nano-menetfúrók -menetformázók

A legkisebb és legprecízebb menetek mesteri kivitelezése

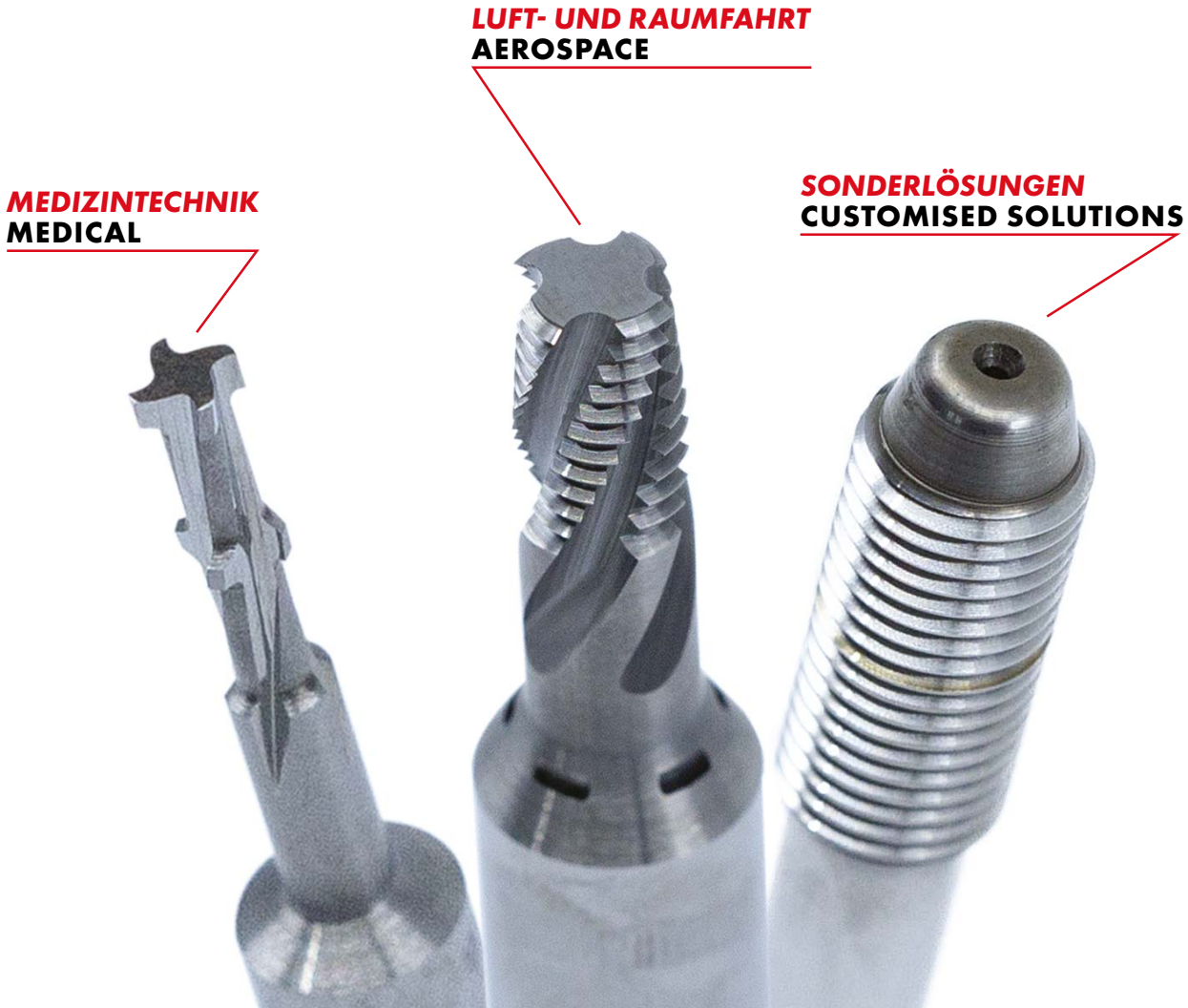
nano

SPEZIALWERKZEUGE NACH MASS

Manche Prozesse erfordern massgefertigte Spezialwerkzeuge. DC SWISS kann perfekt auf Ihre Anforderungen abgestimmte Gewindewerkzeuge herstellen.

Mit unserem Know-how können wir Spezialwerkzeuge herstellen, die besonders hohen Herstelleranforderungen gerecht werden.

Wir helfen Ihnen, mit den geeigneten Werkzeugen auch kühnste Vorhaben umzusetzen. Dazu bietet Ihnen DC SWISS nicht nur ihre Fachkompetenzen und langjährige Erfahrung an, sondern auch eine umfassende Werkzeugpalette und massgeschneiderte Lösungen - für jede Konfiguration, jeden Werkstoff und jede Produktionstechnik, form- und massunabhängig. Denn DC SWISS ist schon heute gut gerüstet für das, was in Zukunft immer wichtiger wird: die individuelle Fertigung.

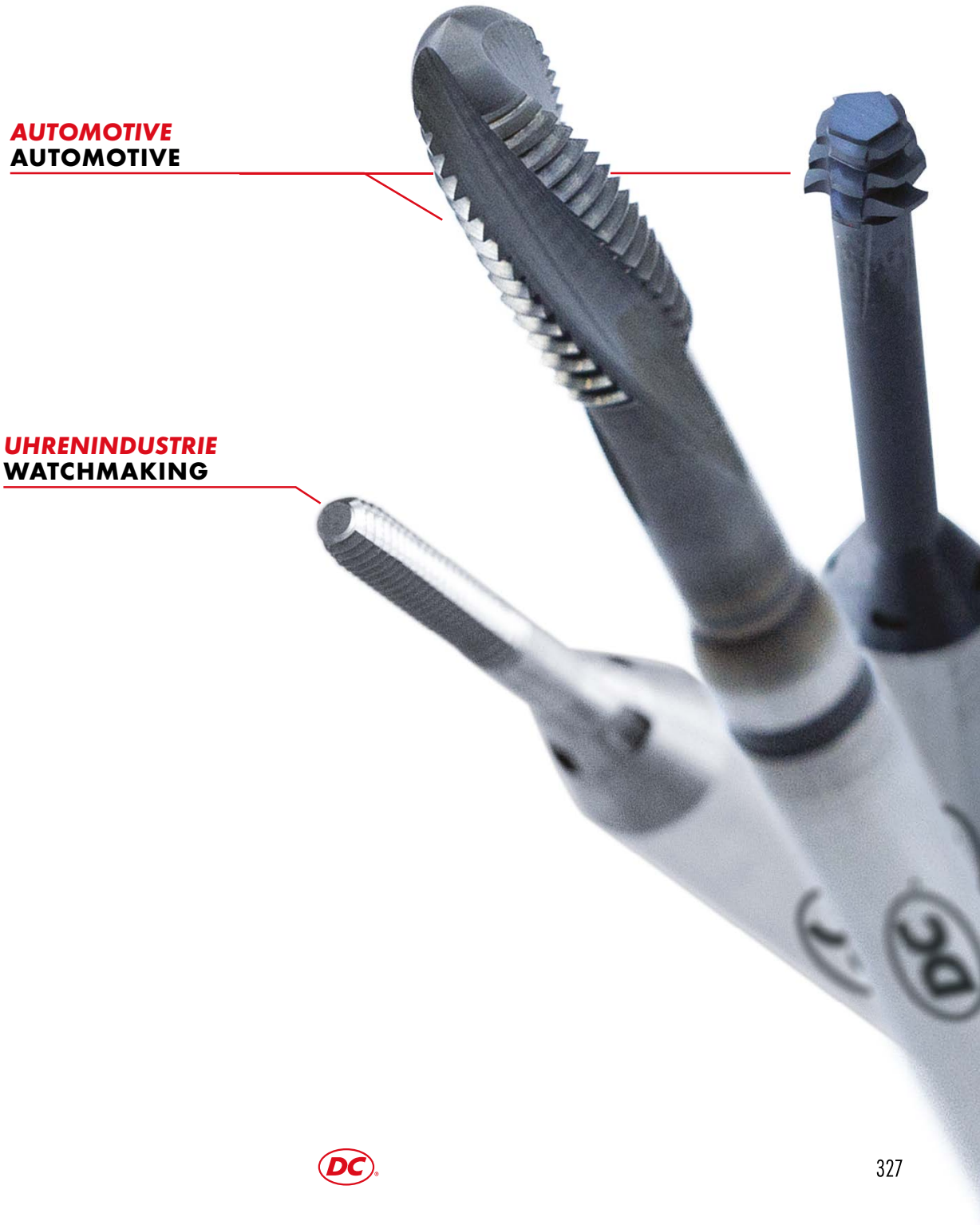


SPECIAL TOOLS ON DEMAND

Some processes require special on demand tools. DC SWISS can create custom-made threading tools to meet your requirements.

With our expertise, we can create on demand tools that meet the highest market requirements.

To enable you to create the most audacious and varied assemblies that are best suited to every situation, DC SWISS offers you access to its extensive expertise. Tools are, after all, essential items. They need to adapt to every configuration, every material and all production techniques. Shapes and sizes are no longer constraining factors. DC SWISS develops tools as a matter of course, because custom-made orders are becoming increasingly commonplace.




TAN
TAZ
FA/CFA
CMS

SPEZIFIZIERUNGEN — SPECIFICATIONS

TAN

TAZ

FA

- *Erstklassisches Basismaterial HSSE-PM*
- *Genauigkeit und Wiederholbarkeit des Werkzeuges durch Fertigung in einer einzigen Aufspannung*
- *Reinigen, bürsten oder polieren von 100 % der Werkzeuge*
- *Optimale Beschichtung, angepasst an jede Geometrie*

- Top quality HSSE-PM raw material
- Accuracy and repeatability of the tool by manufacturing in a single clamping operation
- Cleaning, brushing or polishing of 100 % of the tools
- Optimal coating adapted to each geometry

TAN40

- *Für Durchgangslöcher < 2 x D*

- For through holes < 2 x D

TAN50

- *Für Sacklöcher < 2 x D*

- For blind holes < 2 x D

Anwendung
Für leicht zu bearbeitende Werkstoffe, Stähle, Messing, Gelbgold, Silber

Application
For easy-to-machine materials, steels, brass, yellow gold, silver

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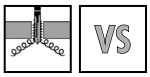
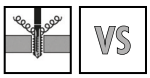
TAN40VS



TAN50VS



- *Vielseitige "VS"-Verschleissschutz-schicht für hohe Standzeiten in der Serienproduktion*

- Versatile "VS" wear-protective coating for long tool life in series production

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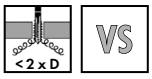
TAZ40VS



TAZ50VS

- *Für Durchgangslöcher < 2 x D*
- *Mit einem langen, an die Steigung angepassten Anschnitt, für ein besseres Eindringen in das Material*

- For through holes < 2 x D
- With a long chamfer adapted to the pitch, for a better penetration into the material

- *Für Sacklöcher < 2 x D*

- For blind holes < 2 x D

Anwendung
Für zähe Werkstoffe wie Nickellegierungen, Titanlegierungen, legierte Edelmetalle

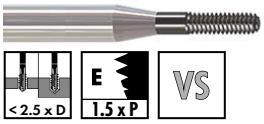
Application
For tough materials such as nickel alloys, titanium alloys, alloyed precious materials

- *Spezifische "VS"-Beschichtung der neuesten Generation, angepasst an die Geometrie des Werkzeugs*

- Specific "VS" coating of the latest generation adapted to the geometry of the tool

SPEZIFIZIERUNGEN — SPECIFICATIONS

FA80VS



- *Für Durchgangs- und Sacklöcher < 2.5 x D*
- *Mit extra-kurzem 1.5 x P-Einlauf (für Gewinde bis nahe dem Bohrungsgrund)*

- For through and blind holes < 2.5 x D
- With extra-short chamfer 1.5 x P (for threads close to the bottom of the core hole)

FA83VS

- *Für Durchgangs- und Sacklöcher < 2.5 x D*
- *Mit kurzem Anschnitt 2.5 x P*

- For through and blind holes < 2.5 x D
- With short chamfer 2.5 x P

Anwendung

- *Für jede Art von Werkstoffen mit einer Bruchdehnung > 5 %*
- *Polygon mit 4 Druckstollen ab Ø 0.5 mm*
- *Verbesserte Ausreissfestigkeit des Gewindes*

Application

- For any type of material with an elongation > 5 %
- Polygon made up of 4 lobes from Ø 0.5 mm
- Improved thread tensile strength

VS

- *Vielseitige "VS"-Verschleissschutz-schicht für hohe Standzeiten in der Serienproduktion*

- Versatile "VS" wear-protective coating for long tool life in series production

SPEZIFIZIERUNGEN — SPECIFICATIONS

CMS

CFA

VHM
CAR

- *Hartmetallsorte angepasst für Härte und Torsionsfestigkeit*
- *Präzision und Wiederholgenauigkeit des Werkzeugs durch Fertigung in einer einzigen Aufspannung*
- *Unübertroffene Oberflächenqualität*

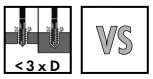
- Hard Metal grade suitable for its hardness and torsional strength
- Precision and repeatability of the tool by manufacturing in a single clamping operation
- Unsurpassed surface quality

