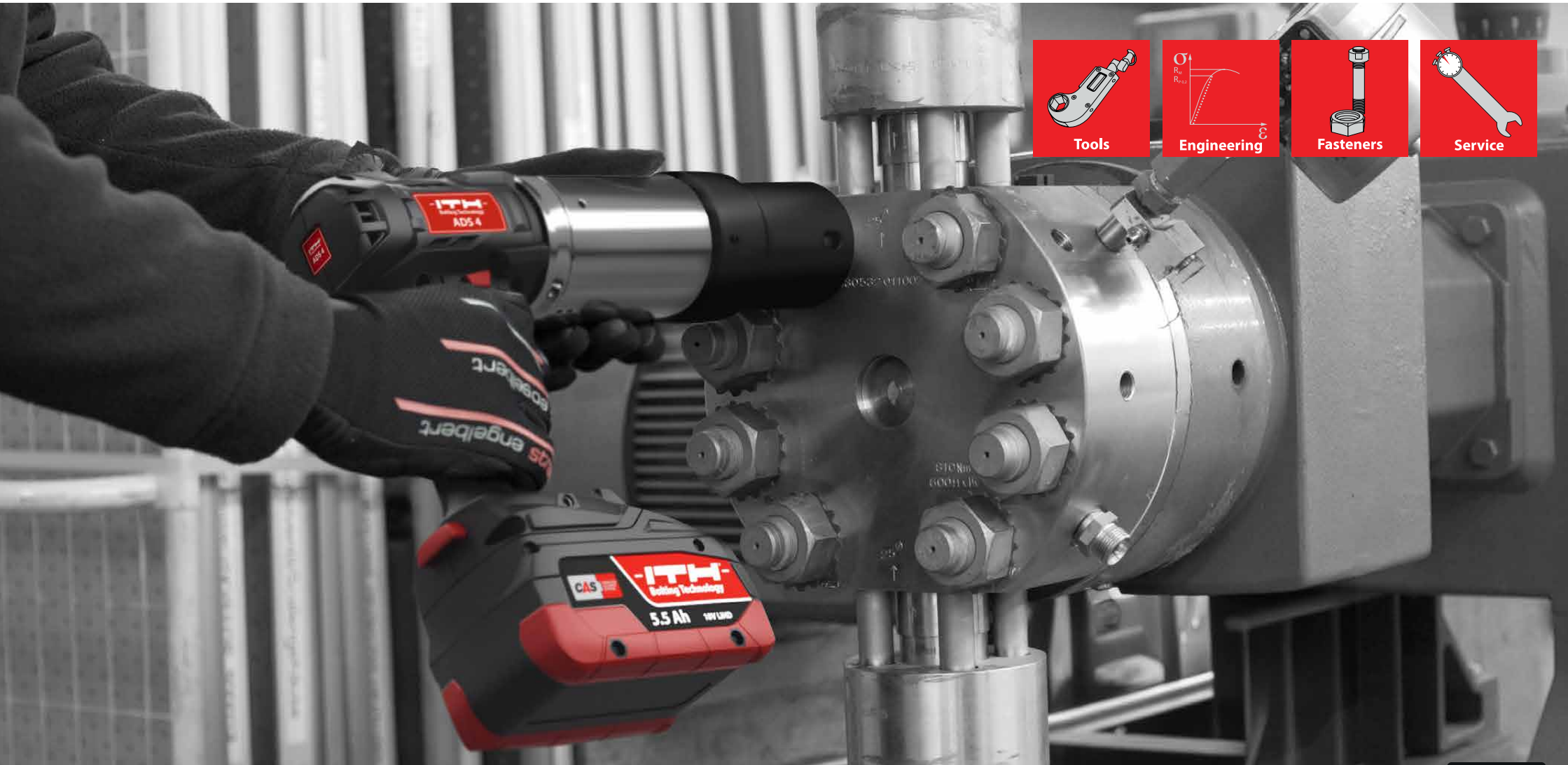
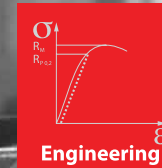


ITH[®]

