

PLARAD[®]
Torque & Tension Systems



Bolting Systems

... a successful connection!

Professional bolting technology

Since 1962 Maschinenfabrik Wagner and its brand „Plarad“ has been the benchmark for quality, innovation and reliability in the field of bolting technology.

Globally engaged companies in various industries rely on our competence where tailor-made bolting solutions are concerned. Our customers benefit from our flexibility and our know-how, acquired continuously since the early 1960s.

Plarad bolting systems are thinner, more powerful and lighter than the preceding models. Due to continuous development of our products, Plarad is always a step ahead. We are driven by customer's requirements as well as market demands.

With eight product lines, from manual torque multipliers through to completely automatic bolting systems, we can offer you the broadest product range in the market. You benefit from perfectly optimised tooling while all the products for your bolted joints come from a single source.





Battery Nutrunner **DA2**

Torque range up to 4 800 Nm

- Optimised handling
- Lighter and more compact than its competitors
- Patented automatic locking
- Integrated free rotation function
- Active two-steps battery charge indication
- 7 sizes up to 8000 Nm
- Optional: Diagnostic Setting Software (DSS)
- Documentation



DA2docu - Safe documentation of bolting data



Safe storage in the transport case



Electric Nutrunner **DE1docu & DE1docu-plus**

Functions of the DE1docu:

- Digital storage of up to 10 000 individual bolted joints
- Wireless transmission via a WLAN module
- Integrated web server
- Connectivity to all WLAN-capable devices
- Actual devices need only one common web browser for transmission of data

Putting the “plus” in DE1docu-plus:

- Torque mode
- Angle mode
- Torque/angle mode
- Angle counting mode
- Test mode



The multi function display of the DE1docu-plus

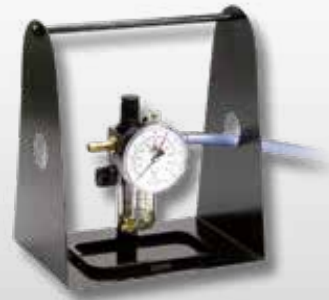




Pneumatic Nutrunner **DP1**

DP1 – the new generation:

- Short and slim model
- Covering a torque range from 125 – 120 000 Nm
- Vibration reducing technology protects the users muscles and joints during continuous operation in assembly/maintenance and production environments
- Lightweight and ergonomic making the tool easy to use
- Pneumatic drive rotates 360° on the gearbox



Pressure regulation unit
The desired torque can be set at the pressure regulation unit.



Mobile transducer Torque Control **TC1**

Measures the bolting process directly on the bolted joint:

- Measures the applied torque directly at the point of application
- Measuring range up to 5500 Nm
- Displays in real time
- Acoustic warning signal if the defined tolerance is exceeded
- Integrated memory for 250 values
- Transfer and analysis to the PC
- Appliances are compatible with the current Plarad nutrunner range and virtually maintenance-free

Torque Control Software:

- Documentation of date, time, OK/NO OK result
- Storage of data
- Optimised documentation and process security
- Quality assurance guarantee



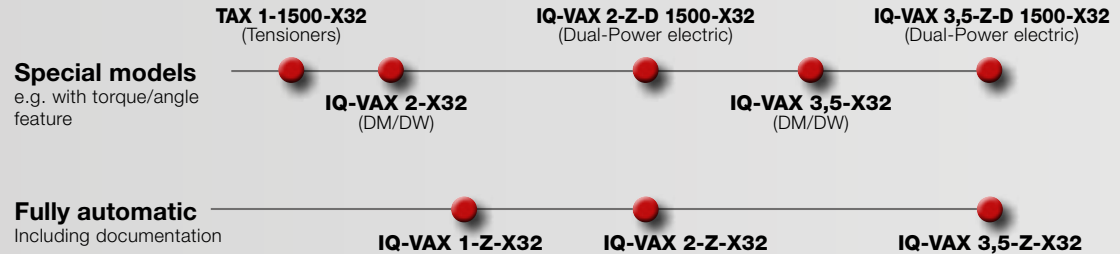


Power Pack Overview IQ, XB, Dual, TAX



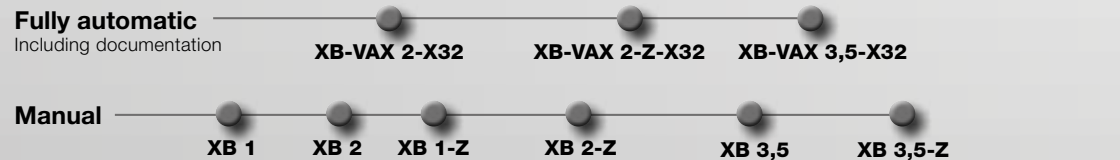
High-Tech

- Fully automatic
- Documentation
- Torque/angle method
- Dual Power Pack



Basic

- Compact, small, light-weight and economical



Equipment

Operation speed



IQ-VAX 2 WZ X32



IQ-VAX 3,5 DM-DW X32



XB 1



XB 2



TAX



IQ VAX 2 WZ Dual



Hydraulic Torque Wrenches **MSX, MX-EC**

Powerful and variable:

- Long-lasting Plarad quality
- Fast operation thanks to optimum harmonisation with Plarad power packs
- Safety relief valve
- SQS-high-pressure safety cylinder – in case of housing failure – no leakage
- Easy servicing
- Compact dimensions
- Fine-toothed ratchet system offers high torque precision and prevents jamming
- Also available in an ATEX version (II 2 G ck II B T4) for Zone 1G
- Internationally patented technology



