
KIMU

External threading - Filetage extérieur - Außen-Gewindedrehen

SXAN 90°

08 ER/L..
11 ER/L..
16 ER/L..
22 ER/L..

Page G.03

STAN 90°

16 ER/L..
22 ER/L..
27 ER/L..

Page G.03

CTAN 90°

16 ER/L..
22 ER/L..
27 ER/L..

Page G.03

SXGN 90°

R/L 166G-3..
R/L 166G-4..

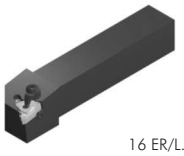
Page G.04

STXN 90°

16 ER/L..
22 ER/L..
27 ER/L..

Page G.04

CTXN 90°



16 ER/L..
22 ER/L..
27 ER/L..

Page G.04

STCN 90°

TNMC 1603..
TNMC 1603..
TNMC 2204..
TNMC 2204..

Page G.05

CXAP 90°

R/L 166-3..
R/L 166-4..

Page G.05

Internal threading - Filetage intérieur - Innen-Gewindedrehen

SXFN 90°

11 NR/L..
22 NR/L..

Page G.06

STXN 90°

16 NR/L..
22 NR/L..
27 NR/L..

Page G.07

CTXN 90°

16 NR/L..
22 NR/L..
27 NR/L..

Page G.07

STGN 90°

TNMC 1603..
TNMC 2204..

Page G.07

STGP 90°

TPMC 1603..
TPMC 2204..

Page G.08

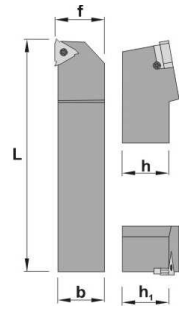
CXFP 90°

R/L 166-2..
R/L 166-3..
R/L 166-4..

Page G.08

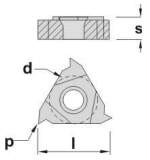
SXAN 90°

REF.	h-h1	b	L	f	ER/L					
SXAN R/L 0808 M08	8	8	150	8	08	125	507	-	-	-
SXAN R/L 1010 M08	10	10	150	10	08	125	507	-	-	-
SXAN R/L 1212 M11	12	12	150	12	11	125	507	-	-	-
SXAN R/L 1616 H16	16	16	100	16	16	133	515	436	435	203
SXAN R/L 1616 M16	16	16	150	16	16	133	515	436	435	203
SXAN R/L 2020 K16	20	20	125	20	16	133	515	436	435	203
SXAN R/L 2525 M16	25	25	150	25	16	133	515	436	435	203
SXAN R/L 3232 P16	32	32	170	32	16	133	515	436	435	203
SXAN R/L 2525 M22	25	25	150	25	22	141	515	343	346	204
SXAN R/L 3232 P22	32	32	170	32	22	141	515	343	346	204

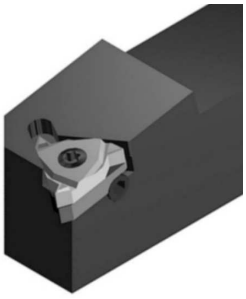


REF.	l	d
08 ER/L..	8,00	4,76
11 ER/L..	11,00	6,35
16 ER/L..	16,00	9,52
22 ER/L..	22,00	12,70

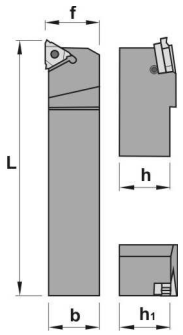
For more information see page: A.59



STAN 90°

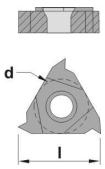


REF.	h-h1	b	L	f	ER/L					
STAN R/L 1616 H16	16	16	100	16	16	SA3	530	YE3	YI3	SY3
STAN R/L 2020 K16	20	20	125	20	16	SA3	530	YE3	YI3	SY3
STAN R/L 2525 M16	25	25	150	25	16	SA3	530	YE3	YI3	SY3
STAN R/L 3232 P16	32	32	170	32	16	SA3	530	YE3	YI3	SY3
STAN R/L 2525 M22	25	25	150	25	22	SA4	520	YE4	YI4	SY4
STAN R/L 3232 P22	32	32	170	32	22	SA4	520	YE4	YI4	SY4
STAN R/L 4040 R22	40	40	200	40	22	SA4	520	YE4	YI4	SY4
STAN R/L 3232 P27	32	32	170	32	27	SA5	552	YE5	YI5	SY5
STAN R/L 4040 R27	40	40	200	40	27	SA5	552	YE5	YI5	SY5
STAN R/L 5050 S27	50	50	250	50	27	SA5	552	YE5	YI5	SY5

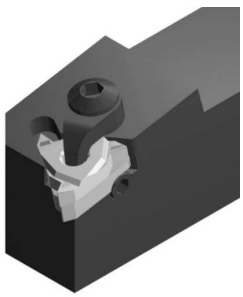


REF.	l	d
16 ER/L..	16,00	9,52
22 ER/L..	22,00	12,70
27 ER/L..	27,50	15,88

For more information see page: A.59

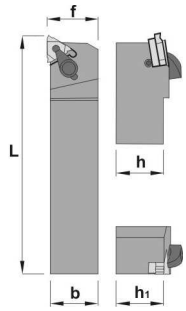


CTAN 90°



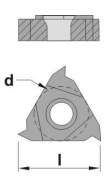
REF.	h-h1	b	L	f	ER/L					
CTAN R/L 2020 K16	20	20	125	20	16	214	515	YE3	YI3	SY3	SA3
CTAN R/L 2525 M16	25	25	150	25	16	214	515	YE3	YI3	SY3	SA3
CTAN R/L 3232 P16	32	32	170	32	16	214	515	YE3	YI3	SY3	SA3
CTAN R/L 2525 M22	25	25	150	25	22	215	515	YE4	YI4	SY4	SA4
CTAN R/L 3232 P22	32	32	170	32	22	215	515	YE4	YI4	SY4	SA4
CTAN R/L 4040 R22	40	40	200	40	22	215	515	YE4	YI4	SY4	SA4
CTAN R/L 3232 P27	32	32	170	32	27	217	552	YE5	YI5	SY5	SA5
CTAN R/L 4040 R27	40	40	200	40	27	217	552	YE5	YI5	SY5	SA5
CTAN R/L 5050 S27	50	50	250	50	27	217	552	YE5	YI5	SY5	SA5

