

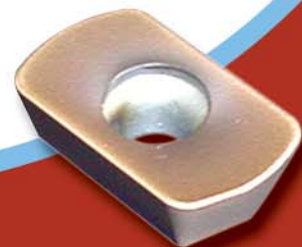
TYXD95 HIGH FEED MILLING CUTTERS

Experience the high metal removal rates

Remarkably high metal removal rates are delivered by the new TYXD95 High Feed mills. Feed ranges of 0.050" to 0.060" per tooth are easily achieved in tool and mold steels with reduced chatter and vibration during machining of deep cavities. The TYXD95 High Feed mills will completely change your approach to material removal.

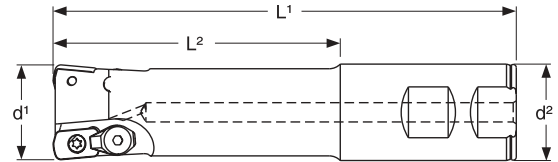
Highlights

- High feed rates
- Reduced power consumption
- Reduced chatter / vibration
- Smooth cutting action even while fully extended from spindle
- Depth of cut up to .080"
- New nickel finish for improved surface wear and chip evacuation
- Excellent grade selection (9 grades available)
- Innovative insert design with reinforced cutting edge
- Unique top clamp design provides excellent insert stability for extended tool life



TXD95 HIGH FEED MILLING CUTTERS

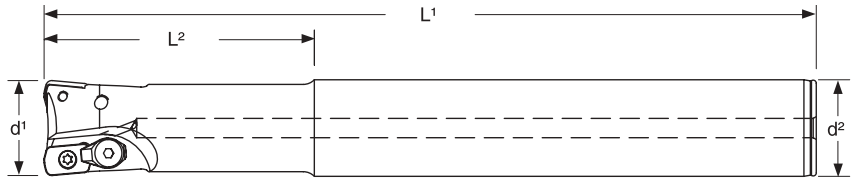
TXD95 End Mills



Designation	Dimensions					Insert	Spare Parts			
	d ¹	d ²	L ¹	L ²	Flutes		Clamp	Clamp Screw	Torx Screw	Torx Wrench
TXD95HF-1250C	1.250	1.250	6.00	3.719	2	XDGW-1604H0 XDGW-1604H20 XDGW-1604TH05 XDGW-1604TH20	214.85.892	214.85.898	214.80.388	214.80.824
TXD95HF-1500C	1.500	1.250	6.00	3.719	3					

REMEMBER TO USE COPASLIP® ANTI-SEIZE COMPOUND ON ALL INSERT SCREWS.

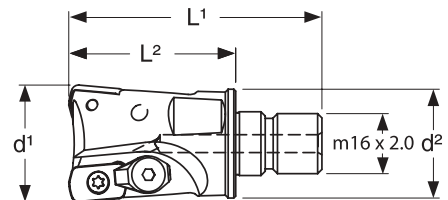
TXD95 Cylindrical Shank End Mills



Designation	Dimensions					Insert	Spare Parts			
	d ¹	d ²	L ¹	L ²	Flutes		Clamp	Clamp Screw	Torx Screw	Torx Wrench
TXD95HFCY-1250-XLC	1.250	1.250	10.00	3.500	2	XDGW-1604H0 XDGW-1604H20 XDGW-1604TH05 XDGW-1604TH20	214.85.892	214.85.898	214.80.388	214.80.824
TXD95HFCY-1500-XLC	1.500	1.250	10.00	2.500	3					

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TXD95 Thread-On Mills



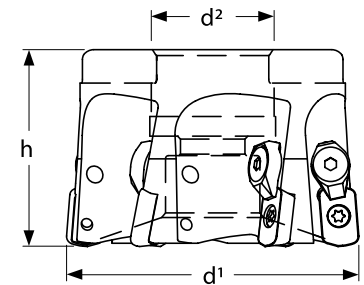
Designation	Dimensions					Insert	Spare Parts			
	d ¹	d ²	L ¹	L ²	Flutes		Clamp	Clamp Screw	Torx Screw	Torx Wrench
TXD95HF-1250-TS	1.250	1.142	2.65	1.75	2	XDGW-1604H0 XDGW-1604H20 XDGW-1604TH05 XDGW-1604TH20	214.85.892	214.85.898	214.80.388	214.80.824
TXD95HF-1500-TS	1.500	1.142	3.03	2.12	3					

