

NPA

Nov 25th, 2024
NPAI-2403

///G GROOVE



INDEXABLE INSERT

Parting & Turn-groove Insert for Multi-purpose machining

Expansion of Products

The newly designed double-ended Parting & Turn-groove Insert with bigger size of width 5 to 8mm offers a wide range of applications.



Expansion of Parting & Turn-Groove

Parting & Multi-functional Grooving Insert

"Expansion of YG-1's Parting & Turn-groove Line: Introducing Larger Sizes"

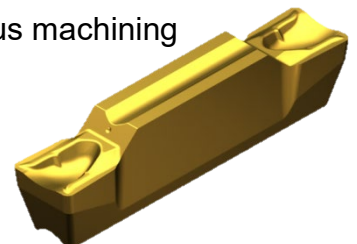
YG-1 has expanded its product line by introducing additional larger size of widths 5 to 8mm to its versatile Parting & Turn-groove range.

Inserts designed with optimal chip breakers can now be applied to multi-purpose applications including turning, parting, grooving, face grooving, face turning and internal machining for various work-piece materials, now accommodating more demanding applications with the newly introduced larger sizes.

The double-ended inserts are available in 5 different chip breakers:

- The TDN chip breaker is 1st choice for general parting and deep grooving with stable cutting edge and suitability for medium to high feed rates.
- The TDP chip breaker is ideal for parting and deep grooving of soft materials with sharp cutting edge, low cutting force and low to medium feed rates.
- The TDY-GL chip breaker is ideal for grooving and side turning with low cutting force and excellent chip evacuation.
- The TDY-GM chip breaker is perfect for side turning with wide grooves at higher feeds, face grooving, and interrupted cut due to stable cutting edge.
- The TDY-RG chip breaker, a full radius insert, offers versatility in profile machining applications.

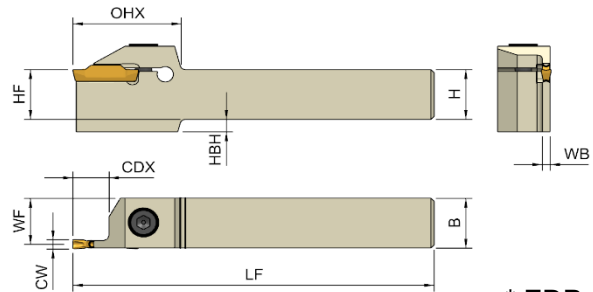
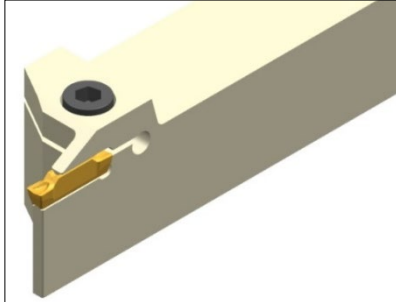
The 5 chip breaker options are highly versatile across various machining fields. Particularly, when used with new external holders and face grooving holders, they deliver outstanding machining performance, now enhanced by the addition of larger sizes to support a wide range of applications.



Expansion of Turn-Groove

YTER/L - Holder for external turning and grooving (Metric)

Holders



* EDP : 5700..