Optional



REF.	l	d
16 ER/L..	16,00	9,52
22 ER/L..	22,00	12,70
27 ER/L..	27,50	15,88

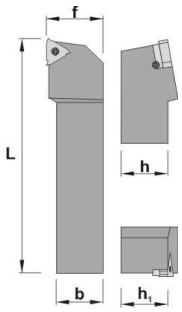
For more information see page: A.59



KIMU

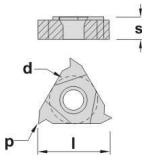
SXGN 90°

REF.	h-h1	b	L	f	ER/L					
SXGN R/L 1212 F16	12	12	80	16	16	133	515	436	435	203
SXGN R/L 1616 H16	16	16	100	20	16	133	515	436	435	203
SXGN R/L 2020 K16	20	20	125	25	16	133	515	436	435	203
SXGN R/L 2525 M16	25	25	150	32	16	133	515	436	435	203
SXGN R/L 3232 P16	32	32	170	40	16	133	515	436	435	203
SXGN R/L 2525 M22	25	25	150	32	22	141	515	343	346	204
SXGN R/L 3232 P22	32	32	170	40	22	141	515	343	346	204

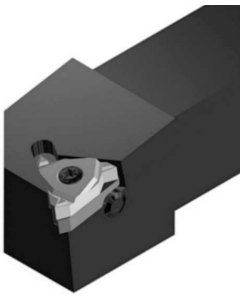


REF.	l	d
16 ER/L..	16,00	9,52
22 ER/L..	22,00	12,70

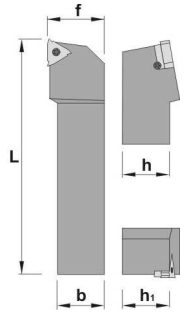
For more information see page: A.59



STXN 90°

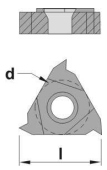


REF.	h-h1	b	L	f	ER/L					
STXN R/L 1212 F16	12	12	80	16	16	SA3	530	YE3	YI3	SY3
STXN R/L 1616 H16	16	16	100	20	16	SA3	530	YE3	YI3	SY3
STXN R/L 2020 K16	20	20	125	25	16	SA3	530	YE3	YI3	SY3
STXN R/L 2525 M16	25	25	150	25	16	SA3	530	YE3	YI3	SY3
STXN R/L 3232 P16	32	32	170	40	16	SA3	530	YE3	YI3	SY3
STXN R/L 2525 M22	25	25	150	32	22	SA4	520	YE4	YI4	SY4
STXN R/L 3232 P22	32	32	170	40	22	SA4	520	YE4	YI4	SY4
STXN R/L 4040 R22	40	40	200	50	22	SA4	520	YE4	YI4	SY4
STXN R/L 2525 M27	25	25	150	32	27	SA5	552	YE5	YI5	SY5
STXN R/L 3232 P27	32	32	170	40	27	SA5	552	YE5	YI5	SY5
STXN R/L 4040 R27	40	40	200	50	27	SA5	552	YE5	YI5	SY5
STXN R/L 5050 S27	50	50	250	60	27	SA5	552	YE5	YI5	SY5



REF.	l	d
16 ER/L..	16,00	9,52
22 ER/L..	22,00	12,70
27 ER/L..	27,50	15,88

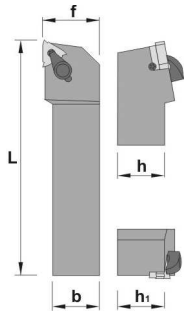
For more information see page: A.59



CTXN 90°

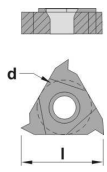
REF.	h-h1	b	L	f	ER/L						
CTXN R/L 1212 F16	12	12	80	16	16	214	515	YE3	YI3	SY3	SA3
CTXN R/L 1616 H16	16	16	100	20	16	214	515	YE3	YI3	SY3	SA3
CTXN R/L 2020 K16	20	20	125	25	16	214	515	YE3	YI3	SY3	SA3
CTXN R/L 2525 M16	25	25	150	32	16	214	515	YE3	YI3	SY3	SA3
CTXN R/L 3232 P16	32	32	170	40	16	214	515	YE3	YI3	SY3	SA3
CTXN R/L 2525 M22	25	25	150	32	22	215	515	YE4	YI4	SY4	SA4
CTXN R/L 3232 P22	32	32	170	40	22	215	515	YE4	YI4	SY4	SA4
CTXN R/L 4040 R22	40	40	200	50	22	215	515	YE4	YI4	SY4	SA4
CTXN R/L 2525 M27	25	25	150	32	27	217	552	YE5	YI5	SY5	SA5
CTXN R/L 3232 P27	32	32	170	40	27	217	552	YE5	YI5	SY5	SA5
CTXN R/L 4040 R27	40	40	200	50	27	217	552	YE5	YI5	SY5	SA5
CTXN R/L 5050 S27	50	50	250	60	27	217	552	YE5	YI5	SY5	SA5

