

NEW PRODUCT *DUETBALL* NEWS



**An Excellent Choice for Rough
& Semi-finish Profile Milling**

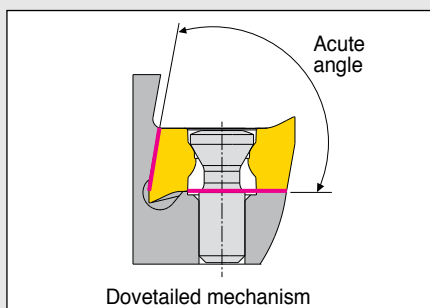




DUETBALL

An excellent choice for rough & semi-finish profile milling

FEATURES

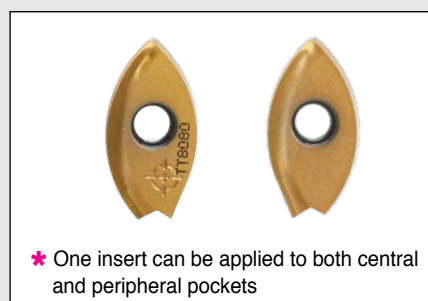
- Dovetail mechanism clamping provides increased security and insert clamping
- High helix cutting edge for smooth milling
- Ground insert for excellent high precision
- Economical double sided insert
- Inserts are applicable for both internal and external pockets making it easier to control inventory
- The direct cooling system and good chip evacuation extends the tool's life
- Standardization from minimum diameter 16mm, 20mm, 25mm, 30mm to 32mm in end mill and modular types



★ Please check both insert and pocket for correct positioning.
Insert marked  must be clamped in pocket marked  on the cutter.



→ Axial supporting side for stable clamping



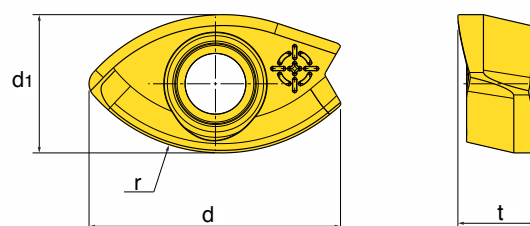
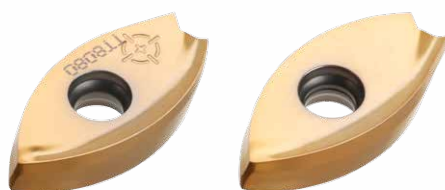
The new DUETBALL from TaeguTec for machining of components in the mold & die, aerospace and power generation industries is an excellent choice for rough & semi-finish profile milling.

Not only is the new line of indexable insert and tool holders ideal for rough & semi-finish profile milling, it saves on cost whilst simplifying inventory.

The DUETBALL enables stable machining credit to its dovetail design providing strong clamping power. A double-sided insert with high helix cutting edge for both the central/peripheral tool holder pockets mean an economical high productivity cutting tool that achieves smooth milling of workpiece materials as well as eliminating the need for extra inserts. Another advantage is the through hole coolant system that allows for easy chip evacuation.

The DUETBALL end-mill and modular type are available in 16, 20, 25, 30 & 32 mm diameters.

Inserts - 2FB160/200/250/300/320



Designation	Dimension (mm)				Grade			
	d	d1	t	r	TT9080	TT8080	TT8020	TT7800
2FB160-M	12.4	6.8	3.7	8	●	●	●	●
2FB200-M	14.9	8.2	4.8	10	●	●	●	●
2FB250-M	18.9	10.2	5.9	12.5	●	●	●	●
2FB300-M	22.1	11.8	6.9	15	●	●	●	●
2FB320-M	23.9	12.8	7.5	16	●	●	●	●