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TXD95 HIGH FEED MILLING CUTTERS



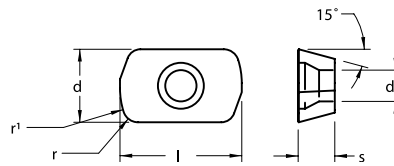
TXD95 Face Mills



Designation	Dimensions				Insert	Spare Parts			
	d ¹	d ²	h	Flutes		Clamp	Clamp Screw	Torx Screw	Torx Wrench
TXD95HF-2000	2.000	.750	1.75	4	XDGW-1604H0 XDGW-1604H20 XDGW-1604TH05 XDGW-1604TH20	214.85.892	214.85.898	214.80.388	214.80.824
TXD95HF-2500	2.500	1.000	1.75	5					
TXD95HF-3000	3.000	1.250	2.00	6					
TXD95HF-4000	4.000	1.500	2.00	7					

REMEMBER TO USE COPASLIP® ANTI-SEIZE COMPOUND ON ALL INSERT SCREWS.

TXD95 Inserts



Designation	l	s	d	r	r ¹	d ¹	T-Land	Hone	XDGW-1604 ...										
									Coated								Uncoated		
									TP765A	TP765T	TP745A	TP745T	TK532A	TK532T	TK209A	TK209T	TK532		
XDGW-1604H0	.625	.1875	.375	.078	.375	.160	---	---										●	
XDGW-1604H20	.625	.1875	.375	.078	.375	.160	---	.002"					●	●	●	●			
XDGW-1604TH05	.625	.1875	.375	.078	.375	.160	.010" x 20°	.0005"	●	●									
XDGW-1604TH20	.625	.1875	.375	.078	.375	.160	.010" x 20°	.002"			●	●							

Insert Grade Descriptions

TP765A (HC-P25)

First choice for steel applications. Good balance of wear resistance, toughness and edge strength. The coating is AlTiN for high performance milling in steel. Must be run dry.

TP745T (HC-P40)

For steel applications where greater toughness is required (i.e. scale or severe interruption). The substrate for this grade is very tough, making it the perfect choice for unfavourable conditions. The coating is TiAlN for high performance milling in steel. This grade can be run dry or wet.

TP765T (HC-P25)

Similar to TP765A using the same substrate but with TiAlN coating. This grade can be run dry or wet.

TP745A (HC-P40)

Similar to TP745T using the same tough substrate but with AlTiN coating for harder materials and high temperature conditions. This grade must be run dry.

TK532T (HC-K15)

For machining of cast irons and austenitic (300 and PH series) stainless steels. High wear resistance, with a micro grain substrate, suitable for abrasive materials. The coating is TiAlN. This grade can be run dry or wet.

TK532A (HC-K15)

Very similar to TK532T but with AlTiN coating. This grade must be run dry.

TK209A (HC-K30)

Very wear resistant AlTiN grade with a micro grain substrate designed for machining of hardened steels and chilled cast irons. High cutting speed can be achieved even on pre-hardened mold and die steels.

TK209T (HC-K30)

Very similar to TK209A but with TiAlN coating.

TK532 (HW-K15)

This uncoated grade is for machining of aluminum and other non-ferrous materials. Also suitable for short chipping cast irons when an uncoated grade is desired.