Optional

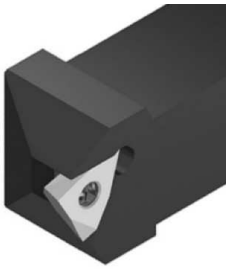


REF.	l	d
16 ER/L..	16,00	9,52
22 ER/L..	22,00	12,70
27 ER/L..	27,50	15,88

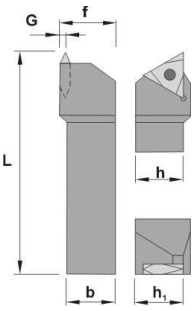
For more information see page: A.59

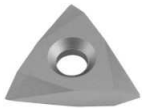


STCN 90°



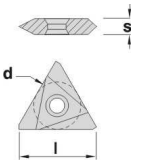
REF.	h-h1	b	L	f	G	T..MC					
STCN R/L 1212 F16	12	12	80	16	1,59	1603..	166	211	198	503	502
STCN R/L 1616 H16	16	16	100	19	1,59	1603..	166	211	198	503	502
STCN R/L 2020 K16	20	20	125	22	1,59	1603..	166	211	198	503	502
STCN R/L 2525 M16	25	25	150	32	1,59	1603..	166	211	198	503	502
STCN R/L 3232 P16	32	32	170	38	1,59	1603..	166	211	198	503	502
STCN R/L 2020 K22	20	20	125	22	2,38	2204..	166	211	197	503	525
STCN R/L 2525 M22	25	25	150	32	2,38	2204..	166	211	197	503	525
STCN R/L 3225 P22	32	25	170	32	2,38	2204..	166	211	197	503	525
STCN R/L 3232 P22	32	32	170	38	2,38	2204..	166	211	197	503	525
STCN R/L 2525 M27	25	25	150	32	2,38	2706..	166	211	491	503	503
STCN R/L 3232 P27	32	32	170	38	2,38	2706..	166	211	491	503	503



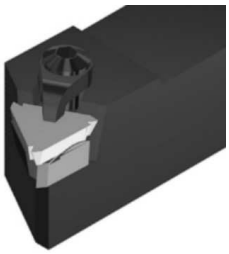


REF.	l	s	d
T..MC 1603..	16,50	3,18	9,52
T..MC 2204..	22,00	4,76	12,70
T..MC 2706..	27,00	6,35	15,80

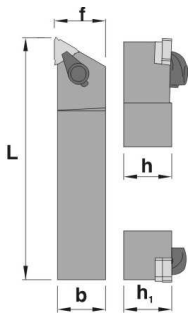
For more information see page: A.65

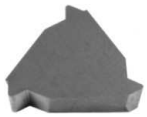


CXAP 90°



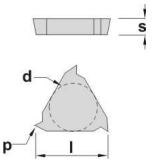
REF.	h-h1	b	L	f	R/L				
CXAP R/L 2016 K16	20	16	125	17	166-3..	229	503	318 R/L	403
CXAP R/L 2020 K16	20	20	125	21	166-3..	229	503	318 R/L	403
CXAP R/L 2525 M16	25	25	150	26	166-3..	229	503	318 R/L	403
CXAP R/L 3225 P16	32	25	170	26	166-3..	229	503	318 R/L	403
CXAP R/L 3232 P16	32	32	170	33	166-3..	229	503	318 R/L	403
CXAP R/L 2525 M22	25	25	150	26	166-4..	231	504	330 R/L	403
CXAP R/L 3225 P22	32	25	170	26	166-4..	231	504	330 R/L	403
CXAP R/L 3232 P22	32	32	170	33	166-4..	231	504	330 R/L	403





REF.	l	s	d
R/L 166G-3..	16,50	3,18	9,52
R/L 166G-4..	22,00	4,76	12,70

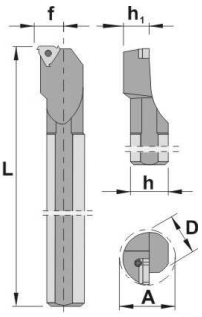
For more information see page: A.65,66



KIMU

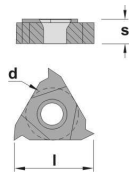
SXFN 90°

REF.	D	h	L	f	A	NR/L					
S10K SXFN R/L 11	10	9	125	7,3	13	11	125	507	-	-	-
S16M SXFN R/L 11	16	15	150	8,9	16	11	125	507	-	-	-
S16M SXFN R/L 16	16	15	150	11,5	20	16	137	530	-	-	-
S20Q SXFN R/L 16	20	18	180	13,4	24	16	447	515	435	436	203
S25S SXFN R/L 16	25	23	250	16,3	29	16	131	515	435	436	203
S32T SXFN R/L 16	32	30	300	19,6	36	16	131	515	435	436	203
S40T SXFN R/L 16	40	37	300	23,8	44	16	131	515	435	436	203
S20Q SXFN R/L 22	20	18	180	15,6	27	22	141	515	-	-	-
S25S SXFN R/L 22	25	23	250	17,2	32	22	141	515	346	343	204
S32T SXFN R/L 22	32	30	300	21,5	39	22	141	515	346	343	204
S40T SXFN R/L 22	40	37	300	25,8	47	22	141	515	346	343	204



REF.	l	d
11 NR/L..	11,00	6,35
16 NR/L..	16,00	9,52
22 NR/L..	22,00	12,70

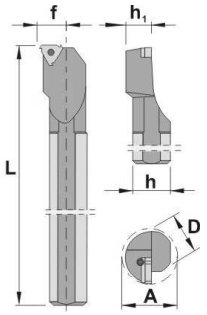
For more information see page: A.60



H-SXFN 90°

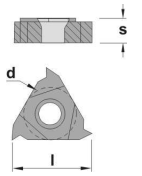
REF.	D	h	L	f	A	NR/L		
H10K SXFN R/L 11	10	4,5	125	7,3	13	11	125	507
H16M SXFN R/L 11	16	7,5	150	8,9	16	11	125	507
H16M SXFN R/L 16	16	7,5	200	11,5	20	16	137	530

Characteristics:
Boring bars with anti-vibration shank.