Designation	Type (EDP)		CW	H (HF)	B	LF	CDX	WF	OHX	WB	HBH	Insert
	Right	Left										
YTER/L2020K-5T13	● 0695	○ 0739	5	20	20	125	13	18.02	37	3.95	-	TD.5..
YTER/L2020K-5T20	○ 0696	○ 0740	5	20	20	125	20	18.02	39	3.95	-	
YTER/L2525M-5T13	● 0697	○ 0741	5	25	25	150	13	23.02	37	3.95	-	
YTER/L2525M-5T20	○ 0698	○ 0742	5	25	25	150	20	23.02	39	3.95	-	
YTER/L2525M-5T25	● 0699	○ 0743	5	25	25	150	25	23.02	47	3.95	-	
YTER/L2525M-5T32	○ 0700	○ 0744	5	25	25	150	32	23.02	56	3.95	-	
YTER/L3232P-5T20	○ 0701	○ 0745	5	32	32	170	20	30.02	39	3.95	-	
YTER/L3232P-5T32	● 0702	○ 0746	5	32	32	170	32	30.02	56	3.95	-	TD.6..
YTER/L2020K-6T13	● 0703	○ 0747	6	20	20	125	13	17.52	38	4.95	-	
YTER/L2020K-6T20	○ 0704	○ 0748	6	20	20	125	20	17.52	41	4.95	-	
YTER/L2525M-6T13	● 0705	○ 0749	6	25	25	150	13	22.52	38	4.95	-	
YTER/L2525M-6T20	○ 0706	○ 0750	6	25	25	150	20	22.52	41	4.95	-	
YTER/L2525M-6T25	● 0707	○ 0751	6	25	25	150	25	22.52	47	4.95	-	
YTER/L2525M-6T32	○ 0708	○ 0752	6	25	25	150	32	22.52	56	4.95	7	
YTER/L3232P-6T20	○ 0709	○ 0753	6	32	32	170	20	29.52	41	4.95	-	TD.8..
YTER/L3232P-6T25	○ 0710	○ 0754	6	32	32	170	25	29.52	47	4.95	-	
YTER/L3232P-6T32	● 0711	○ 0755	6	32	32	170	32	29.52	56	4.95	-	
YTER/L2525M-8T16	● 0712	○ 0756	8	25	25	150	16	22.02	47	5.95	7	
YTER/L2525M-8T25	○ 0713	○ 0757	8	25	25	150	25	22.02	47	5.95	7	
YTER/L3232P-8T16	● 0714	○ 0758	8	32	32	170	16	29.02	47	5.95	-	
YTER/L3232P-8T25	○ 0715	○ 0759	8	32	32	170	25	29.02	47	5.95	-	
YTER/L3232P-8T32	● 0716	○ 0760	8	32	32	170	32	29.02	56	5.95	-	

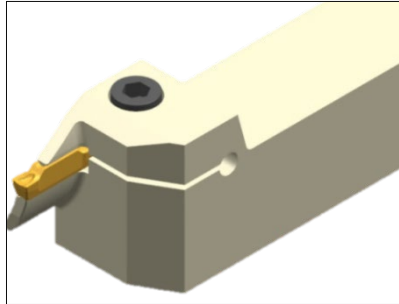
Spare parts

Designation	Screw		Wrench	
	EDP No.	Designation	EDP No.	Designation
YTER/L2020-5	58000038	SHB-M6x1.0x20L	58000041	HL-5
YTER/L2525-5				
YTER/L3232-5				
YTER/L2020-6	58000045	SHB-M8x1.25x20L	58000047	HL-6
YTER/L2525-6/8				
YTER/L3232-6/8				

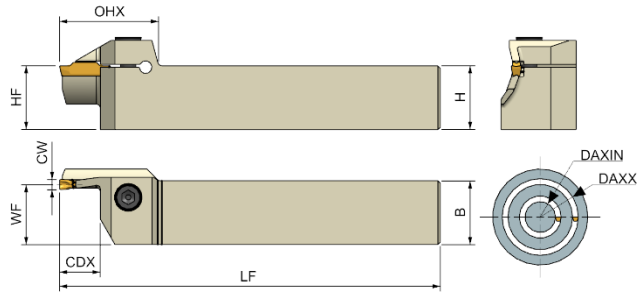
Expansion of Turn-Groove

YTFR/L - Holder for face grooving (Metric)

Holders



※ Right hand shown



* EDP : 5700..

Designation	Type (EDP)		CW	H (HF)	B	LF	CDX	WF	OHX	DAXIN	DAXX	Insert
	Right	Left										
YTFR/L25M-D050080-5T20A	● 0717	○ 0761	5	25	25	150	20	23.02	49	50	80	TD.5.
YTFR/L25M-D070110-5T20A	● 0718	○ 0762	5	25	25	150	20	23.02	49	70	110	
YTFR/L25M-D100150-5T20A	● 0719	○ 0763	5	25	25	150	20	23.02	49	100	150	
YTFR/L25M-D140200-5T20A	● 0720	○ 0764	5	25	25	150	20	23.02	49	140	200	
YTFR/L25M-D200-5T20A	● 0721	○ 0765	5	25	25	150	20	23.02	49	200	-	
YTFR/L25M-D058100-6T20A	● 0722	○ 0766	6	25	25	150	20	22.52	49	58	100	TD.6..
YTFR/L25M-D088180-6T20A	● 0723	○ 0767	6	25	25	150	20	22.52	49	88	180	
YTFR/L25M-D168400-6T20A	● 0724	○ 0768	6	25	25	150	20	22.52	49	168	400	