CMS50

- *Für Durchgangs- und Sacklöcher < 3 x D*
- *Mit revolutionärer Anschnittgeometrie für optimale Materialdurchdringung*

- For through and blind holes < 3 x D
- With a revolutionary chamfer geometry for optimal material penetration

CMS50VS



Anwendung

- *Für spröde Werkstoffe wie Messing kurzspanend, Grauguss, Cube2, Aluminiumlegierung mit Si > 5 %*

Application

- For brittle materials like short chip brass, grey cast iron, Cube2, aluminium alloy with Si > 5 %

VS

- *Spezifische "VS"-Beschichtung der neuesten Generation, angepasst an die Geometrie des Werkzeugs*

- Specific "VS" coating of the latest generation adapted to the geometry of the tool

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CFA80VS

- *Für Durchgangs- und Sacklöcher < 2.5 x D*
- *Mit extra-kurzem 1.5 x P-Einlauf (für Gewinde bis nahe dem Bohrungsgrund)*

- For through and blind holes < 2.5 x D
- With extra-short chamfer 1.5 x P (for threads close to the bottom of the core hole)

CFA83VS

- *Für Durchgangs- und Sacklöcher < 2.5 x D*
- *Mit kurzem Einlauf 2.5 x P*

- For through and blind holes < 2.5 x D
- With short chamfer 2.5 x P

Anwendung

- *Für jede Art von Nichteisen-Metallen mit einer Bruchdehnung > 3 %*
- *Für Werkstoffe wie Aluminium- und Kupferlegierungen, Gelb- und Rotgold, Silber, etc*

Application

- For any type of non-ferrous material with an elongation > 3 %
- For materials such as: aluminium and copper alloys, yellow and red gold, silver, etc

VS

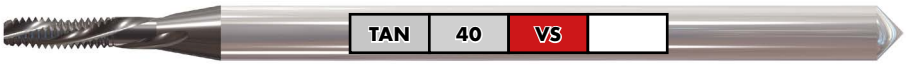
- *Vielseitige "VS"-Veschleissschutzschicht für hohe Standzeiten in der Serienproduktion*

- Versatile "VS" wear-protective coating for long tool life in series production

KODIERUNG — CODIFICATION

DC-Maschinen-Gewindebohrer nano — DC Machine taps nano

Beispiel - Example



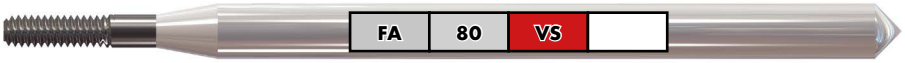
Normale Werkstoffe	Normal materials	**TAN**			
Zähe Werkstoffe	Tough materials	**TAZ**			
Messing	Brass	**CMS**			
Spiralnuten mit Linksdrall < 27°	< 27° left-hand spiral flutes		**40**		
Spiralnuten mit Rechtsdrall < 27°	< 27° right-hand spiral flutes		**50**		
VS-Verschleissschutzschicht, generell	VS wear-protective coating, general			**VS**	
Spezialausführung	Special execution				**SP**

Baumasse nach DC-Werksnorm — General dimensions as per DC standards

Für den Einsatz gemäss DC-Anwendungstabelle für DC-Gewindebohrer nano — For use as per DC application chart for DC taps nano

DC-Maschinen-Gewindeformer nano — DC Machine thread formers nano

Beispiel - Example



Gewindeformer nano aus PM	Thread formers nano in PM	**FA**			
Gewindeformer nano aus Vollhartmetall	Thread formers nano in solid carbide	**CFA**			
Anschnitt Form E (1.5 - 2 Gewindegänge)	Lead form E (1.5 - 2 chamfered threads)		**80**		
Anschnitt Form C (2 - 3 Gewindegänge)	Lead form C (2 - 3 chamfered threads)		**83**		
VS-Verschleissschutzschicht, generell	VS wear-protective coating, general			**VS**	
Spezialausführung	Special execution				**SP**

Baumasse nach DC-Werksnorm — General dimensions as per DC standards

Für den Einsatz gemäss DC-Anwendungstabelle für DC-Gewindeformer nano — For use as per DC application chart for DC thread formers nano

PIKTOGRAMME NANO — PICTOGRAPHS NANO

Für Werkstoffgruppen gemäss DC-Anwendungstabelle
For material groups as per DC application chart

12

1.0037	St37-2 (S235JR)
1.0050	St50-2 (E295)
1.0060	St60-2 (E335)
1.5919	15CrNi6
1.7131	16MnCr5

22

1.4301	X5CrNi18-10
1.4406	X2CrNiMoN17-12-2
1.4435	X2CrNiMo18-14-3
1.4541	X6CrNiTi18-10
1.4571	X6CrNiMoTi17-12-2

Verstärkter Schaft gemäss DIN 371
Reinforced shank as per DIN 371

Verstärkter Schaft gemäss DC-Werksnorm
Reinforced shank as per DC standards

PM
HSSE-PM
HSSE-PM

VHM CAR
Vollhartmetall
Solid Carbide


Anzahl Spannuten (Z)
Number of flutes (Z)

Spiralnuten mit 20° Linksdrall
20° left-hand spiral flutes

Spiralnuten mit 25° Rechtsdrall
25° right-hand spiral flutes


Gewindeformer
Thread former

Durchgangsloch < 2 x D, langspanende Werkstoffe
Through hole < 2 x D, long chipping materials

Sackloch < 2 x D, langspanende Werkstoffe
Blind hole < 2 x D, long chipping materials

Durchgangs- und Sackloch < 2.5 x D, kurzspanende Werkstoffe
Through / blind hole < 2.5 x D, short chipping materials

Durchgangs- und Sackloch < 3 x D, kurzspanende Werkstoffe
Through / blind hole < 3 x D, short chipping materials

2 - 3 Gewindegänge, Form C
2 - 3 chamfered threads, form C

3.5 - 5 Gewindegänge, Form D
3.5 - 5 chamfered threads, form D

1.5 - 2 Gewindegänge, Form E
1.5 - 2 chamfered threads, form E

4H
Toleranzklasse 4H
Tolerance class 4H

ISO 2 6H
Toleranzklasse ISO 2 6H
Tolerance class ISO 2 6H

VS
DC-"VS"-Verschleissschutzschicht für den allgemeinen Einsatz
DC "VS" wear-protective coating for general use

VX
DC-"VX"-Verschleissschutzschicht für rostfreie Stähle und Nickellegierungen
DC "VX" wear-protective coating for stainless steels and nickel alloys

● *Lagerartikel*
Stock item

● *Kurzfristig lieferbar*
Available at short notice

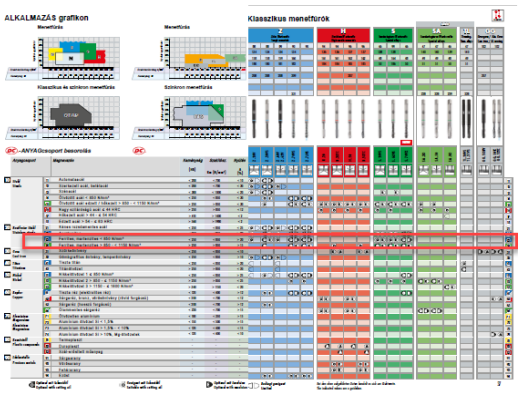
* *Ab Lager lieferbar solange Vorrat*
Available from stock, while stock lasts

SZERSZÁMVÁLASZTÁS

HASZNÁLJA ÁTTEKINTŐ TÁBLÁNKAT, HOGY A KATALÓGUSBAN ELIGAZODJON. Válasszon szerszámot az anyagcsoport alapján, vagy az anyag tulajdonságainak alapján a választógrafikon segítségével.

ANYAGCSOPORT ALAPJÁN

A megmunkálandó anyag anyagminősége vagy werkstoff száma alapján válassza ki a megfelelő anyagcsoportot



Az így meghatározott anyagcsoportszám szerint már beazonosíthatja, hogy az adott anyaghoz mely szerszámok megfelelőek, és milyen alkalmazási feltételekkel, hűtési környezetben. Válassza a menet típusát (M, MF, UNC...), és lapozzon a kívánt katalógusoldalra

Válassza ki az anyagcsoportot a munkadarab anyaga szerint

Példák:

Reference: AISI/ASTM/UNS

11 Free-cutting steels

1.0711	1212
1.0715	1213
1.0718	12L13
1.0726	1140
1.0737	12L14

12 Structural, cementation steels

1.0037	1015
1.0050	A570 Gr.50
1.0060	A572 Gr.55
1.5919	4617
1.7131	5115

13 Carbon steels

1.0503	1045
1.0535	1055
1.0601	1060
1.1545	W110
1.2067	L 3

14 Alloy steels < 850 N/mm2

1.2363	A2
1.3551	M50
1.7218	4130
1.7220	4135
1.7225	4140

15 Alloy steels hard./temp. > 850 - < 1150 N/mm2

1.3553	-
1.6580	4340
1.7220	4135
1.7225	4140
1.8507	A355CLD (K23510)