REF.	l	d
11 NR/L..	11,00	6,35
16 NR/L..	16,00	9,52

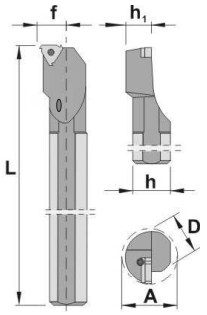
For more information see page: A.60



J-SXFN 90°

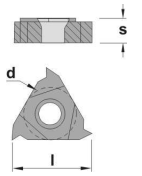
REF.	D	h	L	f	A	NR/L		
J10K SXFN R/L 11	10	4,5	125	7,3	13	11	125	507
J16M SXFN R/L 11	16	7,5	150	8,9	16	11	125	507
J16M SXFN R/L 16	16	7,5	150	11,5	20	16	137	530

Characteristics:
Boring bars with internal coolant and anti-vibration shank.



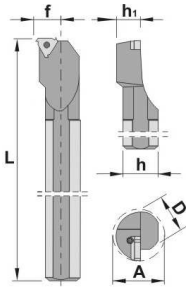
REF.	l	d
11 NR/L..	11,00	6,35
16 NR/L..	16,00	9,52

For more information see page: A.60



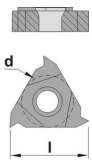
STXN 90°

REF.	D	h	h1	L	f	A	NR/L					
S16M STXN R/L 16	16	15	7,5	150	11,5	20	16	SN3	530	-	-	-
S20Q STXN R/L 16	20	18	9,0	180	13,4	24	16	SN3	530	YI3	YE3	SY3
S25R STXN R/L 16	25	23	11,5	200	16,3	29	16	SA3	530	YI3	YE3	SY3
S32S STXN R/L 16	32	30	15,0	250	19,6	36	16	SA3	530	YI3	YE3	SY3
S40T STXN R/L 16	40	37	18,5	300	23,8	44	16	SA3	530	YI3	YE3	SY3
S20Q STXN R/L 22	20	18	9,0	180	15,6	27	22	SN4	520	-	-	-
S25R STXN R/L 22	25	23	11,5	200	17,2	32	22	SA4	520	YI4	YE4	SY4
S32S STXN R/L 22	32	30	15,0	250	21,5	39	22	SA4	520	YI4	YE4	SY4
S40T STXN R/L 22	40	37	18,5	300	25,8	47	22	SA4	520	YI4	YE4	SY4
S32S STXN R/L 27	32	30	15,0	250	22,4	40	27	SA5	552	YI5	YE5	SY5
S40T STXN R/L 27	40	37	18,5	300	26,4	48	27	SA5	552	YI5	YE5	SY5
S50U STXN R/L 27	50	47	23,5	350	31,4	58	27	SA5	552	YI5	YE5	SY5
S60V STXN R/L 27	60	57	28,5	400	36,4	69	27	SA5	552	YI5	YE5	SY5



REF.	l	d
16 NR/L..	16,00	9,52
22 NR/L..	22,00	12,70
27 NR/L..	27,00	15,87

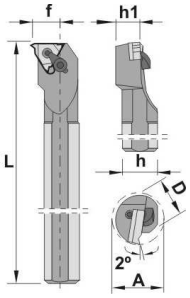
For more information see page: A.60



CTXN 90°

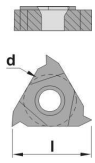
REF.	D	h	h1	L	f	A	NR/L					
S20Q CTXN R/L 16	20	18	9,0	180	13,0	18,0	16	214	515	YI3	YE3	SY3	SN3
S25R CTXN R/L 16	25	23	11,5	200	17,0	22,6	16	214	515	YI3	YE3	SY3	SA3
S32S CTXN R/L 16	32	30	15,0	250	22,0	29,0	16	214	515	YI3	YE3	SY3	SA3
S40T CTXN R/L 16	40	37	18,5	300	27,0	36,0	16	214	515	YI3	YE3	SY3	SA3
S25R CTXN R/L 22	25	23	11,5	200	17,0	22,6	22	215	515	YI4	YE4	SY4	SA4
S32S CTXN R/L 22	32	30	15,0	250	22,0	29,0	22	215	515	YI4	YE4	SY4	SA4
S40T CTXN R/L 22	40	37	18,5	300	27,0	36,0	22	215	515	YI4	YE4	SY4	SA4
S32S CTXN R/L 27	32	30	15,0	250	22,4	40,0	27	217	552	YI5	YE5	SY5	SA5
S40T CTXN R/L 27	40	37	18,5	300	26,4	48,0	27	217	552	YI5	YE5	SY5	SA5
S50U CTXN R/L 27	50	47	23,5	350	31,4	58,0	27	217	552	YI5	YE5	SY5	SA5
S60V CTXN R/L 27	60	58	29,0	400	36,4	69,0	27	217	552	YI5	YE5	SY5	SA5

Optional



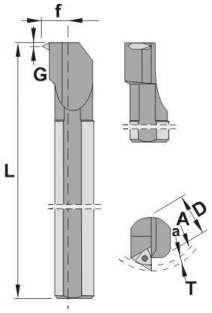
REF.	l	d
16 NR/L..	16,00	9,52
22 NR/L..	22,00	12,70
27 NR/L..	27,00	15,87