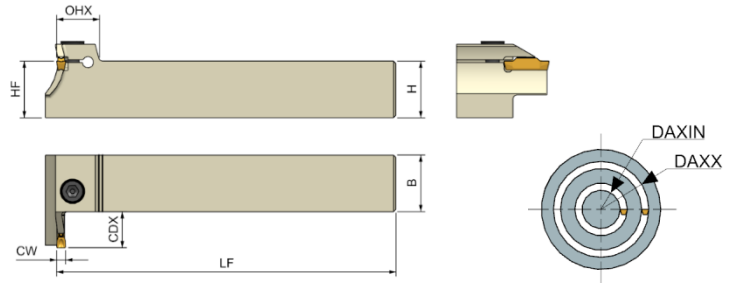
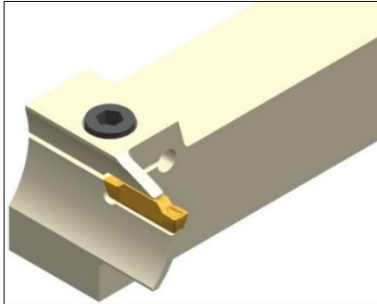
Spare parts

Designation	Screw		Wrench	
	EDP No.	Designation	EDP No.	Designation
YTFR/L25-5/6	58000046	SHB-M8x1.25x25L	58000047	HL-6

Expansion of Turn-Groove

YTFPR/L - Perpendicular type holder for face grooving (Metric)

Holders



※ Right hand shown

* EDP : 5700..

Designation	Type (EDP)		CW	H (HF)	B	LF	CDX	OHX	DAXIN	DAXX	Insert
	Right	Left									
YTFPR/L25M-D050080-5T20A	● 0725	○ 0769	5	25	25	150	20	22	50	80	TD.5..
YTFPR/L25M-D070110-5T20A	● 0726	○ 0770	5	25	25	150	20	22	70	110	
YTFPR/L25M-D100150-5T20A	● 0727	○ 0771	5	25	25	150	20	22	100	150	
YTFPR/L25M-D140200-5T20A	● 0728	○ 0772	5	25	25	150	20	22	140	200	
YTFPR/L25M-D200-5T20A	● 0729	○ 0773	5	25	25	150	20	22	200	-	
YTFPR/L25M-D073150-6T20A	● 0730	○ 0774	6	25	25	150	20	22	73	150	TD.6..
YTFPR/L25M-D138250-6T20A	● 0731	○ 0775	6	25	25	150	20	22	138	250	

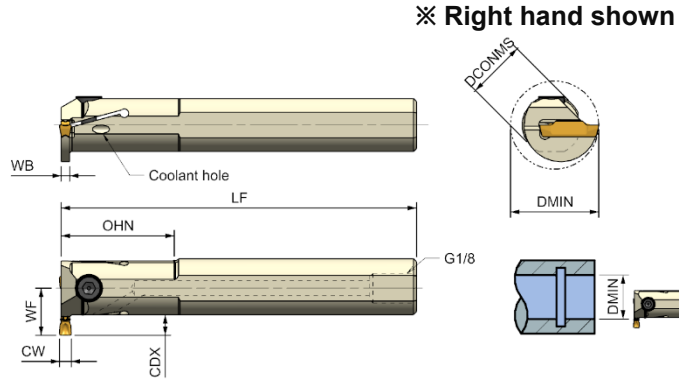
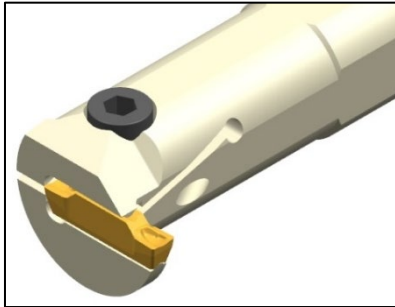
Spare parts

Designation	Screw		Wrench	
	EDP No.	Designation	EDP No.	Designation
YTFR/L25-5/6	58000046	SHB-M8x1.25x25L	58000047	HL-6

Expansion of Turn-Groove

YTIR/L - Internal holder for turning and grooving (Metric)

Holders



※ Right hand shown

* EDP : 5700..