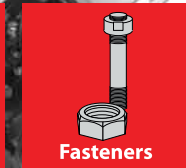
Bolting Technology



Tools



Engineering



Fasteners



Service

ITH RAM System

Reaction Armless Bolting Solution

www.ITH.com



SCAN ME

ITH RAM System

Reaction Armless Bolting Solution



ITH RAM System

Function & Advantages

- ✓ Axial application of the tightening torque without bending or shearing forces in the bolt connection. Both action and reaction take place around the central axis of the bolt
- ✓ Increased work safety due to bolting without reaction arm. No risk of crushing due to the movement of the support against the support surface
- ✓ Faster bolting time due to elimination of counter support measures with the ITH Counter Disc
- ✓ Less damage or wear to adjacent machine parts, fasteners and bolting tools
- ✓ Reliable and permanent protection against automatic loosening of the bolt or nut
- ✓ Suitable for high-strength bolts and nuts of strength class 10.9/10 (standard) and 12.9/12 (on request).
- ✓ Available dimensions from M16 to M36

The ITH RAM System (Reaction Armless Modification)

is the reaction armless bolting solution for ITH Nut Runners and consists of the three components ITH RAM Support, ITH RAM Disc and ITH Counter Disc (optional).



**See more product details
on our website:**

Simply scan the QR code with
your smartphone.

ITH RAM System Components



ITH RAM Support

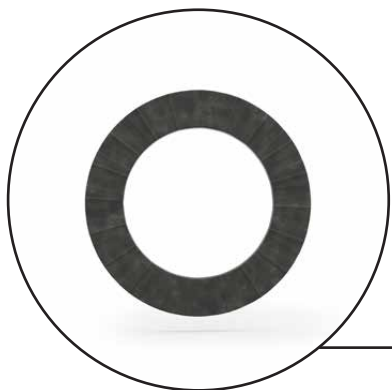
Reaction armless support for ITH Nut Runner

The ITH RAM Support is a reaction armless support for ITH Nut Runners for tightening and loosening bolt connections with the ITH RAM Disc. The inner contour of the support encloses the outer contour of the reaction disc on the preload application side and enables reaction armless tightening without bending moments in the bolt connection.

ITH RAM Disc

Reaction disc on the preload application side (tightening side)

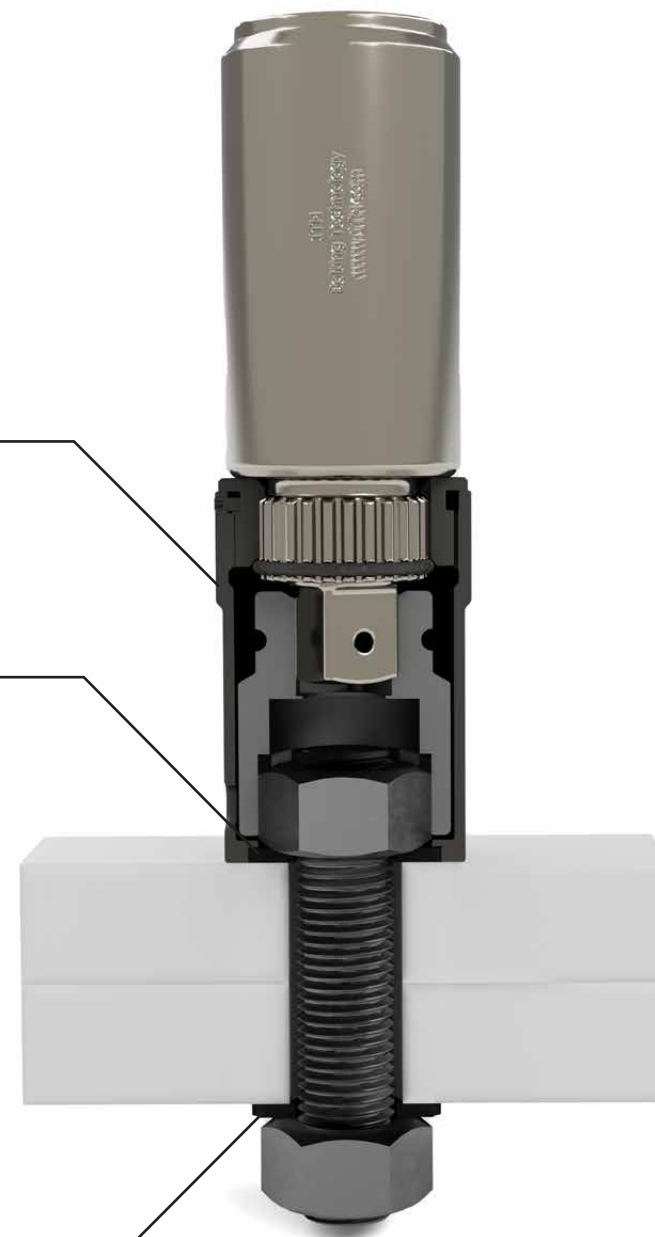
The ITH RAM Disc is a two-layer locking system on the preload application side. It is used to prevent the automatic loosening of bolt connections according to the wedge-locking principle. The outer radial ribs impress themselves into the bearing surface during tightening, while the inner wedge surfaces maintain the high preload force.



