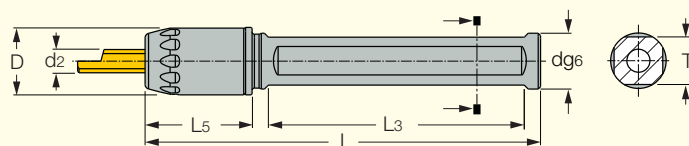


Internal Turning



GROOVETURN





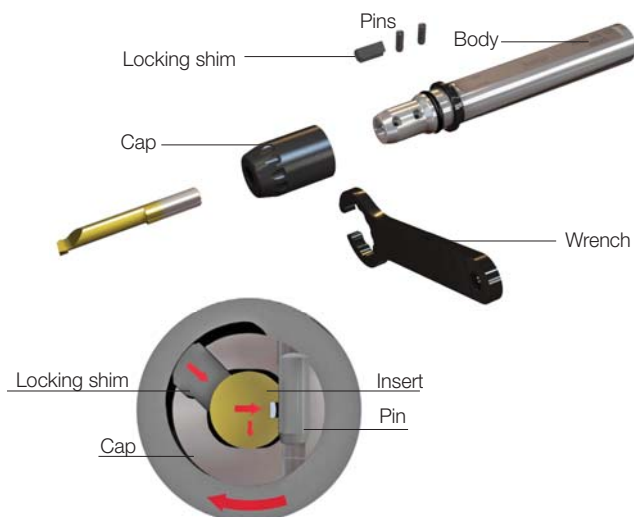
Designation	Dimensions							Wrench	Cap Ace
	d	d2	D	L	L5	L3	T		
PICCO ACE 12-4	12.00	4.00	14.50	85.00	23.00	53.00	10.3	WRENCH ACE 4-5	CAP ACE 4
PICCO ACE 12-5	12.00	5.00	14.50	85.00	23.00	53.00	10.3	WRENCH ACE 4-5	CAP ACE 5
PICCO ACE 16-4	16.00	4.00	14.50	85.00	21.50	53.50	14.0	WRENCH ACE 4-5	CAP ACE 4
PICCO ACE 16-5	16.00	5.00	14.50	85.00	21.50	53.00	14.0	WRENCH ACE 4-5	CAP ACE 5
PICCO ACE 16-6	16.00	6.00	19.90	85.00	23.00	53.50	14.0	WRENCH ACE 6-7	CAP ACE 6
PICCO ACE 16-7	16.00	7.00	19.90	85.00	23.00	53.50	14.0	WRENCH ACE 6-7	CAP ACE 7
PICCO ACE 20-4	20.00	4.00	14.50	150.00	21.50	118.00	18.0	WRENCH ACE 4-5	CAP ACE 4
PICCO ACE 20-5	20.00	5.00	14.50	150.00	21.50	118.00	18.0	WRENCH ACE 4-5	CAP ACE 5
PICCO ACE 20-6	20.00	6.00	19.90	150.00	21.50	118.00	18.0	WRENCH ACE 6-7	CAP ACE 6
PICCO ACE 20-7	20.00	7.00	19.90	150.00	21.50	118.00	18.0	WRENCH ACE 6-7	CAP ACE 7
PICCO ACE 22-4	22.00	4.00	14.50	150.00	21.50	118.00	20.0	WRENCH ACE 4-5	CAP ACE 4
PICCO ACE 22-5	22.00	5.00	14.50	150.00	21.50	118.00	20.0	WRENCH ACE 4-5	CAP ACE 5
PICCO ACE 22-6	22.00	6.00	19.90	150.00	21.50	118.00	20.0	WRENCH ACE 6-7	CAP ACE 6
PICCO ACE 22-7	22.00	7.00	19.90	150.00	21.50	118.00	20.0	WRENCH ACE 6-7	CAP ACE 7

• Holders are suitable for right- and left-hand PICCO inserts

PICCO ACE Inch

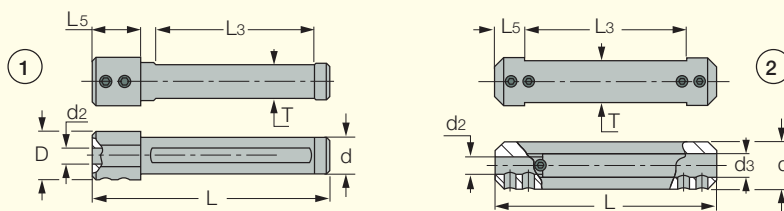
Designation	Dimensions							Wrench	Cap Ace
	d	d2	D	L	L5	L3	T		
PICCO ACE 12.7-4	.500	.157	.571	3.346	.906	2.087	.457	WRENCH ACE 4-5	CAP ACE 4
PICCO ACE 12.7-5	.500	.197	.571	3.346	.906	2.087	.457	WRENCH ACE 4-5	CAP ACE 5
PICCO ACE 15.9-4	.625	.157	.571	3.346	.846	2.087	.551	WRENCH ACE 4-5	CAP ACE 4
PICCO ACE 15.9-5	.625	.197	.571	3.346	.846	2.087	.551	WRENCH ACE 4-5	CAP ACE 5
PICCO ACE 15.9-6	.625	.236	.783	3.346	.906	2.087	.551	WRENCH ACE 6-7	CAP ACE 6
PICCO ACE 15.9-7	.625	.276	.783	3.346	.906	2.087	.551	WRENCH ACE 6-7	CAP ACE 7
PICCO ACE 19-4	.750	.157	.571	5.906	.846	4.646	.677	WRENCH ACE 4-5	CAP ACE 4
PICCO ACE 19-5	.750	.197	.571	5.906	.846	4.646	.677	WRENCH ACE 4-5	CAP ACE 5
PICCO ACE 19-6	.750	.236	.783	5.906	.906	4.646	.677	WRENCH ACE 6-7	CAP ACE 6
PICCO ACE 19-7	.750	.276	.783	5.906	.906	4.646	.677	WRENCH ACE 6-7	CAP ACE 7
PICCO ACE 25.4-4	1.000	.157	.571	5.906	.846	4.646	.905	WRENCH ACE 4-5	CAP ACE 4
PICCO ACE 25.4-5	1.000	.197	.571	5.906	.846	4.646	.905	WRENCH ACE 4-5	CAP ACE 5
PICCO ACE 25.4-6	1.000	.236	.783	5.906	.846	4.646	.905	WRENCH ACE 6-7	CAP ACE 6
PICCO ACE 25.4-7	1.000	.276	.783	5.906	.846	4.646	.905	WRENCH ACE 6-7	CAP ACE 7

• Holders are suitable for right- and left-hand PICCO inserts



PICCO/MG PCO (holder)

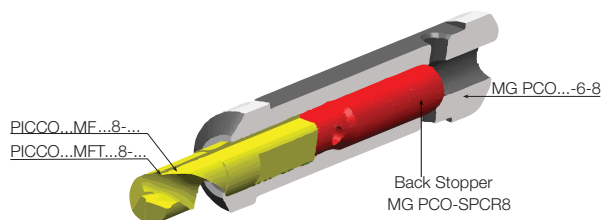
Holders for PICCO Inserts and Small Diameter Boring Bars



Designation	d	d ₂	d ₃	L	L ₅	L ₃	T	D	Fig.
PICCO 12-4-5	12.00	4.00	5.00	75.00	10.00	55.00	10.3	18.00	2
PICCO 16-4-5	16.00	4.00	5.00	75.00	10.00	55.00	14.0	18.00	2
PICCO 20-4-5	20.00	4.00	5.00	90.00	10.00	70.00	18.0	18.00	2
PICCO 22-4-5 ⁽¹⁾	22.00	4.00	5.00	90.00	10.00	70.00	20.0	18.00	2
PICCO 16-6-7	16.00	6.00	7.00	75.00	10.00	55.00	14.0	18.00	2
PICCO 20-6-7	20.00	6.00	7.00	90.00	10.00	70.00	18.0	18.00	2
PICCO 22-6-7 ⁽¹⁾	22.00	6.00	7.00	90.00	10.00	70.00	20.0	18.00	2
MG PCO-12-6	12.00	6.00	-	75.00	15.00	50.80	11.0	18.00	1
MG PCO-16-6-8	16.00	6.00	8.00	75.00	10.00	55.00	14.0	18.00	2
MG PCO-20-6-8	20.00	6.00	8.00	90.00	10.00	70.00	18.0	18.00	2
MG PCO-22-6-8 ⁽¹⁾	22.00	6.00	8.00	90.00	10.00	70.00	20.0	18.00	2
MG PCO-25-6-8	25.00	6.00	8.00	90.00	10.00	70.00	23.0	18.00	2
MG PCO-16-9	16.00	9.00	-	75.00	15.00	53.00	18.0	18.00	1

• Holders are suitable for right- and left-hand inserts, and boring bars.

⁽¹⁾ Tools for Swiss-type CNC



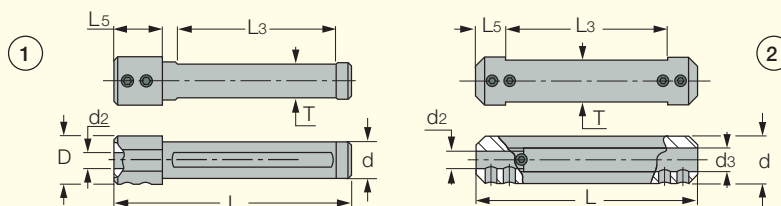
Spare Parts



Designation	Screw	Key	Coolant Fitting	Stopper
PICCO 12-4-5	SR M5X4-PF	HW 2.5		
PICCO 16-4-5	SR M5X6-PF	HW 2.5		
PICCO 20-4-5	SR M5X6-PF	HW 2.5		
PICCO 22-4-5	SR M5X6-PF	HW 2.5		
PICCO 16-6-7	SR M5X6-PF	HW 2.5		
PICCO 20-6-7	SR M5X6-PF	HW 2.5		
PICCO 22-6-7	SR M5X6-PF	HW 2.5		
MG PCO-12-6	SR M5X6-PF	HW 2.5		
MG PCO-16-6-8	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-20-6-8	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-22-6-8	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-25-6-8	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-16-9	SR M5X6-PF	HW 2.5	PL 16	

PICCO/MG PCO (holder) Inch

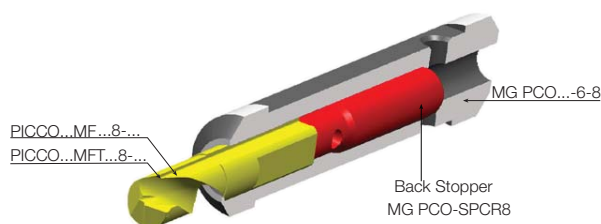
Holders for PICCO Inserts and Small Diameter Boring Bars



Designation	d	d ₂	d ₃	L	L ₅	L ₃	T	D	Fig.
PICCO 12.7-4-5	.500	.157	.197	2.950	.394	2.170	.410	.709	2
PICCO 15.9-4-5	.625	.157	.197	2.950	.394	2.170	.550	.709	2
PICCO 19-4-5	.750	.157	.197	3.540	.394	2.760	.710	.709	2
PICCO 25.4-4-5 ⁽¹⁾	1.000	.157	.197	3.543	.394	2.756	.921	.709	2
PICCO 15.9-6-7	.625	.236	.276	2.950	.394	2.170	.550	.709	2
PICCO 19-6-7	.750	.236	.276	3.540	.394	2.760	.710	.709	2
PICCO 25.4-6-7 ⁽¹⁾	1.000	.236	.276	3.543	.394	2.756	.921	.709	2
MG PCO-12.7-6	.500	.236	-	3.000	.590	2.090	.433	.709	1
MG PCO-15.9-6-8	.625	.236	.315	3.000	.390	2.170	.551	.709	2
MG PCO-19-6-8	.750	.236	.315	3.500	.390	2.760	.709	.709	2
MG PCO-25.4-6-8 ⁽¹⁾	1.000	.236	.315	3.543	.394	2.756	.921	.709	2
MG PCO-16-9	.630	.354	-	2.953	.591	2.087	.709	.709	1

• Holders are suitable for left- and right-hand inserts, and boring bars.

⁽¹⁾ Tools for Swiss-type CNC

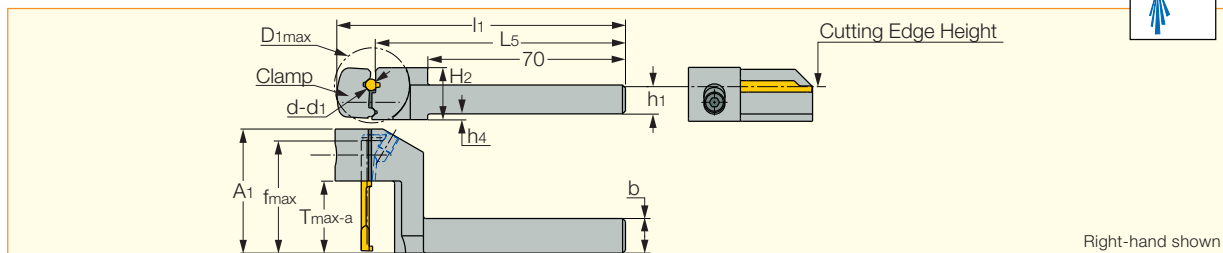


Spare Parts

Designation	Screw	Key	Seal	Stopper
PICCO 12.7-4-5	SR M5X4-PF	HW 2.5		
PICCO 15.9-4-5	SR M5X6-PF	HW 2.5		
PICCO 19-4-5	SR M5X6-PF	HW 2.5		
PICCO 25.4-4-5	SR M5X6-PF	HW 2.5		
PICCO 15.9-6-7	SR M5X6-PF	HW 2.5		
PICCO 19-6-7	SR M5X6-PF	HW 2.5		
PICCO 25.4-6-7	SR M5X6-PF	HW 2.5		
MG PCO-12.7-6	SR M5X6-PF	HW 2.5		
MG PCO-15.9-6-8	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-19-6-8	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-25.4-6-8	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-16-9	SR M5X6-PF	HW 2.5	PL 16	

GHPCOR/L

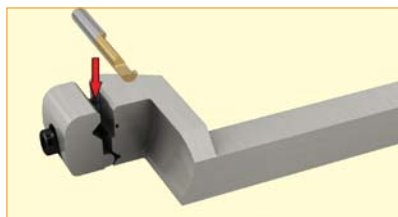
Perpendicular Square-Shank Tools for Use on the Cross Slide Units of Swiss-Type and Automatic Machines



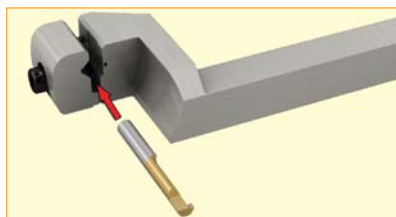
Designation	h	b	L ₁	L ₅	h ₄	H ₂	A ₁	D _{1 max}	T _{max-a}	f _{max}	d	d ₁
GHPCOR/L 08-16-4-5	8.0	8.0	102.00	88.00	4.0	15.0	34.00	26.0	16.00	30.0	4.00	5.00
GHPCOL 08-25-4-5	8.0	8.0	102.00	88.00	4.0	15.0	34.00	26.0	25.00	30.0	4.00	5.00
GHPCOR 08-28-4-5	8.0	8.0	102.00	88.00	4.0	15.0	34.00	26.0	28.00	30.0	4.00	5.00
GHPCOR/L 10-16-4-5	10.0	10.0	102.00	88.00	2.0	18.0	34.00	26.0	16.00	30.0	4.00	5.00
GHPCOR/L 10-25-4-5	10.0	10.0	102.00	88.00	2.0	18.0	34.00	26.0	25.00	30.0	4.00	5.00
GHPCOR/L 12-16-4-6	12.0	12.0	102.00	88.00	-	18.0	34.00	26.0	16.00	30.0	4.00	6.00
GHPCOR 12-25-4-6	12.0	12.0	102.00	88.00	-	18.0	43.00	26.0	25.00	39.0	4.00	6.00
GHPCOR/L 16-16-4-6	16.0	16.0	112.00	98.00	-	22.0	35.00	36.0	16.00	31.0	4.00	6.00
GHPCOR/L 16-25-4-6	16.0	16.0	112.00	98.00	-	22.0	44.00	36.0	25.00	40.0	4.00	6.00
GHPCOR/L 16-30-7-8	16.0	16.0	112.00	98.00	-	22.0	49.00	36.0	30.00	45.0	7.00	8.00

• PICCOCUT insert should not exceed A₁ length. • Left-hand holders are available upon request. • Coolant tube adapter: KQ2L06-M5 (for 6 mm coolant tube)

Indexing from the top



Indexing from the front



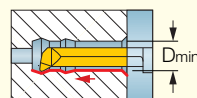
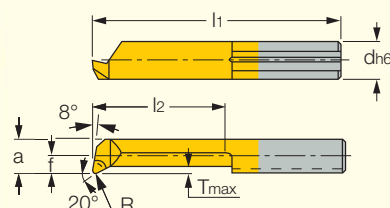
Spare Parts



Designation	Side Clamp	Screw	Key	Pipe Fitting
GHPCOR/L 08-16-4-5	HED 08	SR M4X14DIN912 12.9	HW 3.0	KQ2L06-M5
GHPCOL 08-25-4-5	HED 08	SR M4X14DIN912 12.9	HW 3.0	KQ2L06-M5
GHPCOR 08-28-4-5	HED 08	SR M4X14DIN912 12.9	HW 3.0	KQ2L06-M5
GHPCOR/L 10-16-4-5	HED 10	SR M4X14DIN912 12.9	HW 3.0	KQ2L06-M5
GHPCOR/L 10-25-4-5	HED 10	SR M4X14DIN912 12.9	HW 3.0	KQ2L06-M5
GHPCOR/L 12-16-4-6	HED 12	SR M4X14DIN912 12.9	HW 3.0	KQ2L06-M5
GHPCOR 12-25-4-6	HED 12	SR M4X14DIN912 12.9	HW 3.0	KQ2L06-M5
GHPCOR/L 16-16-4-6	HED 16-4-6	SR M4X14DIN912 12.9	HW 3.0	KQ2L06-M5
GHPCOR/L 16-25-4-6	HED 16-4-6	SR M4X14DIN912 12.9	HW 3.0	KQ2L06-M5
GHPCOL 16-30-7-8	HED 16-7-8	SR M4X14DIN912 12.9	HW 3.0	KQ2L06-M5
GHPCOR 16-30-7-8	HED 16-7-8	SR M4X14DIN912 12.9	HW 3.0	KQ2L06-M5

PICCO R/L 050, 053, 055

Inserts for Internal Turning and Chamfering



Right-hand shown

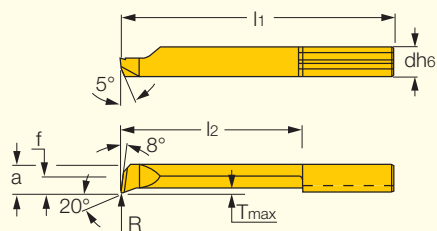
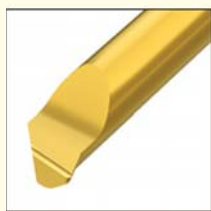
Designation	Dimensions								Tough ↔ Hard	
	d	f	a	l ₁	l ₂	R±0.05	T _{max}	D _{min}	IC228	IC908
PICCO R 050.06-2 ⁽¹⁾	4.00	-	0.50	20.00	2.0	0.04	0.08	0.60	●	●
PICCO R 050.06-3 ⁽¹⁾	4.00	-	0.50	20.00	3.0	0.04	0.08	0.60	●	●
PICCO R 050.08-4	4.00	-	0.70	20.00	4.0	0.04	0.08	0.80	●	●
PICCO R/L 050.1-5	4.00	-	0.90	20.00	4.5	0.05	0.10	1.00	●	●
PICCO R/L 050.1-7	4.00	-	0.90	22.00	6.5	0.05	0.10	1.00	●	●
PICCO R/L 050.2-5	4.00	-	1.70	19.00	4.0	0.05	0.10	2.00	●	●
PICCO R/L 050.2-10	4.00	-	1.70	24.00	9.0	0.05	0.10	2.00	●	●
PICCO R/L 050.2-15	4.00	-	1.70	29.00	14.0	0.05	0.10	2.00	●	●
PICCO R 050.25-5	4.00	0.2	2.20	19.00	5.0	0.05	0.15	2.50	●	●
PICCO R 050.25-10	4.00	0.2	2.20	24.00	10.0	0.05	0.15	2.50	●	●
PICCO R 050.25-16	4.00	0.2	2.20	30.00	16.0	0.05	0.15	2.50	●	●
PICCO R 053.3-10	4.00	0.6	2.60	24.00	9.0	0.03	0.20	2.80	●	●
PICCO R/L 050.3-10	4.00	0.6	2.60	24.00	9.0	0.10	0.20	2.80	●	●
PICCO R 053.3-16	4.00	0.6	2.60	30.00	15.0	0.03	0.20	2.80	●	●
PICCO R/L 050.3-16	4.00	0.6	2.60	30.00	15.0	0.10	0.20	2.80	●	●
PICCO R 053.3-20	4.00	0.6	2.60	34.00	19.0	0.03	0.20	2.80	●	●
PICCO R/L 050.3-20	4.00	0.6	2.60	34.00	19.0	0.10	0.20	2.80	●	●
PICCO R 050.35-10	4.00	1.1	3.10	24.00	10.0	0.10	0.25	3.50	●	●
PICCO R 050.35-16	4.00	1.1	3.10	30.00	16.0	0.10	0.25	3.50	●	●
PICCO R 050.35-20	4.00	1.1	3.10	34.00	20.0	0.10	0.25	3.50	●	●
PICCO R 050.35-24	4.00	1.1	3.10	38.00	24.0	0.10	0.25	3.50	●	●
PICCO R 053.4-10	4.00	1.5	3.50	24.00	9.0	0.03	0.30	4.00	●	●
PICCO R/L 050.4-10	4.00	1.5	3.50	24.00	9.0	0.10	0.30	4.00	●	●
PICCO R 053.4-16	4.00	1.5	3.50	30.00	15.0	0.03	0.30	4.00	●	●
PICCO R/L 050.4-16	4.00	1.5	3.50	30.00	15.0	0.10	0.30	4.00	●	●
PICCO R 053.4-20	4.00	1.5	3.50	34.00	19.0	0.03	0.30	4.00	●	●
PICCO R/L 050.4-20	4.00	1.5	3.50	34.00	19.0	0.10	0.30	4.00	●	●
PICCO R/L 050.4-24	4.00	1.5	3.50	38.00	23.0	0.10	0.30	4.00	●	●
PICCO R/L 050.4-28	4.00	1.5	3.50	42.00	27.0	0.10	0.30	4.00	●	●
PICCO R 055.5-10	5.00	1.9	4.40	25.00	9.0	0.05	0.50	5.00	●	●
PICCO R/L 050.5-10	5.00	1.9	4.40	25.00	9.0	0.15	0.50	5.00	●	●
PICCO R 055.5-15	5.00	1.9	4.40	30.00	14.0	0.05	0.50	5.00	●	●
PICCO R/L 050.5-15	5.00	1.9	4.40	30.00	14.0	0.15	0.50	5.00	●	●
PICCO R 055.5-20	5.00	1.9	4.40	35.00	19.0	0.05	0.50	5.00	●	●
PICCO R/L 050.5-20	5.00	1.9	4.40	35.00	19.0	0.15	0.50	5.00	●	●
PICCO R 055.5-25	5.00	1.9	4.40	40.00	24.0	0.05	0.50	5.00	●	●
PICCO R/L 050.5-25	5.00	1.9	4.40	40.00	24.0	0.15	0.50	5.00	●	●
PICCO R 055.5-30	5.00	1.9	4.40	45.00	29.0	0.05	0.50	5.00	●	●
PICCO R/L 050.5-30	5.00	1.9	4.40	45.00	29.0	0.15	0.50	5.00	●	●
PICCO R/L 050.5-35	5.00	1.9	4.40	50.00	34.0	0.15	0.50	5.00	●	●
PICCO R 055.6-15	6.00	2.3	5.30	30.00	14.0	0.05	0.50	6.00	●	●
PICCO R/L 050.6-15	6.00	2.3	5.30	30.00	14.0	0.15	0.50	6.00	●	●
PICCO R 055.6-22	6.00	2.3	5.30	37.00	21.0	0.05	0.50	6.00	●	●
PICCO R/L 050.6-22	6.00	2.3	5.30	37.00	21.0	0.15	0.50	6.00	●	●
PICCO R 055.6-25	6.00	2.3	5.30	40.00	24.0	0.05	0.50	6.00	●	●
PICCO R/L 050.6-25	6.00	2.3	5.30	40.00	24.0	0.15	0.50	6.00	●	●
PICCO R 055.6-30	6.00	2.3	5.30	45.00	29.0	0.05	0.50	6.00	●	●
PICCO R/L 050.6-30	6.00	2.3	5.30	45.00	29.0	0.15	0.50	6.00	●	●
PICCO R/L 050.6-35	6.00	2.3	5.30	50.00	34.0	0.15	0.50	6.00	●	●
PICCO R/L 050.6-42	6.00	2.3	5.30	57.00	41.0	0.15	0.50	6.00	●	●
PICCO R/L 050.7-20	7.00	2.8	6.30	35.00	19.0	0.15	0.60	6.80	●	●
PICCO R/L 050.7-25	7.00	2.8	6.30	40.00	24.0	0.15	0.60	6.80	●	●
PICCO R/L 050.7-30	7.00	2.8	6.30	45.00	29.0	0.15	0.60	6.80	●	●
PICCO R/L 050.7-35	7.00	2.8	6.30	50.00	34.0	0.15	0.60	6.80	●	●
PICCO R/L 050.7-40	7.00	2.8	6.30	55.00	39.0	0.15	0.60	6.80	●	●
PICCO R/L 050.7-45	7.00	2.8	6.30	60.00	44.0	0.15	0.60	6.80	●	●
PICCO R/L 050.7-50	7.00	2.8	6.30	65.00	49.0	0.15	0.60	6.80	●	●

• Specify right- or left-hand bars

⁽¹⁾ Maximum D.O.C.=0.01-0.03 mm, maximum feed=0.01 mm/rev.

PICCO R/L 050-C

Inserts with Chipformers for Internal Boring and Profiling



Right-hand shown

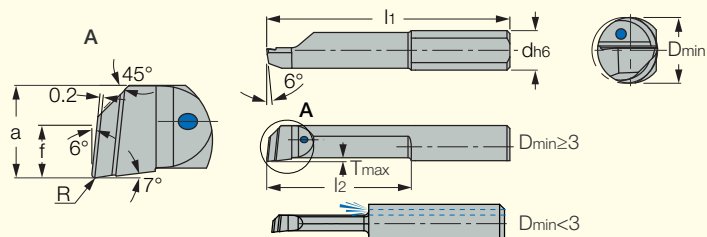
Designation	Dimensions								IC908
	d	f	a	l ₁	l ₂	T _{max}	D _{min}	R _{±0.05}	
PICCO R/L 050.4-10C	4.00	1.5	3.50	24.00	10.0	0.30	4.00	0.20	●
PICCO R/L 050.4-20C	4.00	1.5	3.50	34.00	20.0	0.30	4.00	0.20	●
PICCO R/L 050.4-24C ⁽¹⁾	4.00	1.5	3.50	38.00	24.0	0.30	4.00	0.20	●
PICCO R/L 050.4-28C ⁽¹⁾	4.00	1.5	3.50	42.00	28.0	0.30	4.00	0.20	●
PICCO R/L 050.5-10C	5.00	1.9	4.40	25.00	10.0	0.50	5.00	0.20	●
PICCO R/L 050.5-15C	5.00	1.9	4.40	30.00	15.0	0.50	5.00	0.20	●
PICCO R/L 050.5-20C	5.00	1.9	4.40	35.00	20.0	0.50	5.00	0.20	●
PICCO R/L 050.5-25C ⁽¹⁾	5.00	1.9	4.40	40.00	25.0	0.50	5.00	0.20	●
PICCO R/L 050.5-30C ⁽¹⁾	5.00	1.9	4.40	45.00	30.0	0.50	5.00	0.20	●
PICCO R/L 050.5-35C ⁽¹⁾	5.00	1.9	4.40	50.00	35.0	0.50	5.00	0.20	●
PICCO R/L 050.6-15C	6.00	2.3	5.30	30.00	15.0	0.50	6.00	0.20	●
PICCO R/L 050.6-22C	6.00	2.3	5.30	37.00	22.0	0.50	6.00	0.20	●
PICCO R/L 050.6-25C ⁽¹⁾	6.00	2.3	5.30	40.00	25.0	0.50	6.00	0.20	●
PICCO R/L 050.6-30C ⁽¹⁾	6.00	2.3	5.30	45.00	30.0	0.50	6.00	0.20	●
PICCO R/L 050.6-35C ⁽¹⁾	6.00	2.3	5.30	50.00	35.0	0.50	6.00	0.20	●
PICCO R/L 050.6-42C ⁽¹⁾	6.00	2.3	5.30	57.00	42.0	0.50	6.00	0.20	●
PICCO R/L 050.7-20C	7.00	2.8	6.30	35.00	20.0	0.60	6.80	0.20	●
PICCO R/L 050.7-25C ⁽¹⁾	7.00	2.8	6.30	40.00	25.0	0.60	6.80	0.20	●
PICCO R/L 050.7-30C ⁽¹⁾	7.00	2.8	6.30	45.00	30.0	0.60	6.80	0.20	●
PICCO R/L 050.7-35C ⁽¹⁾	7.00	2.8	6.30	50.00	35.0	0.60	6.80	0.20	●
PICCO R/L 050.7-40C ⁽¹⁾	7.00	2.8	6.30	55.00	40.0	0.60	6.80	0.20	●

• All left-hand inserts on request

⁽¹⁾ Upon request.

PICCO R 051

Reinforced Boring and Profiling Inserts with Internal Coolant Hole

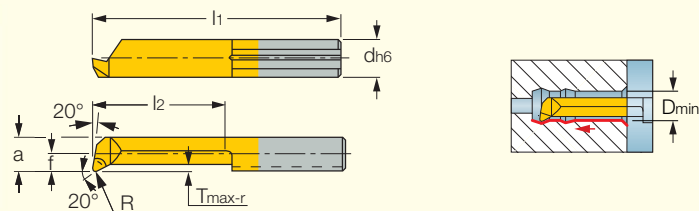


Designation	Dimensions								IC908
	d	f	a	l ₁	l ₂	T _{max}	D _{min}	R±0.05	
PICCO R 051.2.15-5	4.00	-	1.80	19.00	5.0	0.10	2.00	0.15	●
PICCO R 051.2.5-10	4.00	-	1.80	24.00	10.0	0.10	2.00	0.05	●
PICCO R 051.2.15-10	4.00	-	1.80	24.00	10.0	0.10	2.00	0.15	●
PICCO R 051.3.10-16	4.00	0.7	2.70	30.00	16.0	0.15	3.00	0.10	●
PICCO R 051.3.20-16	4.00	0.7	2.70	30.00	16.0	0.15	3.00	0.20	●
PICCO R 051.4.10-10	4.00	1.6	3.60	24.00	10.0	0.20	4.00	0.10	●
PICCO R 051.4.20-10	4.00	1.6	3.60	24.00	10.0	0.20	4.00	0.20	●
PICCO R 051.4.10-16	4.00	1.6	3.60	30.00	16.0	0.20	4.00	0.10	●
PICCO R 051.4.20-16	4.00	1.6	3.60	30.00	16.0	0.20	4.00	0.20	●
PICCO R 051.5.10-15	5.00	2.1	4.60	30.00	15.0	0.30	5.00	0.10	●
PICCO R 051.5.20-15	5.00	2.1	4.60	30.00	15.0	0.30	5.00	0.20	●
PICCO R 051.5.10-25	5.00	2.1	4.60	40.00	25.0	0.30	5.00	0.10	●
PICCO R 051.5.20-25	5.00	2.1	4.60	40.00	25.0	0.30	5.00	0.20	●
PICCO R 051.6.10-15	6.00	2.5	5.50	30.00	15.0	0.40	6.00	0.10	●
PICCO R 051.6.20-15	6.00	2.5	5.50	30.00	15.0	0.40	6.00	0.20	●
PICCO R 051.6.20-22	6.00	2.5	5.50	37.00	22.0	0.40	6.00	0.20	●
PICCO R 051.6.20-35	6.00	2.5	5.50	50.00	35.0	0.40	6.00	0.20	●

PICCO CUT

PICCO R 050.20

Inserts for Internal Turning and Chamfering Next to the Bottom of Blind Holes

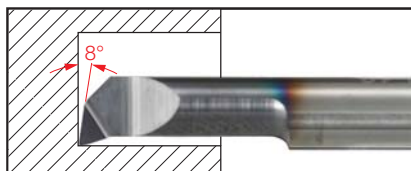


Right-hand shown

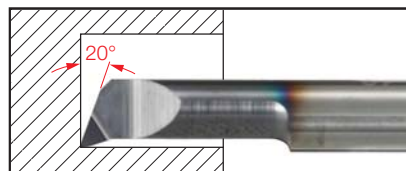
Designation	Dimensions								IC908
	d	f	a	l ₁	l ₂	R _{±0.05}	T _{max-r}	D _{min}	
PICCO R 050.20.2-10	4.00	-	1.70	24.00	10.0	0.05	0.10	2.00	●
PICCO R 050.20.3-10	4.00	0.6	2.60	24.00	10.0	0.10	0.20	2.80	●
PICCO R 050.20.4-16	4.00	1.5	3.50	30.00	16.0	0.10	0.30	4.00	●
PICCO R 050.20.5-20	5.00	1.9	4.40	35.00	19.0	0.15	0.50	5.00	●

• Specify right- or left-hand bars

PICCO 050...

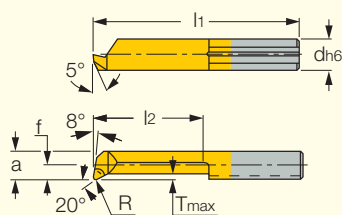


PICCO 050.20...



PICCO R 050 (CBN)

CBN Tipped Inserts for Internal Turning, Profiling and Chamfering of Hard Steel



Right-hand shown • **HARD MATERIALS**

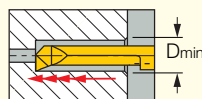
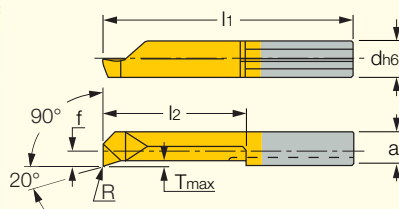
Designation	Dimensions								IB55
	d	f	a	l ₁	l ₂	T _{max}	D _{min}	R _{±0.05}	
PICCO R 050.3-10B	4.00	0.6	2.60	25.50	10.0	0.20	2.80	0.20	●
PICCO R 050.4-10B	4.00	1.5	3.50	25.50	10.0	0.30	4.00	0.20	●
PICCO R 050.5-15B	5.00	1.9	4.40	31.50	15.0	0.50	5.00	0.20	●
PICCO R 050.6-15B	6.00	2.3	5.30	31.50	15.0	0.50	6.00	0.20	●
PICCO R 050.7-20B	7.00	2.8	6.30	36.50	20.0	0.60	6.80	0.20	●

• It is not recommended to use coolant when machining with CBN tipped tools • Available on request only

PICCO CUT

PICCO R/L 090

Inserts for Internal Turning and Profiling



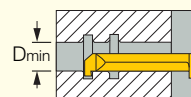
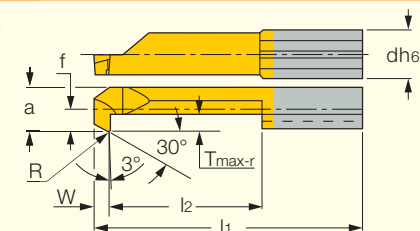
Right-hand shown

Designation	Dimensions								IC228
	d	f	a	l ₁	l ₂	R _{±0.05}	T _{max}	D _{min}	
PICCO R/L 090.3-10	4.00	0.6	2.60	24.00	9.0	0.10	0.20	2.80	●
PICCO R/L 090.3-16	4.00	0.6	2.60	30.00	15.0	0.10	0.20	2.80	●
PICCO R/L 090.4-10	4.00	1.5	3.50	24.00	9.0	0.10	0.30	4.00	●
PICCO R/L 090.4-16	4.00	1.5	3.50	30.00	15.0	0.10	0.30	4.00	●
PICCO R/L 090.5-10	5.00	1.9	4.40	25.00	9.0	0.15	0.50	5.00	●
PICCO R/L 090.5-15	5.00	1.9	4.40	30.00	14.0	0.15	0.50	5.00	●
PICCO R/L 090.5-20	5.00	1.9	4.40	35.00	19.0	0.15	0.50	5.00	●

• Specify right- or left-hand bars

PICCO R/L 080

Inserts for Internal Back Turning



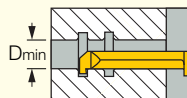
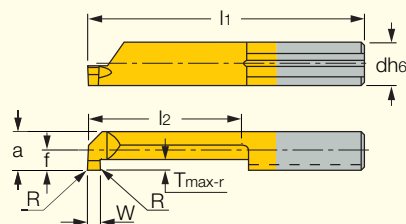
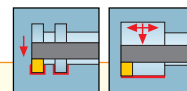
Right-hand shown

Designation	Dimensions								IC228
	d	f	a	W	l ₁	l ₂	R _{±0.05}	T _{max-r}	
PICCO R/L 080.0003-15	4.00	0.6	2.60	1.50	29.00	14.0	0.10	0.50	3.00
PICCO R/L 080.0003-20	4.00	0.6	2.60	1.50	34.00	19.0	0.10	0.50	3.00
PICCO R/L 080.0004-15	4.00	1.5	3.50	1.50	29.00	14.0	0.15	0.80	4.00
PICCO R/L 080.0004-25	4.00	1.5	3.50	1.50	39.00	24.0	0.15	0.80	4.00
PICCO R/L 080.0005-20	5.00	1.9	4.40	1.50	35.00	19.0	0.20	1.00	5.00
PICCO R/L 080.0005-30	5.00	1.9	4.40	1.50	45.00	29.0	0.20	1.00	5.00
PICCO R/L 080.0006-20	6.00	2.3	5.30	1.50	35.00	19.0	0.20	1.80	6.00
PICCO R/L 080.0006-30	6.00	2.3	5.30	1.50	45.00	29.0	0.20	1.80	6.00
PICCO R/L 080.0007-20	7.00	2.8	6.30	1.50	35.00	19.0	0.20	2.50	7.00
PICCO R/L 080.0007-30	7.00	2.8	6.30	1.50	45.00	29.0	0.20	2.50	7.00

• Specify right- or left-hand bars

PICCO R/L 002-007

Inserts for Internal Grooving and Turning



Right-hand shown

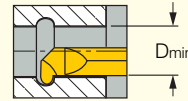
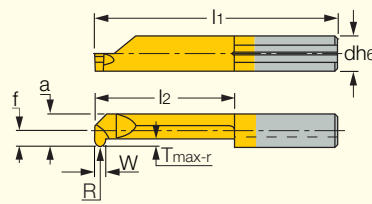
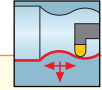
Designation	Dimensions								Tough ↔ Hard	
	d	W±0.05	f	a	l1	l2	T _{max-r}	D _{min}	IC228	IC908
PICCO R 002.0050-5	4.00	0.50	0.2	1.80	19.00	5.0	0.40	2.00		●
PICCO R 002.0050-10	4.00	0.50	0.2	1.80	24.00	10.0	0.40	2.00		●
PICCO R/L 002.0050-15	4.00	0.50	0.2	1.80	29.00	15.0	0.40	2.00		●
PICCO R 003.0070-5	4.00	0.70	0.7	2.70	19.00	5.0	0.60	3.00		●
PICCO R 003.0070-10	4.00	0.70	0.7	2.70	24.00	10.0	0.60	3.00		●
PICCO R 003.0070-16	4.00	0.70	0.7	2.70	29.00	15.0	0.60	3.00		●
PICCO R/L 004.0100-10	4.00	1.00	1.5	3.50	24.00	9.0	0.80	4.00	●	
PICCO R/L 004.0100-16	4.00	1.00	1.5	3.50	30.00	15.0	0.80	4.00	●	
PICCO R/L 004.0100-20	4.00	1.00	1.5	3.50	34.00	19.0	0.80	4.00	●	
PICCO R/L 005.0100-10	5.00	1.00	1.9	4.40	25.00	9.0	1.00	5.00	●	
PICCO R/L 005.0100-15	5.00	1.00	1.9	4.40	30.00	14.0	1.00	5.00	●	
PICCO R/L 005.0100-20	5.00	1.00	1.9	4.40	35.00	19.0	1.00	5.00	●	
PICCO R/L 005.0100-25	5.00	1.00	1.9	4.40	40.00	24.0	1.00	5.00	●	
PICCO R/L 005.0100-30	5.00	1.00	1.9	4.40	45.00	29.0	1.00	5.00	●	
PICCO R/L 005.0150-10	5.00	1.50	1.9	4.40	25.00	9.0	1.00	5.00	●	
PICCO R/L 005.0150-15	5.00	1.50	1.9	4.40	30.00	14.0	1.00	5.00	●	
PICCO R/L 005.0150-20	5.00	1.50	1.9	4.40	35.00	19.0	1.00	5.00	●	
PICCO R/L 005.0150-25	5.00	1.50	1.9	4.40	40.00	24.0	1.00	5.00	●	
PICCO R/L 005.0150-30	5.00	1.50	1.9	4.40	45.00	29.0	1.00	5.00	●	
PICCO R/L 005.0200-10	5.00	2.00	1.9	4.40	25.00	9.0	1.00	5.00	●	
PICCO R/L 005.0200-15	5.00	2.00	1.9	4.40	30.00	14.0	1.00	5.00	●	
PICCO R/L 005.0200-20	5.00	2.00	1.9	4.40	35.00	19.0	1.00	5.00	●	
PICCO R/L 005.0200-25	5.00	2.00	1.9	4.40	40.00	24.0	1.00	5.00	●	
PICCO R/L 005.0200-30	5.00	2.00	1.9	4.40	45.00	29.0	1.00	5.00	●	
PICCO R/L 006.0100-10	6.00	1.00	2.3	5.30	25.00	9.0	1.80	6.00	●	
PICCO R/L 006.0100-15	6.00	1.00	2.3	5.30	30.00	14.0	1.80	6.00	●	
PICCO R/L 006.0100-22	6.00	1.00	2.3	5.30	37.00	21.0	1.80	6.00	●	
PICCO R/L 006.0100-25	6.00	1.00	2.3	5.30	40.00	24.0	1.80	6.00	●	
PICCO R/L 006.0100-30	6.00	1.00	2.3	5.30	45.00	29.0	1.80	6.00	●	
PICCO R/L 006.0150-10	6.00	1.50	2.3	5.30	25.00	9.0	1.80	6.00	●	
PICCO R/L 006.0150-15	6.00	1.50	2.3	5.30	30.00	14.0	1.80	6.00	●	
PICCO R/L 006.0150-22	6.00	1.50	2.3	5.30	37.00	21.0	1.80	6.00	●	
PICCO R/L 006.0150-25	6.00	1.50	2.3	5.30	40.00	24.0	1.80	6.00	●	
PICCO R/L 006.0150-30	6.00	1.50	2.3	5.30	45.00	29.0	1.80	6.00	●	
PICCO R/L 006.0200-10	6.00	2.00	2.3	5.30	25.00	9.0	1.80	6.00	●	
PICCO R/L 006.0200-15	6.00	2.00	2.3	5.30	30.00	14.0	1.80	6.00	●	
PICCO R/L 006.0200-22	6.00	2.00	2.3	5.30	37.00	21.0	1.80	6.00	●	
PICCO R/L 006.0200-25	6.00	2.00	2.3	5.30	40.00	24.0	1.80	6.00	●	
PICCO R/L 006.0200-30	6.00	2.00	2.3	5.30	45.00	29.0	1.80	6.00	●	
PICCO R/L 007.0100-10	7.00	1.00	2.8	6.30	25.00	9.0	2.50	6.80	●	
PICCO R/L 007.0100-15	7.00	1.00	2.8	6.30	30.00	14.0	2.50	6.80	●	
PICCO R/L 007.0100-22	7.00	1.00	2.8	6.30	37.00	21.0	2.50	6.80	●	
PICCO R/L 007.0100-25	7.00	1.00	2.8	6.30	40.00	24.0	2.50	6.80	●	
PICCO R/L 007.0100-30	7.00	1.00	2.8	6.30	45.00	29.0	2.50	6.80	●	
PICCO R/L 007.0150-10	7.00	1.50	2.8	6.30	25.00	9.0	2.50	6.80	●	
PICCO R/L 007.0150-15	7.00	1.50	2.8	6.30	30.00	14.0	2.50	6.80	●	
PICCO R/L 007.0150-22	7.00	1.50	2.8	6.30	37.00	21.0	2.50	6.80	●	
PICCO R/L 007.0150-25	7.00	1.50	2.8	6.30	40.00	24.0	2.50	6.80	●	
PICCO R/L 007.0150-30	7.00	1.50	2.8	6.30	45.00	29.0	2.50	6.80	●	
PICCO R/L 007.0200-10	7.00	2.00	2.8	6.30	25.00	9.0	2.50	6.80	●	
PICCO R/L 007.0200-15	7.00	2.00	2.8	6.30	30.00	14.0	2.50	6.80	●	
PICCO R/L 007.0200-22	7.00	2.00	2.8	6.30	37.00	21.0	2.50	6.80	●	
PICCO R/L 007.0200-25	7.00	2.00	2.8	6.30	40.00	24.0	2.50	6.80	●	
PICCO R/L 007.0200-30	7.00	2.00	2.8	6.30	45.00	29.0	2.50	6.80	●	

• All carbide bars with sharp corners. • Specify right- or left-hand bars

PICCO CUT

PICCO R/L 004-007 (radius)

Full Radius Inserts, for Internal Profiling



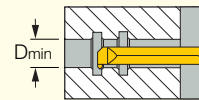
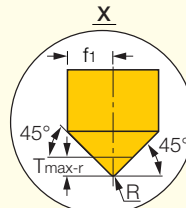
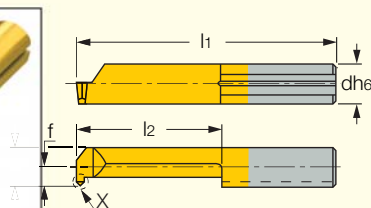
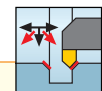
Right-hand shown

Designation	Dimensions									IC228
	d	W ± 0.05	f	a	R	l1	l2	T _{max-r}	D _{min}	
PICCO R/L 004.0.50-16	4.00	1.00	1.5	3.50	0.50	30.00	15.0	0.80	4.00	●
PICCO R/L 005.0.50-20	5.00	1.00	1.9	4.40	0.50	35.00	19.0	1.00	5.00	●
PICCO R/L 005.0.75-20	5.00	1.50	1.9	4.40	0.75	35.00	19.0	1.00	5.00	●
PICCO R/L 005.1.00-20	5.00	2.00	1.9	4.40	1.00	35.00	19.0	1.00	5.00	●
PICCO R/L 006.0.50-25	6.00	1.00	2.3	5.30	0.50	40.00	24.0	1.80	6.00	●
PICCO R/L 006.0.75-25	6.00	1.50	2.3	5.30	0.75	40.00	24.0	1.80	6.00	●
PICCO R/L 006.1.00-25	6.00	2.00	2.3	5.30	1.00	40.00	24.0	1.80	6.00	●
PICCO R/L 007.0.50-30	7.00	1.00	2.8	6.30	0.50	45.00	29.0	2.50	6.80	●
PICCO R/L 007.0.75-30	7.00	1.50	2.8	6.30	0.75	45.00	29.0	2.50	6.80	●
PICCO R/L 007.1.00-30	7.00	2.00	2.8	6.30	1.00	45.00	29.0	2.50	6.80	●

• Specify right- or left-hand bars

PICCO R/L 060

Inserts for Internal Turning and 45° Chamfering



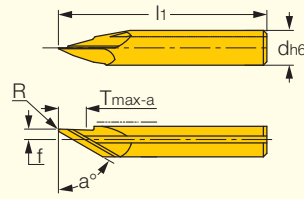
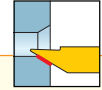
Right-hand shown

Designation	Dimensions									Tough ↔ Hard	
	d	R ± 0.04	f1	f	a	l2	l1	T _{max-r}	D _{min}	IC228	IC908
PICCO R/L 060.5-15	5.00	0.20	1.0	1.9	4.40	14.0	30.00	0.70	5.00	●	
PICCO R/L 060.5-20	5.00	0.20	1.0	1.9	4.40	19.0	35.00	0.70	5.00	●	
PICCO R 060.6-20	6.00	0.20	1.0	2.3	5.30	20.0	35.00	0.70	6.00		●
PICCO R 060.6-25	6.00	0.20	1.0	2.3	5.30	25.0	40.00	0.70	6.00		●
PICCO R/L 060.7-20	7.00	0.20	1.0	2.8	6.30	19.0	35.00	0.70	6.80	●	
PICCO R 060.7-40	7.00	0.20	1.0	2.8	6.30	40.0	55.00	0.70	6.80		●

• Specify right- or left-hand bars

PICCO R/L 520

Inserts for Internal Chamfering



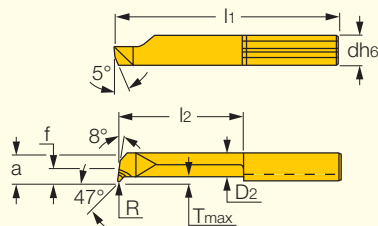
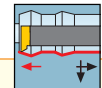
Right-hand shown

Designation	Dimensions								IC908
	d	f	a°	l ₁	R±0.05	T _{max-a}	D _{min}		
PICCO R/L 520.0045-15	5.00	1.5	45	30.00	0.20	3.50	1.00	●	
PICCO R/L 520.0060-15	5.00	1.5	60	30.00	0.20	4.00	1.00	●	

• Left hand inserts on request

PICCO R/L 047

Inserts for Internal Deep Profiling



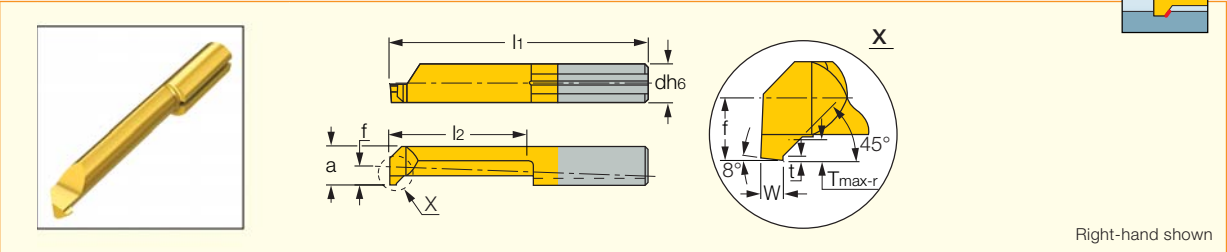
Right-hand shown

Designation	Dimensions										IC908
	d	f	a	l ₁	l ₂	D ₂	T _{max}	D _{min}	R±0.05		
PICCO R/L 047.4-20	4.00	1.5	3.50	34.00	20.0	3.00	0.30	4.00	0.15	●	
PICCO R/L 047.5-25	5.00	1.9	4.40	40.00	25.0	3.80	0.50	5.00	0.15	●	
PICCO R/L 047.6-30	6.00	2.3	5.30	45.00	30.0	4.50	0.50	6.00	0.15	●	

• Left hand inserts on request

PICCO R/L 070

Back Chamfering Inserts for Pre-Parting Operation



Right-hand shown

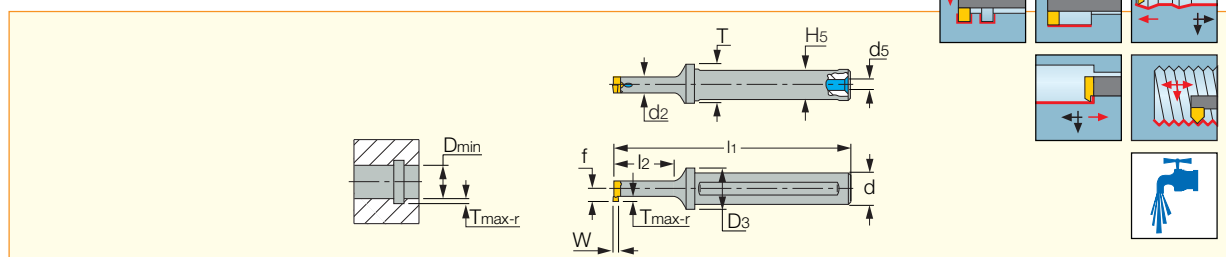
Designation	Dimensions									IC228
	d	W	f	a	l ₂	l ₁	t	T _{max-r}	D _{min}	
PICCO R/L 070.5-15	5.00	1.00	1.9	4.40	15.0	30.00	0.20	1.00	5.00	●
PICCO R/L 070.5-20	5.00	1.00	1.9	4.40	20.0	35.00	0.20	1.00	5.00	●

• All carbide bars with sharp corners • Specify right- or left-hand bars



MG

Internal Grooving, Turning and Threading Bars



Designation	d	D _{min} ⁽¹⁾	T _{max-r} ⁽¹⁾	d ₂	l ₁	l ₂	f ⁽²⁾	H ₅	W _{min}	W _{max}	T	D ₃	d ₅	Insert
MG 12-08C16	12.00	8.00	1.50	6.00	92.00	16.0	4.8	11.0	0.50	3.00	16.3	18.00	6.0	GIQR/L 8
MG 12-08C23	12.00	8.00	1.50	6.00	92.00	23.0	4.8	11.0	0.50	3.00	16.3	18.00	6.0	GIQR/L 8
MG 12-11C25	12.00	11.00	2.30	8.00	92.50	25.0	6.7	11.0	0.50	3.00	16.3	18.00	6.0	GIQR/L 11

• The same tool applies on right and left machining

⁽¹⁾ Check according to specific insert data ⁽²⁾ Cutting edge radius on rotating tool.