Designation	Type (EDP)		CW	DCONMS	LF	CDX	OHN	WF	WB	DMIN	Insert
	Right	Left									
YTIR/L25R-D31-5T07-C	● 0732	○ 0776	5	25	200	7	40	19.5	3.95	31	TD.5..
YTIR/L32S-D40-5T10-C	● 0733	○ 0777	5	32	250	10	60	26	3.95	40	
YTIR/L32S-D31-6T07-C	● 0734	○ 0778	6	32	250	7	60	23	4.95	31	TD.6..
YTIR/L32S-D40-6T10-C	● 0735	○ 0779	6	32	250	10	60	26	4.95	40	
YTIR/L32S-D40-8T10-C	● 0736	○ 0780	8	32	250	10	60	26	5.95	40	TD.8..
YTIR/L40T-D45-8T10-C	● 0737	○ 0781	8	40	300	10	65	30	5.95	45	

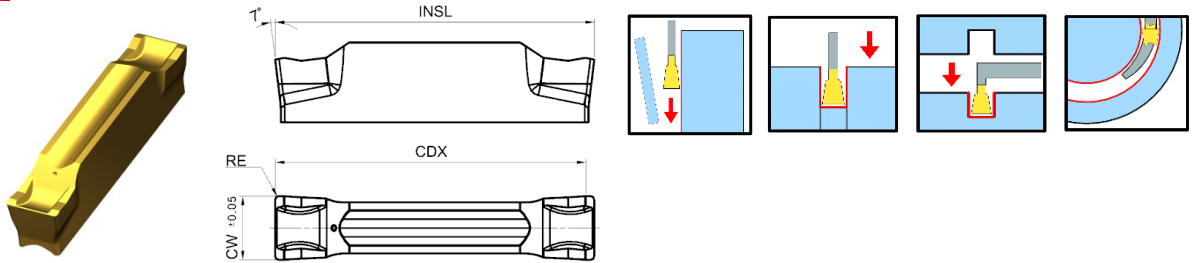
Spare parts

Designation	Screw		Wrench	
	EDP No.	Designation	EDP No.	Designation
YTIR/L25-5	58000044	SHB-M6x1.0x16L	58000041	HL-5
YTIR/L32-5/6/8	58000038	SHB-M6x1.0x20L		
YTIR/L40-8	58000039	SHB-M6x1.0x25L		

Expansion of Parting-Grooving

TDN/TDP – Insert information (Metric)

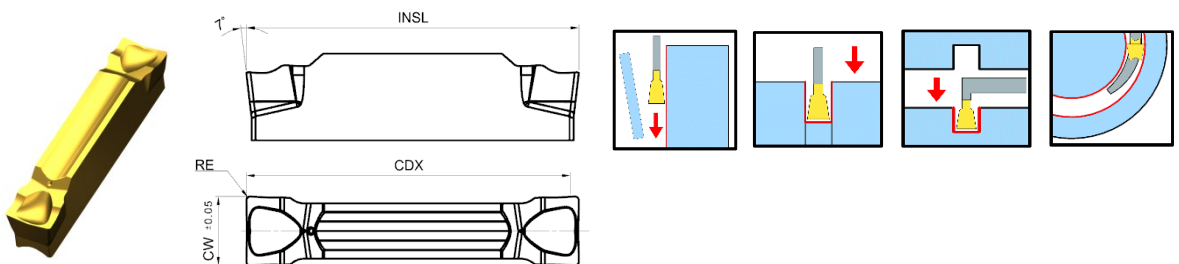
TDN



* EDP : 5200..