ITH Counter Disc (optional)

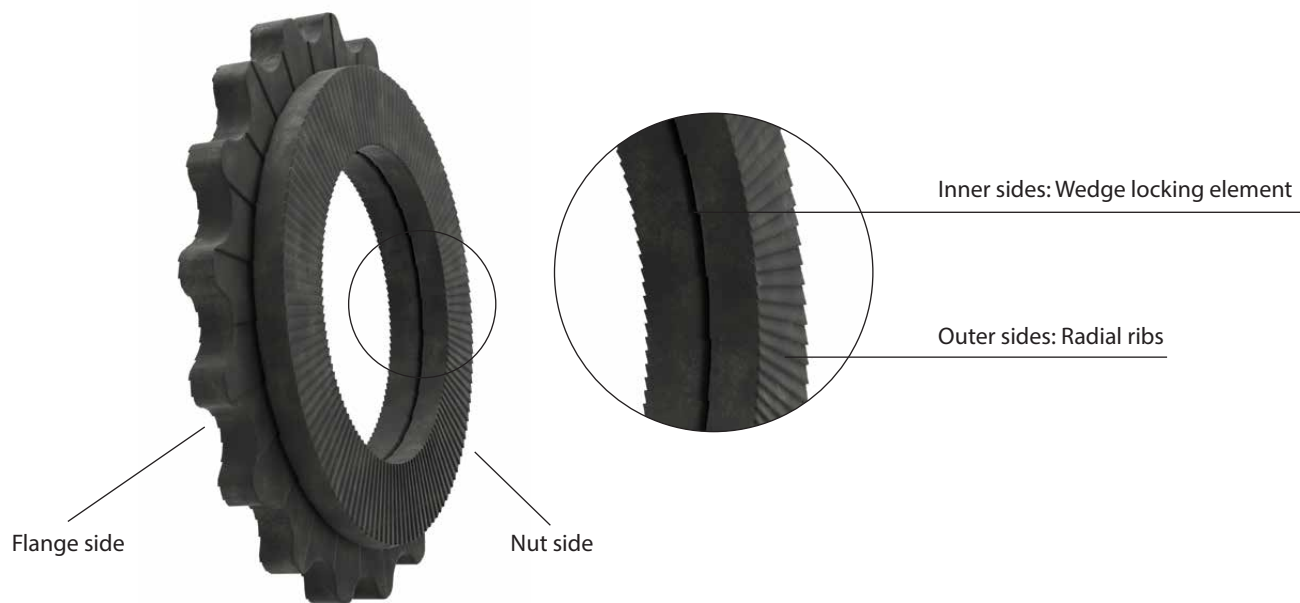
Counter disc on the opposite side

The ITH Counter Disc is a washer with wave-shaped locking ribs on both sides. In combination with the ITH RAM Disc, the counter side is prevented from rotating with through-bolt connections. The arrangement of the locking ribs and the wave-shaped design result in a positive friction grip and mechanical interlocking, which is achieved even at low preloads. Counter-locking is not necessary.