For inserts, see pages: GIQR/L 8 (B18) • GIQR/L 8-R (B18) • GIQR/L 11 (B19) • GIQR/L 11-R (B19) • GIQR/L 11-15 (B20) • GIQR/L 11-15-R (B20) • GIQR/L-A18 (B21) • GIQR/L-B18 (B21) • GIQR/L-MT (B103) • GIQR/L-WT (B100).

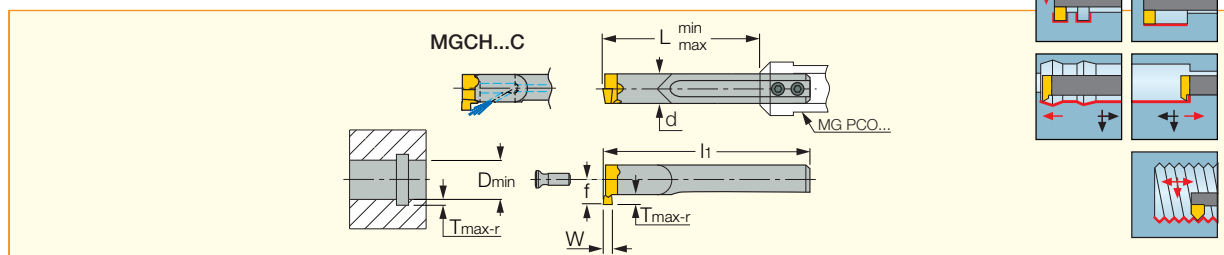
Spare Parts



Designation	Screw	Key
MG 12-08C16	SR 76-1499	T-8/5
MG 12-08C23	SR 76-1499	T-8/5
MG 12-11C25	SR M3.5-08134	T-9/5

MGCH

Solid Carbide Bars for Internal Grooving, Turning and Threading Dmin 8 mm



Designation	D min ⁽¹⁾	Tmax-r ⁽¹⁾	d	l ₁	L min	L max	f	W min	W max	Coolant	Insert
MGCH 06	8.00	1.50	6.00	62.00	16.0	42.0	4.8	0.50	4.00	N	GIQR/L 8
MGCH 06C	8.00	1.50	6.00	62.00	16.0	42.0	4.8	0.50	4.00	Y	GIQR/L 8
MGCH 06-L100	8.00	1.50	6.00	100.00	16.0	80.0	4.8	0.50	4.00	N	GIQR/L 8
MGCH 08	- ⁽²⁾	- ⁽³⁾	8.00	76.00	20.0	56.0	- ⁽⁴⁾	0.50	5.00	N	GIQR/L 11/11-15
MGCH 08C	- ⁽²⁾	- ⁽³⁾	8.00	76.00	20.0	56.0	- ⁽⁴⁾	0.50	5.00	Y	GIQR/L 11/11-15
MGCH 08-L125	- ⁽²⁾	- ⁽³⁾	8.00	125.00	70.0	105.0	- ⁽⁴⁾	0.50	5.00	N	GIQR/L 11/11-15

• The same tool applies on right and left machining.

⁽¹⁾ Check according to specific insert data ⁽²⁾ Dmin=11 mm for GIQR 11, Dmin=15 mm for GIQR 11-15 ⁽³⁾ Tmax-r=2.30 for GIQR 11, Tmax-r=6.3 for GIQR 11-15 ⁽⁴⁾ f=6.70 mm for GIQR 11, f=10.6 mm for GIQR 11-15

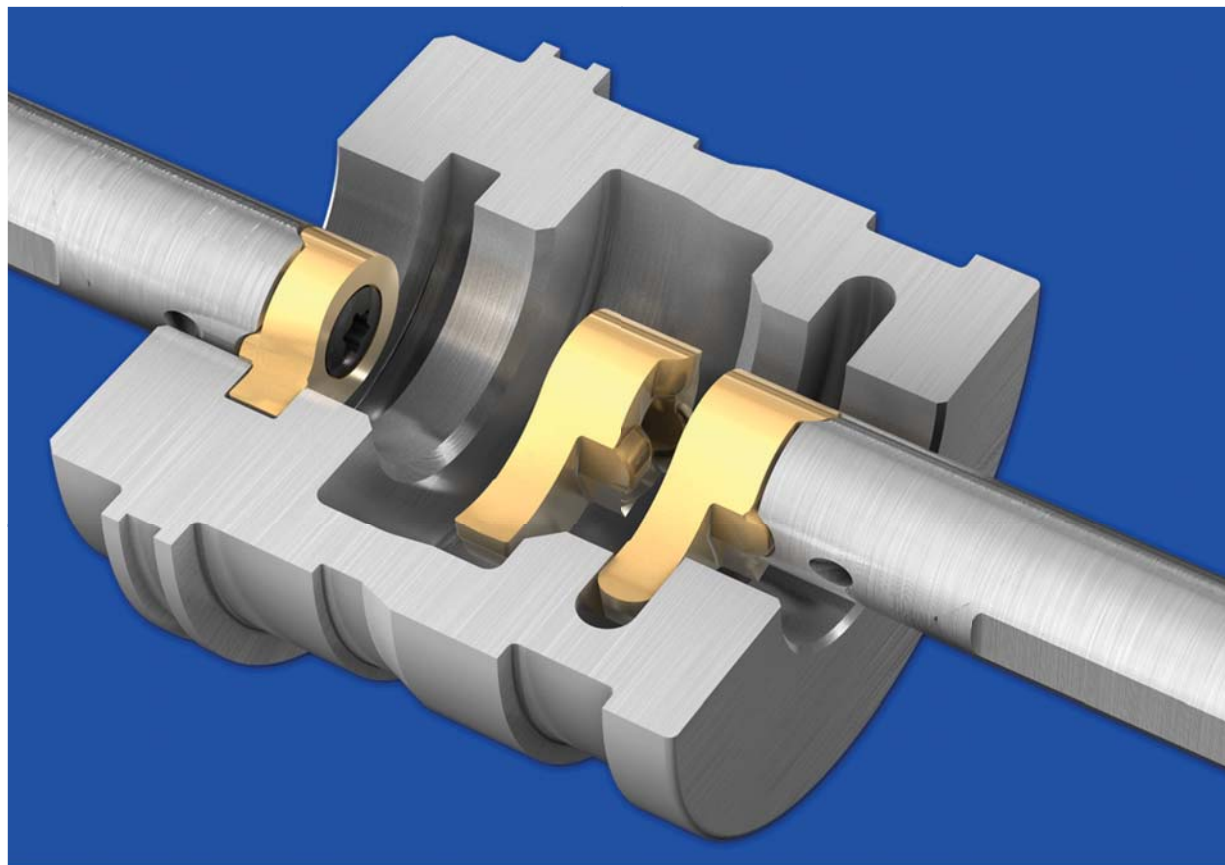
For inserts, see pages: GIQR/L 8 (B18) • GIQR/L 8-R (B18) • GIQR/L 11 (B19) • GIQR/L 11-R (B19) • GIQR/L 11-15 (B20) • GIQR/L 11-15-R (B20) • GIQR/L-A18 (B21) • GIQR/L-B18 (B21) • GIQR/L-MT (B103) • GIQR/L-WT (B100).

For holders, see pages: PICCO/MG PCO (holder) (B123).

Spare Parts

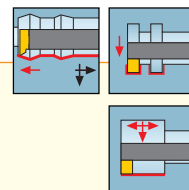
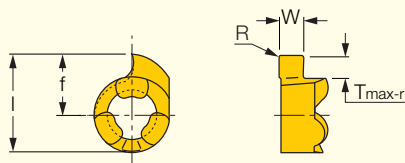


Designation	Screw	Key
MGCH 06	SR 76-1499	T-8/5
MGCH 06C	SR 76-1499	T-8/5
MGCH 06-L100	SR 76-1499	T-8/5
MGCH 08	SR M3.5-08134	T-9/5
MGCH 08C	SR M3.5-08134	T-9/5
MGCH 08-L125	SR M3.5-08134	T-9/5



GIQR/L 8

Precision Ground Single-Ended Internal Grooving and Turning Inserts



Left-hand shown

Designation	Dimensions					IC528	Recommended Machining Data		
	W ± 0.02	R ± 0.03	T $_{max-r}$	D $_{min}$	f		a $_p$ (mm)	f turn (mm/rev)	f groove (mm/rev)
GIQR/L 8-0.50-0.00 ⁽¹⁾	0.50	0.00	0.70	8.00	4.8	●	-	-	0.01-0.03
GIQR/L 8-0.75-0.00 ⁽¹⁾	0.75	0.00	1.20	8.00	4.8	●	-	-	0.01-0.03
GIQR/L 8-0.85-0.00 ⁽¹⁾	0.85	0.00	1.20	8.00	4.8	●	-	-	0.01-0.03
GIQR/L 8-0.95-0.00 ⁽¹⁾	0.95	0.00	1.50	8.00	4.8	●	-	-	0.01-0.03
GIQR/L 8-1.00-0.00 ⁽¹⁾	1.00	0.00	1.50	8.00	4.8	●	-	-	0.01-0.03
GIQR/L 8-1.04-0.05 ⁽¹⁾	1.04	0.05	1.50	8.00	4.8	●	-	-	0.01-0.03
GIQR/L 8-1.20-0.05 ⁽¹⁾	1.20	0.05	1.50	8.00	4.8	●	-	-	0.01-0.03
GIQR/L 8-1.40-0.05 ⁽¹⁾	1.40	0.05	1.50	8.00	4.8	●	-	-	0.01-0.03
GIQR/L 8-1.47-0.05 ⁽¹⁾	1.47	0.05	1.50	8.00	4.8	●	-	-	0.01-0.03
GIQR/L 8-1.50-0.05 ⁽¹⁾	1.50	0.05	1.50	8.00	4.8	●	-	-	0.01-0.03
GIQR/L 8-1.70-0.10	1.70	0.10	1.50	8.00	4.8	●	0.12-0.68	0.02-0.05	0.01-0.03
GIQR/L 8-1.96-0.10	1.96	0.10	1.50	8.00	4.8	●	0.12-0.78	0.02-0.05	0.01-0.03
GIQR/L 8-2.00-0.10	2.00	0.10	1.50	8.00	4.8	●	0.12-0.80	0.02-0.05	0.01-0.03
GIQR/L 8-2.22-0.10	2.22	0.10	1.50	8.00	4.8	●	0.12-0.88	0.02-0.05	0.01-0.03
GIQR/L 8-2.50-0.20	2.50	0.20	1.50	8.00	4.8	●	0.24-1.00	0.02-0.05	0.01-0.03
GIQR/L 8-3.00-0.20	3.00	0.20	1.50	8.00	4.8	●	0.24-1.20	0.02-0.05	0.01-0.03
GIQR 8-3.18-0.20	3.18	0.20	1.50	8.00	4.8	●	0.24-1.27	0.02-0.05	0.01-0.03
GIQR 8-3.50-0.20	3.50	0.20	1.50	8.00	4.8	●	0.24-1.40	0.02-0.05	0.01-0.03
GIQR 8-4.00-0.20	4.00	0.20	1.50	8.00	4.8	●	0.24-1.60	0.02-0.05	0.01-0.03

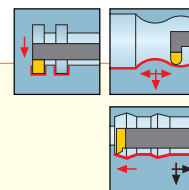
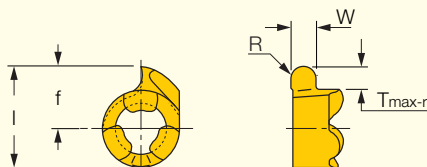
• According to retaining rings standard DIN 471/472. • Can be used for groove milling by circular interpolation.

⁽¹⁾ For grooving only

For tools, see pages: MG (B16) • MGCH (B17).

GIQR/L 8-R

Precision Ground Single-Ended Full Radius Inserts, for Internal Grooving and Profiling



Left-hand shown

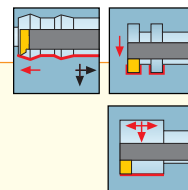
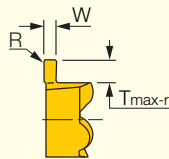
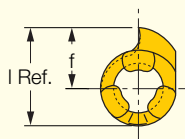
Designation	Dimensions						IC528	Recommended Machining Data		
	W ± 0.02	R ± 0.03	T $_{max-r}$	D $_{min}$	f	l		a $_p$ (mm)	f turn (mm/rev)	f groove (mm/rev)
GIQR/L 8-1.20-R060	1.20	0.60	1.50	8.00	4.8	7.78	●	0.30-0.60	0.02-0.05	0.01-0.03
GIQR/L 8-2.00-R100	2.00	1.00	1.50	8.00	4.8	7.78	●	0.50-1.00	0.02-0.05	0.01-0.03
GIQR 8-3.00-R150	3.00	1.50	1.50	8.00	4.8	7.78	●	0.70-1.50	0.02-0.05	0.01-0.03

• Comply to retaining rings DIN 471/472. • Can be used for groove milling by circular interpolation.

For tools, see pages: MG (B16) • MGCH (B17).

GIQR/L 11

Precision Ground Single-Ended Internal Grooving and Turning Inserts, for Dmin 11 mm



Left-hand shown

Designation	Dimensions						IC528	Recommended Machining Data		
	W±0.02	R±0.03	T max-r	D min	I	f		ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIQR/L 11-0.75-0.00 ⁽¹⁾	0.75	0.00	1.50	11.00	10.68	6.7	●	-	-	0.01-0.03
GIQR/L 11-0.85-0.00 ⁽¹⁾	0.85	0.00	1.50	11.00	10.68	6.7	●	-	-	0.01-0.03
GIQR/L 11-0.95-0.00 ⁽¹⁾	0.95	0.00	1.80	11.00	10.68	6.7	●	-	-	0.01-0.03
GIQR/L 11-1.04-0.05 ⁽¹⁾	1.04	0.05	2.00	11.00	10.68	6.7	●	-	-	0.01-0.03
GIQR/L 11-1.20-0.05 ⁽¹⁾	1.20	0.05	2.30	11.00	10.68	6.7	●	-	-	0.01-0.03
GIQR/L 11-1.40-0.05 ⁽¹⁾	1.40	0.05	2.30	11.00	10.68	6.7	●	-	-	0.01-0.03
GIQR/L 11-1.50-0.05 ⁽¹⁾	1.50	0.05	2.30	11.00	10.68	6.7	●	-	-	0.01-0.03
GIQR/L 11-1.70-0.05 ⁽¹⁾	1.70	0.05	2.30	11.00	10.68	6.7	●	-	-	0.01-0.03
GIQR/L 11-1.96-0.10 ⁽¹⁾	1.96	0.10	2.30	11.00	10.68	6.7	●	-	-	0.01-0.03
GIQR/L 11-2.00-0.10 ⁽¹⁾	2.00	0.10	2.30	11.00	10.68	6.7	●	-	-	0.01-0.03
GIQR/L 11-2.22-0.10	2.22	0.10	2.30	11.00	10.68	6.7	●	0.12-0.88	0.03-0.07	0.02-0.05
GIQR/L 11-2.39-0.15	2.39	0.15	2.30	11.00	10.68	6.7	●	0.18-0.95	0.03-0.07	0.02-0.05
GIQR/L 11-2.47-0.20	2.47	0.20	2.30	11.00	10.68	6.7	●	0.24-0.98	0.03-0.07	0.02-0.05
GIQR/L 11-2.50-0.20	2.50	0.20	2.30	11.00	10.68	6.7	●	0.24-1.00	0.03-0.07	0.02-0.05
GIQR/L 11-2.70-0.20	2.70	0.20	2.30	11.00	10.68	6.7	●	0.24-1.08	0.03-0.07	0.02-0.05
GIQR/L 11-3.00-0.20	3.00	0.20	2.30	11.00	10.68	6.7	●	0.24-1.20	0.03-0.07	0.02-0.05
GIQR 11-3.18-0.20	3.18	0.20	2.30	11.00	10.68	6.7	●	0.24-1.27	0.03-0.07	0.02-0.05
GIQR 11-4.00-0.20	4.00	0.20	2.30	11.00	10.68	6.7	●	0.24-1.60	0.03-0.07	0.02-0.05
GIQR 11-5.00-0.20	5.00	0.20	2.30	11.00	10.68	6.7	●	0.24-2.00	0.03-0.07	0.02-0.05

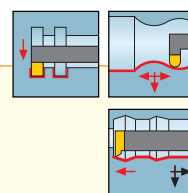
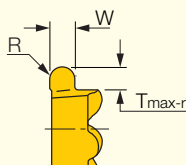
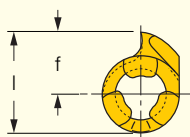
• Comply to retaining rings DIN 471/472. • Can be used for groove milling by circular interpolation.

⁽¹⁾ For grooving only

For tools, see pages: MG (B16) • MGCH (B17).

GIQR/L 11-R

Precision Ground Single-Ended Full Radius Inserts, for Internal Grooving and Profiling



Left-hand shown

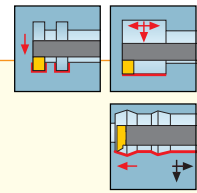
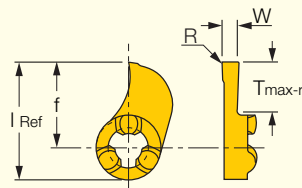
Designation	Dimensions						IC528	Recommended Machining Data		
	W±0.02	R±0.03	T max-r	D min	f	I		ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIQR/L 11-1.20-R060	1.20	0.60	2.30	11.00	6.7	10.68	●	0.30-0.60	0.02-0.05	0.01-0.03
GIQR/L 11-1.80-R090	1.80	0.90	2.30	11.00	6.7	10.68	●	0.40-0.90	0.02-0.05	0.01-0.03
GIQR/L 11-2.00-R100	2.00	1.00	2.30	11.00	6.7	10.68	●	0.50-1.00	0.02-0.05	0.01-0.03
GIQR/L 11-3.00-R150	3.00	1.50	2.30	11.00	6.7	10.68	●	0.70-1.50	0.02-0.05	0.01-0.03
GIQR 11-4.00-R200	4.00	2.00	2.30	11.00	6.7	10.68	●	1.00-2.00	0.02-0.05	0.01-0.03

• Comply to retaining rings DIN 471/472. • Can be used for groove milling by circular interpolation.

For tools, see pages: MG (B16) • MGCH (B17).

GIQR/L 11-15

Precision Ground Single-Ended Internal Deep Grooving and Turning Inserts



Left-hand shown

Designation	Dimensions						IC528	Recommended Machining Data		
	W ± 0.02	R ± 0.03	T $_{max-r}$	D $_{min}$	f	l		a $_p$ (mm)	f turn (mm/rev)	f groove (mm/rev)
GIQR/L 11-15-1.50-0.05	1.50	0.05	6.30	15.00	14.60	10.6	●	0.10-0.40	0.02-0.05	0.02-0.06
GIQR/L 11-15-2.00-0.10	2.00	0.10	6.30	15.00	14.60	10.6	●	0.15-0.50	0.02-0.05	0.02-0.06
GIQR/L 11-15-2.50-0.20	2.50	0.20	6.30	15.00	14.60	10.6	●	0.25-0.65	0.02-0.05	0.02-0.06
GIQR/L 11-15-3.00-0.20	3.00	0.20	6.30	15.00	14.60	10.6	●	0.25-0.75	0.02-0.05	0.02-0.06

• Comply to retaining rings DIN 471/472. • Can be used for groove milling by circular interpolation.

For tools, see pages: MG (B16) • MGCH (B17).

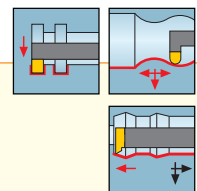
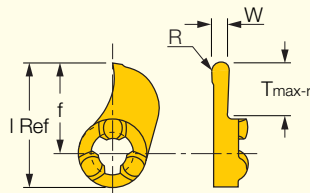
Spare Parts



Designation	Screw
GIQR/L 11-15	SR M3.5-08134

GIQR/L 11-15-R

Precision Ground Single-Ended Full Radius Inserts, for Deep Internal Grooving and Profiling



Left-hand shown

Designation	Dimensions						IC528	Recommended Machining Data		
	W ± 0.02	R ± 0.03	T $_{max-r}$	D $_{min}$	f	l		a $_p$ (mm)	f turn (mm/rev)	f groove (mm/rev)
GIQR/L 11-15-2.00-R100	2.00	1.00	6.30	15.00	10.6	14.60	●	0.00-0.50	0.02-0.05	0.02-0.06
GIQR/L 11-15-2.50-R125	2.50	1.25	6.30	15.00	10.6	14.60	●	0.00-0.65	0.02-0.05	0.02-0.06
GIQR/L 11-15-3.00-R150	3.00	1.50	6.30	15.00	10.6	14.60	●	0.00-0.75	0.02-0.05	0.02-0.06

• Comply to retaining rings DIN 471/472. • Can be used for groove milling by circular interpolation.

For tools, see pages: MG (B16) • MGCH (B17).

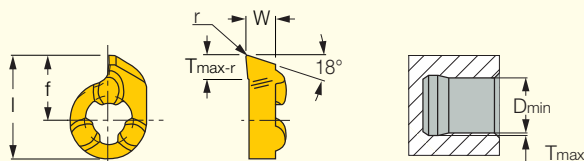
Spare Parts



Designation	Screw
GIQR/L 11-15-R	SR M3.5-08134

GIQR/L-A18

Internal Boring and Profiling Inserts



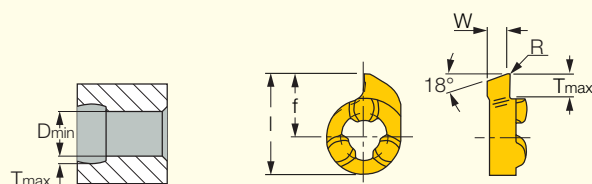
Left-hand shown

Designation	Dimensions						IC528	Recommended Machining Data		
	D _{min}	W	r	T _{max}	l	f		a _p (mm)	f (mm/rev)	f groove (mm/rev)
GIQR/L 8-A18-0.15	7.80	3.00	0.15	1.60	7.60	4.6	●	0.02-1.30	0.02-0.05	0.01-0.03
GIQR/L 11-A18-0.15	11.00	3.00	0.15	2.50	10.70	6.7	●	0.02-2.20	0.02-0.05	0.01-0.03

For tools, see pages: MG (B16) • MGCH (B17).

GIQR/L-B18

Internal Back Boring and Profiling Inserts



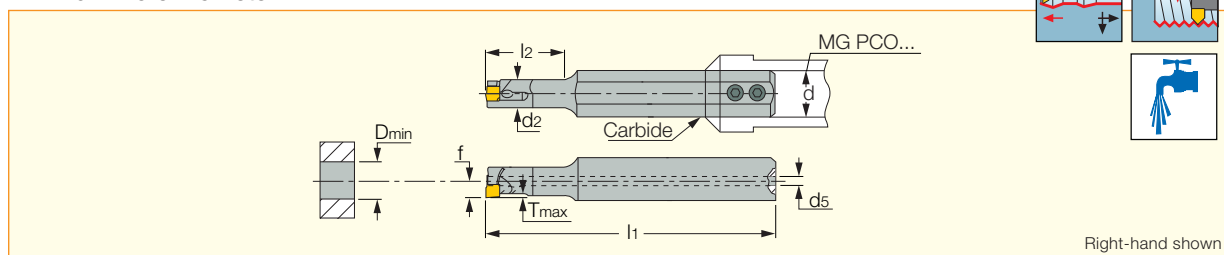
Left-hand shown

Designation	Dimensions						IC528	Recommended Machining Data	
	D _{min}	W	R ^{±0.03}	T _{max}	f	l		a _p (mm)	f (mm/rev)
GIQR/L 8-B18-0.15	7.80	2.50	0.15	1.30	4.6	7.60	●	0.02-1.00	0.02-0.05
GIQR/L 11-B18-0.15	11.00	2.50	0.15	2.30	6.7	10.70	●	0.02-2.00	0.02-0.05

For tools, see pages: MG (B16) • MGCH (B17).

MGUHR

Solid Carbide Bars, for Internal Turning and Threading at 4 mm
Minimum Bore Diameter



Designation	D _{min}	T _{max}	f ⁽²⁾	d	l ₁	l ₂	d ₂	d ₅
MGUHR 06-04L10 ⁽¹⁾	4.00	0.50	2.2	6.00	62.00	10.0	3.45	1.3
MGUHR 06-04L20	4.00	0.50	2.2	6.00	62.00	20.0	3.45	1.3

⁽¹⁾ Dmin for turning 4.0 mm & Tmax 0.43 mm; Dmin for threading 5.0 mm & Tmax 1.00 mm ⁽²⁾ f=2.17 for turning, f=2.7 for threading

For inserts, see pages: UMGR (B23) • UMGR-A55 (B100) • UMGR-A60 (B102).

For holders, see pages: PICCO/MG PCO (holder) (B123).

Mounting Operation

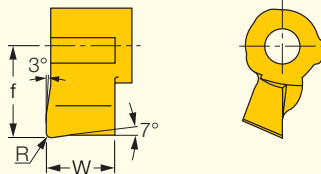
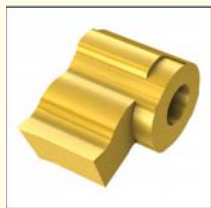


Dismounting Operation



UMGR

Miniature Indexable Inserts for Internal Turning



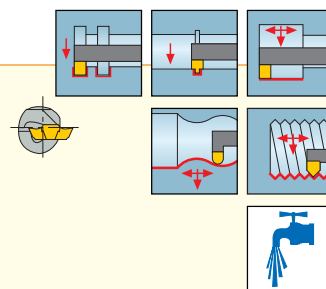
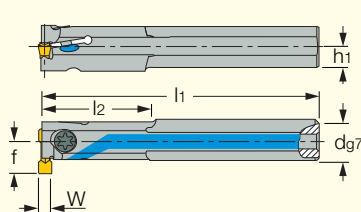
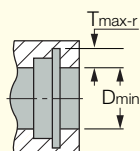
Right-hand shown

Dimensions					IC508
Designation	W ± 0.02	R ± 0.02	f	D _{min}	
UMGR 4.0-0.0	1.63	0.00	2.2	4.00	
UMGR 4.0-0.1	1.63	0.10	2.2	4.00	●

For tools, see pages: MGUHR (B22).

GEHIMR/L

Internal Machining Boring Bars with Coolant Holes,
for Insert Widths Less than 1.9 mm



Right-hand shown

Designation	W _{min}	W _{max} ⁽¹⁾	d	D _{min}	T _{max-r}	l ₁	l ₂	f	h ₁	Inlet
GEHIMR/L 10-13	0.80	1.90	10.00	12.50	2.50	125.00	25.0	7.6	5.0	3.5 mm
GEHIMR/L 12-14	0.80	1.90	12.00	14.00	2.50	150.00	35.0	9.0	6.0	6.0 mm
GEHIMR/L 16-13	0.80	1.90	16.00	12.50	2.50	125.00	20.0	10.6	7.5	M6 ⁽²⁾
GEHIMR/L 16-14	0.80	1.90	16.00	14.00	2.50	125.00	25.0	10.9	7.5	M6 ⁽²⁾
GEHIMR/L 16-16	0.80	1.90	16.00	16.00	2.50	160.00	40.0	10.5	7.5	M6 ⁽²⁾

⁽¹⁾ Pocket can carry inserts up to 3 mm width. ⁽²⁾ Plastic seal with M6 thread.

For inserts, see pages: GEPI (B30) • GEPI (W<M) (B29) • GEPI-MT (B102) • GEPI-RX/LX (B31) • GEPI-WT (B99).

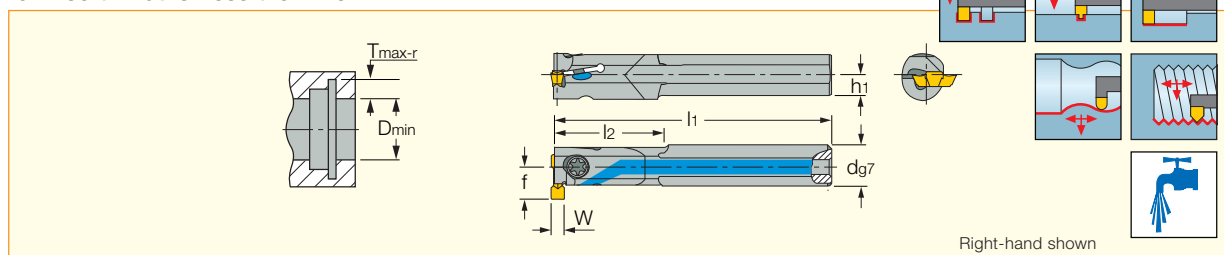
Spare Parts



Designation	Screw	Key	Coolant Fitting
GEHIMR/L 10-13	SR 16-236	T-15/5	
GEHIMR/L 12-14	SR 16-236	T-15/5	
GEHIMR/L 16-13	SR 16-236	T-15/5 PL 16	
GEHIMR/L 16-14	SR 16-236	T-15/5 PL 16	
GEHIMR/L 16-16	SR M5-04451	T-20/5 PL 16	

GEHIMR/L-SC

Internal Machining Solid Carbide Bars with Coolant Holes,
for Insert Widths Less than 1.9 mm



Designation	W_{min}	$W_{max}^{(1)}$	d	D_{min}	T_{max-r}	l_1	l_2	f	h_1	Inlet
GEHIMR/L 10SC-13	0.80	1.90	10.00	12.50	2.50	125.00	30.0	7.6	5.0	3.5 mm
GEHIMR/L 12SC-14	0.80	1.90	12.00	14.00	2.50	125.00	40.0	9.0	6.0	6.0 mm
GEHIMR/L 16SC-13	0.80	1.90	16.00	12.50	2.50	125.00	35.0	10.6	7.5	M6 ⁽²⁾
GEHIMR/L 16SC-16	0.80	1.90	16.00	16.00	2.50	160.00	70.0	10.5	7.5	M6 ⁽²⁾

⁽¹⁾ Pocket can carry inserts up to 3 mm width. ⁽²⁾ Plastic seal with M6 thread.

For inserts, see pages: GEPI (B30) • GEPI (W<M) (B29) • GEPI-MT (B102) • GEPI-RX/LX (B31) • GEPI-WT (B99).

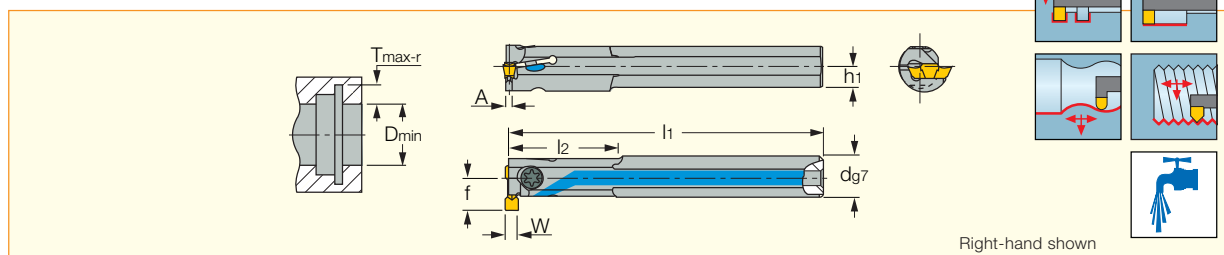
Spare Parts



Designation	Screw	Key	Coolant Fitting
GEHIMR/L 10SC-13	SR 16-236	T-15/5	
GEHIMR/L 12SC-14	SR 16-236	T-15/5	
GEHIMR/L 16SC-13	SR 16-236	T-15/5	PL 16
GEHIMR/L 16SC-16	SR M5-04451	T-20/5	PL 16

GEHIR/L

Internal Machining Bars with Coolant Holes



Designation	W _{min}	W _{max}	d	D _{min}	T _{max-r}	l ₁	l ₂	f	A	h ₁	Inlet
GEHIR/L 10-11.5-2-T3	1.90	2.40	10.00	11.50	3.00	125.00	25.0	8.8	1.60	5.0	3.5 mm
GEHIR/L 10-13-2-T2.4	1.90	2.40	10.00	12.50	2.40	125.00	25.0	7.5	1.60	5.0	3.5 mm
GEHIR/L 12-11.5-2-T3	1.90	2.40	12.00	11.50	3.00	125.00	20.0	11.6	1.60	6.0	6.0 mm
GEHIR/L 12-14-2-T2.6	1.90	2.40	12.00	14.00	2.60	150.00	35.0	9.1	1.60	6.0	6.0 mm
GEHIR/L 12-14-2-T4	1.90	2.40	12.00	14.00	4.00	150.00	35.0	10.3	1.60	6.0	6.0 mm
GEHIR/L 12-15-2-T6	1.90	2.40	12.00	15.00	6.00	150.00	29.0	12.3	1.60	6.0	6.0 mm
GEHIR/L 16-11.5-2-T3	1.90	2.40	16.00	11.50	3.00	125.00	20.0	11.6	1.60	7.5	M6 ⁽¹⁾
GEHIR/L 16-13-2-T2.4	1.90	2.40	16.00	12.50	2.40	125.00	20.0	10.5	1.60	7.5	M6 ⁽¹⁾
GEHIR/L 16-14-2-T2.6	1.90	2.40	16.00	14.00	2.60	125.00	25.0	11.0	1.60	7.5	M6 ⁽¹⁾
GEHIR/L 16-14-2-T4	1.90	2.40	16.00	14.00	4.00	125.00	25.0	12.4	1.60	7.5	M6 ⁽¹⁾
GEHIR/L 16-16-2-T3	1.90	2.40	16.00	16.00	3.00	160.00	40.0	11.0	1.60	7.5	M6 ⁽¹⁾
GEHIR/L 16-20-2-T8	1.90	2.40	16.00	20.00	8.00	160.00	40.0	16.1	1.60	7.5	M6 ⁽¹⁾
GEHIR/L 12-14-3-T2.6	2.40	3.20	12.00	14.00	2.60	150.00	35.0	9.1	2.00	6.0	6.0 mm
GEHIR/L 12-14-3-T4	2.40	3.20	12.00	14.00	4.00	150.00	35.0	10.3	2.00	6.0	6.0 mm
GEHIR/L 12-15-3-T6	2.40	3.20	12.00	15.00	6.00	150.00	29.0	12.3	2.00	6.0	6.0 mm
GEHIR/L 16-11.5-3-T3	2.40	3.20	16.00	11.50	3.00	125.00	20.0	11.6	2.00	7.5	M6 ⁽¹⁾
GEHIR/L 16-13-3-T2.4	2.40	3.20	16.00	12.50	2.40	125.00	20.0	10.5	2.00	7.5	M6 ⁽¹⁾
GEHIR/L 16-14-3-T2.6	2.40	3.20	16.00	14.00	2.60	125.00	25.0	11.0	2.00	7.5	M6 ⁽¹⁾
GEHIR/L 16-14-3-T4	2.40	3.20	16.00	14.00	4.00	125.00	25.0	12.4	2.00	7.5	M6 ⁽¹⁾
GEHIR/L 16-16-3-T3	2.40	3.20	16.00	16.00	3.00	160.00	40.0	11.0	2.00	7.5	M6 ⁽¹⁾
GEHIR/L 16-20-3-T8	2.40	3.20	16.00	20.00	8.00	160.00	40.0	16.1	2.00	7.5	M6 ⁽¹⁾

⁽¹⁾ Plastic seal with M6 thread

For inserts, see pages: GEMI (B29) • GEPI (B30) • GEPI (full radius) (B30) • GEPI-MT (B102) • GEPI-WT (B99).

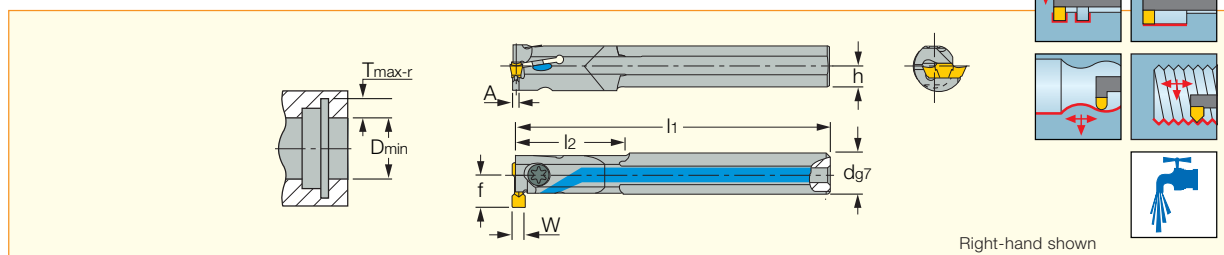
Spare Parts



Designation	Screw	Key	Coolant Fitting
GEHIR/L 10-11.5-2-T3	SR 14-513	T-8/5	
GEHIR/L 10-13-2-T2.4	SR 16-236	T-15/5	
GEHIR/L 12-14-2-T2.6	SR 16-236	T-15/5	
GEHIR/L 12-14-2-T4	SR 14-562	T-10/5	
GEHIR/L 12-15-2-T6	SR 14-513	T-8/5	
GEHIR/L 16-11.5-2-T3	SR 14-513	T-8/5	PL 16
GEHIR/L 16-13-2-T2.4	SR 16-236	T-15/5	PL 16
GEHIR/L 16-14-2-T2.6	SR 16-236	T-15/5	PL 16
GEHIR/L 16-14-2-T4	SR 14-562	T-10/5	PL 16
GEHIR/L 16-16-2-T3	SR M5-04451	T-20/5	PL 16
GEHIR/L 16-20-2-T8	SR M5-04451	T-20/5	PL 16
GEHIR/L 12-14-3-T2.6	SR 16-236	T-15/5	
GEHIR/L 12-14-3-T4	SR 14-562	T-10/5	
GEHIR/L 12-15-3-T6	SR 14-513	T-8/5	
GEHIR/L 16-11.5-3-T3	SR 14-513	T-8/5	PL 16
GEHIR/L 16-13-3-T2.4	SR 16-236	T-15/5	PL 16
GEHIR/L 16-14-3-T2.6	SR 16-236	T-15/5	PL 16
GEHIR/L 16-14-3-T4	SR 14-562	T-10/5	PL 16
GEHIR/L 16-16-3-T3	SR M5-04451	T-20/5	PL 16
GEHIR/L 16-20-3-T8	SR M5-04451	T-20/5	PL 16

GEHIR/L-SC

Internal Machining Solid Carbide Bars with Coolant Holes



Designation	W _{min}	W _{max}	d	D _{min}	T _{max-r}	l ₁	l ₂	f	A	h ₁	Inlet
GEHIR/L 10SC-13-2	1.90	2.40	10.00	12.50	2.40	125.00	30.0	7.5	1.60	5.0	3.5 mm
GEHIR 12SC-14-2	1.90	2.40	12.00	14.00	2.60	125.00	40.0	9.1	1.60	6.0	6.0 mm
GEHIR/L 16SC-16-2	1.90	2.40	16.00	16.00	3.00	160.00	70.0	11.0	1.60	7.5	M6 ⁽¹⁾
GEHIR 12SC-14-3	2.40	3.20	12.00	14.00	2.60	125.00	40.0	9.1	2.00	6.0	6.0 mm
GEHIR 16SC-13-3	2.40	3.20	16.00	12.50	2.40	125.00	35.0	10.5	2.00	7.5	M6 ⁽¹⁾
GEHIR/L 16SC-14-3	2.40	3.20	16.00	14.00	2.60	140.00	40.0	11.0	2.00	7.5	M6 ⁽¹⁾
GEHIR/L 16SC-16-3	2.40	3.20	16.00	16.00	3.00	160.00	70.0	11.0	2.00	7.5	M6 ⁽¹⁾

⁽¹⁾ Plastic seal with M6 thread

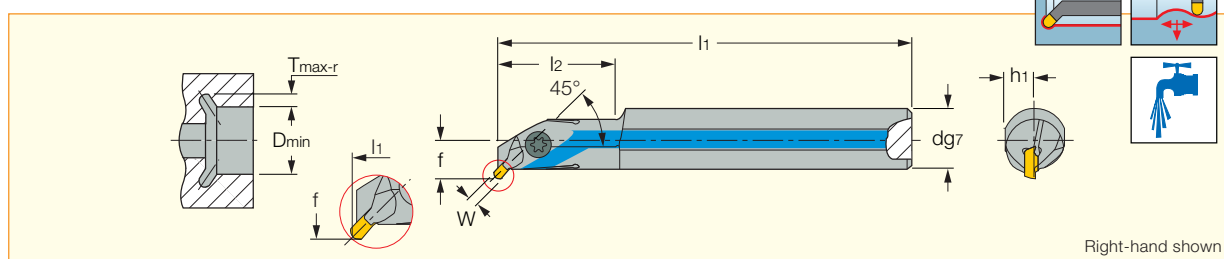
For inserts, see pages: GEMI (B29) • GEPI (B30) • GEPI (full radius) (B30) • GEPI-MT (B102) • GEPI-WT (B99).

Spare Parts

Designation	Screw	Key	Coolant Fitting
GEHIR/L 10SC-13-2	SR 16-236	T-15/5	
GEHIR 12SC-14-2	SR 16-236	T-15/5	
GEHIR/L 16SC-16-2	SR M5-04451	T-20/5	PL 16
GEHIR 12SC-14-3	SR 16-236	T-15/5	
GEHIR 16SC-13-3	SR 16-236	T-15/5	PL 16
GEHIR/L 16SC-14-3	SR 16-236	T-15/5	PL 16
GEHIR/L 16SC-16-3	SR M5-04451	T-20/5	PL 16

GEHIUR/L

Undercutting and Turning Boring Bars with Coolant Holes



Designation	W _{max}	d	D _{min}	T _{max-r}	l ₁	l ₂	f	h ₁	Inlet
GEHIUR/L 12U	3.20	12.00	14.00	2.00	125.00	20.0	8.7	6.0	6.0 mm
GEHIUR/L 16U	3.20	16.00	16.00	2.00	125.00	32.0	9.7	7.5	M6 ⁽¹⁾

• For profiling use GEPI (full radius) inserts only. For undercutting use GEPI - UN/UR/UL.

⁽¹⁾ Plastic seal with M6 thread.

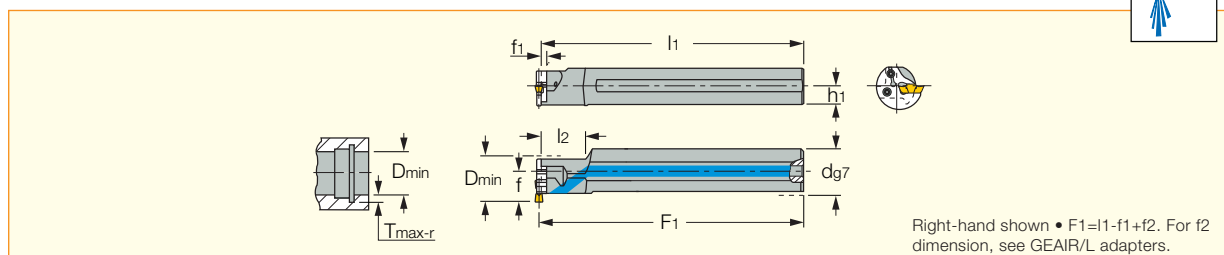
For inserts, see pages: GEPI (full radius) (B30) • GEPI-UN/UR/UL (B31).

Spare Parts

Designation	Screw	Key	Coolant Fitting
GEHIUR/L 12U	SR 16-236 P	T-15/5	
GEHIUR/L 16U	SR M5-04451	T-20/5	PL 16

GHAIR/L-GE

Bars with Coolant Holes for Internal Grooving and Turning Adapters



Designation	d	l ₂	l ₁	f	h ₁	f ₁	Adapter
GHAIR/L 16-20	16.00	-	150.00	11.5	7.5	2.4	GEAIR/L 20..

• For Dmin & Tmax refer to GEAIR/L adapters.

For tools, see pages: GEAIR/L (B27).

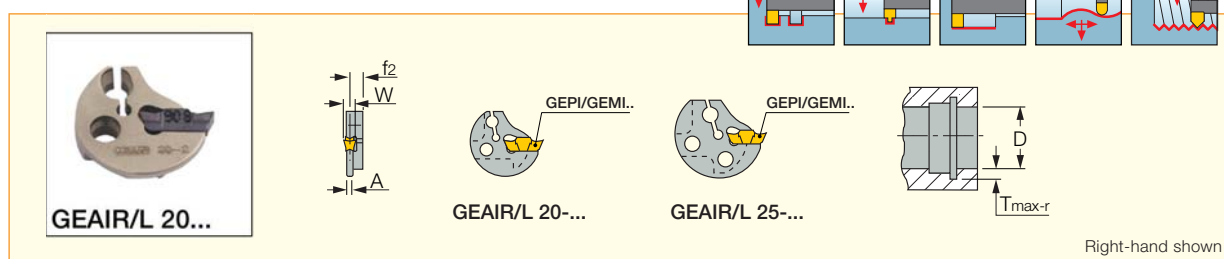
Spare Parts



Designation	Key	Lower & Side Screw	Coolant Fitting
GHAIR/L 16-20	T-8/5	SR 76-2057	PL 16

GEAIR/L

Internal Grooving and Turning Adapters



Designation	D _{min}	W _{min}	W _{max}	T _{max-r}	f ₂	A
GEAIR/L 20-2	20.00	1.90	2.40	3.00	3.40	1.60
GEAIR/L 20-3	20.00	2.40	3.00	3.00	3.60	2.00
GEAIR/L 20-4	20.00	3.00	4.00	3.00	3.90	2.50

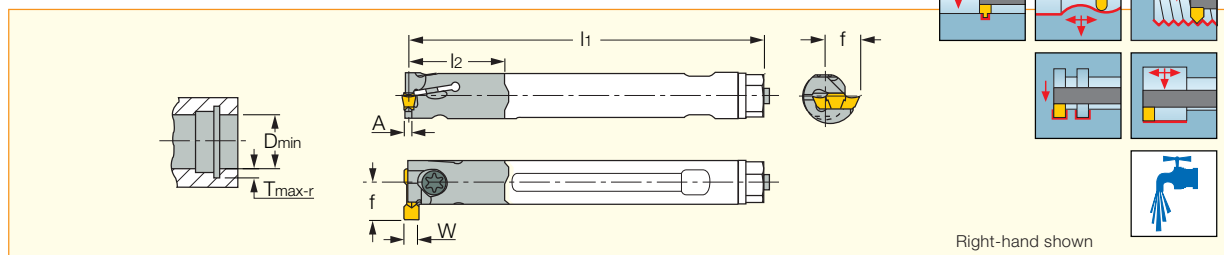
• For using TIPI insert, toolholder seat needs to be modified according to insert profile, to ensure clearance.

For inserts, see pages: GEMI (B29) • GEPI (B30) • GEPI (full radius) (B30) • GEPI-MT (B102) • GEPI-WT (B99).

For holders, see pages: GHAIR/L-GE (B27) .

E-GEHIR / E-GHIR

Interchangeable Heads for Internal Grooving and Turning



Designation	W_{min}	W_{max}	D_{min}	T_{max-r}	l_1	l_2	f	A	Insert
E12 GEHIR 16-1	1.50	1.90	16.00	2.20	174.00	21.0	9.0	1.20	GEPI, GEMI
E12 GEHIR 16-2	1.90	2.40	16.00	2.20	174.00	21.0	9.0	1.60	GEPI, GEMI
E12 GEHIR 16-3	2.40	3.00	16.00	2.20	174.00	21.0	9.0	2.00	GEPI, GEMI

• Left-hand heads on request • The shank assembly is the same for right- and left-hand heads

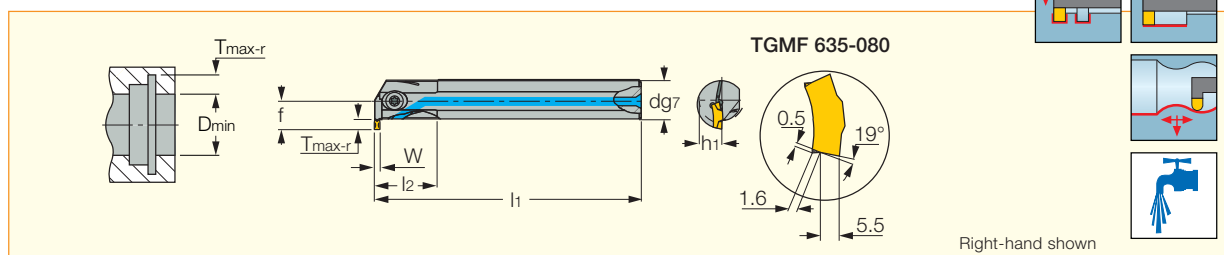
For inserts, see pages: GEMI (B29) • GEPI (B30) • GEPI (full radius) (B30) • GEPI (W<M) (B29) • GEPI-MT (B102) • GEPI-WT (B99) .

Spare Parts

Designation	Screw	Key
E12 GEHIR 16-1	SR M5-04451-L10.5	T-20/5
E12 GEHIR 16-2	SR M5-04451-L10.5	T-20/5
E12 GEHIR 16-3	SR M5-04451-L10.5	T-20/5

TGIR/L-C

Grooving and Turning Bars with Coolant Holes for TOP-GRIP Utility Inserts



Designation	d	W_{min}	W_{max}	D_{min}	T_{max-r}	h_1	l_1	l_2	f	Inlet	Insert
TGIR/L 16C-3	16.00	3.00	3.00	20.50	5.50	7.5	150.00	25.0	12.0	M6	TGMF 3

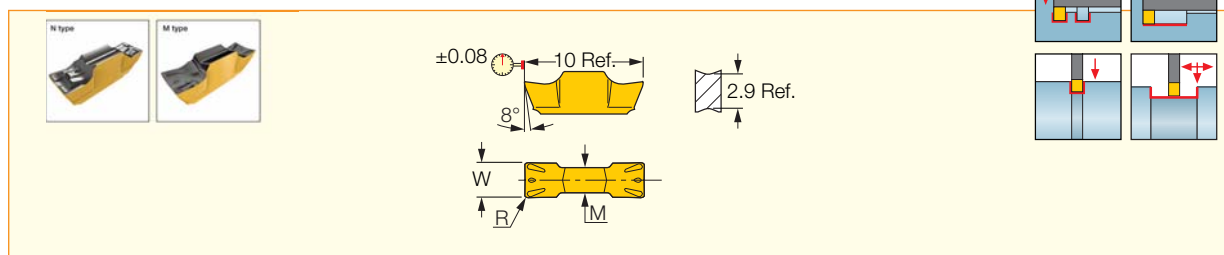
For inserts, see pages: TGMF (full radius) (A22) • TGMF/P (A22).

Spare Parts

Designation	Screw	Key	Coolant Fitting
TGIR/L 16C-3	SR 76-1400	T-20/5	PL 16

GEMI

Utility Double-Ended Inserts, for Internal and External Grooving and Turning



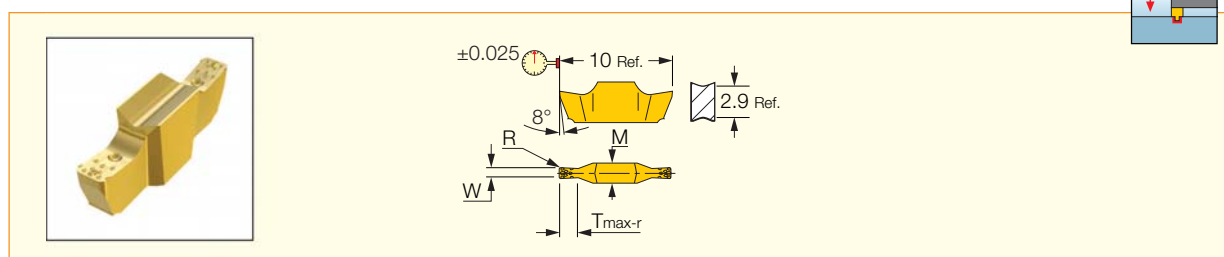
Designation	Dimensions		Tough ↔ Hard			Recommended Machining Data		
	W ± 0.02	M	IC808	IC908		a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GEMI 3002M	3.00	2.2	●	●		0.25-1.30	0.10-0.14	0.05-0.09

• Dmin for internal application=12.5 mm

For tools, see pages: E-GEHIR / E-GHIR (B28) • GEAIR/L (B27) • GEHIR/L (B25) • GEHIR/L-SC (B26) • GEHSR/L-SL (A13).

GEPI (W<M)

Precision Ground Double-Ended Inserts for Internal Grooving



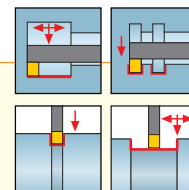
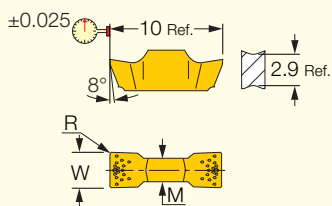
Designation	Dimensions				Tough ↔ Hard			Recommended Machining Data
	W ± 0.02	R ± 0.03	T _{max-r}	M	IC528	IC08	IC908	f groove (mm/rev)
GEPI 1.00-0.10	1.00	0.10	1.60	1.8	●	●	●	0.01-0.03
GEPI 1.00-0.50	1.00	0.50	1.60	1.8	●	●	●	0.01-0.04
GEPI 1.04-0.00	1.04	0.00	1.60	1.8	●	●	●	0.01-0.03
GEPI 1.20-0.00	1.20	0.00	1.80	1.8	●	●	●	0.01-0.03
GEPI 1.25-0.10	1.25	0.10	2.00	1.8	●	●	●	0.02-0.04
GEPI 1.40-0.00	1.40	0.00	2.00	1.8	●	●	●	0.02-0.04
GEPI 1.47-0.00	1.47	0.00	2.00	1.8	●	●	●	0.02-0.04
GEPI 1.50-0.10	1.50	0.10	2.00	1.8	●	●	●	0.02-0.04
GEPI 1.57-0.15	1.57	0.15	2.00	1.8	●	●	●	0.02-0.05
GEPI 1.70-0.05	1.70	0.05	2.50	1.8	●	●	●	0.02-0.05
GEPI 1.78-0.15	1.78	0.15	2.50	1.8	●	●	●	0.02-0.05

• Toolholder seat needs to be modified according to insert profile to ensure clearance • Dmin for internal application=12.5mm

For tools, see pages: E-GEHIR / E-GHIR (B28) • GEHIMR/L (B23) • GEHIMR/L-SC (B24).

