or bolted connections in places that cannot be reached directly with a nutrunner.



### VERSATILE

Interchangeable inserts available  
in various designs and sizes



### LONG DISTANCE RUNNER

The STX enables driving on long  
threaded spindles, nuts up to SW 150



## MODELS // DATA

Typ Type	Für Schrauben ab dem Modell For wrenches from model	Vierkant Square drive Zoll / in	Drehmoment Max. Torque Nm	A mm	B mm	C mm	D mm	R mm	SW/AF mm	Gewicht Weight kg
STX 05-02 TL	DA2/DE1/DP1-05, -10	3/4	500	42	70	170	80	60	45	2.00
STX 22-02 TL	DA2/DE1/DP1-20, -30,	1	2,200	66	81	190	104	64	55	3.20
STX 36-02 TL	DA2/DE1/DP1-36	1	3,600	68	111	254	106	97	100	5.20
STX 60-02 TL	DA2/DE1/DP1-48, -80	1½	6,000	74	162	365	115	135	150	12.00

# ST2



PRODUCT LINK

## OFFSET GEARBOX FOR NUTRUNNERS UP TO 3.600 Nm / SW 60

Thanks to its small yet robust design, the newly developed ST2 offset gearbox is perfect for all bolting applications with long threaded rods, such as plate heat exchangers or for bolted joints in hard-to-reach places.



1

### REACTION ARM

The pin reaction arm can be customised and we offer various lengths. We are also happy to develop customised solutions for your bolting applications.

2

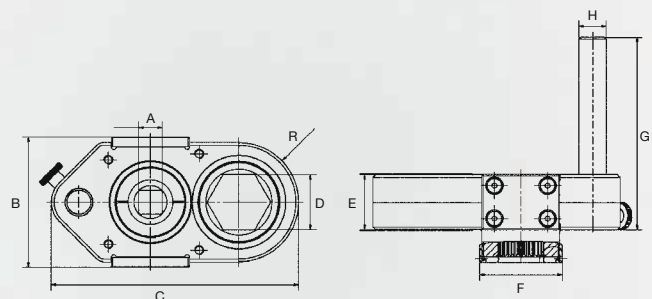
### REDUCER INSERTS

Our reducer inserts allow you to use the offset gearbox flexibly and economically. No matter which spanner width you use, our extensive range of reducers gives you maximum flexibility at minimum cost.

1



2

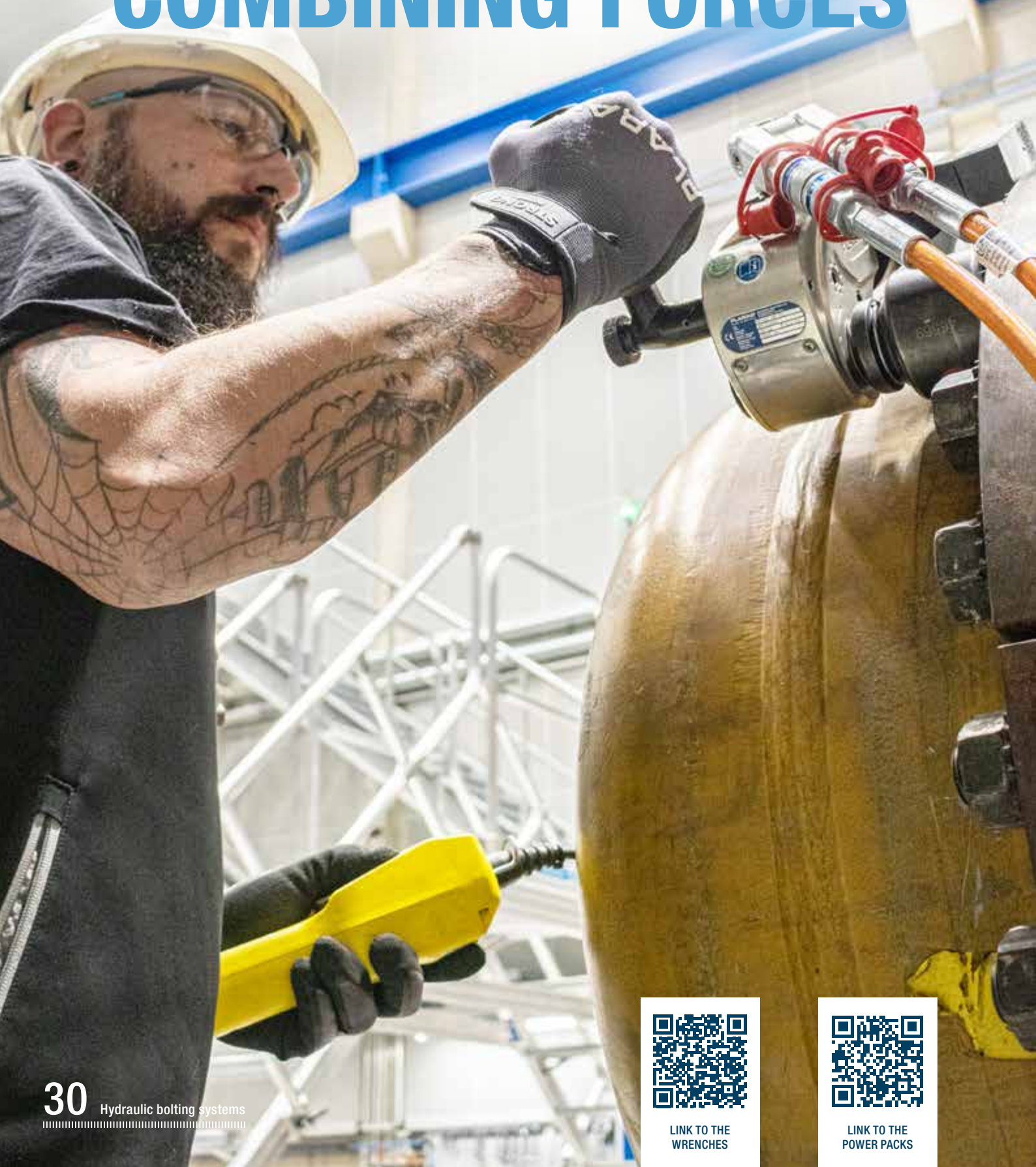


## MODELS // DATA

Type Type	Für Schrauber ab dem Modell For wrenches from model	A Vierkant / Zoll Square drive in	B mm	C mm	D mm	ØF mm	G mm	ØH mm	R mm	Gewicht Weight kg
ST2 10	DA2/DE1/DP1-05, -10	¾	98	205	41	82	225	30	45	4.30
ST2 36	DA2/DE1/DP1-20, -30, -36	1	142	269	60	90	246	30	65	9.15



# EFFICIENTLY COMBINING FORCES



30

Hydraulic bolting systems



LINK TO THE  
WRENCHES



LINK TO THE  
POWER PACKS

# HYDRAULIC BOLTING SYSTEMS

## POSSIBLE COMBINATIONS AT A GLANCE



K



LT



MX-EC



FSX



### ECO

Reliable  
Plarad quality

Economical  
entry-level models  
that fulfil their  
promises:  
durability and  
functionality



Test mode



Torque mode



### POWER

Robust and  
user-friendly tools of  
the next generation

These automatic  
tools set new  
standards in terms  
of precision, speed  
and ergonomics

Upgradeable to the  
*docu* and *control*  
versions



Test mode



Torque mode



### DOCU

The upgrade to the  
*docu* version

Test mode,  
bolting case definition  
and documentation

Upgradeable to the  
*control* version



Documentation



Test mode



Torque mode



### CONTROL

The upgrade to  
the *control* version  
also features torque  
and rotation angle  
mode



Torque/angle  
of rotation mode



Rotation angle  
counting mode



Documentation



Rotation angle mode



Test mode



Torque mode



# MX-EC

## THE ALL-ROUNDER IN FLEXIBILITY AND DURABILITY

With its fine-toothed ratchet system and quick-change mechanism for the square drive, it is perfect for versatile and demanding bolted joints.

Power ranges from 50 to 65,000 Nm and the smallest dimensions open up new possibilities for the MX-EC, even in hard-to-reach work areas.

ALSO  
AVAILABLE AS  
AN ATEX  
VERSION



EXII 2 GD  
Ex h IIB T4 Gb X  
Ex h IIIC T110°C Db X



1

### FLEXIBLE

2-axis hose connection  
(rotatable and swivelling)

2

### ROBUST

Extremely flat, lightweight  
and high-strength housing

3

### SAFE & COMFORTABLE

360° adjustable reaction arm

4

### FAST

High speed thanks to  
optimised compatibility  
with Plarad power packs

SQS

SAFETY QUALITY  
SERVICE SYSTEM



### SQS Safety Quality Service system

Plarad hydraulic devices offer the reliability that is essential for absolute precision, high availability, and cost-effectiveness.

