



ROUGH AIR™

New product line for Aerospace Industry.



Features & Benefits:

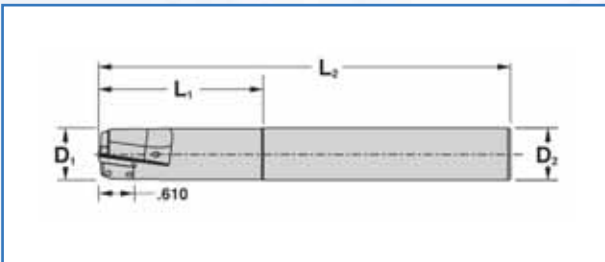
The strong and durable clamping with two insert screws makes this product line an excellent choice for all HPC (High Performance Cutting) applications in Aluminum and other non-ferrous metals. Insert shape and high positive rake face geometry allow aggressive ramping and circular interpolation.



ROUGH-AIR™ END MILL SERIES 15X1W

Diameters
.750"-1.500"

Depth of Cut
.610"

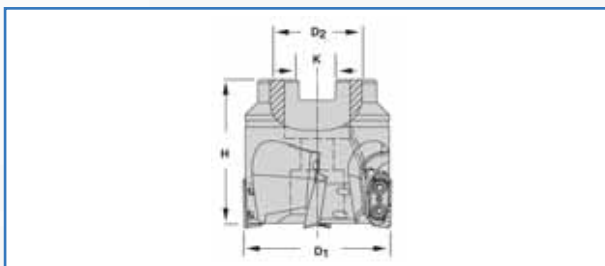


Cutter Number	D ₁ Effective Diameter	D ₂ Shank Size/Style	Extension Length	L ₁ Overall Length	L ₂ # Flutes Effective
15X1W-07020S5R01	.750	.750 Cylindrical	2.20	5.00	1
15X1W-10020S1R01	1.000	1.000 Cylindrical	2.20	4.50	2
15X1W-12020S9R01	1.250	1.250 Cylindrical	2.20	4.50	3
15X1W-15040S5R01	1.500	1.500 Cylindrical	4.06	6.75	3

ROUGH-AIR™ FACE MILL SERIES 5X6W

Diameters
2.000"-6.000"

Depth of Cut
.610"

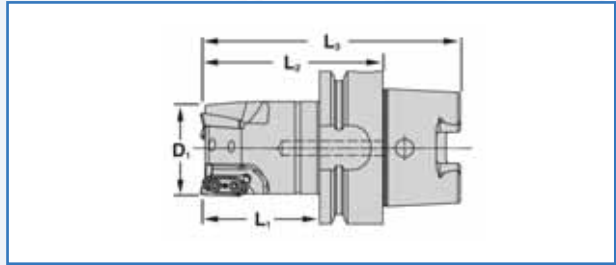


Cutter Number	D ₁ Effective Diameter	D ₂ Bore Size	K Keyway	H Height	# Flutes Effective	SHCS
5X6W-20R01	2.000	0.75	0.31	2.00	4	SD-06-46
5X6W-25R01	2.500	1.00	0.38	2.00	4	SD-08-46
5X6W-30R01	3.000	1.00	0.38	2.00	5	SD-08-46
5X6W-40R01	4.000	1.50	0.62	2.37	5	SD-12-82
5X6W-60R01	6.000	1.50	0.62	2.37	7	SD-12-82

ROUGH-AIR™ INTEGRAL END MILL SERIES HSK 63A, HSK 80A

Diameters
1.500"-3.000"

Depth of Cut
.610"

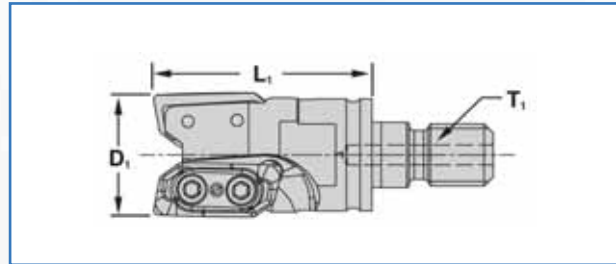


Cutter Number	D ₁ Effective Diameter	Adaption	L ₁ Max Depth of Cut	L ₂ Extension Length	L ₃ Overall Length	# Flutes Effective
15X1W-15040H5R01	1.500	HSK 63A	2.35	4.00	5.25	3
15X1W-20040H5R01	2.000	HSK 63A	2.35	4.00	5.25	4
15X1W-20055H5R01	2.000	HSK 63A	3.85	5.50	6.75	4
15X1W-30040H5R01	3.000	HSK 63A	4.00	4.00	5.25	5
15X1W-30055H5R01	3.000	HSK 63A	5.50	5.50	6.75	5
15X1W-15040H7R01	1.500	HSK 80A	2.35	4.00	5.57	3
15X1W-20040H7R01	2.000	HSK 80A	2.35	4.00	5.57	4
15X1W-30040H7R01	3.000	HSK 80A	2.98	4.00	5.57	5

ROUGH-AIR™ TOP•ON SERIES 15X1W

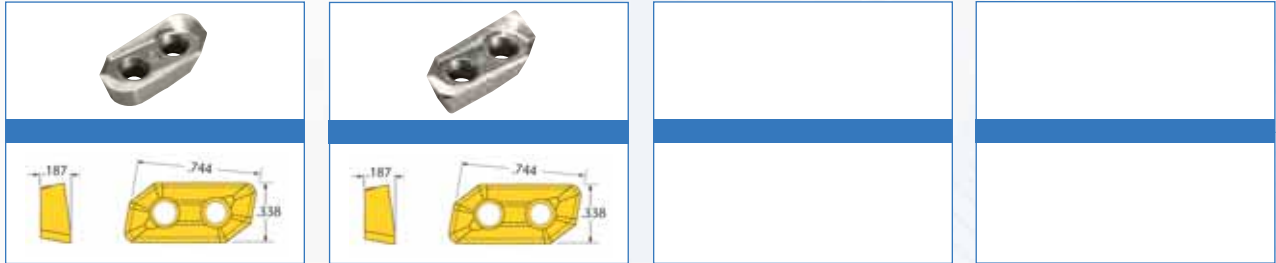
Diameters
.750"-1.500"

Depth of Cut
.610"



Cutter Number	D ₁ Effective Diameter	T ₁ Adaption	L ₁ Extension Length	# Flutes Effective
15X1W-07013X6R01	0.750	M10	1.38	1
15X1W-10017X7R01	1.000	M12	1.75	2
15X1W-12017X8R01	1.250	M16	1.75	3
15X1W-15017X8R01	1.500	M16	1.75	3

INSERTS



Insert Number	Application	Corner	Grades	
			IN	15K
XPET140405FR-P	Ground/Polished	0.020R	■	■
XPET140408FR-P	Ground/Polished	0.031R	■	■
XPET140416FR-P	Ground/Polished	0.062R	■	■
XPET140424FR-P	Ground/Polished	0.093R	■	■
XPET140432FR-P	Ground/Polished	0.125R	■	■

HARDWARE

Insert Screw		Driver	
Part No.	Torque	Part No.	
SM30-065-00	13-18 in lbs	DS-T09W	

OPERATING GUIDELINES

Series 15X1W, 5X6W				Grade	Coolant
Material	Brinell Hardness	SFM	Feed per Insert		
Aluminum	7075-T6, 6061-T2, 2024	-	5000-10000	IN15K	Yes