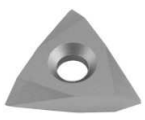
For more information see page: A.60



STGN 90°

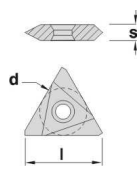
REF.	D	L	f	A	a	T	G	TNMC					
S32U STGN R/L 16	32	350	21,0	50,4	45	2,7	1,59	1603..	198	211	166	503	502
S40V STGN R/L 16	40	400	25,0	60,4	55	2,7	1,59	1603..	193	211	166	503	502
S32U STGN R/L 22	32	350	21,0	78,2	70	4,1	2,38	2204..	197	211	166	503	525
S40V STGN R/L 22	40	400	25,0	78,2	70	4,1	2,38	2204..	197	211	166	503	525
S50W STGN R/L 22	50	450	36,5	78,2	70	4,1	2,38	2204..	197	211	166	503	525
S40V STGN R/L 27	40	400	25,0	60,4	55	6,0	3,18	2704..	491	211	166	503	503
S50W STGN R/L 27	50	450	36,5	78,2	70	6,0	3,18	2704..	491	211	166	503	503





REF.	l	s	d
TNMC 1603..	16,50	3,18	9,52
TNMC 2204..	22,00	4,76	12,70
TNMC 2704..	27,00	4,76	15,88

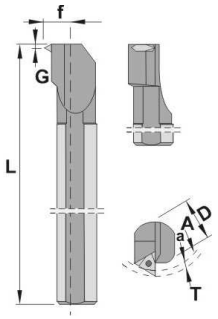
For more information see page: A.65

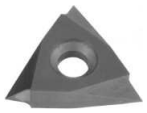


KIMU

STGP 90°

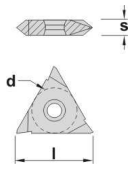
REF.	D	L	f	A	a	T	G	TPMC					
S25T STGP R/L 16	25	300	17,5	50,4	45	2,7	1,59	1603..	198	211	166	503	502
S32U STGP R/L 16	32	350	20,5	50,4	45	2,7	1,59	1603..	198	211	166	503	502
S40V STGP R/L 22	40	400	25,0	78,2	70	4,1	2,38	2204..	197	211	166	503	525
S50W STGP R/L 22	50	450	36,5	78,2	70	4,1	2,38	2204..	197	211	166	503	525





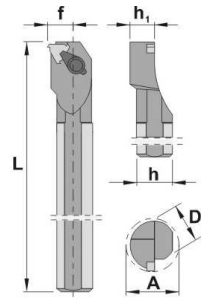
REF.	l	s	d
TPMC 1603..	16,50	3,18	9,52
TPMC 2204..	22,00	4,76	12,70

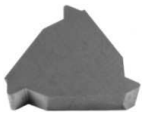
For more information see page: A.65



CXFP 90°

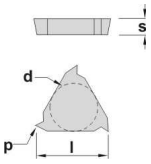
REF.	D	h-h1	L	f	A	R/L		
S16R CXFP R/L 11	16	7,5	200	11	20	166-2..	207	525
S20S CXFP R/L 11	20	9,0	250	13	24	166-2..	207	525
S20S CXFP R/L 16	20	9,0	250	13	24	166-3..	209	503
S25T CXFP R/L 16	25	11,5	300	17	31	166-3..	209	503
S32U CXFP R/L 16	32	15,0	350	22	39	166-3..	229	503
S40V CXFP R/L 22	40	18,5	400	27	38	166-4..	231	504





REF.	l	s	d
R/L 166L-2..	11,00	3,18	6,35
R/L 166L-3..	16,50	3,18	9,52
R/L 166L-4..	22,00	4,76	12,70

For more information see page: A.66



Cutting data

Material	Cutting speed m/min. (Ft/min) Tool grade P25K	K15K	TIC25
Low and medium carbon steel	120-80 (390-260)		250-210 (820-690)
High carbon steel	110-70 (360-230)		210-150 (690-490)
Alloyed tool steel and heat-treatment steels	100-70 (360-230)		180-140 (590-460)
Stainless steels	100-70 (360-230)	90-70 (295-230)	140-110 (460-360)
Cast-iron HB 180-250		90-70 (295-230)	
Non-Ferrous metals		180-120 (590-390)	

N° of passes		
P mm	TPI	N° of passes
0,50	48,0	4 - 6
0,75	32,0	4 - 7
1,00	24,0	4 - 8
1,25	20,0	5 - 9
1,50	16,0	6 - 10
1,75	14,0	7 - 12
2,00	12,0	7 - 12
2,50	10,0	8 - 14
3,00	8,0	10 - 18
3,50	7,0	11 - 18
4,00	6,0	11 - 18
4,50	5,5	11 - 19
5,00	5,0	12 - 20
5,50	4,5	12 - 20
6,00	4,0	12 - 20
8,00	3,0	15 - 24

General recommendations :

- Threading speeds should normally be a minimum of 80% to 90% of turning speeds being used to machine the same component. (Assuming grades are compatible).
- Check helix angle and number of passes shown in charts before starting.
- Ensure centre height is correct.
- When there is a problem consult the following recommendations and change only one variable at time. This will help to be sure of the original problem.
- Do not use flank infeed on work hardening materials.

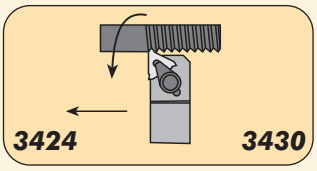
Component problems

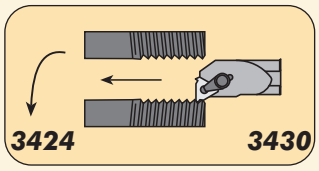
	Problem	*Cause and remedy*
Pitch error (on CNC machines)	★ Starting too close to workpiece ★ Saddle speed towards chuck is excessive	☆ Start cycle further back from workpiece. ☆ Reduce speed by 10% until correct.
Thread torn on one side only	★ Incorrect helix angle in toolholder.	☆ Check helix chart. ☆ Reassemble with correct anvil. ☆ Check centre height.
Thread torn on both sides	★ Running too slow. ★ Built up edge.	☆ Increase cutting speed. ☆ Check center height. ☆ Use coated grade. ☆ Compare thread speed with turning speed.
Long dangerous swarf	★ Incorrect chipbreaker geometry. ★ Incorrect method of infeed.	☆ Use Kimu (TD) chipbreaker. ☆ Use different infeed method.
Vibration chatter marks on both flanks	★ Poor stability. ★ Excessive overhang.	☆ Renew anvil to support insert. ☆ Check tool clamping. ☆ Reduce tool overhang. ☆ Check rigidity of setup.
Shallow threads Problem with gauging	★ Insert not cresting. ★ Incorrect effective diameter.	☆ Check machined diameters. ☆ Excessive tool wear or chipped on nose see remedies above.