- ▶ Special high-pressure safety chamber with an operating pressure of up to 800 bar.
- ▶ Maximum torque accuracy and no jamming thanks to special drive system
- ▶ Integrated release shock absorber

## + QUALITY

- ▶ Durable fine-toothed ratchet system
- ▶ No jamming of the torque wrench regardless of the piston position
- ▶ Replaceable wear parts for effortless maintenance



**UPGRADE**  
Combined with  
Plarad power packs  
suitable for docu-  
mentation, torque and  
angle of rotation  
mode



## + SAFETY

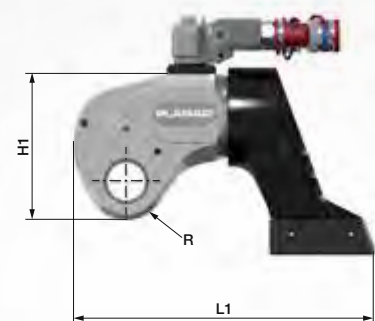
- ▶ SQS system: Hydraulic system encapsulated in a hardened steel cylinder for housing protection
- ▶ Protection against housing damage thanks to integrated release shock absorber
- ▶ The safety latch prevents unintentional unlocking of the support

## + OPTIONAL

- ▶ Available as a single hose system
- ▶ Various insertion tools with quick-change system available
- ▶ Wide range of customised reaction arms available



Various inserts  
available as  
accessories



## MODELS // DATA

Typ Type	Drehmoment Torque max.		max. Betriebsdruck Pressure max.		L1		H1		R		B1		Gewicht* Weight*		Vierkant Squaredrive	Material
	Nm	ft-lbs	bar	psi	mm	inch	mm	inch	mm	inch	mm	inch	kg	lbs	Zoll	
MX-EC 5 TSM	500	369	800	11,600	138,0	5.43	47,0	1.85	16,0	0.63	35	1.38	1,65	3.64	1/2"	Steel
MX-EC 10	1.000	738	800	11,600	166,0	6.54	78,5	3.09	20,5	0.81	40	1.57	2,60	5.73	3/4"	Steel
MX-EC 20	2.100	1,549	800	11,600	194,5	7.66	93,0	3.66	24,0	0.94	50	1.97	2,50	5.51	1"	Aluminium
MX-EC 45	4.500	3,319	800	11,600	255,8	10.07	127,0	5.00	32,0	1.26	67	2.64	4,90	10.80	1"	Aluminium
MX-EC 75	7.500	5,532	800	11,600	304,0	11.97	108,5	4.27	37,5	1.48	80	3.15	7,30	16.09	1 1/2"	Aluminium
MX-EC 95	9.500	7,007	800	11,600	301,5	11.87	156,0	6.14	42,0	1.65	85	3.35	9,50	20.94	1 1/2"	Aluminium
MX-EC 120	12.000	8,851	800	11,600	341,0	13.43	169,0	6.65	46,0	1.81	93	3.66	10,50	23.15	1 1/2"	Aluminium
MX-EC 155	15.500	11,433	800	11,600	360,0	14.17	181,0	7.13	49,0	1.93	100	3.94	13,50	29.76	1 1/2"	Aluminium
MX-EC 200	20.500	15,121	800	11,600	394,0	15.51	213,0	8.39	55,0	2.17	112	4.41	20,50	45.19	2 1/2"	Aluminium
MX-EC 300	30.000	22,128	800	11,600	436,0	17.17	245,0	9.65	61,5	2.42	130	5.12	35,50	78.26	2 1/2"	Aluminium
MSX/T 400	40.000	29,504	800	11,600	453,0	17.83	273,5	10.77	66,5	2.62	136	5.35	49,30	108.69	2 1/2"	Aluminium
MSX/T 650	65.000	47,944	800	11,600	431,0	16.97	329,5	12.97	84,0	3.31	155	6.10	77,70	171.30	2 1/2"	Aluminium

All appliances with twin swivel (double-acting - TS) and 2-axis hose connection (2AS)

Repeat accuracy: ≤ 4%, depending on the bolted joint. Technical data without guarantee. \*Specification with reaction arm.



# FSX

## LOW PROFILE WRENCH FOR UNUSUAL FLANGES

Thanks to its lightweight, slim design and fine-toothed ratchet system, the FSX is perfect for tight, sensitive and hard-to-reach areas. The easy transition from tightening to loosening mode, its high bolting speed and the ease with which the cassette can be changed make the FSX the ultimate tool.

ALSO  
AVAILABLE AS  
AN ATEX  
VERSION



EXII 2 GD  
Ex h IIB T4 Gb X  
Ex h IIIC T110°C Db X



1

### PROTECTION

Integrated release  
shock absorber

2

### SAFETY

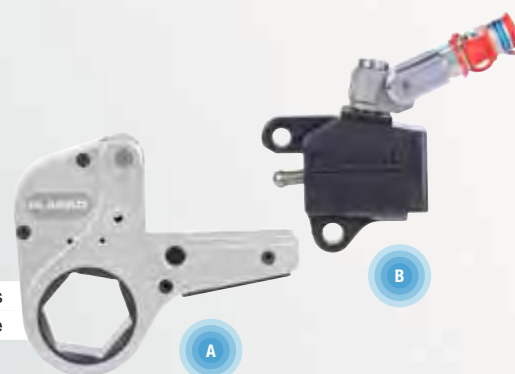
Overpressure  
safety valve

3

### LIGHT WEIGHT

Housing made of  
high-resistant aluminium

Several inserts  
optionally available



A

### Cartridge HSX

- Comfortable and safe working thanks to 360° adjustable handle
- Sustainable and durable thanks to replaceable spare parts
- Also available to suit ANSI flanges

B

### Drive unit SX/SX-EC

- Easy assembly/disassembly thanks to patented connection of piston and ratchet system
- Also available as a single-hose version - for even better handling



FSX

## + ADAPTABILITY

- ▶ Quick and safe change of the output unit thanks to automatic separation of piston and ratchet system
- ▶ Rotatable 2-axis hose connection (rotatable and swivelling)



## + QUALITY

- ▶ Durable fine-toothed ratchet system
- ▶ No jamming of the wrench regardless of the piston position
- ▶ SQS system: Hydraulic system encapsulated in a hardened steel cylinder for housing protection

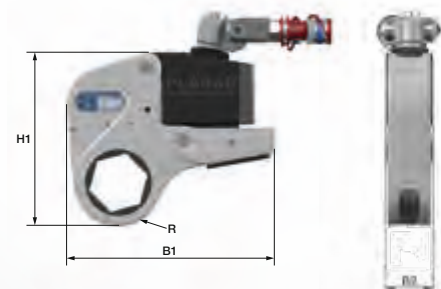
**SQS**  
SAFETY QUALITY  
SERVICE SYSTEM

## + UPGRADE

- ▶ Combined with Plarad power packs suitable for documentation, torque and rotation angle mode
- ▶ Bolting parameters can be preset



Absorber protects the housing from damage in the case of a release shock



## MODELS // DATA

Type FSX-Kombination Type FSX-Combination	max. Drehmoment Torque max.		max. Betriebsdruck Pressure max.		L1		H1		R		B2		Gewicht* Weight*		Material
	Nm	ft-lbs	bar	psi	mm	inch	mm	inch	mm	inch	mm	inch	kg	lbs	
<b>SX-EC 1** / HSX</b>	1.000	738	800	11,600	149	5.87	116	4.57	29,5	1.16	32,0	1.26	1,60	3.5	Aluminium
<b>SX-EC 2 / HSX</b>	2.500	1,844	800	11,600	173	6.81	141	5.55	38,0	1.50	41,0	1.61	2,75	6.1	Aluminium
<b>SX-EC 5 / HSX</b>	5.500	4,057	800	11,600	221	8.70	184	7.24	46,0	1.81	50,0	1.97	5,85	12.9	Aluminium
<b>SX-EC 8 / HSX</b>	8.500	6,270	800	11,600	250	9.84	207	8.15	55,0	2.17	55,0	2.17	6,40	14.1	Aluminium
<b>SX-EC 12 / HSX</b>	12.000	8,851	800	11,600	298	11.73	232	9.13	66,5	2.62	64,0	2.52	7,90	17.4	Aluminium
<b>SX-EC 20 / HSX</b>	20.000	14,752	800	11,600	360	14.17	299	11.77	87,5	3.44	80,0	3.15	16,50	36.4	Aluminium
<b>SX 30 TST / HSX</b>	30.000	22,128	800	11,600	389	15.31	328	12.91	99,5	3.92	102,5	4.04	26,50	58.4	Aluminium
<b>SX 45 TST / HSX</b>	45.000	33,192	800	11,600	426	16.77	376	14.80	119,0	4.69	111,0	4.37	35,00	77.2	Aluminium

Repeat accuracy:  $\leq 4\%$ , depending on the bolted joint. Technical data without guarantee.

\*Specification without reaction arm.

\*\*Supplied with TSM connection.