GEPI

Precision Ground Double-Ended Inserts for Internal and External Grooving



Designation	Dimensions				Tough ↔ Hard			Recommended Machining Data		
	W±0.02	R±0.03	T _{max-r}	M	IC528	IC08	IC908	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GEPI 1.85-0.10 ⁽¹⁾	1.85	0.10	2.50	1.8	●	●	●	0.15-0.50	0.05-0.07	0.03-0.05
GEPI 1.96-0.10	1.96	0.10	2.50	1.8	●	●	●	0.15-0.50	0.05-0.07	0.03-0.05
GEPI 1.96-0.15	1.96	0.15	2.50	1.8	●	●	●	0.20-0.50	0.05-0.07	0.03-0.05
GEPI 2.00-0.10	2.00	0.10	9.00	1.8	●	●	●	0.15-0.60	0.05-0.07	0.03-0.05
GEPI 2.22-0.10	2.22	0.10	9.00	1.8	●	●	●	0.15-0.60	0.06-0.08	0.04-0.06
GEPI 2.22-0.15	2.22	0.15	9.00	1.8	●	●	●	0.20-0.60	0.06-0.08	0.04-0.06
GEPI 2.39-0.10	2.39	0.10	9.00	2.2	●	●	●	0.15-1.00	0.07-0.09	0.04-0.06
GEPI 2.39-0.15	2.39	0.15	9.00	2.2	●	●	●	0.20-1.00	0.07-0.09	0.04-0.06
GEPI 2.47-0.20	2.47	0.20	9.00	2.2	●	●	●	0.25-1.10	0.08-0.11	0.04-0.07
GEPI 2.50-0.10	2.50	0.10	9.00	2.2	●	●	●	0.15-1.10	0.07-0.09	0.04-0.07
GEPI 2.50-0.20	2.50	0.20	9.00	2.2	●	●	●	0.25-1.10	0.08-0.11	0.05-0.08
GEPI 2.70-0.20	2.70	0.20	9.00	2.2	●	●	●	0.25-1.20	0.09-0.12	0.05-0.08
GEPI 3.00-0.20	3.00	0.20	9.00	2.2	●	●	●	0.25-1.30	0.10-0.14	0.05-0.09
GEPI 3.18-0.20	3.18	0.20	9.00	2.2	●	●	●	0.25-1.40	0.11-0.14	0.06-0.10

• Dmin for internal application=12.5mm

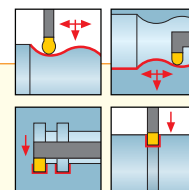
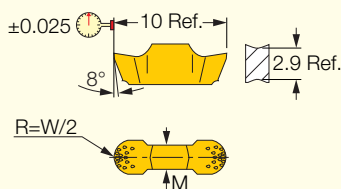
⁽¹⁾ Tool pocket should be modified

For tools, see pages: E-GEHIR / E-GHIR (B28) • GEAIR/L (B27) • GEHIMR/L (B23) • GEHIMR/L-SC (B24) • GEHIR/L (B25)

• GEHIR/L-SC (B26) • GEHSR/L-SL (A13).

GEPI (full radius)

Precision Double-Ended Full Radius Inserts for Internal and External Profiling and Grooving



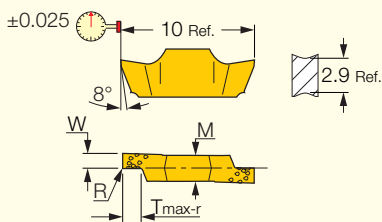
Designation	Dimensions				Tough ↔ Hard			Recommended Machining Data		
	W±0.02	R±0.05	T _{max-r}	M	IC528	IC08	IC908	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GEPI 2.00-1.00	2.00	1.00	5.00	1.8	●	●	●	0.00-0.60	0.08-0.12	0.04-0.07
GEPI 3.00-1.50	3.00	1.50	5.00	2.2	●	●	●	0.00-1.50	0.13-0.20	0.05-0.11
GEPI 3.18-1.59	3.18	1.59	5.00	2.2	●	●	●	0.00-1.59	0.13-0.21	0.06-0.11

• Dmin for internal application=12.5mm

For tools, see pages: E-GEHIR / E-GHIR (B28) • GEAIR/L (B27) • GEHIR/L (B25) • GEHIR/L-SC (B26) • GEHIUR/L (B26) • GEHSR/L-SL (A13).

GEPI-RX/LX

Precision Double-Ended Inserts for Internal Grooving Next to Shoulder



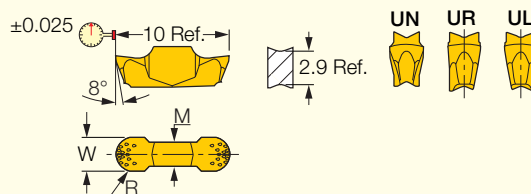
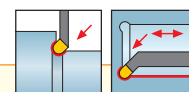
Designation	Dimensions				Tough ↔ Hard		Recommended Machining Data
	W±0.02	R±0.03	T _{max-r}	M	IC528	IC908	
GEPI 0.80-0.00RX	0.80	0.00	1.50	1.8	●	●	0.01-0.02
GEPI 1.00-0.10 LX	1.00	0.10	1.50	1.8	●	●	0.01-0.03
GEPI 1.00-0.10 RX	1.00	0.10	1.50	1.8	●	●	0.01-0.03
GEPI 1.57-0.15RX	1.57	0.15	2.00	1.8	●	●	0.02-0.05

• Toolholder seat needs to be modified according to insert profile to ensure clearance • D_{min} for internal application=12.5mm

For tools, see pages: GEHIMR/L (B23) • GEHIMR/L-SC (B24).

GEPI-UN/UR/UL

Precision Double-Ended Inserts for Internal Undercutting

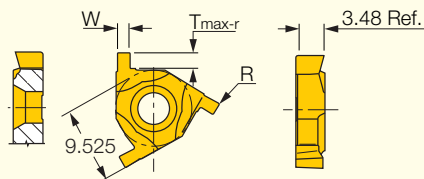
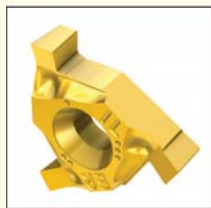
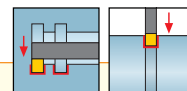


Designation	Dimensions				Tough ↔ Hard		Recommended Machining Data
	W±0.02	R±0.03	T _{max-r}	M	IC528	IC08	
GEPI 3.00-1.50UN	3.00	1.50	2.00	2.2	●	●	0.03-0.12
GEPI 2.00-1.00UR	2.00	1.00	2.00	1.8	●	●	0.03-0.12
GEPI 2.00-1.00UL	2.00	1.00	2.00	1.8	●	●	0.03-0.12

For tools, see pages: GEHIUR/L (B26).

GTGA

Precision Shallow Grooving Inserts with 3 Cutting Edges



GTGA 16 ER/IL shown

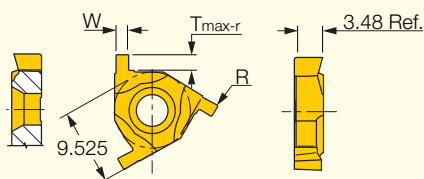
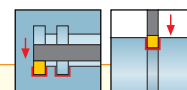
Designation	Dimensions			Tough ↔ Hard		Recommended Machining Data f groove (mm/rev)
	W ± 0.02	T $_{max-r}$	R ± 0.05	IC528	IC508	
GTGA 16EL/IR 100	1.00	1.55	0.10	●	●	0.02-0.03
GTGA 16ER/IL 100	1.00	1.55	0.10	●	●	0.02-0.03
GTGA 16EL/IR 120	1.20	1.60	0.10	●	●	0.02-0.03
GTGA 16ER/IL 120	1.20	1.60	0.10	●	●	0.02-0.03
GTGA 16EL/IR 140	1.40	1.80	0.10	●	●	0.02-0.04
GTGA 16ER/IL 140	1.40	1.80	0.10	●	●	0.02-0.04
GTGA 16EL/IR 170	1.70	2.00	0.10	●	●	0.03-0.05
GTGA 16ER/IL 170	1.70	2.00	0.10	●	●	0.03-0.05
GTGA 16EL/IR 195	1.95	2.00	0.10	●	●	0.03-0.06
GTGA 16ER/IL 195	1.95	2.00	0.10	●	●	0.03-0.06
GTGA 16EL/IR 225	2.25	2.10	0.10	●	●	0.04-0.06
GTGA 16ER/IL 225	2.25	2.10	0.10	●	●	0.04-0.06

• Inserts for right-hand external grooving can be used as left-hand internal grooving. • Use with anvil AE 16-0 on external tools and with anvil AI 16-0 on internal tools.

For tools, see pages: • SER/L (A109) • SIR/L (B96).

GTMA

Utility Shallow Grooving Inserts with 3 Cutting Edges



GTMA 16 ER/IL shown

Designation	Dimensions			IC508	Recommended Machining Data f groove (mm/rev)
	W ± 0.05	T $_{max-r}$	R ± 0.05		
GTMA 16ER/IL 120	1.20	1.60	0.10	●	0.02-0.03
GTMA 16ER/IL 140	1.40	1.80	0.10	●	0.02-0.04
GTMA 16ER/IL 160	1.60	2.00	0.10	●	0.03-0.05
GTMA 16ER/IL 175	1.75	2.00	0.10	●	0.03-0.05
GTMA 16ER/IL 195	1.95	2.00	0.10	●	0.03-0.06
GTMA 16ER/IL 222	2.22	2.10	0.10	●	0.04-0.06

• Inserts for right-hand external grooving can be used as left-hand internal grooving.

• Use with anvil AE 16-0 on external tools and with anvil AI 16-0 on internal tools.

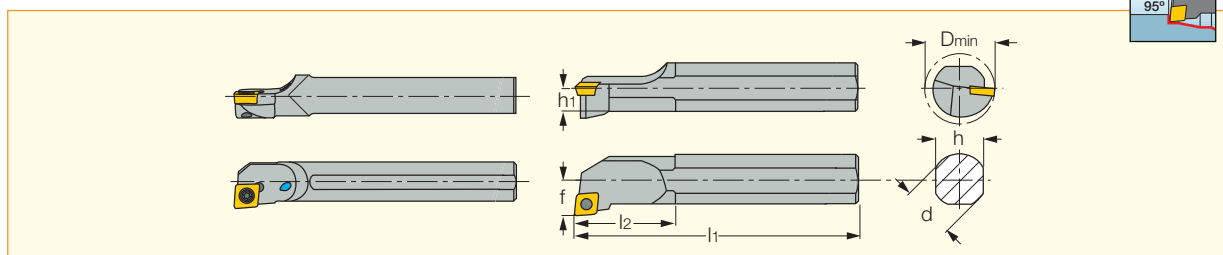
For tools, see pages: SER/L (A109) • SIR/L (B96).

ISO*TURN*



A/E/S-SCLCR/L

Screw Lock Boring Bars for 80° Rhombic Inserts with 7° Clearance



Designation	d	l ₁	l ₂	h	h ₁	f	D _{min}	Shank m. ⁽¹⁾	Coolant	G _a °	G _r °	Insert
A04F SCLCR/L-03	4.00	80.00	8.0	3.8	1.9	2.5	5.00	S	Y	0	-15	CCGT 03X1
A05F SCLCR/L-03	5.00	80.00	9.0	4.8	2.4	3.0	6.00	S	Y	0	-13	CCGT 03X1
A06G SCLCR/L-04	6.00	90.00	10.0	5.8	2.9	3.5	7.00	S	Y	0	-11	CCGT 04T1
A07G SCLCR/L-04	7.00	90.00	11.0	6.8	3.4	4.0	8.00	S	Y	0	-11	CCGT 04T1
E04G SCLCR/L-03	4.00	90.00	9.0	3.8	1.9	2.5	5.00	C	Y	0	-15	CCGT 03X1
E05G SCLCR/L-03	5.00	90.00	10.0	4.8	2.4	3.0	6.00	C	Y	0	-13	CCGT 03X1
E06H SCLCR/L-04	6.00	100.00	12.0	5.8	2.9	3.5	7.00	C	Y	0	-13	CCGT 04T1
E07H SCLCR/L-04	7.00	100.00	14.0	6.8	3.4	4.0	8.00	C	Y	0	-11	CCGT 04T1
E08K SCLCR/L-06	8.00	125.00	-	7.6	3.8	5.0	10.00	C	Y	3	-11	CC.. 0602
E10M SCLCR/L-06	10.00	150.00	-	9.2	4.6	7.0	14.00	C	Y	3	-7	CC.. 0602
E12P SCLCR/L-06	12.00	170.00	-	11.0	5.5	9.0	16.00	C	Y	0	-7	CC.. 0602
E16R SCLCR/L-06	16.00	200.00	-	14.0	7.0	11.0	20.00	C	Y	0	-12	CC.. 0602
E16R SCLCR/L-09	16.00	200.00	-	15.0	7.5	11.0	20.00	C	Y	0	-6	CC.. 09T3
S08K SCLCR/L-06	8.00	125.00	12.0	8.0	3.8	5.0	10.50	S	N	0	-11	CC.. 0602
S10L SCLCR/L-06	10.00	140.00	19.0	10.0	4.6	7.0	13.00	S	N	0	-7	CC.. 0602
S12M SCLCR/L-06	12.00	150.00	12.0	12.0	5.5	9.0	16.00	S	N	0	-9	CC.. 0602
S16Q SCLCR/L-09	16.00	180.00	45.0	15.0	7.5	11.0	20.00	S	N	0	-6	CC.. 09T3

• S - steel shank, A - steel shank with coolant hole, E - carbide shank with coolant hole

For inserts, see pages: CCGT-F1P (B67) • CCMT-F3P (B67) • CCMT-M3M (B68) • CCMT-PF (B69) • CCMT/CCGT-SM (B68) • CCET-WF (B70) • CCMT-WG (B71) • CCGT-AS (B92) • CCGT-AF (B93) • CCMT-14 (B69) • CCMT/CCGT (B70).

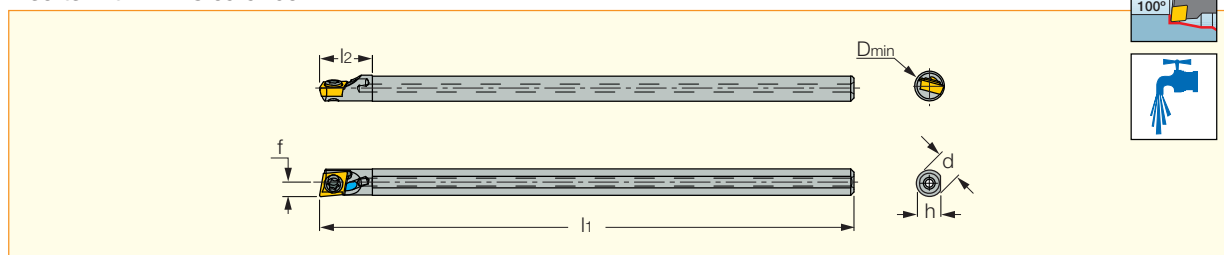
Spare Parts



Designation	Screw	Key
A04F SCLCR/L-03	CSTA-1.6	T-6F
A05F SCLCR/L-03	CSTA-1.6	T-6F
A06G SCLCR/L-04	CSTB-2	T-6F
A07G SCLCR/L-04	CSTB-2	T-6F
E04G SCLCR/L-03	CSTA-1.6	T-6F
E05G SCLCR/L-03	CSTA-1.6	T-6F
E06H SCLCR/L-04	CSTB-2	T-6F
E07H SCLCR/L-04	CSTB-2	T-6F
E08K SCLCR-06	SR 14-548	T-7/5
E10M SCLCR-06	SR 14-548	T-7/5
E12P SCLCR-06	SR 14-548	T-7/5
E16R SCLCR-09	SR 16-236	T-15/5
S08K SCLCR/L-06	SR 14-548	T-7/5
S10L SCLCR/L-06	SR 14-548	T-7/5
S12M SCLCR/L-06	SR 14-548	T-7/5
S16Q SCLCR/L-09	SR 16-236/L8.6	T-15/5

A/E-SEXPR/L-03

Screw Lock Boring Bars for 4.5 mm Minimum Bore Diameter, Carrying 75° Rhombic Inserts with 11° Clearance



Designation	d	l ₁	l ₂	h	h ₁	f	D _{min}	Shank m. ⁽¹⁾	G _a °	G _r °	Insert
A04F SEXPR/L-03	4.00	80.00	8.0	3.8	1.9	2.3	4.50	S	0	-15	EPGT03
E04G SEXPR/L-03	4.00	90.00	9.0	3.8	1.9	2.3	4.50	C	0	-15	EPGT03

• A - steel shank with coolant hole, E - carbide shank with coolant hole

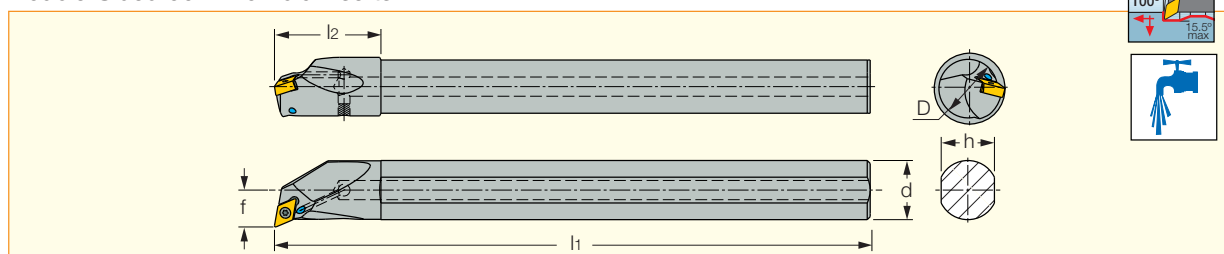
For inserts, see pages: EPGT-F1P (B72).

Spare Parts

Designation	Screw	Key
A/E-SEXPR/L-03	CSTA-1.6	T-6F

A/E-SDXNR/L-07

Boring Bars for Small Diameters, Carrying DNGP 0703..
Double-Sided 55° Rhombic Inserts



Designation	d	l ₁	l ₂	h	f	D _{min}	G _a °	G _r °	Shank m. ⁽¹⁾	Insert
A10K SDXNR/L-07	10.00	125.00	20.0	9.0	7.6	13.00	-14	-16	S	DNGP 07
A12M SDXNR/L-07	12.00	150.00	24.0	11.0	8.6	16.00	-14	-14	S	DNGP 07
A16Q SDXNR/L-07	16.00	180.00	32.0	15.0	10.6	20.00	-13	-13	S	DNGP 07
E10M SDXNR/L-07	10.00	125.00	20.0	9.0	7.6	13.00	-14	-16	C	DNGP 07
E12Q SDXNR/L-07	12.00	150.00	24.0	11.0	8.6	16.00	-14	-14	C	DNGP 07
E16R SDXNR/L-07	16.00	180.00	32.0	15.0	10.6	20.00	-13	-13	C	DNGP 07

• Use left-hand inserts on right-hand bars and vice versa. • A - steel shank with coolant hole, E - carbide shank with coolant hole.

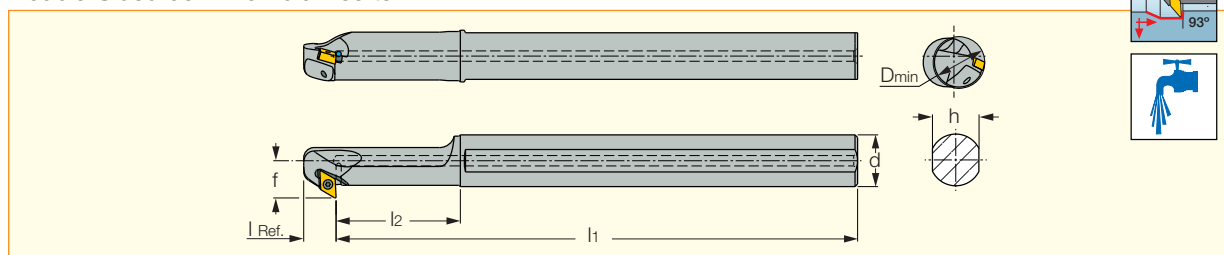
For inserts, see pages: DNGP-F2M (B53) • DNGP-F2P (B54).

Spare Parts

Designation	Screw	Key
A/E-SDXNR/L-07	SR 34-514	T-7F

A/E-SDZNR/L-07

Bakck Turning Boring Bars for Small Diameters, Carrying DNGP 0703..
Double-Sided 55° Rhombic Inserts



Designation	d	l ₁	l ₂	l Ref.	h	f	D _{min}	G _a °	G _r °	Insert
A12M SDZNR/L-07	12.00	150.00	38.0	13.0	11.0	11.0	14.00	-10	-14	DNGP 07
A16Q SDZNR/L-07	16.00	180.00	43.0	13.0	15.0	13.0	16.00	-10	-12.5	DNGP 07
E12Q SDZNR/L-07	12.00	180.00	-	13.0	11.0	11.0	18.00	-11	-11	DNGP 07
E16R SDZNR/L-07	16.00	200.00	-	13.0	15.0	13.0	22.00	-11	-9	DNGP 07

• Use right-hand inserts on right-hand bars and vice versa. • A - steel shank with coolant hole, E - carbide shank with coolant hole.

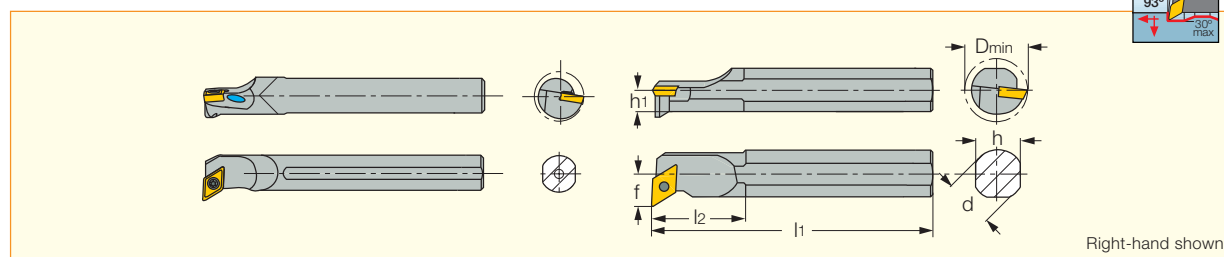
For inserts, see pages: DNGP-F2M (B53) • DNGP-F2P (B54).

Spare Parts

Designation	Screw	Key
A/E-SDZNR/L-07	SR 34-514	T-7F

E/S-SDUCR/L

Screw Lock Boring Bars for 55° Rhombic Inserts with 7° Clearance



Designation	d	l ₁	l ₂	h	h ₁	f	D _{min}	G _a °	G _r °	Shank m. ⁽¹⁾	Coolant	Insert
E10M SDUCR/L-07	10.00	150.00	-	9.2	5.1	8.0	14.00	3	-7	C	Y	DC.. 0702
E12P SDUCR/L-07	12.00	170.00	-	11.0	5.5	9.0	16.00	0	-7	C	Y	DC.. 0702
E16R SDUCR/L-07	16.00	200.00	-	15.0	8.1	11.0	20.00	0	-8	C	Y	DC.. 0702
S10L SDUCR/L-07	10.00	140.00	18.0	9.2	5.0	8.0	14.00	-3	-9	S	N	DC.. 0702
S12M SDUCR/L-07	12.00	150.00	20.0	12.0	5.5	9.0	16.00	-7	-9	S	N	DC.. 0702
S16Q SDUCR/L-07	16.00	180.00	25.0	15.0	8.0	11.0	20.00	0	-8	S	N	DC.. 0702

• S - steel shank, E - carbide shank with coolant hole

⁽¹⁾ S-Steel, C-carbide

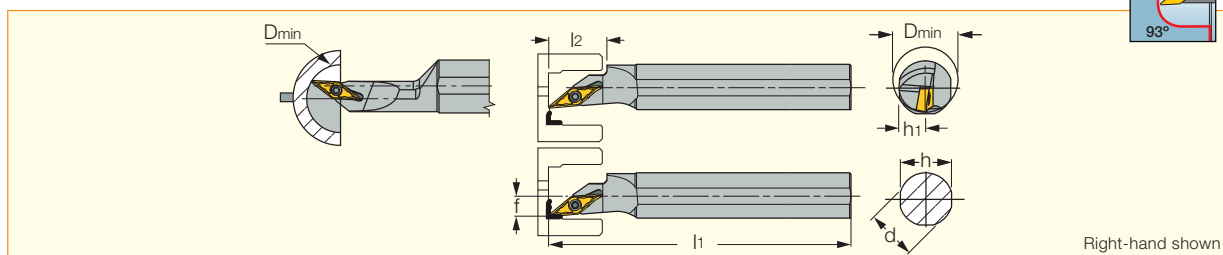
For inserts, see pages: DCMT-F3P (B73) • DCMT-M3M (B73) • DCMT-PF (B76) • DCMT/DCGT-SM (B74) • DCET-WF (B75) • DCGT-AS (B93) • DCGT-AF (B94) • DCMT-14 (B75) • DCMT/DCGT (B74).

Spare Parts

Designation	Screw	Key
E/S SDUCR/L	SR 14-548	T-7/5

S/A-SVJCR/L

Screw Lock Boring Bars for 35° Diamond Inserts with 7° Clearance Angle



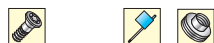
Designation	d	l ₁	l ₂	h	h ₁	f	D _{min}	G _a °	G _r °	Coolant	Insert
A16R SVJCR/L-11	16.00	200.00	47.5	15.0	8.0	8.5	20.00	-5	-5	Y	VC.. 1103
S16R SVJCR/L-11 ⁽¹⁾	16.00	200.00	20.0	15.0	8.0	7.0	19.00	-5	-4	N	VC.. 1103

⁽¹⁾ Cannot be used for internal sphere turning

For inserts, see pages: VCMT-F3P (B80) • VCMT-SM (B70) • VCET-WF (B80) • VCGT-AS (B92).



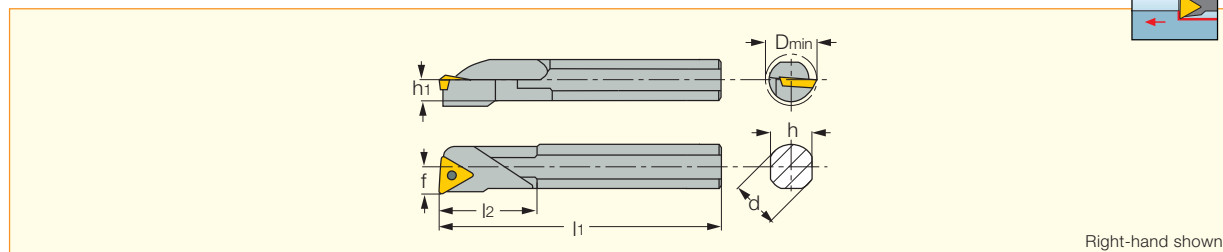
Spare Parts



Designation	Screw	Key	Coolant Fitting
A16R SVJCR/L-11	SR 14-560/S	T-8/5	PL 16
S16R SVJCR/L-11	SR 14-560/S	T-8/5	

S-STFCR/L

Screw Lock Boring Bars for Triangular 7° Clearance Angle Inserts



Designation	d	l ₁	l ₂	h	h ₁	f	D _{min}	G _a °	G _r °	Insert
S10K STFCR/L-11	10.00	125.00	29.0	9.0	4.5	7.0	13.00	0	-6	TC.. 1102
S12M STFCR/L-11	12.00	150.00	30.0	11.0	5.5	9.0	15.80	0	-3	TC.. 1102

For inserts, see pages: TCMT-F3P (B83) • TCMT-M3M (B84) • TCMT-PF (B84) • TCMT-SM (B85) • TCGT-AS (B91).

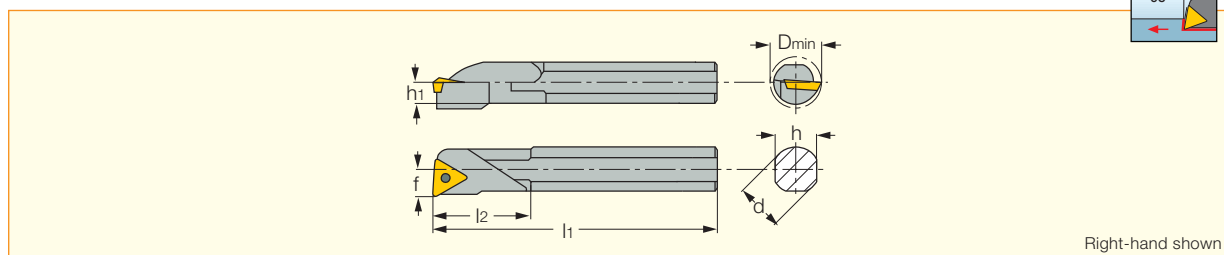
Spare Parts



Designation	Screw	Key
S-STFCR/L	SR 14-548	T-7/5

S-STLCR/L

Screw Clamp Bars for 7° Clearance Triangular Inserts



Designation	d	l ₁	l ₂	h	h ₁	f	D _{min}	G _a °	G _r °	Insert
S16Q STLCR/L-11	16.00	180.00	45.0	15.0	7.5	11.0	20.00	0	-1	TC.. 1102

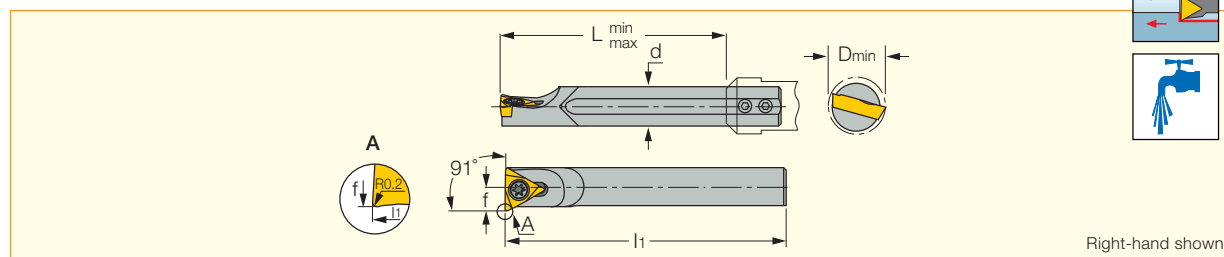
For inserts, see pages: TCMT-F3P (B83) • TCMT-M3M (B84) • TCMT-PF (B84) • TCMT-SM (B85) • TCGT-AS (B91).

Spare Parts

Designation	Screw	Key
S16Q STLCR/L-11	SR 14-548	T-7/5

MG STFPR-X

Solid Carbide Boring Bar Using TPGX Inserts for Small Diameters



Designation	d	l ₁	L _{min} ⁽¹⁾	L _{max} ⁽¹⁾	f	G _a °	G _r °	D _{min}
MG 08-STFPR-09X	8.00	79.00	20.0	56.0	4.9	5	-15	9.50

⁽¹⁾ Adjustment range

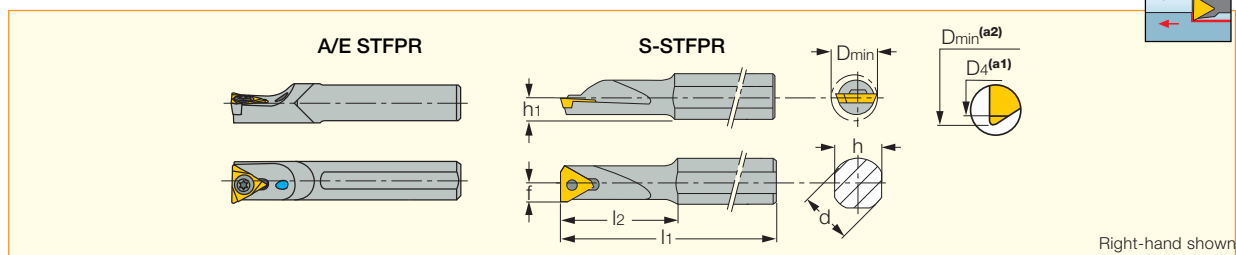
For inserts, see pages: TPGX (B88).

Spare Parts

Designation	Screw	Key
MG STFPR-X	SR 14-298	T-8/5

A/E/S-STFPR/L

Screw Lock Boring Bars for Triangular Inserts with 11° Clearance



Designation	d	l ₁	l ₂	h	h ₁	f	D _{min}	D ₄	G _a °	G _r °	Coolant	Shank m. ⁽¹⁾
A10K STFPR-11	10.00	125.00	-	9.0	5.3	6.0	11.00	12.00	3	0	Y	S
A12Q STFPR-11	12.00	180.00	-	11.0	6.3	7.0	13.00	14.00	4	0	Y	S
E10M STFPR-11	10.00	150.00	-	9.0	5.3	6.0	12.00	12.00	3	0	Y	C
E12P STFPR/L-11	12.00	170.00	-	11.0	6.3	7.0	14.00	14.00	4	0	Y	C
S12K STFPR/L-11	12.00	125.00	35.0	11.0	6.3	5.6	11.00	11.00	3	0	N	S
S12M STFPR/L-11	12.00	150.00	27.0	11.0	6.3	7.0	15.00	15.00	4	0	N	S
S16Q STFPR/L-11	16.00	180.00	27.0	15.0	8.0	9.2	18.00	18.00	5	0	N	S

• (a1) When used with insert TPG. 110204-XL (a2) When used with insert TP.. 110204-..

⁽¹⁾ S-Steel, C-Carbide

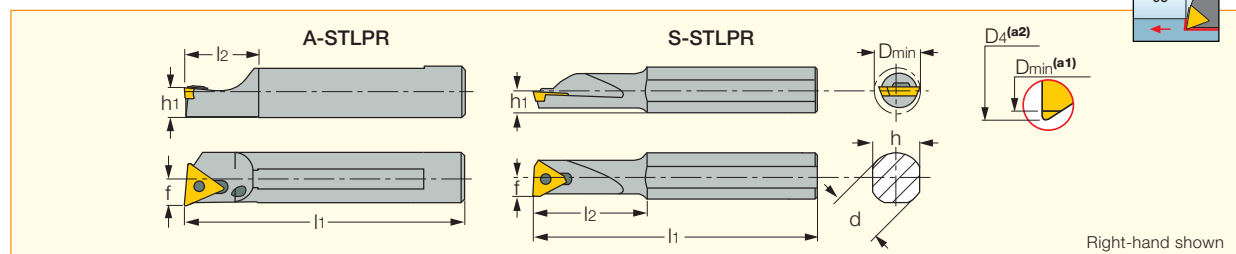
For inserts, see pages: TPMT-PF (B85) • TPGB-XL (B86) • TPGH-XL (B87) • TPGB (B86) .

Spare Parts

Designation	Screw	Key
A/E/S-STFPR/L	SR 14-505	T-7/5

A/S-STLPR/L

Screw Lock Boring Bars for Triangular Inserts with 11° Clearance



Designation	d	l ₁	l ₂	h	h ₁	f	G _a °	G _r °	D _{min}	D ₄	Coolant
A10K STLPR-11	10.00	125.00	18.0	9.5	5.8	6.0	3	0	11.00	12.00	Y
A12Q STLPR-11	12.00	180.00	18.0	11.5	6.0	7.0	4	0	13.00	14.00	Y
S12K STLPR/L-11	12.00	125.00	35.0	11.0	6.3	5.6	3	0	9.70	11.00	N
S12M STLPR/L-11	12.00	150.00	27.0	11.0	6.3	7.0	4	0	14.00	15.00	N
S16Q STLPR-11	16.00	180.00	27.0	15.0	8.0	9.0	5	0	17.00	18.00	N

• (a1) When used with insert TPG. 110204-XL (a2) When used with insert TP.. 110204-..

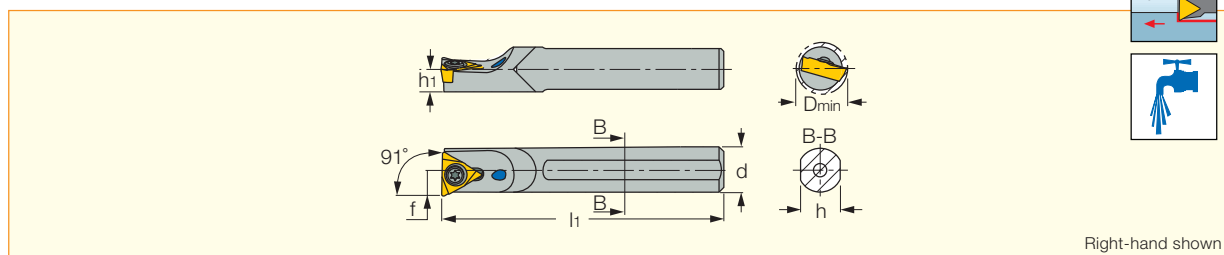
For inserts, see pages: TPMT-PF (B85) • TPGB-XL (B86) • TPGH-XL (B87) • TPGB (B86) .

Spare Parts

Designation	Screw	Key
A/S-STLPR/L	SR 14-505	T-15/5

A/E-STFPR-X

Boring Bars for Small Diameters for TPGX 11° Clearance Triangular Inserts



Right-hand shown

Designation	d	l ₁	f	h	h ₁	D _{min}	G _a °	G _r °	Shank m. ⁽¹⁾	Insert
A08J STFPR-09X	8.00	110.00	5.0	7.2	3.6	9.50	5	-15	S	TPGX 0902
A10K STFPR-09X	10.00	125.00	5.7	9.0	4.5	10.90	5	-8	S	TPGX 0902
A12M STFPR-09X	12.00	150.00	6.7	11.0	5.5	13.00	5	-8	S	TPGX 0902
A10K STFPR-11X	10.00	125.00	6.0	9.0	4.5	11.40	3	-15	S	TPGX 1103
A12M STFPR-11X	12.00	150.00	6.8	11.0	5.5	13.50	3	-10	S	TPGX 1103
A16Q STFPR-11X	16.00	180.00	8.8	14.0	7.0	17.30	3	-5	S	TPGX 1103
E08K STFPR-09X	8.00	125.00	5.0	7.2	3.6	9.50	5	-15	C	TPGX 0902
E10M STFPR-09X	10.00	150.00	5.7	9.0	4.5	10.90	5	-8	C	TPGX 0902
E12P STFPR-09X	12.00	170.00	6.7	11.0	5.5	13.00	5	-8	C	TPGX 0902
E10M STFPR-11X	10.00	150.00	6.0	9.0	4.5	11.40	3	-15	C	TPGX 1103
E12P STFPR-11X	12.00	170.00	6.8	11.0	5.5	13.50	3	-10	C	TPGX 1103
E16R STFPR-11X	16.00	200.00	8.8	14.0	7.0	17.30	3	-5	C	TPGX 1103

⁽¹⁾ S-Steel, C-Carbide

For inserts, see pages: • TPGX (B88).

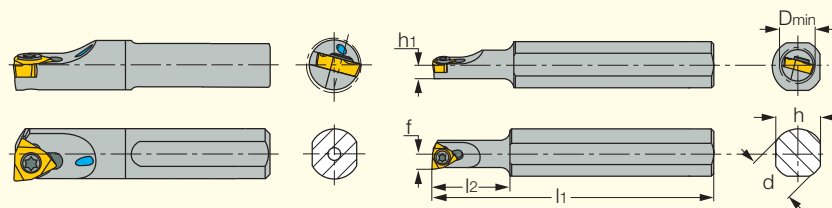
Spare Parts



Designation	Screw	Key
A08J STFPR-09X	SR 14-298	T-8/5
A10K STFPR-09X	SR 14-298	T-8/5
A12M STFPR-09X	SR 14-298	T-8/5
A10K STFPR-11X	SR 10400052	T-8/5
A12M STFPR-11X	SR 10400052	T-8/5
A16Q STFPR-11X	SR 10400052	T-8/5
E08K STFPR-09X	SR 14-298	T-8/5
E10M STFPR-09X	SR 14-298	T-8/5
E12P STFPR-09X	SR 14-298	T-8/5
E10M STFPR-11X	SR 10400052	T-8/5
E12P STFPR-11X	SR 10400052	T-8/5
E16R STFPR-11X	SR 10400052	T-8/5

E/S-SWUBR/L

Screw Clamp Miniature Boring Bars for Small WBMT Trigon Inserts



Right-hand shown

Designation	d	l ₁	l ₂	h	h ₁	f	G _a °	G _r °	D _{min}	Coolant	Shank m. ⁽¹⁾	Insert
E06H SWUBR/L-06	6.00	100.00	-	5.2	2.6	3.3	0	-15	6.50	Y	C	WBMT 020102L
E08K SWUBR-06	8.00	125.00	-	7.6	3.8	4.3	0	-8	8.70	Y	C	WBMT 020102L
E10M SWUBR-06	10.00	150.00	-	9.0	4.5	5.2	0	-12	10.90	Y	C	WBMT 020102L
S0606H SWUBR-06	6.00	100.00	-	5.2	2.6	3.3	0	-15	6.50	N	S	WBMT 020102L
S0610H SWUBR/L-06	10.00	100.00	20.0	9.0	4.5	3.0	0	-15	6.00	N	S	WBMT 020102L/R
S0710H SWUBR/L-06	10.00	100.00	24.0	9.0	4.5	3.5	0	-13	7.00	N	S	WBMT 020102L/R
S0808J SWUBR-06	8.00	100.00	-	7.4	3.7	4.3	0	-12	8.50	N	S	WBMT 020102L
S0812J SWUBR/L-06	12.00	110.00	32.0	11.0	5.5	4.0	0	-12	8.00	N	S	WBMT 020102L/R
S1010K SWUBR/L-06	10.00	125.00	-	9.0	4.5	5.2	0	-12	11.00	N	S	WBMT 020102L

• Use right-hand WBMT 06...R inserts on left-hand tools and left-hand WBMT 06...L inserts on right-hand tools.

⁽¹⁾ S-Steel, C-Carbide

For inserts, see pages: WBGT (B88) • WBMT (B89).

Spare Parts

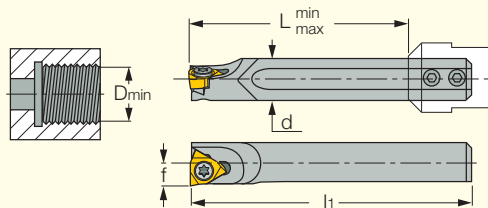
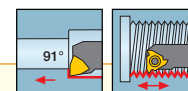


Designation	Screw	Key
E/S-SWUBR/L	SR 14-552	T-6/5

ISOTURN • ISCAR THREAD

MGSIR/L

Solid Carbide Bars for Internal Turning and Threading



Right-hand shown

Designation	d	l ₁	L _{min} ⁽³⁾	L _{max} ⁽³⁾	f	D _{min}
MGSIR/L 06-06W ⁽¹⁾	6.00	59.00	16.0	42.0	3.9	7.00
MGSIR/L 08-06W ⁽²⁾	8.00	72.00	20.0	56.0	5.0	9.20

• 91° for shoulder depth up to 2 mm • Use right-hand WBMT 06...R inserts on left-hand tools and left-hand WBMT 06...L inserts on right-hand tools. • In order to maintain high machining reliability we strongly recommend replacing the clamping screw every 10 insert indexes.

⁽¹⁾ For WBMT 060102 D_{min}=6.6 mm f=4.13 mm ⁽²⁾ For WBMT 060102 D_{min}=8.8 mm f=5.20 mm ⁽³⁾ Adjustment range

For inserts, see pages: IR/L-55° (B98) • IR/L-60° (B101) • IR/L-BSPT (B110) • IR/L-ISO (B104) • IR/L-NPT (B115) • IR/L-NPTF (B113) • IR/L-UN (B106) • IR/L-W (B109) • WBGT (B88) • WBMT (B89).

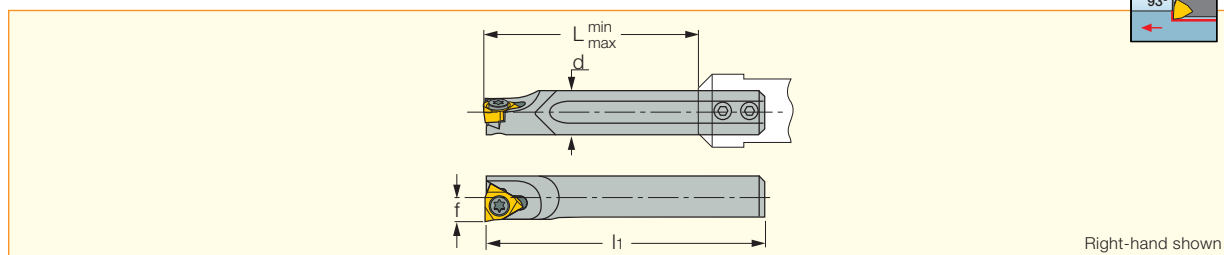
Spare Parts



Designation	Screw	Key
MGSIR/L	SR 14-552	T-6/5

MG-SWUBR/L

Solid Carbide Bars for Internal Turning



Designation	d	l ₁	L _{min} ⁽¹⁾	L _{max} ⁽¹⁾	f	D _{min}
MG 06-SWUBR/L-06	6.00	59.00	16.0	42.0	3.3	6.60
MG 08-SWUBR/L-06	8.00	72.00	20.0	56.0	4.3	8.70

• Use right-hand WBMT 06...R inserts on left-hand tools and left-hand WBMT 06...L inserts on right-hand tools

⁽¹⁾ Adjustment range

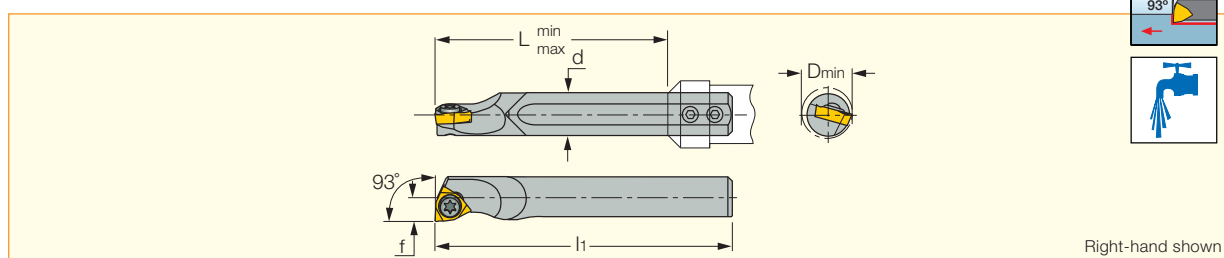
For inserts, see pages: WBGT (B88) • WBMT (B89).

Spare Parts

Designation	Screw	Key
MG-SWUBR/L	SR 14-552	T-6/5

MG-SWUCR

Solid Carbide Boring Bar for Small Diameters Using WCGT Trigon Inserts



Designation	d	l ₁	L _{min} ⁽¹⁾	L _{max} ⁽¹⁾	f	G _a °	G _r °	D _{min}	Insert
MG 06-SWUCR-02	6.00	60.00	16.0	42.0	3.3	0	15	6.60	WCGT 0201
MG 08-SWUCR-02	8.00	75.70	20.0	56.0	4.3	0	12	8.80	WCGT 0201

⁽¹⁾ Adjustment range

For inserts, see pages: WCGT (B89).

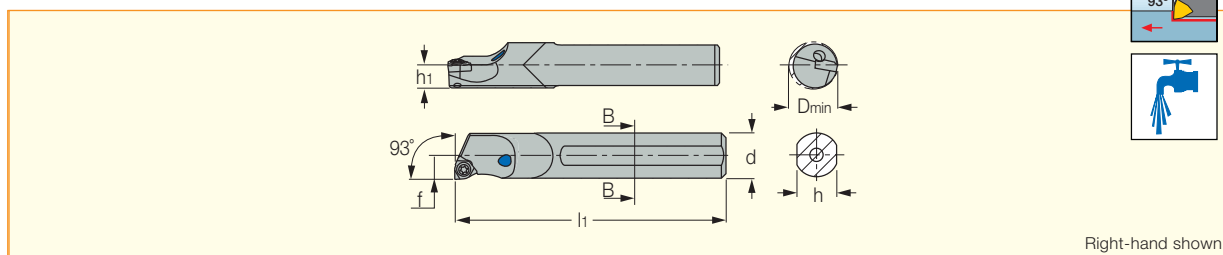
For holders, see pages: PICCO/MG PCO (holder) (B123).

Spare Parts

Designation	Screw	Key
MG-SWUCR	SR 14-299	T-6/5

A/E-SWUCR

Boring Bars for Small Diameters Using WCGT Trigon Inserts



Designation	d	l ₁	h	h ₁	f	G _a °	G _r °	D _{min}	Shank m. ⁽¹⁾	Insert
A06H SWUCR-02	6.00	100.00	5.4	2.7	3.3	0	-15	6.60	S	WCGT 0201
A08J SWUCR-02	8.00	110.00	7.2	3.6	4.3	0	-12	8.70	S	WCGT 0201
A10K SWUCR-02	10.00	125.00	9.0	4.5	5.2	0	-12	10.90	S	WCGT 0201
E06H SWUCR-02	6.00	100.00	5.4	2.7	3.3	0	-15	6.60	C	WCGT 0201
E08K SWUCR-02	8.00	125.00	7.2	3.6	4.3	0	-12	8.70	C	WCGT 0201
E10M SWUCR-02	10.00	150.00	9.0	4.5	5.2	0	-12	10.90	C	WCGT 0201

⁽¹⁾ S-Steel, C-Carbide

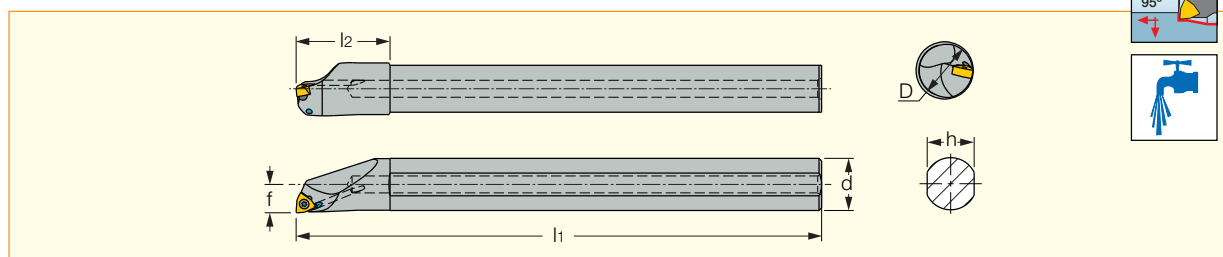
For inserts, see pages: WCGT (B89).

Spare Parts

Designation	Screw	Key
A/E-SWUCR	SR 14-299	T-6/5

A/E-SWLNR-04

Boring Bars for Small Diameters, Carrying WNGP 0403.. Double-Sided Trigon Inserts



Designation	d	l ₁	l ₂	h	f	G _a °	G _r °	D _{min}	Shank m. ⁽¹⁾	Insert
A10K SWLNR/L-04	10.00	125.00	20.0	9.0	6.0	-10	-16	12.00	S	WNGP 04
A12M SWLNR/L-04	12.00	150.00	24.0	11.0	7.0	-10	-14	14.00	S	WNGP 04
A16Q SWLNR/L-04	16.00	180.00	32.0	15.0	9.0	-10	-11	18.00	S	WNGP 04
E10M SWLNR/L-04	10.00	125.00	20.0	9.0	6.0	-10	-16	12.00	C	WNGP 04
E12Q SWLNR/L-04	12.00	150.00	24.0	11.0	7.0	-10	-14	14.00	C	WNGP 04
E16R SWLNR/L-04	16.00	180.00	32.0	15.0	9.0	-10	-11	18.00	C	WNGP 04

• Use left-hand inserts on right-hand bars and vice versa. • A - steel shank with coolant hole, E - carbide shank with coolant hole.

⁽¹⁾ S-Steel, C-Carbide

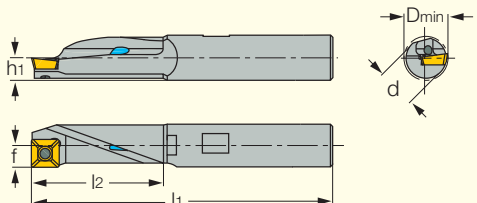
For inserts, see pages: WNGP-F2M (B45) • WNGP-F2P (B46).

Spare Parts

Designation	Screw	Key
A/E-SWLNR-04	SR 34-514	T-7F

A-SXFOR/L

Boring Bars with Coolant Holes Using XOMT Inserts



Right-hand shown

Designation	d	l ₁	l ₂	h ₁	f	G _a °	G _r °	D _{min}	Insert
A10J SXFOR/L-06	10.00	110.00	28.5	5.0	4.9	6	1.75	10.00	XOMT 0602
A12K SXFOR/L-06	10.00	125.00	28.5	5.0	4.9	6	1.75	10.00	XOMT 0602

For inserts, see pages: XOMT-DT (B45).

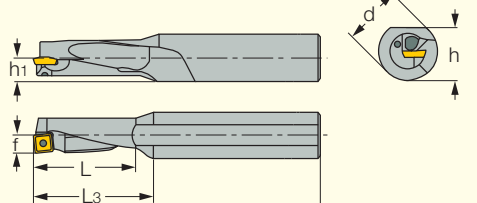
Spare Parts

Designation	Screw	Key
A-SXFOR/L	SR 34-508	T-7/5

MULTIFUNCTION TOOLS

A-SXFOR-DR

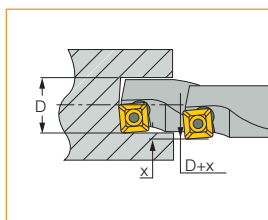
Boring and Drilling Bars for XOMT Inserts



Right-hand shown

Designation	d	L ₂	L ₃	L	f	h ₁	G _a °	G _r °	h	D _{min}	Insert
A1612M SXFOR-06DR	16.00	180.00	31.0	21.0	6.0	8.5	0	0	15.0	12.50	XOMT 0602

For inserts, see pages: XOMT-DT (B45).