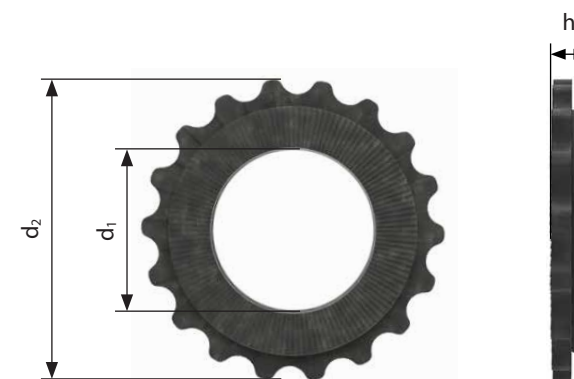


ITH RAM System Technical Data

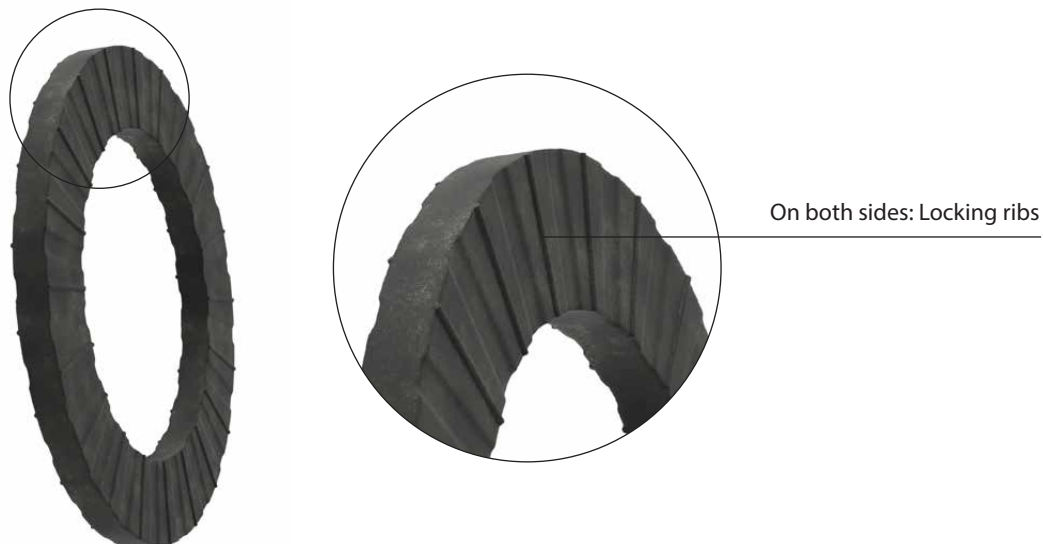
ITH RAM Disc



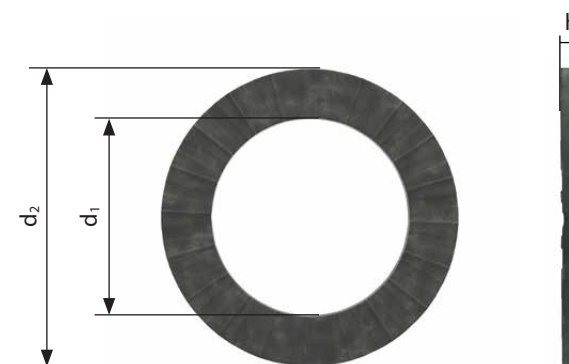
Thread size	ITH order no.	Hole diameter d_1	Outer diameter d_2	Thickness h
		[mm]	[mm]	[mm]
M16	40.01130-1016	17.0	30.9	5.5
M20	40.01130-1020	21.4	36.9	5.5
M24	40.01130-1024	26.3	47.2	5.5
M30	40.01130-1030	33.4	58.5	6.5
M36	40.01130-1036	39.4	69.5	6.5



ITH Counter Disc



Thread size	ITH order no.	Hole diameter d_1	Outer diameter d_2	Thickness h
		[mm]	[mm]	[mm]
M16	40.01130-2016	17.0	25.4	2.0
M20	40.01130-2020	21.4	30.7	2.0
M24	40.01130-2024	26.3	39.0	3.5
M30	40.01130-2030	33.4	47.0	3.5
M36	40.01130-2036	39.4	55.0	3.5



ITH RAM System Technical Data



ITH RAM Support

Thread size	ITH order no.	Height h	Diameter D ₁	Diameter D ₂	A/F	Square drive
		[mm]	[mm]	[mm]	[mm]	["]
M16	31.01535-25016	80	55	38.5	24	3/4
M20	31.01535-25020	97	70	46	30	3/4
M24	31.01535-25024	108	70	57	36	1
M30	31.01535-25030	118	72	69	46	1
M36	31.01535-27036	131	81	81	55	1
M36	31.01535-34036	145	97	82	55	1 1/2



ITH ADS – recommendation

Thread size	ITH order no.	Max. torque	ITH ADS Type	Square drive
		[Nm]**		["]
M16	24.312.0050-y	338	ADS 4 50	3/4
M20	24.312.0100-y	661	ADS 4 100	3/4
M24	24.312.0150-y	1136	ADS 4 150	1
M30	24.312.0230-y	2274	ADS 4 230	1
	24.312.0320-y		ADS 4 320	
M36	24.312.0470-y	3957	ADS 4 470	1 1/2*

ADS 4:
ADS 4 incl. ALPHA:
ADS 4 Basic:
ADS 4 Docu incl. ALPHA:

y = 0
y = 1
y = 3
y = 1-24

*1" on request
**acc. VDI 2230-1 Tab. A1, property class 10.9, $\mu = 0,14$



Type ADS 4 Battery Nut Runner



Features

Bolting data and machine settings directly on the ADS:

- ✓ Input of torque and angle of rotation
- ✓ Selection of unit
- ✓ Setting of standby and free turning time
- ✓ Setting of brightness of LCD color display and LED work lights
- ✓ Display of cycle counter and software version

**See more product details
and videos on our website:**

Simply scan the QR code with
your smartphone.

