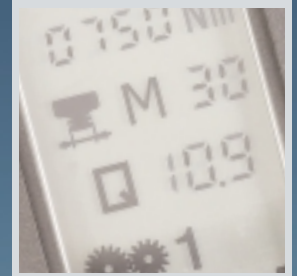
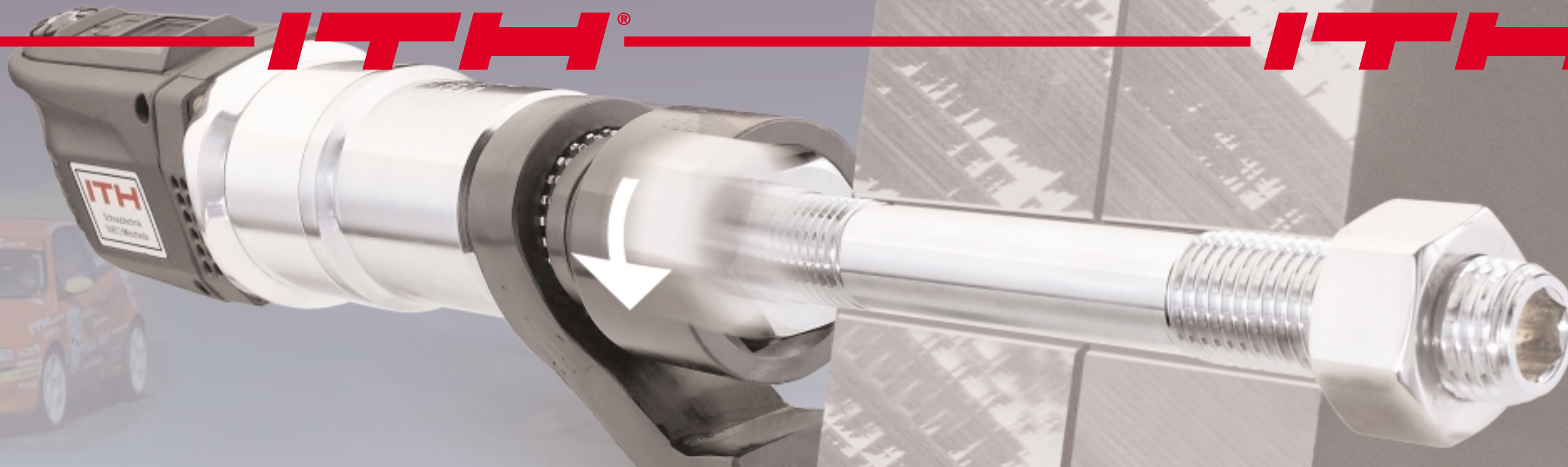




Nut Runners





Standard Features:

- × Look-up table, menu control
- × Safety turning knuckle
- × Speed selector
- × Soft-turn automatic (STA)
- × High-power planetary gear system
- × Multi-function display

EDS, Electric Nut Runners

Design and construction

The torque from the electric motor is increased to a previously set torque value by the high-power planetary gear system. The standard reaction arms provides optimum counter-support. Customer-specific braces (TWIN brace, rotating foot) can be produced according to requirement. The ergonomic switch lever of the change gear permits quick alternation back and forth between low and fast mode. The mechanical sliding clutch ensures that the gear unit is never overloaded. The **safety turning knuckle** of the drive unit ensures that the drive unit is always in the best possible position.

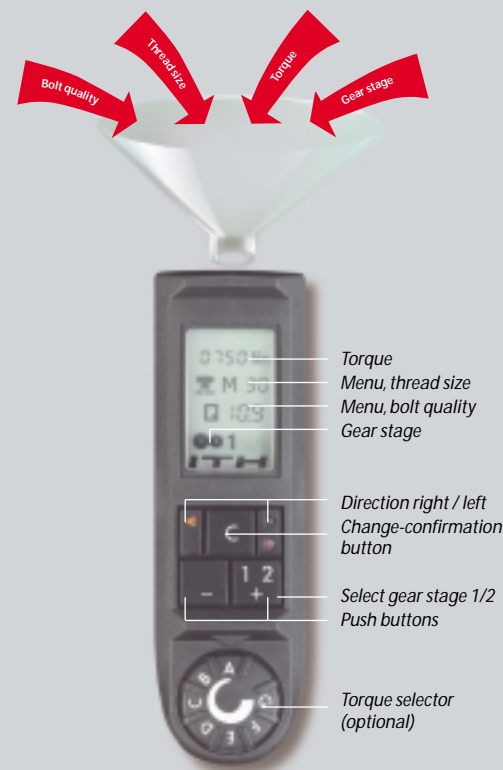
Description of function

In the nut runners with **Multi-Function Display**, the required torque is set using either the +/- buttons or automatically via menu control. With the nut runner of type SEDS, the torque is selected using the hand wheels. The **Soft-Turn Automatic system (STA)** of the microcontroller adjusts the speed individually to the torque applied. This permits a fast bolting operation which has no adverse effects on the material. When the maximum torque has been achieved, the machine switches off automatically.