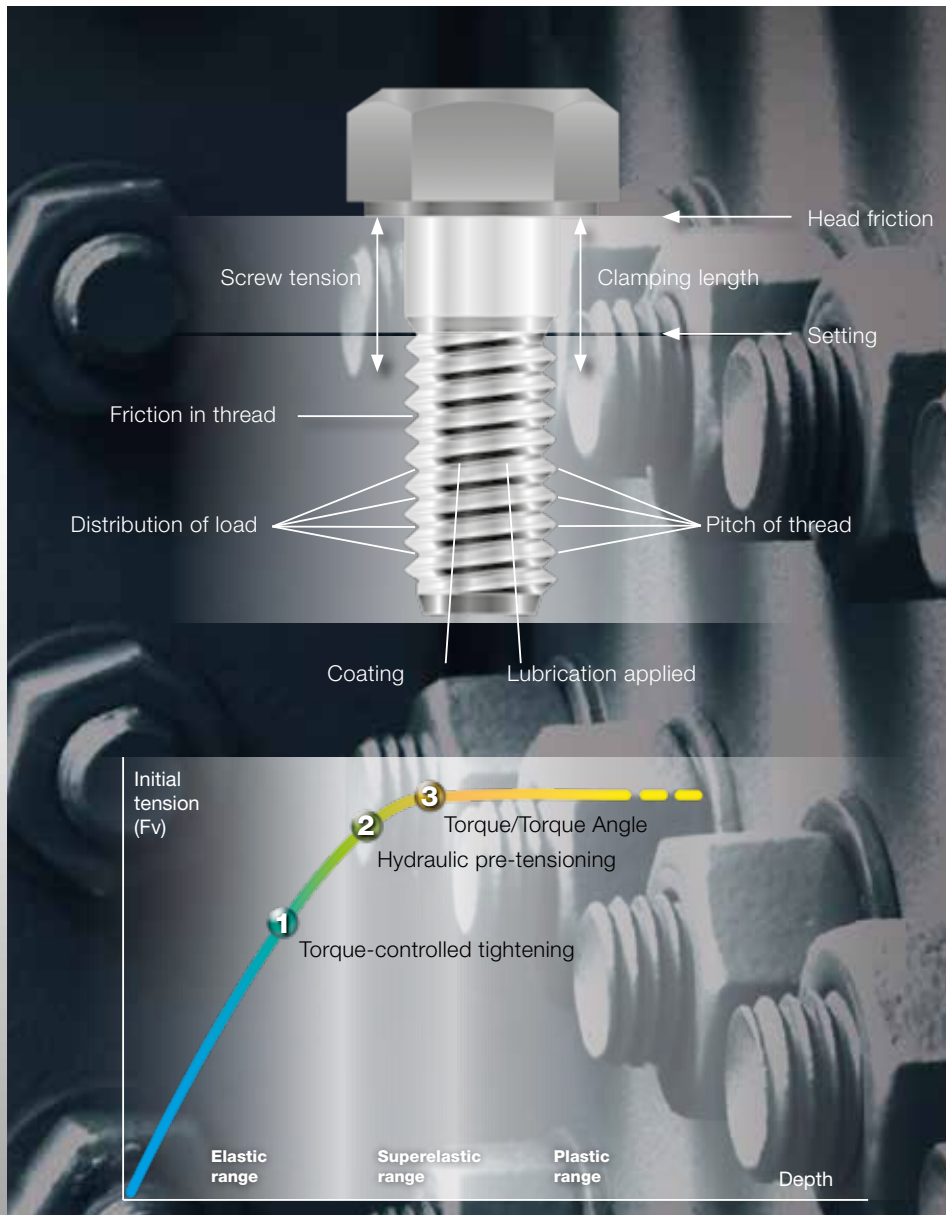
Hydraulic Torque Wrenches **FSX**

Slim and precise:

- Long-lasting Plarad quality
- Fast operation thanks to optimum harmonisation with Plarad power packs
- Safety relief valve
- SQS-high-pressure safety cylinder – in case of housing failure – no leakage
- Easy servicing
- Compact dimensions
- Fine-toothed ratchet system offers high torque precision and prevents jamming
- Also available in an ATEX version (II 2 G ck II B T4) for Zone 1G
- Internationally patented technology



Bolt joint



Our solutions

1 Torque-controlled tightening

- In the majority of cases where bolts are used, torque-controlled tightening is the method used to tighten.
- With this method the friction on the thread and head of the bolt act as a precise pre-tensioning force, therefore the use of accurate tools is imperative.
- Effectively the bolt can be tightened quicker.
- This method is more practical and easy.
- Light, compact tools can be used where space is limited.

2 Hydraulic Tensioning

- As the nut is not rotated under load, there is no torsional load on the bolt.
- After achieving the desired applied load, the nut can be tightened without causing stresses on it. The correct applied bolt load is therefore achieved.
- Even different co-efficients (levels) of friction have no effect on the tensioning process.

3 Torque/torque-angle-controlled tightening

- Torque/torque-angle-controlled tightening is more precise than purely torque-controlled tightening.
- The defined amount of rotation of the bolt (torque angle) provides automatically and accurately the required pretension.
- Control is achieved directly from the power pack, by means of microprocessor technology within the pump.
- Higher quality bolting joints are achieved.
- Results can be stored and used at a later date for documentation required in quality assurance processes.
- The whole control process is achieved without the need of external sensors, hence no need for extra cables from the tool.

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