16 High tensile alloy steels ≤ 44 HRC

	EN-GJS-1200-2
1.6582	4340
1.7225	4140
1.7228	4150
1.8515	-

17 Alloy steels tempered > 44 - ≤ 54 HRC

> 44 - ≤ 54 HRC

18 Alloy steels hardened > 54 - ≤ 63 HRC

> 54 - ≤ 63 HRC

21 Free machining stainless steels

1.4005	416
1.4104	430F
1.4305	303

22 Austenitic stainless steels

1.4301	304
1.4406	316LN
1.4435	316L
1.4541	321
1.4571	316Ti

23 Ferritic and martensitic < 850 N/mm2

1.4112	440B
1.4540	XM12
1.4582	-
1.4762	446
1.4821	4922

24 Ferritic and martensitic > 850 - < 1150 N/mm2

1.4057	431
1.4125	440C
1.4542	630 (17-4PH)
1.4748	-

31 Cast iron

0.6015	A48-25B
0.6020	A48-30B
0.6025	A48-35B
0.6030	A48-45B

32 Spheroidal graphite + malleable cast iron

0.7040	65-45-12
0.7043	60-40-18
0.7050	80-55-06
0.7060	70-60-03
0.7080	120-90-02

41 Pure titanium

3.7024	Gr.1
3.7034	Gr.2
3.7055	Gr.3
3.7065	Gr.4

42 Titanium alloys

3.7124	Alloy 230
	F-1295
3.7164	Gr.5
3.7174	-

51 Nickel alloys 1 ≤ 850 N/mm2

1.3912	K93600
2.4360	N04400
2.4816	N06600
1.4876	N08800

52 Nickel alloys 2 > 850 - ≤ 1150 N/mm2

2.4375	N05500 (B865)
2.4631	N07080 (B637)
2.4668	N07718 (B637)

53 Nickel alloys 3 > 1150 - ≤ 1600 N/mm2

2.4631	N07080 (B637)
2.4668	N07718 (B637)

61 Pure copper (electrolytic copper)

2.0060	C11000

62 Short chip brass, phosphor bronze, gun metal

2.0401	C38500
2.0402	C37800
2.1030	C52100
2.1096	-

63 Long chip brass

2.0240	C23000
2.0265	C26000
2.0321	C27200

64 Lead free brass

CuZn21Si3P
(ECOBRASS®)
CuZn35
CuZn42

71 Al unalloyed

3.0205	1200
3.0255	1050A

72 Al alloyed Si < 1.5 %

3.1255	2014
3.1355	2024
3.2315	6082
3.3206	6060
3.4345	7022

73 Al alloyed Si > 1.5 % - < 10 %

3.2161	327
3.2162	-
3.2341	-
3.2371	356

74 Al alloyed Si > 10 %, Mg-alloys

3.2381	A360
3.2382	-
3.2581	A413
3.2583	413.1

81 Thermoplastics

Delrin (POM)
Teflon
Nylon

82 Duroplastics

Bakelit
Novopan

83 Glass fibre reinforced plastics

Glass fibre reinforced,
Thermo and Duroplastics

91 Yellow gold

2N18
Au585AgCu205
3N18
Au917AgCu44

92 Red gold

4N18
5N18
Au585CuAg325
Au750AgCu
Au917Cu83

93 White gold

Au750PdCu125
Au750PdCu150
Au585PdCu150
Au925Pd75

94 Silver

Ag999
Ag800Cu
Ag925Cu

GEWINDEBOHRER NANO
THREAD TAPS NANO

DC -Anwendungsgruppen — DC Material classification

	Werkstoff-Gruppen Material groups		Werkstoffbezeichnung	Material designation	Härte Hardness (HB)	Festigkeit Tensile strength Rm (N/mm²)	Dehnung Elongation A (%)
10	Stahl Steels	11	Automatenstahl	Free-cutting steels	< 200	< 700	< 10
		12	Baustahl, Einsatzstahl	Structural, cementation steels	< 200	< 700	< 30
		13	Kohlenstoffstahl	Carbon steels	< 300	< 1000	< 20
		14	Stahl legiert < 850 N/mm²	Alloy steels < 850 N/mm²	< 250	< 850	< 30
		15	Stahl legiert / vergütet > 850 - < 1150 N/mm²	Alloy steels hard. / temp. > 850 - < 1150 N/mm²	> 250	> 850	< 30
		16	Hochfester Stahl ≤ 44 HRC	High tensile alloy steels ≤ 44 HRC	> 250	> 850	< 12
		17	Stahl vergütet > 44 - ≤ 54 HRC	Alloy steels tempered > 44 - ≤ 54 HRC	> 410	> 1400	< 2
		18	Stahl gehärtet > 54 - ≤ 63 HRC	Alloy steels hardened > 54 - ≤ 63 HRC	> 560	> 1980	< 2
20	Rostfreier Stahl Stainless steels	21	Rostfreier Stahl, geschwefelt	Free machining stainless steels	< 250	< 850	< 25
		22	Austenitisch	Austenitic stainless steels	< 250	< 850	> 20
		23	Ferritisch, martensitisch < 850 N/mm²	Ferritic and martensitic < 850 N/mm²	< 250	< 850	> 20
		24	Ferritisch, martensitisch > 850 - < 1150 N/mm²	Ferritic and martensitic > 850 - < 1150 N/mm²	> 250	> 850	> 15
30	Guss Cast iron	31	Grauguss	Cast iron	< 250	< 850	< 10
		32	Kugelgraphitguss, Temperguss	Spheroidal graphite + malleable cast iron	< 250	< 850	> 10
40	Titan Titanium	41	Reintitan	Pure titanium	< 250	< 850	> 20
		42	Titanlegierung	Titanium alloys	> 250	> 850	< 20
50	Nickel Nickel	51	Nickellegierung 1 ≤ 850 N/mm²	Nickel alloys 1 ≤ 850 N/mm²	< 250	< 850	> 25
		52	Nickellegierung 2 > 850 - ≤ 1150 N/mm²	Nickel alloys 2 > 850 - ≤ 1150 N/mm²	> 250	> 850	< 25
		53	Nickellegierung 3 > 1150 - ≤ 1600 N/mm²	Nickel alloys 3 > 1150 - ≤ 1600 N/mm²	> 340	> 1150	< 20
60	Kupfer Copper	61	Reinkupfer (Elektrolytkupfer)	Pure copper (electrolytic copper)	< 120	< 400	> 12
		62	Messing, Bronze, Rotguss (kurzspanend)	Short chip brass, phosphor bronze, gun metal	< 200	< 700	< 12
		63	Messing (langspanend)	Long chip brass	< 200	< 700	> 12
		64	Messing bleifrei	Lead free brass	< 220	< 700	> 15
70	Aluminium Magnesium Aluminium Magnesium	71	Al unlegiert	Al unalloyed	< 100	< 350	> 15
		72	Al legiert Si < 1.5 %	Al alloyed Si < 1.5 %	< 150	< 500	> 15
		73	Al legiert Si > 1.5 % - < 10 %	Al alloyed Si > 1.5 % - < 10 %	< 120	< 400	< 15
		74	Al legiert Si > 10 %, Mg-Legierungen	Al alloyed Si > 10 %, Mg-alloys	< 120	< 400	< 10
80	Kunststoff Plastic compounds	81	Thermoplaste	Thermoplastics	-	-	-
		82	Duroplaste	Duroplastics	-	-	-
		83	Faserverstärkte Kunststoffe	Glass fibre reinforced plastics	-	-	-
90	Edelmetalle Precious metals	91	Gelbgold	Yellow gold	-	-	-
		92	Rotgold	Red gold	-	-	-
		93	Weissgold	White gold	-	-	-
		94	Silber	Silver	-	-	-

Optimal mit Schneidöl / Optimal with cutting oil

Geeignet mit Schneidöl / Suitable with cutting oil

Optimal mit Emulsion / Optimal with emulsion

Geeignet mit Emulsion / Suitable with emulsion

GEWINDEBOHRER NANO — THREAD TAPS NANO

CLASSIC SYNCHRO

Ab Seite: From page:	TAN				TAZ				CMS	
	Normale Werkstoffe Normal materials				Zähe Werkstoffe Tough materials				Spröde Werkstoffe Brittle materials	
M	338	338	338	338	339	339	339	339	340	340
MF	341	341	341	341	342	342	342	342	343	343
UNC	344	344	344	344	345	345	345	345	346	346
UNF	347	347	347	347	348	348	348	348	349	349
S	350	350	350	350	351	351	351	351	352	352
SF	353	353	353	353	354	354	354	354	355	355
SL	356	356	356	356	357	357	357	357	358	358

	TAN40	TAN40VS	TAN50	TAN50VS	TAZ40	TAZ40VS	TAZ50	TAZ50VS	CMS50	CMS50VS	
Vc (m/min) Guide Line Ø 0.3 - 1.4 mm Standard / Beschichtet			Ø 1.4 - 2.8 mm Standard / Beschichtet								
11		4 - 10		12 - 20							11
12		4 - 10		12 - 20							12
13		4 - 10		12 - 20							13
14		4 - 10		12 - 20							14
15											15
16											16
17											17
18											18
21		4 - 10		12 - 20							21
22		4 - 10		12 - 20							22
23		3 - 6		6 - 12							23
24		3 - 6		6 - 12							24
31		4 - 10		12 - 20							31
32		4 - 10		12 - 20							32
41	2 - 4	2 - 4	4 - 8	4 - 8							41
42	2 - 4	2 - 4	4 - 8	4 - 8							42
51											51
52											52
53											53
61		4 - 10		12 - 20							61
62	4 - 10	4 - 10	12 - 20	12 - 20							62
63	4 - 10	4 - 10	12 - 20	12 - 20							63
64		4 - 10		12 - 20							64
71		4 - 10		12 - 20							71
72		4 - 10		12 - 20							72
73		4 - 10		12 - 20							73
74		4 - 10		12 - 20							74
81		4 - 10		12 - 20							81
82											82
83		4 - 10		12 - 20							83
91	4 - 10		12 - 20								91
92		4 - 10		12 - 20							92
93		4 - 10		12 - 20							93
94		4 - 10		12 - 20							94

Optimal mit Luft / **Optimal with air**

Geeignet mit Luft / **Suitable with air**

Bedingt geeignet / **Limited**

Bei den oben aufgeführten Daten handelt es sich um Richtwerte.
The indicated values are a guideline.

Inhaltsverzeichnis — Maschinengewindebohrer nano
Directory — Machine taps nano

CLASSIC SYNCHRO

				TAN				TAZ	
Merkmale **Characteristics**				L20	L20 VS	R25	R25 VS	L20	L20 VS
									
Lochart **Hole type**									
				TAN40	**TAN40VS**	**TAN50**	**TAN50VS**	**TAZ40**	**TAZ40VS**
M	**4H / 6H**	**ISO DIN 14 ISO DIN 13**	**DC ~DIN 371**	338	338	338	338	339	339
MF	**4H / 6H**	**ISO DIN 13**	**DC ~DIN 371**	341	341	341	341	342	342
UNC	**2B**	**ASME B1.1**	**DC ~DIN 371**	344	344	344	344	345	345
	3B	**ASME B1.1**	**DC ~DIN 371**	344	344	344	344	345	345
UNF	**2B**	**ASME B1.1**	**DC ~DIN 371**	347	347	347	347	348	348
	3B	**ASME B1.1**	**DC ~DIN 371**	347	347	347	347	348	348
S	**NIHS**	**NIHS 06 - 10**	**DC**	350	350	350	350	351	351
SF	**NIHS**	**NIHS 06-10 Fine Thread**	**DC**	353	353	353	353	354	354
SL	**Safelock**	**SL 15 - 01**	**DC**	356	356	356	356	357	357

Inhaltsverzeichnis — Maschinengewindebohrer nano
Directory — Machine taps nano

CLASSIC SYNCHRO

TAZ		CMS	
R25	R25 VS	R12	R12 VS
			
			
TAZ50	**TAZ50VS**	**CMS50**	**CMS50VS**
339	339	340	340
342	342	343	343
345	345	346	346
345	345	346	346
348	348	349	349
348	348	349	349
351	351	352	352
354	354	355	355
357	357	358	358

M ISO DIN 13 ISO DIN 14

CLASSIC SYNCHRO

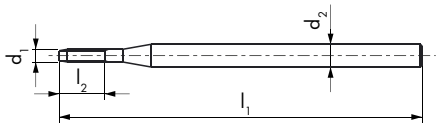
PM

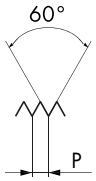
DC – DIN 371

TAN

TAN40	L20		62 63 91
TAN40VS	L20	VS	11 12 13 14 32 62 63 71 72 73 74 81 93
TAN50	R25		62 63 91
TAN50VS	R25	VS	11 12 13 14 32 62 63 71 72 73 74 81 93

TAN40	TAN40VS	TAN50	TAN50VS
			
<2 x D	<2 x D	<2 x D	<2 x D
C 2 x P	C 2 x P	C 2 x P	C 2 x P
4H	4H	4H	4H

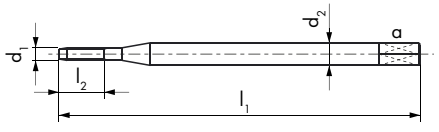


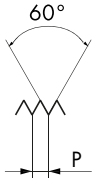


Ø d_1 M	P mm	l_1 mm	l_2 mm	d_2 mm			TAN40 ID	TAN40VS ID	TAN50 ID	TAN50VS ID
0.5	0.125	25	1.5	2	3	Δ0.41	161817	161748	161818	161749
0.6	0.15	25	1.8	2	3	Δ0.5	152512	152511	152545	151766
0.7	0.175	25	2.1	2	3	Δ0.58	152516	152515	152548	152547
0.8	0.2	25	2.4	2	3	Δ0.66	152520	152519	152552	152551
0.9	0.225	25	2.7	2	3	Δ0.74	152524	152523	152555	152554
1	0.25	40	3.0	2.5	3	0.75	152528	152527	152558	151557
1.2	0.25	40	3.6	2.5	3	0.95	152531	151463	152562	152561
1.4	0.3	40	4.2	2.5	3	1.1	152534	151756	152565	151757

Δ 4H5H → 4H6H = +0.02 mm

Δ 4H5H → 4H6H = +0.02 mm





Ø d_1 M	P mm	l_1 mm	l_2 mm	d_2 mm	a mm			TAN40 ID	TAN40VS ID	TAN50 ID	TAN50VS ID
1.6	0.35	40	4.8	2.5		3	1.25	152538	152537	152569	152568
1.8	0.35	40	5.4	2.5		3	1.45	193841	151461	193915	193952
2	0.4	45	8	2.8	2.1	3	1.6	152542	152541	152573	152572
2.3	0.4	45	9	2.8	2.1	3	1.9	193842	193878	193916	193953
2.5	0.45	50	10	2.8	2.1	3	2.05	193843	193879	193917	193954
2.6	0.45	50	10	2.8	2.1	3	2.15	193844	193880	193918	193955

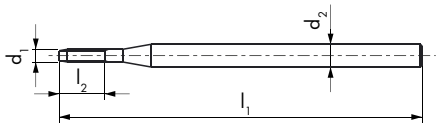
ISO 2 6H

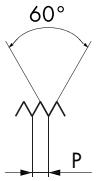
M ISO DIN 13 ISO DIN 14

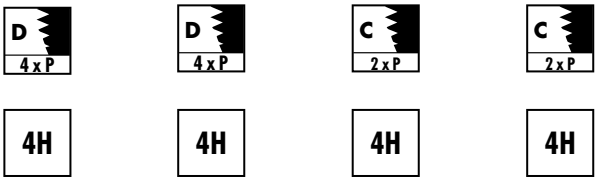
CLASSIC | SYNCHRO | PM | DC – DIN 371

TAZ

	TAZ40	TAZ40VS	TAZ50	TAZ50VS
	L20	L20 VS	R25	R25 VS
		21 22 23 41 42 61 64		21 22 23 41 42 61 64



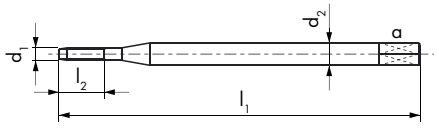


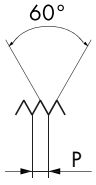


Ø d_1 M	P mm	l_1 mm	l_2 mm	d_2 mm			TAZ40 ID	TAZ40VS ID	TAZ50 ID	TAZ50VS ID
0.5	0.125	25	1.5	2	3	Δ0.41	193994	194059	194119	194182
0.6	0.15	25	1.8	2	3	Δ0.5	193995	194060	194120	194183
0.7	0.175	25	2.1	2	3	Δ0.58	193996	194061	194121	194184
0.8	0.2	25	2.4	2	3	Δ0.66	193997	194062	194122	194185
0.9	0.225	25	2.7	2	3	Δ0.74	193998	194063	194123	194186
1	0.25	40	3	2.5	3	0.75	193999	194064	194124	183753
1.2	0.25	40	3.6	2.5	3	0.95	194000	194065	194125	194187
1.4	0.3	40	4.2	2.5	3	1.1	194001	194066	194126	194188