Menu Control, Multi-Function Display

All the data set on the nut runner are shown directly to the operator in the Multi-Function Display. The tables normally required for tensioning operations are not required for the version with Multi-Function Display, because all the values are stored in the microchip. The torque values required for a bolt of certain dimensions and quality are indicated in the Multi-Function Display after being entered via the

push buttons. If the customer has a number of different working locations, it is possible to create a menu for each of these locations. The chip is then programmed for the location in question.



EDS Nut Runner – the various models

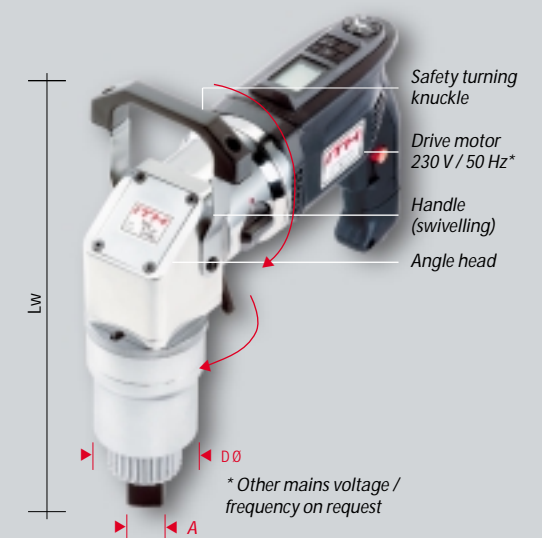
Type sEDSx
Electric Nut Runner,
basic



Type EDS
Electric Nut Runner,
standard



Type EDSw
Electric Nut Runner,
right-angle



ITH Type	Art no.	Recommen- ded bolt size	Max. torque [Nm]	A [inch]	D Ø [mm]	Technical data, straight				Technical data, right angle			
						Idle speed [1/min] Gear 1 / Gear 2	L [mm]	Weight [kg]	Idle speed [1/min] Gear 1 / Gear 2	Lw [mm]	Weight [kg]		
EDS - 25	2x.00025	M 10 - M 20	250	1/2	70	70	204	380	4,4	57	166	216	6,0
EDS - 40	2x.00040	M 12 - M 24	400	3/4	70	28	83	404	5,0	23	68	238	6,2
EDS - 75	2x.00075	M 16 - M 27	750	3/4	72	17	49	416	5,8	14	40	259	7,0
EDS - 150	2x.00150	M 20 - M 33	1.500	1	84	6	18	441	6,7	5	15	337	7,9
EDS - 250	2x.00250	M 24 - M 36	2.500	1	86	4	13	467	7,7	4	10	368	8,9
EDS - 400	2x.00400	M 27 - M 42	4.000	1 1/2	93	2	6	505	8,9	2	5	401	10,1
EDS - 600	2x.00600	M 30 - M 48	6.000	1 1/2	105	2	5	486	14,5	2	4	426	15,7
EDS - 800	2x.00800	M 36 - M 56	8.000	1 1/2	125	2	3	542	22,0	1	3	476	22,0
EDS - 1000	2x.01000	M 42 - M 60	10.000	1 1/2	125	1	3	542	22,0	1	1	476	23,2
EDS - 1300	2x.01300	M 48 - M 72	13.000	1 1/2	155	1	2	600	26,0	1	1	495	28,0

Straight version: art. no. EDS: 28..., art. no. sEDS: 28..., special version to customer request

Angle version: art. no. EDSw: 29..., art. no. sEDSw: 29..., special version to customer request



Standard Features:

- × Safety turning knuckle
- × Impact-proof pistol grip
- × Torque selection in four stages
- × Vibration-absorbing grip
- × High-performance planetary gears