Drilling Solid Material

Range:

D_{min}=12.5 mm

D_{max}=14 mm

To achieve required diameter ϕD , position tool as shown at $D + x$ ($x=0.10$) to compensate for tool deflection.

Use pecking cycle, pulling back 0.1 mm after each 1 mm of DOC.

Maximum feed for steel:

0.05 mm/rev;

For stainless steel:

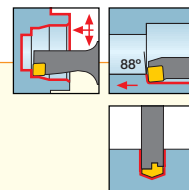
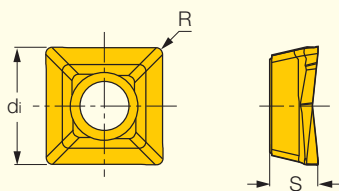
0.03 mm/rev

Spare Parts

Designation	Screw	Key	Coolant Fitting
A-SXFOR-DR	SR 34-508	T-7/51	PL 16

XOMT-DT

Inserts for DR Drills and Boring Bars



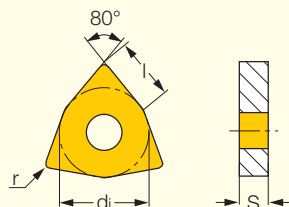
Designation	Dimensions			Tough ↔ Hard						
	di	S	R	IC28	IC328	IC250	IC350	IC908	IC520M	IC428
XOMT 060204-DT	6.16	2.56	0.40	●	●	●	●	●	●	●

• Two cutting edges • For hard materials and interrupted cut

ISOTURN

WNGP-F2M

Double-Sided Trigon Inserts, for Super Finish Machining Conditions on Stainless Steel

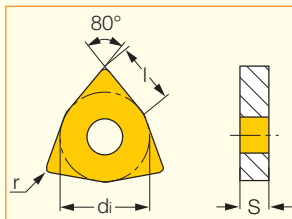
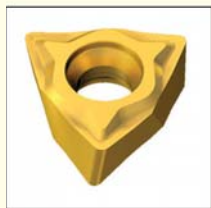


Designation	Dimensions				IC908	Recommended Machining Data	
	l	di	S	r		a _p (mm)	f (mm/rev)
WNGP 040302R/L-F2M	4.35	6.35	3.18	0.20	●	0.30-2.00	0.08-0.30
WNGP 040304R/L-F2M	4.35	6.35	3.18	0.40	●	0.30-2.00	0.08-0.30
WNGP 040308R/L-F2M	4.35	6.35	3.18	0.80	●	0.30-2.00	0.08-0.30

For tools, see page: PWLNR/L-04S (A104).

WNGP-F2P

Double-Sided Trigon Inserts, for Super Finish Machining Conditions on Alloyed Steel

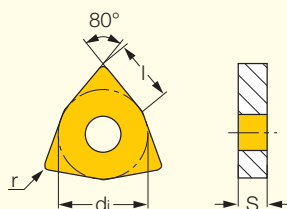
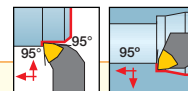


Designation	Dimensions				IC530N	Recommended Machining Data	
	l	di	S	r		a_p (mm)	f (mm/rev)
WNGP 040302R/L-F2P	4.35	6.35	3.18	0.20	●	0.30-2.00	0.08-0.30
WNGP 040304R/L-F2P	4.35	6.35	3.18	0.40	●	0.30-2.00	0.08-0.30
WNGP 040308R/L-F2P	4.35	6.35	3.18	0.80	●	0.30-2.00	0.08-0.30

For tools, see page: PWLNR/L-04S (A104).

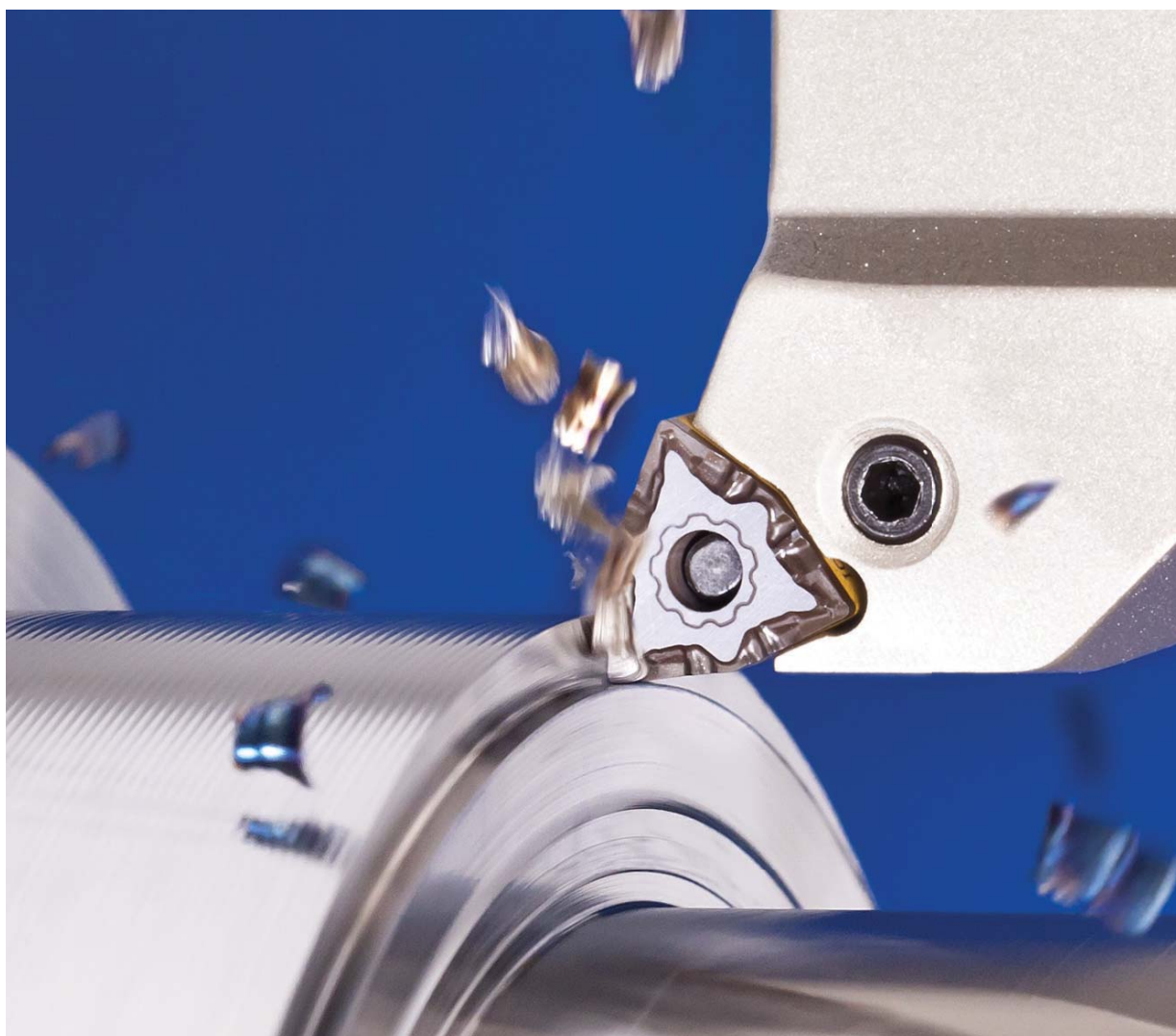
WNMG-F3P

Double-Sided Trigon Inserts for Semi-Finishing and Finishing Applications



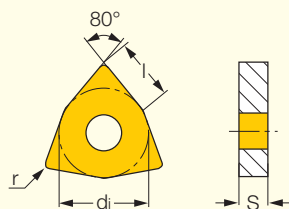
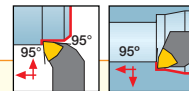
Designation	Dimensions				Tough ↔ Hard				Recommended Machining Data	
	l	di	S	r	IC8250	IC8150	IC20N	IC520N	a_p (mm)	f (mm/rev)
WNMG 060404-F3P	6.52	9.52	4.76	0.40	●	●	●	●	0.50-2.50	0.07-0.25
WNMG 060408-F3P	6.52	9.52	4.76	0.80	●	●	●	●	0.90-3.00	0.08-0.25
WNMG 060412-F3P	6.52	9.52	4.76	1.20	●	●	●	●	1.30-3.00	0.10-0.25

For tools, see pages: PWLNR/L (A104)



WNMG-M3P

Double-Sided Trigon Inserts for Medium Machining Conditions on Steel

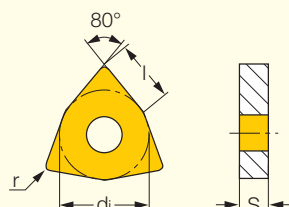
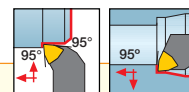


Designation	Dimensions				Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	IC8250	IC8150	ap (mm)	f (mm/rev)
WNMG 06T304-M3P	6.52	9.52	3.97	0.40	●		0.45-2.50	0.10-0.45
WNMG 06T308-M3P	6.52	9.52	3.97	0.80	●	●	0.50-3.00	0.15-0.50
WNMG 06T312-M3P	6.52	9.52	3.97	1.20	●		0.80-3.00	0.18-0.60
WNMG 060404-M3P	6.52	9.52	4.76	0.40	●	●	0.45-2.50	0.10-0.45
WNMG 060408-M3P	6.52	9.52	4.76	0.80	●	●	0.50-3.00	0.15-0.50
WNMG 060412-M3P	6.52	9.52	4.76	1.20		●	0.80-3.00	0.18-0.60

For tools, see page: PWLNR/L (A104)

WNMG-F3M

Double-Sided Trigon Inserts for Stainless Steel Finishing Applications

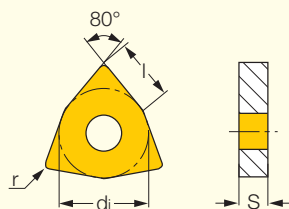
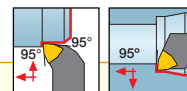


Designation	Dimensions				Tough ↔ Hard				Recommended Machining Data	
	l	di	S	r	IC6025	IC6015	IC806	IC807	ap (mm)	f (mm/rev)
WNMG 060404-F3M	6.52	9.52	4.76	0.40	●	●	●	●	0.10-1.50	0.05-0.30
WNMG 060408-F3M	6.52	9.52	4.76	0.80	●	●	●	●	0.10-1.50	0.10-0.40
WNMG 060412-F3M	6.52	9.52	4.76	1.20	●	●	●	●	0.20-2.50	0.15-0.50

For tools, see pages: PWLNR/L (A104)

WNMG-M3M

Double-Sided Trigon Inserts for Machining Stainless and Low Carbon Steel

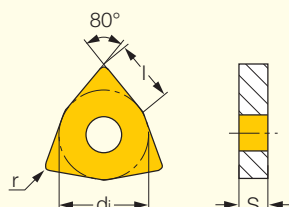
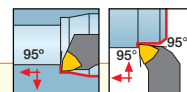


Designation	Dimensions				Tough $\longleftrightarrow$ Hard			Recommended Machining Data	
	l	di	S	r	IC6025	IC6015	IC806	a_p (mm)	f (mm/rev)
WNMG 060404-M3M	6.52	9.52	4.76	0.40	●	●	●	0.50-3.50	0.12-0.40
WNMG 060408-M3M	6.52	9.52	4.76	0.80	●	●	●	0.50-3.50	0.15-0.50
WNMG 060412-M3M	6.52	9.52	4.76	1.20	●	●	●	0.50-3.50	0.20-0.60

For tools, see pages: PWLNR/L (A104)

WNMG-GN

Double-Sided Trigon Inserts for General Applications

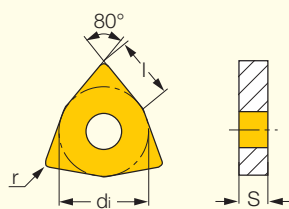
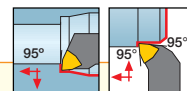


Designation	Dimensions				Tough $\longleftrightarrow$ Hard					Recommended Machining Data	
	l	di	S	r	IC3028	IC8350	IC8250	IC8150	IC20	a_p (mm)	f (mm/rev)
WNMG 06T304-GN	6.52	9.52	3.97	0.40	●		●	●	●	1.00-3.50	0.14-0.40
WNMG 06T308-GN	6.52	9.52	3.97	0.80	●	●	●	●		1.00-3.50	0.16-0.45
WNMG 06T312-GN	6.52	9.52	3.97	1.20			●			1.50-4.00	0.18-0.45
WNMG 060404-GN	6.52	9.52	4.76	0.40			●			1.00-3.50	0.14-0.40
WNMG 060408-GN	6.52	9.52	4.76	0.80			●			1.00-3.50	0.16-0.45
WNMG 060412-GN	6.52	9.52	4.76	1.20				●		1.50-4.00	0.18-0.45

For tools, see pages: PWLNR/L (A104)

WNMG-WG

Double-Sided Trigon Wiper Inserts for High Surface Finish at High Feed Turning

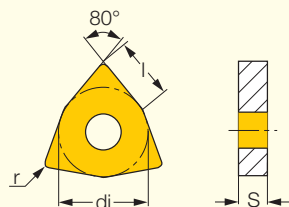
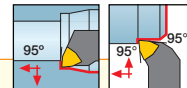


Designation	Dimensions				Tough ↔ Hard								Recommended Machining Data	
	di	l	S	r	IC3028	IC8250	IC530N	IC8150	IC807	IC907	IC20N	IC520N	ap (mm)	f (mm/rev)
WNMG 06T304-WG	9.52	6.52	3.97	0.40		●	●	●			●	●	0.40-3.00	0.10-0.35
WNMG 06T308-WG	9.52	6.52	3.97	0.80	●	●		●		●		●	0.60-3.50	0.10-0.50
WNMG 060404-WG	9.52	6.52	4.76	0.40		●	●	●	●				0.40-3.00	0.10-0.35
WNMG 060408-WG	9.52	6.52	4.76	0.80		●		●	●				0.60-3.50	0.10-0.50

For tools, see page: PWLNR/L (A104).

WNMG-SF

Double-Sided Trigon Inserts for Super Finishing

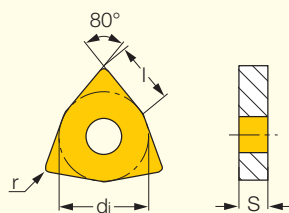
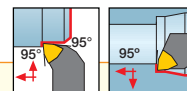


Designation	Dimensions				Tough ↔ Hard				Recommended Machining Data	
	l	di	S	r	IC530N	IC807	IC907	IC520N	ap (mm)	f (mm/rev)
WNMG 06T302-SF	6.52	9.52	3.97	0.20	●				0.30-1.50	0.02-0.15
WNMG 06T304-SF	6.52	9.52	3.97	0.40	●	●	●	●	0.30-1.50	0.05-0.15

For tools, see page: PWLNR/L (A104).

WNMG-NF

Double-Sided Trigon Inserts for Semi-Finishing and Finishing Applications

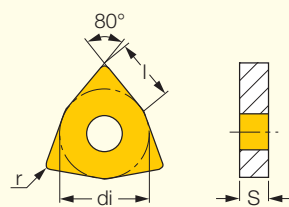
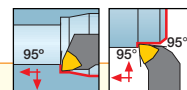


Designation	Dimensions				Tough ↔ Hard												Recommended Machining Data	
	l	di	S	r	IC8350	IC8250	IC908	IC30N	IC530N	IC10	IC8150	IC807	IC907	IC20	IC20N	IC520N	ap (mm)	f (mm/rev)
WNMG 06T301-NF	6.52	9.52	3.97	0.10			●										0.20-1.00	0.05-0.15
WNMG 06T302-NF	6.52	9.52	3.97	0.20	●	●		●	●	●	●	●	●		●		0.30-1.50	0.08-0.17
WNMG 06T304-NF	6.52	9.52	3.97	0.40	●	●		●	●	●	●	●	●	●	●	●	0.40-2.50	0.07-0.25
WNMG 06T308-NF	6.52	9.52	3.97	0.80	●	●				●	●			●	●		0.60-3.00	0.08-0.25
WNMG 060402-NF	6.52	9.52	4.76	0.20								●	●				0.30-3.00	0.05-0.20
WNMG 060404-NF	6.52	9.52	4.76	0.40		●						●	●				0.60-3.00	0.08-0.25
WNMG 060408-NF	6.52	9.52	4.76	0.80							●						0.80-3.00	0.08-0.25

For tools, see page: PWNLR/L (A104).

WNMG-VL

Double-Sided Trigon Inserts with a Chipformer for High Temperature Alloys and Stainless Steel Valves

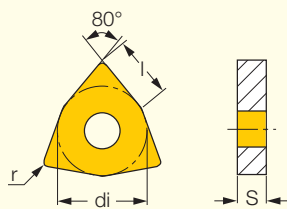
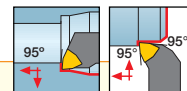


Designation	Dimensions				IC908	Recommended Machining Data	
	l	di	S	r		a _p (mm)	f (mm/rev)
WNMG 06T308-VL	6.52	9.52	3.97	0.80	●	0.50-3.00	0.07-0.25

For tools, see page: PWNLR/L (A104).

WNMG-WF

Double-Sided Trigon Wiper Inserts for Finishing Operations at High Feeds

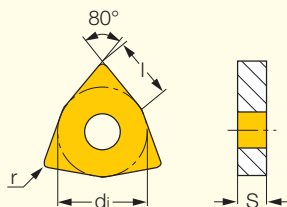
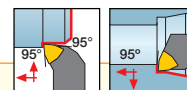


Designation	Dimensions				Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	IC807	IC907	ap (mm)	f (mm/rev)
WNMG 060402-WF	6.52	9.52	4.76	0.20		●	0.20-3.00	0.05-0.25
WNMG 060404-WF	6.52	9.52	4.76	0.40	●	●	0.50-3.00	0.05-0.30
WNMG 060408-WF	6.52	9.52	4.76	0.80		●	0.80-3.50	0.07-0.30

For tools, see pages: PWLNR/L (A104)

WNMG-PP

Double-Sided Trigon Inserts for Machining Very Ductile Materials at Medium Cutting Conditions

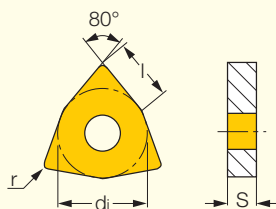
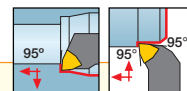


Designation	Dimensions				Tough ↔ Hard								Recommended Machining Data	
	l	di	S	r	IC3028	IC8350	IC8250	IC530N	IC10	IC8150	IC807	IC907	ap (mm)	f (mm/rev)
WNMG 06T304-PP	6.52	9.52	3.97	0.40		●	●	●	●	●	●	●	1.00-3.00	0.14-0.30
WNMG 06T308-PP	6.52	9.52	3.97	0.80	●	●	●			●	●	●	1.00-3.00	0.14-0.30
WNMG 060404-PP	6.52	9.52	4.76	0.40		●	●			●	●	●	1.00-3.00	0.14-0.30
WNMG 060408-PP	6.52	9.52	4.76	0.80		●					●	●	1.00-3.00	0.14-0.30

For tools, see pages: PWLNR/L (A104)

WNMG-TF

Double-Sided Trigon Inserts for Machining a Wide Range of Materials at Medium Cutting Conditions

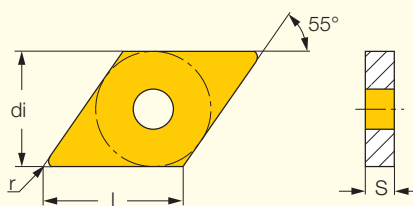


Designation	Dimensions				Tough $\longleftrightarrow$ Hard										Recommended Machining Data	
	l	di	S	r	IC3028	IC6025	IC8250	IC6015	IC8150	IC806	IC807	IC907	IC20	IC20N	a_p (mm)	f (mm/rev)
WNMG 06T304-TF	6.52	9.52	3.97	0.40	●	●	●	●	●	●	●	●	●	●	1.00-3.00	0.12-0.35
WNMG 06T308-TF	6.52	9.52	3.97	0.80	●	●	●	●	●	●	●	●	●	●	1.00-3.00	0.12-0.35
WNMG 06T312-TF	6.52	9.52	3.97	1.20							●	●			1.00-4.00	0.15-0.40
WNMG 060404-TF	6.52	9.52	4.76	0.40			●				●	●			1.00-3.00	0.12-0.35
WNMG 060408-TF	6.52	9.52	4.76	0.80	●		●		●		●	●			1.00-3.00	0.12-0.35
WNMG 060412-TF	6.52	9.52	4.76	1.20							●	●			1.00-4.00	0.15-0.35

For tools, see page: PWLNR/L (A104).

DNGP-F2M

Double-Sided 55° Rhombic Inserts for Semi-Finishing and Finishing Applications on Stainless Steel

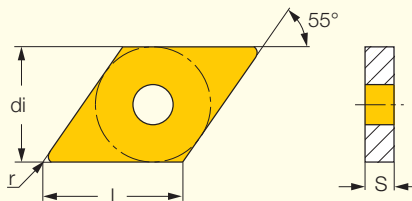
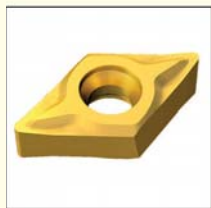


Designation	Dimensions				IC908	Recommended Machining Data	
	l	di	S	r		a_p (mm)	f (mm/rev)
DNGP 070302R/L-F2M	7.70	6.35	3.18	0.20	●	0.30-2.00	0.08-0.30
DNGP 070304R/L-F2M	7.70	6.35	3.18	0.40	●	0.30-2.00	0.08-0.30
DNGP 070308R/L-F2M	7.70	6.35	3.18	0.80	●	0.30-2.00	0.08-0.30

For tools, see pages: A/E-SDXNR/L-07 (B35) • A/E-SDZNR/L-07 (B36) .

DNGP-F2P

Double-Sided 55° Rhombic Inserts for Semi-Finishing and Finishing Applications on Alloyed Steel

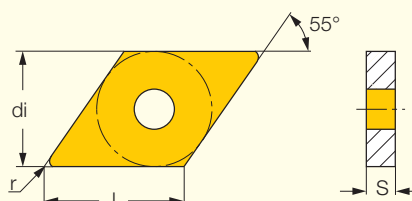
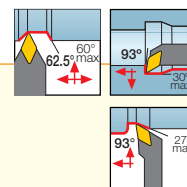


Designation	Dimensions				IC530N	Recommended Machining Data	
	l	di	S	r		a_p (mm)	f (mm/rev)
DNGP 070302R/L-F2P	7.70	6.35	3.18	0.20	●	0.30-2.00	0.08-0.30
DNGP 070304R/L-F2P	7.70	6.35	3.18	0.40	●	0.30-2.00	0.08-0.30
DNGP 070308R/L-F2P	7.70	6.35	3.18	0.80	●	0.30-2.00	0.08-0.30

For tools, see pages: A/E-SDXNR/L-07 (B35) • A/E-SDZNR/L-07 (B36) .

DNMG-F3P

Double-Sided 55° Rhombic Inserts for Semi-Finishing and Finishing Applications on Steel

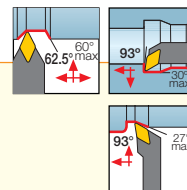
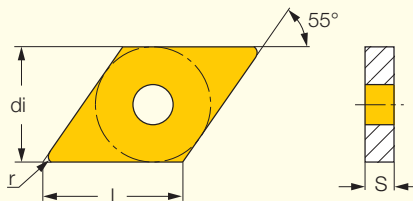


Designation	Dimensions				Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	IC8250	IC8150	a_p (mm)	f (mm/rev)
DNMG 110404-F3P	11.63	9.52	4.76	0.40	●	●	0.80-3.00	0.07-0.25
DNMG 110408-F3P	11.63	9.52	4.76	0.80	●	●	1.00-3.50	0.08-0.25
DNMG 110412-F3P	11.63	9.52	4.76	1.20	●	●	1.40-4.00	0.10-0.25

For tools, see pages: • DDJNR/L (A105) • PDJNR/L (A105).

DNMG-M3P

Double-Sided 55° Rhombic Inserts for Medium Machining Conditions on Steel

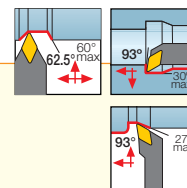
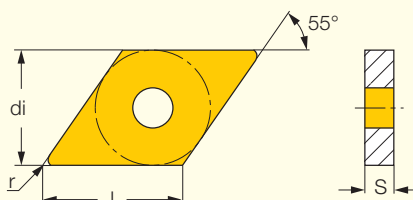


Designation	Dimensions				Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	IC8250	IC8150	ap (mm)	f (mm/rev)
DNMG 110408-M3P	11.63	9.52	4.76	0.80	●	●	0.50-5.00	0.15-0.50
DNMG 110412-M3P	11.63	9.52	4.76	1.20		●	0.80-5.00	0.18-0.60

For tools, see pages: • DDJNR/L (A105) • PDJNR/L (A105).

DNMG-F3M

Double-Sided 55° Rhombic Inserts, for Finish Turning of Stainless and Low Carbon Steel

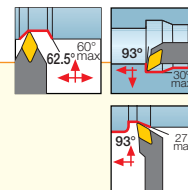
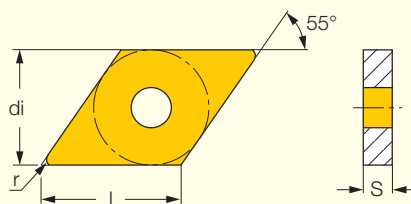


Designation	Dimensions				Tough ↔ Hard				Recommended Machining Data	
	l	di	S	r	IC6025	IC6015	IC806	IC807	ap (mm)	f (mm/rev)
DNMG 110404-F3M	11.63	9.52	4.76	0.40	●	●	●	●	0.10-1.50	0.05-0.32
DNMG 110408-F3M	11.63	9.52	4.76	0.80	●	●	●	●	0.10-1.50	0.10-0.42
DNMG 110412-F3M	11.63	9.52	4.76	1.20	●	●	●	●	0.15-2.00	0.15-0.52

For tools, see pages: • DDJNR/L (A105) • PDJNR/L (A105).

DNMG-M3M

Double-Sided 55° Rhombic Inserts for Machining Stainless and Low Carbon Steel

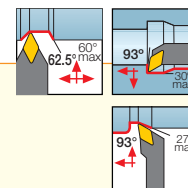
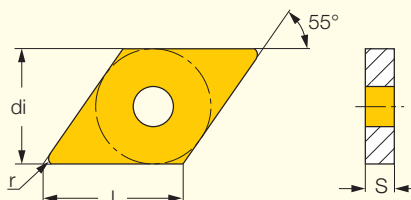


Designation	Dimensions				Tough ↔ Hard			Recommended Machining Data	
	l	di	S	r	IC6025	IC6015	IC806	ap (mm)	f (mm/rev)
DNMG 110404-M3M	11.63	9.52	4.76	0.40	●	●	●	0.50-3.50	0.12-0.40
DNMG 110408-M3M	11.63	9.52	4.76	0.80	●	●	●	0.50-4.00	0.15-0.50
DNMG 110412-M3M	11.63	9.52	4.76	1.20	●	●	●	0.50-4.00	0.20-0.60

For tools, see pages: • DDJNR/L (A105) • PDJNR/L (A105).

DNMG-GN

Double-Sided 55° Rhombic Inserts for General Applications

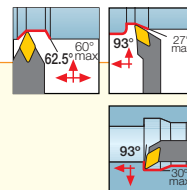
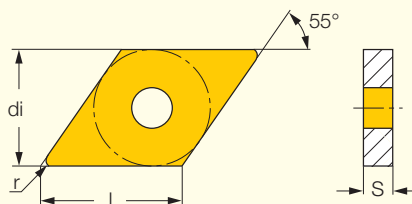


Designation	Dimensions				Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	IC8250	IC8150	ap (mm)	f (mm/rev)
DNMG 110408-GN	11.63	9.52	4.76	0.80	●	●	1.00-4.00	0.18-0.38
DNMG 110412-GN	11.63	9.52	4.76	1.20	●	●	1.50-4.50	0.18-0.38

For tools, see pages: • DDJNR/L (A105) • PDJNR/L (A105).

DNMG-SF

Double-Sided 55° Rhombic Inserts for Super-Finishing. Controls Chip Flow at Very Low Feed and Depth of Cut

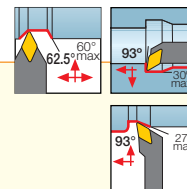
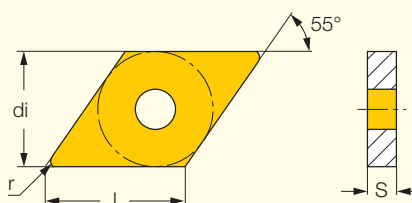


Designation	Dimensions				Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	IC530N	IC520N	ap (mm)	f (mm/rev)
DNMG 110404-SF	11.63	9.52	4.76	0.40	●	●	0.50-3.00	0.05-0.25

For tools, see pages: • DDJNR/L (A105) • PDJNR/L (A105) .

DNMG-NF

Double-Sided 55° Rhombic Inserts for Semi-Finishing and Finishing Applications

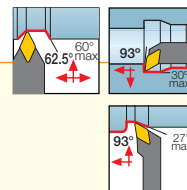
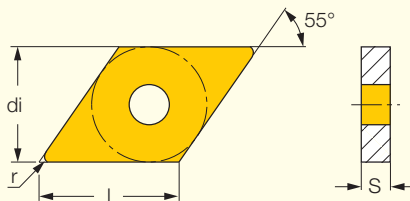
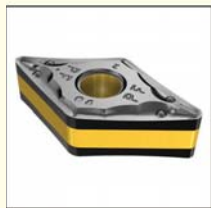


Designation	Dimensions				Tough ↔ Hard											Recommended Machining Data	
					IC3028	IC8350	IC6025	IC8250	IC530N	IC6015	IC8150	IC807	IC907	IC20N	IC520N		
	l	di	S	r											ap (mm)	f (mm/rev)	
DNMG 110402-NF	11.63	9.52	4.76	0.20	●	●		●			●	●	●	●	●	0.40-2.50	0.07-0.18
DNMG 110404-NF	11.63	9.52	4.76	0.40			●	●		●			●	●	●	0.80-3.00	0.07-0.25
DNMG 110408-NF	11.63	9.52	4.76	0.80	●		●	●	●	●	●	●	●	●	●	1.00-3.50	0.08-0.25

For tools, see pages: • DDJNR/L (A105) • PDJNR/L (A105) .

DNMG-PF

Double-Sided 55° Rhombic Inserts for Finishing Applications on Alloyed and Stainless Steel

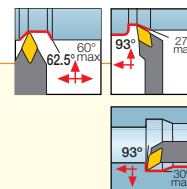
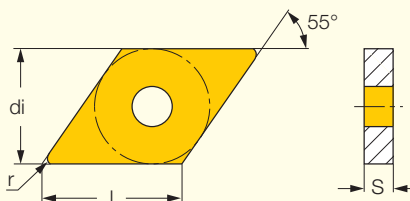


Designation	Dimensions				IC8150	Recommended Machining Data	
	l	di	S	r		a_p (mm)	f (mm/rev)
	11.63	9.52	4.76	0.80		0.30-3.00	0.07-0.30

For tools, see pages: • DDJNR/L (A105) • PDJNR/L (A105).

DNMG-PP

55° Double-Sided Rhombic Inserts for Machining Very Ductile Materials at Medium Cutting Conditions

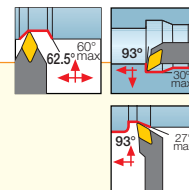
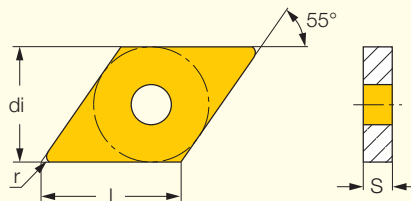


Designation	Dimensions				Tough ↔ Hard					Recommended Machining Data	
	l	di	S	r	IC3028	IC8250	IC10	IC8150	IC20	a_p (mm)	f (mm/rev)
	11.63	9.52	4.76	0.40	●	●	●	●	●	0.40-3.00	0.12-0.30
	11.63	9.52	4.76	0.80	●	●	●	●	●	1.00-3.50	0.12-0.30

For tools, see pages: • DDJNR/L (A105) • PDJNR/L (A105).

DNMG-VL

Double-Sided 55° Rhombic Inserts with a Chipformer for High Temperature Alloys and Stainless Steel Valves

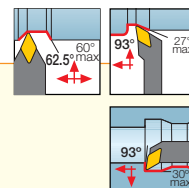
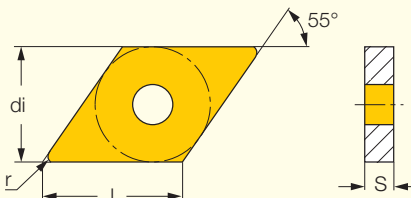


Designation	Dimensions				Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	IC908	IC806	ap (mm)	f (mm/rev)
DNMG 110404-VL	11.63	9.52	4.76	0.40	●	●	0.50-3.50	0.10-0.25
DNMG 110404-VL	11.63	9.52	4.76	0.40	●	●	0.50-3.50	0.10-0.25
DNMG 110408-VL	11.63	9.52	4.76	0.80	●	●	0.50-3.50	0.10-0.25

For tools, see pages: • DDJNR/L (A105) • PDJNR/L (A105).

DNMG-TF

Double-Sided 55° Rhombic Inserts for Machining a Wide Range of Materials at Medium Cutting Conditions

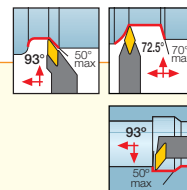
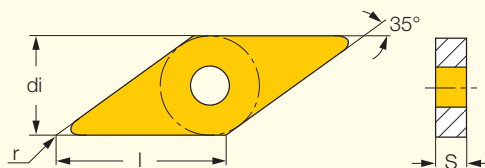


Designation	Dimensions				Tough ↔ Hard			Recommended Machining Data	
	l	di	S	r	IC8250	IC530N	IC20	ap (mm)	f (mm/rev)
DNMG 110404-TF	11.63	9.52	4.76	0.40	●	●	●	1.00-3.00	0.12-0.30
DNMG 110412-TF	11.63	9.52	4.76	1.20	●	●	●	1.50-4.00	0.15-0.35

For tools, see pages: • DDJNR/L (A105) • PDJNR/L (A105).

VNMG-SF

Double-Sided 35° Rhombic Inserts for Super-Finishing

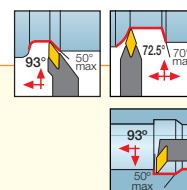
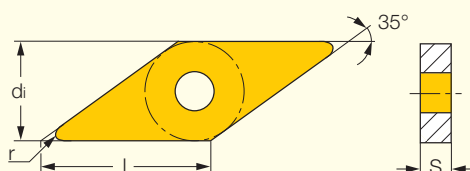


Designation	Dimensions				IC908	Recommended Machining Data	
	l	di	S	r		ap (mm)	f (mm/rev)
VNMG 12T302-SF	12.40	7.15	3.97	0.20	●	0.30-2.00	0.03-0.20
VNMG 12T304-SF	12.40	7.15	3.97	0.40	●	0.50-3.00	0.05-0.25

For tools, see pages: • SVJNR/L-F (A106) • SVVNN-F (A107).

VNMG/VNMG-NF

Double-Sided 35° Rhombic Inserts for Semi-Finishing and Finishing Applications

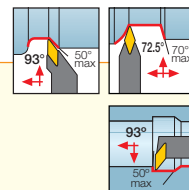
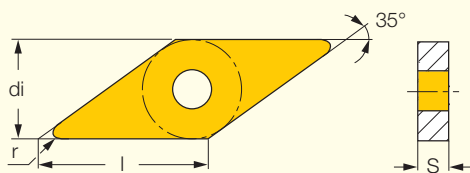


Designation	Dimensions				Tough ↔ Hard															Recommended Machining Data	
	l	di	S	r	IC830	IC3028	IC8350	IC6025	IC8250	IC30N	IC10	IC6015	IC8150	IC807	IC907	IC20N	IC428	IC5010	IC5005	ap (mm)	f (mm/rev)
VNMG 12T302-NF	12.40	7.15	3.97	0.20	●	●						●	●		●	●				0.40-2.50	0.07-0.18
VNMG 12T304-NF	12.40	7.15	3.97	0.40	●	●	●	●	●		●	●	●	●	●	●	●			0.70-2.00	0.07-0.24
VNMG 12T308-NF	12.40	7.15	3.97	0.80	●	●	●	●	●	●	●	●	●	●		●	●	●	●	1.00-3.00	0.08-0.24
VNMG 12T302-NF	12.40	7.15	3.90	0.20											●					0.40-2.50	0.05-0.17
VNGG 12T304-NF	12.40	7.15	3.90	0.40		●									●					0.50-3.00	0.05-0.25

For tools, see pages: • SVJNR/L-F (A106) • SVVNN-F (A107).

VNMM-PP

Single-Sided, 35° Rhombic Inserts for Machining Very Ductile Materials at Medium Cutting Conditions

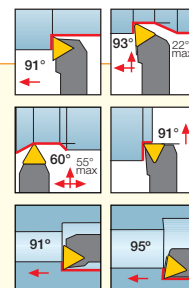
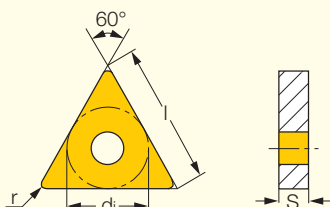


Designation	Dimensions				Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	IC8250	IC20	ap (mm)	f (mm/rev)
VNMM 12T304-PP	12.40	7.15	3.97	0.40	●	●	0.80-2.50	0.12-0.20
VNMM 12T308-PP	12.40	7.15	3.97	0.80	●	●	1.00-2.50	0.12-0.25

For tools, see pages: • SVJNR/L-F (A106) • SVVNN-F (A107).

TNMG-F3P

Double-Sided Triangular Inserts for Semi-Finishing and Finishing Applications

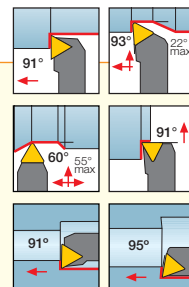
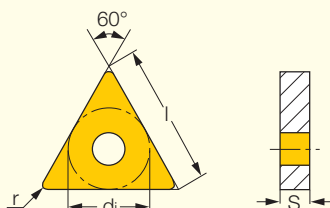


Designation	Dimensions				Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	IC8250	IC8150	ap (mm)	f (mm/rev)
TNMG 160404-F3P	16.50	9.52	4.76	0.40	●	●	0.50-2.00	0.07-0.25
TNMG 160408-F3P	16.50	9.52	4.76	0.80	●	●	0.90-3.00	0.08-0.25
TNMG 160412-F3P	16.50	9.52	4.76	1.20	●	●	1.30-4.00	0.10-0.25

For tools, see page: MTJNR/L-W (A106).

TNMG-M3P

Double-Sided Triangular Inserts for Medium Machining Conditions on Steel

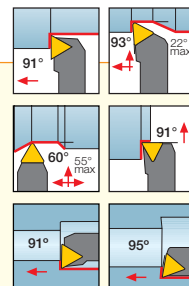
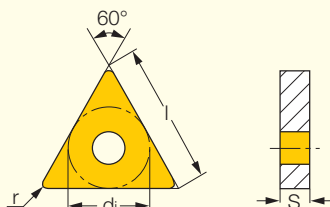


Designation	Dimensions				Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	IC8250	IC8150	a_p (mm)	f (mm/rev)
TNMG 160404-M3P	16.50	9.52	4.76	0.40	●	●	0.40-5.00	0.10-0.30
TNMG 160408-M3P	16.50	9.52	4.76	0.80	●	●	0.50-5.00	0.15-0.50
TNMG 160412-M3P	16.50	9.52	4.76	1.20	●	●	0.80-5.00	0.18-0.60

For tools, see page: MTJNR/L-W (A106).

TNMG-F3M

Double-Sided Triangular Inserts, for Finish Turning of Stainless and Low Carbon Steel

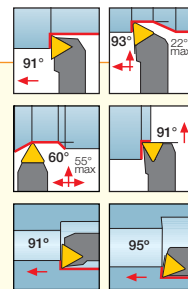
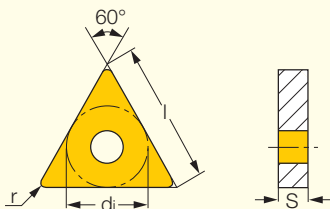


Designation	Dimensions				Tough ↔ Hard						Recommended Machining Data	
	l	di	S	r	IC6025	IC6015	IC806	IC807	IC20N	IC520N	a_p (mm)	f (mm/rev)
TNMG 160404-F3M	16.50	9.52	4.76	0.40	●	●	●	●	●	●	0.10-1.50	0.05-0.32
TNMG 160408-F3M	16.50	9.52	4.76	0.80	●	●	●	●	●	●	0.10-1.50	0.10-0.42
TNMG 160412-F3M	16.50	9.52	4.76	1.20	●	●	●	●	●	●	0.15-2.00	0.15-0.52

For tools, see page: MTJNR/L-W (A106).

TNMG-M3M

Triangular Double-Sided Inserts, for Machining Stainless and Low Carbon Steel

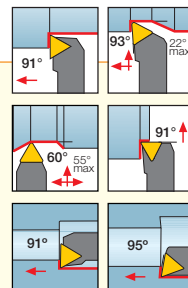
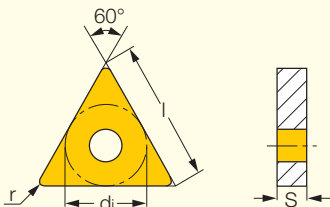


Designation	Dimensions				Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	IC6025	IC6015	ap (mm)	f (mm/rev)
TNMG 160408-M3M	16.50	9.52	4.76	0.80	●	●	0.50-4.00	0.15-0.50
TNMG 160412-M3M	16.50	9.52	4.76	1.20	●	●	0.50-4.00	0.20-0.60

For tools, see page: MTJNR/L-W (A106).

TNMG-GN

Double-Sided Triangular Inserts for General Applications

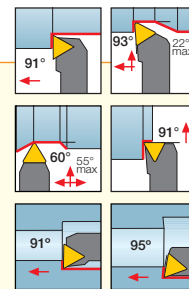
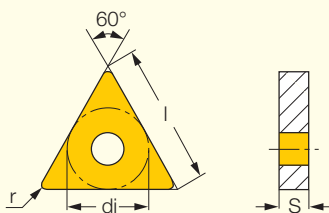


Designation	Dimensions				Tough ↔ Hard											Recommended Machining Data	
					IC830	IC3028	IC8350	IC8250	IC8150	IC807	IC907	IC20	IC428	IC5010	IC5005		
	l	di	S	r												a _p (mm)	f (mm/rev)
	TNMG 160404-GN	16.50	9.52	4.76	0.40	●	●	●	●	●	●	●	●	●	●	1.00-3.00	0.12-0.30
TNMG 160408-GN	16.50	9.52	4.76	0.80	●	●	●	●	●	●	●	●	●	●	1.00-3.50	0.18-0.39	
TNMG 160412-GN	16.50	9.52	4.76	1.20	●	●	●	●	●	●	●	●	●	●	1.50-4.00	0.18-0.43	

For tools, see page: MTJNR/L-W (A106).

TNMG-SF

Triangular Double-Sided Inserts for Super-Finishing. Controls Chip Flow at Very Low Feed and Depth of Cut

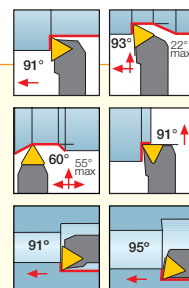
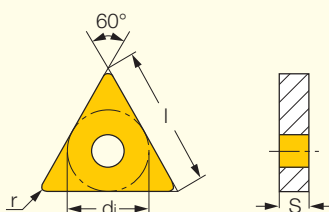


Designation	Dimensions				Tough ↔ Hard			Recommended Machining Data	
	l	di	S	r	IC8250	IC530N	IC520N	ap (mm)	f (mm/rev)
TNMG 160404-SF	16.50	9.52	4.76	0.40	●	●	●	0.40-2.00	0.04-0.25
TNMG 160408-SF	16.50	9.52	4.76	0.80	●	●	●	1.00-3.00	0.06-0.30

For tools, see page: MTJNR/L-W (A106).

TNMG-PF

Triangular Double-Sided Inserts for Finishing Applications on Alloyed and Stainless Steel

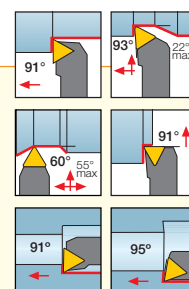
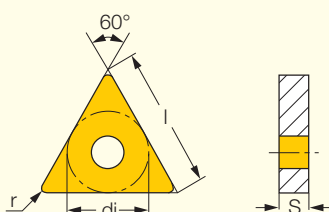


Designation	Dimensions				IC8150	Recommended Machining Data	
	l	di	S	r		ap (mm)	f (mm/rev)
TNMG 160408-PF	16.50	9.52	4.76	0.80	●	0.80-3.00	0.08-0.30

For tools, see page: MTJNR/L-W (A106).

TNMG-VL

Double-Sided Triangular Inserts with a Chipformer for High Temperature Alloys and Stainless Steel Valves

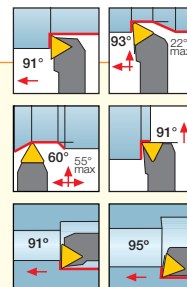
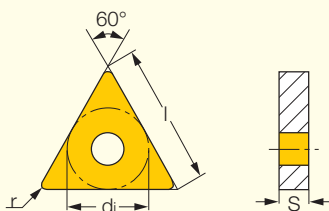


Designation	Dimensions				Tough ↔ Hard				Recommended Machining Data	
	l	di	S	r	IC908	IC806	IC807	IC907	ap (mm)	f (mm/rev)
TNMG 160404-VL	16.50	9.52	4.76	0.40	●	●	●	●	0.80-3.50	0.10-0.25
TNMG 160408-VL	16.50	9.52	4.76	0.80	●	●	●	●	0.80-3.50	0.10-0.25

For tools, see page: MTJNR/L-W (A106).

TNMG-TF

Double-Sided Triangular Inserts for Machining a Wide Range of Materials at Medium Cutting Conditions

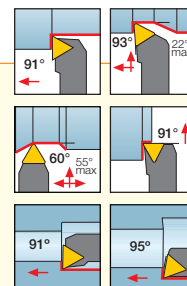
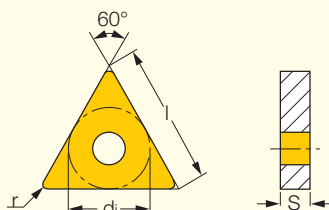


Designation	Dimensions				Tough ↔ Hard										Recommended Machining Data			
	l	di	S	r	IC830	IC3028	IC6025	IC8250	IC908	IC6015	IC8150	IC806	IC807	IC907	IC20	IC20N	ap (mm)	f (mm/rev)
TNMG 160304-TF	16.50	9.52	3.18	0.40				●									1.00-3.00	0.12-0.30
TNMG 160308-TF	16.50	9.52	3.18	0.80										●			1.00-3.00	0.12-0.30
TNMG 160404-TF	16.50	9.52	4.76	0.40	●	●	●	●		●	●	●	●	●	●		1.00-3.00	0.12-0.30
TNMG 160408-TF	16.50	9.52	4.76	0.80		●	●	●	●	●	●	●	●	●	●	●	1.00-3.00	0.12-0.30
TNMG 160412-TF	16.50	9.52	4.76	1.20				●			●		●	●		●	1.00-5.00	0.12-0.40

For tools, see page: MTJNR/L-W (A106).

TNMG/TNGG-PP

Double-Sided Triangular Inserts for Machining Very Ductile Materials at Medium Cutting Conditions



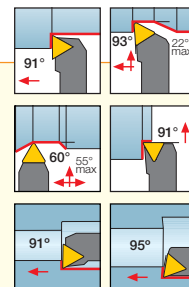
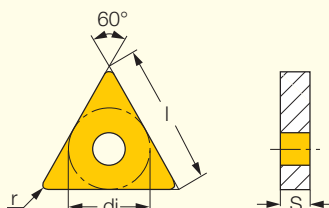
Designation	Dimensions				Tough $\leftrightarrow$ Hard						Recommended Machining Data	
	l	di	S	r	IC3028	IC8350	IC8250	IC8150	IC907	IC20	ap (mm)	f (mm/rev)
TNGG 160402-PP	16.50	9.52	4.76	0.20			•		•		0.50-1.50	0.05-0.25
TNMG 160404-PP	16.50	9.52	4.76	0.40		•	•			•	0.50-3.00	0.13-0.30
TNMG 160408-PP	16.50	9.52	4.76	0.80	•		•	•		•	1.00-3.00	0.12-0.30

For tools, see page: MTJNR/L-W (A106).

ISOTURN

TNMG-NF

Double-Sided Triangular Inserts for Semi-Finishing and Finishing Applications



Designation	Dimensions				Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	IC8250	IC8150	a_p (mm)	f (mm/rev)
TNMG 160408-NF	16.50	9.52	4.76	0.80	●	●	1.00-3.00	0.08-0.25

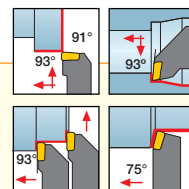
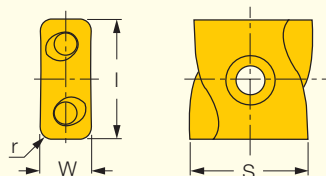
For tools, see page: MTJNR/L-W (A106).

HELITURN

TANGENTIAL LINE

LNMX-HT

Tangential Insert with 4 Cutting Edges and a Positive Rake Angle for High Metal Removal Rates

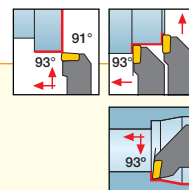
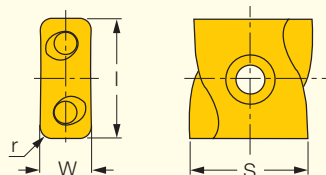


Designation	Dimensions				Tough ↔ Hard								Recommended Machining Data		
	W	l	S	r	IC3028	IC8350	IC8250	IC908	IC8150	IC807	IC907	IC428	IC5005	a _p (mm)	f (mm/rev)
LNMX 110408R/L-HT	4.75	11.00	11.40	0.80	●	●	●	●	●	●	●	●	●	0.50-5.00	0.15-0.60
LNMX 110412R/L-HT	4.75	11.00	11.40	1.20	●	●	●	●	●	●	●	●	●	0.80-5.00	0.20-0.80

For tools, see page: SLANR/L-TANG (A107).

LNMX-HM

Tangential Insert with a Positive Rake Angle for High Metal Removal on Soft and Ductile Materials

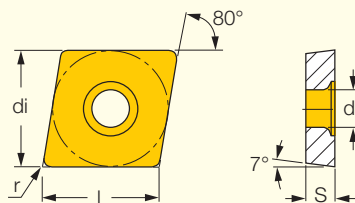
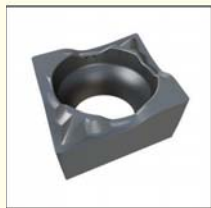


Designation	Dimensions				Tough ↔ Hard				Recommended Machining Data	
	l	W	S	r	IC6025	IC8250	IC6015	IC807	a_p (mm)	f (mm/rev)
LNMX 110408R/L-HM	11.00	4.75	11.40	0.80	●	●	●	●	1.00-5.00	0.10-0.40
LNMX 110412R/L-HM	11.00	4.75	11.40	1.20	●	●	●	●	1.00-5.00	0.10-0.40

For tools, see page: SLANR/L-TANG (A107).

CCGT-F1P

80° Rhombic Positive Flank Inserts, for Very Low Finish Turning Conditions of Steel

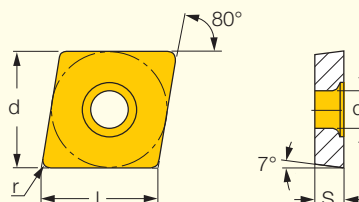


Designation	Dimensions					IC908	Recommended Machining Data	
	l	di	S	r	d ₁		a _p (mm)	f (mm/rev)
CCGT 03X101-F1P	3.60	3.57	1.39	0.10	1.90	●	0.10-0.50	0.01-0.05
CCGT 03X102-F1P	3.60	3.57	1.39	0.20	1.90	●	0.10-0.50	0.02-0.10
CCGT 03X104-F1P	3.60	3.57	1.39	0.40	1.90	●	0.10-0.50	0.05-0.15
CCGT 04T101-F1P	4.40	4.37	1.79	0.10	2.30	●	0.10-0.50	0.01-0.05
CCGT 04T102-F1P	4.40	4.37	1.79	0.20	2.30	●	0.10-0.50	0.02-0.10
CCGT 04T104-F1P	4.40	4.37	1.79	0.40	2.30	●	0.10-0.50	0.05-0.15

For tools, see pages: A/E/S-SCLCR/L (B34).

CCMT-F3P

80° Rhombic Positive Flank Inserts, for Semi-Finishing and Finishing Turning of Steel

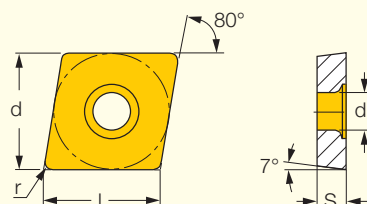


Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	d ₁	IC8250	IC8150	a _p (mm)	f (mm/rev)
CCMT 060202-F3P	6.30	6.35	2.38	0.20	2.80	●	●	0.06-1.70	0.03-0.12
CCMT 060204-F3P	6.30	6.35	2.38	0.40	2.80	●	●	0.10-1.70	0.05-0.18
CCMT 09T302-F3P	9.70	9.52	3.97	0.20	4.40	●	●	0.08-2.00	0.04-0.16
CCMT 09T304-F3P	9.70	9.52	3.97	0.40	4.40	●	●	0.11-2.00	0.06-0.25
CCMT 09T308-F3P	9.70	9.52	3.97	0.80	4.40	●	●	0.15-2.00	0.08-0.32

For tools, see pages: A/E/S-SCLCR/L (B34) • PCLCR/L-S (A93) • PCLCR/L-S-JHP (A93) • SCACR/L-S (A92) • SCLCR/L (A92).