Helix chart

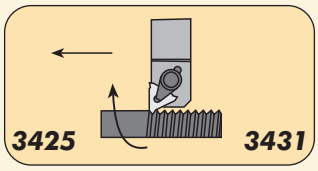
Feed direction towards the chuck

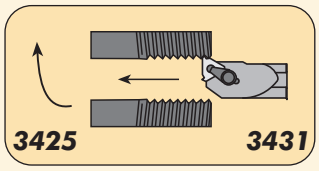
RH Thread - RH Tool





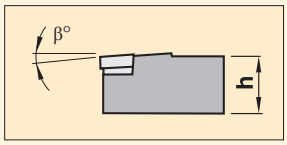
LH Thread - LH Tool

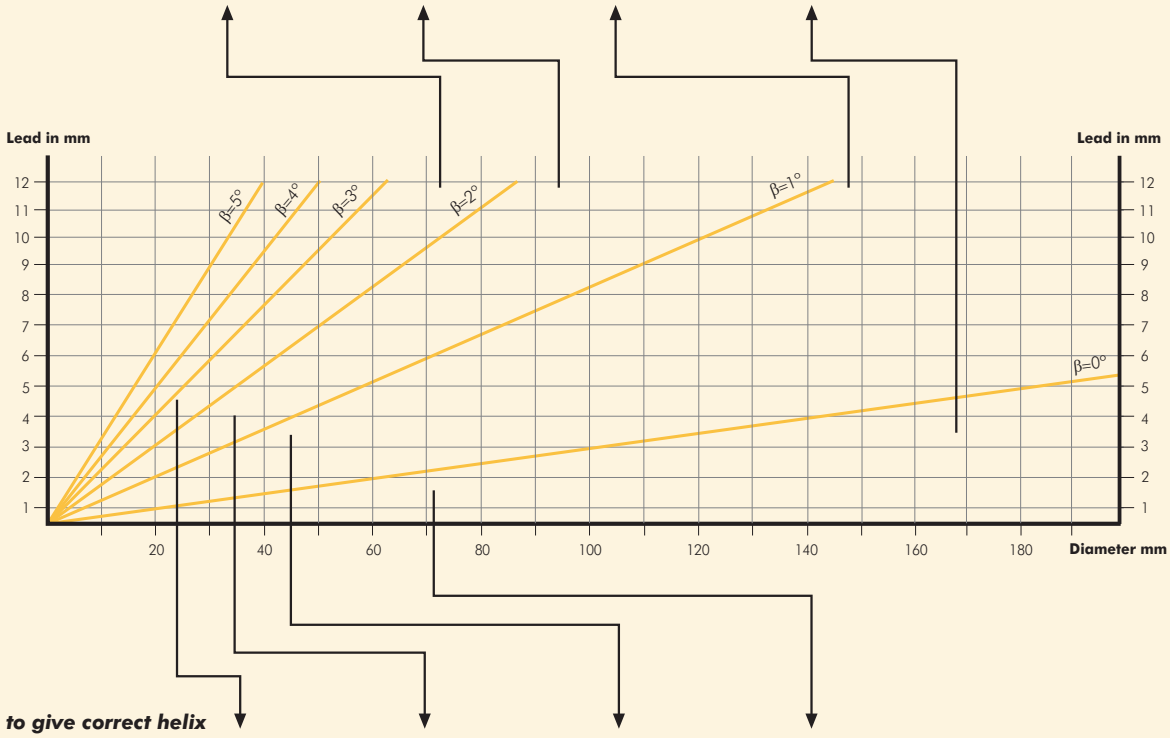




Anvil to give correct helix

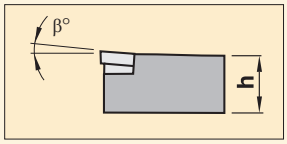
Insert size	+3°	+2°	+1°	+0°
16R	3424+3	3424+2	3424+1	3424
16L	3425+3	3425+2	3425+1	3425
22R	3430+3	3430+2	3430+1	3430
22L	3431+3	3431+2	3431+1	3431





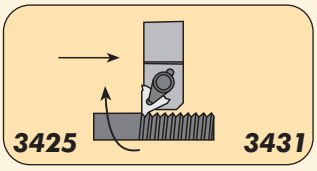
Anvil to give correct helix

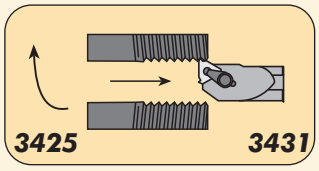
Insert size	-3°	-2°	-1°	0°
16R	3424-3	3424-2	3424-1	3424
16L	3425-3	3425-2	3425-1	3425
22R	3430-3	3430-2	3430-1	3430
22L	3431-3	3431-2	3431-1	3431