PDS, Pneumatic Nut Runner

Design and construction

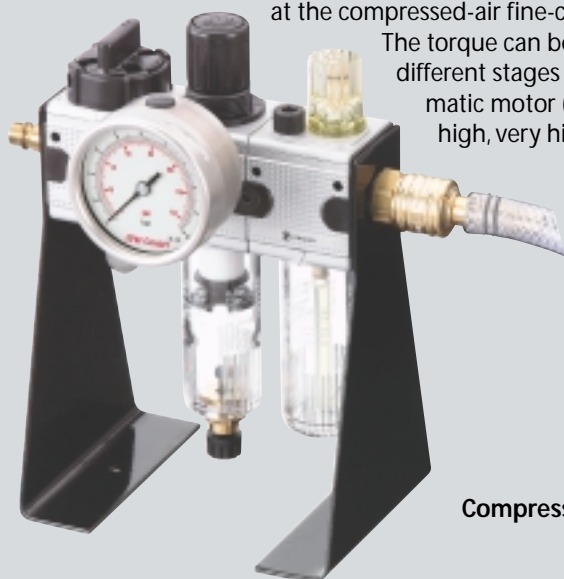
The torque of the pneumatic motor is increased by the compact planetary gear system. The standard reaction arm provides optimum absorption of reaction moment. Customer-specific braces (TWIN brace, rotating foot) can be produced according to requirement. Alternatively, the nut runner can be ordered with a switchover gear (low and fast mode). In this way, a wider range of speeds can be covered. The **safety turning knuckle** of the drive unit ensures that the drive unit is always in the best possible position.

Description of function

At idle speed, the required torque of the nut runner is set according to the desired table value at the compressed-air fine-control valve. The torque can be set to four different stages at the pneumatic motor (low, medium, high, very high).

Explosion-protected version

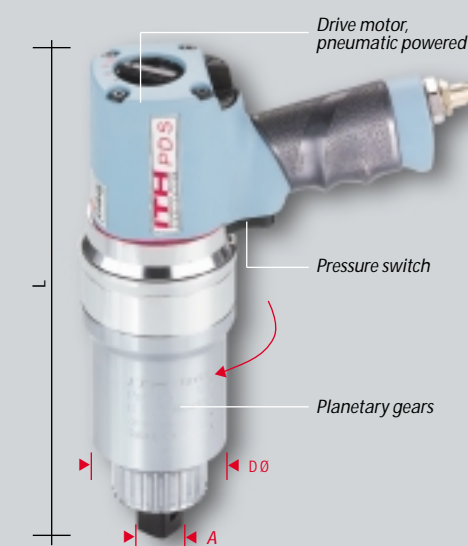
For use in areas where there is a risk of explosion, the ITH nut runners of type PDS have a special coating on the gear unit and a brace with bronze jacketing.