Δ 4H5H → 4H6H = +0.02 mm

Δ 4H5H → 4H6H = +0.02 mm





Ø d_1 M	P mm	l_1 mm	l_2 mm	d_2 mm	a mm			TAZ40 ID	TAZ40VS ID	TAZ50 ID	TAZ50VS ID
1.6	0.35	40	4.8	2.5		3	1.25	194002	194067	194127	194189
1.8	0.35	40	5.4	2.5		3	1.45	194003	194068	194128	194190
2	0.4	45	8	2.8	2.1	3	1.6	194004	194947	194129	179266
2.3	0.4	45	9	2.8	2.1	3	1.9	194005	194069	194130	194191
2.5	0.45	50	10	2.8	2.1	3	2.05	194006	194070	194131	194192
2.6	0.45	50	10	2.8	2.1	3	2.15	194007	194071	194132	194193

M ISO DIN 13 ISO DIN 14

CLASSIC SYNCHRO

VHM CAR

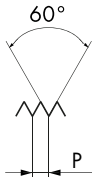
DC

CMS

	CMS50	CMS50VS		
				
				

CMS50 R12 — 62 63 93

CMS50VS R12 VS — 31 62 63 73 74 83 93

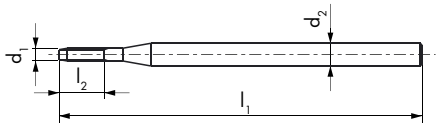


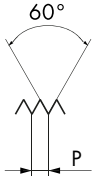
C 2.5 x P — 4H

Ø d_1 M	P mm	l_1 mm	l_2 mm	d_2 h5 mm			ID	ID
0.3	0.08	32	1.1	1.5	3	0.23	193639	193702
0.35	0.09	32	1.3	1.5	3	0.28	193640	193703
0.4	0.1	32	1.5	1.5	3	Δ0.32	193641	193704
0.5	0.125	32	1.8	1.5	3	Δ0.41	193642	193705
0.6	0.15	32	2.2	1.5	3	Δ0.5	193643	193706
0.7	0.175	32	2.6	1.5	3	Δ0.58	193644	193707
0.8	0.2	32	3	1.5	3	Δ0.66	193645	193708
0.9	0.225	32	3.3	1.5	3	Δ0.74	193646	193709
1	0.25	32	3.7	2	3	0.75	193647	193710
1.2	0.25	32	4.5	2	3	0.95	193648	193711
1.4	0.3	32	5.2	2	3	1.1	193649	193712

Δ 4H5H → 4H6H = +0.02 mm

≥ M1 - ≤ M1.4 ISO 1 4H





ISO 2 6H

Ø d_1 M	P mm	l_1 mm	l_2 mm	d_2 h5 mm			ID	ID
1.6	0.35	32	6	2	3	1.25	193650	193713
1.8	0.35	32	6.7	2	3	1.45	193651	193714
2	0.4	39	7.5	3	3	1.6	193652	193715
2.3	0.4	39	8.6	3	3	1.9	193653	193716
2.5	0.45	39	9.3	3	3	2.05	193654	193717
2.6	0.45	39	9.7	3	3	2.15	193655	193718

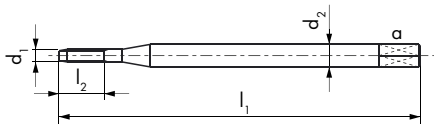
MF ISO DIN 13

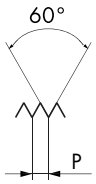
CLASSIC | SYNCHRO | PM | DC – DIN 371

TAN

TAN40	L20		62 63 91
TAN40VS	L20	VS	11 12 13 14 32 62 63 71 72 73 74 81 93
TAN50	R25		62 63 91
TAN50VS	R25	VS	11 12 13 14 32 62 63 71 72 73 74 81 93

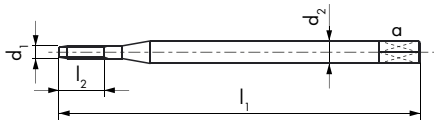
TAN40	TAN40VS	TAN50	TAN50VS
			
			

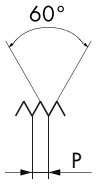




C 2 x P	C 2 x P	C 2 x P	C 2 x P
ISO 1 4H	ISO 1 4H	ISO 1 4H	ISO 1 4H

Ø d_1 MF	P mm	l_1 mm	l_2 mm	d_2 mm	a mm			ID	ID	ID	ID
1.4	0.2	40	4.2	2.5		3	1.2	170390	193881	170393	156730
1.6	0.2	40	4.8	2.5		3	1.4	193845	193882	193919	193956
1.8	0.2	40	5.4	2.5		3	1.6	193846	193883	193920	180810
2	0.2	45	6	2.8	2.1	3	1.8	193847	193884	193921	184999
2	0.25	45	6	2.8	2.1	3	1.75	193848	193885	193922	182944
2.2	0.2	45	6.6	2.8	2.1	3	2	193849	193886	193923	179593
2.2	0.25	45	6.6	2.8	2.1	3	1.95	193850	193887	193924	193957
2.3	0.2	45	6.9	2.8	2.1	3	2.1	193851	193888	193925	193958
2.3	0.25	45	6.9	2.8	2.1	3	2.05	193852	193889	193926	193959
2.5	0.2	50	7.5	2.8	2.1	3	2.3	193853	193890	193927	193960
2.5	0.25	50	7.5	2.8	2.1	3	2.25	193854	193891	193928	193961





ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H

Ø d_1 MF	P mm	l_1 mm	l_2 mm	d_2 mm	a mm			ID	ID	ID	ID
2.5	0.35	50	7.5	2.8	2.1	3	2.15	193855	193892	193929	193962
2.6	0.35	50	7.8	2.8	2.1	3	2.25	193856	193893	193930	193963

MF ISO DIN 13

CLASSIC SYNCHRO

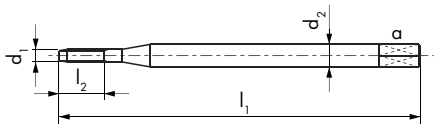
PM

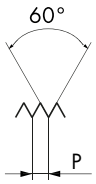
DC – DIN 371

TAZ

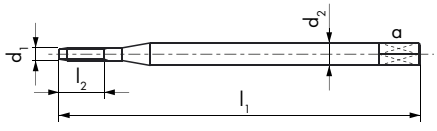
TAZ40	L20		
TAZ40VS	L20	VS	21 22 23 41 42 61 64
TAZ50	R25		
TAZ50VS	R25	VS	21 22 23 41 42 61 64

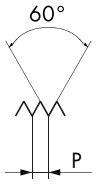
TAZ40	TAZ40VS	TAZ50	TAZ50VS
			
<2 x D	<2 x D	<2 x D	<2 x D
D 4 x P	D 4 x P	C 2 x P	C 2 x P
ISO 1 4H	ISO 1 4H	ISO 1 4H	ISO 1 4H





Ø d_1 MF	P mm	l_1 mm	l_2 mm	d_2 mm	a mm			TAZ40 ID	TAZ40VS ID	TAZ50 ID	TAZ50VS ID
1.4	0.2	40	4.2	2.5		3	1.2	194008	194950	194133	194194
1.6	0.2	40	4.8	2.5		3	1.4	194009	194072	194134	181665
1.8	0.2	40	5.4	2.5		3	1.6	194010	194073	194135	190047
2	0.2	45	6	2.8	2.1	3	1.8	194011	194949	194136	194195
2	0.25	45	6	2.8	2.1	3	1.75	194012	194948	194137	185307
2.2	0.2	45	6.6	2.8	2.1	3	2	194013	194074	194138	194196
2.2	0.25	45	6.6	2.8	2.1	3	1.95	194014	194075	194139	194197
2.3	0.2	45	6.9	2.8	2.1	3	2.1	194015	194076	194140	194198
2.3	0.25	45	6.9	2.8	2.1	3	2.05	194016	194077	194141	194199
2.5	0.2	50	7.5	2.8	2.1	3	2.3	194017	194078	194142	194200
2.5	0.25	50	7.5	2.8	2.1	3	2.25	194018	194951	194143	194201





								ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H
Ø d_1 MF	P mm	l_1 mm	l_2 mm	d_2 mm	a mm			TAZ40 ID	TAZ40VS ID	TAZ50 ID	TAZ50VS ID
2.5	0.35	50	7.5	2.8	2.1	3	2.15	194019	194079	194144	194202
2.6	0.35	50	7.8	2.8	2.1	3	2.25	194020	194080	194145	194203

MF ISO DIN 13

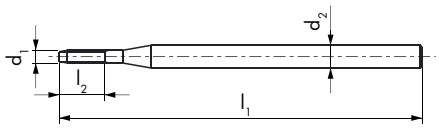
CLASSIC | SYNCHRO | VHM CAR | DC

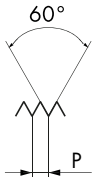
CMS

	CMS50	CMS50VS		
				
				

CMS50 R12 — 62 / 63 / 93

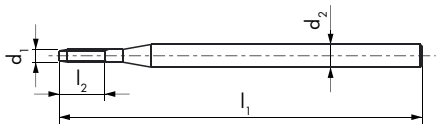
CMS50VS R12 VS — 31 / 62 / 63 / 73 / 74 / 83 / 93

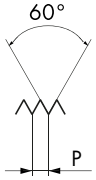




C 2.5 x P — ISO 1 4H

Ø d_1 MF	P mm	l_1 mm	l_2 mm	d_2 h5 mm			CMS50 ID	CMS50VS ID
1.4	0.2	32	5.2	2	3	1.2	193656	193719
1.6	0.2	32	6	2	3	1.4	193657	193720
1.8	0.2	32	6.7	2	3	1.6	193658	193721
2	0.2	39	7.5	3	3	1.8	193659	193722
2	0.25	39	7.5	3	3	1.75	193660	193723
2.2	0.2	39	8.2	3	3	2	193661	193724
2.2	0.25	39	8.2	3	3	1.95	193662	193725
2.3	0.2	39	8.6	3	3	2.1	193663	193726
2.3	0.25	39	8.6	3	3	2.05	193664	193727
2.5	0.2	39	9.3	3	3	2.3	193665	193728
2.5	0.25	39	9.3	3	3	2.25	193666	193729





ISO 2 6H

Ø d_1 MF	P mm	l_1 mm	l_2 mm	d_2 h5 mm			CMS50 ID	CMS50VS ID
2.5	0.35	39	9.3	3	3	2.15	193667	193730
2.6	0.35	39	9.7	3	3	2.25	193668	193731

UNC ASME B1.1

CLASSIC SYNCHRO

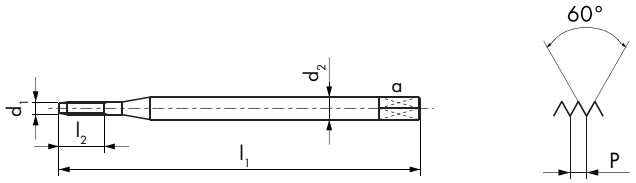
PM

DC – DIN 371

TAN

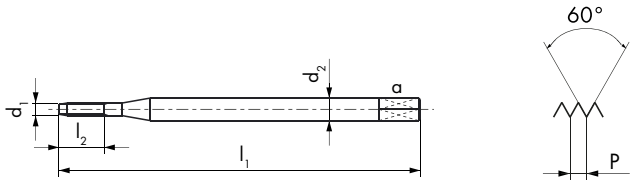
TAN40	L20		62 63 91
TAN40VS	L20	VS	11 12 13 14 32 62 63 71 72 73 74 81 93
TAN50	R25		62 63 91
TAN50VS	R25	VS	11 12 13 14 32 62 63 71 72 73 74 81 93

TAN40	TAN40VS	TAN50	TAN50VS
			
			



TAN40	TAN40VS	TAN50	TAN50VS
C 2 x P	C 2 x P	C 2 x P	C 2 x P
2B	2B	2B	2B

Ø d_1 UNC	P TPI	d_1 mm	l_1 mm	l_2 mm	d_2 mm	a mm			TAN40 ID	TAN40VS ID	TAN50 ID	TAN50VS ID
1	64	1.85	40	5.6	2.5		3	1.45	193857	193894	193931	193964
2	56	2.18	45	9	2.8	2.1	3	1.75	193858	193895	193932	193965
3	48	2.51	50	10	2.8	2.1	3	2	193859	193896	193933	193966



TAN40	TAN40VS	TAN50	TAN50VS
3B	3B	3B	3B

Ø d_1 UNC(J)	P TPI	d_1 mm	l_1 mm	l_2 mm	d_2 mm	a mm			TAN40 ID	TAN40VS ID	TAN50 ID	TAN50VS ID
1	64	1.85	40	5.6	2.5		3	1.45	193860	193897	193934	193967
2	56	2.18	45	9	2.8	2.1	3	1.75	193861	193898	193935	193968
3	48	2.51	50	10	2.8	2.1	3	2	193862	193899	193936	193969

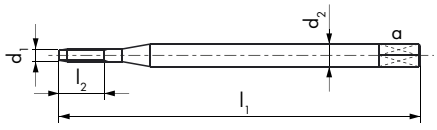
UNC ASME B1.1

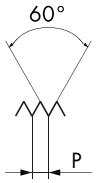
CLASSIC | SYNCHRO | PM | DC – DIN 371

TAZ

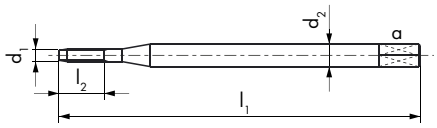
TAZ40	L20		
TAZ40VS	L20	VS	21 22 23 41 42 61 64
TAZ50	R25		
TAZ50VS	R25	VS	21 22 23 41 42 61 64