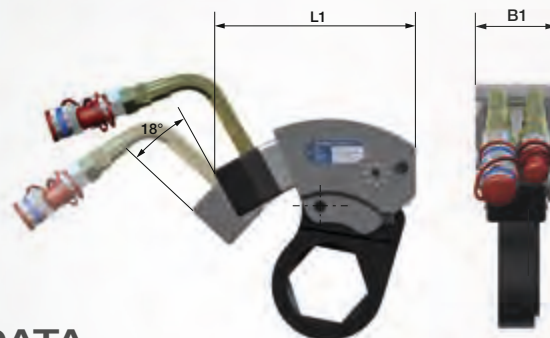
# K Series

## THE ULTIMATE PROBLEM SOLVER FOR SPECIAL CASES AND CONFINED SPACES

- ▶ One product, hundreds of possible uses: quick and easy change of the ring spanner for customised applications
- ▶ The special device from Plarad: no comparable tool system on the market
- ▶ Tightest diameters and high insertion depths of the spanner inserts
- ▶ Open and split ring spanners for special applications
- ▶ Wide range of bolting options thanks to large range of accessories
- ▶ Low weight with high performance
- ▶ Torque range from 300 to 30,000 Nm
- ▶ Up to 800 bar system pressure



Various inserts available as accessories



## MODELS // DATA

Typ Type	max. Drehmoment Torque max.		max. Betriebs- druck Pressure max.		SW A/F		L1		B1		Gewicht* Weight*	
	Nm	ft-lbs	bar	psi	min	max	mm	inch	mm	inch	kg	lbs
K 30 TF	3.000	2,213	800	11,600	24	90	163,0	6.42	25	0.98	6,0	13.2
K 60 TF	6.600	4,868	800	11,600	24	90	170,0	6.69	30	1.18	7,3	16.1
K 150 TF	11.000	8,114	800	11,600	27	110	180,0	7.09	45	1.77	11,6	25.6
K 200 TF	20.000	14,752	800	11,600	60	135	248,5	9.78	70	2.76	30,5	67.2
K 300 TF	30.000	22,128	800	11,600	80	150	319,0	12.56	120	4.72	38,0	83.8

Repeat accuracy: ≤ 4%, depending on the bolted joint. Technical data without guarantee.





# LT Series

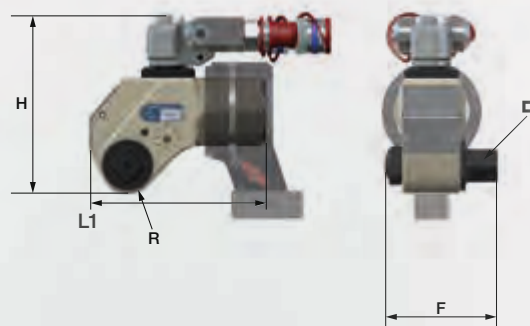
## STRONG, PRECISE, ROBUST: THE HANDY BOLTING SYSTEM

The 'MS' single-hose system offers convenient handling and reduces weight – also available as a two-hose system 'TS'.

### SQS – Safety-Quality-Service System.

Thanks to the SQS high-pressure safety chamber, the housing is free of oil pressure and can be used for support, no additional reaction arm is required.

If support is needed, the quick-release fastener with safety latch makes it easy.



## MODELS // DATA

Typ Type	Schlauch-System Hose system	max. Drehmoment Torque max.		max. Betriebsdruck Pressure max.		L1		H1		R		F		Gewicht* Weight*	
		Nm	ft-lbs	bar	psi	mm	inch	mm	inch	mm	inch	mm	inch	kg	lbs
LT 5 MS	single	500	369	800	11,600	127,0	5.00	78,0	3.07	17,0	0.67	71,5	2.81	1,5	3.3
LT 10 TS	double	1.000	738	800	11,600	132,0	5.20	89,0	3.50	22,0	0.87	84,0	3.31	2,3	5.1
LT 10 MS	single	1.000	738	800	11,600	132,0	5.20	89,0	3.50	22,0	0.87	84,0	3.31	1,8	4.0
LT 20 TS	double	2.200	1,623	800	11,600	166,5	6.56	100,0	3.94	29,5	1.16	104,0	4.09	4,0	8.8
LT 20 MS	single	2.200	1,623	800	11,600	147,0	5.79	109,0	4.29	29,0	1.14	104,0	4.09	3,3	7.3
LT 50 TS	double	5.000	3,688	800	11,600	211,5	8.33	128,5	5.06	37,0	1.46	134,0	5.28	7,0	15.4
LT 50 MS	single	5.000	3,688	800	11,600	189,5	7.46	132,0	5.20	37,0	1.46	134,0	5.28	6,2	13.7
LT 100 TS	double	10.000	7,376	800	11,600	243,7	9.59	159,0	6.26	49,0	1.93	147,0	5.79	11,1	24.5

Repeat accuracy:  $\leq 4\%$ , depending on the bolted joint. Technical data without guarantee.

\*Specification without reaction arm.

# XE1eco

## POWERFUL BASIC PUMP

The entry-level power pack for manual operation of hydraulic tools. With an optional 2-stage version for high bolting speed, it delivers optimal performance. The user-friendly remote control allows monitoring of key operating parameters, such as motor/oil temperature, operating hours, and power consumption.

Thanks to patented motor-under-oil technology, it operates efficiently and reliably. Its robust design and optimised maintenance intervals ensure high cost-effectiveness.



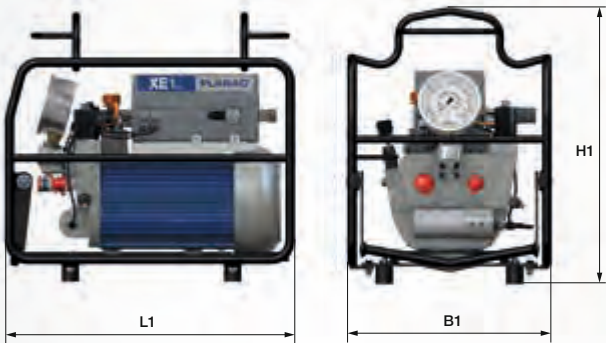
2-STAGE-UPGRADE  
OPTIONAL GEAR PUMP  
FOR MAXIMUM FLOW RATE

- 1

**EFFICIENCY**  
External oil filter and service-friendly design for simplified maintenance work
- 2

**ROBUST**  
Steady and robust industrial frame protects against damage
- 3

**FLEXIBLE**  
Use of single or multiple hydraulic wrenches in single and dual-hose technology



## MODELS // DATA

Type Type	Betriebsart Operation mode	max. Betriebsdruck Pressure max.		max. Durchfluss flow max.		max. Durchfluss flow max. (2-Stage Upgrade)		Motorleistung Motor power		Maße (L1 x B1 x H1) Dimensions (L1 x B1 x H1)	Gewicht* Weight*	
		bar	psi	l/min	gal/min	l/min	gal/min	kW	hp		kg	lbs
XE1eco 10	Manuell manual	800	11,600	0,8	0.21	5,4	1.43	0,8	1.07	455 x 286 x 449 mm 17.91 x 11.26 x 17.68 in	22	48.5
XE1eco 20	Manuell manual	800	11,600	1,2	0.32	8,0	2.11	1,1	1.48	500 x 343 x 465 mm 19.69 x 13.50 x 18.31 in	29	63.9
XE1eco 30	Manuell manual	800	11,600	3,0	0.79	13,2	3.49	2,2	2.95	500 x 343 x 465 mm 19.69 x 13.50 x 18.31 in	35	77.2

Repeat accuracy: ≤ 4%, depending on the bolted joint. Technical data without guarantee.  
Units available in the following voltages: 110V 50Hz, 110V 60Hz, 230V 50Hz, 230V 60Hz, 400V 50Hz, 400V 60Hz. Others on request.

# XE1power

## FULLY AUTOMATIC WITH THE PUSH OF A BUTTON

The XE1power sets new standards in hydraulic bolting technology. The fully automatic system enables fast and precise bolting results with the push of a button. The work process is greatly simplified by the automatic switch-off once the final torque is reached. This innovative power pack combines efficiency, precision and convenience for demanding bolting applications.

Upgradeable to the *docu* and *control* model variants, the XE1power is the entry point to the smart pump generation.

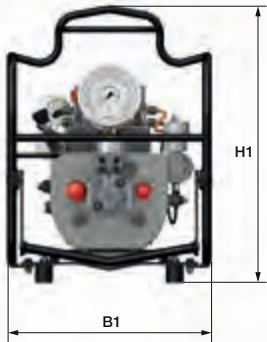


- 1

**PERFORMANCE**  
High fastening speeds with the optional 2-stage version
- 2

**COMFORT**  
Fully automatic bolting allows for comfortable handling up to the preset hydraulic pressure
- 3

**INFORMATION**  
Remote control with colour display: important operating parameters always in view (pressure, status message, motor/oil temperature, operating hours, power consumption and much more)



## MODELS // DATA

Typ Type	Betriebsart Operation mode	max. Betriebsdruck Pressure max.		max. Durchfluss flow max.		max. Durchfluss flow max. (2-Stage Upgrade)		Motorleistung Motor power		Maße (L1 x B1 x H1) Dimensions (L1 x B1 x H1)	Gewicht* Weight*	
		bar	psi	l/min	gal/min	l/min	gal/min	kW	hp		kg	lbs
XE1power 10	Automatik automatic	800	11,600	0,8	0.21	5,4	1.43	0,8	1.07	455 x 286 x 449 mm 17.91 x 11.26 x 17.68 in	24	52.9
XE1power 20	Automatik automatic	800	11,600	1,2	0.32	8,0	2.11	1,1	1.48	500 x 343 x 465 mm 19.69 x 13.50 x 18.31 in	34	75.0
XE1power 30	Automatik automatic	800	11,600	3,0	0.79	13,2	3.49	2,2	2.95	500 x 343 x 465 mm 19.69 x 13.50 x 18.31 in	36	79.4

Repeat accuracy: ≤ 4%, depending on the bolted joint. Technical data without guarantee.  
Units available in the following voltages: 110V 50Hz, 110V 60Hz, 230V 50Hz, 230V 60Hz, 400V 50Hz, 400V 60Hz. Others on request.