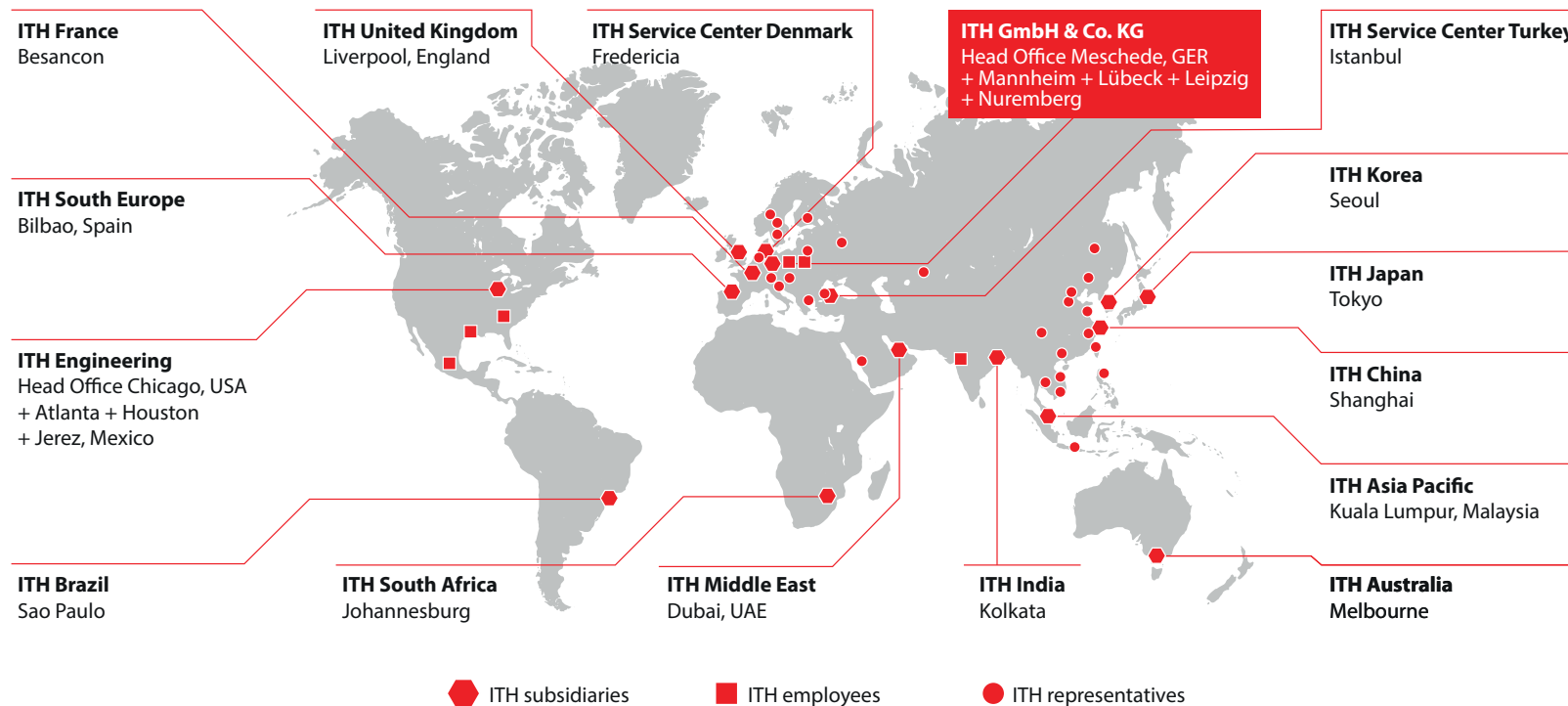


Worldwide network

ITH drives innovation in bolting technology

With more than 40 years in the bolting industry, ITH continuously invests experience and know-how into new technical developments.

- ✓ Development, production and distribution of industrial bolting tools > M16 (3/8")
- ✓ More than 200 national and international patents
- ✓ More than 40 global representations
- ✓ Synergy effects being a whole system supplier
- ✓ Certified quality, environmental and occupational safety management according to DIN ISO 9001, 14001 and 45001



The global ITH network offers you qualified service, fast turnaround times and personal service. Contact us, we will be happy to advise you:

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