DIXI polytool

CARBIDE PRECISION GAUGES

A WIDE RANGE OF SOLUTIONS FOR YOUR INSPECTION OPERATIONS

DIXI POLYTOOL S.A.

COMPANY PROFILE

DIXI Polytool S.A. is a company based in Le Locle, Switzerland, that produces tungsten carbide and diamond cutting tools as well as precision reamers. The company was founded in 1946 and has been making investments into its production since then.
DIXI Polytool S.A. has a friendly work environment for its 300 employees and wants to guarantee the quality of its products while preserving the environment by using **ISO 9001** and **ISO 14001** certified management systems.

AN ENVIRONMENTALLY RESPONSIBLE ATTITUDE
A forerunner in this field too, DIXI Polytool SA uses exclusively green energy for all building maintenance and manufacturing operations.

DIXI Polytool is powered 100% green electricity produced exlusively from solar panels and hydrpower station.

KEY FIGURES

60 million CHF sales
35% of special tools

300
employees

140
CNC machines

+ 18'000
standard references in stock

9 subsidiaries in
7 countries

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"GO" - "NO GO" THREAD GAUGES
NIHS 06-12

NIHS 06

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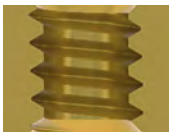
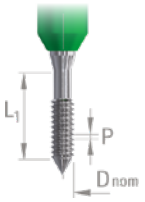
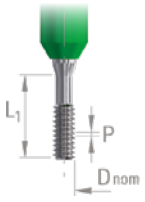
- Solid carbide thread gauges dedicated to the pitch diameter inspection of 3G and 4H left hand threads according to NIHS 06-10 (ISO 1501 / DIN 14).
- Gauges tolerances according to NIHS 06-12.

Right-hand thread

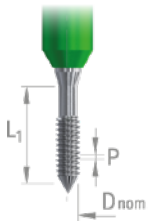






D nom.	Pitch P	L_1	Tol.	1718-S GO	1718-S GO (flat base)	Tol.	1719-S NO GO
S 0.30	0.08	1.00	4H 3G	965295 983114	978958 414460	4H/3G	965312
S 0.35	0.09	1.30	4H 3G	965296 983468	978959 414461	4H/3G	965313
S 0.40	0.10	2.00	4H 3G	965297 983115	978960 414462	4H/3G	965314
S 0.45	0.10	2.00	4H 3G	304767 442063		4H/3G	304768
S 0.50	0.125	2.50	4H 3G	965298 983116	978961 414463	4H/3G	965315
S 0.55	0.125	2.50	4H 3G	963622 442064		4H/3G	963623
S 0.60	0.15	3.00	4H 3G	965299 983117	978962 414464	4H/3G	965316
S 0.70	0.175	3.00	4H 3G	965300 983236	978963 414465	4H/3G	965317
S 0.80	0.20	3.50	4H 3G	965301 983118	978964 414466	4H/3G	965318
S 0.90	0.225	4.00	4H 3G	965302 983119	978965 414467	4H/3G	965319
S 1.00	0.25	4.00	4H 3G	965303 983120	978966 414468	4H/3G	965320
S 1.10	0.25	4.00	4H 3G	319501 442065		4H/3G	319502
S 1.20	0.25	5.00	4H 3G	965304 983121	978967 414469	4H/3G	965321
S 1.30	0.30	5.00	4H 3G	980548 442066		4H/3G	980549
S 1.40	0.30	5.00	4H 3G	965305 983122	978968 414470	4H/3G	965322

Left-hand thread



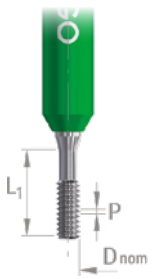
D nom.	Pitch P	L_1	Tol.	1718-S L GO	Tol.	1719-S L NO GO
S 0.50	0.125	2.50	4H	968369	4H/3G	968370
S 0.60	0.15	3.00	4H	968345	4H/3G	968346
S 0.70	0.175	3.00	4H	968344	4H/3G	968347
S 0.80	0.20	3.50	4H	968343	4H/3G	968348
S 0.90	0.225	4.00	4H	968925	4H/3G	968926
S 1.00	0.25	4.00	4H	969395	4H/3G	969396
S 1.20	0.25	5.00	4H	982638	4H/3G	982639

DIXI 1718-M - 1719-M

"GO" - "NO GO" THREAD GAUGES

P.14

- Solid carbide thread gauges dedicated to the pitch diameter inspection of threads according to ISO 965 (DIN 13).
- Gauges tolerances according to ISO 1502.



D nom.	Pitch P	L_1	Tol.	**1718-M** GO (flat base)	**1719-M** NO GO (flat base)
M 1.00	0.25	5	5H	976633	976635
M 1.20	0.20 0.25	5 5	4H 5H	305894 976634	305900 976636
M 1.40	0.20 0.30	5 6	4H 5H	305895 976693	305901 976710
M 1.50	0.30	6	6H	976694	
M 1.60	0.20 0.35	5 6	4H 6H	305896 975716	305902 975717
M 1.80	0.20 0.35	5 6	4H 6H	305897 976024	305903 976026
M 2.00	0.20 0.40	5 6	4H 6H	305898 976699	305904 976716
M 2.20	0.20 0.25 0.45	5 5 8	4H 5H 6H	305899 976701 976702	305905 976718 976719
M 2.50	0.35 0.45	6 8	6H 6H	303652 976704	303653 976721
M 3.00	0.50	8	6H	976705	976722

DIXI 1718-AF/BT - 1719-AF/BT

"GO" - "NO GO" THREAD GAUGES
SELF LOCKING PROFILE

DIXI NORM

P.14

- Solid carbide thread gauges dedicated to the pitch diameter inspection of AF self-locking threads according to DIXI internal standard.