# XE1docu



## PRECISION MEETS POWER

Based on the XE1power, the XE1docu offers a wide range of additional features for seamless documentation. The data can be easily transferred to all standard digital devices, ensuring transparent documentation of bolting operations. Fully automatic tightening and automatic switch-off once the final torque is reached make this power pack especially user-friendly.

The remote control with colour display allows users to keep an eye on important operating parameters at all times.



The control unit saves all tightening torques and rotation angles that have been performed



### INDIVIDUAL

Fast and reliable work thanks to predefined bolting cases



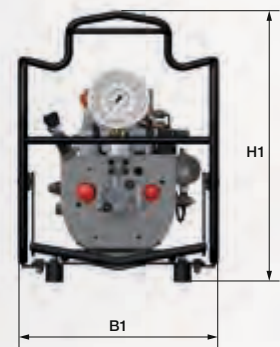
### PERFORMANCE

The 2-stage version is the fastest documentable unit on the market



### HIGH TECH

Patented algorithms control the bolting procedure using various methods



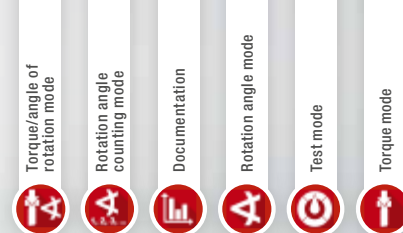
## MODELS // DATA

Typ Type	Betriebsart Operation mode	max. Betriebsdruck Pressure max.		max. Durchfluss flow max.		max. Durchfluss flow max. (2-Stage Upgrade)		Motorleistung Motor power		Maße (L1 x B1 x H1) Dimensions (L1 x B1 x H1)	Gewicht* Weight*	
		bar	psi	l/min	gal/min	l/min	gal/min	kW	hp		kg	lbs
XE1docu 10	Automatik automatic	800	11,600	0,8	0.21	5,4	1.43	0,8	1.07	455 x 286 x 449 mm 17.91 x 11.26 x 17.68 in	24	52.9
XE1docu 20	Automatik automatic	800	11,600	1,2	0.32	8,0	2.11	1,1	1.48	500 x 343 x 465 mm 19.69 x 13.50 x 18.31 in	34	75.0
XE1docu 30	Automatik automatic	800	11,600	3,0	0.79	13,2	3.49	2,2	2.95	500 x 343 x 465 mm 19.69 x 13.50 x 18.31 in	36	79.4

Repeat accuracy: ≤ 4%, depending on the bolted joint. Technical data without guarantee.

Units available in the following voltages: 110V 50Hz, 110V 60Hz, 230V 50Hz, 230V 60Hz, 400V 50Hz, 400V 60Hz. Others on request.

# XE1control



## THE EFFICIENT MASTERPIECE

The XE1control is the ultimate all-rounder for torque and rotation angle bolting with an integrated documentation features. Based on the XE1docu, it offers a comprehensive range of features for maximum versatility and efficiency.

With predefined bolting cases, automatic bolting, and documentation of torque and angle of rotation, it ensures fast, safe, and user-friendly operation.



### SMART

Data transfer to digital end devices for seamless documentation



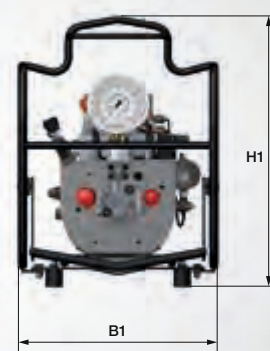
### POWER

High fastening speeds with the optional 2-stage version



### COMFORTABLE

Fully automatic bolting up to the preset hydraulic pressure with the push of a button



## MODELS // DATA

Typ Type	Betriebsart Operation mode	max. Betriebsdruck Pressure max.		max. Durchfluss flow max.		Motorleistung Motor power		Maße (L1 x B1 x H1) Dimensions (L1 x B1 x H1)	Gewicht* Weight*	
		bar	psi	l/min	gal/min	kW	hp		kg	lbs
XE1control 10	Automatik automatic	800	11,600	0,8	0.21	0,8	1.07	455 x 286 x 449 mm 17.91 x 11.26 x 17.68 in	26	57,3
XE1control 20	Automatik automatic	800	11,600	1,2	0.32	1,1	1.48	500 x 343 x 465 mm 19.69 x 13.50 x 18.31 in	31	68,3
XE1control 30	Automatik automatic	800	11,600	3,0	0.79	2,2	2.95	500 x 343 x 465 mm 19.69 x 13.50 x 18.31 in	35	77,2

Repeat accuracy: ≤ 4%, depending on the bolting case. Technical data without guarantee. \*

Units available in the following voltages: 110V 50Hz, 110V 60Hz, 230V 50Hz, 230V 60Hz, 400V 50Hz, 400V 60Hz. Others on request.



# XA1power

## THE WORLD'S FIRST BATTERY-POWERED, FULLY AUTOMATIC HIGH-PERFORMANCE PUMP

The new XA1power cordless power pack is revolutionising the world of hydraulic tools. It's incredibly user-friendly, requiring only a wrench, hoses, and a compact pump.

A key feature for international teams: all operations are independent of the power supply's frequency and voltage, allowing service technicians to fully focus on their tasks. An average of 170 fastening operations\* can be carried out on one battery charge.

Designed for a torque range of up to 150,000 Nm and capable of operating hydraulic wrenches up to 800 bar, it weighs just 10 kg (including batteries), compared to the 30-40 kg power packs commonly available on the market.



1

### BATTERY

Set with 3 interchangeable batteries for approx. 170 bolting operations (M36)

2

### PERFORMANCE

Up to 800 bar operating pressure and 150,000 Nm torque

3

### COMPATIBILITY

Compatible with all commercially available hydraulic wrenches, ensuring worldwide use without voltage restrictions

4

### ERGONOMIC

approx. 10 kg including batteries  
Wireless remote control  
Max. 70 db noise emission

## + OPERATION

- ▶ Battery-operated power pack with replaceable battery (FEIN system)
- ▶ Secure and fully automatic
- ▶ Tightens with the push of a button up to the preset torque or pressure.



THE WORLD'S FIRST BATTERY-POWERED  
**HIGH PERFORMANCE PUMP**

## + OPTIONS

- ▶ Compact and robust design
- ▶ Maximum freedom of movement thanks to wireless remote control
- ▶ Mobile use worldwide, independent of frequency and voltage



YOUR ADVANTAGES



## MODEL // DATA

Akkusystem <i>Battery system</i>	3 x Akku 18 V 5.2 Ah (wechselbar) 3pc 18 V 5.2 Ah exchangeable
Betriebsspannung <i>Operating voltage</i>	54 V
Akku-Kapazität <i>Battery capacity</i>	3 x 5,2 Ah
Motorleistung <i>Motor power</i>	0,5 kW 0.67 hp
Max. Druck <i>Max. pressure</i>	800 bar 11,600 psi
Max. Volumenstrom <i>Flow rate</i>	1,8 l/min (bei 100 bar) 0.48 gal/min at 1,450 psi 1 l/min (bei 800 bar) .26 gal/min at 11,600 psi
Betriebsart <i>Operation mode</i>	automatisch automatic
Ölvolumen <i>Oil volume</i>	1 l 0.26 gal
Gewicht <i>Weight</i>	10 kg inkl. Akkus 22 lb incl. batteries
Maße (L x B x H) <i>Dimensions (L x W x H)</i>	185 x 270 x 360 mm 7.28" x 10.63" x 14.17" in
Einsatztemperaturen <i>Temp. Range</i>	-20°C bis +50°C -4 °F to 122 °F
Schalldruckpegel <i>Sound pressure level</i>	<70 dB



\*M36x160 SW55 12.9 (1650 Nm) with HSX 555 F



# DXE1docu

## SMART THROUGH CONVINCING ARGUMENST

Based on the XE1docu, the DXE1docu offers a wide range of additional features for seamless documentation.

The data can be easily transferred to all standard digital devices, ensuring transparent documentation of bolting operations. Fully automatic tightening and automatic switch-off once the final torque is reached make this power pack especially user-friendly.

The remote control with colour display allows users to keep an eye on important operating parameters at all times.