End mill type

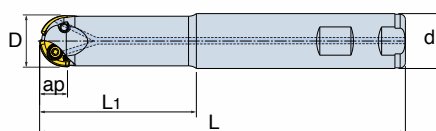


Fig.1

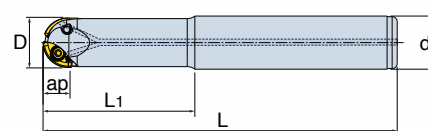


Fig.2

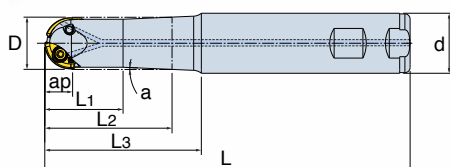


Fig.3

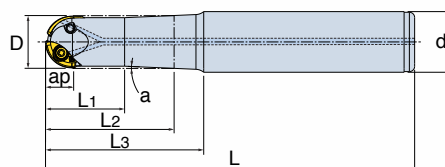


Fig.4

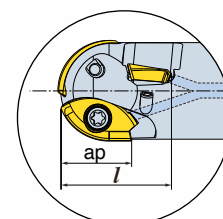
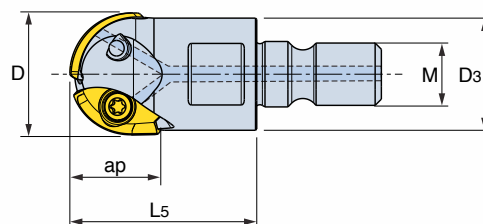


Fig.5

Designation	Inserts				Dimension (mm)								Screw		Wrench		Fig.
	Ball	Periphery	Periphery	Periphery	D	d	L	L1	L2	L3	ap	l	Ball	Periphery	Ball	Periphery	
2F 16-11-W20-L120	2FB160-M	2	-	-	16	20	120	35	43.5	60	11.8	-	TS 25064I		TD 8		3
2F 16-11-20-L130		2	-	-	16	20	130	35	45.9	60	11.8	-					4
2F 16-11-20-L200		2	-	-	16	20	200	35	45.9	60	11.8	-					4
2F 16-20-25-L200-P		2	APKT 09T3	1	16	20	200	40	43.4	65	11.8	20.5		TS 25064I			5
2F 20-13-W25-L150	2FB200-M	2	-	-	20	25	150	40	45.7	65	13.6	-	TS 30085I/HG		TD 9		3
2F 20-13-20-L220		2	-	-	20	20	220	70	-	-	13.6	-					2
2F 20-13-25-L160		2	-	-	20	25	160	45	54.5	75	13.6	-					4
2F 20-13-25-L220		2	-	-	20	25	220	70	-	-	13.6	-					2
2F 20-22-25-L200-P		2	APKT 09T3	1	20	25	200	70	74.3	90	13.6	22.3		TS 25055I/HG		TD8	5
2F 20-22-32-L250-P	2FB250-M	2	APKT 09T3	1	20	32	250	70	72.3	100	13.6	22.3	TS 35085I/HG	TS 25055I/HG	TD 15	TD8	5
2F 25-17-W25-L150		2	-	-	25	25	150	60	-	-	17.7	-					1
2F 25-17-32-L150		2	-	-	25	32	150	50	55.7	75	17.7	-					4
2F 25-17-32-L200		2	-	-	25	32	200	55	61.6	85	17.7	-					4
2F 25-17-32-L300		2	-	-	25	32	300	70	80	120	17.7	-					4
2F 25-35-25-L200-P		2	-	-	25	25	200	85	-	-	17.7	35.1					5
2F 25-35-32-L200-P		2	-	-	25	32	200	90	-	-	17.7	35.1					5
2F 25-35-32-L250-P		2	APKT 09T3	1	25	32	250	100	-	-	17.7	35.1		TS 25055I/HG		TD8	5
2F 25-43-32-L300-P		2	APKT 09T3	1	25	32	300	120	-	-	17.7	43.7		TS 25055I/HG		TD8	5
2F 30-20-W32-L180	2FB300-M	2	-	-	30	32	180	80	-	-	20	-	TS 40A115I		TD 15		1
2F 30-20-30-L250		2	-	-	30	30	250	100	-	-	20	-					2
2F 30-20-32-L200		2	-	-	30	32	200	80	-	-	20	-					2
2F 30-20-32-L300		2	-	-	30	32	300	120	-	-	20	-					2
2F 30-43-32-L200-P		2	APKT 1204	-	30	32	200	80	-	-	20	43.7		TS 35A088I/HG		TD10P	5
2F 30-43-32-L250-P		2	APKT 1204	-	30	32	250	120	-	-	20	43.7		TS 35A088I/HG		TD10P	5
2F 30-51-32-L300-P	2FB320-M	2	APKT 1204	-	30	32	300	140	-	-	20	55.3	TS 40A115I	TS 35A088I/HG	TD 15	TD10P	5
2F 32-21-W32-L200		2	-	-	32	32	200	100	-	-	21.4	-					1
2F 32-21-32-L180		2	-	-	32	32	180	100	-	-	21.4	-					2
2F 32-21-32-L300		2	-	-	32	32	300	130	-	-	21.4	-					1
2F 32-44-32-L200-P		2	APKT 1204	1	32	32	200	80	-	-	21.4	44.7		TS 35A088I/HG		TD10P	5
2F 32-44-32-L250-P		2	APKT 1204	1	32	32	250	120	-	-	21.4	44.7		TS 35A088I/HG		TD10P	5
2F 32-44-32-L300-P		2	APKT 1204	1	32	32	300	140	-	-	21.4	44.7		TS 35A088I/HG		TD10P	5