CCMT-M3M

80° Rhombic Positive Flank Inserts, for Machining Stainless and Low Carbon Steel

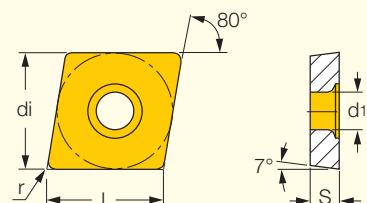
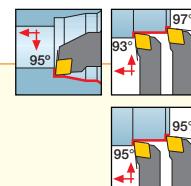


Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data	
	l	d _i	S	r	d ₁	IC6025	IC6015	a _p (mm)	f (mm/rev)
CCMT 060204-M3M	6.30	6.35	2.38	0.40	2.80	●	●	0.40-2.50	0.07-0.23
CCMT 060208-M3M	6.30	6.35	2.38	0.80	2.80	●	●	0.80-2.50	0.10-0.25
CCMT 09T304-M3M	9.70	9.52	3.97	0.40	4.40	●	●	0.40-3.00	0.07-0.25
CCMT 09T308-M3M	9.70	9.52	3.97	0.80	4.40	●	●	0.80-3.00	0.10-0.30

For tools, see pages: A/E/S-SCLCR/L (B34) • PCLCR/L-S (A93) • PCLCR/L-S-JHP (A93) • SCACR/L-S (A92) • SCLCR/L (A92).

CCMT/CCGT-SM

Single-Sided Turning Inserts for Semi-Finishing and Finishing on Soft Materials and Exotic Alloys

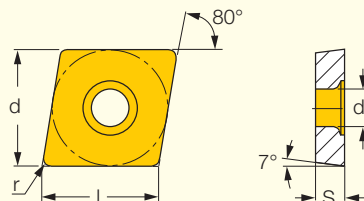


Designation	Dimensions					Tough ↔ Hard										Recommended Machining Data				
	l	d _i	S	r	d ₁	IC830	IC3028	IC6025	IC8250	IC6015	IC8150	IC806	IC807	IC907	IC20	IC428	IC5010	IC5005	a _p (mm)	f (mm/rev)
CCGT 060201-SM	6.45	6.35	2.38	0.10	2.80									●					0.25-2.00	0.05-0.20
CCGT 060202-SM	6.45	6.35	2.38	0.20	2.80									●					0.25-2.00	0.05-0.25
CCMT 060202-SM	6.45	6.35	2.38	0.20	2.80				●		●								0.25-2.00	0.05-0.25
CCMT 060204-SM	6.45	6.35	2.38	0.40	2.80			●	●	●	●	●	●	●					0.50-2.50	0.07-0.25
CCMT 060208-SM	6.45	6.35	2.38	0.80	2.80			●	●	●			●	●					0.50-2.50	0.07-0.25
CCMT 09T302-SM	9.70	9.52	3.97	0.20	4.40			●	●	●		●	●	●					0.50-2.50	0.06-0.25
CCMT 09T304-SM	9.70	9.52	3.97	0.40	4.40	●	●	●	●	●	●	●	●	●	●	●	●	●	0.50-2.50	0.06-0.25
CCMT 09T308-SM	9.70	9.52	3.97	0.80	4.40			●	●	●	●	●	●	●			●	●	0.50-3.00	0.07-0.25

For tools, see pages: A/E/S-SCLCR/L (B34) • PCLCR/L-S (A93) • PCLCR/L-S-JHP (A93) • SCACR/L-S (A92) • SCLCR/L (A92).

CCMT-PF

80° Rhombic Positive Flank Inserts for Semi-Finishing and Finishing on Soft Materials and Exotic Alloys

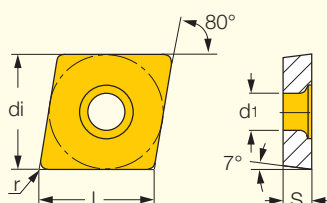
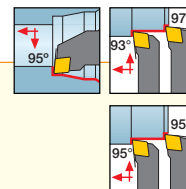


Designation	Dimensions					Tough ↔ Hard						Recommended Machining Data	
	l	di	S	r	d1	IC830	IC3028	IC6025	IC6015	IC807	IC907	ap (mm)	f (mm/rev)
CCMT 060202-PF	6.30	6.35	2.38	0.20	2.80	●	●	●	●	●	●	0.20-2.50	0.04-0.25
CCMT 060204-PF	6.30	6.35	2.38	0.40	2.80	●	●	●	●	●	●	0.40-2.50	0.04-0.30
CCMT 09T302-PF	9.70	9.52	3.97	0.20	4.40	●	●	●	●	●	●	0.50-3.00	0.05-0.30
CCMT 09T304-PF	9.70	9.52	3.97	0.40	4.40	●	●	●	●	●	●	0.50-3.50	0.05-0.35

For tools, see pages: A/E/S-SCLCR/L (B34) • PCLCR/L-S (A93) • PCLCR/L-S-JHP (A93) • SCACR/L-S (A92) • SCLCR/L (A92).

CCMT-14

80° Rhombic 7° Positive Flank Inserts for Semi-Finish and Finish Turning

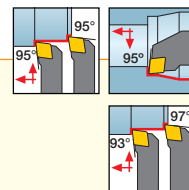
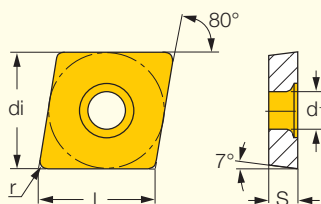


Designation	Dimensions					Tough ↔ Hard								Recommended Machining Data	
	l	di	S	r	d1	IC830	IC3028	IC8250	IC807	IC907	IC20	IC428	IC5005	ap (mm)	f (mm/rev)
CCMT 060204-14	6.30	6.35	2.38	0.40	2.80	●	●	●	●	●	●	●	●	0.50-2.50	0.14-0.25
CCMT 09T304-14	9.70	9.52	3.97	0.40	4.40	●	●	●	●	●	●	●	●	0.50-3.00	0.14-0.25
CCMT 09T308-14	9.70	9.52	3.97	0.80	4.40	●	●	●	●	●	●	●	●	0.80-3.00	0.14-0.30

For tools, see pages: A/E/S-SCLCR/L (B34) • PCLCR/L-S (A93) • PCLCR/L-S-JHP (A93) • SCACR/L-S (A92) • SCLCR/L (A92).

CCMT/CCGT

80° Rhombic 7° Positive Flank Inserts for Semi-Finish and Finish Turning



Designation	Dimensions					Tough ↔ Hard				Recommended Machining Data	
	l	di	S	r	d1	IC30N	IC20	IC20N	IC520N	ap (mm)	f (mm/rev)
CCGT 060202	6.30	6.35	2.38	0.20	2.80	●				0.50-2.00	0.10-0.20
CCGT 060202L ⁽¹⁾	6.30	6.35	2.38	0.20	2.80	●	●			0.50-2.00	0.10-0.20
CCGT 060204	6.30	6.35	2.38	0.40	2.80	●				0.50-2.00	0.10-0.20
CCGT 060204L ⁽¹⁾	6.30	6.35	2.38	0.40	2.80	●				0.50-2.00	0.10-0.20
CCMT 060202	6.30	6.35	2.38	0.20	2.80			●		0.50-2.00	0.10-0.20
CCMT 060204	6.30	6.35	2.38	0.40	2.80	●		●	●	0.50-2.00	0.12-0.22
CCMT 09T302	9.70	9.52	3.97	0.20	4.40			●	●	0.50-2.50	0.12-0.25
CCMT 09T304	9.70	9.52	3.97	0.40	4.40			●	●	0.50-2.50	0.12-0.25
CCMT 09T308	9.70	9.52	3.97	0.80	4.40			●	●	0.80-3.00	0.14-0.25

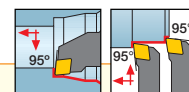
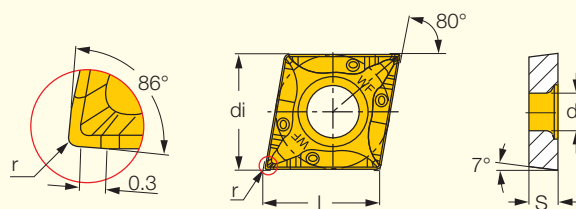
• Use left-hand inserts for left-hand external tools and for right-hand internal tools

⁽¹⁾ Left-hand insert

For tools, see pages: A/E/S-SCLCR/L (B34) • PCLCR/L-S (A93) • PCLCR/L-S-JHP (A93) • SCACR/L-S (A92) • SCLCR/L (A92).

CCET-WF

80° Rhombic Insert with a 7° Positive Flank and a Wiper Near the Corner for High Feed Finishing

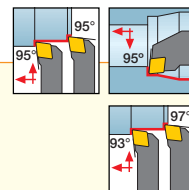
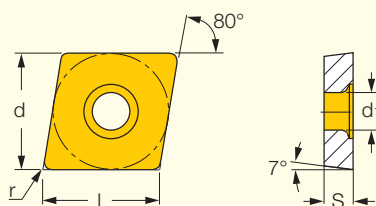


Designation	Dimensions					IC907	Recommended Machining Data	
	l	di	S	r	d1		ap (mm)	f (mm/rev)
CCET 0602005-WF	6.30	6.35	2.38	0.05	2.80	●	0.05-2.00	0.01-0.20
CCET 09T3005-WF	9.50	9.52	3.97	0.05	4.40	●	0.05-2.00	0.01-0.20

For tools, see pages: A/E/S-SCLCR/L (B34) • PCLCR/L-S (A93) • PCLCR/L-S-JHP (A1) • SCACR/L-S (A92) • SCLCR/L (A92).

CCMT-WG

80° Rhombic Insert with a 7° Positive Flank and a Wiper Near the Corner for High Feed Finishing

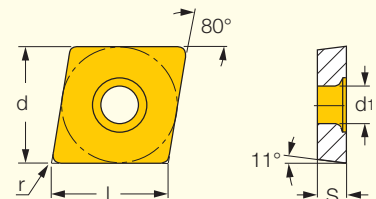


Designation	Dimensions					Tough ↔ Hard			Recommended Machining Data	
	l	di	S	r	d ₁	IC8250	IC807	IC907	a _p (mm)	f (mm/rev)
CCMT 060204-WG	6.30	6.35	2.38	0.40	2.80	●	●	●	0.40-2.00	0.10-0.35
CCMT 09T304-WG	9.70	9.52	3.97	0.40	4.40	●	●	●	0.40-2.00	0.14-0.30
CCMT 09T308-WG	9.70	9.52	3.97	0.80	4.40	●	●	●	0.50-2.50	0.20-0.38

For tools, see pages: A/E/S-SCLCR/L (B34) • PCLCR/L-S (A93) • PCLCR/L-S-JHP (A93) • SCACR/L-S (A92) • SCLCR/L (A92).

CPGT-SM

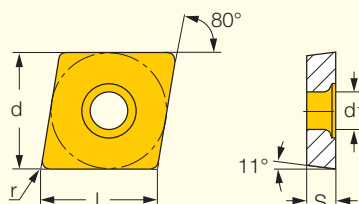
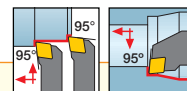
80° Rhombic 11° Positive Flank Inserts for Semi-Finish and Finish Turning on Soft Materials and Exotic Alloys



Designation	Dimensions					IC907	Recommended Machining Data	
	l	di	S	r	d ₁		a _p (mm)	f (mm/rev)
CPGT 060201-SM	6.45	6.35	2.38	0.10	2.80	●	0.25-2.00	0.05-0.20
CPGT 060202-SM	6.45	6.35	2.38	0.20	2.80	●	0.25-2.00	0.05-0.30
CPGT 060204-SM	6.45	6.35	2.38	0.40	2.80	●	0.50-3.00	0.10-0.35
CPGT 09T301-SM	9.67	9.52	3.97	0.10	4.40	●	0.25-2.00	0.05-0.25
CPGT 09T302-SM	9.67	9.52	3.97	0.20	4.40	●	0.50-2.50	0.10-0.30
CPGT 09T304-SM	9.67	9.52	3.97	0.40	4.40	●	0.60-3.50	0.10-0.35

CPMT-PF

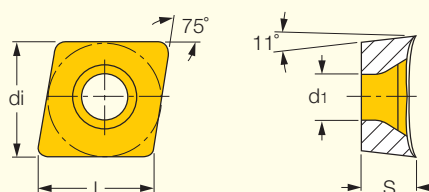
80° Rhombic Positive Flank Inserts, for Semi Finishing and Finishing on Soft Materials and Exotic Alloys



Designation	Dimensions					Tough ↔ Hard					Recommended Machining Data	
	l	di	S	r	d1	IC3028	IC6025	IC6015	IC807	IC907	ap (mm)	f (mm/rev)
CPMT 060204-PF	6.30	6.35	2.38	0.40	2.80	●	●	●	●	●	0.50-2.50	0.04-0.30
CPMT 060208-PF	6.30	6.35	2.38	0.80	2.80	●	●	●	●	●	0.50-2.50	0.08-0.30
CPMT 09T304-PF	9.50	9.52	3.97	0.40	4.40	●	●	●	●	●	0.50-3.00	0.05-0.35
CPMT 09T308-PF	9.50	9.52	3.97	0.80	4.40	●	●	●	●	●	0.50-3.50	0.10-0.35
CPMT 090308-PF	9.50	9.52	3.18	0.80	4.40	●	●	●	●	●	0.50-3.50	0.10-0.35

EPGT-F1P

75° Rhombic Positive Flank Inserts, for Very Low Finish Turning Conditions of Steel

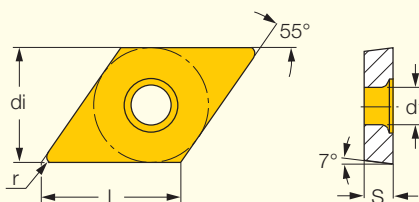
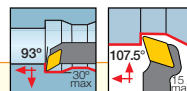


Designation	Dimensions					IC908	Recommended Machining Data	
	l	di	S	r	d1		ap (mm)	f (mm/rev)
EPGT 03X101-F1P	3.70	3.57	1.39	0.10	1.90	●	0.10-0.50	0.01-0.05
EPGT 03X102-F1P	3.70	3.57	1.39	0.20	1.90	●	0.10-0.50	0.02-0.10
EPGT 03X104-F1P	3.70	3.57	1.39	0.40	1.90	●	0.10-0.50	0.05-0.15

For tools, see pages: A/E-SEXPR/L-03 (B35).

DCMT-F3P

55° Rhombic Positive Flank Inserts, for Semi-Finishing and Finishing Turning of Steel

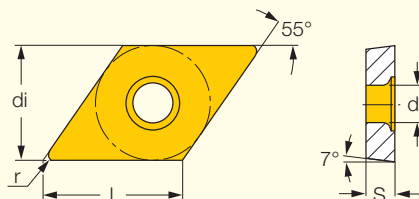
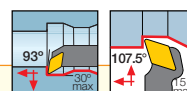


Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	d1	IC8250	IC8150	ap (mm)	f (mm/rev)
DCMT 070202-F3P	7.70	6.35	2.38	0.20	2.80	●	●	0.06-1.50	0.03-0.12
DCMT 070204-F3P	7.70	6.35	2.38	0.40	2.80	●	●	0.08-1.50	0.05-0.18
DCMT 11T302-F3P	11.60	9.52	3.97	0.20	4.40	●	●	0.08-2.00	0.04-0.16
DCMT 11T304-F3P	11.60	9.52	3.97	0.40	4.40	●	●	0.11-2.00	0.06-0.25
DCMT 11T308-F3P	11.60	9.52	3.97	0.80	4.40	●	●	0.15-2.00	0.08-0.32

For tools, see pages: • PDACR/L-JHP (A94) • PDACR/L-S (A94) • SDACR/L (A96) • SDJCR/L (A95) • SDNCN (A97).

DCMT-M3M

55° Rhombic Positive Flank Inserts, for Machining Stainless and Low Carbon Steel

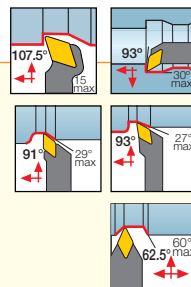
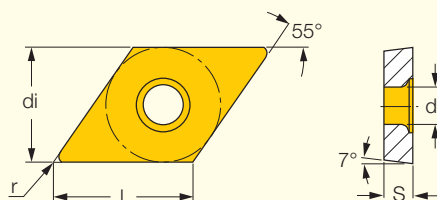


Designation	Dimensions					Tough ↔ Hard				Recommended Machining Data	
	l	di	S	r	d1	IC6025	IC6015	IC806	IC907	ap (mm)	f (mm/rev)
DCMT 070204-M3M	7.70	6.35	2.38	0.40	2.80	●	●			0.40-2.50	0.07-0.23
DCMT 070208-M3M	7.70	6.35	2.38	0.80	2.80	●	●			0.80-2.50	0.10-0.25
DCMT 11T304-M3M	11.60	9.52	3.97	0.40	4.40	●	●			0.40-3.00	0.07-0.25
DCMT 11T308-M3M	11.60	9.52	3.97	0.40	4.40	●	●	●	●	0.80-3.00	0.10-0.30
DCMT 11T312-M3M	11.60	9.52	3.97	1.20	4.40	●	●			1.20-3.00	0.13-0.35

For tools, see pages: • PDACR/L-JHP (A94) • PDACR/L-S (A94) • SDACR/L (A96) • SDJCR/L (A95) • SDNCN (A97).

DCMT/DCGT-SM

55° Rhombic 7° Positive Flank Inserts for Semi-Finish and Finish Turning on Soft Materials and Exotic Alloys

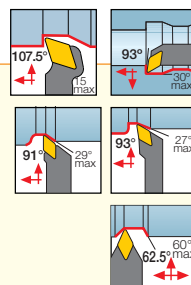
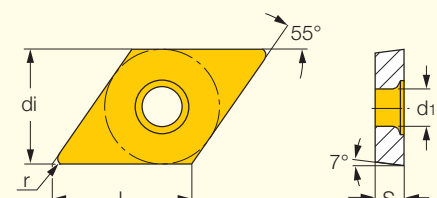
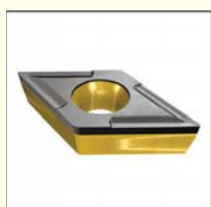


Designation	Dimensions					Tough ↔ Hard										Recommended Machining Data	
	l	di	S	r	d1	IC8350	IC6025	IC8250	IC530N	IC6015	IC8150	IC806	IC807	IC907	IC520N	ap (mm)	f (mm/rev)
DCMT 070202-SM	7.70	6.35	2.38	0.20	2.80		•			•			•	•		0.50-2.00	0.04-0.20
DCMT 070204-SM	7.70	6.35	2.38	0.40	2.80		•			•	•		•	•		0.50-2.50	0.05-0.25
DCMT 070208-SM	7.70	6.35	2.38	0.80	2.80			•								0.50-3.00	0.07-0.25
DCGT 11T302-SM	11.60	9.52	3.97	0.20	4.40									•		0.30-2.00	0.05-0.25
DCGT 11T304-SM	11.60	9.52	3.97	0.40	4.40									•		0.50-2.50	0.05-0.25
DCMT 11T302-SM	11.60	9.52	3.97	0.20	4.40		•	•	•	•			•	•		0.50-2.50	0.05-0.25
DCMT 11T304-SM	11.60	9.52	3.97	0.40	4.40		•	•	•		•	•	•	•		0.50-2.50	0.07-0.25
DCMT 11T308-SM	11.60	9.52	3.97	0.80	4.40	•	•	•		•	•		•	•		1.00-3.00	0.07-0.25
DCMT 11T312-SM	11.60	9.52	3.97	1.20	4.40										•	1.00-3.50	0.10-0.28

For tools, see pages: • PDACR/L-JHP (A94) • PDACR/L-S (A94) • SDACR/L (A96) • SDJCR/L (A95) • SDNCN (A97).

DCMT/DCGT

55° Rhombic Insert with 7° Positive Clearance for Finishing Applications



Designation	Dimensions					Tough ↔ Hard										Recommended Machining Data	
	l	di	S	r	d1	IC830	IC3028	IC8250	IC908	IC30N	IC530N	IC8150	IC20N	IC520N		ap (mm)	f (mm/rev)
DCGT 070201R ⁽¹⁾	7.70	6.35	2.38	0.10	2.80				•							0.25-1.50	0.05-0.15
DCGT 070202	7.70	6.35	2.38	0.20	2.80					•						0.50-2.00	0.08-0.20
DCGT 070204	7.70	6.35	2.38	0.40	2.80					•						0.80-2.50	0.10-0.25
DCMT 070202	7.70	6.35	2.38	0.20	2.80		•	•				•	•	•		0.50-2.00	0.08-0.20
DCMT 070204	7.70	6.35	2.38	0.40	2.80	•	•			•		•	•	•		0.50-2.00	0.08-0.22
DCGT 11T302	11.60	9.52	3.97	0.20	4.40					•						0.50-2.00	0.08-0.20
DCGT 11T304	11.60	9.52	3.97	0.40	4.40					•			•			1.00-2.50	0.12-0.25
DCMT 11T302	11.60	9.52	3.97	0.20	4.40					•	•		•	•		0.50-2.00	0.08-0.20
DCMT 11T304	11.60	9.52	3.97	0.40	4.40					•			•	•		0.50-2.00	0.12-0.25
DCMT 11T308	11.60	9.52	3.97	0.80	4.40	•	•						•	•		1.50-3.00	0.14-0.29

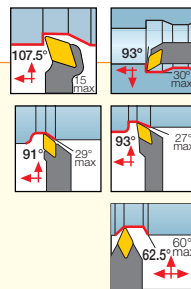
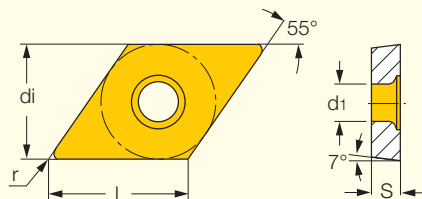
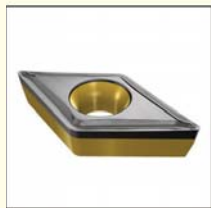
• Right-hand inserts for right-hand external tools and for left-hand internal tools

⁽¹⁾ Right-hand insert

For tools, see pages: PDACR/L-JHP (A94) • PDACR/L-S (A94) • SDACR/L (A96) • SDJCR/L (A95) • SDNCN (A97).

DCMT-14

55° Rhombic 7° Positive Flank Inserts for Semi-Finish and Finish Turning on Soft Materials and Exotic Alloys



Designation	Dimensions					Tough ↔ Hard					Recommended Machining Data	
	l	di	S	r	d ₁	IC830	IC3028	IC8150	IC20	IC428	a _p (mm)	f (mm/rev)
DCMT 11T304-14	11.60	9.52	3.97	0.40	4.40	●	●	●	●	●	1.00-2.50	0.14-0.25
DCMT 11T308-14	11.60	9.52	3.97	0.80	4.40	●	●	●	●	●	1.50-3.00	0.14-0.29

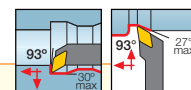
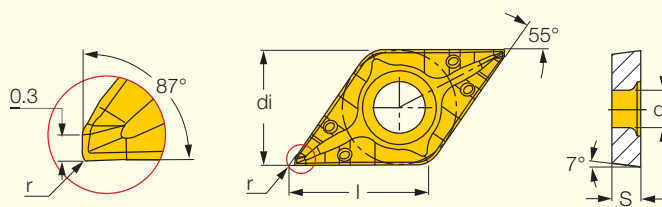
For tools, see pages: • PDACR/L-JHP (A94) • PDACR/L-S (A94) • SDACR/L (A96) • SDJCR/L (A95) • SDNCN (A97).

DCET-WF

55° Rhombic Wiper Inserts for Finishing Operations at High Feeds



Left-hand shown



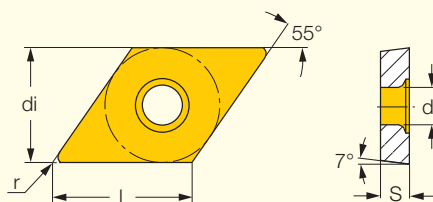
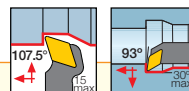
Right-hand shown

Designation	Dimensions					IC907	Recommended Machining Data	
	l	di	S	r	d ₁		a _p (mm)	f (mm/rev)
DCET 0702005R/L-WF	7.70	6.35	2.38	0.05	2.80	●	0.05-3.00	0.01-0.20
DCET 11T3005R/L-WF	11.60	9.52	3.97	0.05	4.40	●	0.05-3.00	0.01-0.20

For tools, see pages: • PDACR/L-JHP (A94) • PDACR/L-S (A94) • SDACR/L (A96) • SDJCR/L (A95).

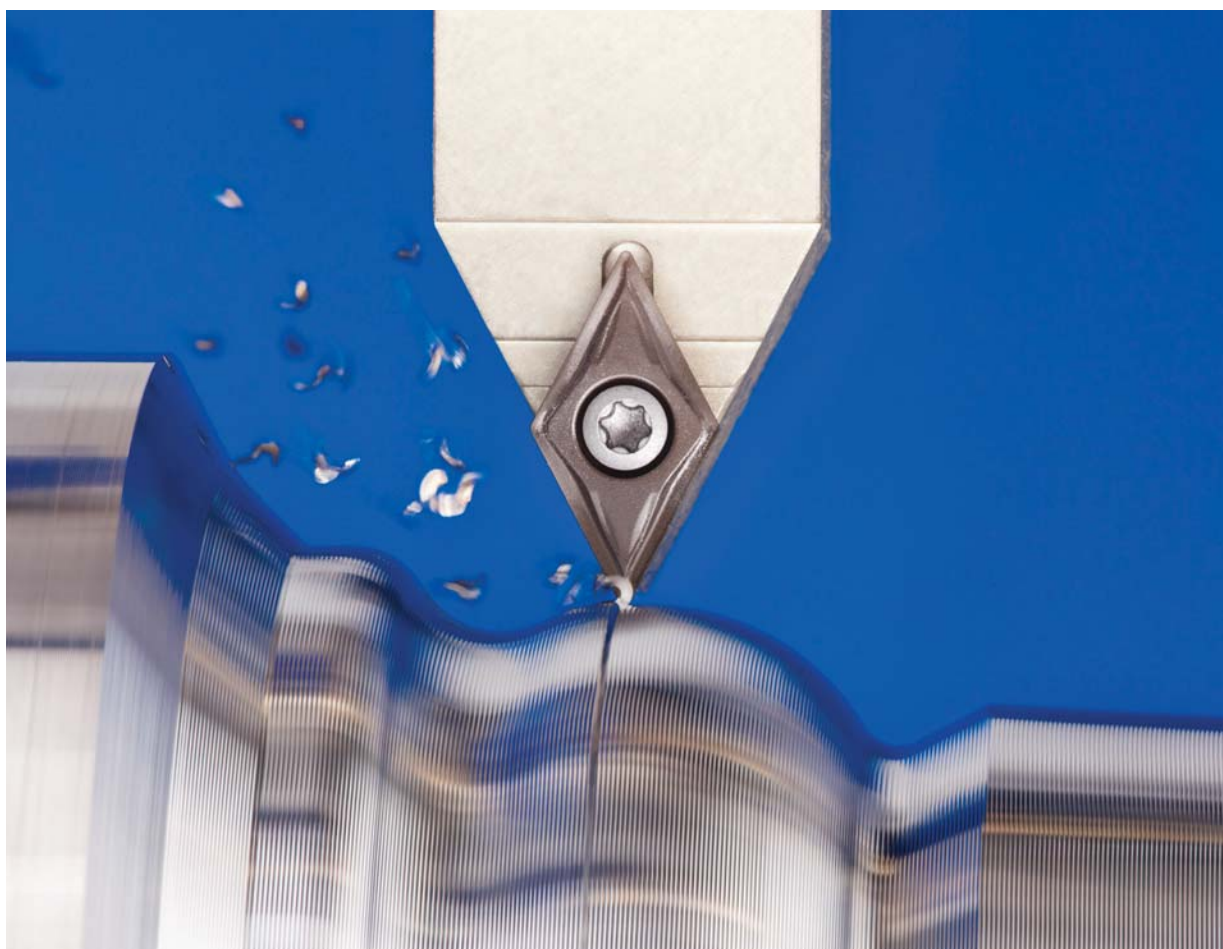
DCMT-PF

55° Rhombic Positive Flank Inserts for Semi-Finishing and Finishing on Soft Materials and Exotic Alloys



Designation	Dimensions					Tough ↔ Hard								Recommended Machining Data	
	l	di	S	r	d1	IC830	IC3028	IC6025	IC8250	IC6015	IC806	IC807	IC907	ap (mm)	f (mm/rev)
DCMT 070201-PF	7.70	6.35	2.38	0.10	2.80		●					●	●	0.30-3.00	0.02-0.25
DCMT 070202-PF	7.70	6.35	2.38	0.20	2.80		●							0.40-3.00	0.03-0.25
DCMT 070204-PF	7.70	6.35	2.38	0.40	2.80	●	●							0.50-3.50	0.05-0.30
DCMT 070208-PF	7.70	6.35	2.38	0.80	2.80							●	●	0.70-3.00	0.08-0.30
DCMT 11T302-PF	11.60	9.52	3.97	0.20	4.40	●	●					●	●	0.30-2.50	0.04-0.25
DCMT 11T304-PF	11.60	9.52	3.97	0.40	4.40	●	●	●	●	●	●	●	●	0.50-3.00	0.05-0.25
DCMT 11T308-PF	11.60	9.52	3.97	0.80	4.40	●	●	●	●	●	●	●	●	0.70-3.00	0.10-0.25

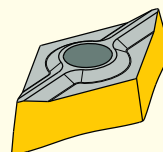
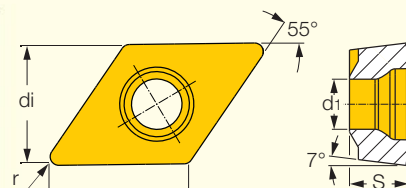
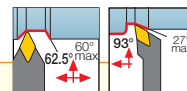
For tools, see pages: PDACR/L-JHP (A94) • PDACR/L-S (A94) • SDACR/L (A96) • SDJCR/L (A95) • SDNCN (A97).



SAFE-T-LOCK

DCMT-F3P-SL

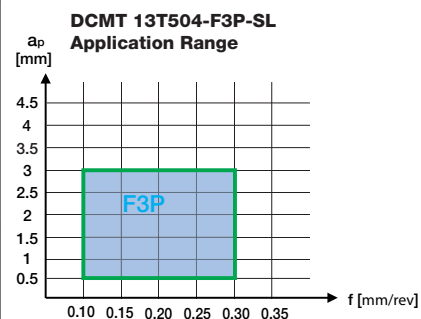
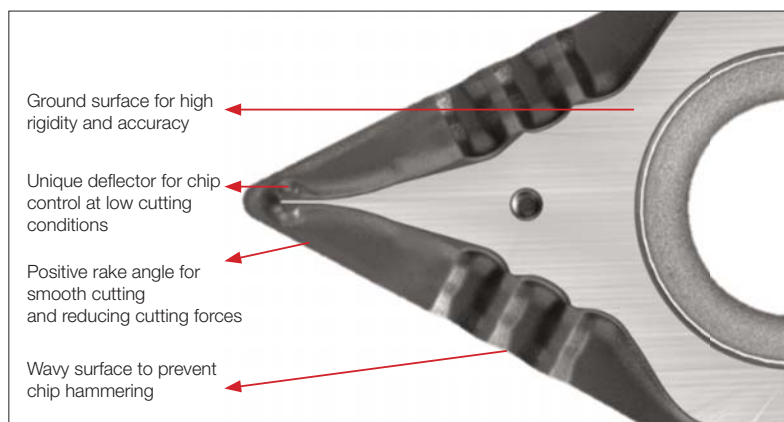
55° Rhombic Positive Flank Inserts with a Locating Bottom Ridge, for Semi-Finishing and Finishing of Steel



Bottom view

Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data	
	l	d _i	S	r	d ₁	IC8250	IC8150	a _p (mm)	f (mm/rev)
DCMT 13T504-F3P-SL	13.40	11.00	5.11	0.40	4.50	●	●	0.50-3.00	0.05-0.25
DCMT 13T508-F3P-SL	13.40	11.00	5.11	0.80	4.50	●	●	0.90-3.50	0.10-0.25

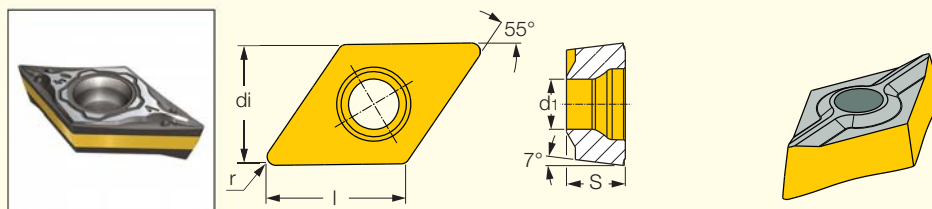
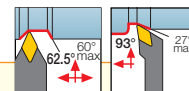
For tools, see pages: SDJCR/L-13-SL (A95) • SDNCN-13-SL (A97).



SAFE-T-LOCK

DCMT-PF-SL

55° Rhombic Positive Flank Inserts with a Locating Bottom Ridge, for Finish Turning on Soft Materials and Exotic Alloys

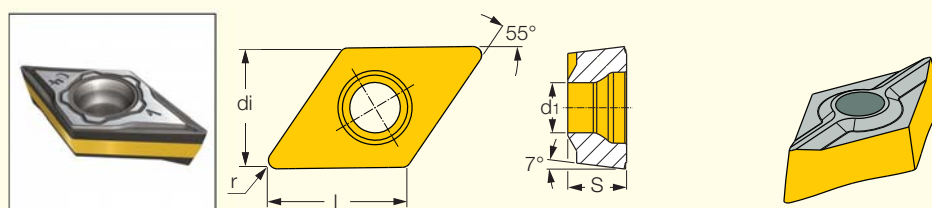
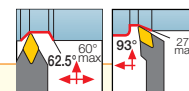


Designation	Dimensions					IC8150	Recommended Machining Data	
	l	di	S	r	d1		ap (mm)	f (mm/rev)
DCMT 13T504-PF-SL	13.40	11.00	5.11	0.40	4.50	●	0.50-3.00	0.05-0.25
DCMT 13T508-PF-SL	13.40	11.00	5.11	0.80	4.50	●	0.70-3.00	0.05-0.25

For tools, see pages: SDJCR/L-13-SL (A95) • SDNCN-13-SL (A97).

DCMT-SM-SL

55° Rhombic Positive Flank Inserts with a Locating Bottom Ridge, for Finish Turning on Soft Materials and Exotic Alloys

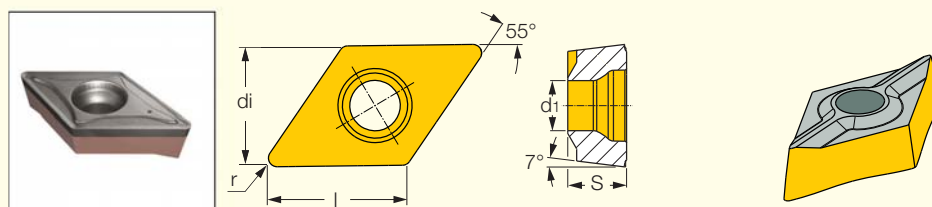
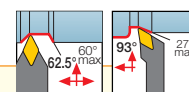


Designation	Dimensions					IC8150	Recommended Machining Data	
	l	di	S	r	d1		ap (mm)	f (mm/rev)
DCMT 13T504-SM-SL	13.40	11.00	5.11	0.40	4.50	●	0.50-2.50	0.07-0.27
DCMT 13T508-SM-SL	13.40	11.00	5.11	0.80	4.50	●	1.00-3.00	0.07-0.27

For tools, see pages: SDJCR/L-13-SL (A95) • SDNCN-13-SL (A97).

DCMT-M3M-SL

55° Rhombic Positive Flank Inserts with a Locating Bottom Ridge, for Machining Stainless and Low Carbon Steel



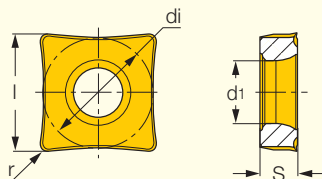
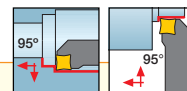
Bottom view

Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	d1	IC6025	IC6015	ap (mm)	f (mm/rev)
DCMT 13T508-M3M-SL	13.40	11.00	5.11	0.80	4.50	●	●	0.90-3.50	0.10-0.25
DCMT 13T512-M3M-SL	13.40	11.00	5.11	1.20	4.50	●	●	0.90-3.50	0.15-0.30

For tools, see pages: SDJCR/L-13-SL (A95) • SDNCN-13-SL (A97).

QCMT-PF

Positive 7° Clearance, Four 80° Cornered Insert with a Chipformer for Finishing

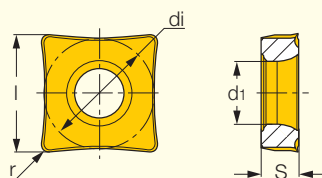
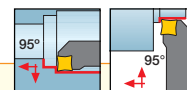


Designation	Dimensions				IC908	Recommended Machining Data	
	di	S	r	d1		ap (mm)	f (mm/rev)
QCMT 09T302-PF	9.65	3.97	0.20	4.40	●	0.50-2.50	0.05-0.30

For tools, see pages: PQLCR-A (A102) • PQLCR/L (A101) • PQLCR/L-S (A101).

QCMT-SM

Positive 7° Clearance, Four 80° Cornered Insert with a Chipformer for Finishing

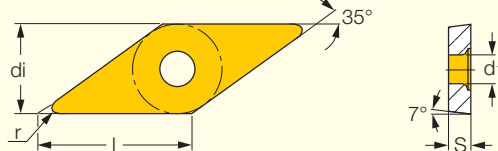
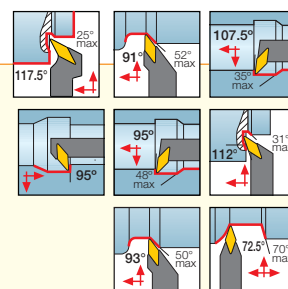


Designation	Dimensions					Tough ↔ Hard			Recommended Machining Data	
	l	di	S	r	d1	IC3028	IC8250	IC8150	ap (mm)	f (mm/rev)
QCMT 09T304-SM	10.40	9.65	3.97	0.40	4.40	●	●	●	0.50-2.50	0.06-0.25

For tools, see pages: PQLCR-A (A102) • PQLCR/L (A101) • PQLCR/L-S (A101).

VCGT 1303...-PF

35° Rhombic Positive Flank Inserts for Semi-Finishing and Finishing on Soft Materials and Exotic Alloys

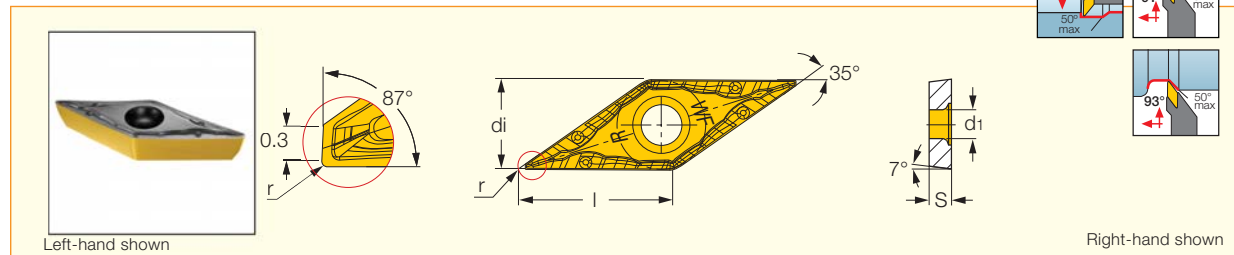


Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	d1	IC830	IC3028	ap (mm)	f (mm/rev)
VCGT 130302-PF	13.00	7.94	3.18	0.20	3.40	●	●	0.30-2.50	0.03-0.25
VCGT 130304-PF	13.00	7.94	3.18	0.40	3.40	●	●	0.50-3.00	0.05-0.25

For tools, see pages: SVACR/L (A99).

VCET-WF

35° Rhombic Wiper Inserts for Finishing Operations at High Feeds

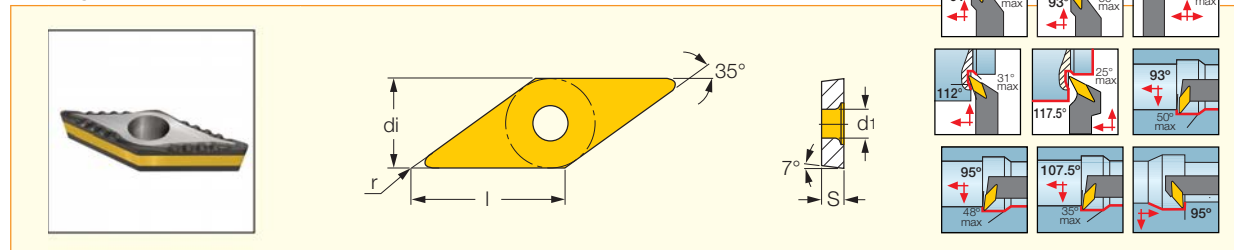


Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	d ₁	IC807	IC907	a _p (mm)	f (mm/rev)
VCET 1103005R/L-WF	11.10	6.35	3.18	0.05	2.90	●	●	0.05-4.00	0.01-0.20

For tools, see pages: PVACR/L-JHP (A98) • PVACR/L-S (A98) • S/A-SVJCR/L (B37) • SVACR/L (A99) • SVJCR/L (A99) .

VCMT-F3P

35° Rhombic Positive Flank Inserts, for Semi-Finishing and Finishing Turning of Steel

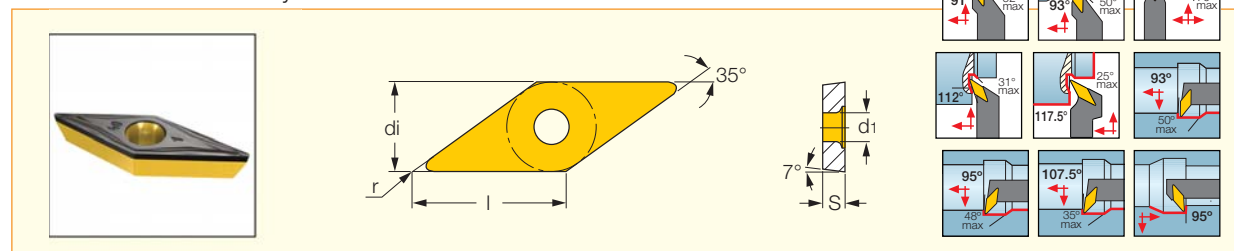


Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	d ₁	IC8250	IC8150	a _p (mm)	f (mm/rev)
VCMT 110302-F3P	11.10	6.35	3.18	0.20	2.80	●	●	0.06-1.70	0.03-0.14
VCMT 110304-F3P	11.10	6.35	3.18	0.40	2.80	●	●	0.10-1.70	0.05-0.20
VCMT 110308-F3P	11.10	6.35	3.18	0.80	2.80	●	●	0.13-1.70	0.07-0.28
VCMT 110312-F3P	11.10	6.35	3.18	1.20	2.80	●	●	0.13-1.70	0.08-0.33

For tools, see pages: PVACR/L-JHP (A98) • PVACR/L-S (A98) • S/A-SVJCR/L (B37) • SVACR/L (A99) • SVJCR/L (A99) • SVVCN (A100) .

VCMT-SM

35° Rhombic 7° Positive Flank Inserts for Semi-Finish and Finish Turning on Soft Materials and Exotic Alloys

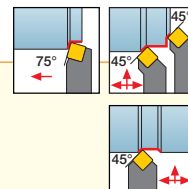
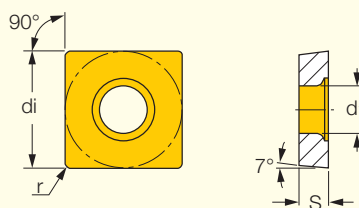


Designation	Dimensions					Tough ↔ Hard					Recommended Machining Data	
	l	di	S	r	d ₁	IC6025	IC908	IC6015	IC807	IC907	a _p (mm)	f (mm/rev)
VCMT 110302-SM	11.10	6.35	3.18	0.20	2.90	●	●	●	●	●	0.20-2.50	0.04-0.20
VCMT 110304-SM	11.10	6.35	3.18	0.40	2.90	●	●	●	●	●	0.50-3.00	0.07-0.24
VCMT 110308-SM	11.10	6.35	3.18	0.80	2.90	●	●	●	●	●	0.50-2.00	0.07-0.25

For tools, see pages: PVACR/L-JHP (A98) • PVACR/L-S (A98) • S/A-SVJCR/L (B37) • SVACR/L (A99) • SVVCN (A100) .

SCMT-F3P

Square Positive Flank Inserts, for Semi-Finishing and Finishing Turning of Steel

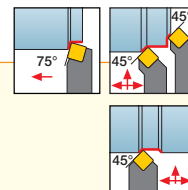
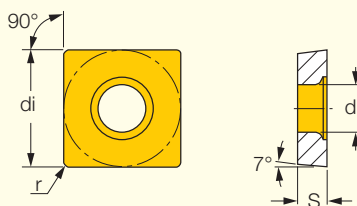


Designation	Dimensions				Tough ↔ Hard		Recommended Machining Data	
	l	S	r	d ₁	IC8250	IC8150	a _p (mm)	f (mm/rev)
SCMT 09T304-F3P	9.52	3.97	0.40	4.40	●	●	0.11-2.00	0.06-0.25
SCMT 09T308-F3P	9.52	3.97	0.80	4.40	●	●	0.15-2.00	0.08-0.32

For tools, see pages: SSBGR/L (A102) • SSSCR/L (A102).

SCMT-M3M

Square Positive Flank Inserts, for Machining Stainless and Low Carbon Steel

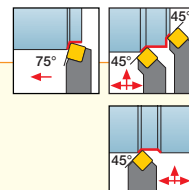
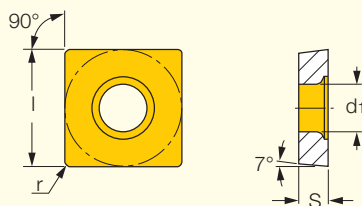
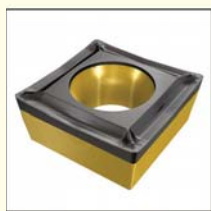


Designation	Dimensions				Tough ↔ Hard		Recommended Machining Data	
	l	S	r	d ₁	IC6025	IC6015	a _p (mm)	f (mm/rev)
SCMT 09T304-M3M	9.52	3.97	0.40	4.40	●	●	0.40-3.80	0.07-0.25
SCMT 09T308-M3M	9.52	3.97	0.80	4.40	●	●	0.80-3.80	0.10-0.30

For tools, see pages: SSBGR/L (A102) • SSSCR/L (A102).

SCMT-SM

Square 7° Positive Flank Inserts for Semi-Finish and Finish Turning on Soft Materials and Exotic Alloys

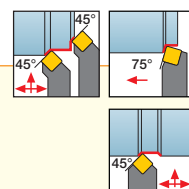
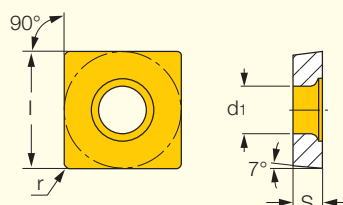


Designation	Dimensions				Tough ↔ Hard							Recommended Machining Data	
	l	S	r	d ₁	IC830	IC3028	IC6025	IC8250	IC8150	IC807	IC907	a _p (mm)	f (mm/rev)
SCMT 09T304-SM	9.52	3.97	0.40	4.40	●	●	●	●	●	●	●	0.50-3.00	0.07-0.25
SCMT 09T308-SM	9.52	3.97	0.80	4.40	●	●	●	●	●	●	●	0.50-3.00	0.10-0.30

For tools, see pages: SSBOR/L (A102) • SSSOR/L (A102).

SCMT-14

Square 7° Positive Flank Inserts for Semi-Finish and Finish Turning on Soft Materials and Exotic Alloys

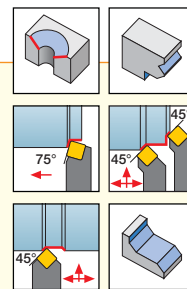
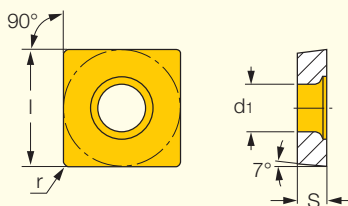


Designation	Dimensions				Tough ↔ Hard				Recommended Machining Data	
	l	S	r	d ₁	IC8250	IC807	IC907	IC20	a _p (mm)	f (mm/rev)
SCMT 09T304-14	9.52	3.97	0.40	4.40	●	●	●	●	1.00-3.50	0.12-0.30

For tools, see pages: SSBOR/L (A102) • SSSOR/L (A102).

SCMT-19

Square 7° Positive Inserts for Semi-Roughing at Medium to High Feeds

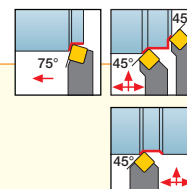
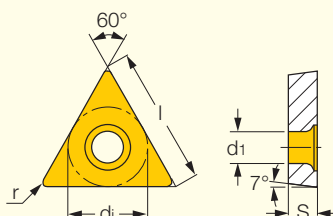


Designation	Dimensions				Tough ↔ Hard				Recommended Machining Data	
	l	S	r	d ₁	IC635	IC50M	IC520M	IC20	a _p (mm)	f _z (mm/t)
SCMT 09T308-19	9.52	3.97	0.80	4.40	●	●	●	●	1.00-5.00	0.08-0.15

For tools, see pages: SSBCL/L (A102) • SSSCL/L (A102).

TCMT-F3P

Triangular Positive Flank Inserts, for Semi-Finishing and Finishing Turning of Steel

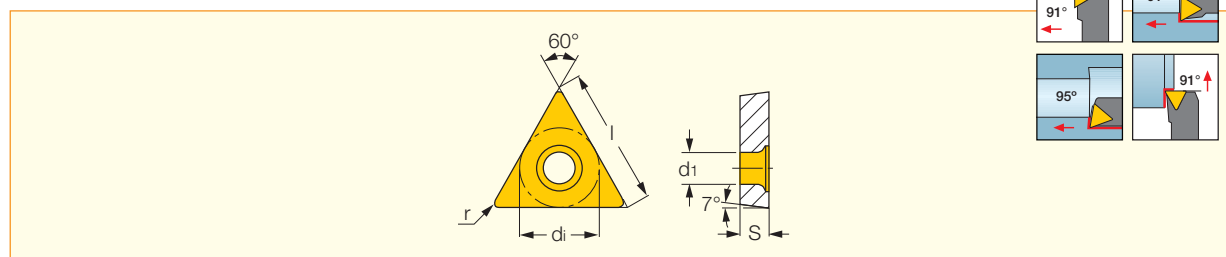


Designation	Dimensions				Tough ↔ Hard		Recommended Machining Data	
	l	S	r	d ₁	IC8250	IC8150	a _p (mm)	f (mm/rev)
TCMT 110202-F3P	11.00	2.38	0.20	2.80	●	●	0.06-1.70	0.03-0.14
TCMT 110204-F3P	11.00	2.38	0.40	2.80	●	●	0.10-1.70	0.05-0.20
TCMT 110208-F3P	11.00	2.38	0.80	2.80	●	●	0.13-1.70	0.07-0.28

For tools, see pages: S-STFCR/L (B37) • S-STLCR/L (B38) • STFCR/L (A103) • STGCR/L (A103).

TCMT-M3M

Triangular Positive Flank Inserts, for Machining Stainless and Low Carbon Steel

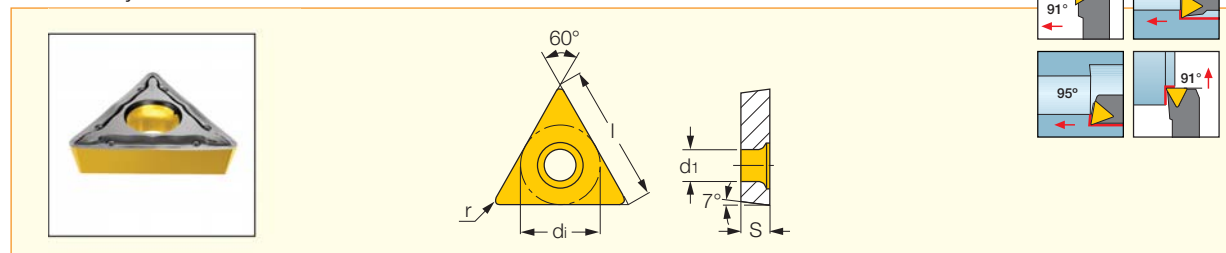


Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	d1	IC6025	IC6015	ap (mm)	f (mm/rev)
TCMT 110204-M3M	11.00	6.35	2.38	0.40	2.80	●	●	0.40-2.50	0.07-0.23
TCMT 110208-M3M	11.00	6.35	2.38	0.80	2.80	●	●	0.80-2.50	0.10-0.25

For tools, see pages: S-STFCR/L (B37) • S-STLCR/L (B38) • STFCR/L (A103) • STGCR/L (A103).