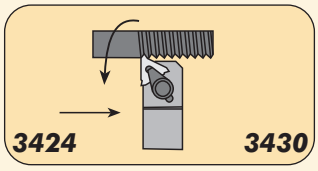
Feed direction away from the chuck

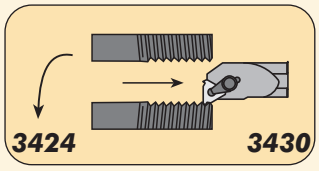
RH Thread - RH chuck



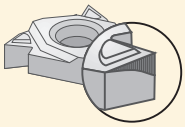
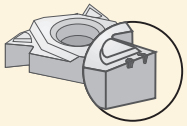
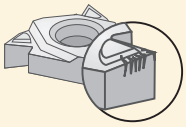
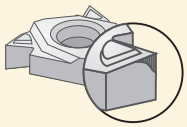
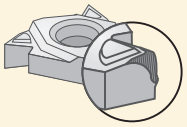
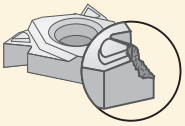


LH Thread - LH Tool

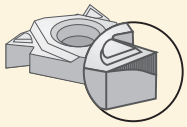
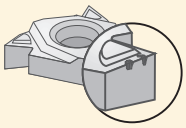
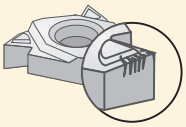
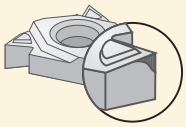
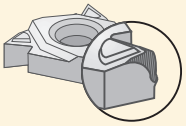
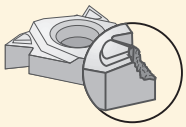




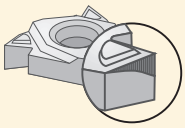
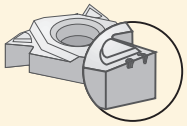
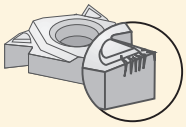
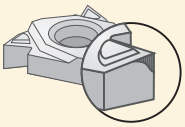
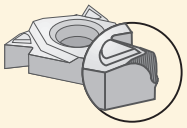
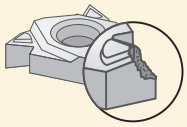
Threading insert wear and tool life

	Problem	Cause and Remedy
Rapid flank wear 	★ Cutting speed too high. ★ Lack of coolant. ★ Infeed per pass too small - too many passes ★ Incorrect grade.	☆ Reduce the cutting speed. ☆ Increase the coolant supply. ☆ Increase the depth of infeed for the smallest infeed depths - reduce the number of passes. ☆ Select a more wear resistant grade.
Edge frittering 	★ Instability of workholding and/or tool set-up.	☆ Check rigidity of operation. ☆ Select a tougher grade.
Edge spalling 	★ Intermittent coolant supply.	☆ Position coolant flow and/or increase coolant supply.
Uneven flank wear 	★ Incorrect method of infeed. ★ Incorrect angle of inclination.	☆ In case of flank infeed use modified flank infeed. Decrease infeed angle 3-5°. ☆ Correct the angle on inclination according to the diagram.
Excessive plastic deformation 	★ Infeed per pass too big - too few passes. ★ Lack of coolant. ★ Cutting speed too high. ★ Incorrect grade. ★ Excessive stock removal from crest.	☆ Decrease the depth of infeed for the biggest depths. - Increase the number of passes. ☆ Increase coolant supply. ☆ Reduce the cutting speed. ☆ Select a harder grade. ☆ Check the volume of the material above the crest.
Insert breakage 	★ Instability. ★ Lack of chip control. ★ Excessive plastic deformation. ★ Intermittent or inadequate coolant supply ★ Incorrect preparation of the operation	☆ Check rigidity of operation. ☆ Select a tougher grade. Select modified flank infeed. ☆ Machine with same infeed per pass. ☆ Direct coolant flow and/or increase coolant supply. ☆ Check dimension of blank.
Shallow thread profile	★ Wrong centre height. ★ Insert not cresting. ★ Excessive tool wear.	☆ Adjust cutting edge height. ☆ Check dimension of blank. ☆ Change insert earlier.
Incorrect thread profile	★ Incorrect tool setting.	☆ Correct tool setting.
Lack of chip control	★ Incorrect depth of infeed per pass ★ Radial infeed.	☆ Adjust cutting edge height. ☆ Check dimension of blank. ☆ Change insert earlier.
Bad surface finish	★ Cutting speed too low. ★ Incorrect angle of inclination. ★ Flank infeed.	☆ Increase the cutting speed. ☆ Correct the angle of inclination according to diagram. ☆ Use modified flank infeed or radial infeed.