POWER PACKS ALSO AVAILABLE  
WITH 4 LITRE ADDITIONAL TANK

## MODELS // DATA

Typ Type	Betriebsart Operation mode	max. Betriebsdruck Pressure max.		max. Durchfluss flow max.		max. Durchfluss flow max. (2-Stage Upgrade)		Motorleistung Motor power		Maße (L1 x B1 x H1) Dimensions (L1 x B1 x H1)	Gewicht* Weight*	
		bar	psi	l/min	gal/min	l/min	gal/min	kW	hp		kg	lbs
DXE1docu 20	Automatik automatic	800 / 1,500	11,600 / 21.750	1.2	0.32	8.0	2.11	1.1	1.48	500 x 343 x 465 mm 19.7 x 13.5 x 18.3 in	40	88
DXE1docu 30	Automatik automatic	800 / 1,500	11,600 / 21.750	3.0	0.79	13.2	3.49	2.2	2.95	500 x 343 x 465 mm 19.7 x 13.5 x 18.3 in	42	93

Repeat accuracy: ≤ 4%, depending on the bolted joint. Technical data without guarantee.

Units available in the following voltages: 110V 50Hz, 110V 60Hz, 230V 50Hz, 230V 60Hz, 400V 50Hz, 400V 60Hz. Others on request.

**DUAL**  
OUR PUMP SERIES FOR  
THE OPERATION OF  
HYDRAULIC WRENCHES  
AND TENSION  
CYLINDERS



### INDIVIDUAL

Fast and reliable work thanks to predefined bolting cases



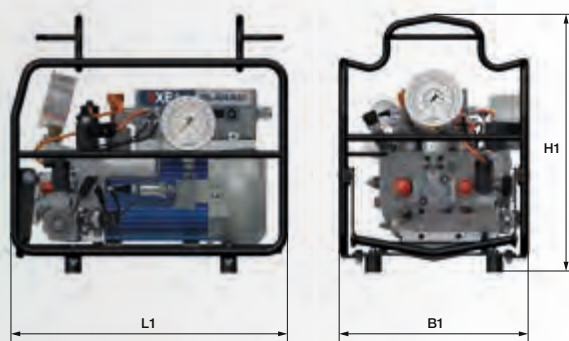
### PERFORMANCE

The 2-stage version is the fastest documentable hydraulic power pack on the market



### HIGH TECH

Patented algorithms control the bolting process using various methods





# DXE1control

## THE EFFICIENT MASTERPIECE

The DXE1*control* is the ultimate all-rounder for torque and angle bolting with an integrated documentation function. Based on the DXE1*docu*, it offers a comprehensive range of features for maximum versatility and efficiency.

With predefined bolting cases, automatic bolting and documentation of torque, rotation angle and preload force, this pump enables fast, safe and user-friendly work.



FOR THE OPERATION OF  
HYDRAULIC WRENCHES  
AND TENSIONERS



### SMART

Data transfer to digital devices  
for seamless documentation



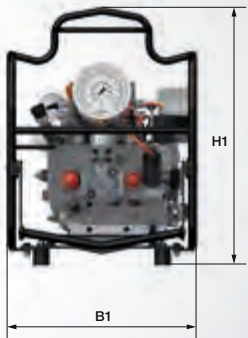
### PRECISE

Rotation angle bolting (+/-2°) without  
additional sensor technology thanks to  
patented process



### COMFORTABLE

Fully automatic bolting up to  
the preset hydraulic pressure  
with the push of a button



## MODELS // DATA

Typ Type	Betriebsart Operation mode	Max. Betriebsdruck Max. pressure		Max. Durchfluss Max. flow		Motorleistung Motor power		Maße (L1 x B1 x H1) Dimensions (L1 x B1 x H1)	Gewicht Weight	
		bar	psi	l/min	gal/min	kW	hp		kg	lbs
DXE1control 20	Automatik automatic	800 / 1.500	11,600 / 21,750	1,2	0.32	1,1	1.48	500 x 343 x 465 mm 19.68 x 13.50 x 18.30 in	40	88

Repeat accuracy: ≤ 4%, depending on the bolted joint. Technical data without guarantee.  
Units available in the following voltages: 110V 50Hz, 110V 60Hz, 230V 50Hz, 230V 60Hz, 400V 50Hz, 400V 60Hz. Others on request.

# TXP1eco

## THE PURE HYDRAULIC PUMP

The TXP1eco pneumatic hydraulic pump is ideal for simple tensioner applications. With a maximum pressure of up to 1500 bar, it provides the necessary power for challenging tasks. The handling is easy: pressure build-up and pressure release are performed with the push of a button, and a manual safety release provides additional safety.

Thanks to the robust protective frame, the TXP1eco is robust and mobile, supported by castors on the frame. With an oil volume of 6 litres, it is also suitable for large or several simultaneously connected tension cylinders. The TXP1eco combines performance, safety and mobility in a user-friendly design.



### SOLID

Fast & safe tensioner applications  
up to 1500 bar



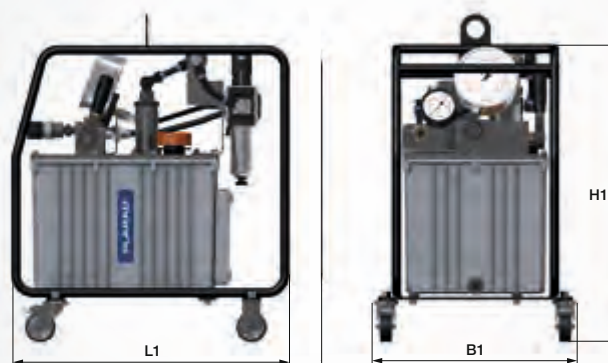
### EASY OPERATION

Pressure build-up and pressure relief  
at the touch of a button and manual  
safety relief in extreme cases



### ROBUST & MOBILE

Under-oil motor technology and robust  
protective frame with castors



## MODEL // DATA

Typ Type	Betriebsart Operation mode	max. Betriebsdruck Pressure max.		max. Durchfluss flow max.		pneumatischer Druck pneumatic pressure		Maße (L1 x B1 x H1) Dimensions (L1 x B1 x H1)	Gewicht* Weight*	
		bar	psi	l/min	gal/min	bar	psi		kg	lbs
TXP1eco 20	manuell manual	1,500	21,750	0.7	0.185	3 - 7	43 - 102	457 x 338 x 540 mm 18 x 13.3 x 21.26 in	28	61.7

Repeat accuracy: ≤ 4%, depending on the bolted joint. Technical data without guarantee. \*

# XP1eco

## CONSTANT UNTIL THE FINAL PRESSURE IS REACHED

Like the electrically powered models, our XP1eco 2-Stage pneumatic hydraulic power pack offers sturdiness, durability and a constant litre output up to the final pressure. The pneumatic motor integrated in the oil tank prevents icing up and cools the hydraulic oil at the same time.

The ATEX model is also suitable for use in potentially explosive areas in zone 1G.

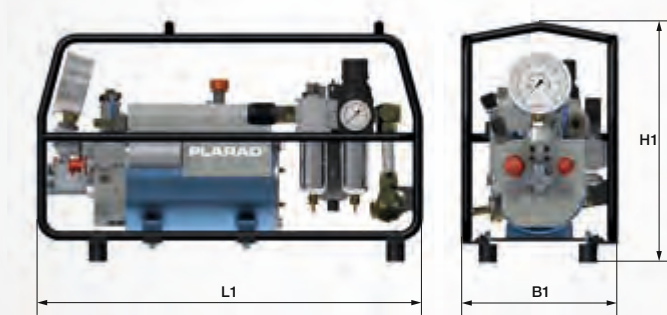


+

**EASY TO USE**  
 Pressure build-up and relief with the push of a button and manual safety pressure release in extreme cases

+

**POWER**  
 High bolting speeds thanks to the 2-stage design



## MODEL // DATA

Typ Type	Betriebsart Operation mode	max. Betriebsdruck Pressure max.		max. Durchfluss flow max.		max. Durchfluss flow max. (2-Stage Upgrade)		Maße (L1 x B1 x H1) Dimensions (L1 x B1 x H1)	Gewicht* Weight*	
		bar	psi	l/min	gal/min	l/min	gal/min		kg	lbs
XP1eco 20 2-Stage	Automatik automatic	800	11,600	7.0	1.85	1.6	0.422	634 x 257 x 395 mm 24.96 x 10.12 x 15.55 in	32	70.5

Repeat accuracy: ≤ 4%, depending on the bolted joint. Technical data without guarantee. \*



# TXE1eco

## THE ROBUST AND RELIABLE BASIC PUMP

The TXE1eco is equipped with a powerful electric motor and can be effortlessly connected to large tension cylinders thanks to the 7-litre tank. It offers a maximum operating pressure of 1,500 bar and a flow rate of up to 3 litres/min. The pump has an integrated pressure gauge for easy reading of the pressure.

This power pack can be operated by remote control and is perfect for applications where no documentation is required.