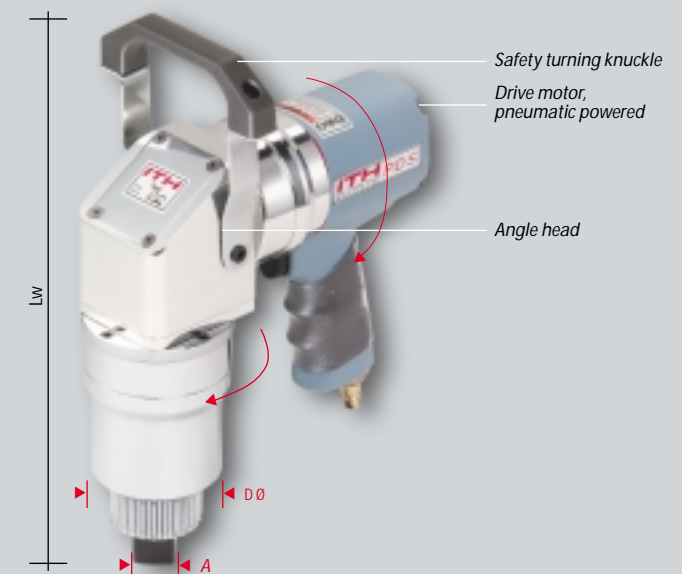
Compressed-air fine-control valve

PDS Nut Runners – the various models

Type PDS Pneumatic Nut Runner, standard



PDSw Pneumatic Nut Runner, right-angle



ITH Type	Art. no.	Recommended bolt size	Max. torque [Nm]	A [inch]	D Ø [mm]	Technical data, straight			Technical data, right angle				
						Idle speed [1/min] Gear 1 / Gear 2	L [mm]	Weight [kg]	Idle speed [1/min] Gear 1 / Gear 2	Lw [mm]	Weight [kg]		
PDS - 25	2x.00025	M 10 - M 20	250	1/2	70	52	210	242	3,5	43	171	216	4,7
PDS - 40	2x.00040	M 12 - M 24	400	3/4	70	21	85	268	4,0	17	70	238	5,2
PDS - 75	2x.00075	M 16 - M 27	750	3/4	72	13	50	280	4,5	10	41	259	5,7
PDS - 150	2x.00150	M 20 - M 33	1.500	1	84	5	18	304	5,6	4	15	337	6,8
PDS - 250	2x.00250	M 24 - M 36	2.500	1	86	3	13	330	6,7	3	10	368	7,9
PDS - 400	2x.00400	M 27 - M 42	4.000	1 1/2	93	2	7	368	7,9	2	5	401	9,1
PDS - 600	2x.00600	M 30 - M 48	6.000	1 1/2	105	1	5	389	13,5	1	4	426	14,7

Straight version: art. no. PDS: 26..., art. no. for EX-version, PDS-EX: 26...EX, special version to customer request
 Angle version: art. no. PDSw: 27..., art. no. for EX-version, PDS-EXw, 27...EX, special version to customer request



Documentation

ITH nut runners of series EDS and PDS are calibrated on a dynamic torque rotation-angle test bench. Various bolt lengths can be used for calibration. A test report is issued for each nut runner.

Test bench with nut runner

Accessoires

ITH-Torque Wrenches Interchangeable ratchet head

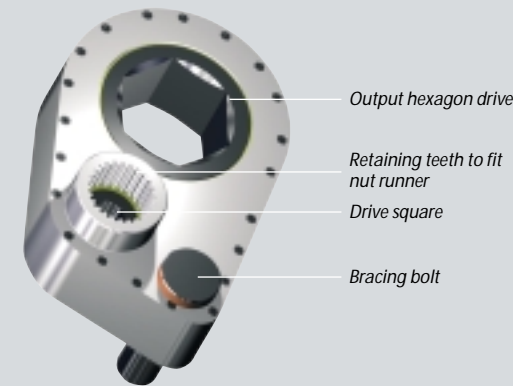


Interchangeable ratchet head

Bit insert ø 8 - 20

ITH-art. no.	Torque range (Nm)	Technical data			
		□A	D	L	
31.10022	40 - 200	1/2"	40	475	
31.10024	60 - 360	1/2"	40	590	
31.10026	200 - 850	3/4"	70	1300	not
31.10028	300 - 1250	3/4"	70	1450	shown

ITH-Side Drive



Output hexagon drive

Retaining teeth to fit nut runner

Drive square

Bracing bolt

ITH side drives are used in radially confined spaces or for long threaded rods (heat exchanging). The side drive is simply pushed onto the nut runner. The A/F-width of the drive hexagon can be selected for the intended application.

Art. no.	Art. no.	Min. A/F-width (Nm)	Max. A/F-width (Nm)	Min. torque (Nm)
ST - 55	31.00755	36	56	2000
ST - 65	31.00765	46	65	2500
ST - 75	31.00775	55	75	2500
ST - 85	31.00785	65	85	2500

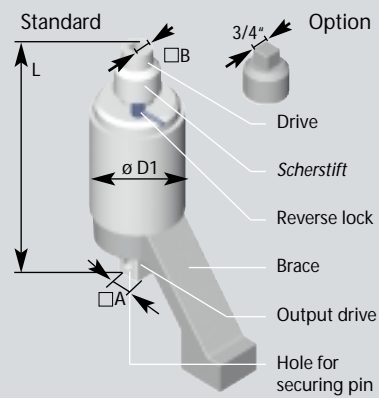
MDS, Mechanical Nut Runner

Design and construction

All ITH nut runners are based on the planetary-gear principle. They are divided into various types according to size and torque reduction. On all types, the reaction arm is adjustable and movable on splines and can be altered according to customer requirement. If the maximum working capacity should be exceeded, an overload safety device (shear pin) is integrated in the drive unit. The return lock prevents reverse winding during operation. It can be switched back and forward for tightening and loosening. On all mechanical nut runners, the drive unit is a 1/2" square. Depending on type, the output drive is a square of 1" or 1 1/2" in size.