Usure et longueur de vie de la plaquette de filetage

	Problème	*Causes et solutions*
Usure rapide en dépouille 	★ Vitesse de coupe trop élevée. ★ Manque d'arrosage. ★ Pénétration par passe trop faible - trop de passes. ★ Nuance incorrecte.	☆ Réduire la vitesse de coupe. ☆ Augmenter le débit de l'arrosage. ☆ Augmenter la profondeur de la pénétration en diminuant le nombre de passes. ☆ Choisir une nuance plus résistante à l'usure.
Ecaillage de l'arête 	★ Rigidité insuffisante de la pièce à usiner et/ou de la machine.	☆ Contrôler la rigidité de l'opération. ☆ Choisir une nuance plus tenace.
Fissuration thermique 	★ Arrosage irrégulier.	☆ Contrôler le débit de l'arrosage et/ou l'appliquer de façon plus abondante.
Usure en dépouille irregulière 	★ Méthode de pénétration pas correcte. ★ Angle d'inclinaison pas correcte.	☆ Dans le cas de pénétration oblique, utiliser une pénétration oblique modifiée, diminuer l'angle de plongée 3-5°. ☆ Corriger l'angle d'inclinaison d'accord avec le diagramme ci-joint.
Déformation plastique excessive 	★ Pénétration par passe trop forte - trop peu de passes. ★ Arrosage insuffisant. ★ Vitesse de coupe trop élevée. ★ Nuance incorrecte. ★ La pointe de la plaquette enlève trop de matériel.	☆ Diminuer la profondeur de pénétration en augmentant le nombre de passes. ☆ Augmenter le débit d'arrosage. ☆ Réduire la vitesse de coupe. ☆ Choisir une nuance plus dure. ☆ Contrôler le matériel sur la pointe.
Rupture 	★ Instabilité. ★ Manque de contrôle des copeaux. ★ Déformation plastique excessive. ★ Arrosage irrégulier ou insuffisant. ★ Préparation incorrecte de l'opération.	☆ Contrôler la rigidité de l'opération. ☆ Choisir une nuance plus dure. Utiliser une pénétration oblique modifiée. ☆ Usiner avec la même pénétration par passe. ☆ Contrôler le débit de l'arrosage et/ou augmenter l'arrosage. ☆ Contrôler les dimensions de la plaquette.
Profile de filet superficiel	★ Hauteur de centre incorrecte. ★ La plaquette ne taille pas. ★ Usure excessive de l'arête.	☆ Regler la hauteur de centre de l'outil. ☆ Contrôler les dimensions de la plaquette. ☆ Changer la plaquette plus tôt.
Profile de filet incorrect	★ Fixation de l'outil incorrecte.	☆ Régler la fixation de l'outil.
Manque de contrôle des copeaux	★ Profondeur de pénétration par passe incorrecte. ★ Pénétration radiale.	☆ Ajuster la hauteur de l'arête de coupe. ☆ Contrôler les dimensions de la pièce. ☆ Changer la plaquette plus tôt.
Mauvais état de surface	★ Vitesse de coupe insuffisante. ★ Angle d'inclinaison incorrect. ★ Pénétration oblique.	☆ Augmenter la vitesse de coupe. ☆ Corriger l'angle d'inclinaison selon le diagramme. ☆ Utiliser une pénétration oblique modifiée ou bien une pénétration radiale.

Verschleiß und Standzeit der Wendeplatte zum Gewindedrehen

	Problem	*Ursache und Maßnahmen*
Schneller Freiflächenverschleiß 	★ Zu hohe Schnittgeschwindigkeit. ★ Mangel an Kühlmittel. ★ Zustellungstiefe pro Durchgang zu niedrig – zu viele Durchgänge. ★ Nicht korrekte Plattensorte.	☆ Schnittgeschwindigkeit reduzieren. ☆ Kühlmittelzufuhr erhöhen. ☆ Für kleine Zustellungen, die Zustellungstiefe erhöhen - Anzahl Durchgänge reduzieren. ☆ Eine Sorte mit höherem Widerstand gegen Verschleißfestigkeit wählen.
Absplittern der Schneidkante 	★ Instabilität des Werkstückes und/oder des Werkzeuges.	☆ Stabilität der Operation kontrollieren. ☆ Eine härtere Sorte wählen.
Kammrisse 	★ Unterbrochene Kühlmittelzufuhr.	☆ Kühlmittel kontrollieren und/oder Zufuhr erhöhen.
Ungleichmäßiger Freiflächenverschleiß 	★ Falsche Methode der Flankenzustellung. ★ Falscher Neigungswinkel der Wendeplatte.	☆ Zustellmethode ändern. Zustellwinkel 3-5° vermindern. ☆ Neigungswinkel gemäß Diagramm ändern.
Übermäßige plastische Verformung 	★ Zustellungstiefe pro Durchgang zu groß - zu wenige Durchgänge. ★ Mangel an Kühlmittel. ★ Zu hohe Schnittgeschwindigkeit. ★ Nicht korrekte Plattensorte. ★ Zuviel Materialabnahme an der Wendeplattenspitze.	☆ Zustellungstiefe reduzieren - Anzahl der Durchgänge erhöhen. ☆ Kühlmittelzufuhr erhöhen. ☆ Schnittgeschwindigkeit reduzieren. ☆ Eine härtere Sorte wählen. ☆ Materialmenge an der Wendeplattenspitze kontrollieren.
Plattenbruch 	★ Instabilität. ★ Unkontrollierte Späne. ★ Übermäßige plastische Verformung. ★ Unterbrochene oder ungeeignete Kühlmittelzufuhr. ★ Falsche Hartmetallsorte.	☆ Stabilität der Operation kontrollieren. ☆ Eine härtere Sorte wählen. Modifizierte Flankenzustellung wählen. ☆ Bearbeiten mit derselben Zustellung per Steigung. ☆ Kühlmittelzufuhr kontrollieren und/oder Zufuhr erhöhen. ☆ Die Abmessung der Wendeplatte kontrollieren.
Zu kleines Gewindeprofil	★ Falsche Spitzenhöhe. ★ Plattenbruch. ★ Übermäßiger Verschleiß.	☆ Schneidkantenhöhe einstellen. ☆ Die Abmessung der Wendeplatte kontrollieren. ☆ Wendeplatte früher wechseln.
Mangelhaftes Gewindeprofil	★ Falsche Werkzeug/ Wendeplattenkombination.	☆ Richtige Werkzeug/Wendeplattenkombination wählen.
Schlechte Spankontrolle	★ Falsche Tiefe der Zustellung per Steigung. ★ Radiale Zustellung.	☆ Schneidkantenhöhe einstellen. ☆ Die Abmessung der Wendeplatte kontrollieren. ☆ Wendeplatte früher wechseln.
Schlechte Oberflächengüte	★ Zu niedrige Schnittgeschwindigkeit. ★ Nicht korrekter Neigungswinkel. ★ Flankenzustellung.	☆ Schnittgeschwindigkeit erhöhen. ☆ Neigungswinkel gemäß Diagramm korrigieren. ☆ Modifizierte Flankenzustellung oder radiale Zustellung verwenden.