D nom.	Pitch P	L_1	Tol.	1718-AF/BT GO	Tol.	1719-AF/BT NO GO
S 0.60	0.15	3.00	4H 3G	308810 391440	4H/3G	961669
S 0.70	0.175	3.00	4H 3G	995572 391441	4H/3G	995573
S 0.80	0.20	3.50	4H 3G	995615 391442	4H/3G	995664
S 0.90	0.225	4.00	4H 3G	995616 442047	4H/3G	995665
M 1.00	0.25	5.00	4H 3G	995617 397448	4H/3G	995666
M 1.10	0.25	5.00	4H 3G	442052 442048	4H/3G	443909
M 1.20	0.25	5.00	4H 3G	995619 442049	4H/3G	995667
M 1.30	0.30	5.00	4H 3G	312180 442050	4H/3G	312181
M 1.40	0.30	5.00	4H 3G	995620 442051	4H/3G	995668
M 1.60	0.35	6.00	4H	995621	4H/3G	995669
M 1.80	0.35	6.00	4H	995622	4H/3G	995670
M 2.00	0.40	6.00	4H	995623	4H/3G	995671
M 2.20	0.45	8.00	4H	995624	4H/3G	995672
M 2.50	0.45	8.00	4H	995631	4H/3G	995674
M 3.00	0.50	8.00	4H	995626	4H/3G	995675

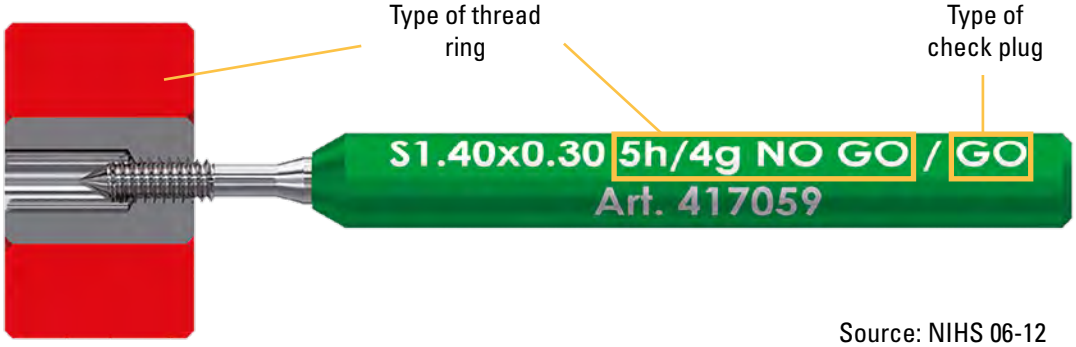
"GO" - "NO GO" CHECK PLUGS
NIHS 06-12

NIHS 06

- Solid carbide check plugs dedicated to the inspection of thread rings for external threads according to NIHS 06-10 (ISO 1501/DIN 14).
- Check plugs tolerances according to NIHS 06-12.

			Ring 5h GO		Ring 4g GO		Ring 5h/4g NO GO	
								
D nom.	Pitch P	L_1	GO	NO GO	GO	NO GO	GO	NO GO
S 0.30	0.08	1.00	417005	417016	417027	417038	417049	417060
S 0.35	0.09	1.30	417006	417017	417028	417039	417050	417061
S 0.40	0.10	2.00	417007	417018	417029	417040	417051	417062
S 0.45	0.10	2.00	442192	442194			442216	442219
S 0.50	0.125	2.50	417008	417019	417030	417041	417052	417063
S 0.55	0.125	2.50	442204	442207			442220	442221
S 0.60	0.15	3.00	417009	417020	417031	417042	417053	417064
S 0.70	0.175	3.00	417010	417021	417032	417043	417054	417065
S 0.80	0.20	3.50	417011	417022	417033	417044	417055	417066
S 0.90	0.225	4.00	417012	417023	417034	417045	417056	417067
S 1.00	0.25	4.00	417013	417024	417035	417046	417057	417068
S 1.10	0.25	4.00	442208	442210			442222	442223
S 1.20	0.25	5.00	417014	417025	417036	417047	417058	417069
S 1.30	0.30	5.00	442212	442214			442224	442225
S 1.40	0.30	5.00	417015	417026	417037	417048	417059	417070

CHECK PLUGS DESCRIPTION



Source: NIHS 06-12

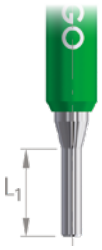
DIXI 0418 - 0419

"GO" - "NO GO" PLAIN GAUGES
FOR NIHS THREAD MINOR DIAMETER

NIHS 06

P.14

- Solid carbide plain gauges dedicated to the inspection of the minor diameter of threads according to NIHS 06-10 (ISO 1501 / DIN 14).
- Gauge tolerances according to NIHS 06-12.



D nom.	Pitch P	L_1	Tol.	0418 GO	Tol.	0419 NO GO
S 0.30	0.08	2.00	5H	308301	5H	308307
S 0.35	0.09	2.00	5H	308300	5H	308306
S 0.40	0.10	3.50	5H/6H	308299	5H 6H	308305 308310
S 0.45	0.10	3.50	5H/6H	442067	5H 6H	442071 442075
S 0.50	0.125	3.50	5H/6H	308298	5H 6H	308304 308309
S 0.55	0.125	3.50	5H/6H	442068	5H 6H	442072 442077
S 0.60	0.15	3.50	5H 6H	308297 411747	5H 6H	308302 308308
S 0.70	0.175	5.00	5H 6H	306719 411748	5H 6H	306818 306824
S 0.80	0.20	5.00	5H 6H	306813 411749	5H 6H	306819 306825
S 0.90	0.225	5.00	5H/6H	306814	5H 6H	306820 306826
S 1.00	0.25	5.00	5H/6H	306815	5H 6H	306821 306827
S 1.10	0.25	5.00	5H/6H	442069	5H 6H	442073 442078
S 1.20	0.25	5.00	5H/6H	306816	5H 6H	306822 306828
S 1.30	0.30	5.00	5H/6H	442070	5H 6H	442074 442079
S 1.40	0.30	5.00	5H/6H	306817	5H 6H	306823 306829

DIXI 0418 - 0419

"GO" - "NO GO" PLAIN GAUGES
FOR ISO THREAD MINOR DIAMETER

ISO 1502

P.14

ON REQUEST

- Solid carbide plain gauges dedicated to the inspection of the minor diameter of threads according to ISO 965 (DIN 13).
- Gauge tolerances according to ISO 1502.