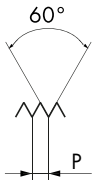
TAZ40	TAZ40VS	TAZ50	TAZ50VS
			
			
D 4xP	D 4xP	C 2xP	C 2xP
2B	2B	2B	2B





Ø d_1 UNC	P TPI	d_1 mm	l_1 mm	l_2 mm	d_2 mm	a mm			ID	ID	ID	ID
1	64	1.85	40	5.6	2.5		3	1.45	194021	194081	194146	194204
2	56	2.18	45	9	2.8	2.1	3	1.75	194022	194082	194147	194205
3	48	2.51	50	10	2.8	2.1	3	2	194023	194083	194148	194206





									3B	3B	3B	3B
Ø d_1 UNC(J)	P TPI	d_1 mm	l_1 mm	l_2 mm	d_2 mm	a mm			ID	ID	ID	ID
1	64	1.85	40	5.6	2.5		3	1.45	194024	194084	194149	194207
2	56	2.18	45	9	2.8	2.1	3	1.75	194025	194085	194150	194208
3	48	2.51	50	10	2.8	2.1	3	2	194026	194086	194151	194209

UNC ASME B1.1

CLASSIC SYNCHRO

VHM CAR

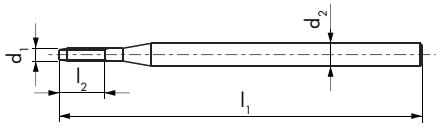
DC

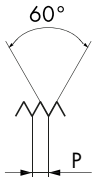
CMS

	CMS50	CMS50VS		
				
				

CMS50 — R12 — 62 63 93

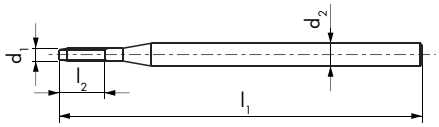
CMS50VS — R12 — VS — 31 62 63 73 74 83 93

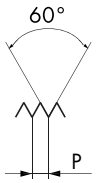




C 2.5 x P — 2B

Ø d_1 UNC	P TPI	d_1 mm	l_1 mm	l_2 mm	d_2 h5 mm			ID	ID
1	64	1.85	32	6.9	2	3	1.45	● 193669	● 193732
2	56	2.18	39	8.1	3	3	1.75	● 193670	● 193733
3	48	2.51	39	9.4	3	3	2	● 193671	● 193734





3B

Ø d_1 UNC(J)	P TPI	d_1 mm	l_1 mm	l_2 mm	d_2 h5 mm			ID	ID
1	64	1.85	32	6.9	2	3	1.45	● 193672	● 193735
2	56	2.18	39	8.1	3	3	1.75	● 193673	● 193736
3	48	2.51	39	9.4	3	3	2	● 193674	● 193737

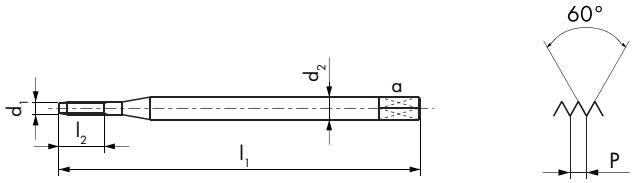
UNF ASME B1.1

CLASSIC | SYNCHRO | PM | DC – DIN 371

TAN

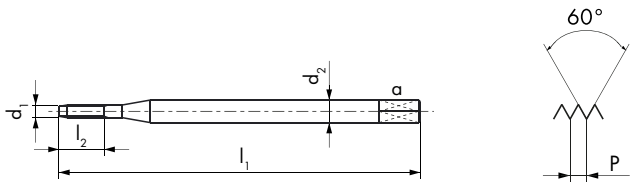
TAN40	L20		62 63 91
TAN40VS	L20	VS	11 12 13 14 32 62 63 71 72 73 74 81 93
TAN50	R25		62 63 91
TAN50VS	R25	VS	11 12 13 14 32 62 63 71 72 73 74 81 93

TAN40	TAN40VS	TAN50	TAN50VS
			
			



	C 2xP	C 2xP	C 2xP	C 2xP
	2B	2B	2B	2B

Ø d_1 UNF	P TPI	d_1 mm	l_1 mm	l_2 mm	d_2 mm	a mm			ID	ID	ID	ID
0	80	1.52	40	4.6	2.5		3	1.2	● 193863	● 193900	● 193937	● 193970
1	72	1.85	40	5.6	2.5		3	1.5	● 193864	● 193901	● 193938	● 193971
2	64	2.18	45	9	2.8	2.1	3	1.8	● 193865	● 193902	● 193939	● 193972
3	56	2.51	50	10	2.8	2.1	3	2.1	● 193866	● 193903	● 193940	● 193973



	3B	3B	3B	3B

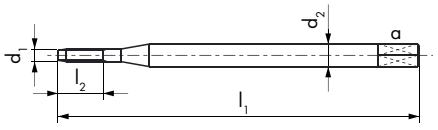
Ø d_1 UNF(J)	P TPI	d_1 mm	l_1 mm	l_2 mm	d_2 mm	a mm			ID	ID	ID	ID
0	80	1.52	40	4.6	2.5		3	1.2	● 193867	● 193904	● 193941	● 193974
1	72	1.85	40	5.6	2.5		3	1.5	● 193868	● 193905	● 193942	● 193975
2	64	2.18	45	9	2.8	2.1	3	1.8	● 193869	● 193906	● 193943	● 193976
3	56	2.51	50	10	2.8	2.1	3	2.1	● 193870	● 193907	● 193944	● 193977

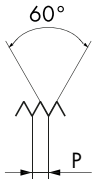
UNF ASME B1.1

CLASSIC | SYNCHRO | PM | DC – DIN 371

TAZ

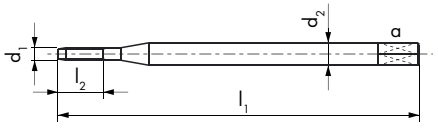
	TAZ40	TAZ40VS	TAZ50	TAZ50VS
	L20	L20 VS	R25	R25 VS
21 22 23 41 42 61 64		●		●

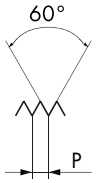




	D 4 x P	D 4 x P	C 2 x P	C 2 x P
	2B	2B	2B	2B

Ø d_1 UNF	P TPI	d_1 mm	l_1 mm	l_2 mm	d_2 mm	a mm			ID	ID	ID	ID
0	80	1.52	40	4.6	2.5		3	1.2	● 194027	● 194087	● 194152	● 194210
1	72	1.85	40	5.6	2.5		3	1.5	● 194028	● 194088	● 194153	● 194211
2	64	2.18	45	9	2.8	2.1	3	1.8	● 194029	● 194089	● 194154	● 194212
3	56	2.51	50	10	2.8	2.1	3	2.1	● 194030	● 194090	● 194155	● 194213





	3B	3B	3B	3B

Ø d_1 UNF(J)	P TPI	d_1 mm	l_1 mm	l_2 mm	d_2 mm	a mm			ID	ID	ID	ID
0	80	1.52	40	4.6	2.5		3	1.2	● 194031	● 194091	● 194156	● 194214
1	72	1.85	40	5.6	2.5		3	1.5	● 194032	● 194092	● 194157	● 194215
2	64	2.18	45	9	2.8	2.1	3	1.8	● 194033	● 194093	● 194158	● 194216
3	56	2.51	50	10	2.8	2.1	3	2.1	● 194034	● 194094	● 194159	● 194217

UNF ASME B1.1

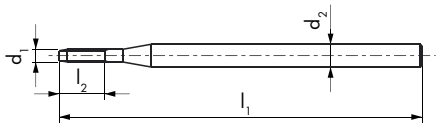
CLASSIC | SYNCHRO | VHM CAR | DC

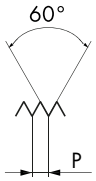
CMS

	CMS50	CMS50VS		
				
				

CMS50 — R12 — 62 / 63 / 93

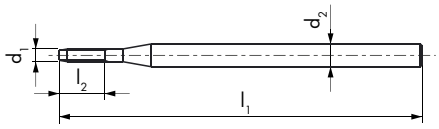
CMS50VS — R12 — VS — 31 / 62 / 63 / 73 / 74 / 83 / 93

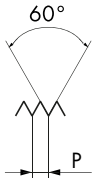




C 2.5 x P — 2B

Ø d_1 UNF	P TPI	d_1 mm	l_1 mm	l_2 mm	d_2 h5 mm			ID	ID
0	80	1.52	32	5.7	2	3	1.2	● 193675	● 193738
1	72	1.85	32	6.9	2	3	1.5	● 193676	● 193739
2	64	2.18	39	8.1	3	3	1.8	● 193677	● 193740
3	56	2.51	39	9.4	3	3	2.1	● 193678	● 193741





3B

Ø d_1 UNF(J)	P TPI	d_1 mm	l_1 mm	l_2 mm	d_2 h5 mm			ID	ID
0	80	1.52	32	5.7	2	3	1.2	● 193679	● 193742
1	72	1.85	32	6.9	2	3	1.5	● 193680	● 193743
2	64	2.18	39	8.1	3	3	1.8	● 193681	● 193744
3	56	2.51	39	9.4	3	3	2.1	● 193682	● 193745

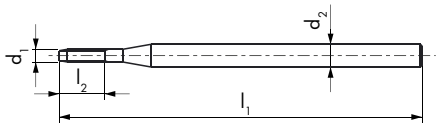
S NIHS 06-10

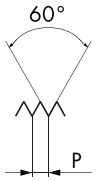
CLASSIC SYNCHRO PM DC

TAN

TAN40	L20		62 63 91
TAN40VS	L20	VS	11 12 13 14 32 62 63 71 72 73 74 81 93
TAN50	R25		62 63 91
TAN50VS	R25	VS	11 12 13 14 32 62 63 71 72 73 74 81 93

TAN40	TAN40VS	TAN50	TAN50VS
			
			
			
NIHS	NIHS	NIHS	NIHS





Ø d_1 S	P mm	l_1 mm	l_2 mm	d_2 mm			ID	ID	ID	ID
0.5	0.125	25	1.5	2	3	Δ0.41	161816	157021	159301	158384
0.6	0.15	25	1.8	2	3	Δ0.5	152510	152509	151567	152544
0.7	0.175	25	2.1	2	3	Δ0.58	152514	152513	151768	152546
0.8	0.2	25	2.4	2	3	Δ0.66	152518	152517	152550	152549
0.9	0.225	25	2.7	2	3	Δ0.74	152522	152521	152553	151563
1	0.25	40	3	2.5	3	Δ0.82	152526	152525	152557	152556
1.2	0.25	40	3.6	2.5	3	Δ1.02	152530	152529	152560	152559
1.4	0.3	40	4.2	2.5	3	Δ1.18	152533	152532	152564	152563

Δ 4H5H → 4H6H = +0.02 mm

S NIHS 06-10

CLASSIC SYNCHRO

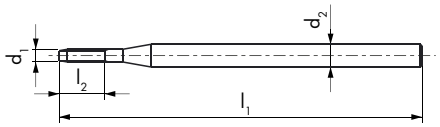
PM

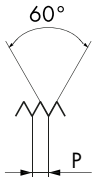
DC

TAZ

TAZ40	L20		
TAZ40VS	L20	VS	21 22 23 41 42 61 64
TAZ50	R25		
TAZ50VS	R25	VS	21 22 23 41 42 61 64

TAZ40	TAZ40VS	TAZ50	TAZ50VS
			
<2xD	<2xD	<2xD	<2xD
D 4xP	D 4xP	C 2xP	C 2xP
NIHS	NIHS	NIHS	NIHS





Ø d_1 S	P mm	l_1 mm	l_2 mm	d_2 mm			ID	ID	ID	ID
0.5	0.125	25	1.5	2	3	Δ0.41	193978	194043	194103	194168
0.6	0.15	25	1.8	2	3	Δ0.5	193979	194044	194104	194169
0.7	0.175	25	2.1	2	3	Δ0.58	193980	194045	194105	194170
0.8	0.2	25	2.4	2	3	Δ0.66	193981	194046	194106	188515
0.9	0.225	25	2.7	2	3	Δ0.74	193982	194047	194107	188521
1	0.25	40	3	2.5	3	Δ0.82	193983	194048	194108	194171
1.2	0.25	40	3.6	2.5	3	Δ1.02	193984	194049	194109	194172
1.4	0.3	40	4.2	2.5	3	Δ1.18	193985	194050	194110	194173