TXD95 HIGH FEED MILLING CUTTERS

CUTTING DATA FOR HIGH FEED MILLING CUTTERS				Coated																		
ISO 513	MILLING CUTTER / MATERIAL			TP765T		TP765A		TP745T		TP745A		TK532T		TK209T								
	Cutter	Max. a_p	Carbide Insert	Feed fz as inches per tooth																		
	TXD95HF	.080	XDGW-1604_ _ _	.036	.045	.054	.040	.050	.060	.036	.045	.054	.040	.050	.060	--	--	--	--	--	--	
P	Work Material		Condition	Hardness HB	Mat. Gr.	Cutting Speeds in SFPM																
	Carbon steel,	< 0.25% C	annealed	125	1	855	765	675	950	850	750	750	675	594	835	750	660	--	--	--	--	--
	Unalloyed steel,	\geq 0.25% C	annealed	190	2	810	720	630	900	800	700	711	630	550	790	700	615	--	--	--	--	--
	cast steel and free cutting steel	< 0.55% C	heat-treated	250	3	740	630	520	825	700	575	650	550	450	725	615	500	--	--	--	--	--
		\geq 0.55% C	annealed	220	4	765	675	585	850	750	650	675	594	513	750	660	570	--	--	--	--	--
	Low alloy steel and cast steel	heat-treated		300	5	650	540	430	725	600	475	576	477	378	640	530	420	--	--	--	--	--
				200	6	740	630	520	825	700	575	650	550	459	725	615	510	--	--	--	--	--
		annealed	275	7	650	540	430	725	600	475	576	477	378	640	530	420	--	--	--	--	--	
		heat-treated	300	8	610	495	380	675	550	425	540	440	340	595	485	375	--	--	--	--	--	
	High alloy steel, cast steel & tool steel	annealed	350	9	540	450	360	600	500	400	477	396	320	530	440	352	--	--	--	--	--	
heat-treated		200	10	740	630	520	825	700	575	650	550	450	725	615	500	--	--	--	--	--		
heat-treated		325	11	540	450	360	600	500	400	477	396	315	530	440	350	--	--	--	--	--		

ISO 513	MILLING CUTTER / MATERIAL			Coated																		
	Cutter	Max. a_p	Carbide Insert	Feed fz as inches per tooth																		
	TXD95HF	0.080	XDGW-1604_ _ _	.040	.050	.060	.040	.050	.060	--	--	--	--	--	--	.040	.050	.060	.040	.050	.060	
M	Work Material		Condition	Hardness HB	Mat. Gr.	Cutting Speeds in SFPM																
	400 series Stainless & cast steel	ferrit./mart.	200	12	720	600	480	825	700	575	--	--	--	--	--	--	825	700	575	720	600	480
		martensitic	240	13	600	500	400	720	600	480	--	--	--	--	--	--	720	600	480	600	500	400
	300 series Stainless & cast steel	austenitic	180	14	720	600	480	840	700	560	--	--	--	--	--	--	840	700	560	720	600	480

ISO 513	MILLING CUTTER / MATERIAL			Coated			Uncoated						
	Cutter	Max. a_p	Carbide Insert	TK532T			TK532						
	TXD95HF	0.080	XDGW-1604_ _ _	.050	.065	.080	--	--	--	.050	.065	.080	
K	Work Material		Condition	Hardness HB	Mat. Gr.	Cutting Speeds in SFPM							
	Grey cast iron	ferrit./pearl.	180	15	1235	910	764	--	--	--	520	390	325
		pearlitic	260	16	943	699	601	--	--	--	390	290	260
	Nodular cast iron	ferritic	160	17	1056	764	634	--	--	--	455	340	293
		pearlitic	250	18	764	471	--	--	--	--	325	230	--
	Malleable cast iron	ferritic	130	19	1056	634	--	--	--	--	455	290	--
pearlitic		230	20	845	520	--	--	--	--	360	230	--	

ISO 513	MILLING CUTTER / MATERIAL			Coated									
	Cutter	Max. a_p	Carbide Insert	Feed fz as inches per tooth									
	TXD95HF	0.080	XDGW-1604_ _ _	--	--	--	--	--	--	--	.050	.065	.080
N	Work Material		Condition	Hardness HB	Mat. Gr.	Cutting Speeds in SFPM							
	Cast aluminum alloys	\leq 12% Si	75	23	--	--	--	--	--	--	3250	2350	2000
		age-hardened	90	24	--	--	--	--	--	--	2600	1900	1600
		$>$ 12% Si heat resistant	130	25	--	--	--	--	--	--	1600	1000	800
	Copper & copper alloys	Red Brass, brass	90	27	--	--	--	--	--	--	--	--	--
Bronze		100	28	--	--	--	--	--	--	--	--	--	

- Ideal for mold & die steels 250-400 HBN
- Recommended depth of cut 0.040" - 0.080"
- Important to maintain 75 to 90% width of cut. (Cutter should stay in cut as much as possible.)
- Best approach when milling a pocket is to helical ramp into the workpiece at 1 to 2 degrees (which maintains consistent load on inserts). Cutter is cleared to ramp in at up to 3 degrees at 0.040" feed per tooth.
- Feed rates per tooth of 0.040" to 0.080" easily attainable.
- These cutters greatly reduce chatter and vibration in deep pockets. If any vibration exists, it is advisable to increase feed load per tooth.



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