Description of function

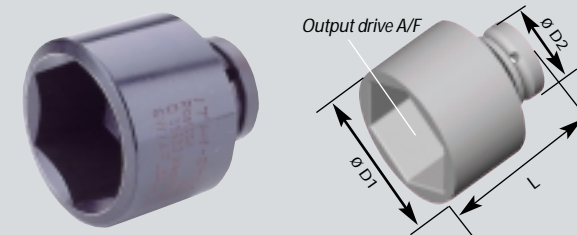
The input torque for the manual torque wrench (art. no. 31.10024) and for the mechanical nut runner is taken from the table. The switch lever for the return lock must be set to Loosen / Tighten (L/R). Correct positioning of the reaction arm is essential for safe and reliable installation.



ITH Type	Art. no.	Technical data							Recommended bolt size
		max. torque [Nm]	Reduction ratio	A [inch]	B [inch]	D1 [mm]	L [mm]	Weight [kg]	
MDS - 150	30.00115	1.400	1 : 4	1	1/2	85	190	4,1	M 10-M 20
MDS - 320	30.00121	3.200	1 : 16	1	1/2	88	235	6,2	M 12-M 24
MDS - 400	30.00124	4.000	1 : 16	1 1/2	1/2	88	245	7,4	M 16-M 27
MDS - 600	30.00127	6.000	1 : 22	1 1/2	1/2	128	305	15,8	M 20-M 33
MDS - 1000	30.00130	10.000	1 : 60	1 1/2	1/2	130	323	19,6	M 24-M 36

Special versions available to customer specification

ITH-Power-Wrench Inserts

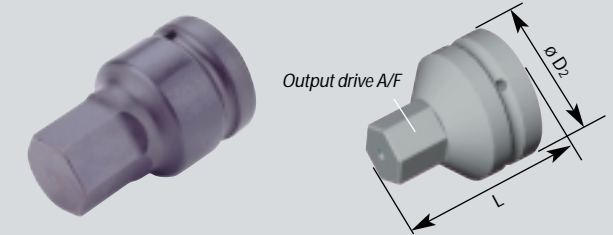


Ordering example

ITH art. no. 31.000 04 - 0046

Inch inserts	Power-wrench insert Type
02 = drive 1/2"	
03 = drive 3/4"	
04 = drive 1"	
05 = drive 1 1/2"	
06 = drive 2 1/2"	
08 = drive 1/2"	
09 = drive 3/4"	
10 = drive 1"	
11 = drive 1 1/2"	
Width across flat A/F 46	

Inserts for Allen-Type bolts



Ordering example

ITH art. no. 31.00128 - 0024

Inch inserts	Allen-type insert Type
126 = drive 3/4"	
128 = drive 1"	
130 = drive 1 1/2"	
Width across flat A/F 24	



*ITH torque wrench, type DV,
oxygen-fission unit*



ITH nut runner, wind generator, sliding bearing



ITH tensioning cylinder, ITH round nut type RMZ



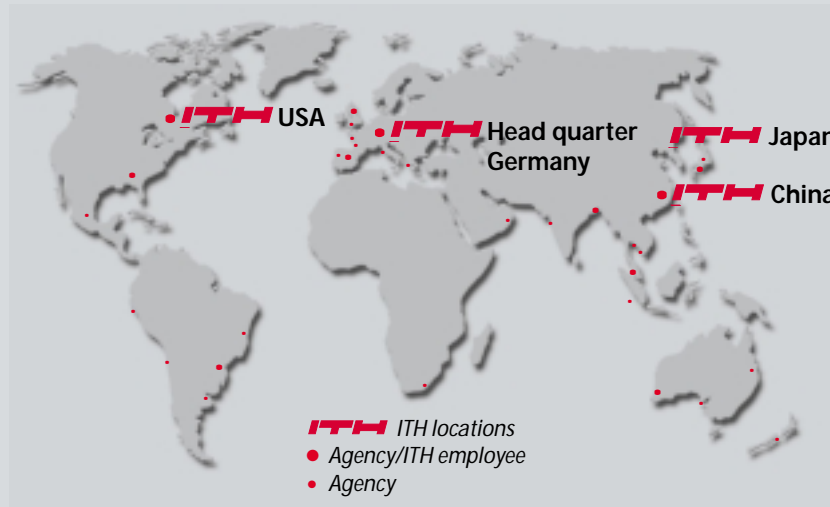
Products in Use

ITH is a system supplier providing a complete package consisting of the joining elements and the correct tools for tightening them.

The leading position on the market enjoyed by ITH is reflected in the following facts:

- worldwide distribution network
- international patents
- expert advisory service by qualified mechanical engineers (not salesmen) in all questions involving bolts
- decades of experience in the bolting sector
- lean production
- fast service

Worldwide Network



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