TCMT-PF

Triangular Positive Flank Inserts for Semi-Finishing and Finishing on Soft Materials and Exotic Alloys

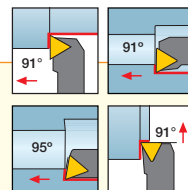
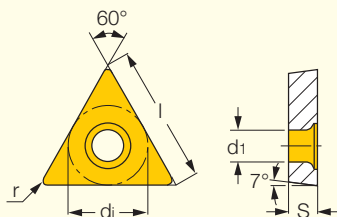
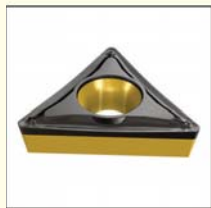


Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	d1	IC807	IC907	ap (mm)	f (mm/rev)
TCMT 110202-PF	11.00	6.35	2.38	0.20	2.85	●	●	0.20-3.00	0.05-0.25

For tools, see pages: S-STFCR/L (B37) • S-STLCR/L (B38) • STFCR/L (A103) • STGCR/L (A103).

TCMT-SM

Triangular 7° Positive Flank Inserts for Semi-Finish and Finish Turning on Soft Materials and Exotic Alloys

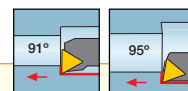
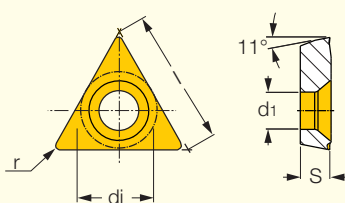


Designation	Dimensions					Tough ↔ Hard								Recommended Machining Data	
	l	di	S	r	d ₁	IC8350	IC8250	IC908	IC8150	IC807	IC907	IC5010	IC5005	a _p (mm)	f (mm/rev)
						●	●	●	●	●	●	●	●		
TCMT 110204-SM	11.00	6.35	2.38	0.40	2.80	●	●	●	●	●	●	●	●	0.20-3.00	0.05-0.25
TCMT 110208-SM	11.00	6.35	2.38	0.80	2.80					●	●			0.50-2.50	0.07-0.25

For tools, see pages: S-STFCR/L (B37) • S-STLCR/L (B38) • STFCR/L (A103) • STGCR/L (A103).

TPMT-PF

11° Positive Triangular Inserts for Semi-Finish and Finishing Applications

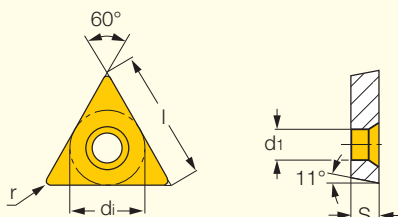
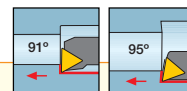


Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data	
	l	di ⁽¹⁾	S	r	d ₁	IC8250	IC8150	a _p (mm)	f (mm/rev)
						●	●		
TPMT 110204-PF	11.00	6.35	2.38	0.40	3.00	●	●	0.50-3.00	0.10-0.30

For tools, see pages: S-STFCR/L (B37) • S-STLCR/L (B38) • STFCR/L (A103) • STGCR/L (A103).

TPGB

Triangular 11° Positive Flank Inserts for Short Chipping Materials

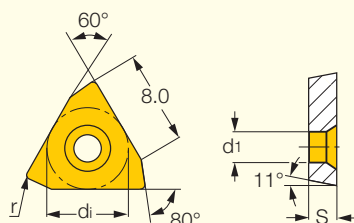
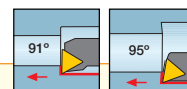


Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	d1	IC20	IC70	ap (mm)	f (mm/rev)
TPGB 110204	11.00	6.35	2.38	0.40	3.00	●	●	1.00-3.00	0.05-0.25

For tools, see pages: A/E/S-STFPR/L (B39) • A/S-STLPR/L (B39).

TPGB-XL

Triangular 11° Positive Flank Inserts for Short Chipping Materials

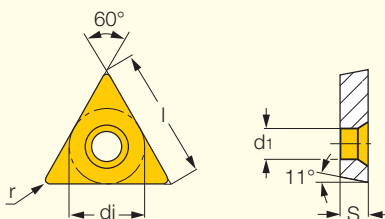
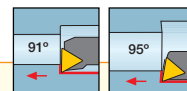


Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	d ₁	IC20	IC70	a _p (mm)	f (mm/rev)
						●	●	1.00-3.00	0.05-0.25
TPGB 110204-XL	11.00	6.35	2.38	0.40	3.00	●	●	1.00-3.00	0.05-0.25

For tools, see pages: A/E/S-STFPR/L (B39) • A/S-STLPR/L (B39).

TPGH-L

Triangular 11° Positive Flank Inserts with a Ground Chipformer for Finish Turning

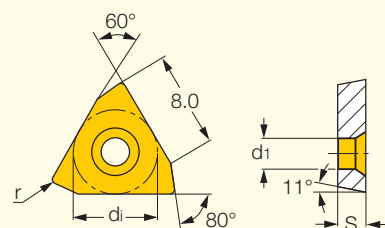
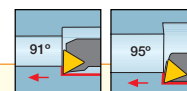


Designation	Dimensions					Tough ↔ Hard			Recommended Machining Data	
	l	di	S	r	d1	IC908	IC20	IC70	ap (mm)	f (mm/rev)
TPGH 110204-L	11.00	6.35	2.38	0.40	3.00	●	●	●	1.00-3.00	0.05-0.25
TPGH 110208-L	11.00	6.35	2.38	0.40	3.00	●	●	●	1.00-3.00	0.05-0.25

For tools, see pages: A/E/S-STFPR/L (B39) • A/S-STLPR/L (B39).

TPGH-XL

Triangular 11° Positive Flank Inserts with a Ground Chipformer for Finish Turning

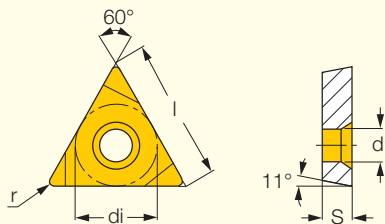


Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	d1	IC20	IC70	ap (mm)	f (mm/rev)
TPGH 110204-XL	11.00	6.35	2.38	0.40	3.00	●	●	1.00-3.00	0.05-0.25

For tools, see pages: A/E/S-STFPR/L (B39) • A/S-STLPR/L (B39).

TPGX

Triangular 11° Positive Flank Inserts with a Ground Chipformer for Finish Turning

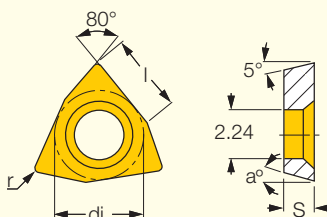
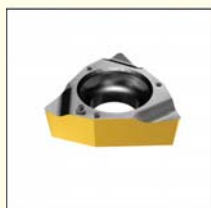


Designation	Dimensions					Tough ↔ Hard				Recommended Machining Data	
	l	di	S	r	d1	IC54	IC908	IC20	IC20N	ap (mm)	f (mm/rev)
TPGX 090202-L	9.52	5.56	2.38	0.20	3.00		●	●	●	1.00-2.00	0.10-0.20
TPGX 090204-L	9.52	5.56	2.38	0.40	3.00	●	●	●	●	1.00-2.50	0.15-0.20
TPGX 110302-L	11.00	6.35	3.18	0.20	3.50		●	●	●	1.00-2.50	0.10-0.20
TPGX 110304-L	11.00	6.35	3.18	0.40	3.50	●	●	●	●	1.00-3.00	0.15-0.20
TPGX 110308-L	11.00	6.35	3.18	0.80	3.50			●		1.00-3.50	0.15-0.25

For tools, see pages: A/E-STFPR-X (B40) • MG STFPR-X (B38).

WBGT

Trigon 5° Positive Flank Inserts with a Ground Chipformer for Finish Turning

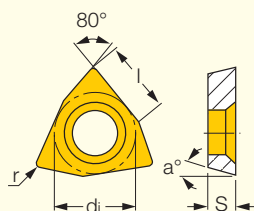
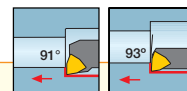


Designation	Dimensions				Tough ↔ Hard				Recommended Machining Data	
	l	di	S	r	IC3028	IC908	IC807	IC907	ap (mm)	f (mm/rev)
WBGT 060102L	2.18	3.97	1.59	0.20	●	●	●	●	0.10-1.00	0.05-0.10

For tools, see pages: E/S-SWUBR/L (B41) • MG-SWUBR/L (B42) • MGSIR/L (B41) • SIR/L (B96).

WBMT

Trigon 5° Positive Flank Inserts with a Ground Chipformer for Finish Turning



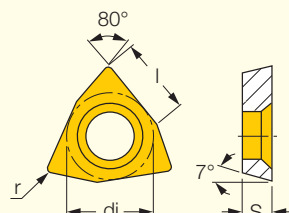
Designation	Dimensions				Tough ↔ Hard							Recommended Machining Data	
	l	di	S	r	IC830	IC3028	IC354	IC350	IC908	IC30N	IC530N	a _D (mm)	f (mm/rev)
WBMT 060101R/L	2.18	3.97	1.59	0.10								0.40-2.00	0.10-0.15
WBMT 060102R/L	2.18	3.97	1.59	0.20	●	●	●	●	●	●	●	0.40-2.00	0.10-0.15

• WBMT 06...R right-hand inserts used on left-hand tools and WBMT 06...L left-hand inserts used on right-hand tools

For tools, see pages: E/S-SWUBR/L (B41) • MG-SWUBR/L (B42) • MGSIR/L (B41) • SIR/L (B96).

WCGT

Trigon 7° Positive Flank Inserts with a Chipformer for Finish Turning

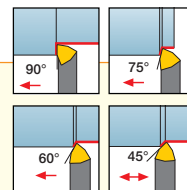
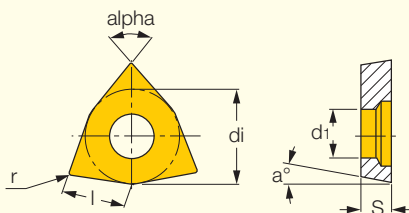


Designation	Dimensions				Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	IC908	IC30N	ap (mm)	f (mm/rev)
WCGT 020102L	2.18	3.97	1.59	0.20	●	●	0.40-2.00	0.05-0.10
WCGT 020104L	2.18	3.97	1.59	0.40	●	●	0.40-2.00	0.10-0.15

For tools, see pages: A/E-SWUCR (B43) • MG-SWUCR (B42).

WPEX

Precision Positive 8° and 12° Clearance, 80° and 84° Trigon Inserts with a Chipformer for Finishing Applications

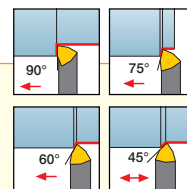
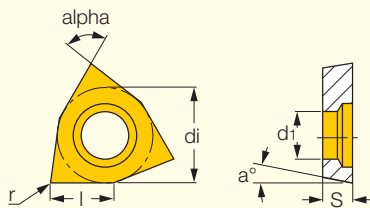


Designation	Dimensions							Tough ↔ Hard		Recommended Machining Data	
	l	S	r	di	d ₁	alpha	a°	IC08	IC908	a _p (mm)	f (mm/rev)
WPEX 040200R/L08	4.00	2.50	0.00	6.60	3.20	84	8.00	●		0.20-2.00	0.05-0.20
WPEX 040200R/L12	4.00	2.50	0.00	6.60	3.20	84	12.00	●		0.20-2.00	0.05-0.20
WPEX 040202R/L08	4.00	2.50	0.20	6.60	3.20	84	8.00	●		0.20-2.00	0.05-0.20
WPEX 050300R/L08	5.00	3.18	0.00	7.94	3.70	80	8.00	●	●	0.20-2.50	0.05-0.20
WPEX 050300R12	5.00	3.18	0.00	7.94	3.70	80	12.00	●	●	0.20-2.50	0.05-0.20
WPEX 050302R/L08	5.00	3.18	0.20	7.94	3.70	80	8.00	●	●	0.20-2.50	0.05-0.20
WPEX 050302R/L12	5.00	3.18	0.20	7.94	3.70	80	12.00	●	●	0.20-2.50	0.05-0.20
WPEX 050304R/L08	5.00	3.18	0.40	7.94	3.70	80	8.00	●	●	0.20-2.50	0.05-0.20
WPEX 050304R/L12	5.00	3.18	0.40	7.94	3.70	80	12.00	●	●	0.20-2.50	0.05-0.20
WPEX 060400R/L08	6.00	4.00	0.00	9.52	3.70	80	8.00	●	●	0.20-3.00	0.05-0.20
WPEX 060400R/L12	6.00	4.00	0.00	9.52	3.70	80	12.00	●	●	0.20-3.00	0.05-0.20
WPEX 060402R/L08	6.00	4.00	0.20	9.52	3.70	80	8.00	●	●	0.20-3.00	0.05-0.20
WPEX 060402R/L12	6.00	4.00	0.20	9.52	3.70	80	12.00	●	●	0.20-3.00	0.05-0.20
WPEX 060404R/L08	6.00	4.00	0.40	9.52	3.70	80	8.00	●	●	0.20-3.00	0.05-0.20
WPEX 060404R12	6.00	4.00	0.40	9.52	3.70	80	12.00	●	●	0.20-3.00	0.05-0.20

For tools, see pages: SWAPR/L (A90) • SWBPR/L (A90) • SWDPR/L (A91) • SWEPR/L (A91).

WPEB

Precision Positive 8° and 12° Clearance, 80° and 84° Trigon Inserts with a Flat Rake for Finishing Applications

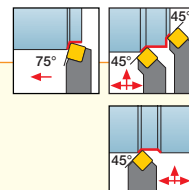
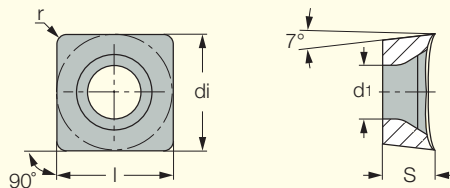


Designation	Dimensions							Tough ↔ Hard		Recommended Machining Data	
	l	S	r	di	d ₁	alpha	a°	IC08	IC908	a _p (mm)	f (mm/rev)
WPEB 040200R08	4.00	2.50	0.00	6.60	3.20	84	8.00	●		0.20-2.00	0.05-0.20
WPEB 050300R/L08	5.00	3.18	0.00	7.94	3.70	80	8.00	●		0.20-2.50	0.05-0.20
WPEB 050300L12	5.00	3.18	0.00	7.94	3.70	80	12.00	●		0.20-2.50	0.05-0.20
WPEB 050302N12	5.00	3.18	0.20	7.94	3.70	80	12.00	●		0.20-2.50	0.05-0.20
WPEB 060400R/L08	6.00	4.00	0.00	9.52	3.70	80	8.00	●	●	0.20-3.00	0.05-0.20
WPEB 060402N08	6.00	4.00	0.20	9.52	3.70	80	8.00	●		0.20-3.00	0.05-0.20
WPEB 060404N08	6.00	4.00	0.40	9.52	3.70	80	8.00	●	●	0.20-3.00	0.05-0.20
WPEB 060404N12	6.00	4.00	0.40	9.52	3.70	80	12.00	●		0.20-3.00	0.05-0.20

For tools, see pages: SWAPR/L (A90) • SWBPR/L (A90) • SWDPR/L (A91) • SWEPR/L (A91).

SCGT-AS

Square 7° Positive Flank, Very Positive Rake Angle and Sharp Cutting Edge for Machining Aluminum

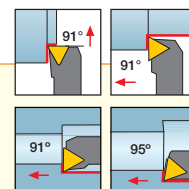
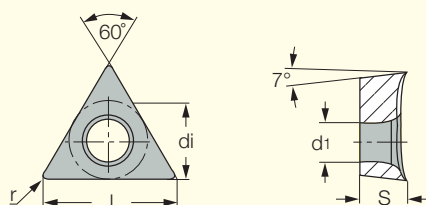


Designation	Dimensions					IC20	Recommended Machining Data	
	l	di	S	r	d1		ap (mm)	f (mm/rev)
	9.52	9.52	3.97	0.80	4.40		0.50-3.00	0.10-0.30

For tools, see pages: SSBCL/L (A102) • SSSCL/L (A102).

TCGT-AS

Triangular 7° Positive Flank, Very Positive Rake Angle and Sharp Cutting Edge for Machining Aluminum

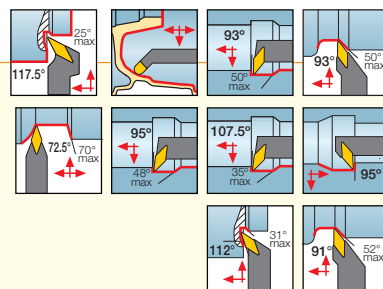
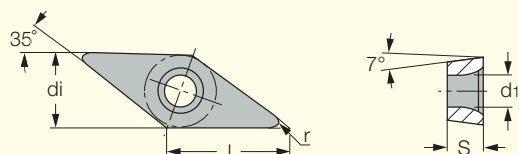


Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data	
	l	di	S	r	d1	IC20	IC320	ap (mm)	f (mm/rev)
	11.00	6.35	2.38	0.40	2.80	●	●	0.20-3.00	0.05-0.30

For tools, see pages: S-STFCR/L (B37) • S-STLCR/L (B38) • STFCR/L (A103) • STGCR/L (A103).

VCGT-AS

35° Rhombic 7° Positive Flank, Very Positive Rake Angle and Sharp Cutting Edge for Machining Aluminum

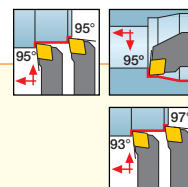
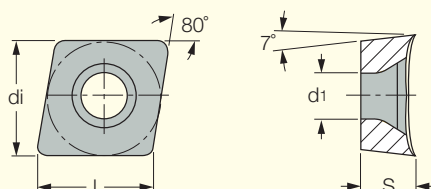


Designation	Dimensions					IC20	Recommended Machining Data	
	l	di	S	r	d1		ap (mm)	f (mm/rev)
VCGT 110302-AS	11.10	6.35	3.18	0.20	2.90	●	0.20-2.50	0.05-0.20
VCGT 110304-AS	11.10	6.35	3.18	0.40	2.90	●	0.50-3.00	0.05-0.25

For tools, see pages: PVACR/L-JHP (A98) • PVACR/L-S (A98) S/A-SVJCR/L (B37) • SVACR/L (A99) • SVJCR/L (A99) • SVWCN (A100).

CCGT-AS

80° Rhombic 7° Positive Flank, Very Positive Rake Angle and Sharp Cutting Edge, for Machining Aluminum

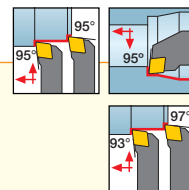
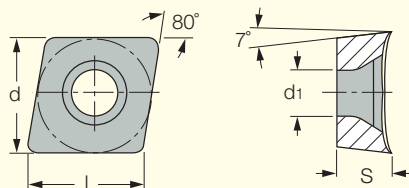


Designation	Dimensions					IC20	Recommended Machining Data	
	l	di	S	r	d1		ap (mm)	f (mm/rev)
CCGT 060201-AS	6.40	6.35	2.38	0.10	2.80	●	0.50-2.00	0.10-0.20
CCGT 060202-AS	6.40	6.35	2.38	0.20	2.80	●	0.50-2.00	0.10-0.20
CCGT 060204-AS	6.40	6.35	2.38	0.40	2.80	●	0.50-2.00	0.10-0.25
CCGT 09T301-AS	9.70	9.52	3.97	0.10	4.40	●	0.50-2.50	0.10-0.25
CCGT 09T302-AS	9.70	9.52	3.97	0.20	4.40	●	0.50-2.50	0.10-0.25
CCGT 09T304-AS	9.70	9.52	3.97	0.40	4.40	●	0.50-2.50	0.10-0.25
CCGT 09T308-AS	9.70	9.52	3.97	0.80	4.40	●	0.80-3.00	0.10-0.30

For tools, see pages: A/E/S-SCLCR/L (B34) • PCLCR/L-S (A93) • PCLCR/L-S-JHP (A1) • SCACR/L-S (A92) • SCLCR/L (A92).

CCGT-AF

80° Rhombic 7° Positive Flank Inserts, Very Positive Rake and Sharp Cutting Edge for Machining Aluminum

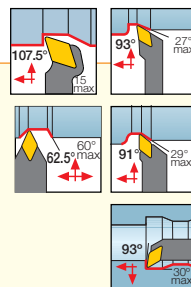
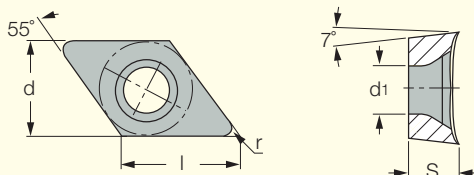


Designation	Dimensions					IC20	Recommended Machining Data	
	l	d _i	S	r	d ₁		a _p (mm)	f (mm/rev)
	9.70	9.52	3.97	0.80	4.40		0.80-3.00	0.15-0.25

For tools, see pages: A/E/S-SCLCR/L (B34) • PCLCR/L-S (A93) • PCLCR/L-S-JHP (A93) • SCLCR/L (A92).

DCGT-AS

55° Rhombic 7° Positive Flank, Very Positive Rake Angle and Sharp Cutting Edge for Machining Aluminum

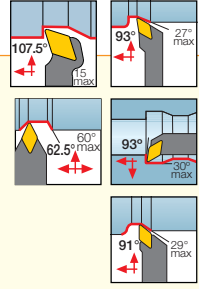
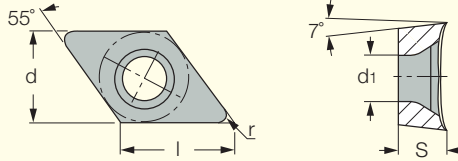


Designation	Dimensions					Tough ↔ Hard			Recommended Machining Data	
	l	d _i	S	r	d ₁	IC907	IC20	IC320	a _p (mm)	f (mm/rev)
	7.75	6.35	2.38	0.10	2.80		●		0.50-2.00	0.03-0.20
DCGT 070202-AS	7.75	6.35	2.38	0.20	2.80		●		0.50-2.00	0.05-0.20
DCGT 070204-AS	7.75	6.35	2.38	0.40	2.80		●		0.50-2.50	0.05-0.25
DCGT 11T301-AS	11.60	9.52	3.97	0.10	4.40		●		0.50-2.50	0.05-0.25
DCGT 11T302-AS	11.60	9.52	3.97	0.20	4.40		●	●	0.50-2.50	0.05-0.26
DCGT 11T304-AS	11.60	9.52	3.97	0.40	4.40	●	●	●	0.50-2.50	0.05-0.25
DCGT 11T308-AS	11.60	9.52	3.97	0.80	4.40		●	●	0.80-3.00	0.08-0.30

For tools, see pages: PDACR/L-JHP (A94) • PDACR/L-S (A94) • SDACR/L (A96) • SDJCR/L (A95) • SDNCR (A97).

DCGT-AF

Very Positive Rake Angle and Sharp Cutting Edge Inserts for Semi-Finishing and Finishing on Aluminum



Designation	Dimensions					IC20	Recommended Machining Data	
	l	d _i	S	r	d ₁		a _p (mm)	f (mm/rev)
DCGT 11T304-AF	11.60	9.52	3.97	0.40	4.40	●	0.50-2.50	0.05-0.25

For tools, see pages: PDACR/L-JHP (A94) • PDACR/L-S (A94) • SDACR/L (A96) • SDJCR/L (A95) • SDNCN (A97).

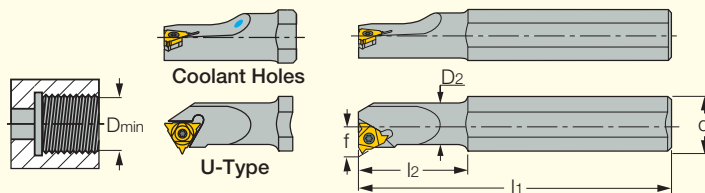


ISCARTHREAD



SIR/L

Internal Threading Bars



Right-hand shown

Designation	d	D ₂	l ₁	l ₂	D _{min}	f	Coolant	Shank m. ⁽⁴⁾	Insert ⁽⁵⁾
SIR/L 0005 H06 ⁽¹⁾	12.00	5.10	100.00	12.0	6.40	4.3	N	S	06 IR/IL..
SIR/L 0005 H06CB ⁽²⁾	6.00	5.10	100.00	25.0	6.40	4.3	Y	C	06 IR/IL..
SIR 0005 H06-W ⁽³⁾	12.00	5.10	100.00	12.0	6.40	4.3	N	S	06 IR/IL..
SIR/L 0007 K08 ⁽¹⁾	16.00	6.60	125.00	18.0	7.80	5.3	N	S	08 IR/IL..
SIR/L 0007 K08CB ⁽²⁾	8.00	6.60	125.00	30.0	7.80	5.3	Y	C	08 IR/IL..
SIR/L 0008 K08U ⁽¹⁾	16.00	7.40	125.00	21.0	9.00	6.4	N	S	08 UIRL..
SIR 0008 K08UCB ⁽²⁾	8.00	7.30	125.00	35.0	9.00	6.4	Y	C	08 UIRL..
SIR/L 0010 H11 ⁽¹⁾	10.00	10.00	100.00	-	12.00	7.4	N	S	11 IR/IL..
SIR 0010 H11B ⁽¹⁾	10.00	10.00	100.00	-	12.00	7.4	Y	S	11 IR/IL..
SIR/L 0010 K11 ⁽¹⁾	16.00	10.00	125.00	25.0	12.00	6.5	N	S	11 IR/IL..
SIR/L 0010 K11B ⁽¹⁾	16.00	10.00	125.00	25.0	12.00	7.4	Y	S	11 IR/IL..
SIR/L 0010 M11CB ⁽²⁾	10.00	10.00	150.00	-	12.00	7.4	Y	C	11 IR/IL..
SIR/L 0012 P11CB ⁽²⁾	12.00	12.00	170.00	-	15.00	8.4	Y	C	11 IR/IL..
SIR/L 0013 L11 ⁽¹⁾	16.00	13.00	140.00	32.0	15.00	8.9	N	S	11 IR/IL..
SIR/L 0013 M16 ⁽¹⁾	16.00	13.00	150.00	32.0	16.00	10.0	N	S	16 IR/L..
SIR/L 0013 M16B ⁽¹⁾	16.00	13.00	150.00	32.0	16.00	10.2	Y	S	16 IR/L..
SIR 0016 R16CB ⁽²⁾	16.00	16.00	200.00	-	19.00	11.7	Y	C	16 IR/IL..

• All toolholders are made for 1.5 helix angle • For GTGA inserts, use anvil AL 16-0

⁽¹⁾ Toolholder without anvil ⁽²⁾ Carbide shank without anvil ⁽³⁾ Toolholder without anvil • WBMT 060102 R/L for internal turning ⁽⁴⁾ C-carbide, S-steel ⁽⁵⁾ Right-hand inserts (IR) for right-hand tools (SIR)

Spare Parts

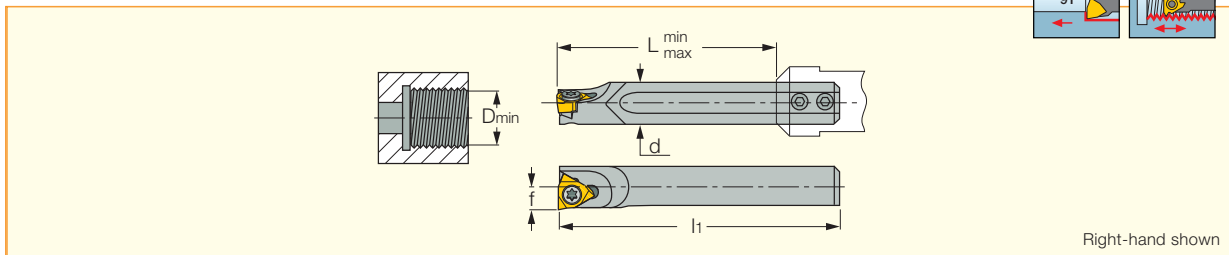


Designation	Insert Screw	Key
SIR/L 0005 H06	SR 14-552	T-6/5
SIR/L 0005 H06CB	SR 14-552	T-6/5
SIR 0005 H06-W	SR 14-552	T-6/5
SIR/L 0007 K08	SR 14-558	T-6/5
SIR/L 0007 K08CB	SR 14-558	T-6/5
SIR/L 0008 K08U	SR 14-558	T-6/5
SIR 0008 K08UCB	SR 14-558	T-6/5
SIR/L 0010 H11	S11	T-8/5
SIR 0010 H11B	S11	T-6/5
SIR/L 0010 K11	S11	T-8/5
SIR/L 0010 K11B	S11	T-8/5
SIR/L 0010 M11CB	S11	T-8/5
SIR/L 0012 P11CB	S11	T-8/5
SIR/L 0013 L11	S11	T-8/5
SIR/L 0013 M16	S16S	T-10/5
SIR/L 0013 M16B	S16S	T-10/5
SIR 0016 R16CB	S16S	T-10/5

ISCARTHREAD

MGSIR/L

Solid Carbide Bars for Internal Turning and Threading



Designation	d	l ₁	L _{min} ⁽³⁾	L _{max} ⁽³⁾	f	D _{min}
MGSIR/L 06-06W ⁽¹⁾	6.00	59.00	16.0	42.0	3.9	7.00
MGSIR/L 08-06W ⁽²⁾	8.00	72.00	20.0	56.0	5.0	9.20

• 91° for shoulder depth up to 2 mm • Use right-hand WBMT 06...R inserts on left-hand tools and left-hand WBMT 06...L inserts on right-hand tools. • In order to maintain high machining reliability we strongly recommend replacing the clamping screw every 10 insert indexes.

⁽¹⁾ For WBMT 060102 D_{min}=6.6 mm f=4.13 mm ⁽²⁾ For WBMT 060102 D_{min}=8.8 mm f=5.20 mm ⁽³⁾ Adjustment range

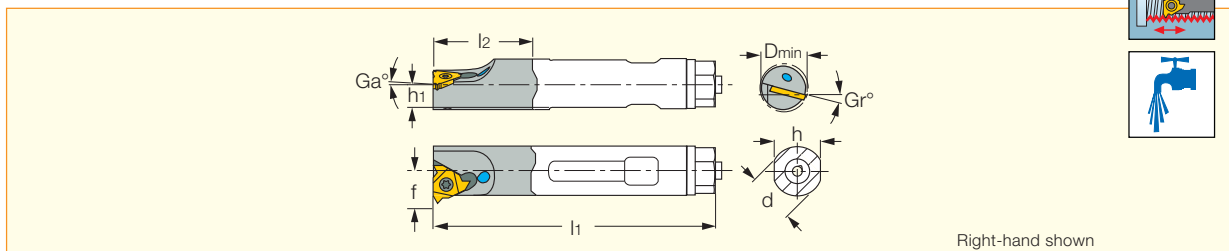
For inserts, see pages: IR/L-55° (B98) • IR/L-60° (B101) • IR/L-BSPT (B110) • IR/L-ISO (B104) • IR/L-NPT (B115) • IR/L-NPTF (B113) • IR/L-UN (B106) • IR/L-W (B109) • WBGT (B88) • WBMT (B89).

Spare Parts

Designation	Screw	Key
MGSIR/L	SR 14-552	T-6/5

E-SIR-HEAD

Interchangeable Threading Heads for Carbide Bars



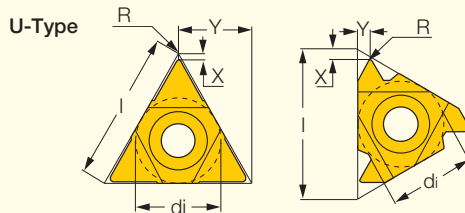
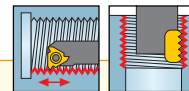
Designation	d	l ₁	l ₂	h	h ₁	f	G _a °	G _r °	D _{min}	Insert
E12 SIR-11 HEAD	12.00	179.00	24.8	11.0	5.5	8.3	1.5	-15	14.90	11 IRM../11 IR
E16 SIR-16 HEAD	16.00	200.00	37.0	15.0	8.0	10.3	1.5	-15	20.00	16 IRM../16 IR

Spare Parts

Designation	Key	Screw
E12 SIR-11 HEAD	T-8/5	S11
E16 SIR-16 HEAD	T-10/5	S16S

IR/L-55°

Internal 55° Partial Profile Laydown Threading Inserts, for General Industry



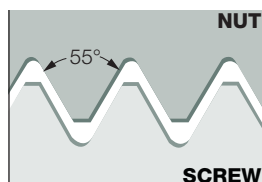
Internal left-hand shown

Designation	Dimensions									Tough ↔ Hard							
	di	P _{min}	P _{max}	TPI		L	R	X	Y	IC228	IC928	IC50M	IC250	IC508	IC808	IC908	IC1007
				max	min												
06IR/L A 55	3.97	0.50	1.25	48	20	6.00	0.05	0.5	0.6	●							
08IR/L A 55	4.76	0.50	1.50	48	16	8.00	0.05	0.6	0.7	●	●					●	
08UIRL U 55	4.76	1.75	2.00	14	11	8.00	0.10	0.9	4.0	●							
11IR/L A 55	6.35	0.50	1.50	48	16	11.00	0.05	0.8	0.9	●		●	●			●	
16IR A 55	9.52	0.50	1.50	48	16	16.00	0.05	0.8	0.9			●	●			●	
16IR/L AG 55	9.52	0.50	3.00	48	8	16.00	0.05	1.2	1.7	●		●	●	●		●	
16IRB AG 55 ⁽¹⁾	9.52	0.50	3.00	48	8	16.00	0.05	1.2	1.7							●	
16IRM AG 55 ⁽¹⁾	9.52	0.50	3.00	48	8	16.00	0.05	1.2	1.7			●	●		●	●	●
16IR/L G 55	9.52	1.75	3.00	14	8	16.00	0.20	1.2	1.7			●	●	●		●	
16IRB G 55 ⁽¹⁾	9.52	1.75	3.00	14	8	16.00	0.20	1.2	1.7							●	

For threading between walls use GRIP-type inserts TIP-WT, GEPI-WT, TIPI-WT

⁽¹⁾ With pressed chipformer .

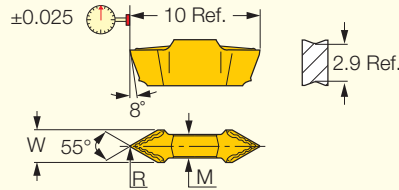
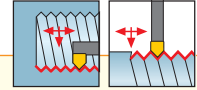
For tools, see pages: E-SIR-HEAD (B96) • MGSIR/L (B41) • SIR/L (B95).



ISCARTHREAD • CUT-GRIP

GEPI-WT

Precision Ground 55° Partial Profile, Double-Ended Threading Inserts with a Chipformer for 12.5 mm Bore Diameter



Designation	Dimensions					Tough ↔ Hard	
	W	R±0.03	M	TPI _{max}	P _{min}	IC08	IC908
GEPI 2.5-WT0.05	2.50	0.05	1.8	54	0.47	●	●

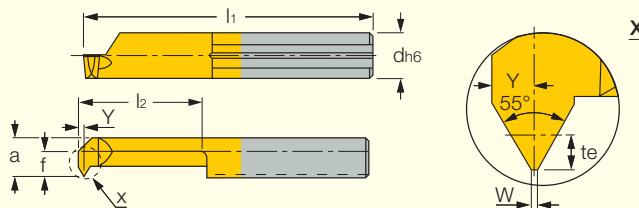
• Toolholder seat needs to be modified according to insert profile to ensure clearance • Pitch max 0.167xD, TPI min D/6.0

For tools, see pages: E-GEHIR / E-GHIR (B28) • GEAIR/L (B27) • GEHIMR/L (B23) • GEHIMR/L-SC (B24) • GEHIR/L (B25) • GEHIR/L-SC (B26) • GEHSR/L-SL (A13).

ISCARTHREAD • PICCOCUT

PICCO-Whitworth-Thread

Mini-Carbide Bars for Whitworth Profile Internal Threading



Right-hand shown

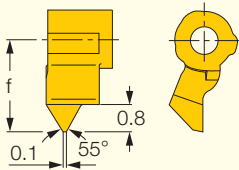
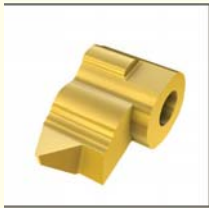
Designation	Dimensions											IC228
	d	TPI _{max}	TPI _{min}	te	w	Y	f	a	l2	l1	D _{min}	
PICCO R 005.5548-15	5.00	48	24	0.40	0.06	0.5	1.9	4.40	15.0	30.00	4.80	●
PICCO R 006.5548-15	6.00	48	24	0.40	0.06	0.5	2.3	5.30	15.0	30.00	6.00	●
PICCO R 006.5524-15	6.00	24	16	0.81	0.12	0.8	2.3	5.30	15.0	30.00	6.00	●
PICCO R 007.5524-15	7.00	24	16	0.81	0.12	0.8	2.8	6.30	15.0	30.00	7.00	●

• All mini-bars have sharp corners

ISCARTHREAD • MINICHAM

UMGR-A55

Mini Indexable Inserts, for Threading Whitworth, Partial Profile in 5.2 mm and Larger Holes



Right-hand shown

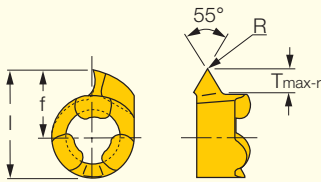
Designation	Dimensions						IC508
	f	TPI max	TPI min	P min	P max	D min	
	UMGR 4.0-A55	2.7	48	18	0.50	1.40	5.20

For tools, see pages: MGUHR (B22).

ISCARTHREAD • CHAMGROOVE

GIQR/L-WT

Internal Threading Inserts for Threading Whitworth, Partial Profile in 8 mm and Larger Holes



Left-hand shown

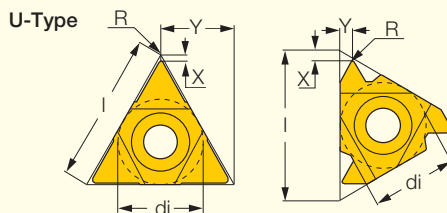
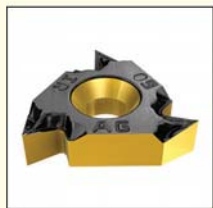
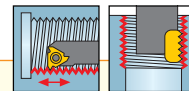
Designation	Dimensions							IC528
	l	R±0.03	T max-r	f	D min	P min	TPI max	
	GIQR/L 8-WT-0.05	7.78	0.05	1.50	4.8	8.00	0.50	50
GIQR/L 11-WT-0.05	10.68	0.05	2.00	6.7	11.00	0.50	50	

• Can be used for thread milling by circular interpolation. • TPI min D/5.9 • D-diameter of thread (pitch max<=W)
For tools, see pages: MG (B16) • MGCH (B17).

ISCAR[®] THREAD

IR/L-60°

Internal 60° Partial Profile, Laydown Threading Inserts, for General Industry

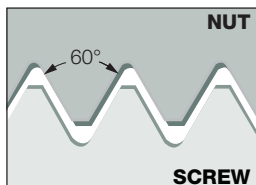


Internal left-hand shown

Designation	Dimensions									Tough ↔ Hard							
	di	P _{min}	P _{max}	TPI _{max}	TPI _{min}	I	R	X	Y	IC28	IC228	IC50M	IC250	IC508	IC808	IC908	IC1007
06IR/L A 60	3.97	0.50	1.25	48	20	6.00	0.05	0.6	0.6	●	●						
06IRM A 60 ⁽¹⁾	3.97	0.50	1.25	48	20	6.00	0.05	0.5	0.6		●						
08IR/L A 60	4.76	0.50	1.50	48	16	8.00	0.05	0.6	0.7		●						
08IRM A 60 ⁽¹⁾	4.76	0.50	1.50	48	16	8.00	0.05	0.6	0.7		●				●	●	●
08UIRL U 60	4.76	1.75	2.00	14	11	8.00	0.10	0.8	4.0		●						
11IR/L A 60	6.35	0.50	1.50	48	16	11.00	0.05	0.8	0.9		●	●	●			●	
11IRM A 60 ⁽¹⁾	6.35	0.50	1.50	48	16	11.00	0.05	0.7	0.9		●		●		●		●
16IR/L A 60	9.52	0.50	1.50	48	16	16.00	0.05	0.8	0.9		●	●	●	●		●	
16IRB A 60 ⁽¹⁾	9.52	0.50	1.50	48	16	16.00	0.05	0.8	0.9							●	
16IRM A 60 ⁽¹⁾	9.52	0.50	1.50	48	16	16.00	0.05	0.8	0.9				●		●	●	●
16IR/L AG 60	9.52	0.50	3.00	48	8	16.00	0.05	1.2	1.7		●	●	●	●			●
16IRB AG 60 ⁽¹⁾	9.52	0.50	3.00	48	8	16.00	0.05	1.2	1.7							●	
16IRM AG 60 ⁽¹⁾	9.52	0.50	3.00	48	8	16.00	0.05	1.2	1.7			●	●	●	●	●	●
16IR/L G 60	9.52	1.75	3.00	14	8	16.00	0.12	1.2	1.7		●	●	●	●		●	
16IRB G 60 ⁽¹⁾	9.52	1.75	3.00	14	8	16.00	0.12	1.2	1.7							●	
16IRM G 60 ⁽¹⁾	9.52	1.75	3.00	14	8	16.00	0.10	1.2	1.7			●	●		●	●	●

⁽¹⁾ With a pressed chipformer

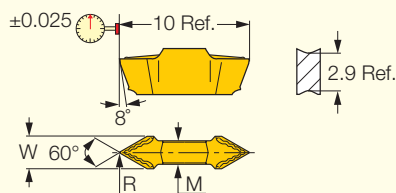
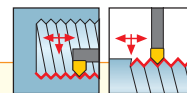
For tools, see pages: E-SIR-HEAD (B97) • MGSIR/L (B41) • SIR/L (B96).



ISCARTHREAD • CUT-GRIP

GEPI-MT

Internal Double-Ended Precision Threading Inserts for 60° Partial Profile, for General Applications



Designation	Dimensions					Tough ↔ Hard	
	W	R±0.03	M	P _{min}	TPI _{max}	IC08	IC908
GEPI 2.5-MT0.05	2.50	0.05	1.8	0.90	28	●	●

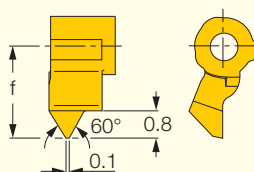
- Toolholder seat needs to be modified according to insert profile to ensure clearance.
- Pitch max 0.187xD, TPI min D/5.35
- D=Diameter of thread (pitch max<=W)

For tools, see pages: E-GEHR / E-GHIR (B28) • GEAIR/L (B27) • GEHMR/L (B23) • GEHMR/L-SC (B24) • GEHR/L (B25) • GEHR/L-SC (B26) • GEHSR/L-SL (A13).

ISCARTHREAD • MINICHAM

UMGR-A60

Mini Indexable Inserts, for Threading 60° Partial Profile, in 5.2 mm and Larger Holes



Right-hand shown

Designation	Dimensions				IC508
	f	D _{min}	P _{min}	P _{max}	
UMGR 4.0-A60	2.7	5.20	0.50	1.25	●

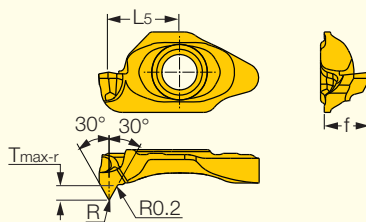
For tools, see pages: MGUHR (B22).

ISCARTHREAD • MIN CUT

MINI FACE LINE

MITR 8-MT

Internal Partial Profile, ISO Metric Threading Inserts



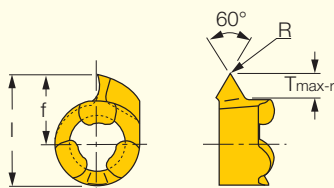
Dimensions							IC908
Designation	T _{max-r}	R _{±0.02}	l	D _{min}	P _{min}	P _{max}	
MITR 8-MT2-0.1	1.17	0.10	5.75	10.00	1.50	2.00	
MITR 8-MT1-0.05	1.23	0.05	5.75	10.00	0.75	1.25	●

For tools, see pages: MIFHR (B125).

ISCARTHREAD • CHAMGROOVE

GIQR/L-MT

Internal Threading Inserts, for Threading 60° Partial Profile in 8 mm and Larger Holes



Left-hand shown

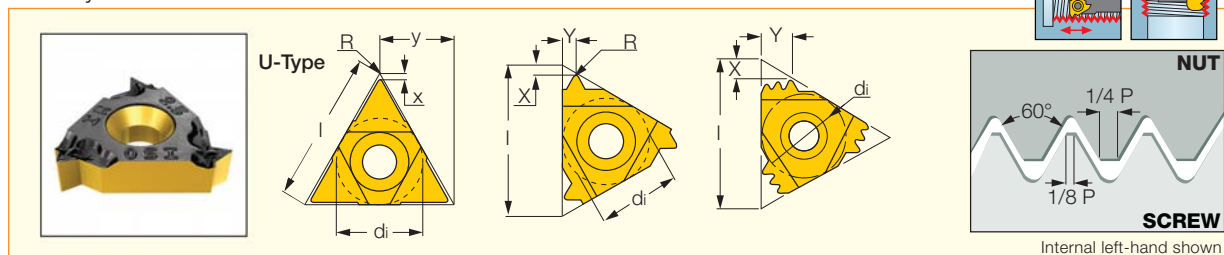
Designation	Dimensions							IC528	
	l	R±0.03	T _{max-r}	f	D _{min}	P _{min}	TPI _{max}		
	GIQR/L 8-MT-0.05	7.78	0.05	1.50	4.8	8.00	0.90		28
	GIQR/L 11-MT-0.05	10.68	0.05	2.00	6.7	11.00	0.90		28

• Can be used for thread milling by circular interpolation. • Pitch max 0.19xD. • D-diameter of thread

For tools, see pages: MG (B16) • MGCH (B17).

IR/L-ISO

Internal ISO Metric (DIN13 12-1986 class 6H) Laydown Threading Inserts, for General Industry



Designation	Dimensions							Tough ← Hard								
	di	Pitch	l	R	X	Y	Z ⁽³⁾	IC28	IC228	IC50M	IC250	IC08	IC508	IC808	IC908	IC1007
06IR/L 0.50 ISO	3.97	0.50	6.00	0.03	0.9	0.5	1		●							
06IR/L 0.75 ISO	3.97	0.75	6.00	0.04	0.8	0.5	1		●							
06IR/L 1.00 ISO	3.97	1.00	6.00	0.05	0.7	0.6	1		●							
06IR/L 1.25 ISO	3.97	1.25	6.00	0.07	0.6	0.6	1		●							
08IR/L 0.50 ISO	4.76	0.50	8.00	0.05	0.6	0.5	1		●							
08IR 0.75 ISO	4.76	0.75	8.00	0.04	0.6	0.5	1		●							
08IR/L 1.00 ISO	4.76	1.00	8.00	0.05	0.6	0.6	1		●						●	
08IR/L 1.25 ISO	4.76	1.25	8.00	0.07	0.6	0.7	1		●							
08IR/L 1.50 ISO	4.76	1.50	8.00	0.08	0.6	0.7	1	●	●							
08IR/L 1.75 ISO	4.76	1.75	8.00	0.10	0.6	0.8	1		●							
08UIRL 2.00 ISO	4.76	2.00	8.00	0.12	0.9	4.0	1		●							
11IR/L 0.35 ISO	6.35	0.35	11.00	0.02	0.8	0.3	1					●			●	
11IR 0.40 ISO	6.35	0.40	11.00	0.02	0.8	0.4	1								●	
11IR/L 0.50 ISO	6.35	0.50	11.00	0.03	0.6	0.6	1			●	●	●			●	
11IR 0.70 ISO	6.35	0.70	11.00	0.04	0.6	0.6	1								●	
11IR/L 0.75 ISO	6.35	0.75	11.00	0.08	0.6	0.6	1			●	●				●	
11IR 0.80 ISO	6.35	0.80	11.00	0.04	0.6	0.6	1			●	●				●	
11IR/L 1.00 ISO	6.35	1.00	11.00	0.05	0.6	0.7	1		●	●	●	●			●	
11IRM 1.00 ISO ⁽¹⁾	6.35	1.00	11.00	0.05	0.6	0.7	1							●	●	
11IR/L 1.25 ISO	6.35	1.25	11.00	0.07	0.8	0.8	1			●	●				●	
11IR/L 1.50 ISO	6.35	1.50	11.00	0.08	0.8	1.0	1		●	●	●				●	●
11IRM 1.50 ISO ⁽¹⁾	6.35	1.50	11.00	0.08	0.8	1.0	1				●			●	●	●
11IR/L 1.75 ISO	6.35	1.75	11.00	0.10	0.8	1.1	1			●	●				●	
11IR/L 2.00 ISO	6.35	2.00	11.00	0.12	0.8	0.9	1		●		●		●		●	
16IR 0.35 ISO	9.52	0.35	16.00	0.02	0.8	0.3	1								●	
16IR/L 0.40 ISO	9.52	0.40	16.00	0.02	0.8	0.4	1								●	
16IL 0.45 ISO	9.52	0.45	16.00	0.02	0.8	0.4	1								●	
16IR/L 0.50 ISO	9.52	0.50	16.00	0.03	0.6	0.6	1			●	●	●			●	
16IR/L 0.60 ISO	9.52	0.60	16.00	0.03	0.6	0.6	1			●					●	
16IR/L 0.70 ISO	9.52	0.70	16.00	0.04	0.6	0.6	1			●	●				●	
16IR/L 0.75 ISO	9.52	0.75	16.00	0.04	0.6	0.6	1		●	●	●	●			●	
16IR/L 0.80 ISO	9.52	0.80	16.00	0.04	0.6	0.6	1			●	●				●	
16IR/L 1.00 ISO	9.52	1.00	16.00	0.05	0.6	0.7	1			●	●	●	●		●	
16IR 1.00 ISO 3M ⁽²⁾	9.52	1.00	16.00	0.05	1.7	2.5	3								●	
16IRB 1.00 ISO ⁽¹⁾	9.52	1.00	16.00	0.05	0.6	0.7	1								●	
16IRM 1.00 ISO ⁽¹⁾	9.52	1.00	16.00	0.05	0.6	0.7	1			●	●		●	●	●	●

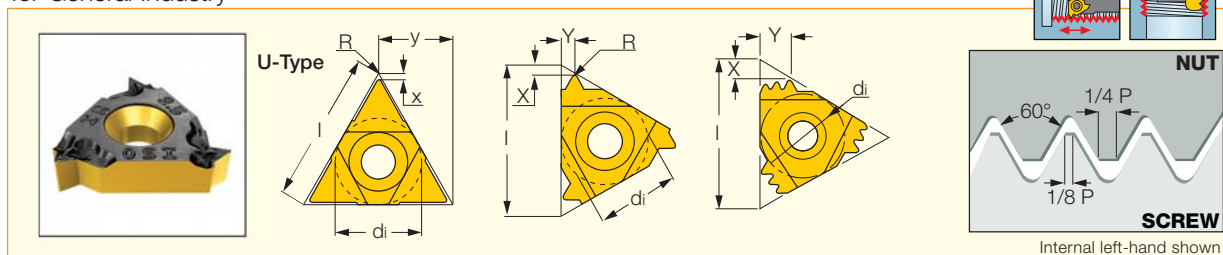
● Tolerance: Class 6H.

⁽¹⁾ With pressed chipformer ⁽²⁾ Multi-tooth ⁽³⁾ Number of teeth per corner.

For tools, see pages: E-SIR-HEAD (B97) • MGSIR/L (B41) • SIR/L (B96).

IR/L-ISO (continued)

Internal ISO Metric (DIN13 12-1986 class 6H) Laydown Threading Inserts, for General Industry



Designation	Dimensions							Tough ↔ Hard								
	di	Pitch	l	R	X	Y	Z ⁽³⁾	IC28	IC228	IC50M	IC250	IC08	IC508	IC808	IC908	IC1007
16IR/L 1.25 ISO	9.52	1.25	16.00	0.07	0.8	0.9	1		●	●	●	●	●		●	
16IRB 1.25 ISO ⁽¹⁾	9.52	1.25	16.00	0.07	0.8	0.9	1								●	
16IRM 1.25 ISO ⁽¹⁾	9.52	1.25	16.00	0.06	0.8	0.9	1				●			●	●	
16IR/L 1.50 ISO	9.52	1.50	16.00	0.08	0.8	1.0	1		●	●	●	●	●		●	●
16IR 1.50 ISO 2M ⁽²⁾	9.52	1.50	16.00	0.08	1.5	2.3	2				●				●	
16IRB 1.50 ISO ⁽¹⁾	9.52	1.50	16.00	0.08	0.8	1.0	1								●	
16IRM 1.50 ISO ⁽¹⁾	9.52	1.50	16.00	0.08	0.8	1.0	1			●	●		●	●	●	●
16IR/L 1.75 ISO	9.52	1.75	16.00	0.10	0.9	1.2	1			●	●	●			●	
16IRB 1.75 ISO ⁽¹⁾	9.52	1.75	16.00	0.10	0.9	1.2	1								●	
16IRM 1.75 ISO ⁽¹⁾	9.52	1.75	16.00	0.10	0.9	1.2	1				●			●	●	
16IR/L 2.00 ISO	9.52	2.00	16.00	0.12	1.0	1.3	1		●	●	●		●		●	
16IR 2.00 ISO 2M ⁽²⁾	9.52	2.00	16.00	0.12	2.0	3.0	2								●	
16IRB 2.00 ISO ⁽¹⁾	9.52	2.00	16.00	0.12	1.0	1.3	1								●	
16IRM 2.00 ISO ⁽¹⁾	9.52	2.00	16.00	0.11	1.0	1.3	1			●	●		●	●	●	●
16IR/L 2.50 ISO	9.52	2.50	16.00	0.15	1.1	1.5	1		●	●	●		●		●	
16IRM 2.50 ISO ⁽¹⁾	9.52	2.50	16.00	0.14	1.1	1.5	1				●			●	●	●
16IR/L 3.00 ISO	9.52	3.00	16.00	0.18	1.1	1.5	1		●	●	●				●	
16IRB 3.00 ISO ⁽¹⁾	9.52	3.00	16.00	0.18	1.1	1.5	1								●	
16IRM 3.00 ISO ⁽¹⁾	9.52	3.00	16.00	0.17	1.1	1.5	1			●	●		●	●	●	●

⁽¹⁾ With pressed chipformer ⁽²⁾ Multi-tooth ⁽³⁾ Number of teeth per corner.