Δ 4H5H → 4H6H = +0.02 mm

S NIHS 06-10

CLASSIC SYNCHRO

VHM CAR

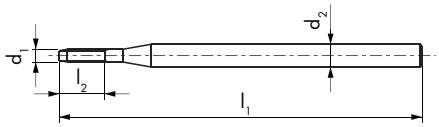
DC

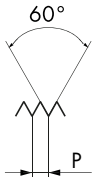
CMS

	CMS50	CMS50VS
		
	 <3 x D	 <3 x D
	 C 2.5 x P	 C 2.5 x P
	NIHS	NIHS

CMS50 R12 62 63 93

CMS50VS R12 VS 31 62 63 73 74 83 93





Ø d_1 S	P mm	l_1 mm	l_2 mm	d_2 h5 mm			ID	ID
0.3	0.08	32	1.1	1.5	3	0.23	● 178257	● 193683
0.35	0.09	32	1.3	1.5	3	0.28	● 178260	● 193684
0.4	0.1	32	1.5	1.5	3	Δ0.32	● 178263	● 193685
0.5	0.125	32	1.8	1.5	3	Δ0.41	● 178266	● 193686
0.6	0.15	32	2.2	1.5	3	Δ0.5	● 178269	● 193687
0.7	0.175	32	2.6	1.5	3	Δ0.58	● 178272	● 193688
0.8	0.2	32	3	1.5	3	Δ0.66	● 178275	● 193689
0.9	0.225	32	3.3	1.5	3	Δ0.74	● 178278	● 193690
1	0.25	32	3.7	2	3	Δ0.82	● 178281	● 193691
1.2	0.25	32	4.5	2	3	Δ1.02	● 178284	● 193692
1.4	0.3	32	5.2	2	3	Δ1.18	● 178287	● 193693

Δ 4H5H → 4H6H = +0.02 mm

SF

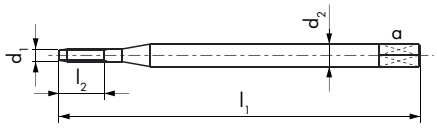
NIHS 06-10 Fine Thread

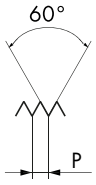
CLASSIC | SYNCHRO | PM | DC – DIN 371

TAN

TAN40	L20		62 63 91
TAN40VS	L20	VS	11 12 13 14 32 62 63 71 72 73 74 81 93
TAN50	R25		62 63 91
TAN50VS	R25	VS	11 12 13 14 32 62 63 71 72 73 74 81 93

TAN40	TAN40VS	TAN50	TAN50VS
			
			
C 2xP NIHS	C 2xP NIHS	C 2xP NIHS	C 2xP NIHS





Ø d_1 SF	P mm	l_1 mm	l_2 mm	d_2 mm	a mm		
1.4	0.2	40	4.2	2.5		3	Δ1.26
1.6	0.2	40	4.8	2.5		3	Δ1.46
1.8	0.2	40	5.4	2.5		3	Δ1.66
2	0.2	45	6	2.8	2.1	3	Δ1.86
2.2	0.2	45	6.6	2.8	2.1	3	Δ2.06
2.2	0.25	45	6.6	2.8	2.1	3	Δ2.02
2.5	0.2	50	7.5	2.8	2.1	3	Δ2.36
2.5	0.25	50	7.5	2.8	2.1	3	Δ2.32

ID	ID	ID	ID
193833	170491	169767	170492
193834	193871	193908	193945
193835	193872	193909	193946
193836	193873	193910	193947
193837	193874	193911	193948
193838	193875	193912	193949
193839	193876	193913	193950
193840	193877	193914	193951

Δ 4H5H → 4H6H = +0.02 mm

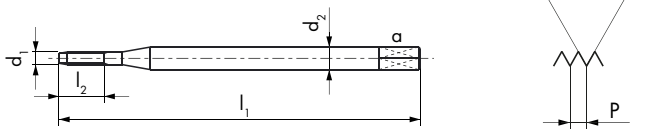
SF

NIHS 06-10 Fine Thread

CLASSIC | SYNCHRO | PM | DC – DIN 371

TAZ

	TAZ40	TAZ40VS	TAZ50	TAZ50VS
	L20	L20 VS	R25	R25 VS
		21 22 23 41 42 61 64		21 22 23 41 42 61 64



	TAZ40	TAZ40VS	TAZ50	TAZ50VS
	D 4 x P	D 4 x P	C 2 x P	C 2 x P
	NIHS	NIHS	NIHS	NIHS

Ø d_1 SF	P mm	l_1 mm	l_2 mm	d_2 mm	a mm			TAZ40 ID	TAZ40VS ID	TAZ50 ID	TAZ50VS ID
1.4	0.2	40	4.2	2.5		3	Δ1.26	193986	194051	194111	194174
1.6	0.2	40	4.8	2.5		3	Δ1.46	193987	194052	194112	194175
1.8	0.2	40	5.4	2.5		3	Δ1.66	193988	194053	194113	194176
2	0.2	45	6	2.8	2.1	3	Δ1.86	193989	194054	194114	194177
2.2	0.2	45	6.6	2.8	2.1	3	Δ2.06	193990	194055	194115	194178
2.2	0.25	45	6.6	2.8	2.1	3	Δ2.02	193991	194056	194116	194179
2.5	0.2	50	7.5	2.8	2.1	3	Δ2.36	193992	194057	194117	194180
2.5	0.25	50	7.5	2.8	2.1	3	Δ2.32	193993	194058	194118	194181

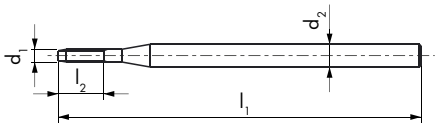
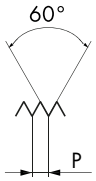
Δ 4H5H → 4H6H = +0.02 mm

SF

NIHS 06-10 Fine Thread

CLASSIC | SYNCHRO | VHM CAR | DC

CMS

	CMS50	CMS50VS		
				
				
				
				
				

CMS50 — R12 — 62 / 63 / 93

CMS50VS — R12 — VS — 31 / 62 / 63 / 73 / 74 / 83 / 93

Ø d_1 SF	P mm	l_1 mm	l_2 mm	d_2 h5 mm			CMS50 ID	CMS50VS ID
1.4	0.2	32	5.2	2	3	Δ1.26	180329	193694
1.6	0.2	32	6	2	3	Δ1.46	193632	193695
1.8	0.2	32	6.7	2	3	Δ1.66	193633	193696
2	0.2	39	7.5	3	3	Δ1.86	193634	193697
2.2	0.2	39	8.2	3	3	Δ2.06	193635	193698
2.2	0.25	39	8.2	3	3	Δ2.02	193636	193699
2.5	0.2	39	9.3	3	3	Δ2.36	193637	193700
2.5	0.25	39	9.3	3	3	Δ2.32	193638	193701

Δ 4H5H → 4H6H = +0.02 mm

SL

SL 15-01

Micro Safelock®

CLASSIC | SYNCHRO

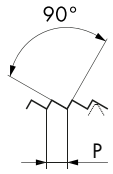
PM

DC

TAN

TAN40	L20		62 63 91
TAN40VS	L20	VS	11 12 13 14 32 62 63 71 72 73 74 81 93
TAN50	R25		62 63 91
TAN50VS	R25	VS	11 12 13 14 32 62 63 71 72 73 74 81 93

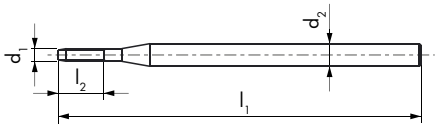
TAN40	TAN40VS	TAN50	TAN50VS
			
			
			

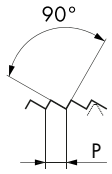


Ø d_1 SL	P mm	l_1 mm	l_2 mm	d_2 mm			ID	ID	ID	ID
0.5	0.1	25	1.5	2	3	0.46	600065	600073	600081	600089
0.6	0.125	25	1.8	2	3	0.55	600066	600074	600082	600090
0.7	0.15	25	2.1	2	3	0.64	600067	600075	600083	600091
0.8	0.15	25	2.4	2	3	0.74	600068	600076	600084	600092
0.9	0.175	25	2.7	2	3	0.83	600069	600077	600085	600093
1	0.2	40	3	2.5	3	0.92	600070	600078	600086	600094
1.2	0.2	40	3.6	2.5	3	1.12	600071	600079	600087	600095
1.4	0.25	40	4.2	2.5	3	1.3	600072	600080	600088	600096

TAZ

	TAZ40	TAZ40VS	TAZ50	TAZ50VS
	L20	L20 VS	R25	R25 VS
	21 22 23 41 42 61 64	21 22 23 41 42 61 64		





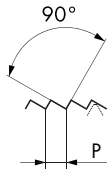
Ø d_1 SL	P mm	l_1 mm	l_2 mm	d_2 mm			ID	ID	ID	ID
0.5	0.1	25	1.5	2	3	0.46	600210	600218	600194	600202
0.6	0.125	25	1.8	2	3	0.55	600211	600219	600195	600203
0.7	0.15	25	2.1	2	3	0.64	600212	600220	600196	600204
0.8	0.15	25	2.4	2	3	0.74	600213	600221	600197	600205
0.9	0.175	25	2.7	2	3	0.83	600214	600222	600198	600206
1	0.2	40	3	2.5	3	0.92	600215	600223	600199	600207
1.2	0.2	40	3.6	2.5	3	1.12	600216	600224	600200	600208
1.4	0.25	40	4.2	2.5	3	1.3	600217	600225	600201	600209

CMS

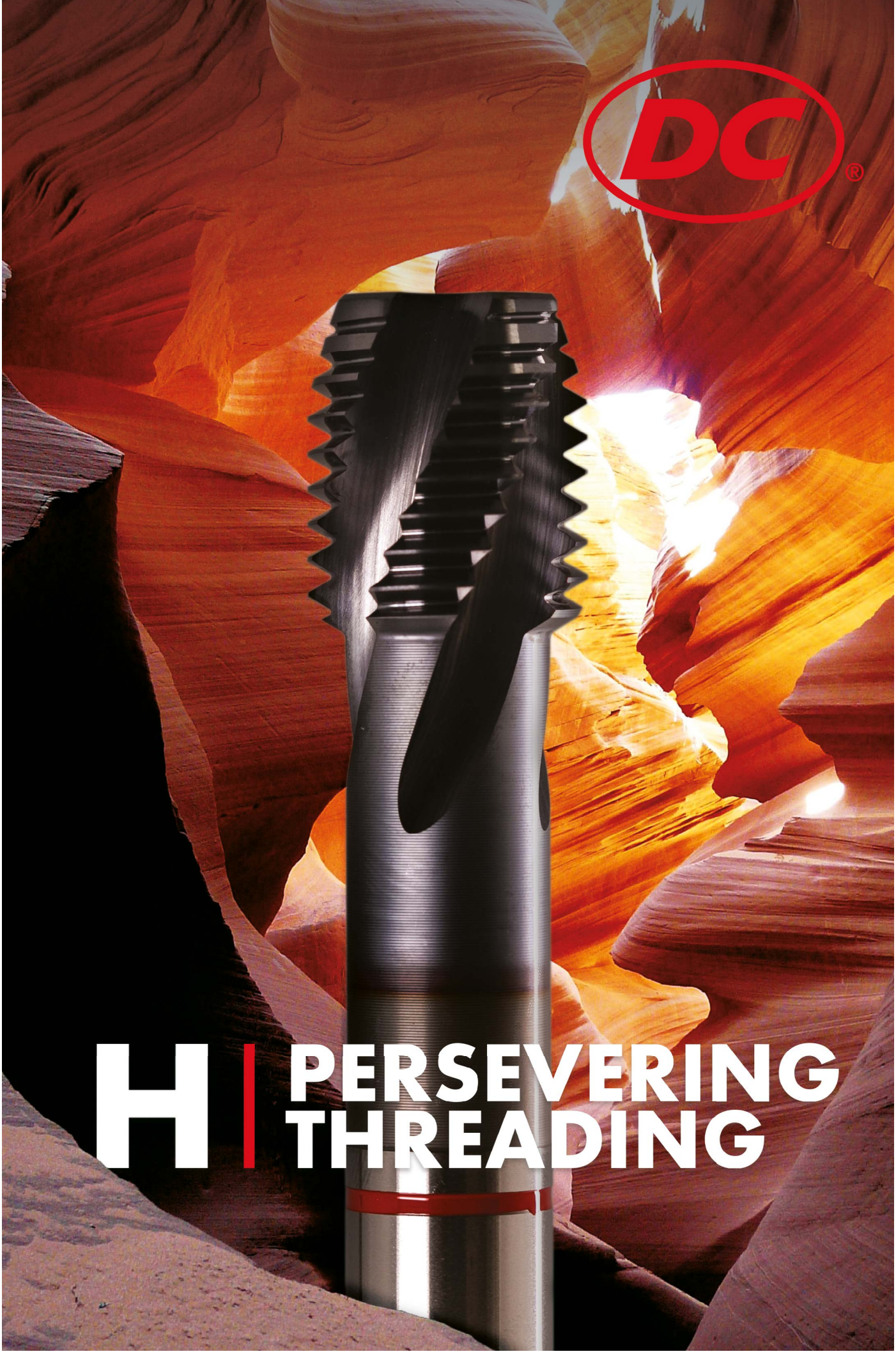
	CMS50	CMS50VS		
				
				
				