D nom.	Pitch P	L_1	Tol.	0418 GO	0419 NO GO
M 1.00	0.25	5	5H	393778	334347
M 1.20	0.25	5	5H	436517	334348
M 1.40	0.30	5	5H		334349
M 1.60	0.35	5	6H	392110	392111
M 1.80	0.20 0.35	6 6	4H 6H		431787 431789
M 2.00	0.40	6	6H	392882	375093
M 2.20	0.20	8	4H		431791
M 2.50	0.45	8	6H		395325
M 3.00	0.50	8	6H	383759	375095

DIXI 0418-AF - 0419-AF

"GO" - "NO GO" PLAIN GAUGES
FOR AF THREAD MINOR DIAMETER

DIXI NORM P.14

- Solid carbide plain gauges dedicated to the inspection of the minor diameter of AF self-locking threads according to DIXI internal standard.

D nom.	Pitch P	L_1	Tol.	0418-AF GO	Tol.	0419-AF NO GO
S 0.60	0.15	5.0	4H 3G	442060 389763	4H/3G	389767
S 0.70	0.175	5.0	4H 3G	414480 389764	4H/3G	414492
S 0.80	0.20	5.0	4H 3G	414481 389765	4H/3G	414493
S 0.90	0.225	5.0	4H 3G	414482 442054	4H/3G	414494
M 1.00	0.25	5.0	4H 3G	414483 442055	4H/3G	414495
M 1.10	0.25	5.0	4H 3G	442061 442056	4H/3G	442053
M 1.20	0.25	5.0	4H 3G	414484 442057	4H/3G	414496
M 1.30	0.30	5.0	4H 3G	442062 442058	4H/3G	443910
M 1.40	0.30	5.0	4H 3G	414485 442059	4H/3G	414497
M 1.60	0.35	5.0	4H	414486	4H/3G	414498
M 1.80	0.35	6.0	4H	414487	4H/3G	414499
M 2.00	0.40	6.0	4H	414488	4H/3G	414500
M 2.20	0.45	6.0	4H	414489	4H/3G	414501
M 2.50	0.45	8.0	4H	414490	4H/3G	414502
M 3.00	0.50	8.0	4H	414491	4H/3G	414503

DIXI 1718 SET

NIHS 06

SET OF NIHS THREAD GAUGES

Content	Art.
DIXI 1718-S 4H GO (S0.30-S1.40) **DIXI 1719-S 4H/3G NO GO** (S0.30-S1.40)	305989
Empty box (NIHS 4H)	307437

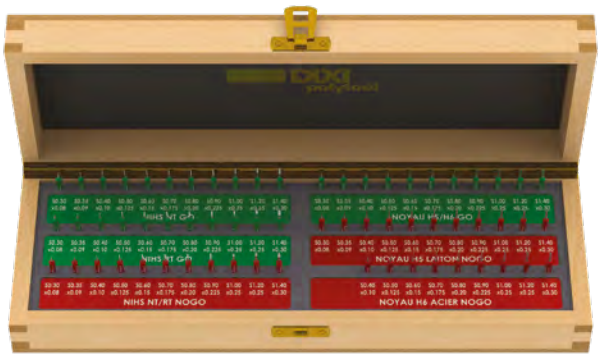
Content	Art.
DIXI 1718-S 3G GO (S0.30-S1.40) **DIXI 1719-S 4H/3G NO GO** (S0.30-S1.40)	305990
Empty box (NIHS 3G)	307438

Content	Art.
DIXI 1718-S 4H GO (S0.30-S1.40) **DIXI 1718-S 3G GO** (S0.30-S1.40) **DIXI 1719-S 4H/3G NO GO** (S0.30-S1.40)	305991
Empty box (NIHS 4H & 3G)	307439

NIHS 06

SET OF THREAD AND PLAIN GAUGES
FOR THE FULL CHECKING OF NIHS THREADS

Content	Art.
DIXI 1718-S 4H GO (S0.30-S1.40) **DIXI 1718-S 3G GO** (S0.30-S1.40) **DIXI 1719-S 4H/3G NO GO** (S0.30-S1.40) **DIXI 0418-5H/6H GO** (S0.30-S1.40) **DIXI 0419-5H NO GO** (S0.30-S1.40) **DIXI 0419-6H NO GO** (S0.40-S1.40)	308313
Empty box	312619



To ensure that our offer meets your requirements, please follow the steps below:

1. Select your set configuration from the available options
2. Select the type of GO or NO GO gauge according to the configuration.
3. Select the thread sizes you wish to include in your set, as well as the thread direction (R or L)
4. Indicate the quantity of set you wish to offer.

We reserve the right to contact you for further information.

1 ☐ SET OF NIHS THREAD GAUGES

Included with the set:
☑ DIXI 1719-S 4H/3G **NO GO**

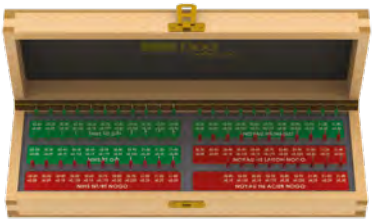
2 Choice of **GO** threaded gauges (max. 2):
☐ DIXI 1718-S 4H **GO**
☐ DIXI 1718-S 4H **GO**(flat base)
☐ DIXI 1718-S 3G **GO**
☐ DIXI 1718-S 3G **GO** (flat base)

1 ☐ SET OF PLAIN GAUGES FOR NIHS THREAD MINOR DIAMETER

Included with the set:
☑ DIXI 0418 5H **GO**

2 Choice of **NO GO** plain gauges:
☐ DIXI 0419 5H **NO GO**
☐ DIXI 0419 6H **NO GO**

1 ☐ SET OF THREAD AND PLAIN GAUGES FOR THE FULL CHECKING OF NIHS THREADS



Included with the set:
☑ DIXI 1719-S 4H/3G **NO GO**
☑ DIXI 0418 5H **GO**

2 Choice of **GO** threaded gauges (max. 2):
☐ DIXI 1718-S 4H **GO**
☐ DIXI 1718-S 4H **GO** (flat base)
☐ DIXI 1718-S 3G **GO**
☐ DIXI 1718-S 3G **GO** (flat base)

Choice of **NO GO** plain gauges:
☐ DIXI 0419 5H **NO GO**
☐ DIXI 0419 6H **NO GO**

3 THREAD SIZES AND DIRECTIONS

	R	L
S 0.30 x 0.08	☐	☐
S 0.35 x 0.09	☐	☐
S 0.40 x 0.10	☐	☐
S 0.50 x 0.125	☐	☐
S 0.60 x 0.15	☐	☐
S 0.70 x 0.175	☐	☐
S 0.80 x 0.20	☐	☐
S 0.90 x 0.225	☐	☐
S 1.00 x 0.25	☐	☐
S 1.20 x 0.25	☐	☐
S 1.40 x 0.30	☐	☐

4 Quantity

CARBIDE PLAIN GAUGES

DIXI 0420 (± 0.5µm)

D_1 ±0.0005	L_1
0.100 - 0.199	1.50
0.200 - 0.299	2.00
0.300 - 0.499	3.50
0.500 - 1.499	5.00
1.500 - 1.950	6.00
1.951 - 3.499	8.00
3.500 - 3.999	10.00

Standard each 0.001mm
Available in 72h.