Modular head



Designation	Insert		Dimension (mm)					Screw	Wrench
			D	D3	L5	M	ap		
2F 16-11-M08	2FB160-M	2	16	13	25	8	11.8	TS 25064I	TD 8
2F 20-13-M10	2FB200-M	2	20	18	30	10	13.6	TS 30085I/HG	TD 9
2F 25-17-M12	2FB250-M	2	25	21	35	12	17.7	TS 30085I/HG	TD 15
2F 30-20-M16	2FB300-M	2	30	29	43	16	20.0	TS 40A115I	TD 15
2F 32-21-M16	2FB320-M	2	32	29	43	16	21.4	TS 40A115I	TD 15

Operating guidelines for DUETBALL

Material	Hardness (HB)	Speed (m/min)	Best grades	Feed (mm/tooth)		
				Side deep cutting	Side cutting	Grooving
Low carbon steel	85 - 175	200 - 350	TT9080, TT7800	0.15 - 0.6	0.2 - 0.9	0.1 - 0.5
High carbon steel	175 - 225	180 - 320	TT9080, TT7800	0.1 - 0.5	0.15 - 0.85	0.05 - 0.4
Alloy steel	275 - 325	120 - 250	TT9080, TT7800	0.1 - 0.5	0.15 - 0.8	0.05 - 0.4
Tool steel	200 - 250	100 - 200	TT9080, TT7800	0.15 - 0.5	0.2 - 0.7	0.1 - 0.35
Stainless 300 series	-	180 - 280	TT8080, TT8020	0.08 - 0.6	0.12 - 0.75	0.05 - 0.4
Stainless 400 series	-	200 - 300	TT8080, TT8020	0.1 - 0.6	0.15 - 0.8	0.05 - 0.35
High temp. super alloy	-	20 - 80	TT8080, TT8020	0.05 - 0.4	0.1 - 0.6	0.08 - 0.4
Titanium alloy	-	40 - 110	TT9080, TT8080	0.05 - 0.6	0.1 - 0.8	0.08 - 0.65
Gray cast iron	190 - 220	240 - 380	TT9080, TT7800	0.15 - 0.5	0.2 - 0.9	0.1 - 0.45
Ductile / Nodular cast iron	140 - 200	180 - 280	TT9080, TT7800	0.1 - 0.45	0.2 - 0.8	0.1 - 0.35