CMS50 R12 — 62 63 93

CMS50VS R12 VS — 31 62 63 73 74 83 93



Ø d_1 SL	P mm	l_1 mm	l_2 mm	d_2 h5 mm			ID	ID
0.3	0.06	32	1.1	1.5	3	0.27	600097	600226
0.35	0.06	32	1.3	1.5	3	0.32	600098	600227
0.4	0.08	32	1.5	1.5	3	0.36	600099	600228
0.5	0.1	32	1.8	1.5	3	0.46	600039	600229
0.6	0.125	32	2.2	1.5	3	0.55	600040	600230
0.7	0.15	32	2.6	1.5	3	0.64	600041	600231
0.8	0.15	32	3	1.5	3	0.74	600042	600232
0.9	0.175	32	3.3	1.5	3	0.83	600043	600233
1	0.2	32	3.7	2	3	0.92	600044	600234
1.2	0.2	32	4.5	2	3	1.12	600045	600235
1.4	0.25	32	5.2	2	3	1.3	600046	600236


DC
H | PERSEVERING THREADING

GEWINDEFORMER NANO
THREAD FORMERS NANO

DC -Anwendungsgruppen

DC Material classification

	Werkstoff-Gruppen Material groups		*Werkstoffbezeichnung*	Material designation	*Härte* Hardness (HB)	*Festigkeit* Tensile strength Rm (N/mm²)	*Dehnung* Elongation A (%)
10	*Stahl* Steels	11	*Automatenstahl*	Free-cutting steels	< 200	< 700	< 10
		12	*Baustahl, Einsatzstahl*	Structural, cementation steels	< 200	< 700	< 30
		13	*Kohlenstoffstahl*	Carbon steels	< 300	< 1000	< 20
		14	*Stahl legiert < 850 N/mm²*	Alloy steels < 850 N/mm²	< 250	< 850	< 30
		15	*Stahl legiert / vergütet > 850 - < 1150 N/mm²*	Alloy steels hard. / temp. > 850 - < 1150 N/mm²	> 250	> 850	< 30
		16	*Hochfester Stahl ≤ 44 HRC*	High tensile alloy steels ≤ 44 HRC	> 250	> 850	< 12
		17	*Stahl vergütet > 44 - ≤ 54 HRC*	Alloy steels tempered > 44 - ≤ 54 HRC	> 410	> 1400	< 2
		18	*Stahl gehärtet > 54 - ≤ 63 HRC*	Alloy steels hardened > 54 - ≤ 63 HRC	> 560	> 1980	< 2
20	*Rostfreier Stahl* Stainless steels	21	*Rostfreier Stahl, geschwefelt*	Free machining stainless steels	< 250	< 850	< 25
		22	*Austenitisch*	Austenitic stainless steels	< 250	< 850	> 20
		23	*Ferritisch, martensitisch < 850 N/mm²*	Ferritic and martensitic < 850 N/mm²	< 250	< 850	> 20
		24	*Ferritisch, martensitisch > 850 - < 1150 N/mm²*	Ferritic and martensitic > 850 - < 1150 N/mm²	> 250	> 850	> 15
30	*Guss* Cast iron	31	*Grauguss*	Cast iron	< 250	< 850	< 10
		32	*Kugelgraphitguss, Temperguss*	Spheroidal graphite + malleable cast iron	< 250	< 850	> 10
40	*Titan* Titanium	41	*Reintitan*	Pure titanium	< 250	< 850	> 20
		42	*Titanlegierung*	Titanium alloys	> 250	> 850	< 20
50	*Nickel* Nickel	51	*Nickellegierung 1 ≤ 850 N/mm²*	Nickel alloys 1 ≤ 850 N/mm²	< 250	< 850	> 25
		52	*Nickellegierung 2 > 850 - ≤ 1150 N/mm²*	Nickel alloys 2 > 850 - ≤ 1150 N/mm²	> 250	> 850	< 25
		53	*Nickellegierung 3 > 1150 - ≤ 1600 N/mm²*	Nickel alloys 3 > 1150 - ≤ 1600 N/mm²	> 340	> 1150	< 20
60	*Kupfer* Copper	61	*Reinkupfer (Elektrolytkupfer)*	Pure copper (electrolytic copper)	< 120	< 400	> 12
		62	*Messing, Bronze, Rotguss (kurzspanend)*	Short chip brass, phosphor bronze, gun metal	< 200	< 700	< 12
		63	*Messing (langspanend)*	Long chip brass	< 200	< 700	> 12
		64	*Messing bleifrei*	Lead free brass	< 220	< 700	> 15
70	*Aluminium Magnesium* Aluminium Magnesium	71	*Al unlegiert*	Al unalloyed	< 100	< 350	> 15
		72	*Al legiert Si < 1.5 %*	Al alloyed Si < 1.5 %	< 150	< 500	> 15
		73	*Al legiert Si > 1.5 % - < 10 %*	Al alloyed Si > 1.5 % - < 10 %	< 120	< 400	< 15
		74	*Al legiert Si > 10 %, Mg-Legierungen*	Al alloyed Si > 10 %, Mg-alloys	< 120	< 400	< 10
80	*Kunststoff* Plastic compounds	81	*Thermoplaste*	Thermoplastics	-	-	-
		82	*Duroplaste*	Duroplastics	-	-	-
		83	*Faserverstärkte Kunststoffe*	Glass fibre reinforced plastics	-	-	-
90	*Edelmetalle* Precious metals	91	*Gelbgold*	Yellow gold	-	-	-
		92	*Rotgold*	Red gold	-	-	-
		93	*Weissgold*	White gold	-	-	-
		94	*Silber*	Silver	-	-	-

Optimal mit Schneidöl Optimal with cutting oil

Geeignet mit Schneidöl Suitable with cutting oil

Optimal mit Emulsion Optimal with emulsion

Geeignet mit Emulsion Suitable with emulsion

GEWINDEFORMER NANO — THREAD FORMERS NANO

CLASSIC SYNCHRO

Ab Seite: From page:
M
MF
UNC
UNF
S
SF
SL

	Vc (m/min) Guide Line Ø 0.3 - 1.4 mm Beschichtet Coated	Ø 1.4 - 2.8 mm Beschichtet Coated	FA Normale Werkstoffe Normal materials FA80VS	FA83VS	CFA Nichteisen-Metalle Non-ferrous materials CFA80VS	CFA83VS	
			363	363	370	370	
			364	364			
			365	365	371	371	
			366	366	372	372	
			367	367	373	373	
			368	368			
			369	369			
							
			FA80VS	FA83VS	CFA80VS	CFA83VS	
11	4 - 10	12 - 20	O E	O E			11
12	4 - 10	12 - 20	O E	O E			12
13	4 - 10	12 - 20	O E	O E			13
14	4 - 10	12 - 20	O E	O E			14
15	3 - 6	6 - 12	O	O			15
16							16
17							17
18							18
21	4 - 10	12 - 20	O E	O E			21
22	3 - 6	6 - 12	O E	O E			22
23	3 - 6	6 - 12	O E	O E			23
24	3 - 6	6 - 12	O	O			24
31							31
32							32
41							41
42							42
51	3 - 6	6 - 12	O	O			51
52							52
53							53
61	4 - 10	12 - 20	O E	O E			61
62	4 - 10	12 - 20			O E	O E	62
63	4 - 10	12 - 20	O E	O E	O E	O E	63
64	4 - 10	12 - 20	O E	O E			64
71	4 - 10	12 - 20	O E	O E			71
72	4 - 10	12 - 20	O E	O E			72
73	4 - 10	12 - 20	O E	O E			73
74							74
81							81
82							82
83							83
91	4 - 10	12 - 20	O E	O E	O E	O E	91
92	4 - 10	12 - 20	O E	O E	O E	O E	92
93	4 - 10	12 - 20					93
94	4 - 10	12 - 20	O E	O E	O E	O E	94

A *Optimal mit Luft* Optimal with air

A *Geeignet mit Luft* Suitable with air

Bedingt geeignet Limited

Bei den oben aufgeführten Daten handelt es sich um Richtwerte. The indicated values are a guideline.

Inhaltsverzeichnis — Maschinengewindeformer nano
Directory — Machine thread formers nano

CLASSIC SYNCHRO

				FA		CFA	
Merkmale **Characteristics**				VS E 1.5 x P	VS C 2.5 x P	VS E 1.5 x P	VS C 2.5 x P
							
Lochart **Hole type**				< 2.5 x D	< 2.5 x D	< 2.5 x D	< 2.5 x D
				**FA80VS**	**FA83VS**	**CFA80VS**	**CFA83VS**
M	**4HX / 6HX**	**ISO DIN 14 ISO DIN 13**	**DC ~DIN 371**	363	363	370	370
MF	**4HX / 6HX**	**ISO DIN 13**	**DC ~DIN 371**	364	364		
UNC	**2BX**	**ASME B1.1**	**DC ~DIN 371**	365	365	371	371
	3BX	**ASME B1.1**	**DC ~DIN 371**	365	365		
UNF	**2BX**	**ASME B1.1**	**DC ~DIN 371**	366	366	372	372
	3BX	**ASME B1.1**	**DC ~DIN 371**	366	366		
S	**NIHS**	**NIHS 06 - 10**	**DC**	367	367	373	373
SF	**NIHS**	**NIHS 06-10 Fine Thread**	**DC**	368	368		
SL	**Safelock**	**SL 15 - 01**	**DC**	369	369		

M ISO DIN 13 ISO DIN 14

CLASSIC SYNCHRO

PM

DC – DIN 371

FA

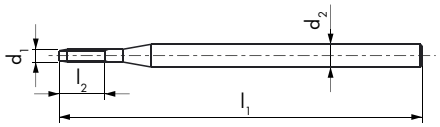
FA80VS	FA83VS		

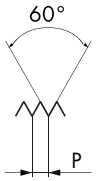
FA80VS VS

FA83VS VS

11 12 13 14 15
21 22 23 24 51
61 63 64 71 72
73 91 92 94

< 2.5 x D < 2.5 x D



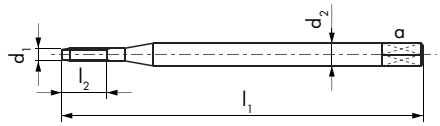


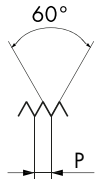
E 1.5 x P C 2.5 x P

4HX 4HX

Ø d_1 M	P mm	l_1 mm	l_2 mm	d_2 mm		ID	ID
0.5	0.125	25	1.5	2	Δ0.44	● 161750	● 173719
0.6	0.15	25	1.8	2	Δ0.53	● 152412	● 173720
0.7	0.175	25	2.1	2	Δ0.62	● 152415	● 173721
0.8	0.2	25	2.4	2	Δ0.71	● 152418	● 173722
0.9	0.225	25	2.7	2	Δ0.8	● 152421	● 173723
1	0.25	40	3	2.5	Δ0.88	● 151559	● 173729
1.2	0.25	40	3.6	2.5	Δ1.08	● 151565	● 173730
1.4	0.3	40	4.2	2.5	Δ1.25	● 152429	● 173731

Δ Tol. = +0/0.02 mm





6HX 6HX

Ø d_1 M	P mm	l_1 mm	l_2 mm	d_2 mm	a mm		ID	ID
1.6	0.35	40	4.8	2.5		Δ1.45	● 152433	● 193801
1.8	0.35	40	5.4	2.5		Δ1.65	● 193764	● 193802
2	0.4	45	8	2.8	2.1	Δ1.8	● 151566	● 193803
2.3	0.4	45	9	2.8	2.1	Δ2.1	● 193765	● 193804
2.5	0.45	50	10	2.8	2.1	Δ2.3	● 193766	● 193805
2.6	0.45	50	10	2.8	2.1	Δ2.4	● 193767	● 193806

Δ Tol. = +0/0.02 mm

MF ISO DIN 13

CLASSIC SYNCHRO

PM

DC – DIN 371

FA

FA80VS	FA83VS		

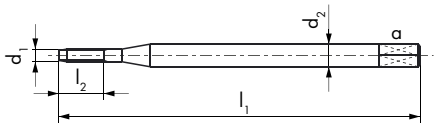
FA80VS

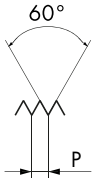
VS

FA83VS

VS

11 12 13 14 15
21 22 23 24 51
61 63 64 71 72
73 91 92 94





E 1.5 x P

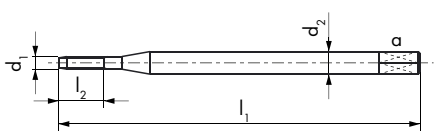
C 2.5 x P

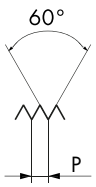
4HX

4HX

Ø d_1 MF	P mm	l_1 mm	l_2 mm	d_2 mm	a mm		ID	ID
1.4	0.2	40	4.2	2.5		Δ 1.31	155928	180436
1.6	0.2	40	4.8	2.5		Δ 1.51	156480	193807
1.8	0.2	40	5.4	2.5		Δ 1.71	193768	193808
2	0.2	45	6	2.8	2.1	Δ 1.91	193769	193809
2	0.25	45	6	2.8	2.1	Δ 1.88	193770	193810
2.2	0.2	45	6.6	2.8	2.1	Δ 2.11	193771	193811
2.2	0.25	45	6.6	2.8	2.1	Δ 2.08	193772	193812
2.3	0.2	45	6.9	2.8	2.1	Δ 2.21	193773	193813
2.3	0.25	45	6.9	2.8	2.1	Δ 2.18	193774	193814
2.5	0.2	50	7.5	2.8	2.1	Δ 2.41	193775	193815
2.5	0.25	50	7.5	2.8	2.1	Δ 2.38	193776	193816