DIXI 0421 (± 1.0µm)

D_1 ±0.0005	L_1
0.10 - 0.19	1.50
0.20 - 0.29	2.00
0.30 - 0.49	3.50
0.50 - 1.49	5.00
1.50 - 1.95	6.00
1.96 - 3.49	8.00
3.50 - 3.99	10.00

From stock each 0.01mm

Products available with an internal control protocol or made by an accredited laboratory

SET OF PLAIN GAUGES

Diameter range:
D_1 min = _____
D_1 max = _____

Gauge tolerance:
☐ ± 0.5 µm
☐ ± 1.0 µm

Increment:
☐ 0.001 ☐ 0.002
☐ 0.005 ☐ 0.01
☐ other: _____

Contact us for any other set composition

☐ **Set of 50 pieces** ☐ **Set of 100 pieces** **Quantity** _____

Figure 1
DIXI 1718

Figure 2
DIXI 1719

Figure 3
DIXI 0418

Figure 4
DIXI 0419

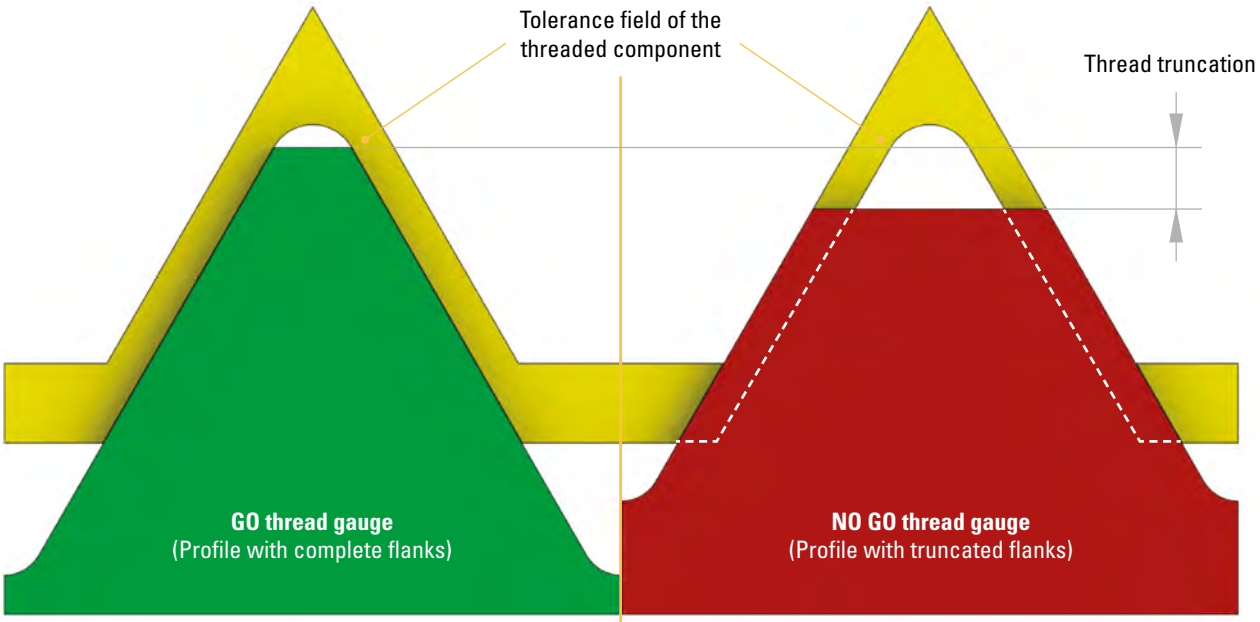
Gauging internal threads must be done with both thread and plain gauges. Each of these gauges has its own function, way of use and result analysis.

Figure 1: GO thread gauge (DIXI 1718)
A **GO** thread gauge cheks the minimum limit of the pitch diameter, taking into account pitch errors, errors in flank angles and deviations of form, which produce an apparent reduction of the pitch diameter of the workpiece. In addition, it checks the minimum limit of the major diameter and also whether the length of straight flank is sufficient; i.e. that the rounding at the root of the profile does not encroach too far upon the flank of the thread. The **GO** thread gauge, when screwed by hand without using excessive force, shall enter the whole length of the workpiece thread. If entry is not possible, the workpiece thread does not comply with the specification. Wear of the **GO** thread gauge shall be monitored by remeasurement of the gauge at intervals of time according to the intensity of use. Note: This gauge does not check the min or diameter of the workpiece thread.

Figure 3: GO plain gauge (DIXI 0418)
A **GO** plain gauge checks the minimum limit of the minor diameter of the workpiece thread. The **GO** plain gauge, when introduced by hand without using excessive force, shall pass through the workpiece thread.