1

### PRESSURE GAUGE

Pressure gauge integrated into the pump for easy pressure control

2

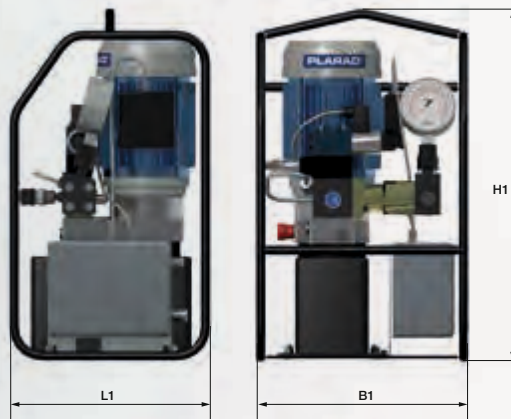
### 7L OIL VOLUME

For large or several simultaneously connected tools

3

### OPERATION

Via wired remote control



## MODELS // DATA

Typ Type	Betriebsart Operation mode	max. Betriebsdruck Pressure max.		Volumenstrom bei 0 - 120 bar Flow rate at xxx - xxxx psi		Volumenstrom bei 120 - 1.500 bar Flow rate at xxx - xxxx psi		Motorleistung Motor power		Spannungsvarianten Voltage versions	Maße (L1 x B1 x H1) Dimensions (L1 x B1 x H1)	Gewicht* Weight*	
		bar	psi	l/min	gal/min	l/min	gal/min	kW	hp			kg	lbs
TXE1eco	elektrisch + manuell electric + manual	1.500	21,756	3,0	0.8	0,35	0.09	1,1	1.48	230V 50/60Hz	380 x 630 x 360 mm	38	84
										110V 50/60Hz 400V 50H	15.0 x 24.8 x 14.2 in		

Repeat accuracy: ≤ 4%, depending on the bolted joint. Technical data without guarantee.

# TXE1docu

## THE HIGH-END SOLUTION FOR TENSION CYLINDERS

The TXE1docu has numerous additional features to ensure comprehensive documentation. The transfer of data to digital devices enables transparent recording of tensioning processes.

Automatic re-pumping in the event of a pressure drop makes this unit extremely user-friendly. The remote control with colour display allows users to keep an eye on important operating parameters at all times.



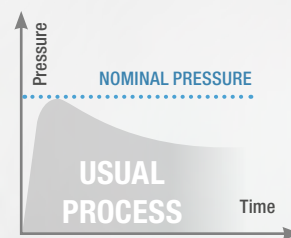
### INDIVIDUAL

Fast and reliable work thanks to predefined bolting cases



### HIGH TECH

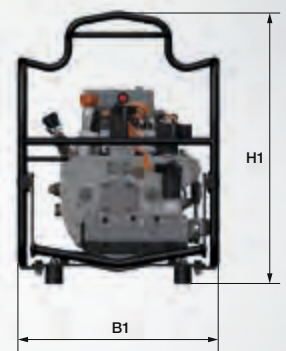
Automatic re-pumping ensures safe and qualitative connections



Hydraulic power packs **without** tensioner mode



Plarad power packs **with** tensioner mode



## MODELS // DATA

Typ Type	Betriebsart Operation mode	max. Betriebsdruck Pressure max.		max. Durchfluss flow max.		Motorleistung Motor power		Maße (L1 x B1 x H1) Dimensions (L1 x B1 x H1)	Gewicht* Weight*	
		bar	psi	l/min	gal/min	kW	hp		kg	lbs
TXE1docu 10	Automatik automatic	1.500	21,756	0,8	0.21	0,8	1.07	450 x 317 x 366 mm 17.7 x 12.5 x 14.4 in	38	84
TXE1docu 30	Automatik automatic	1.500	21,756	1,0	0.26	2,2	2.95	500 x 343 x 465 mm 19.7 x 13.5 x 18.3 in	41	90

Repeat accuracy: ≤ 4%, depending on the bolted joint. Technical data without guarantee.



# MAXIMUM POWER IN SMALL SPACES

50

Hydraulic tensioners // **PSE / PSD / PST / PSQ**



LINK TO THE  
POWER PACKS



LINK TO THE  
TENSIONERS



# TENSIONERS

## POSSIBLE COMBINATIONS AT A GLANCE



PSE



PSD



PST



PSQ



TXP1 ECO

The pneumatic hydraulic pump for tensioners

The pneumatic hydraulic pump TXP1eco is ideal for simple tensioning applications

Robust and easy to use, up to 1,500 bar



Tensioner mode



TXE1 ECO

The robust and reliable basic pump

The power pack is equipped with a powerful electric motor and can also be connected to large tension cylinders thanks to the 7 litre oil tank

Perfect for applications where no documentation is required



Test mode



Torque mode



Tensioner mode



TXE1 DOCU

The smart upgrade to the *docu* version: ready for comprehensive documentation on digital devices

Automatic re-pumping in case of a pressure drop makes this unit extremely effective. The remote control with colour display shows important operating parameters



Documentation



Test mode



Torque mode



Tensioner mode

## TENSIONERS

### 1-STAGED

# PSE

### BOLT TENSIONING IN SMALL SPACES

Thanks to its flat design, the PSE single-stage hydraulic tension cylinder offers a distinct advantage, particularly in tight, axially confined spaces. The knurled attachment included in the scope of delivery also ensures that the tensioner can be turned open in the case of excessively long bolt protrusions.

The PSE also has all the relevant features of the PSD (see sectional model, next page).



1

#### CYCLE COUNTER

Prevention of damage and failures through preventive maintenance

2

#### FLEXIBLE

Knurled attachment for long bolt protrusions

3

#### HANDLING

Support bridge 360° rotatable

4

#### PERFECT FIT

Optimised support surface for tight spaces

5

#### ERGONOMIC

Quick and easy screw-on of the nut via toothed drive guaranteed

## TENSIONERS

2-STAGED

3-STAGED

4-STAGED

# PSD / PST / PSQ

## QUICK, SAFE, EASY TO OPERATE

Thanks to their multi-stage design, the tension cylinders provide the required tensile forces with a minimal diameter. They are ideal for use in confined lateral installation spaces.

The preload force can be precisely adjusted, and the modular design allows for optimal customisation to suit your specific bolting application.



1

### SECURITY INDICATOR

**GREEN:** A sufficient bolt insertion depth has been reached

**RED:** Maximum stroke of the draw bolt has been completed

2

### ERGONOMIC

The removable handle provides optimum grip and protects the hose connections from damage

3

### FLEXIBLE

Optimum handling: easy alignment thanks to rotatable support, regardless of the bolt arrangement



## + EFFECTIVENESS

- ▶ Easy to operate with the toothed drive:  
Ensures simple and fast nut tightening using a ratchet or torque wrench



## + PROCESS RELIABILITY

- ▶ Mechanical stroke limiter for enhanced safety:  
The end stop restricts piston lifting for maximum protection



## + HIGH TECH

- ▶ Prevention of assembly damage when fitting the tension cylinder: The rotating sleeve is axially flexible with spring support
- ▶ Automatic piston return moves the tension bolt quickly to the starting position after pressure relief

## + ERGONOMIC

- ▶ 'Fail safe system':  
Maximum safety through stroke limitation
- ▶ Visual indicator for the end stop
- ▶ Detachable handle and carrying strap for maximum comfort and safety



## + PERFORMANCE

- ▶ Suitable for parallel and series-connected tension cylinders
- ▶ Fast operation thanks to automatic piston reset
- ▶ Tensioning forces of up to 3,000 klb with the smallest dimension

## + UPGRADE

- ▶ Suitable for documenting the preload force when used in combination with Plarad power packs
- ▶ Additional rings ensure optimum adaptation to different bolt lengths



# MODELS // DATA



## PSE

Typ Type	Zugkraft max. Load max.		max. Betriebsdruck Pressure max.		Regelgewinde Bolt diameter		Hub Stroke		Betriebszyklen Operation cycles	H1		D1		D2		Gewicht* Weight*	
	kN	lbf	bar	psi	mm	inch	mm	inch		mm	inch	mm	inch	mm	inch	kg	lbs
PSE 20	212	47,659	1.500	21,756	20	0.79	8	0.31	8.000	100	3.94	64	2.52	48	1.89	2,1	4.63
PSE 24	305	68,567	1.500	21,756	24	0.94	8	0.31	8.000	95	3.74	80	3.15	72	2.83	3,2	7.05
PSE 30	482	108,358	1.500	21,756	30	1.18	10	0.39	8.000	79	3.11	98	3.86	74	2.91	5,1	11.24
PSE 33	573	128,816	1.500	21,756	33	1.30	8	0.31	8.000	125	4.92	106	4.17	90	3.54	6,4	14.11
PSE 36	681	153,095	1.500	21,756	36	1.42	10	0.39	8.000	125	4.92	114	4.49	95	3.74	7,1	15.65
PSE 42	980	220,313	1.500	21,756	42	1.65	10	0.39	8.000	135	5.31	135	5.31	115	4.53	11,1	24.47
PSE 48	1.235	277,639	1.500	21,756	48	1.89	10	0.39	8.000	144	5.67	152	5.98	130	5.12	15	33.07
PSE 52	1.458	327,771	1.500	21,756	52	2.05	10	0.39	8.000	151	5.94	163	6.42	137	5.39	17,6	38.80
PSE 56	1.676	376,780	1.500	21,756	56	2.20	10	0.39	8.000	159	6.26	175	6.89	147	5.79	21,0	46.30
PSE 64	2.259	507,843	1.500	21,756	64	2.52	10	0.39	8.000	197	7.76	205	8.07	170	6.69	27,8	61.29
PSE 72	2.960	665,434	1.500	21,756	72	2.83	10	0.39	8.000	208	8.19	245	9.65	180	7.09	42,5	93.70