Designation	CW	RE	INSL	CDX	Grooving fn(mm/r)	Grade		
						YG602	YG602G	YG603
TDN5003	5.0	0.3	25.0	24	0.09-0.30	● 0042	○ 0136	○ 0130
TDN6003	6.0	0.3	25.0	24	0.10-0.35	● 0132	○ 0137	○ 0133
TDN8004	8.0	0.4	30.0	29	0.12-0.40	● 0138	○ 0139	○ 0140

TDP



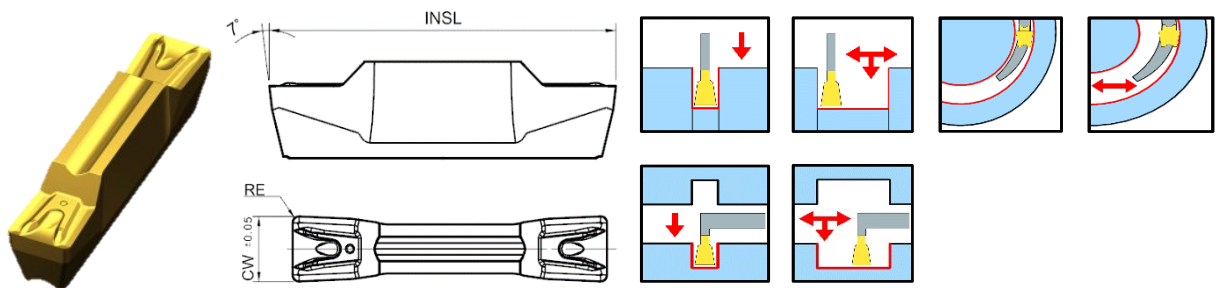
* EDP : 5200..

Designation	CW	RE	INSL	CDX	Grooving fn(mm/r)	Grade		
						YG602	YG602G	YG603
TDP5003	5.0	0.3	25.0	24	0.06-0.20	● 0142	○ 0143	○ 0144
TDP6003	6.0	0.3	25.0	24	0.06-0.22	● 0145	○ 0146	○ 0147

Expansion of Turn-Groove

TDY – GM Chipbreaker information (Metric)

TDY - GM



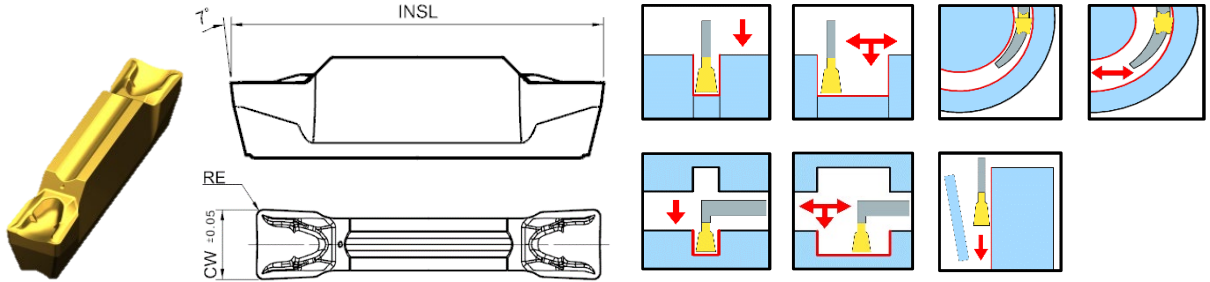
* EDP : 5200..

Designation	CW	RE	INSL	Turning		Grooving	Grade	
				fn(mm/r)	ap(mm)	fn(mm/r)	YG602G	YG603
TDY5E-0.4-GM	5.0	0.4	25.0	0.18-0.35	0.5-3.0	0.08-0.27	● 0134	● 0135
TDY5E-0.8-GM	5.0	0.8	25.0	0.18-0.37	0.8-3.0	0.10-0.27	● 0148	● 0149
TDY6E-0.4-GM	6.0	0.4	25.0	0.18-0.40	0.8-3.6	0.12-0.30	● 0150	● 0153
TDY6E-0.8-GM	6.0	0.8	25.0	0.18-0.42	1.0-3.6	0.12-0.35	● 0129	● 0154
TDY8E-0.8-GM	8.0	0.8	30.0	0.20-0.50	1.0-4.5	0.10-0.25	● 0155	● 0156

Expansion of Turn-Groove

TDY – GL / RG Chipbreaker information (Metric)