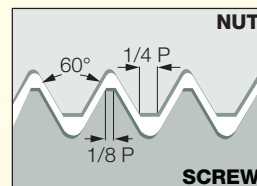
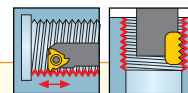
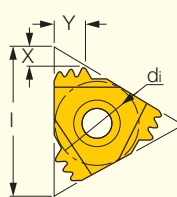
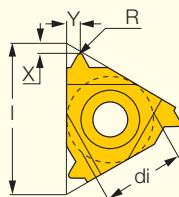
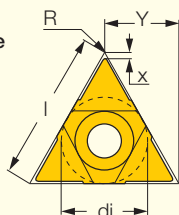
For tools, see pages: E-SIR-HEAD (B97) • MGSIR/L (B41) • SIR/L (B96).

IR/L-UN

Internal American UN, Full Profile (UN, UNC, UNF, UNEF) Laydown Threading Inserts, for General Industry



U-Type



Internal left-hand shown

Designation	Dimensions							Tough ← Hard								
	di	TPI	I	R	X	Y	Z ⁽³⁾	IC228	IC928	IC50M	IC250	IC08	IC508	IC808	IC908	IC1007
06IR 32 UN	3.97	32.0	6.00	0.04	0.8	0.5	1	●								
06IL 28 UN	3.97	28.0	6.00	0.04	0.8	0.6	1	●								
06IR/L 24 UN	3.97	24.0	6.00	0.05	0.7	0.6	1	●								
06IR/L 20 UN	3.97	20.0	6.00	0.06	0.6	0.6	1	●								
06IR/L 18 UN	3.97	18.0	6.00	0.07	0.6	0.7	1	●								
08IR 32 UN	4.76	32.0	8.00	0.04	0.6	0.5	1	●								
08IR/L 28 UN	4.76	28.0	8.00	0.04	0.6	0.6	1	●								
08IR/L 24 UN	4.76	24.0	8.00	0.05	0.6	0.6	1	●								
08IR/L 20 UN	4.76	20.0	8.00	0.06	0.6	0.7	1	●								
08IR 18 UN	4.76	18.0	8.00	0.07	0.6	0.7	1	●								
08IR/L 16 UN	4.76	16.0	8.00	0.09	0.6	0.7	1	●								
08IR 14 UN	4.76	14.0	8.00	0.10	0.6	0.8	1	●							●	
08UIRL 13 UN	4.76	13.0	8.00	0.10	1.0	4.0	1								●	
08UIRL 12 UN	4.76	12.0	8.00	0.10	0.9	4.0	1		●							
08UIRL 11 UN	4.76	11.0	8.00	0.10	0.9	4.0	1	●								
11IR 64 UN	6.35	64.0	11.00	0.02	0.8	0.4	1								●	
11IR 36 UN	6.35	36.0	11.00	0.04	0.6	0.6	1								●	
11IR/L 32 UN	6.35	32.0	11.00	0.04	0.6	0.6	1			●					●	
11IR/L 28 UN	6.35	28.0	11.00	0.04	0.6	0.7	1			●		●			●	
11IR/L 24 UN	6.35	24.0	11.00	0.05	0.7	0.8	1			●		●			●	
11IR/L 20 UN	6.35	20.0	11.00	0.06	0.8	0.9	1			●		●			●	
11IR/L 18 UN	6.35	18.0	11.00	0.07	0.8	1.0	1			●	●				●	
11IR/L 16 UN	6.35	16.0	11.00	0.09	0.9	1.1	1	●		●	●				●	
11IR/L 14 UN	6.35	14.0	11.00	0.10	0.9	1.1	1			●	●				●	
11IR 12 UN	6.35	12.0	11.00	0.12	0.9	1.1	1				●					
11IR 11 UN	6.35	11.0	11.00	0.14	0.8	1.1	1				●				●	
16IR 32 UN	9.52	32.0	16.00	0.04	0.6	0.6	1			●	●				●	
16IR/L 28 UN	9.52	28.0	16.00	0.04	0.6	0.7	1			●					●	
16IR 27 UN	9.52	27.0	16.00	0.04	0.7	0.8	1			●						
16IR 24 UN	9.52	24.0	16.00	0.05	0.7	0.8	1			●	●	●			●	
16IRB 24 UN ⁽¹⁾	9.52	24.0	16.00	0.05	0.7	0.8	1								●	
16IR/L 20 UN	9.52	20.0	16.00	0.06	0.8	0.9	1			●	●	●	●		●	
16IRB 20 UN ⁽¹⁾	9.52	20.0	16.00	0.06	0.8	0.9	1								●	
16IRM 20 UN ⁽¹⁾	9.52	20.0	16.00	0.06	0.8	0.9	1							●	●	
16IR/L 18 UN	9.52	18.0	16.00	0.07	0.8	1.0	1			●	●		●		●	
16IRB 18 UN ⁽¹⁾	9.52	18.0	16.00	0.07	0.8	1.0	1								●	
16IRM 18 UN ⁽¹⁾	9.52	18.0	16.00	0.08	0.8	1.0	1							●	●	
16IR/L 16 UN	9.52	16.0	16.00	0.09	0.9	1.1	1			●	●		●		●	
16IR 16 UN 2M ⁽²⁾	9.52	16.0	16.00	0.09	1.5	2.3	2						●			
16IRB 16 UN ⁽¹⁾	9.52	16.0	16.00	0.18	0.9	1.1	1								●	
16IRM 16 UN ⁽¹⁾	9.52	16.0	16.00	0.09	0.9	1.1	1				●			●	●	●
16IR/L 14 UN	9.52	14.0	16.00	0.10	0.9	1.2	1			●	●		●		●	
16IRB 14 UN ⁽¹⁾	9.52	14.0	16.00	0.10	0.9	1.2	1								●	
16IRM 14 UN ⁽¹⁾	9.52	14.0	16.00	0.11	0.9	1.2	1				●				●	
16IR/L 13 UN	9.52	13.0	16.00	0.11	1.0	1.3	1			●					●	

• Tolerance: class 2B, ANSI B1, 3M-1986.

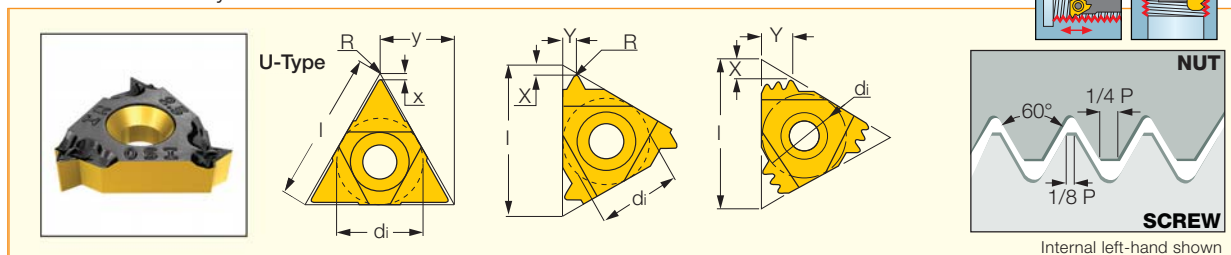
⁽¹⁾ With pressed chipformer. ⁽²⁾ Multi-tooth ⁽³⁾ Number of teeth per corner.

For tools, see pages: E-SIR-HEAD (B97) • MGSIR/L (B41) • SIR/L (B96).

ISCARTHREAD

IR/L-UN (continued)

Internal American UN, Full Profile (UN, UNC, UNF, UNEF) Laydown Threading Inserts, for General Industry



Designation	Dimensions							Tough ↔ Hard								
	di	TPI	l	R	X	Y	Z ⁽³⁾	IC228	IC928	IC50M	IC250	IC08	IC508	IC808	IC908	IC1007
16IR/L 12 UN	9.52	12.0	16.00	0.12	1.1	1.4	1	●		●	●	●			●	
16IRB 12 UN ⁽¹⁾	9.53	12.0	16.00	0.12	1.1	1.4	1								●	
16IRM 12 UN ⁽¹⁾	9.52	12.0	16.00	0.12	1.1	1.4	1				●			●	●	●
16IR 11.5 UN	9.52	11.5	16.00	0.13	1.1	1.5	1							●	●	
16IR 11 UN	9.52	11.0	16.00	0.14	1.1	1.5	1			●	●				●	
16IR/L 10 UN	9.52	10.0	16.00	0.15	1.1	1.5	1			●	●				●	
16IRB 10 UN ⁽¹⁾	9.52	10.0	16.00	0.15	1.1	1.5	1								●	
16IR 9 UN	9.52	9.0	16.00	0.17	1.2	1.7	1								●	
16IR/L 8 UN	9.52	8.0	16.00	0.19	1.1	1.5	1			●	●		●		●	
16IRB 8 UN ⁽¹⁾	9.52	8.0	16.00	0.19	1.1	1.5	1								●	
16IRM 8 UN ⁽¹⁾	9.52	8.0	16.00	0.20	1.1	1.5	1				●			●	●	

• Tolerance: class 2B, ANSI B1, 3M-1986.

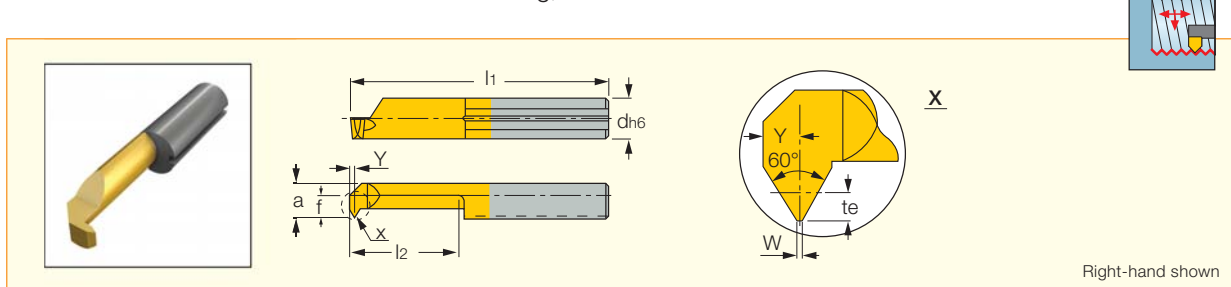
⁽¹⁾ With pressed chipformer. ⁽²⁾ Multi-tooth ⁽³⁾ Number of teeth per corner.

For tools, see pages: E-SIR-HEAD (B97) • MGSIR/L (B41) • SIR/L (B96).

ISCARTHREAD • PICCOCUT

PICCO R/L-ISO-Thread

Mini-Carbide Bars for ISO Internal Thread Turning, Dmin 2.4 mm

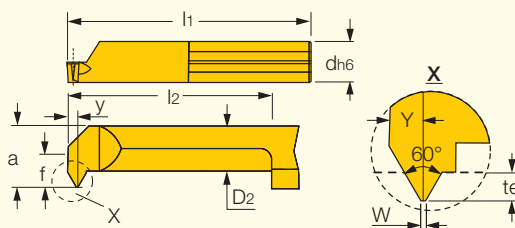


Designation	Dimensions											Tough $\longleftrightarrow$ Hard	
	d	Pitch	te	w	Y	f	a	l2	l1	Dmin		IC228	IC908
PICCO R 003.0105-8	3.00	0.50	0.27	0.04	0.3	0.3	2.30	8.0	22.00	2.40			●
PICCO R 004.0105-10	4.00	0.50	0.27	0.09	0.4	1.0	3.00	10.0	24.00	3.20			●
PICCO R/L 004.0205-15	4.00	0.50	0.27	0.06	0.4	1.5	3.50	15.0	30.00	4.00	●		
PICCO R/L 005.0205-15	5.00	0.50	0.27	0.06	0.4	1.9	4.40	15.0	30.00	5.00	●		
PICCO R/L 005.0407-15	5.00	0.75	0.40	0.90	0.5	1.9	4.40	15.0	30.00	5.00	●		●
PICCO R/L 005.0510-15	5.00	1.00	0.55	0.12	0.6	1.9	4.40	15.0	30.00	4.80	●		
PICCO R/L 006.0510-15	6.00	1.00	0.55	0.12	0.6	2.3	5.30	15.0	30.00	6.00	●		
PICCO R/L 006.0612-15	6.00	1.25	0.68	0.15	0.7	2.3	5.30	15.0	30.00	6.00	●		
PICCO R/L 006.0815-15	6.00	1.50	0.81	0.18	0.8	2.3	5.30	15.0	30.00	6.00	●		
PICCO R/L 007.0815-15	7.00	1.50	0.81	0.18	0.8	2.7	6.30	15.0	30.00	7.00	●		

PICCO CUT

PICCO ISO Full Profile

Inserts for ISO, Standard Full Profile Thread

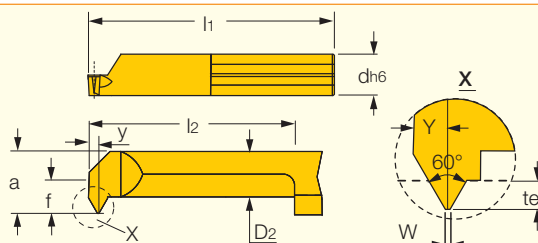


Right-hand shown

Designation	Dimensions											IC908
	Pitch	d	f	a	l ₁	l ₂	D ₂	Y	t _e	w	D _{min}	
PICCO R/L 105.0510-15	1.00	5.00	1.9	4.40	30.00	15.0	3.30	0.6	0.54	0.12	4.80	●
PICCO R/L 106.0612-15	1.25	6.00	2.3	5.30	30.00	15.0	3.40	0.7	0.67	0.15	6.00	●
PICCO R/L 106.0815-15	1.50	6.00	2.3	5.30	30.00	15.0	3.40	0.8	0.81	0.18	6.00	●
PICCO R/L 107.0815-15	1.50	7.00	2.8	6.30	30.00	15.0	3.80	0.8	0.81	0.18	7.00	●

PICCO ISO Full Profile Fine

Inserts ISO, Fine Pitch Full Profile Thread

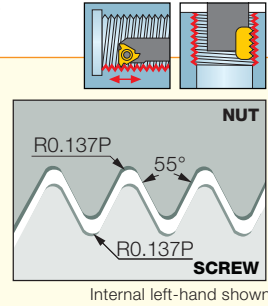
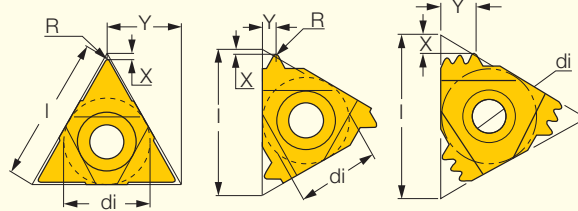
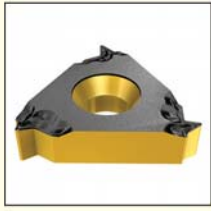


Right-hand shown

Designation	Dimensions											IC908
	Pitch	d	f	a	l ₁	l ₂	D ₂	Y	t _e	w	D _{min}	
PICCO R/L 104.0205-15	0.50	5.00	1.5	3.50	30.00	15.0	2.40	0.4	0.27	0.06	4.00	●
PICCO R/L 105.0205-15	0.50	5.00	1.9	4.40	30.00	15.0	3.30	0.4	0.27	0.06	5.00	●
PICCO R/L 105.0407-15	0.75	5.00	1.9	4.40	30.00	15.0	3.30	0.5	0.40	0.09	5.00	●
PICCO R/L 106.0510-15	1.00	6.00	2.3	5.30	30.00	15.0	3.40	0.6	0.54	0.12	6.00	●

IR/L-W

Internal Whitworth (BSW, BSF, BSP), B.S.84-1956 DIN 259 Medium Class, Full Profile
Laydown Threading Inserts



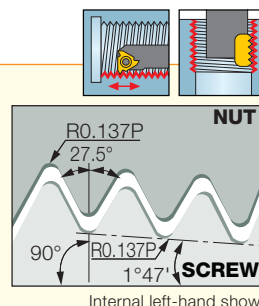
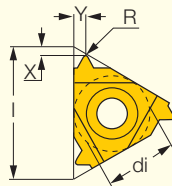
Designation	Dimensions							Tough ↔ Hard								
	di	TPI	I	R	X	Y	Z ⁽³⁾	IC228	IC928	IC50M	IC250	IC08	IC508	IC808	IC908	IC1007
06IR 26 W	3.97	26.0	6.00	0.10	0.7	0.6	1	●								
06IR 20 W	3.97	20.0	6.00	0.14	0.6	0.7	1	●								
08IR 24 W	4.76	24.0	8.00	0.11	0.6	0.6	1	●								
08IR/L 19 W	4.76	19.0	8.00	0.15	0.6	0.7	1	●	●							
08IR 18 W	4.76	18.0	8.00	0.16	0.6	0.7	1	●								
08IR 16 W	4.76	16.0	8.00	0.18	0.6	0.7	1	●								
08UIRL 12 W	4.76	12.0	8.00	0.25	0.9	4.0	1	●								
11IR 36 W	6.35	36.0	11.00	0.07	0.6	0.6	1					●				
11IR 28 W	6.35	28.0	11.00	0.10	0.6	0.7	1				●					
11IR 26 W	6.35	26.0	11.00	0.10	0.7	0.7	1	●								
11IR/L 24 W	6.35	24.0	11.00	0.11	0.7	0.8	1				●				●	
11IR 20 W	6.35	20.0	11.00	0.14	0.8	0.9	1			●	●				●	
11IR 19 W	6.35	19.0	11.00	0.15	0.8	1.0	1			●	●				●	
11IR/L 18 W	6.35	18.0	11.00	0.16	0.8	1.0	1			●	●				●	
11IR 16 W	6.35	16.0	11.00	0.18	0.9	1.1	1			●	●				●	
11IR/L 14 W	6.35	14.0	11.00	0.21	0.9	1.1	1	●		●	●	●			●	
11IL 12 W	6.35	12.0	11.00	0.27	1.0	1.1	1								●	
16IR 40 W	9.52	40.0	16.00	0.06	0.6	0.6	1			●						
16IR/L 32 W	9.52	32.0	16.00	0.09	0.6	0.6	1			●						
16IR/L 28 W	9.52	28.0	16.00	0.09	0.6	0.7	1			●	●					
16IR 26 W	9.52	26.0	16.00	0.10	0.7	0.7	1			●	●				●	
16IR/L 24 W	9.52	24.0	16.00	0.11	0.7	0.8	1			●	●				●	
16IR/L 22 W	9.52	22.0	16.00	0.13	0.8	0.9	1			●	●				●	
16IR/L 20 W	9.52	20.0	16.00	0.14	0.8	0.9	1			●	●		●		●	
16IRM 20 W ⁽¹⁾	9.52	20.0	16.00	0.14	0.8	0.9	1						●		●	
16IR/L 19 W	9.52	19.0	16.00	0.15	0.8	1.0	1			●	●		●		●	
16IRB 19 W ⁽¹⁾	9.52	19.0	16.00	0.15	0.8	1.0	1								●	
16IRM 19 W ⁽¹⁾	9.52	19.0	16.00	0.15	0.8	1.0	1				●					
16IR/L 18 W	9.52	18.0	16.00	0.16	0.8	1.0	1			●	●				●	
16IR/L 16 W	9.52	16.0	16.00	0.18	0.9	1.1	1			●						
16IRB 16 W ⁽¹⁾	9.52	16.0	16.00	0.18	0.9	1.1	1								●	
16IRM 16 W ⁽¹⁾	9.52	16.0	16.00	0.18	0.9	1.1	1				●		●		●	
16IR/L 14 W	9.52	14.0	16.00	0.21	1.0	1.2	1	●		●	●		●		●	
16IR 14 W 2M ⁽²⁾	9.52	14.0	16.00	0.23	1.7	2.7	2								●	
16IRB 14 W ⁽¹⁾	9.52	14.0	16.00	0.21	1.0	1.2	1								●	
16IRM 14 W ⁽¹⁾	9.52	14.0	16.00	0.21	1.0	1.2	1				●			●		●
16IR/L 12 W	9.52	12.0	16.00	0.25	1.1	1.4	1			●	●				●	
16IR/L 11 W	9.52	11.0	16.00	0.27	1.1	1.5	1	●		●	●	●			●	
16IRB 11 W ⁽¹⁾	9.52	11.0	16.00	0.27	1.1	1.5	1								●	
16IRM 11 W ⁽¹⁾	9.52	11.0	16.00	0.27	1.1	1.5	1				●		●		●	●
16IR/L 10 W	9.52	10.0	16.00	0.31	1.1	1.5	1			●	●				●	
16IRB 10 W ⁽¹⁾	9.52	10.0	16.00	0.31	1.1	1.5	1								●	
16IR/L 9 W	9.52	9.0	16.00	0.34	1.2	1.7	1			●	●					
16IR/L 8 W	9.52	8.0	16.00	0.39	1.2	1.5	1			●	●				●	

⁽¹⁾ With pressed chipformer. ⁽²⁾ Multi-tooth ⁽³⁾ Number of teeth per corner.

For tools, see pages: E-SIR-HEAD (B97) • MGSIR/L (B41) • SIR/L (B96).

IR/L-BSPT

Internal BSPT (British Standard Pipe) B.S.21-1957, Full Profile, Laydown Threading Inserts



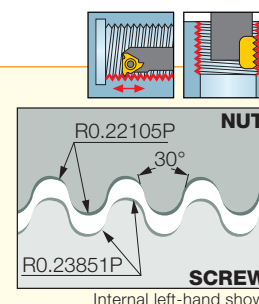
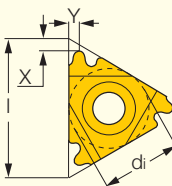
Designation	Dimensions						Tough ↔ Hard					
	di	TPI	l	R	X	Y	IC228	IC50M	IC250	IC808	IC908	IC1007
06IR 28 BSPT	3.97	28.0	6.00	0.11	0.7	0.6	●					
08IR 28 BSPT	4.76	28.0	8.00	0.11	0.6	0.6	●					
08IR 19 BSPT	4.76	19.0	8.00	0.16	0.6	0.6	●					
11IR 19 BSPT	6.35	19.0	11.00	0.16	0.8	0.9			●		●	
11IR/L 14 BSPT	6.35	14.0	11.00	0.21	0.9	1.0			●		●	
16IR 28 BSPT	9.52	28.0	16.00	0.11	0.6	0.6			●			
16IR 19 BSPT	9.52	19.0	16.00	0.16	0.8	0.9		●	●			
16IRB 14 BSPT ⁽¹⁾	9.52	14.0	16.00	0.21	1.0	1.2					●	
16IRM 14 BSPT ⁽¹⁾	9.52	14.0	16.00	0.21	1.0	1.2				●	●	●
16IR/L 14 BSPT	9.52	14.0	16.00	0.21	1.0	1.2		●	●		●	
16IRM 11 BSPT ⁽¹⁾	9.52	11.0	16.00	0.28	1.1	1.5				●	●	●
16IRB 11 BSPT ⁽¹⁾	9.52	11.0	16.00	0.28	1.1	1.5					●	
16IR/L 11 BSPT	9.52	11.0	16.00	0.28	1.1	1.5	●	●	●		●	

⁽¹⁾ With pressed chipformer.

For tools, see pages: E-SIR-HEAD (B97) • MGSIR/L (B41) • SIR/L (B96).

IR/L-RND

Internal DIN 405, Round Laydown Threading Inserts, for Fire Fighting and Food Industry Pipe Couplings



Designation	Dimensions						Tough ↔ Hard			
	di	TPI	l	X	Y		IC228	IC50M	IC250	IC908
16IR 10 RND	9.52	10.0	16.00	1.1	1.2			●	●	●
16IR/L 8 RND	9.52	8.0	16.00	1.4	1.4			●	●	●
16IRM 8 RND ⁽¹⁾	9.52	8.0	16.00	1.4	1.4				●	●
16IR/L 6 RND	9.52	6.0	16.00	1.4	1.5		●		●	●
16IRM 6 RND ⁽¹⁾	9.52	6.0	16.00	1.4	1.5					●

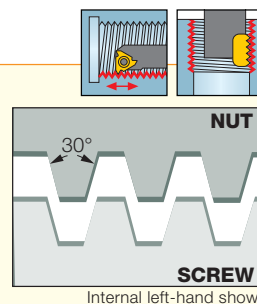
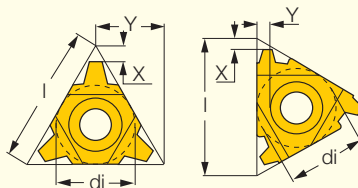
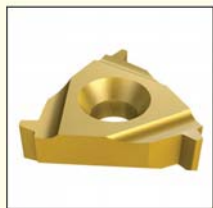
• Tolerance: Class 7H.

⁽¹⁾ With pressed chipformer.

For tools, see pages: E-SIR-HEAD (B97) • SIR/L (B96).

IR/L-TR

Internal Trapeze Shaped DIN 103 Laydown Threading Inserts, for Feed Screws



Designation	Dimensions					Tough ↔ Hard				
	di	Pitch	l	X	Y	IC228	IC50M	IC250	IC508	IC908
08IR 1.5 TR ⁽¹⁾	4.76	1.50	8.00	0.6	0.6	●				
08UIRL 2 TR	4.76	2.00	8.00	0.9	4.0	●				
16IR 1.5 TR	9.52	1.50	16.00	1.0	1.1			●		
16IR/L 2 TR	9.52	2.00	16.00	1.0	1.3		●	●		●
16IR/L 3 TR	9.52	3.00	16.00	1.3	1.5	●	●	●	●	●

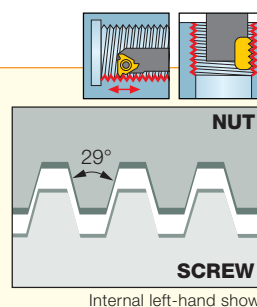
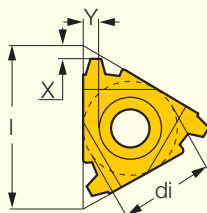
• Tolerance: Class 7H

⁽¹⁾ Single threading corner

For tools, see pages: E-SIR-HEAD (B97) • SIR/L (B96).

IR/L-STACME

Internal STUB ACME Laydown Threading Inserts, for Control Valves and Shallow ACME Profile



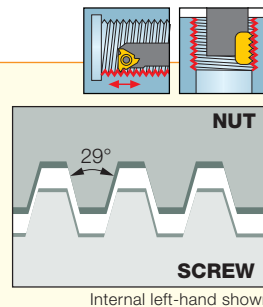
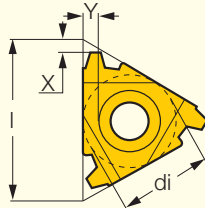
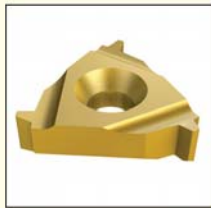
Designation	Dimensions					Tough ↔ Hard		
	di	TPI	l	X	Y	IC50M	IC250	IC908
16IR/L 16 STACME	9.52	16.0	16.00	1.0	1.0	●		
16IR/L 14 STACME	9.52	14.0	16.00	1.1	1.1	●		
16IR/L 12 STACME	9.52	12.0	16.00	1.2	1.2	●	●	●
16IR/L 10 STACME	9.52	10.0	16.00	1.3	1.3	●		
16IR/L 8 STACME	9.52	8.0	16.00	1.5	1.5	●		
16IR 6 STACME	9.52	6.0	16.00	1.8	1.8		●	●

• Tolerance: Class 2G.

For tools, see pages: E-SIR-HEAD (B97) • SIR/L (B96).

IR/L-ACME

Internal ACME Profile Laydown Threading Inserts, for Feed Screws



Internal left-hand shown

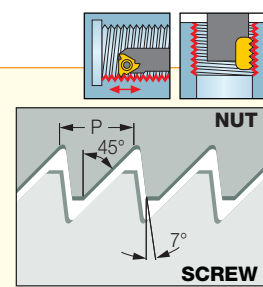
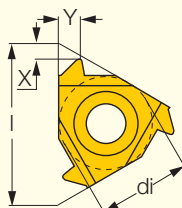
Designation	Dimensions					Tough ↔ Hard			
	di	TPI	l	X	Y	IC50M	IC250	IC508	IC908
16IR/L 16 ACME	9.52	16.0	16.00	0.9	1.0	●	●		
16IR/L 14 ACME	9.52	14.0	16.00	1.0	1.2	●			
16IR/L 12 ACME	9.52	12.0	16.00	1.1	1.2	●	●		●
16IR/L 10 ACME	9.52	10.0	16.00	1.3	1.3	●	●		
16IR/L 8 ACME	9.52	8.0	16.00	1.5	1.5	●	●	●	●

• ACME ASME/ANSI B1.5-1988 Class 3G.

For tools, see pages: E-SIR-HEAD (B97) • SIR/L (B96).

IR/L-ABUT

Internal American Buttress Laydown Threading Inserts, for High Force Transmission in One Direction



Internal left-hand shown

Designation	Dimensions					Tough ↔ Hard			
	di	TPI	l	X	Y	IC228	IC50M	IC250	IC908
11IR 20 ABUT	6.35	20.0	11.00	1.0	1.3				●
11IR/L 16 ABUT	6.35	16.0	11.00	1.0	1.5	●		●	●
16IR 20 ABUT	9.52	20.0	16.00	1.0	1.3			●	●
16IR/L 16 ABUT	9.52	16.0	16.00	1.0	1.5			●	●
16IR/L 12 ABUT	9.52	12.0	16.00	1.4	2.0		●	●	●
16IR/L 10 ABUT	9.52	10.0	16.00	1.5	2.3		●	●	●

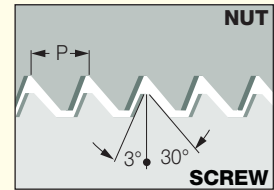
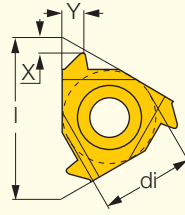
• ANSI B1.9-1973 Class 2.

For tools, see pages: E-SIR-HEAD (B97) • SIR/L (B96).

ISCAR[®] THREAD

IR/L-SAGE

Internal Sagengwinde (DIN 513) Thread, Application for High Force in One Direction

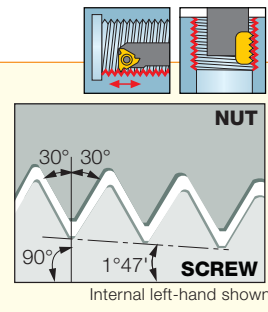
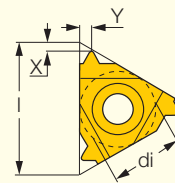


Designation	Dimensions						IC908
	di	Pitch	l	X	Y		
16IR/L 2 SAGE	9.52	2.00	16.00	1.2	1.7		●

For tools, see pages: E-SIR-HEAD (B97) • SIR/L (B96).

IR/L-NPTF

Internal NPTF (National Pipe Threads) Full Profile Laydown Threading Inserts for Steam, Gas and Water Pipes



Designation	Dimensions						Tough ↔ Hard		
	di	TPI	l	R	X	Y	IC228	IC250	IC908
06IR 27 NPTF	3.97	27.0	6.00	0.04	0.7	0.6	●		
08IR 27 NPTF	4.76	27.0	8.00	0.04	0.6	0.6	●		
08IR 18 NPTF	4.76	18.0	8.00	0.06	0.6	0.6	●		
11IR 18 NPTF	6.35	18.0	11.00	0.06	0.8	1.0			●
11IR 14 NPTF	6.35	14.0	16.00	0.07	0.8	1.0			●
16IR 18 NPTF	9.52	18.0	16.00	0.06	0.8	1.0			●
16IR/L 14 NPTF	9.52	14.0	16.00	0.07	0.9	1.2		●	●
16IR 11.5 NPTF	9.52	11.5	16.00	0.09	1.1	1.5		●	●

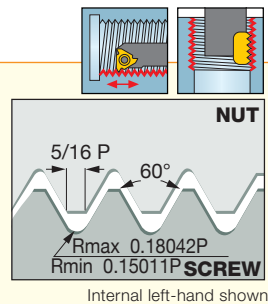
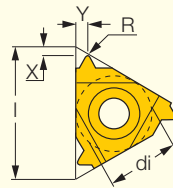
• (National Pipe Threads-Dry seal) ANSI/ASME B1.20.1-1976.

For tools, see pages: E-SIR-HEAD (B97) • MGSIR/L (B41) • SIR/L (B96).

ISCAR[®] THREAD

IR/L-UNJ

Internal Thread Profile Inserts, for the Aircraft and Aerospace Industry

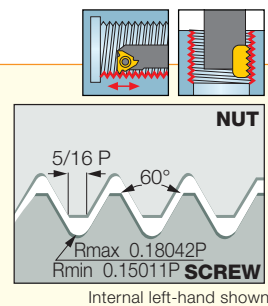
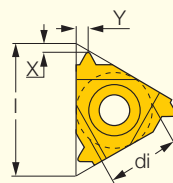


Designation	Dimensions						Tough ↔ Hard			
	di	TPI	l	R	X	Y	IC228	IC50M	IC250	IC908
08IR 20 UNJ	4.76	20.0	8.00	0.19	0.8	0.9	●			
08IR 18 UNJ	4.76	18.0	8.00	0.21	0.8	1.0	●			
11IR 32 UNJ	6.35	32.0	11.00	0.12	0.6	0.6				●
11IR 28 UNJ	6.35	28.0	11.00	0.14	0.6	0.6				●
11IR 24 UNJ	6.35	24.0	11.00	0.16	0.7	0.8				●
11IR 20 UNJ	6.35	20.0	11.00	0.19	0.8	0.9				●
11IR 18 UNJ	6.35	18.0	11.00	0.21	0.8	1.0				●
11IR 16 UNJ	6.35	16.0	11.00	0.24	0.8	1.0				●
16IR 28 UNJ	9.52	28.0	16.00	0.14	0.6	0.6		●		
16IR 24 UNJ	9.52	24.0	16.00	0.16	0.7	0.8		●		
16IR 20 UNJ	9.52	20.0	16.00	0.19	0.8	0.9				●
16IR 18 UNJ	9.52	18.0	16.00	0.21	0.8	1.0		●		
16IR/L 16 UNJ	9.52	16.0	16.00	0.24	0.8	1.0		●	●	●
16IR 14 UNJ	9.52	14.0	16.00	0.27	1.0	1.2		●		●
16IR/L 12 UNJ	9.52	12.0	16.00	0.13	1.1	1.4		●	●	●
16IR/L 8 UNJ	9.52	8.0	16.00	0.48	1.2	1.6				●

For tools, see pages: E-SIR-HEAD (B97) • SIR/L (B96).

IR-MJ

Internal MJ ISO 5855 Metric Full Profile Laydown Threading Inserts, for the Aviation and Aerospace Industry



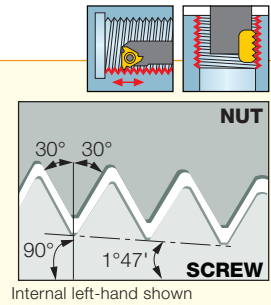
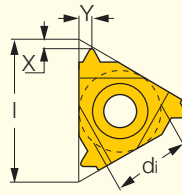
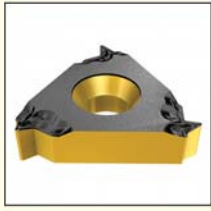
Designation	Dimensions						IC908
	di	Pitch	l	R	X	Y	
11IR 1.00 MJ	6.35	1.00	11.00	0.05	0.7	0.8	●
11IR 1.25 MJ	6.35	1.25	11.00	0.07	0.8	0.9	●
11IR 1.50 MJ	6.35	1.50	11.00	0.08	0.8	1.0	●
11IR 2.00 MJ	6.35	2.00	11.00	0.12	0.9	1.0	●
16IR 1.00 MJ	9.52	1.00	16.00	0.05	0.7	0.8	●
16IR 1.25 MJ	9.52	1.25	16.00	0.07	0.8	0.9	●
16IR 1.50 MJ	9.52	1.50	16.00	0.08	0.8	1.0	●

For tools, see pages: E-SIR-HEAD (B97) • SIR/L (B96).

ISCAR[®] THREAD

IR/L-NPT

Internal NPT (National Pipe Threads) Full Profile Laydown Threading Inserts for Steam, Gas and Water Pipes



Designation	Dimensions						Tough ↔ Hard						
	di	TPI	l	R	X	Y	IC228	IC50M	IC250	IC508	IC808	IC908	IC1007
06IR 27 NPT	3.97	27.0	6.00	0.04	0.6	0.6	●						
08IR 18 NPT	4.76	18.0	8.00	0.06	0.6	0.6	●					●	
11IR 27 NPT	6.35	27.0	11.00	0.04	0.7	0.8			●				
11IR/L 18 NPT	6.35	18.0	11.00	0.06	0.8	1.0	●		●			●	
11IR/L 14 NPT	6.35	14.0	11.00	0.07	0.8	1.0			●			●	
16IR 27 NPT	9.52	27.0	16.00	0.04	0.7	0.8		●				●	
16IR 18 NPT	9.52	18.0	16.00	0.06	0.8	1.0		●				●	
16IRM 14 NPT ⁽¹⁾	9.52	14.0	16.00	0.05	0.9	1.2			●		●	●	●
16IRB 14 NPT ⁽¹⁾	9.52	14.0	16.00	0.07	0.9	1.2						●	
16IR/L 14 NPT	9.52	14.0	16.00	0.07	0.9	1.2	●	●	●	●		●	
16IRM 11.5 NPT ⁽¹⁾	9.52	11.5	16.00	0.09	1.1	1.5				●	●		●
16IRB 11.5 NPT ⁽¹⁾	9.52	11.5	16.00	0.09	1.1	1.5						●	
16IR/L 11.5 NPT	9.52	11.5	16.00	0.09	1.1	1.5	●	●	●	●		●	
16IRM 8 NPT ⁽¹⁾	9.52	8.0	16.00	0.12	1.3	1.8					●	●	●
16IRB 8 NPT ⁽¹⁾	9.52	8.0	16.00	0.12	1.3	1.8						●	
16IR/L 8 NPT	9.52	8.0	16.00	0.12	1.3	1.8		●	●			●	

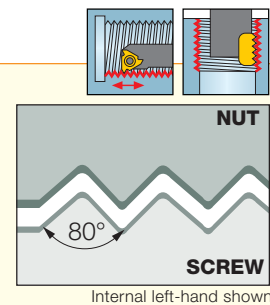
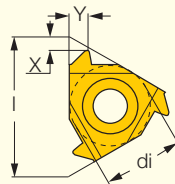
● National Pipe Threads ANSI/ASME B1.20.1-1983.

⁽¹⁾ With pressed chipformer.

For tools, see pages: E-SIR-HEAD (B97) • MGSIR/L (B41) • SIR/L (B96).

IR/L-PG

Internal Thread Profile Inserts for the Electrical Industry

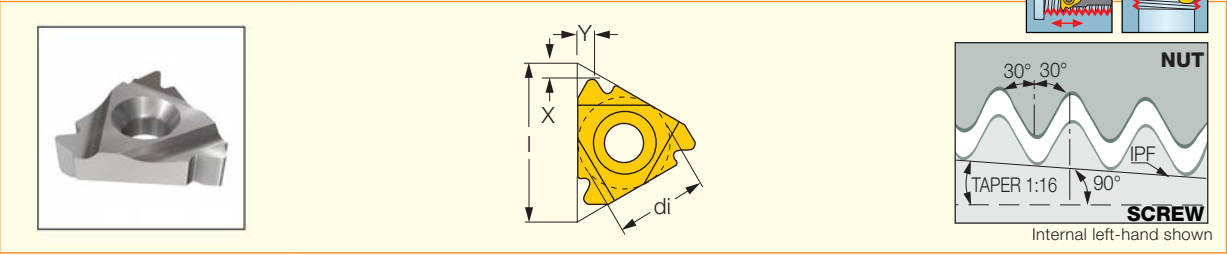


Designation	Dimensions						Tough ↔ Hard		
	di	Pitch	l	X	Y		IC50M	IC250	IC908
11IR 18 PG	6.35	18.00	11.00	0.8	0.9			●	●
16IR/L 16 PG	9.52	16.00	16.00	0.8	1.0		●		●
16IR 18 PG	9.52	18.00	16.00	0.8	0.9				●
16IL 20 PG	9.52	20.00	16.00	0.8	1.0				●

For tools, see pages: E-SIR-HEAD (B97) • SIR/L (B96).

IR/L-API RD

Internal API - Oil Thread, Round Profile Laydown Threading Inserts



Designation	Dimensions						Tough ↔ Hard			
	di	TPI	l	IPF	X	Y	IC228	IC50M	IC250	IC908
	9.52	10.0	16.00	0.75	1.5	1.4	●	●	●	●
16IR/L 8 API RD	9.52	8.0	16.00	0.75	1.3	1.6		●	●	

• API Spec 5B8-1996.

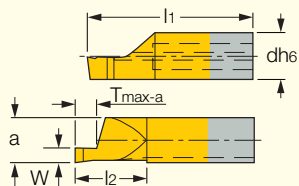
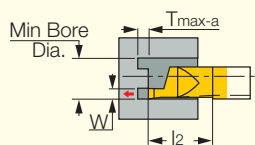
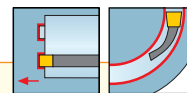
For tools, see pages: E-SIR-HEAD (B97) • SIR/L (B96).

FACE GROOVING



PICCO-010/610 (face grooving)

Inserts for Face Grooving



Right-hand shown

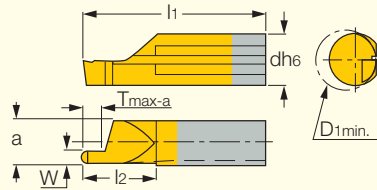
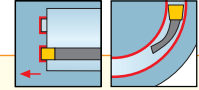
Designation	Dimensions							IC228	Recommended Machining Data f face-groove (mm/rev)
	D1 min	W	Tmax-a	d	a	l2	l1		
PICCO R 010.1006-10	6.0	1.00	1.50	6.00	5.20	11.0	26.00	●	0.01-0.04
PICCO R 010.1506-10	6.0	1.50	2.00	6.00	5.20	11.0	26.00	●	0.01-0.04
PICCO R 010.1008-10	8.0	1.00	1.50	7.00	5.90	11.0	26.00	●	0.01-0.04
PICCO R 010.1008-20	8.0	1.00	1.50	7.00	5.90	21.0	35.00	●	0.01-0.04
PICCO R 010.1008-30	8.0	1.00	1.50	7.00	5.90	30.0	45.00	●	0.01-0.04
PICCO R 610.1008-10	8.0	1.00	1.50	6.00	5.20	11.0	26.00	●	0.01-0.04
PICCO R 610.1008-20	8.0	1.00	1.50	6.00	5.20	20.0	35.00	●	0.01-0.04
PICCO R/L 010.1508-20	8.0	1.50	2.50	7.00	5.90	21.0	35.00	●	0.01-0.04
PICCO R/L 010.1508-30	8.0	1.50	2.50	7.00	5.90	30.0	45.00	●	0.01-0.04
PICCO R 010.1508-10	8.0	1.50	2.50	7.00	5.90	11.0	26.00	●	0.01-0.04
PICCO R 610.1508-10	8.0	1.50	2.50	6.00	5.20	11.0	26.00	●	0.01-0.04
PICCO R 610.1508-20	8.0	1.50	2.50	6.00	5.20	20.0	35.00	●	0.01-0.04
PICCO R/L 010.2008-30	8.0	2.00	3.00	7.00	5.90	30.0	45.00	●	0.02-0.05
PICCO R 010.2008-10	8.0	2.00	3.00	7.00	5.90	11.0	26.00	●	0.02-0.05
PICCO R 010.2008-20	8.0	2.00	3.00	7.00	5.90	21.0	35.00	●	0.02-0.05
PICCO R 610.2008-10	8.0	2.00	3.00	6.00	5.20	11.0	26.00	●	0.02-0.05
PICCO R 610.2008-20	8.0	2.00	3.00	6.00	5.20	20.0	35.00	●	0.02-0.05
PICCO R 010.2508-10	8.0	2.50	3.50	7.00	5.90	11.0	26.00	●	0.02-0.05
PICCO R 010.2508-20	8.0	2.50	3.50	7.00	5.90	21.0	35.00	●	0.02-0.05
PICCO R 010.2508-30	8.0	2.50	3.50	7.00	5.90	30.0	45.00	●	0.02-0.05
PICCO R 610.2508-10	8.0	2.50	3.50	6.00	5.20	11.0	26.00	●	0.02-0.05
PICCO R 610.2508-20	8.0	2.50	3.50	6.00	5.20	20.0	35.00	●	0.02-0.05
PICCO R 010.3008-10	8.0	3.00	3.50	7.00	5.90	11.0	26.00	●	0.02-0.06
PICCO R 010.3008-20	8.0	3.00	3.50	7.00	5.90	21.0	35.00	●	0.02-0.06
PICCO R 010.3008-30	8.0	3.00	3.50	7.00	5.90	30.0	45.00	●	0.02-0.06
PICCO R 610.3008-10	8.0	3.00	3.50	6.00	5.20	11.0	26.00	●	0.02-0.06
PICCO R 610.3008-20	8.0	3.00	3.50	6.00	5.20	20.0	35.00	●	0.02-0.06

• Only right-hand inserts are available as standard • All inserts are with sharp corners

PICCO CUT

PICCO-010 (round face groove)

Inserts for Round Profile Face Grooving



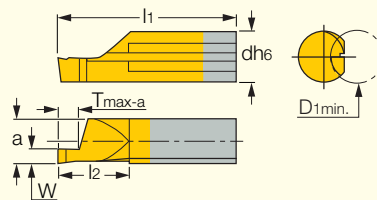
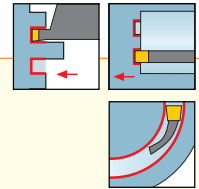
Right-hand shown

Designation	Dimensions								IC1008	Recommended Machining Data
	D1 min	W	R	T _{max-a}	d	a	l ₂	l ₁		f face-groove (mm/rev)
PICCO R 010.1005-10	8.0	1.00	0.50	2.00	7.00	5.90	11.0	26.00	●	0.01-0.04
PICCO R 010.1005-20	8.0	1.00	0.50	2.00	7.00	5.90	20.0	35.00	●	0.01-0.04
PICCO R 010.1608-10	8.0	1.60	0.80	3.00	7.00	5.90	11.0	26.00	●	0.01-0.05
PICCO R 010.1608-20	8.0	1.60	0.80	3.00	7.00	5.90	20.0	35.00	●	0.01-0.05
PICCO R 010.2010-10	8.0	2.00	1.00	4.00	7.00	5.90	11.0	26.00	●	0.02-0.05
PICCO R 010.2010-20	8.0	2.00	1.00	4.00	7.00	5.90	20.0	35.00	●	0.02-0.05
PICCO R 010.2512-10	8.0	2.50	1.25	5.00	7.00	5.90	11.0	26.00	●	0.02-0.05
PICCO R 010.2512-20	8.0	2.50	1.25	5.00	7.00	5.90	20.0	35.00	●	0.02-0.05
PICCO R 010.3015-10	8.0	3.00	1.50	6.00	7.00	5.90	11.0	26.00	●	0.02-0.05
PICCO R 010.3015-20	8.0	3.00	1.50	6.00	7.00	5.90	20.0	35.00	●	0.02-0.05

• Only right-hand inserts are available as standard. Left-hand inserts on request.

PICCO-620 (groov.along shaft)

Inserts for Grooving Along a Shaft Dmin 6 mm



Right-hand shown

Designation	Dimensions							IC1008	Recommended Machining Data
	D _{1 min}	W	T _{max-a}	d	a	l ₂	l ₁		f face-groove (mm/rev)
PICCO R 620.1006-20	6.0	1.00	2.00	6.00	5.20	20.0	35.00	●	0.01-0.04
PICCO R 620.1506-20	6.0	1.50	3.00	6.00	5.20	20.0	35.00	●	0.01-0.05
PICCO R 620.2006-20	6.0	2.00	4.00	6.00	5.20	20.0	35.00	●	0.02-0.06
PICCO R 620.2506-20	6.0	2.50	5.00	6.00	5.20	20.0	35.00	●	0.02-0.06
PICCO R 620.3006-20	6.0	3.00	6.00	6.00	5.20	20.0	35.00	●	0.02-0.06

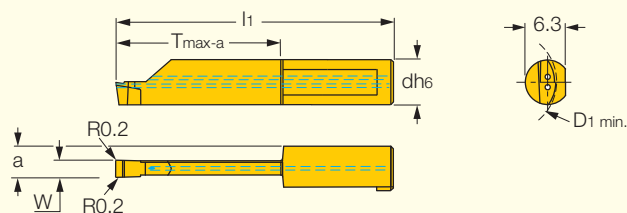
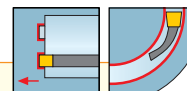
• Only right-hand inserts are available as standard. Left-hand inserts on request. • All carbide inserts are with sharp corners



PICCO CUT

PICCO-016/020 (face grooving)

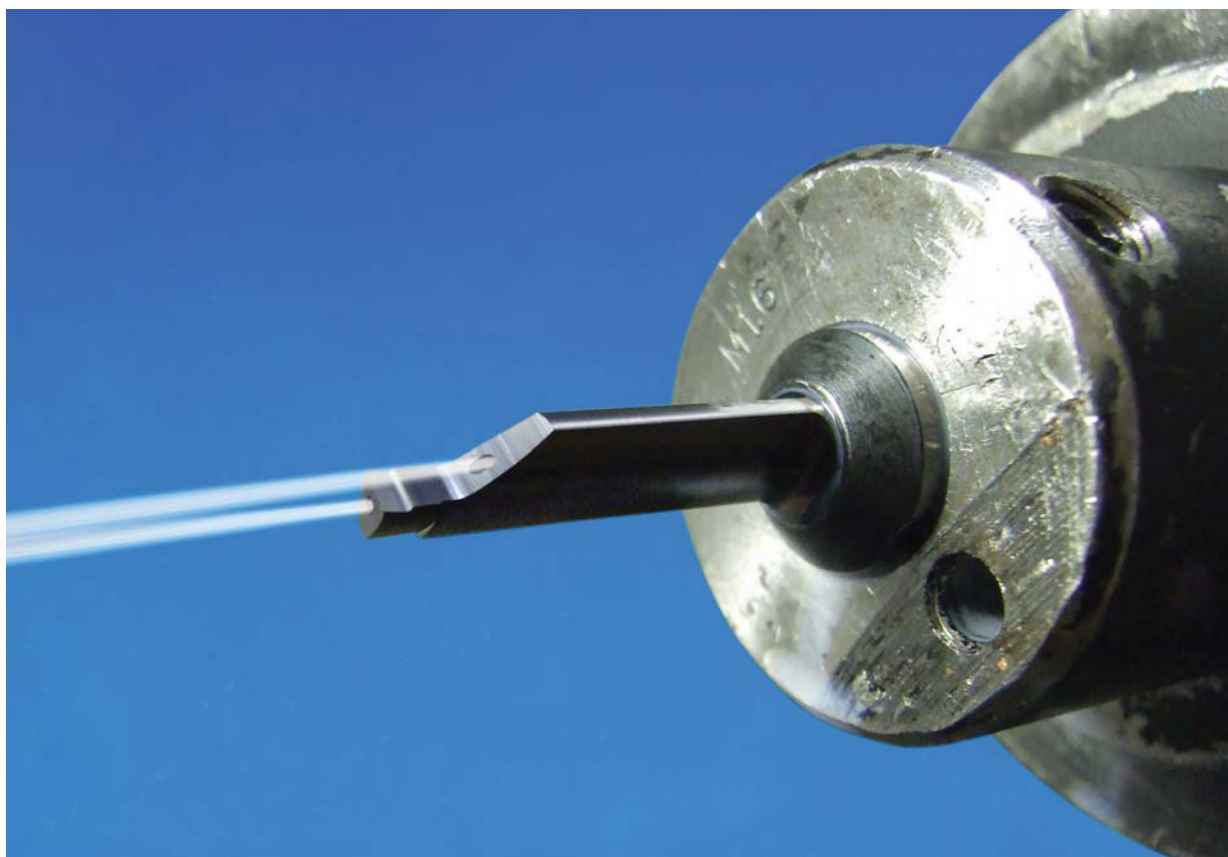
Inserts with Coolant Holes for Deep Face Grooving



Right-hand shown

Designation	Dimensions						IC1008	Recommended Machining Data
	D1 min	W	T _{max-a}	d	a	l ₁		f face-groove (mm/rev)
PICCO R 016.0300-10	16.0	3.00	10.00	8.00	5.50	30.00	●	0.01-0.05
PICCO R 016.0300-20	16.0	3.00	20.00	8.00	5.50	40.00	●	0.01-0.05
PICCO R 016.0400-10	16.0	4.00	10.00	8.00	6.00	30.00	●	0.01-0.05
PICCO R 016.0400-20	16.0	4.00	20.00	8.00	6.00	40.00	●	0.01-0.05
PICCO R 020.0300-25	20.0	3.00	25.00	8.00	5.50	45.00	●	0.01-0.05
PICCO R 020.0300-30	20.0	3.00	30.00	8.00	5.50	50.00	●	0.01-0.04
PICCO R 020.0300-35	20.0	3.00	35.00	8.00	5.50	55.00	●	0.01-0.04
PICCO R 020.0300-40	20.0	3.00	40.00	8.00	5.50	60.00	●	0.01-0.04
PICCO R 020.0400-25	20.0	4.00	25.00	8.00	6.00	45.00	●	0.01-0.06
PICCO R 020.0400-30	20.0	4.00	30.00	8.00	6.00	50.00	●	0.01-0.06
PICCO R 020.0400-35	20.0	4.00	35.00	8.00	6.00	55.00	●	0.01-0.05
PICCO R 020.0400-40	20.0	4.00	40.00	8.00	6.00	60.00	●	0.01-0.05
PICCO R 020.0500-20	20.0	5.00	20.00	8.00	6.50	40.00	●	0.02-0.06
PICCO R 020.0500-25	20.0	5.00	25.00	8.00	6.50	45.00	●	0.02-0.06
PICCO R 020.0500-30	20.0	5.00	30.00	8.00	6.50	50.00	●	0.02-0.06
PICCO R 020.0500-35	20.0	5.00	35.00	8.00	6.50	55.00	●	0.02-0.05
PICCO R 020.0500-40	20.0	5.00	40.00	8.00	6.50	60.00	●	0.02-0.05

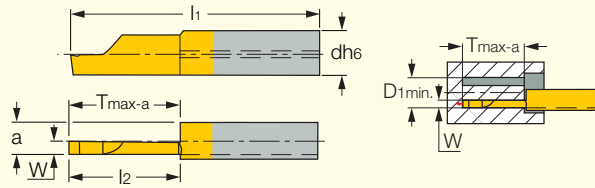
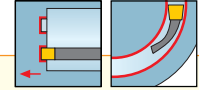
• All inserts have two coolant holes which may be used with coolant pressure up to 100 bars.