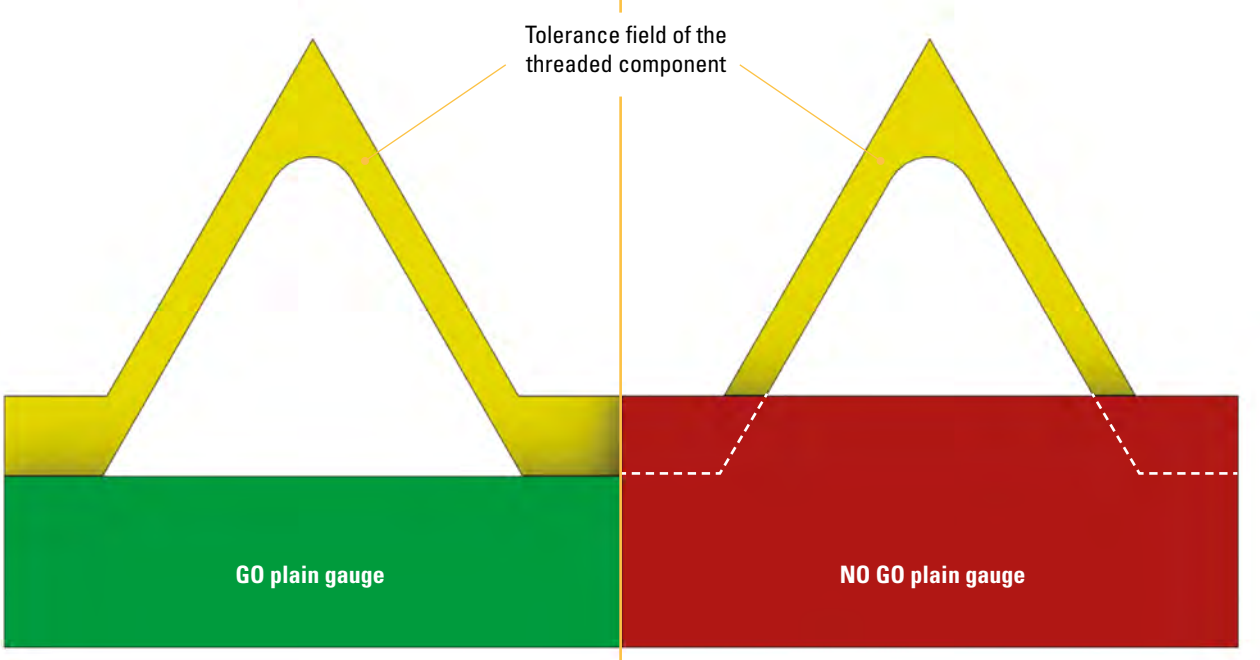
Figure 2: NO GO thread gauge (DIXI 1719)
A **NO GO** thread gauge checks whether the actual pitch diameter exceeds the specified maximum size.The **NO GO** thread gauge, when screwed by hand without using excessive force, may enter into both ends of the threaded part, but by not more than two turns of thread. If it can be screwed in by more than two turns of thread, the workpiece thread does not comply with the specification. The **NO GO** thread gauge shall not pass completely through a workpiece with a length of thread of three threads or less. It is recommended that the **NO GO** screw plug gauge be checked regularly for wear. Note: This gauge does not check the minor diameter of the workpiece thread.

Figure 4: NO GO plain gauge (DIXI 0419)
A **NO GO** plain gauge checks whether the actual minor diameter exceeds the specified maximum size. The **NO GO** plain gauge may enter into both ends of the workpiece thread but only in a zone which has a distance of not more than one pitch length from the start of the thread.



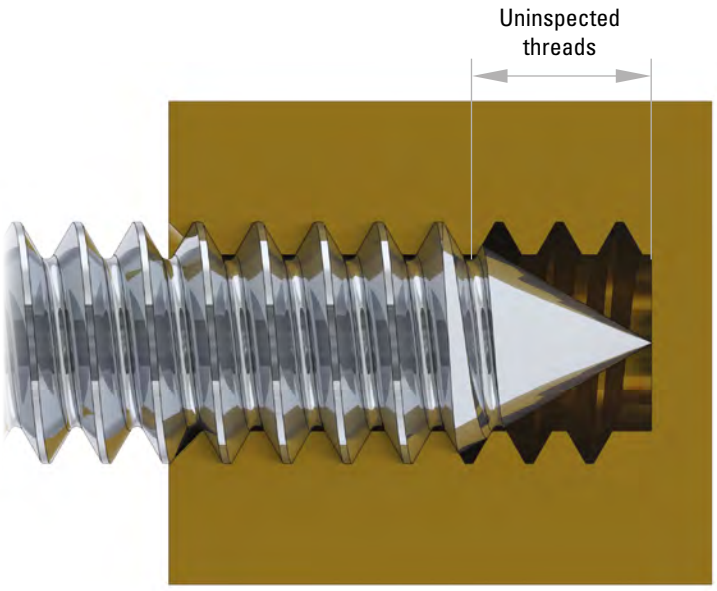
GO thread gauges check the minimum pitch diameter (D_2) and minimum major diameter (D) of the component. **GO** threaded gauges do not check the minor diameter (D_1) of the component. The gauge thread root radius does not interfere with the minor diameter (D_1).

NO GO thread gauges check the maximum pitch diameter (D_2) of the component. The external diameter of the plug is truncated because the thread major diameter (D) of the component has already been checked by the **GO** gauge. **NO GO** thread gauges do not check the minor diameter (D_1) of the component. The gauge thread root radius does not interfere with the minor diameter (D_1).



GO plain gauges check the minimum minor diameter (D_1) of the component.

NO GO plain gauges check the maximum minor diameter (D_1) of the component.



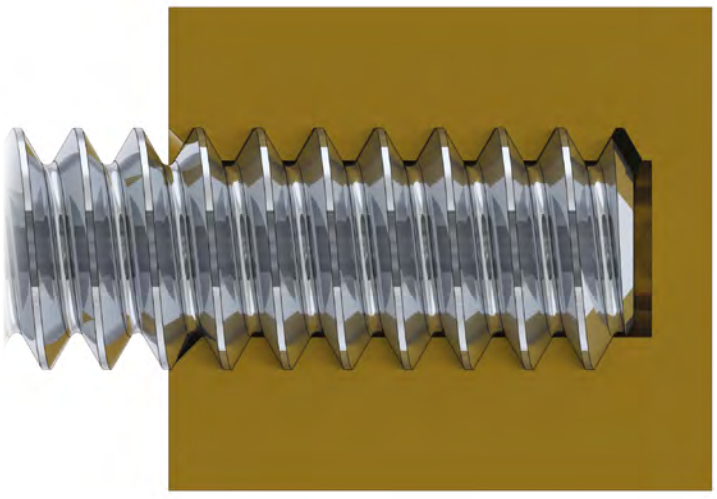
Below a nominal diameter of Ø1, DIXI Polytool's thread gauges have a pointed tip. This is a great help in engaging the gauge when inspecting even the smallest threads.