## PSD // PST // PSQ

Typ Type	Zugkraft max. Load max.		max. Betriebsdruck Pressure max.		Regelgewinde Bolt diameter		Hub Stroke		Betriebszyklen Operation cycles	H1		D1		D2		Gewicht* Weight*	
	kN	lbf	bar	psi	mm	inch	mm	inch		mm	inch	mm	inch	mm	inch	kg	lbs
PSD 20	220	49,458	1.350	19,580	20	0.79	8	0.31	4.500	162	6.4	51	2.01	48	1.89	3,2	7.1
PSD 24	313	70,365	1.350	19,580	24	0.94	8	0.31	4.500	196	7.7	58	2.28	55	2.17	4,8	10.6
PSD 27	397	89,249	1.370	19,870	27	1.06	8	0.31	4.500	218	8.6	66	2.60	65	2.56	5,7	12.6
PSD 30	471	105,885	1.500	21,756	30	1.18	8	0.31	4.500	196	7.7	71	2.80	70	2.76	5,7	12.6
PSD 33	581	130,614	1.500	21,756	33	1.30	10	0.39	4.500	215	8.5	79	3.11	80	3.15	7,2	15.9
PSD 36	678	152,420	1.500	21,756	36	1.42	10	0.39	4.500	228	9.0	83	3.27	83	3.27	8,1	17.9
PSD 39	808	181,646	1.500	21,756	39	1.54	10	0.39	4.500	250	9.8	92	3.62	92	3.62	10,4	22.9
PSD 42	937	210,646	1.500	21,756	42	1.65	10	0.39	4.500	263	10.4	98	3.86	98	3.86	12,3	27.1
PSD 45	1089	244,817	1.500	21,756	45	1.77	10	0.39	4.500	256	10.1	106	4.17	100	3.94	14,0	30.9
PSD 48	1278	287,306	1.500	21,756	48	1.89	10	0.39	4.500	269	10.6	112	4.41	112	4.41	16,0	35.3
PSD 52	1476	331,818	1.500	21,756	52	2.05	10	0.39	4.500	293	11.5	120	4.72	120	4.72	19,6	43.2
PSD 56	1695	381,051	1.500	21,756	56	2.20	10	0.39	4.500	300	11.8	130	5.12	130	5.12	23,4	51.6
PSD 60	1959	440,401	1.500	21,756	60	2.36	10	0.39	4.500	343	13.5	140	5.51	140	5.51	30,0	66.1
PSD 64	2233	501,998	1.500	21,756	64	2.52	10	0.39	4.500	350	13.8	146	5.75	146	5.75	32,7	72.1
PSD 68	2825	635,085	1.500	21,756	68	2.68	10	0.39	4.500	424	16.7	167	6.57	167	6.57	52,6	116.0
PSD 72	2825	635,085	1.500	21,756	72	2.83	10	0.39	4.500	424	16.7	167	6.57	167	6.57	53,6	118.2
PSD 80	3587	806,390	1.500	21,756	80	3.15	10	0.39	4.500	457	18.0	188	7.40	180	7.09	71,4	157.4
PSD 90	4524	1,017,036	1.500	21,756	90	3.54	10	0.39	4.500	486	19.1	225	8.86	200	7.87	106,7	235.2
PST 48	1404	315,632	1.400	20,306	48	1.89	10	0.39	4.500	380	15.0	112	4.41	112	4.41	23,6	52.0
PST 56	1673	376,105	1.400	20,306	56	2.20	10	0.39	4.500	394	15.5	120	4.72	130	5.12	28,8	63.5
PST 64	2239	503,347	1.500	21,756	64	2.52	10	0.39	4.500	418	16.5	130	5.12	134	5.28	36,8	81.1
PSQ 36	748	168,157	1.400	20,306	36	1.42	10	0.39	4.500	315	12.4	77	3.03	75	2.95	10,3	22.7
PSQ 42	1090	245,042	1.400	20,306	42	1.65	10	0.39	4.500	343	13.5	91	3.58	85	3.35	14,6	32.2
PSQ 48	1450	325,973	1.400	20,306	48	1.89	10	0.39	4.500	372	14.6	105	4.13	98	3.86	20,7	45.6
PSQ 56	1959	440,401	1.400	20,306	56	2.20	10	0.39	4.500	428	16.9	123	4.84	110	4.33	31,5	69.4
PSQ 64	2705	608,108	1.400	20,306	64	2.52	10	0.39	4.500	471	18.5	141	5.55	126	4.96	44,6	98.3

Repeat accuracy: ≤ 4%, depending on the bolted joint. Technical data without guarantee.



PRODUCT LINK

# XVK & XVR

## QUICK AND EASY FASTENING WITH BACKSPIN PROTECTION

Our manual torque multipliers give you the freedom to work anywhere without having to rely on a power or compressed air supply. Whether in remote areas, on construction sites or in workshops - devices from the XVR/XVK series work anytime, anywhere.



1

### PROCESS RELIABILITY

Selector lever between clockwise and anti-clockwise rotation

2

### SECURITY

Overload protection due to easily replaceable shear pin

3

### FLEXIBLE

Height-adjustable reaction arm for optimum use

## FEATURES

- ▶ Power ranges from 200 to 10,000 Nm
- ▶ Small dimensions
- ▶ Low weight
- ▶ Low maintenance and durable
- ▶ Suitable for all industrial requirements
- ▶ Replaces temporary solutions such as pipe extensions and impact spanners



## + COST EFFICIENCY

Our manual torque multipliers not only guarantee reliable performance, but are also easy on your wallet. With our solution, you not only save time and resources, but also money – without compromising on quality.



## + PERFORMANCE

With our bolting technology, you can easily achieve high torques to master even the most demanding bolted joints.

With an output torque of up to 10,000 Nm, no tightening task is too tough, and no loosening too challenging

## + FLEXIBILITY

In situations where power or compressed air supply is unreliable or unavailable, a hand-operated tool provides a dependable solution. This is especially crucial in emergencies or areas with limited infrastructure



SUITABLE  
TORQUE  
SPANNERS AS  
ACCESSORIES  
PAGE 56

YOUR ADVANTAGES



## MODELS // DATA

Typ Type	H1		D		Gewicht* Weight*		Max. Drehmoment Max. torque		Übersetzungs- verhältnis Ratio	Antriebs- vierkant Input square	Abtriebs- vierkant Output square
	mm	inch	mm	inch	kg	lbs	Nm	ft-lbs			
<b>XVK 15**</b>	172	6.77	81	3.19	2,6	5.7	1.700	1,254	01:04	¾"	1"
<b>XVR 25</b>	302	11.89	81	3.19	5,2	11.5	2.300	1,696	01:07	¾"	1"
<b>XVR 35</b>	273	10.75	81	3.19	5,0	11.0	3.600	2,655	01:10	¾"	1"
<b>XVR 40</b>	238	9.37	95	3.74	6,1	13.4	4.000	2,950	01:11	¾"	1 ½"
<b>XVR 65</b>	244	9.61	114	4.49	8,4	18.5	6.200	4,573	01:15	¾"	1 ½"
<b>XVR 70</b>	302	11.89	128	5.04	11,4	25.1	6.800	5,016	01:17	¾"	1 ½"
<b>XVR 90</b>	300	11.81	172	6.77	21,8	48.1	8.600	6,343	01:32	¾"	1 ½"
<b>XVR D45</b> Stage 1 Stage 2	310	12.20	128	5.04	16,0	35.3	4.700	3,466	01:13,5 01:22	½"	1 ½"
							10.100	7,450			1 ½"

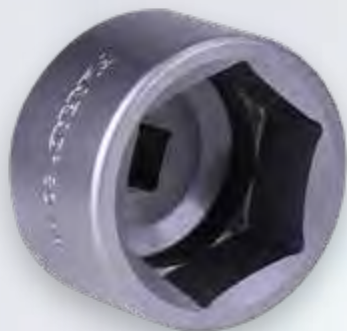


Repeat accuracy: ≤ 4%, depending on the bolted joint. Technical data without guarantee. \*Specification with reaction arm

\*\* Model XVK without backspin protection

# ACCESSORIES

## FOR PLARAD PRODUCTS



### SIX POINT SOCKETS

Our slip-on sockets offer a practical solution for fast and efficient fastening in various sizes.

With their versatile range of applications and ease of use, they are an indispensable tool and perfectly complement our wide selection of torque tools. Our socket spanners are compatible with all square-head wrenches.



PRODUKT LINK



### TORQUE SPANNER

Our torque spanners are reliable tools for the controlled tightening of nuts and bolts.

They are fully compatible with all manual torque wrenches, meeting your needs for both ergonomics and process reliability..



PRODUKT LINK



### BACK UP WRENCH

Our back up wrenches help to ensure safe and effective tightening or loosening of bolts, especially in hard-to-reach places.

The back up wrench is typically used to prevent the bolt head or nut from turning while tightening with high torque.



PRODUKT LINK

## EXPAND YOUR OPTIONS



### HANDLE

Our in-house developed handles are extremely beneficial for heavy tools as they equalise the weight and reduce the strain on the user.

By keeping a constant balance, they enable effortless handling and increase safety, especially during long work sessions, by preventing fatigue.