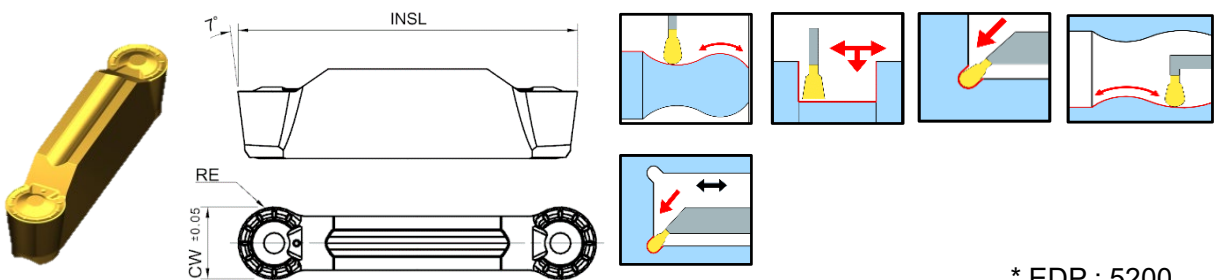
TDY - GL



* EDP : 5200..

Designation	CW	RE	INSL	Turning		Grooving	Grade	
				fn(mm/r)	ap(mm)	fn(mm/r)	YG602G	YG603
TDY5E-0.4-GL	5.0	0.4	25.0	0.10-0.30	0.5-3.0	0.08-0.30	● 0157	● 0158
TDY6E-0.4-GL	6.0	0.4	25.0	0.15-0.35	0.5-3.5	0.12-0.35	● 0159	● 0160
TDY8E-0.8-GL	8.0	0.8	30.0	0.20-0.50	1.0-4.5	0.15-0.50	● 0164	● 0165

TDY - RG



* EDP : 5200..

Designation	CW	RE	INSL	Turning		Grooving	Grade	
				fn(mm/r)	ap(mm)	fn(mm/r)	YG602G	YG603
TDY5E-2.5-RG	5.0	2.5	25.0	0.20-0.50	0.1-2.0	0.12-0.23	● 0166	● 0167
TDY6E-3.0-RG	6.0	3.0	25.0	0.25-0.60	0.1-2.4	0.15-0.28	● 0168	● 0169
TDY8E-4.0-RG	8.0	4.0	30.0	0.25-0.70	0.1-3.2	0.18-0.30	● 0170	● 0171

Expansion of Turn-Groove

TD* — Recommended Cutting Conditions (Cutting Speed, Metric)

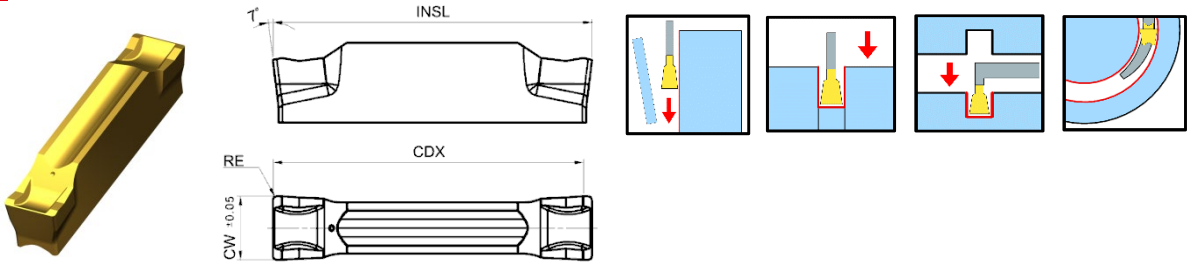
* Unit : m/min

Materials	VDI	YG602G	YG603
Non-alloy steel	1-5	120-180	-
Low alloy steel	6-9	100-140	-
High alloy steel	10-11	80-110	-
Ferritic & Martensitic stainless steel	12-13	70-160	50-90
Austenitic stainless steel	14	55-140	40-80
Grey cast iron	15-16	110-185	-
Nodular cast iron	17-18	110-140	-
Malleable cast iron	19-20	90-120	-
Non-ferrous metals (Al)	21-30	250-440	-
Super alloys & Titanium alloys	31-37	25-45	-
Hardened steel	38-41	25-50	-

Expansion of Parting-Grooving

TDN/TDP – Insert information (Inch)