Advantages:

- Easy gauge engagement
- Reduced risk of breakage

Disadvantages:

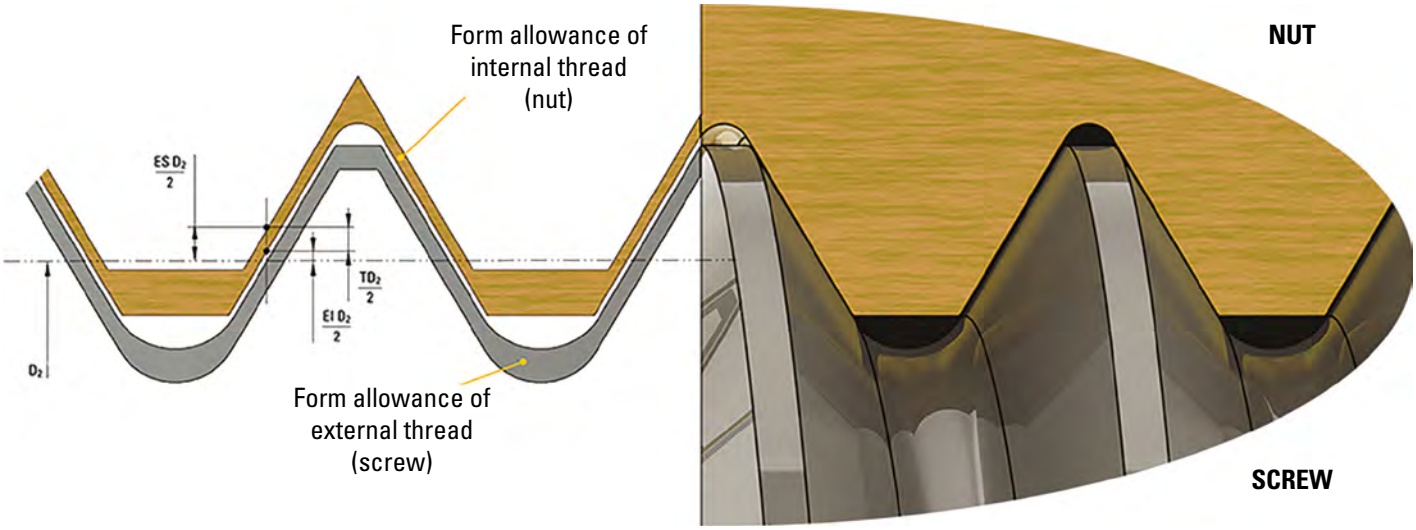
- The tip can leave uninspected threads in case of blind threads



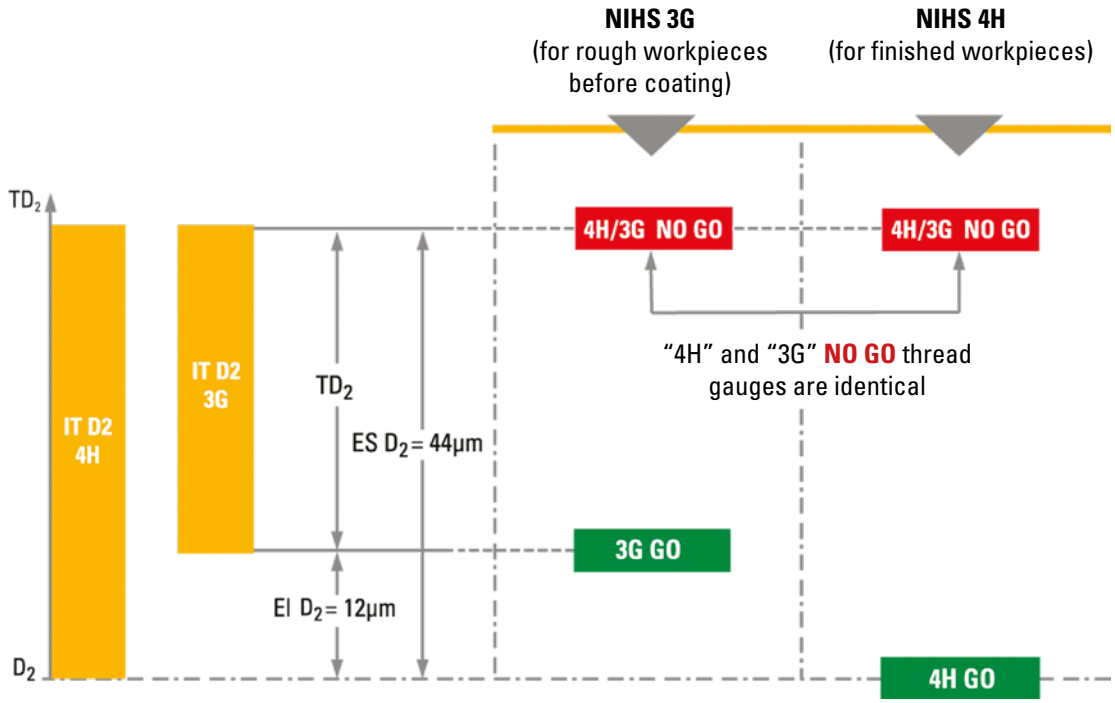
DIXI Polytool also produces its thread gauges with flat bottom. The entire thread is inspected down to the last active thread, even in case of blind holes.

Advantages:

- Inspection down to the last active thread
- Can be used as a depth gauge



D_2	Pitch diameter.
EI D_2 deviation	Lower deviation of pitch diameter (D_2)
Ecart ES D_2 deviation	Upper deviation of pitch diameter (D_2).
TD_2 allowance	Pitch diameter (D_2) allowance. TD_2 = ES D_2 - EI D_2
4H **GO** gauges	They are used for inspection of S threads of finished parts (with or without galvanic coating or heat treatment) in 4H tolerance according to NIHS 06-10. NIHS 4H **GO** gauges replace the former NIHS NT **GO** gauges.
3G **GO** gauges	They are used for checking S threads of raw parts (before galvanic coating or heat treatment) in 3G tolerance according to NIHS 06-10. NIHS 3G **GO** gauges replace the former NIHS RT **GO** gauges.
NO GO gauges	They are used for the checking of raw parts (at the production stage) or finished parts (with or without galvanic coating or heat treatment). **NO GO** gauges are identical in both 3G and 4H tolerances according to NIHS 06-10. NIHS 4H/3G **NO GO** gauges replace the former NIHS NT/RT **NO GO** gauges.