PRODUKT LINK



### CASE / TROLLEY

Our tool trolley allows you to transport your torque wrench quickly and effortlessly, ergonomically and without straining your back.

You always have quick and easy access to your tool and accessories.



PRODUKT LINK



### DIGITAL SOLUTIONS

With our digital solutions, we are revolutionising torque-accurate fastening in three stages.

The basic level saves costs and time by connecting torque wrenches to smart devices via a Wi-Fi chip and innovative documentation software.

The second level enables precise documentation and control of the bolting process via a local network.

The third level allows users to manage their tool inventory web-based and from anywhere.



LINK TO THE  
DIGITISATION  
BROCHURE



# PLARAD SERVICE

RELY ON OVER  
**60 YEARS**  
OF EXPERIENCE



## REPAIR AND CALIBRATION SERVICE

Despite the highest quality, our products may eventually require repair. To ensure swift service, our experts are always on hand.

We recommend having your bolting devices and accessories inspected at regular intervals.

Devices serviced by us are provided with a new factory test certificate, ensuring that quality is thoroughly documented.



SERVICE FORM  
LINK



## PLARAD ACADEMY

Acquire and deepen your knowledge in handling and maintaining our tools. We will train you in the use of our tools and turn you into a bolting specialist.

### USER TRAINING

Teaching the basics of physics, different tightening methods, documentation of your bolting applications and safety-related topics.

### SERVICE TRAINING

Avoid defects or total failure of your bolting tools through preventive maintenance.



## RENTAL SERVICE

Need a tool fast? Or have a bolting job that doesn't justify purchasing a new product? No problem!

plarad provides the perfect solution for every bolting need with its wide range of rental options.

### ADVANTAGES

- ▶ Almost 2,000 tools in the well-known Plarad quality always in stock
- ▶ Fast and easy to hire
- ▶ Individual contract agreements
- ▶ Easy rent equipment accessories
- ▶ Hire purchase option
- ▶ 24-hour ordering service

## ON-SITE SERVICE

With our service vehicle, we also offer our service directly at your premises and on the construction site. Our qualified employees calibrate and certify your tools within the shortest possible time and at your desired date.

Our air-conditioned vehicle guarantees optimal test conditions with a constant temperature of 20°C and a humidity of 50 - 60%.

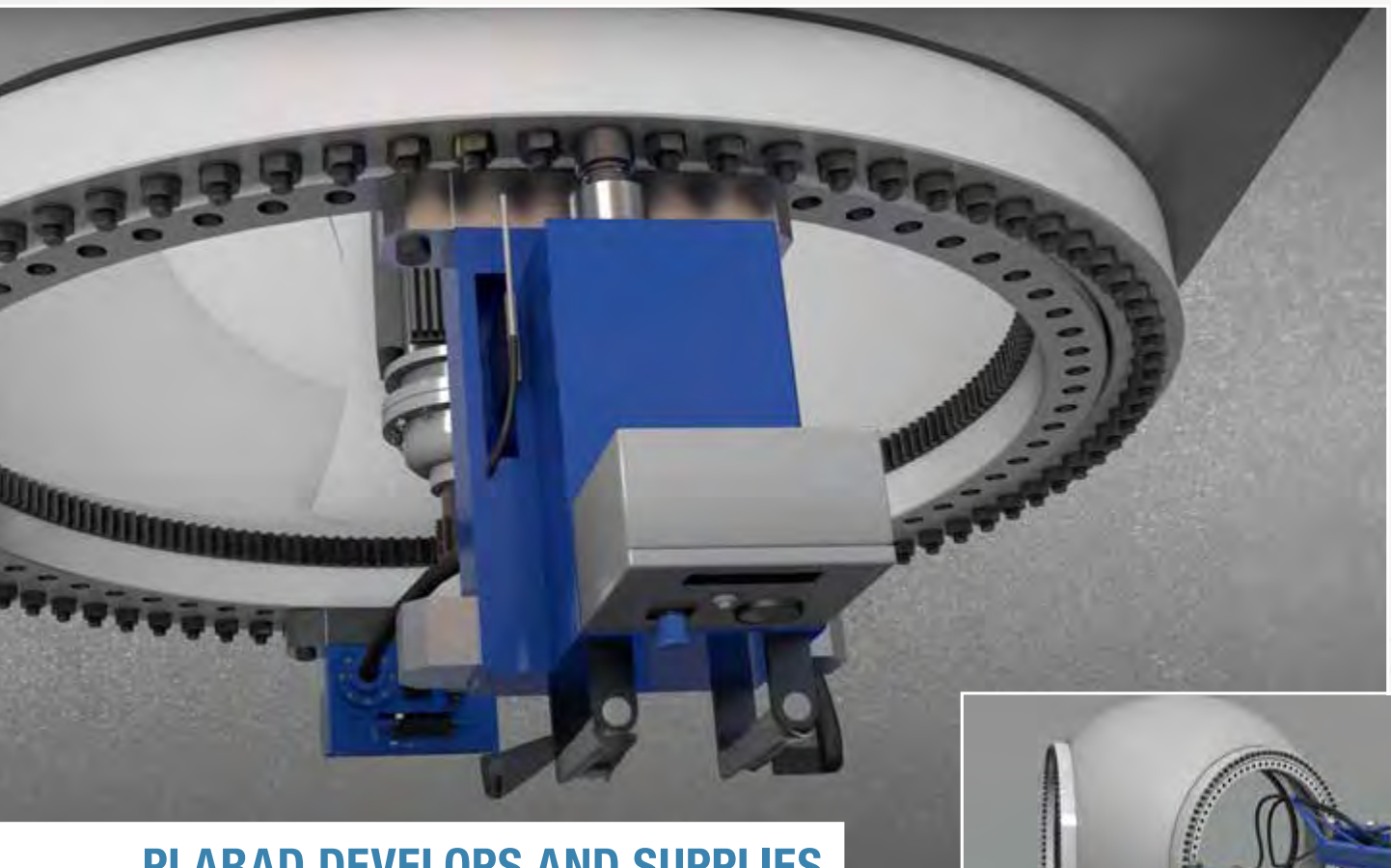
### ADVANTAGES

- ▶ Torque measurements up to 20,000 Nm under test bench conditions in a fully air-conditioned vehicle with test laboratory
- ▶ Creation of certificates for torque tools directly on-site
- ▶ Certification of hydraulic power packs (manometer calibration)
- ▶ DGUV V3 testing for electrical devices
- ▶ Certification of manual torque spanners from 40 - 1,000 Nm
- ▶ Europe-wide on-site service
- ▶ Preventive maintenance
- ▶ Available as an inspection and maintenance package at a fixed price

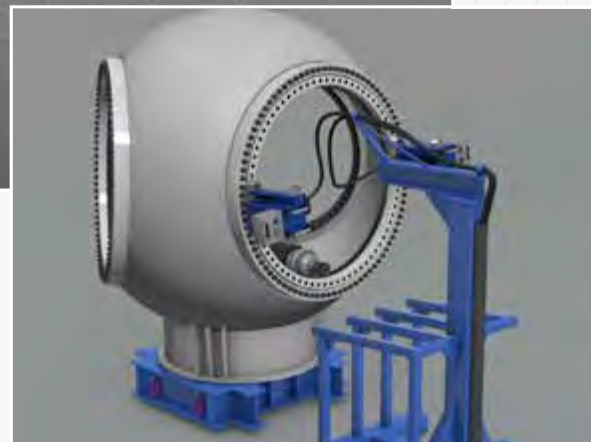




# BESPOKE ROBOTIC BOLTING PLANT MACHINERY



**PLARAD DEVELOPS AND SUPPLIES  
CUSTOMISED BOLTING SYSTEMS  
FOR TORQUES FROM 500 Nm.**



The range of services extends from supplementary auxiliary devices for our series products to fully automated bolting systems.





## AORDER PLACEDT

Plarad sets clear milestones, ensuring detailed coordination of electrical design and software development, with the respective design freeze approved by the client.



## BEFORE PLACING THE ORDER

- ▶ Individual personal project-related coordination with the client
- ▶ Creation of the project brief: The project brief consolidates all relevant information from emails, telephone calls, notes, and more.
- ▶ Development of a specification list with the client
- ▶ Based on the requirements specification and project outline, a functional specification is created that outlines in detail how the requirements will be met
- ▶ Concept development and coordination with the client, taking into account the client's technical and economic ideas
- ▶ Concept presentation and discussion with the client
- ▶ Quotation based on the concept



## PROJECT PROCESS

- ▶ MILESTONE 1: Mechanical engineering
- ▶ MILESTONE 2: Control concept, control cabinet, electrical planning, packaging
- ▶ MILESTONE 3: User interface, ergonomics, operating concept

**Plarad, in collaboration with Broetje Automation, has developed a mobile platform featuring a Comau NJ-165-3.0 robot arm and the Plarad end effector.**



The system can handle loads of up to 165 kg, providing omnidirectional movement at speeds of up to 1.4 m/s, and is autonomously controlled using laser scanners. Devices such as tension cylinders or torque wrenches can be easily attached to the end effector. Its modular design enhances automation processes and drives innovation.

# **PLARAD®**

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