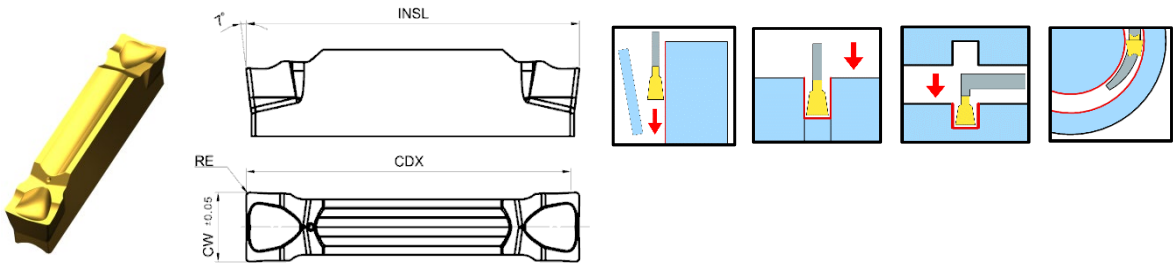
TDN



* EDP : 5200..

Designation	CW	RE	INSL	CDX	Grooving fn(in/r)	Grade		
						YG602	YG602G	YG603
TDN5003	.197	.012	.984	.945	.004-.012	● 0042	○ 0136	○ 0130
TDN6003	.236	.012	.984	.945	.004-.014	● 0132	○ 0137	○ 0133
TDN8004	.315	.016	1.181	1.142	.005-.016	● 0138	○ 0139	○ 0140

TDP



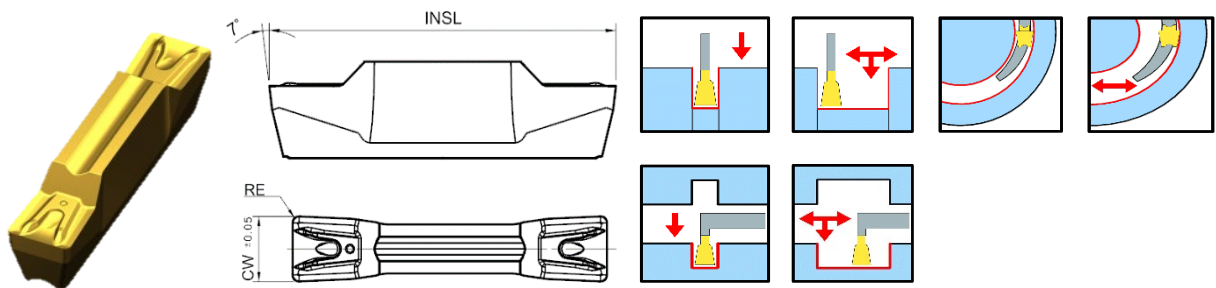
* EDP : 5200..

Designation	CW	RE	INSL	CDX	Grooving fn(in/r)	Grade		
						YG602	YG602G	YG603
TDP5003	.197	.012	.984	.945	.002-.008	● 0142	○ 0143	○ 0144
TDP6003	.236	.012	.984	.945	.002-.009	● 0145	○ 0146	○ 0147

Expansion of Turn-Groove

TDY – GM Chip-breaker information (Inch)

TDY - GM



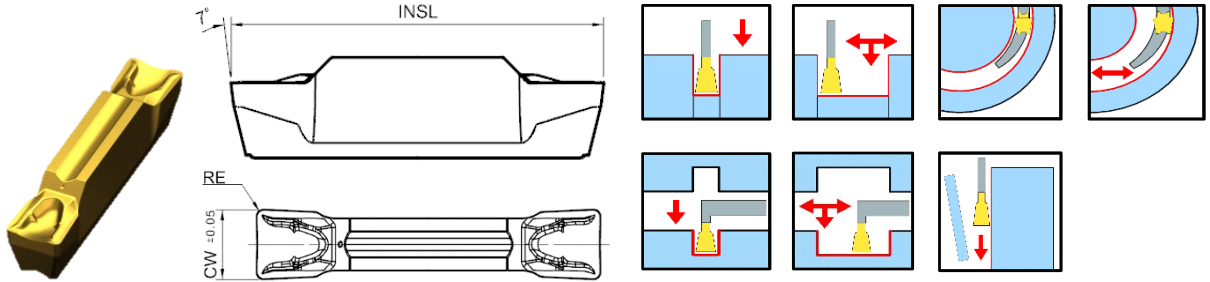
* EDP : 5200..