PICCO CUT

PICCO-015 (face grooving)

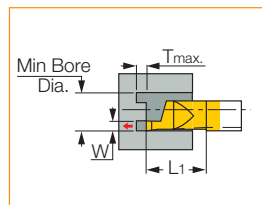
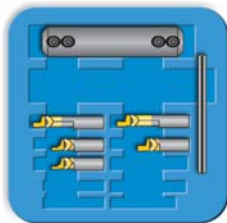
Inserts for Deep Face Grooving



Right-hand shown

Designation	Dimensions							IC228	Recommended Machining Data f face-groove (mm/rev)
	D1 min	W	Tmax-a	d	a	l2	l1		
PICCO R 015.2515-20	15.0	2.50	20.00	7.00	5.90	20.0	35.00	●	0.01-0.04
PICCO R/L 015.3015-20	15.0	3.00	20.00	7.00	5.90	20.0	35.00	●	0.02-0.05
PICCO R 015.3015-30	15.0	3.00	30.00	7.00	5.90	30.0	45.00	●	0.01-0.04

• Only right-hand inserts are available as standard. Left-hand inserts on request. • All inserts are with sharp corners



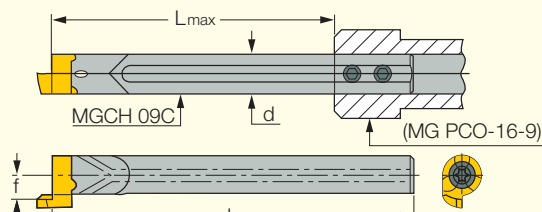
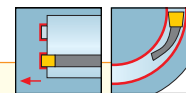
PICCO Mini-Bar Tool Kit Face Grooving KIT PICCO SET-4R

Designation	Mini Bore Dia.	L ₁	Tmax	W	Pcs.	Designation
PICCO 16.D6				1x		Holder
PICCO R/L 010.1008-10	8.0	11	1.5	1.0	1x	Mini Carbide Bar
PICCO R/L 010.1508-10	8.0	11	2.5	1.5	1x	Mini Carbide Bar
PICCO R/L 010.2008-10	8.0	11	3.0	2.0	1x	Mini Carbide Bar
PICCO R/L 010.2508-20	8.0	21	3.5	2.5	1x	Mini Carbide Bar
PICCO R/L 010.3008-20	8.0	21	3.5	3.0	1x	Mini Carbide Bar

Available grade: IC228.

MGCH-C (face)

Face Machining Tools for Dmin 12 - Dmax 19 mm Penetration Range,
Using GFQR Inserts



The same tool applies for right-and left-machining

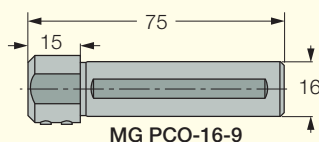
Designation	d	l ₁	L _{max}	f
MGCH 09C	9.00	83.50	65.0	5.5

For inserts, see pages: GFQR (B122).

For holders, see pages: PICCO/MG PCO (holder) (B123).

MG PCO

Holder Bar for Adjustable Shank



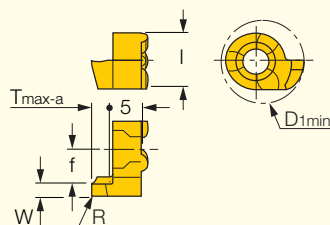
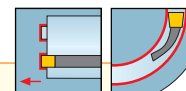
Spare Parts



Designation	Screw	Key
MGCH-C (face)	SR 76-2145	T-15/5

GFQR

Face Grooving Inserts

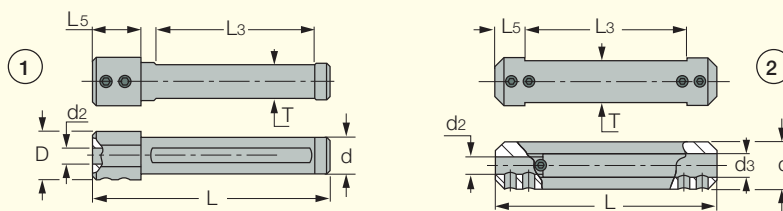


Designation	Dimensions					IC528	Recommended Machining Data
	W±0.02	R	T _{max-a}	D _{1 min} ⁽¹⁾	D _{1 max} ⁽²⁾		f face-groove (mm/rev)
GFQR 12-1.00-0.05	1.00	0.05	1.50	12.0	16.0	●	0.01-0.04
GFQR 12-1.50-0.20	1.50	0.20	2.50	12.0	17.0	●	0.01-0.04
GFQR 12-2.00-0.20	2.00	0.20	3.00	12.4	18.0	●	0.02-0.05
GFQR 12-2.50-0.20	2.50	0.20	3.00	13.0	19.0	●	0.02-0.05

⁽¹⁾ Minimum penetration diameter ⁽²⁾ Maximum penetration diameter

PICCO/MG PCO (holder)

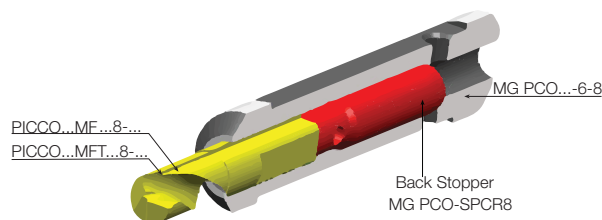
Holders for PICCO Inserts and Small Diameter Boring Bars



Designation	d	d ₂	d ₃	L	L ₅	L ₃	T	D	Fig.
PICCO 12-4-5	12.00	4.00	5.00	75.00	10.00	55.00	10.3	18.00	2
PICCO 16-4-5	16.00	4.00	5.00	75.00	10.00	55.00	14.0	18.00	2
PICCO 20-4-5	20.00	4.00	5.00	90.00	10.00	70.00	18.0	18.00	2
PICCO 22-4-5 ⁽¹⁾	22.00	4.00	5.00	90.00	10.00	70.00	20.0	18.00	2
PICCO 16-6-7	16.00	6.00	7.00	75.00	10.00	55.00	14.0	18.00	2
PICCO 20-6-7	20.00	6.00	7.00	90.00	10.00	70.00	18.0	18.00	2
PICCO 22-6-7 ⁽¹⁾	22.00	6.00	7.00	90.00	10.00	70.00	20.0	18.00	2
MG PCO-12-6	12.00	6.00	-	75.00	15.00	50.80	11.0	18.00	1
MG PCO-16-6-8	16.00	6.00	8.00	75.00	10.00	55.00	14.0	18.00	2
MG PCO-20-6-8	20.00	6.00	8.00	90.00	10.00	70.00	18.0	18.00	2
MG PCO-22-6-8 ⁽¹⁾	22.00	6.00	8.00	90.00	10.00	70.00	20.0	18.00	2
MG PCO-25-6-8	25.00	6.00	8.00	90.00	10.00	70.00	23.0	18.00	2
MG PCO-16-9	16.00	9.00	-	75.00	15.00	53.00	18.0	18.00	1

• Holders are suitable for right- and left-hand inserts, and boring bars.

⁽¹⁾ Tools for Swiss-type CNC



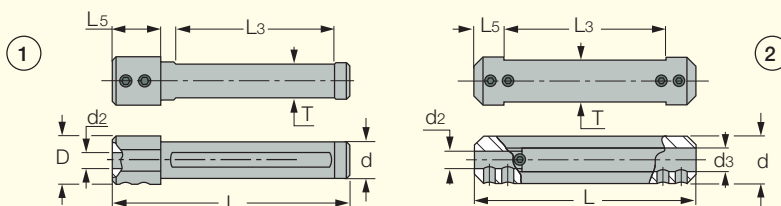
Spare Parts



Designation	Screw	Key	Coolant Fitting	Stopper
PICCO 12-4-5	SR M5X4-PF	HW 2.5		
PICCO 16-4-5	SR M5X6-PF	HW 2.5		
PICCO 20-4-5	SR M5X6-PF	HW 2.5		
PICCO 22-4-5	SR M5X6-PF	HW 2.5		
PICCO 16-6-7	SR M5X6-PF	HW 2.5		
PICCO 20-6-7	SR M5X6-PF	HW 2.5		
PICCO 22-6-7	SR M5X6-PF	HW 2.5		
MG PCO-12-6	SR M5X6-PF	HW 2.5		
MG PCO-16-6-8	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-20-6-8	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-22-6-8	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-25-6-8	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-16-9	SR M5X6-PF	HW 2.5	PL 16	

PICCO/MG PCO (holder) Inch

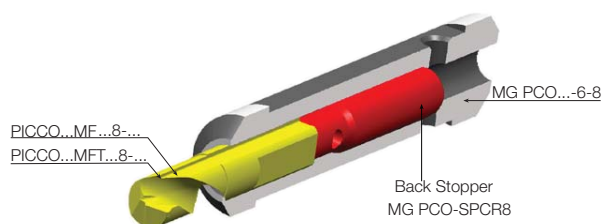
Holders for PICCO Inserts and Small Diameter Boring Bars



Designation	d	d ₂	d ₃	L	L ₅	L ₃	T	D	Fig.
PICCO 12.7-4-5	.500	.157	.197	2.950	.394	2.170	.410	.709	2
PICCO 15.9-4-5	.625	.157	.197	2.950	.394	2.170	.550	.709	2
PICCO 19-4-5	.750	.157	.197	3.540	.394	2.760	.710	.709	2
PICCO 25.4-4-5 ⁽¹⁾	1.000	.157	.197	3.543	.394	2.756	.921	.709	2
PICCO 15.9-6-7	.625	.236	.276	2.950	.394	2.170	.550	.709	2
PICCO 19-6-7	.750	.236	.276	3.540	.394	2.760	.710	.709	2
PICCO 25.4-6-7 ⁽¹⁾	1.000	.236	.276	3.543	.394	2.756	.921	.709	2
MG PCO-12.7-6	.500	.236	-	3.000	.590	2.090	.433	.709	1
MG PCO-15.9-6-8	.625	.236	.315	3.000	.390	2.170	.551	.709	2
MG PCO-19-6-8	.750	.236	.315	3.500	.390	2.760	.709	.709	2
MG PCO-25.4-6-8 ⁽¹⁾	1.000	.236	.315	3.543	.394	2.756	.921	.709	2
MG PCO-16-9	.630	.354	-	2.953	.591	2.087	.709	.709	1

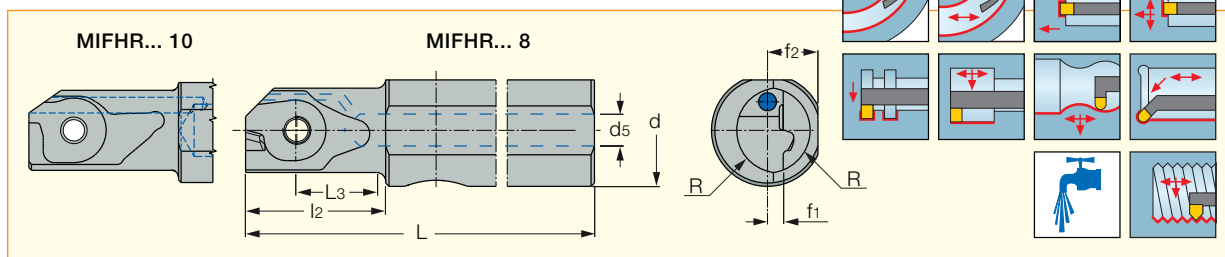
• Holders are suitable for left- and right-hand inserts, and boring bars.

⁽¹⁾ Tools for Swiss-type CNC



Spare Parts

Designation	 Screw	 Key	 Seal	 Stopper
PICCO 12.7-4-5	SR M5X4-PF	HW 2.5		
PICCO 15.9-4-5	SR M5X6-PF	HW 2.5		
PICCO 19-4-5	SR M5X6-PF	HW 2.5		
PICCO 25.4-4-5	SR M5X6-PF	HW 2.5		
PICCO 15.9-6-7	SR M5X6-PF	HW 2.5		
PICCO 19-6-7	SR M5X6-PF	HW 2.5		
PICCO 25.4-6-7	SR M5X6-PF	HW 2.5		
MG PCO-12.7-6	SR M5X6-PF	HW 2.5		
MG PCO-15.9-6-8	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-19-6-8	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-25.4-6-8	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-16-9	SR M5X6-PF	HW 2.5	PL 16	



Designation	d	d ₅	f ₁	f ₂	L	L ₃	L ₂	R	Insert
MIFHR 8SC-8-SRK ⁽¹⁾	8.00	1.2	1.4	3.70	75.00	7.40	11.7	3.80	MI.R 8
MIFHR 10C-8	10.00	4.0	1.4	4.50	102.50	7.40	12.5	3.80	MI.R 8
MIFHR 12C-8	12.00	5.0	1.4	5.50	102.50	7.40	12.5	3.80	MI.R 8
MIFHR 12C-10 ⁽²⁾	12.00	6.0	2.4	5.50	90.00	11.20	17.2	4.60	MIFR 10
MIFHR 16C-10 ⁽²⁾	16.00	6.0	2.4	7.50	90.00	11.20	17.2	4.60	MIFR 10

⁽¹⁾ Solid carbide shank ⁽²⁾ Only face grooving inserts are available for this tool

For inserts, see pages: • MIFR (B125) • MIGR 8 (B127) • MITR 8-MT (B103) • MIUR 8 (B127).

For holders, see pages: PICCO/MG PCO (holder) (B123).

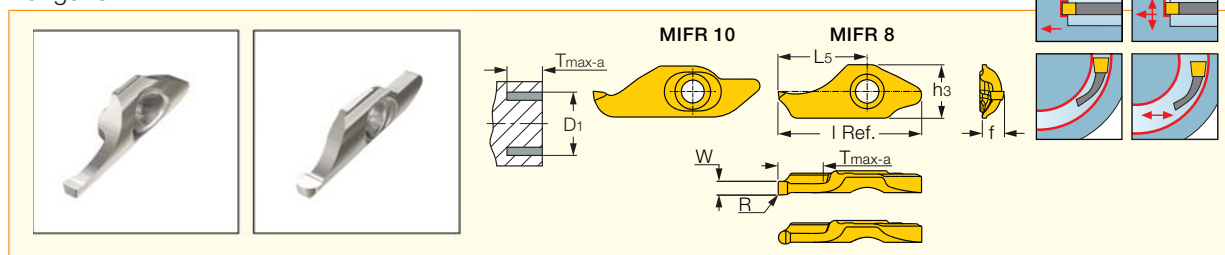
Spare Parts

Designation	Screw 1	Key
MIFHR 8SC-8-SRK	SR 14-297 T-8/5	
MIFHR 10C-8	SR 14-297 T-8/5	
MIFHR 12C-8	SR 14-297 T-8/5	
MIFHR 12C-10	SR 34-506 T-9/5	
MIFHR 16C-10	SR 34-506 T-9/5	



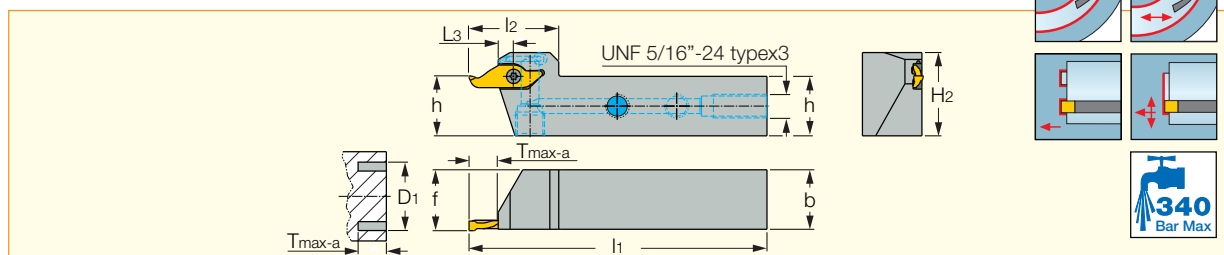
MIFR

Screw-Clamped Inserts for Internal Face Grooving and Turning, Penetration Diameter Range: 8-17 mm



Designation	Dimensions										IC908	Recommended Machining Data	
	I Ref.	W±0.02	R±0.02	f	h ₃	D ₁ min	D ₁ max	T _{max-a}	L ₅			f face-groove (mm/rev)	f face-turn (mm/rev)
MIFR 8-1.50-0.20	17.7	1.50	0.20	2.6	6.5	8.0	11.5	5.70	11.00	●	●	0.02-0.10	0.02-0.06
MIFR 8-1.60-0.80	17.7	1.60	0.80	2.6	6.5	8.0	12.1	5.70	11.00	●	●	0.02-0.10	0.02-0.06
MIFR 8-2.00-0.20	17.7	2.00	0.20	2.8	6.5	8.0	15.1	5.70	11.00	●	●	0.02-0.10	0.02-0.06
MIFR 8-2.20-0.20	17.7	2.20	0.20	2.9	6.5	8.0	17.0	5.70	11.00	●	●	0.02-0.10	0.02-0.06
MIFR 10-2.00-1.00	25.1	2.00	1.00	2.4	7.6	10.0	30.0	9.00	14.80	●	●	0.02-0.10	0.02-0.06
MIFR 10-2.50-0.20	25.1	2.50	0.20	3.1	7.6	10.0	30.0	9.00	14.80	●	●	0.02-0.10	0.02-0.06
MIFR 10-3.00-0.20	25.1	3.00	0.20	3.4	7.6	10.0	25.0	9.00	14.80	●	●	0.02-0.10	0.02-0.06
MIFR 10-3.00-1.50	25.1	3.00	1.50	3.3	7.6	10.0	35.0	9.00	14.80	●	●	0.02-0.10	0.02-0.06

For tools, see pages: MFHR-JHP (B126) • MIFHR (B125).



Designation	h	b	L_1	L_2	L_3	T_{max-a}	D_1 min	H_2	Insert
MFHR 12C-10-JHP	12.0	12.0	100.00	27.0	5.20	9.00	10.0	20.0	MIFR 10
MFHR 16C-10-JHP	16.0	16.0	100.00	27.0	5.20	9.00	10.0	24.0	MIFR 10

- For D_1 max, refer to insert data
- For inserts, see page: MIFR (B125).

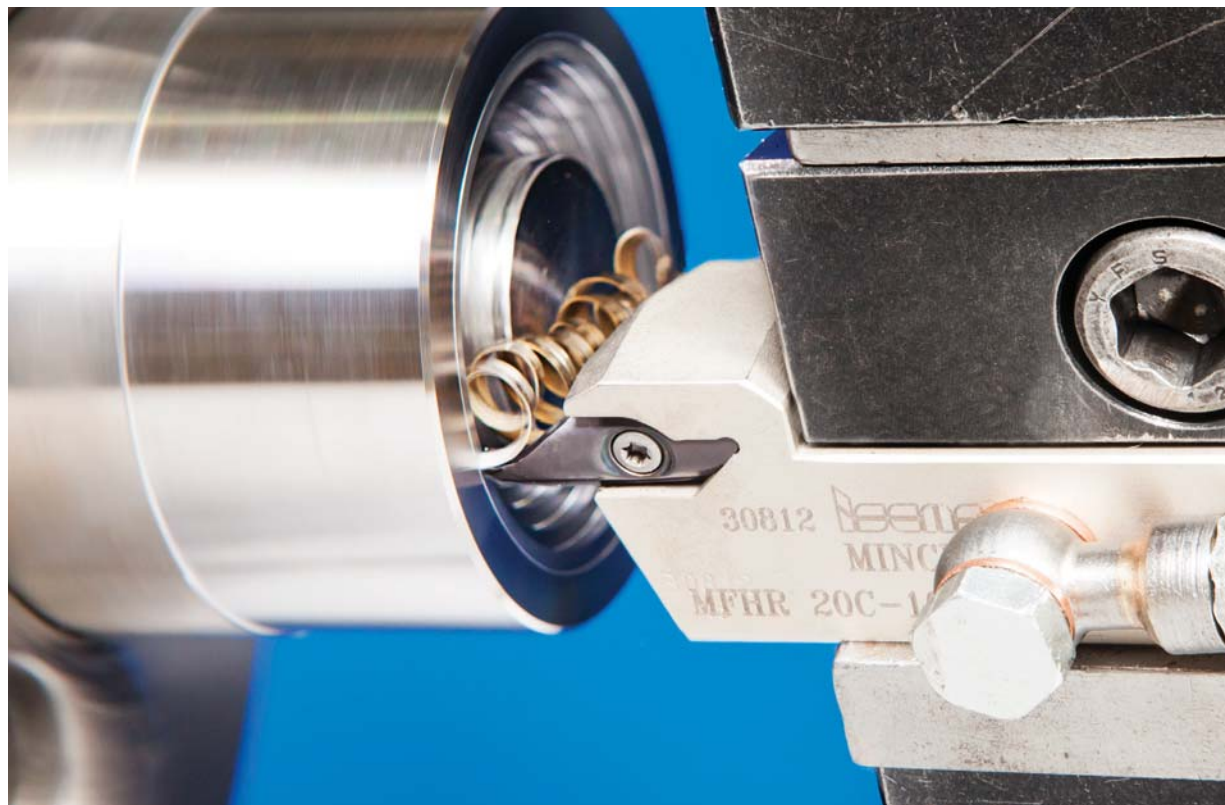
Flow Rate vs. Pressure

Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
MFHR 12C-10-JHP	3	5-9	9-11
MFHR 16C-10-JHP	3	7-9	9-11

Spare Parts

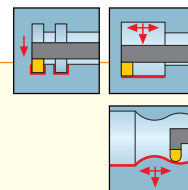
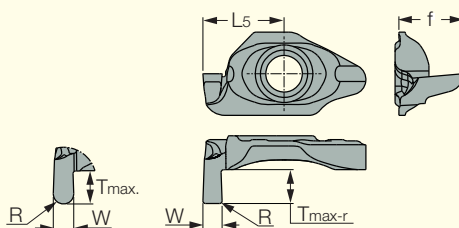


Designation	Screw	Key	Plug
MFHR-JHP	SR 34-506	T-9/5	SR 5/16UNF TL360



MIGR 8

Internal Shallow Grooving Inserts

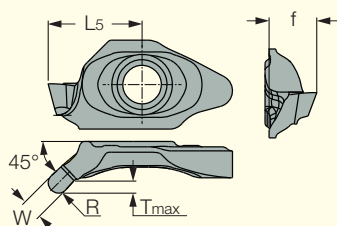


Designation	Dimensions						IC908	Recommended Machining Data		
	$W_{\pm 0.02}$	$R_{\pm 0.02}$	D_{min}	T_{max-r}	L_5	f		a_p (mm)	f_{turn} (mm/rev)	f_{groove} (mm/rev)
MIGR 8-0.50-0.00	0.50	-	8.50	1.40	6.30	4.0	●	0.05-0.50	0.03-0.10	0.01-0.03
MIGR 8-1.00-0.05	1.00	0.05	8.50	1.40	6.80	4.0	●	0.05-0.50	0.03-0.10	0.01-0.03
MIGR 8-1.20-0.05	1.20	0.05	9.20	2.10	6.80	4.7	●	0.05-0.50	0.03-0.10	0.01-0.03
MIGR 8-1.20-0.60	1.20	0.60	9.20	2.10	6.80	4.7	●	0.05-0.50	0.03-0.10	0.01-0.03
MIGR 8-1.50-0.05	1.50	0.05	9.20	2.10	6.80	4.7	●	0.05-0.50	0.03-0.10	0.01-0.03
MIGR 8-1.60-0.80	1.60	0.80	9.20	2.10	6.80	4.7	●	0.05-0.50	0.03-0.10	0.01-0.03
MIGR 8-2.00-0.10	2.00	0.10	8.90	1.80	6.80	4.4	●	0.05-0.50	0.03-0.10	0.01-0.03
MIGR 8-2.00-1.00	2.00	1.00	9.20	2.10	6.80	4.7	●	0.05-0.50	0.03-0.10	0.01-0.03

For tools, see pages: MIFHR (B125).

MIUR 8

45° Full Radius Internal Undercutting Inserts



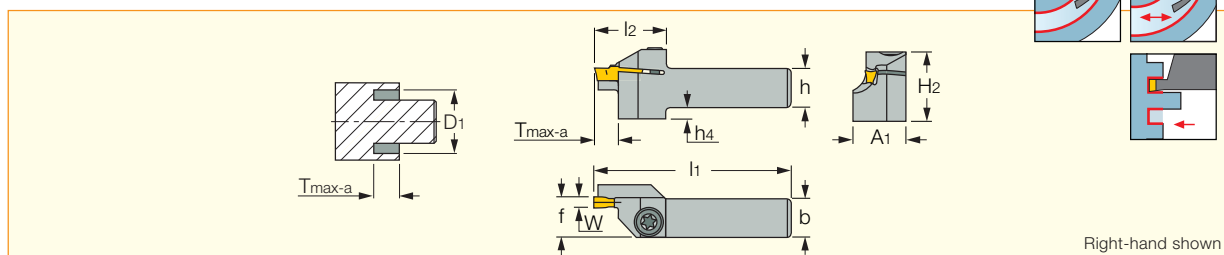
Designation	Dimensions						IC908	Recommended Machining Data		
	$W_{\pm 0.02}$	$R_{\pm 0.02}$	D_{min}	T_{max-r}	L_5	f		a_p (mm)	f_{turn} (mm/rev)	f_{groove} (mm/rev)
MIUR 8-1.00-0.50	1.00	0.50	8.00	1.10	6.70	3.6	●	0.03-0.50	0.03-0.10	0.01-0.03
MIUR 8-1.5-0.75	1.50	0.75	8.10	1.20	6.70	3.6	●	0.03-0.50	0.03-0.10	0.01-0.03
MIUR 8-2.00-1.00	2.00	1.00	8.30	1.36	6.70	3.6	●	0.03-0.50	0.03-0.10	0.01-0.03

For tools, see pages: MIFHR (B125).



HGHR/L-3

Integral Holders for Face Grooving and Turning, Dmin. 12 mm



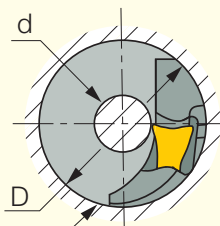
Designation	h	b	W	T _{max-a}	h ₄	f	D _{1 min} ⁽¹⁾	D _{1 max} ⁽²⁾	l ₁	l ₂	H ₂	A ₁
HGHR/L 1010-12-3T6	10.0	10.0	3.00	6.00	2.0	9.5	12.0	16.0	120.00	19.0	19.0	13.70
HGHR 1010-16-3T6	10.0	10.0	3.00	6.00	2.0	9.5	16.0	25.0	120.00	19.0	19.0	12.80
HGHR/L 1212-12-3T6	12.0	12.0	3.00	6.00	-	11.0	12.0	16.0	120.00	19.0	19.0	15.70
HGHR 1212-16-3T6	12.0	12.0	3.00	6.00	-	11.0	16.0	25.0	120.00	19.0	19.0	14.80
HGHR/L 1616-12-3T6	16.0	16.0	3.00	6.00	-	15.0	12.0	16.0	120.00	19.0	21.0	19.70
HGHR/L 1616-16-3T6	16.0	16.0	3.00	6.00	-	15.0	16.0	25.0	120.00	19.0	21.0	18.80

• Use HGN and GRIP inserts with right-hand toolholders only and HGPL inserts only with left-hand toolholders

⁽¹⁾ Minimum penetration diameter ⁽²⁾ Maximum penetration diameter

For inserts, see pages: GRIP (A19) • GRIP (full radius) (A20) • HGN-C (A70) • HGN-J (A71) • HGN-UT (A72) • HGPL (B133).

No limitation for widening groove toward or away from center, except for the following tools:



Limitation of widening toward center depends on the major diameter (D) as per chart.

HGHR/L...-12-3T6

D	d
12.0	4.0
13.0	1.0
13.5	0

Spare Parts

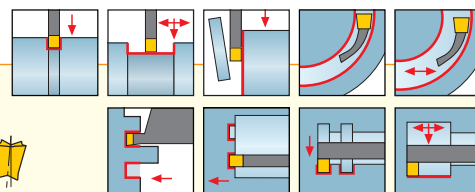
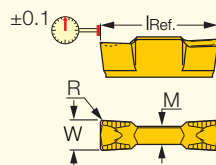
Designation	Screw	Key
HGHR/L-3	SR 76-1400	T-20/3

GRIP

Utility Double-Ended Inserts for External, Internal and Face Machining



HG-Y



No depth penetration limit

Designation	Dimensions				Tough $\longleftrightarrow$ Hard								Recommended Machining Data				
	W ± 0.05	R ± 0.05	I	M	IC830	IC8250	IC08	IC808	IC908	IC418	IC807	IC5010	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)	f face-groove (mm/rev)	f face-turn (mm/rev)
GRIP 3002Y	3.00	0.20	16.00	2.3	●	●	●	●	●	●	●	●	0.25-1.80	0.14-0.18	0.07-0.11	0.08-0.20	0.10-0.20
GRIP 3003Y	3.00	0.30	16.00	2.3	●	●	●	●	●	●	●	●	0.40-1.80	0.15-0.19	0.07-0.11	0.08-0.20	0.10-0.20
GRIP 318-040Y	3.18	0.40	16.00	2.3	●	●	●	●	●	●	●	●	0.50-1.90	0.17-0.22	0.07-0.12	0.08-0.20	0.10-0.20
GRIP 4002Y	4.00	0.20	19.00	2.8	●	●	●	●	●	●	●	●	0.25-2.40	0.16-0.21	0.09-0.14	0.10-0.24	0.15-0.30
GRIP 4004Y	4.00	0.40	19.00	2.8	●	●	●	●	●	●	●	●	0.50-2.40	0.18-0.24	0.09-0.15	0.10-0.24	0.15-0.30
GRIP 476-080Y	4.76	0.80	19.00	3.1	●	●	●	●	●	●	●	●	1.00-2.80	0.21-0.33	0.10-0.20	0.10-0.24	0.15-0.30

For tools, see pages: DGFH (A18) • DGTR/L (A56) • HELIR/L (A19) • HGFH (A18) • HGHR/L-3 (B128).

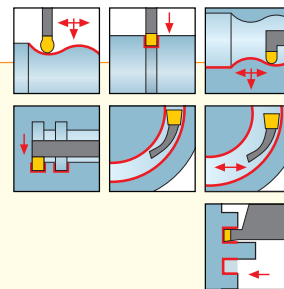
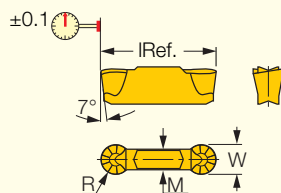
The Twisted Insert for Face Machining

The double-ended, twisted insert body makes it possible to machine to depths much larger than insert length. Unique chipformer for controlled chip flow in axial and radial directions. The rear angle is slanted in relation to the frontal edge so it does not come into contact with the machined groove surface, as tool penetrates deeply into the workpiece.

HELI-GRIP

GRIP (full radius)

Utility Double-Ended Full Radius Inserts, for External, Internal and Face Machining



No depth penetration limit

Designation	Dimensions				Tough ↔ Hard								Recommended Machining Data				
	W±0.05	R±0.05	I	M	IC830	IC8250	IC08	IC808	IC908	IC418	IC807	IC5010	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)	f face-groove (mm/rev)	f face-turn (mm/rev)
GRIP 3015Y	3.00	1.50	15.80	2.1	●	●	●	●	●	●	●	●	0.00-1.50	0.18-0.26	0.07-0.13	0.08-0.20	0.10-0.20
GRIP 318-159Y	3.18	1.59	16.00	2.3	●	●	●	●	●	●	●	●	0.00-1.50	0.19-0.28	0.07-0.13	0.08-0.20	0.10-0.20
GRIP 4020Y	4.00	2.00	19.00	2.8	●	●	●	●	●	●	●	●	0.00-2.00	0.20-0.34	0.09-0.17	0.10-0.24	0.15-0.30
GRIP 476-238Y	4.76	2.38	19.00	3.2	●	●	●	●	●	●	●	●	0.00-2.30	0.21-0.40	0.10-0.20	0.10-0.24	0.15-0.30

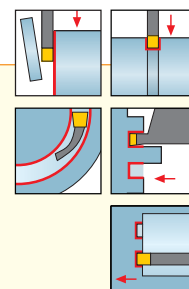
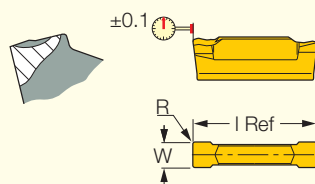
For tools, see pages: • DGFH (A18) • DGTR/L (A56) • HELIR/L (A19) • HGFH (A18) • HGHR/L-3 (B128)

DO-GRIP

TWISTED 2-SIDED

HGN-C

Parting and Grooving Insert, for Parting Bars, Hard Materials and Tough Applications



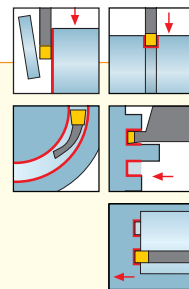
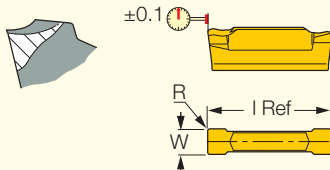
Designation	Dimensions			Tough ↔ Hard					Recommended Machining Data
	W±0.05	R	I	IC328	IC830	IC354	IC308	IC908	
HGN 3003C	3.00	0.30	15.80	●	●	●	●	●	f groove (mm/rev) 0.08-0.20

• No depth limit

For tools, see pages: • HELIR/L (A19) • HGFH (A18) • HGHR/L-3 (B128).

HGN-J

Parting and Grooving Insert for Soft Materials, Parting of Tubes, Small Diameters and Thin-Walled Parts



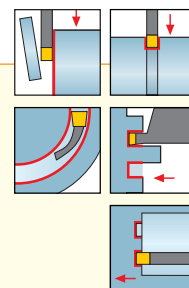
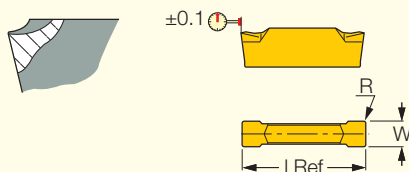
Designation	Dimensions			Tough ↔ Hard				Recommended Machining Data
	W ± 0.05	R	I	IC328	IC830	IC354	IC308	
HGN 3002J	3.00	0.20	16.10	●	●	●	●	f groove (mm/rev) 0.04-0.15

• No depth limit

For tools, see pages: • HELIR/L (A19) • HGFH (A18) • HGHR/L-3 (B128).

HGN-UT

Parting and Grooving Double-Sided Insert, for Low Feeds on Cr-Ni Alloys and Low Carbon Steel



Designation	Dimensions			Tough ↔ Hard		Recommended Machining Data
	W ± 0.05	R	I	IC328	IC354	
HGN 3003UT	3.00	0.30	15.80	●	●	f groove (mm/rev) 0.04-0.13

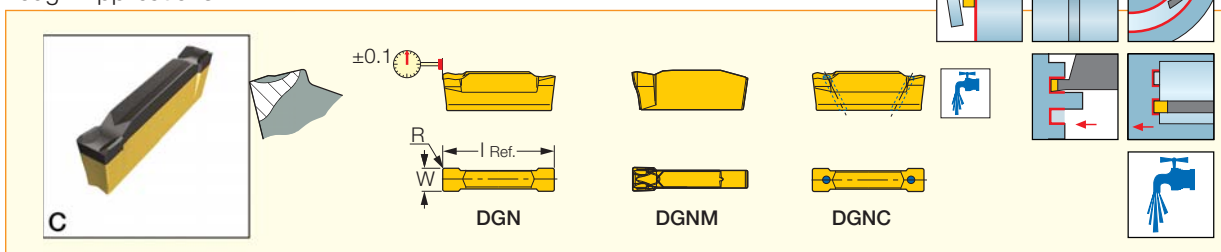
• No depth limit

For tools, see pages: HELIR/L (A19) • HGFH (A18) • HGHR/L-3 (B128).

DO-GRIP
TWISTED 2-SIDED

DGN/DGNC/DGNM-C

Double-Sided Parting Insert, for Parting and Grooving of Bars, Hard Materials and Tough Applications

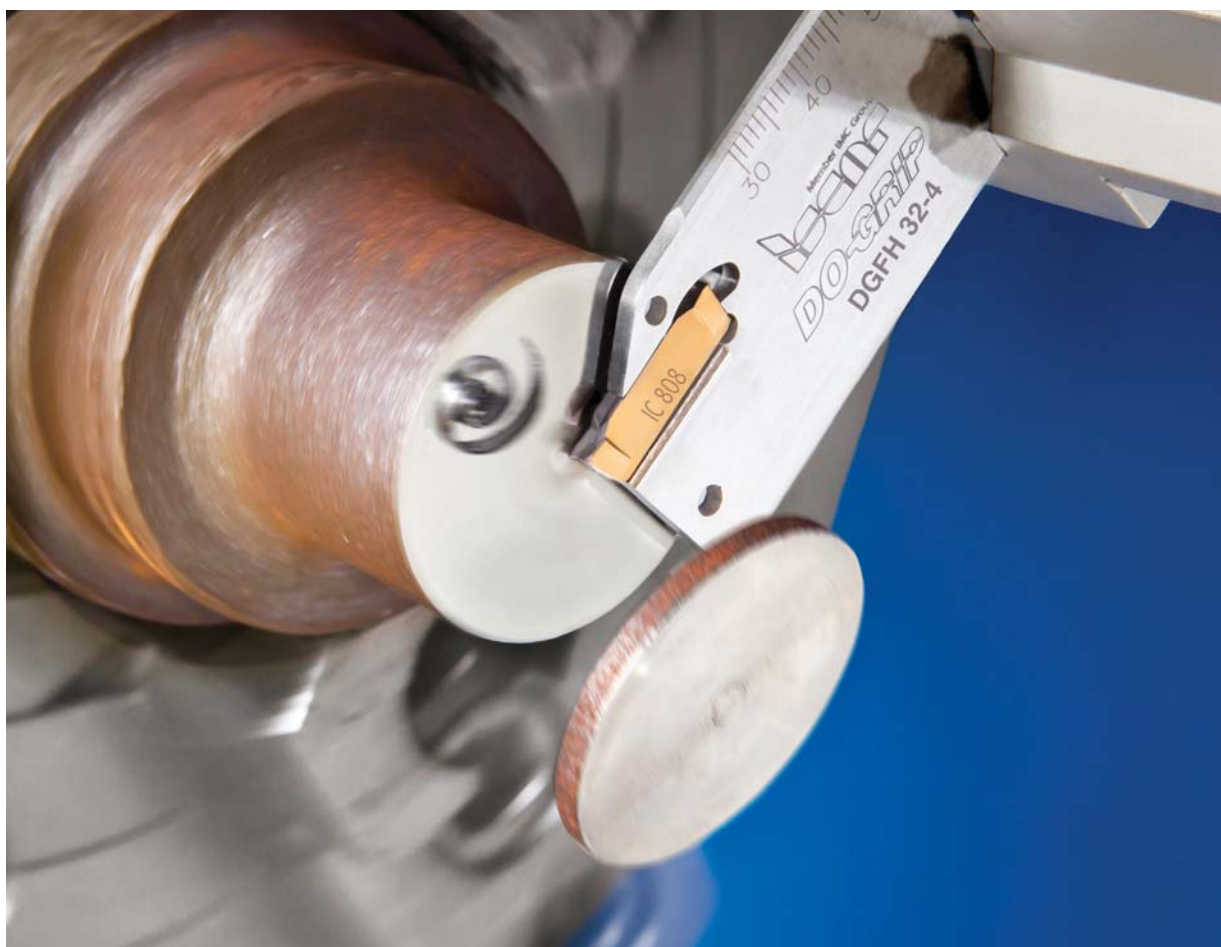


Designation	Dimensions					Tough ↔ Hard											Recommended Machining Data	
	W	W _{stoler}	R	T _{max-r}	I Ref.	IC328	IC830	IC1028	IC354	IC5400	IC308	IC808	IC908	IC30N	IC807	IC907	IC20	f groove (mm/rev)
DGN 2002C	2.00	0.03	0.20	18.00	19.9	●	●	●	●	●	●	●	●	●	●	●	●	0.05-0.16
DGN 2202C	2.20	0.03	0.20	18.00	19.8	●	●	●	●	●	●	●	●	●	●	●	●	0.05-0.16
DGN 2502C	2.50	0.03	0.20	18.00	20.7	●	●	●	●	●	●	●	●	●	●	●	●	0.08-0.20
DGN 3102C	3.10	0.04	0.20	18.00	20.1	●	●	●	●	●	●	●	●	●	●	●	●	0.10-0.25
DGNC 3102C ⁽¹⁾	3.10	0.04	0.20	18.00	21.0	●	●	●	●	●	●	●	●	●	●	●	●	0.10-0.25
DGNM 3202C ⁽²⁾	3.18	0.04	0.20	- ⁽³⁾	20.4	●	●	●	●	●	●	●	●	●	●	●	●	0.10-0.25
DGN 4003C	4.00	0.04	0.30	- ⁽³⁾	18.8	●	●	●	●	●	●	●	●	●	●	●	●	0.10-0.30
DGNC 4003C ⁽¹⁾	4.00	0.04	0.30	- ⁽³⁾	19.0	●	●	●	●	●	●	●	●	●	●	●	●	0.10-0.30

• Feed values for grade IC20 should be decreased by 50%

⁽¹⁾ Inserts with coolant holes, recommended coolant pressure 10 bar minimum ⁽²⁾ Single-ended insert. ⁽³⁾ No depth limit

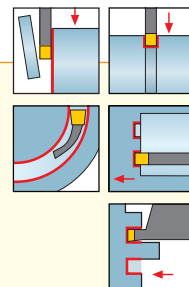
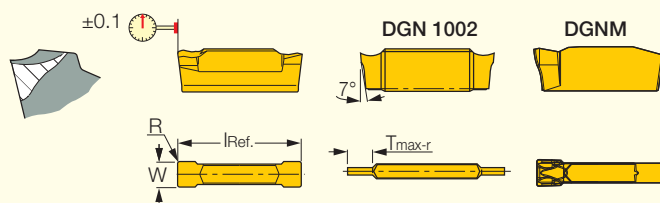
For tools, see pages: • DGFH (A18) • DGFHL-26B-TR-D (A52) • DGFHL/L (A51) • DGFHL/L-B-D..(R/L) (A51) • DGTR/L (A56) • DGTR/L-B-D-JHP-SL (A53) • DGTR/L-B-D-SH (A54) • DGTR/L-B/BC-D (A55) • HELIR/L (A19).



DO-GRIP

TWISTED 2-SIDED
DGN/DGNM-J/JS/JT

Double-Sided Parting and Grooving Insert for Soft Materials, Parting of Tubes, Small Diameters and Thin-Walled Parts



Designation	Dimensions					Tough ↔ Hard										Recommended Machining Data	
	W	W±toler	R	T _{max-r}	I Ref.	IC328	IC830	IC1028	IC354	IC5400	IC308	IC808	IC908	IC807	IC907	IC20	f groove (mm/rev)
DGN 1002J	1.00	0.02	0.16	3.00	21.0	●		●				●	●				0.02-0.07
DGN 1402J	1.40	0.03	0.16	15.00	15.8	●	●	●	●		●	●	●				0.03-0.12
DGN 1502J	1.50	0.03	0.16	18.00	20.9	●		●				●	●				0.03-0.12
DGN 2002JT	2.00	0.03	0.20	18.00	19.8							●					0.04-0.14
DGN 2200JS ⁽¹⁾	2.20	0.03	0.02	18.00	19.4	●	●										0.03-0.08
DGN 2202J	2.20	0.03	0.20	18.00	19.8	●	●	●	●	●	●	●	●	●		●	0.04-0.12
DGN 2202JT	2.20	0.03	0.20	18.00	19.8		●			●		●					0.04-0.14
DGN 3100JS ⁽¹⁾	3.10	0.04	0.02	18.00	19.7	●					●						0.03-0.10
DGN 3102J	3.10	0.04	0.20	18.00	20.1	●	●	●	●	●	●	●	●		●	●	0.04-0.16
DGN 3102JT	3.10	0.04	0.20	18.00	20.1		●			●		●			●	●	0.05-0.18
DGN 3202J	3.18	0.04	0.20	18.00	21.0								●				0.04-0.16
DGNM 3202J ⁽²⁾	3.18	0.04	0.20	- ⁽³⁾	20.3	●			●				●				0.04-0.16
DGN 4003J	4.00	0.04	0.30	- ⁽³⁾	18.9	●	●	●	●		●	●	●	●		●	0.05-0.18
DGN 4003JT	4.00	0.04	0.30	- ⁽³⁾	18.9		●					●					0.05-0.18

• JT chipformer has the basic positive configuration of the J-type and a reinforced negative frontal edge. Most suitable for soft materials at low to medium feeds.

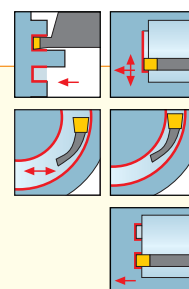
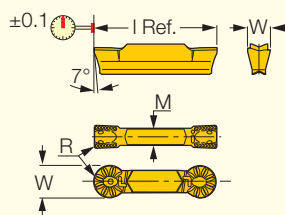
⁽¹⁾ Sharp corners ⁽²⁾ Single-ended insert. ⁽³⁾ No depth limit

For tools, see pages: • DGFH (A18) • DGFHL-26B-TR-D (A52) • DGFHR/L (A51) • DGFHR/L-B-D..(R/L) (A51) • DGTR/L (A56) • DGTR/L-B-D-JHP-SL (A53) • DGTR/L-B-D-SH (A54) • DGTR/L-B-D-TR (A56) • DGTR/L-B/BC-D (A55) • HELIR/L (A19).

HELIFACE

HGPL

Utility Double-Ended Face Machining Insert



Designation	Dimensions				Tough ↔ Hard					Recommended Machining Data		
	W±0.03	M	R±0.05	I	IC328	IC354	IC08	IC808	IC908	a _p (mm)	f face-groove (mm/rev)	f face-turn (mm/rev)
HGPL 3015Y	3.00	2.1	1.50	16.00				●	●	0.00-1.50	0.08-0.20	0.12-0.23
HGPL 3002Y	3.00	2.3	0.20	16.00		●	●	●	●	0.24-1.80	0.08-0.20	0.12-0.23
HGPL 3003Y	3.00	2.3	0.30	16.00	●	●	●	●	●	0.36-1.80	0.08-0.20	0.12-0.23
HGPL 4002Y	4.00	2.8	0.20	19.00		●	●	●	●	0.24-2.40	0.10-0.24	0.16-0.30
HGPL 4004Y	4.00	2.8	0.40	19.00		●	●	●	●	0.48-2.40	0.10-0.24	0.16-0.30
HGPL 4020Y	4.00	2.8	2.00	19.00			●	●	●	0.00-2.00	0.10-0.24	0.16-0.30

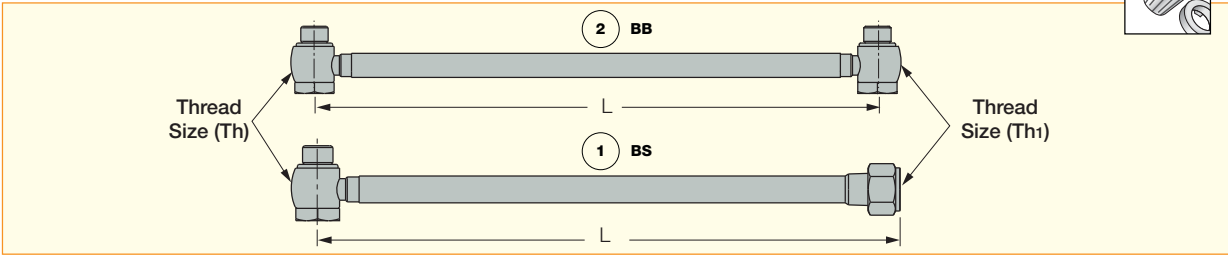
• No depth penetration limit

For tools, see pages: • HGHR/L-3 (B128).

Accessories

JHP HOSE

High Pressure Coolant Hose

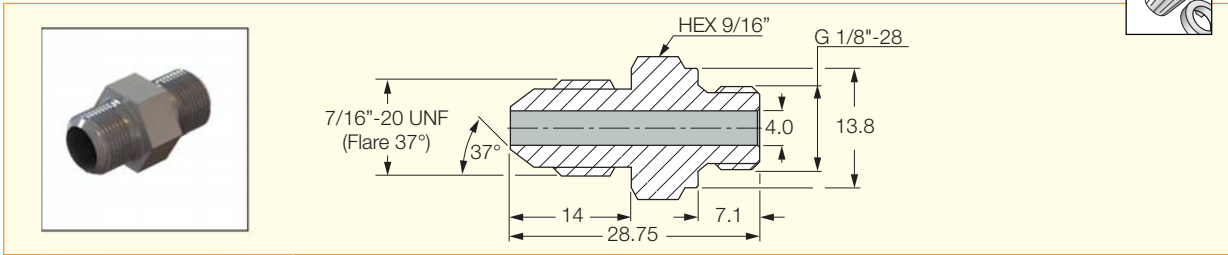


Designation	L	Fig.	Th	Th1
JHP HOSE G1/8-7/16-200BS	200.00	1	G1/8" BSPP	UNF 7/16" FLARE 37°
JHP HOSE 5/16-G1/8-200BS	200.00	1	5/16 -24 UNF	G1/8" BSPP
JHP HOSE 5/16-7/16-200BS	200.00	1	5/16 -24 UNF	UNF 7/16" FLARE 37°
JHP HOSE G1/8-G1/8-200BB	200.00	2	G1/8" BSPP	G1/8" BSPP
JHP HOSE G1/8-7/16-250BS	250.00	1	G1/8" BSPP	UNF 7/16" FLARE 37°
JHP HOSE G1/8-G1/8-250BB	250.00	2	G1/8" BSPP	G1/8" BSPP



JHP NIPPLE

High Pressure Adaptation Nipple

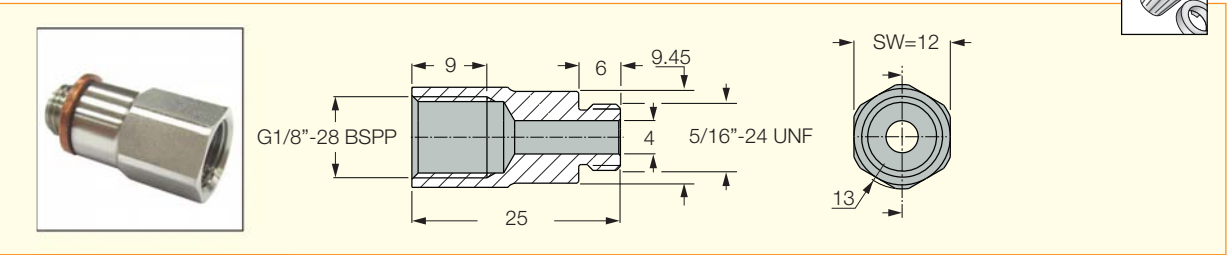


Designation	L
JHP NIPPLE G1/8"-7/16"UNF	28.75

Accessories

JHP CONNECTOR

High Pressure Connector



Designation	L
JHP CONECTOR 5/16"-G1/8"	25.00

Spare Parts

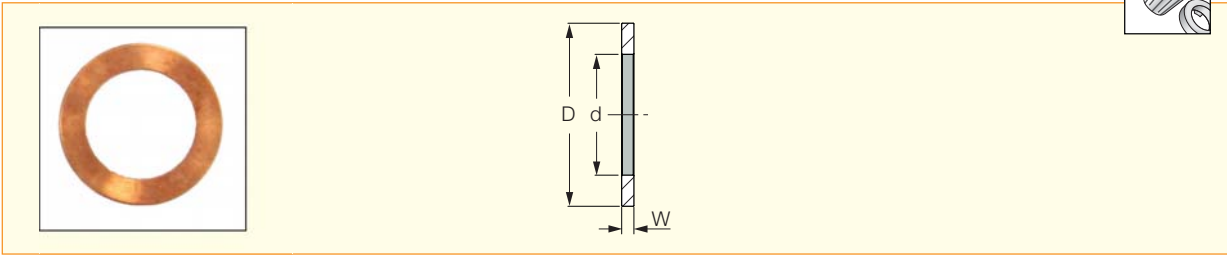


Designation	Seal
JHP CONECTOR 5/16"-G1/8"	JHP COPPER SEAL 5/16"-2.5



JHP COPPER SEAL

High Pressure Copper Seal



Designation	D	d	W
JHP COPPER SEAL 5/16"-2.5	9.4	8.00	2.50
JHP COPPER SEAL 5/16"	11.00	8.00	1.00
JHP COPPER SEAL 1/8"	15.00	10.00	1.00