GO and NO GO thread gauges tolerances - Example for a 0.25 mm pitch

CALIBRATION PROTOCOLS AND CERTIFICATES

To ensure that your gauges are properly referenced in your quality management system, DIXI Polytool offers you the possibility of obtaining an inspection certificate issued by us, or an SCS calibration certificate issued by an accredited laboratory.

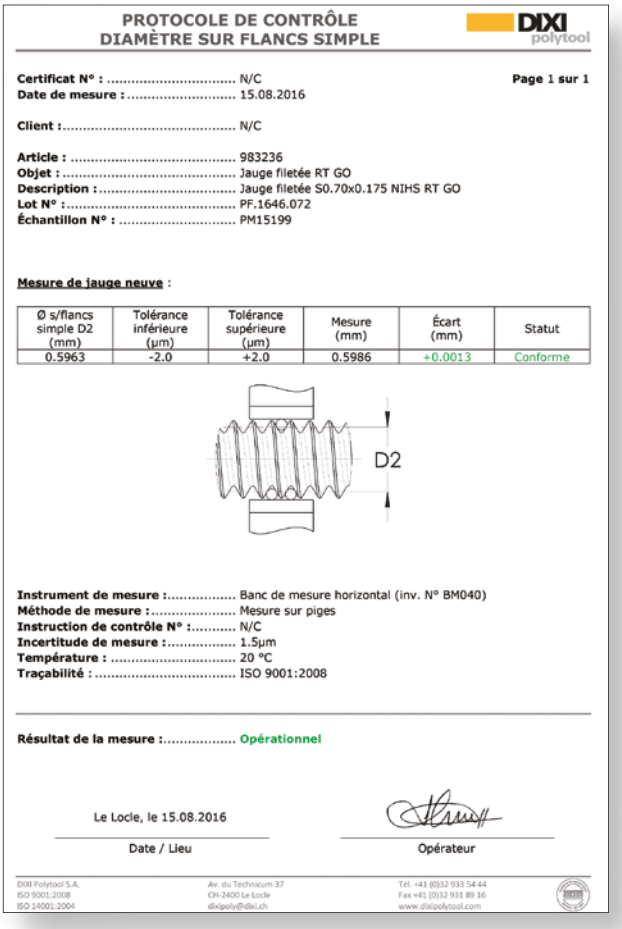
These tasks can be carried out in the following situations:

- DIXI threaded or plain gauges
- Other brands threaded or plain gauges (Ø4 max.)
- On delivery of a new product
- As part of a calibration (a replacement product may be offered if excessive wear is detected).

Please refer to the tables below to specify the level of certificate you require.

Description	Art.
Control protocol for thread gauges DIXI 1718 and DIXI 1719	327656
Calibration certificate for thread gauges DIXI 1718 and DIXI 1719 (accredited external laboratory)	327657

Description	Art.
Control protocol for plain gauges DIXI 0418, 0419, 0420 and 0421	317293
Calibration certificate for plain gauges DIXI 0418, 0419, 0420 and 0421 (accredited external laboratory)	317294



PROTOCOLE DE CONTRÔLE
DIAMÈTRE SUR FLANCS SIMPLE

DIXI polytool

Certificat N° : ..... N/C
Date de mesure : 15.08.2016

Page 1 sur 1

Client : ..... N/C

Article : 983236
Objet : ..... Jauge filetée RT GO
Description : ..... Jauge filetée S0.70x0.175 NIHS RT GO
Lot N° : PF.1646.072
Échantillon N° : PM15199

Mesure de jauge neuve :

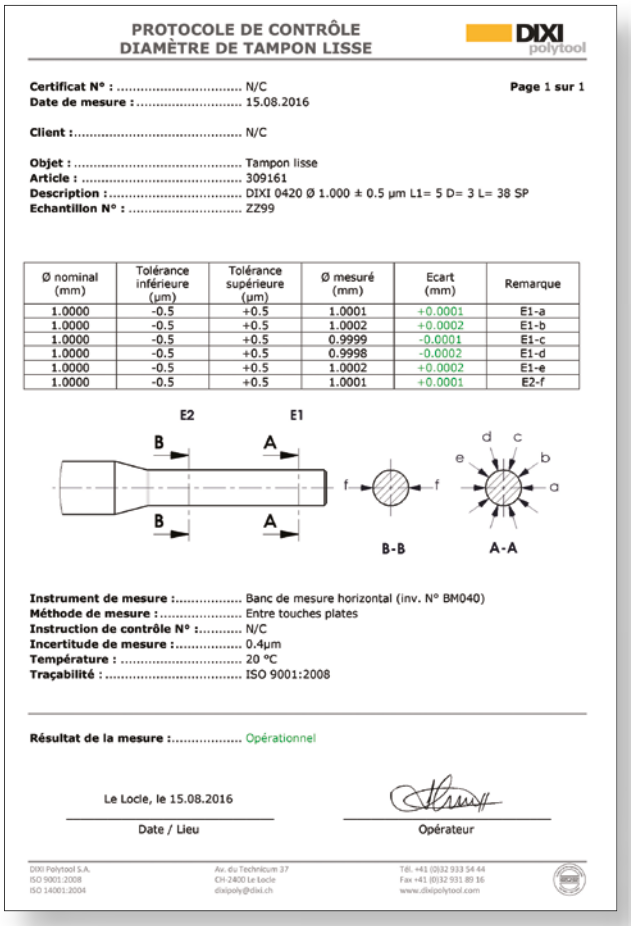
Ø s/flancs simple D2 (mm)	Tolérance inférieure (µm)	Tolérance supérieure (µm)	Mesure (mm)	Écart (mm)	Statut
0.5963	-2.0	+2.0	0.5986	+0.0013	Conforme

Instrument de mesure : ..... Banc de mesure horizontal (inv. N° BM040)
Méthode de mesure : ..... Mesure sur piges
Instruction de contrôle N° : ..... N/C
Incertitude de mesure : 1.5µm
Température : ..... 20 °C
Traçabilité : ..... ISO 9001:2008