Δ Tol. = +0/0.02 mm





6HX

6HX

Ø d_1 MF	P mm	l_1 mm	l_2 mm	d_2 mm	a mm		ID	ID
2.5	0.35	50	7.5	2.8	2.1	Δ 2.35	193777	193817
2.6	0.35	50	7.8	2.8	2.1	Δ 2.45	193778	193818

Δ Tol. = +0/0.02 mm

UNC ASME B1.1

CLASSIC SYNCHRO

PM

DC – DIN 371

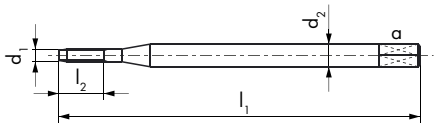
FA

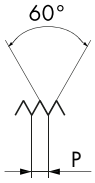
FA80VS	FA83VS		

FA80VS — VS

FA83VS — VS

11 12 13 14 15
21 22 23 24 51
61 63 64 71 72
73 91 92 94



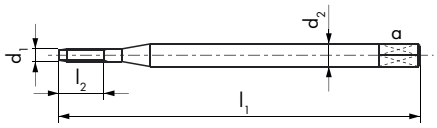


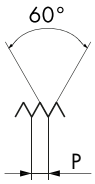
E 1.5 x P — C 2.5 x P

2BX — 2BX

Ø d_1 UNC	P TPI	d_1 mm	l_1 mm	l_2 mm	d_2 mm	a mm		ID	ID
1	64	1.85	40	5.6	2.5		Δ1.65	● 193779	● 193819
2	56	2.18	45	9	2.8	2.1	Δ2	● 193780	● 193820
3	48	2.51	50	10	2.8	2.1	Δ2.25	● 193781	● 193821

Δ Tol. = +0/0.02 mm





3BX — 3BX

Ø d_1 UNC	P TPI	d_1 mm	l_1 mm	l_2 mm	d_2 mm	a mm		ID	ID
1	64	1.85	40	5.6	2.5		Δ1.65	● 193782	● 193822
2	56	2.18	45	9	2.8	2.1	Δ2	● 193783	● 193823
3	48	2.51	50	10	2.8	2.1	Δ2.25	● 193784	● 193824

Δ Tol. = +0/0.02 mm

UNF ASME B1.1

CLASSIC SYNCHRO

PM

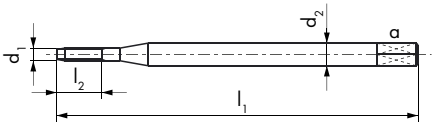
DC – DIN 371

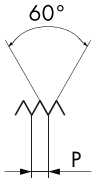
FA

FA80VS	FA83VS		
			
			

FA80VS  VS

FA83VS  VS



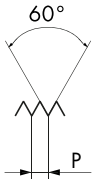


E 1.5 x P — C 2.5 x P

2BX — 2BX

Ø d_1 UNF	P TPI	d_1 mm	l_1 mm	l_2 mm	d_2 mm	a mm		ID	ID
0	80	1.52	40	4.6	2.5		Δ1.4	● 193785	● 193825
1	72	1.85	40	5.6	2.5		Δ1.7	● 193786	● 193826
2	64	2.18	45	9	2.8	2.1	Δ2	● 193787	● 193827
3	56	2.51	50	10	2.8	2.1	Δ2.3	● 193788	● 193828

Δ Tol. = +0/0.02 mm



3BX — 3BX

Ø d_1 UNF	P TPI	d_1 mm	l_1 mm	l_2 mm	d_2 mm	a mm		ID	ID
0	80	1.52	40	4.6	2.5		Δ1.4	● 193789	● 193829
1	72	1.85	40	5.6	2.5		Δ1.7	● 193790	● 193830
2	64	2.18	45	9	2.8	2.1	Δ2	● 193791	● 193831
3	56	2.51	50	10	2.8	2.1	Δ2.3	● 193792	● 193832

Δ Tol. = +0/0.02 mm

S NIHS 06-10

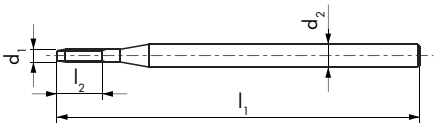
CLASSIC SYNCHRO PM DC

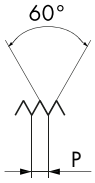
FA

FA80VS	FA83VS		

FA80VS  VS

FA83VS  VS





NIHS NIHS

Ø d_1 S	P mm	l_1 mm	l_2 mm	d_2 mm		ID	ID
0.5	0.125	25	1.5	2	Δ 0.44	● 158977	● 173724
0.6	0.15	25	1.8	2	Δ 0.53	● 151561	● 173725
0.7	0.175	25	2.1	2	Δ 0.62	● 151742	● 173726
0.8	0.2	25	2.4	2	Δ 0.71	● 151564	● 173727
0.9	0.225	25	2.7	2	Δ 0.8	● 151562	● 173728
1	0.25	40	3.0	2.5	Δ 0.88	● 151542	● 173732
1.2	0.25	40	3.6	2.5	Δ 1.08	● 151543	● 173733
1.4	0.3	40	4.2	2.5	Δ 1.25	● 152427	● 173734

Δ **Tol. =** +0/0.02 mm

SF

NIHS 06-10 Fine Thread

CLASSIC | SYNCHRO | PM | DC – DIN 371

FA

	FA80VS	FA83VS		
				
				

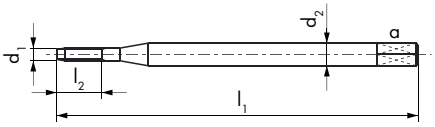
FA80VS

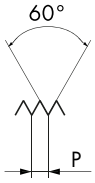
VS

FA83VS

VS

11 12 13 14 15
21 22 23 24 51
61 63 64 71 72
73 91 92 94





	E 1.5 x P	C 2.5 x P
	NIHS	NIHS

Ø d_1 SF	P mm	l_1 mm	l_2 mm	d_2 mm	a mm		ID	ID
1.4	0.2	40	4.2	2.5		Δ1.31	176180	193793
1.6	0.2	40	4.8	2.5		Δ1.51	193757	193794
1.8	0.2	40	5.4	2.5		Δ1.71	193758	193795
2	0.2	45	6	2.8	2.1	Δ1.91	193759	193796
2.2	0.2	45	6.6	2.8	2.1	Δ2.11	193760	193797
2.2	0.25	45	6.6	2.8	2.1	Δ2.08	193761	193798
2.5	0.2	50	7.5	2.8	2.1	Δ2.41	193762	193799
2.5	0.25	50	7.5	2.8	2.1	Δ2.38	193763	193800

Δ Tol. = +0/0.02 mm

SL

SL 15-01

Micro Safelock®

CLASSIC | SYNCHRO

PM

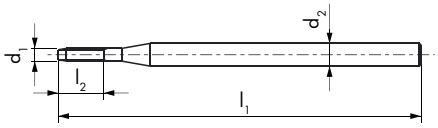
DC

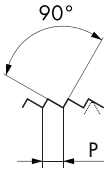
FA

	FA80VS	FA83VS		
				
				
				

FA80VS

FA83VS





Ø d_1 SL	P mm	l_1 mm	l_2 mm	d_2 mm	ID	ID
0.5	0.1	25	1.5	2	600049	600100
0.6	0.125	25	1.8	2	600050	600101
0.7	0.15	25	2.1	2	600051	600102
0.8	0.15	25	2.4	2	600052	600103
0.9	0.175	25	2.7	2	600053	600104
1	0.2	40	3	2.5	600054	600105
1.2	0.2	40	3.6	2.5	600055	600106
1.4	0.25	40	4.2	2.5	600056	600107

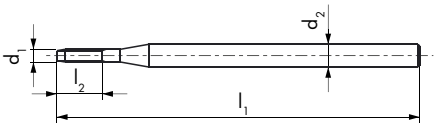
CFA

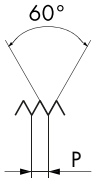
CFA80VS	CFA83VS		


CFA80VS VS

62 63 91 92 94

CFA83VS VS

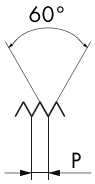




4HX 4HX

Ø d_1 M	P mm	l_1 mm	l_2 mm	d_2h5 mm		ID	ID
0.5	0.125	32	1.5	1.5	Δ0.44	● 171771	● 193611
0.6	0.15	32	1.8	1.5	Δ0.53	● 171773	● 193612
0.7	0.175	32	2.1	1.5	Δ0.62	● 171775	● 193613
0.8	0.2	32	2.4	1.5	Δ0.71	● 171777	● 193614
0.9	0.225	32	2.7	1.5	Δ0.8	● 171779	● 193615
1	0.25	32	3	2	Δ0.88	● 171782	● 193616
1.2	0.25	32	3.6	2	Δ1.08	● 171783	● 193617
1.4	0.3	32	4.2	2	Δ1.25	● 171785	● 193618

Δ Tol. = +0/0.02 mm



6HX 6HX

Ø d_1 M	P mm	l_1 mm	l_2 mm	d_2h5 mm		ID	ID
1.6	0.35	32	4.8	2	Δ1.45	● 193590	● 193619
1.8	0.35	32	5.4	2	Δ1.65	● 193591	● 193620
2	0.4	39	8	3	Δ1.8	● 193592	● 193621
2.3	0.4	39	9	3	Δ2.1	● 193593	● 193622
2.5	0.45	39	10	3	Δ2.3	● 193594	● 193623
2.6	0.45	39	10	3	Δ2.4	● 193595	● 193624

Δ Tol. = +0/0.02 mm

UNC ASME B1.1

CLASSIC SYNCHRO

VHM CAR

DC

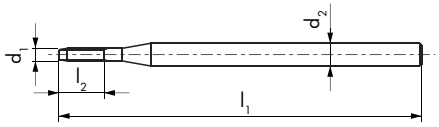
CFA

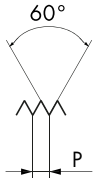
	CFA80VS	CFA83VS		
				
				
				
	2BX	2BX		

CFA80VS VS

62 63 91 92 94

CFA83VS VS





Ø d_1 UNC	P TPI	d_1 mm	l_1 mm	l_2 mm	d_2 h5 mm		ID	ID
1	64	1.85	32	5.5	2	Δ 1.65	● 193596	● 193625
2	56	2.18	39	8.6	3	Δ 2	● 193597	● 193626
3	48	2.51	39	10	3	Δ 2.25	● 193598	● 193627

Δ Tol. = +0/0.02 mm

UNF ASME B1.1

CLASSIC SYNCHRO

VHM CAR

DC

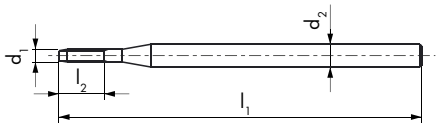
CFA

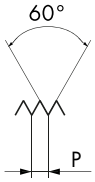
CFA80VS	CFA83VS		
			

CFA80VS  VS

62 63 91 92 94

CFA83VS  VS





Ø d_1 UNF	P TPI	d_1 mm	l_1 mm	l_2 mm	d_2h5 mm		CFA80VS ID	CFA83VS ID
0	80	1.52	32	4.5	2	Δ1.4	● 193599	● 193628
1	72	1.85	32	5.5	2	Δ1.7	● 193600	● 193629
2	64	2.18	39	8.6	3	Δ2	● 193601	● 193630
3	56	2.51	39	10	3	Δ2.3	● 193602	● 193631

Δ Tol. = +0/0.02 mm

S NIHS 06-10

CLASSIC | SYNCHRO | VHM CAR | DC

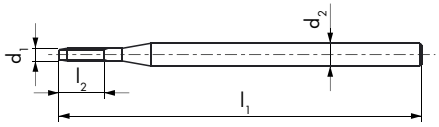
CFA

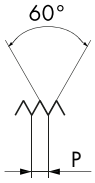
	CFA80VS	CFA83VS		
				
				

CFA80VS  VS

62 63 91 92 94

CFA83VS  VS





						E 1.5 x P	C 2.5 x P
						NIHS	NIHS
Ø d_1 S	P mm	l_1 mm	l_2 mm	d_2 h5 mm		ID	ID
0.5	0.125	32	1.5	1.5	Δ 0.44	● 171770	● 193603
0.6	0.15	32	1.8	1.5	Δ 0.53	● 171772	● 193604
0.7	0.175	32	2.1	1.5	Δ 0.62	● 171774	● 193605
0.8	0.2	32	2.4	1.5	Δ 0.71	● 171776	● 193606
0.9	0.225	32	2.7	1.5	Δ 0.8	● 171778	● 193607
1	0.25	32	3	2	Δ 0.88	● 171780	● 193608
1.2	0.25	32	3.6	2	Δ 1.08	● 171781	● 193609
1.4	0.3	32	4.2	2	Δ 1.25	● 171784	● 193610

Δ Tol. = +0/0.02 mm