Designation	CW	RE	INSL	Turning		Grooving	Grade	
				fn(in/r)	ap(in)	fn(in/r)	YG602G	YG603
TDY5E-0.4-GM	.197	.016	.984	.007-.014	.020-.118	.003-.011	● 0134	● 0135
TDY5E-0.8-GM	.197	.031	.984	.007-.015	.031-.118	.004-.011	● 0148	● 0149
TDY6E-0.4-GM	.236	.016	.984	.007-.016	.031-.142	.005-.012	● 0150	● 0153
TDY6E-0.8-GM	.236	.031	.984	.007-.017	.039-.142	.005-.014	● 0129	● 0154
TDY8E-0.8-GM	.315	.031	1.181	.008-.020	.039-.177	.004-.010	● 0155	● 0156

Expansion of Turn-Groove

TDY – GL / RG Chip-breaker information (Inch)

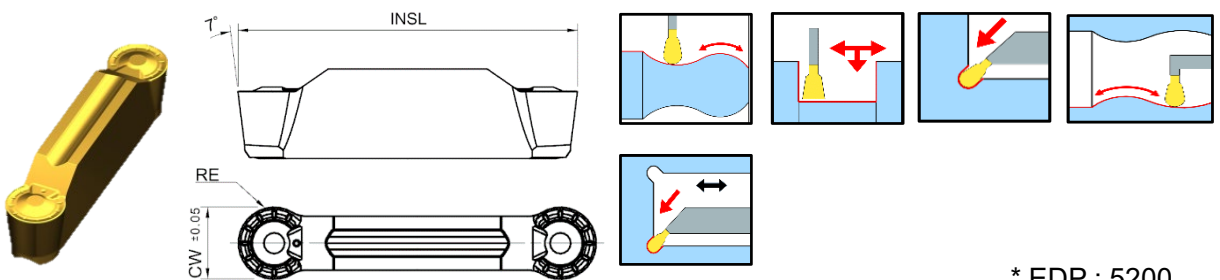
TDY - GL



* EDP : 5200..

Designation	CW	RE	INSL	Turning		Grooving	Grade	
				fn(in/r)	ap(in)	fn(in/r)	YG602G	YG603
TDY5E-0.4-GL	.197	.016	.984	.004-.012	.020-.118	.003-.012	● 0157	● 0158
TDY6E-0.4-GL	.236	.016	.984	.006-.014	.020-.138	.005-.014	● 0159	● 0160
TDY8E-0.8-GL	.315	.031	1.181	.008-.020	.039-.177	.006-.020	● 0164	● 0165

TDY - RG



* EDP : 5200..

Designation	CW	RE	INSL	Turning		Grooving	Grade	
				fn(in/r)	ap(in)	fn(in/r)	YG602G	YG603
TDY5E-2.5-RG	.197	.098	.984	.008-.020	.004-.079	.005-.009	● 0166	● 0167
TDY6E-3.0-RG	.236	.118	.984	.010-.024	.004-.094	.006-.011	● 0168	● 0169
TDY8E-4.0-RG	.315	.157	1.181	.010-.028	.004-.126	.007-.012	● 0170	● 0171

Expansion of Turn-Groove

TD* — Recommended Cutting Conditions (Cutting Speed, Inch)

* Unit : SFM

Materials	VDI	YG602G	YG603
Non-alloy steel	1-5	395-590	-
Low alloy steel	6-9	330-460	-
High alloy steel	10-11	260-360	-
Ferritic & Martensitic stainless steel	12-13	230-525	165-295
Austenitic stainless steel	14	180-460	130-260
Grey cast iron	15-16	360-605	-
Nodular cast iron	17-18	360-460	-
Malleable cast iron	19-20	295-395	-
Non-ferrous metals (Al)	21-30	820-1440	-
Super alloys & Titanium alloys	31-37	80-150	-
Hardened steel	38-41	80-165	-



Expansion of Turn-Groove

Turn-Groove Item

If you need further information or questions, please contact
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