Résultat de la mesure : ..... Opérationnel

Le Locle, le 15.08.2016
Date / Lieu

Opérateur



PROTOCOLE DE CONTRÔLE
DIAMÈTRE DE TAMPON LISSE

DIXI polytool

Certificat N° : ..... N/C
Date de mesure : 15.08.2016

Page 1 sur 1

Client : ..... N/C

Objet : ..... Tampon lisse
Article : 309161
Description : ..... DIXI 0420 Ø 1.000 ± 0.5 µm L1= 5 D= 3 L= 38 SP
Echantillon N° : ZZ99

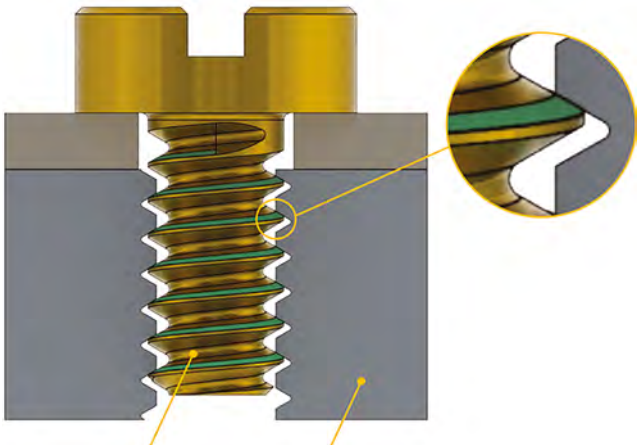
Ø nominal (mm)	Tolérance inférieure (µm)	Tolérance supérieure (µm)	Ø mesuré (mm)	Ecart (mm)	Remarque
1.0000	-0.5	+0.5	1.0001	+0.0001	E1-a
1.0000	-0.5	+0.5	1.0002	+0.0002	E1-b
1.0000	-0.5	+0.5	0.9999	-0.0001	E1-c
1.0000	-0.5	+0.5	0.9998	-0.0002	E1-d
1.0000	-0.5	+0.5	1.0002	+0.0002	E1-e
1.0000	-0.5	+0.5	1.0001	+0.0001	E2-f

Instrument de mesure : ..... Banc de mesure horizontal (inv. N° BM040)
Méthode de mesure : ..... Entre touches plates
Instruction de contrôle N° : ..... N/C
Incertitude de mesure : 0.4µm
Température : ..... 20 °C
Traçabilité : ..... ISO 9001:2008

Résultat de la mesure : ..... Opérationnel

Le Locle, le 15.08.2016
Date / Lieu

Opérateur

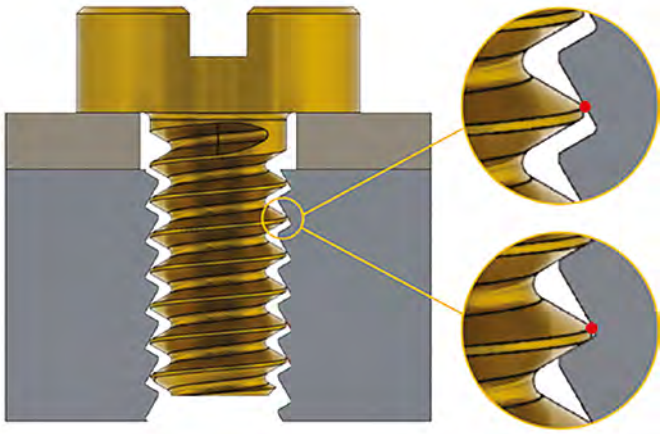


Screw at minimum material profile

Nut at maximum material profile

On a S1.00x0.25 assembly, there can be up to 0.05mm free space between the screw crest diameter and the nut root diameter. That clearance allows a freedom of movement that could cause vibration loosening. This phenomenon is accentuated by the narrow theoretical contact surface between the flanks of both screw and nut. In some cases, adhesives can be used to avoid vibration loosening. This solution is inappropriate for assemblies on which visual aspects are key (watch industry).

Screw at minimum material profile



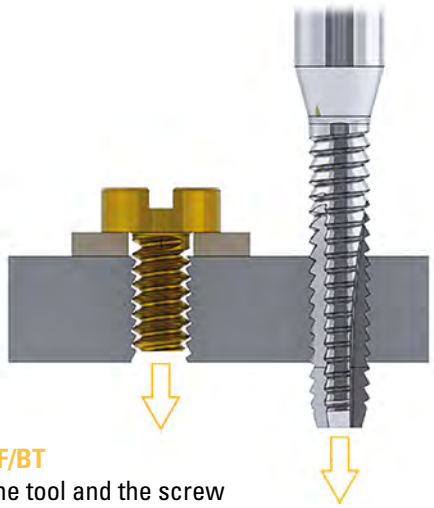
Screw at maximum material profile

Whatever the screw size (minimum or maximum material profile), the contact line is guaranteed to be the same. Thus the manufacturing tolerances do not influence the assembly quality.

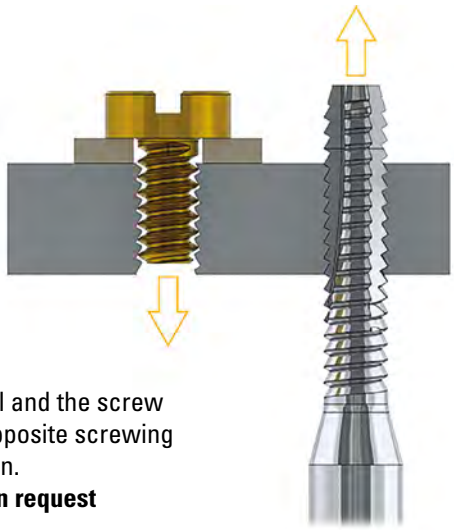
Thanks to AF thread profile, no need to use adhesive anymore.

PROFILE DIRECTION - MACHINING DIRECTION

Unlike 60° thread, AF thread is made of an asymmetric profile. Depending on the tool machining direction, the cutting profile is reversed.



AF/BT
The tool and the screw have the same screwing direction.
Tools from stock



AF/TT
The tool and the screw have opposite screwing direction.
Tools on request








DIXI polytool

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