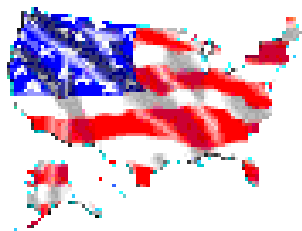




HI VELOCITY

"HV" SERIES VARIABLE OFFSET MILL



NEW
STYLES
AND
SIZES

Performance Matters

SQUARE END

HV140 SERIES

STANDARD LENGTH AND EXTENDED REACH 4 FLUTE SQUARE END

EDP #	DIA	SHANK	LOC	OAL	EXT. REACH	RADIUS
HV 140-1250	1/8	1/8	1/2	1 1/2	-	NO
HV 140-1252	1/8	1/8	1/2	2	-	NO
HV 140-1253	1/8	1/8	1/2	3	-	NO
HV 140-1875	3/16	3/16	5/8	2	-	NO
HV 140-1876	3/16	3/16	5/8	3	-	NO
HV 140-1877	3/16	1/4	1/4	4	2* x 1-3/4"	NO
HV 140-2500	1/4	1/4	3/4	2 1/2	-	NO
HV 140-2501	1/4	1/4	3/4	4	2-1/2"	NO
HV 140-2502	1/4	3/8	3/8	6	2* x 2-1/2"	NO
HV 140-3125	5/16	5/16	13/16	2 1/2	-	NO
HV 140-3126	5/16	5/16	13/16	4	2-1/2"	NO
HV 140-3750	3/8	3/8	1	2 1/2	-	NO
HV 140-3751	3/8	3/8	1	4	2-1/2"	NO
HV 140-3752	3/8	3/8	1	6	4"	NO
HV 140-4375	7/16	7/16	1	2 3/4	-	NO
HV 140-5000	1/2	1/2	1	3	-	NO
HV 140-5001	1/2	1/2	1	4	2-1/2"	NO
HV 140-5002	1/2	1/2	1	6	4"	NO
HV 140-6250	5/8	5/8	1-1/4	3 1/2	-	NO
HV 140-6251	5/8	5/8	1-1/4	6	4"	NO
HV 140-7500	3/4	3/4	1-1/2	4	-	NO
HV 140-7501	3/4	3/4	1-1/2	5	3"	NO
HV 140-7502	3/4	3/4	1-1/2	6	4"	NO
HV 140-1000	1	1	1-1/2	4	-	NO
HV 140-1001	1	1	1-1/2	5	3"	NO
HV 140-1002	1	1	1-1/2	6	4"	NO

"OFFSET" YOUR METAL REMOVAL

- INCREASE FEED RATES UP TO 10 TIMES OVER CONVENTIONAL TOOLING
- VIBRATION FREE MACHINING
- BETTER TOOL PERFORMANCE AT FASTER RPM
- LESS TOOL WEAR AT HIGH SPEEDS IN ALLOYS & STEELS
- IMPROVED SURFACE FINISHES
- ELIMINATE MULTIPLE TOOLING
- ALTiN COATED
- ROUGH AND FINISH

HV240 SERIES

STUB LENGTH 4 FLUTE SQUARE END

EDP #	DIA	SHANK	LOC	OAL	RADIUS
HV 240-1250	1/8	1/8	3/16	1 1/2	NO
HV 240-1875	3/16	3/16	3/8	2	NO
HV 240-2500	1/4	1/4	1/2	2	NO
HV 240-3125	5/16	5/16	1/2	2	NO
HV 240-3750	3/8	3/8	5/8	2	NO
HV 240-4375	7/16	7/16	5/8	2 1/2	NO
HV 240-5000	1/2	1/2	5/8	2 1/2	NO
HV 240-6250	5/8	5/8	3/4	3	NO
HV 240-7500	3/4	3/4	1	3	NO

**NEW
EXTENDED REACH SIZES
NOW AVAILABLE**

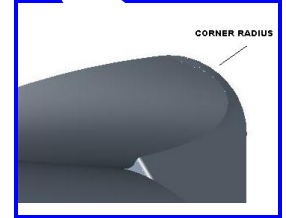


**ALTiN
COATED**



CORNER RADIUS

**ALTiN
COATED**



HV143 SERIES

STANDARD LENGTH AND EXTENDED REACH
4 FLUTE
CORNER RADIUS END

EDP #	DIA	SHANK	LOC	OAL	EXT. REACH	RADIUS
HV 143-1250	1/8	1/8	1/2	1 1/2	-	.010 - .015
HV 143-1252	1/8	1/8	1/2	2	-	.010 - .015
HV 143-1253	1/8	1/8	1/2	3	-	.010 - .015
HV 143-1875	3/16	3/16	5/8	2	-	.015 - .020
HV 143-1876	3/16	3/16	5/8	3	-	.015 - .020
HV 143-1877	3/16	1/4	1/4	4	2* x 1-3/4"	.015 - .020
HV 143-2500	1/4	1/4	3/4	2 1/2	-	.015 - .020
HV 143-2501	1/4	1/4	3/4	4	2-1/2"	.015 - .020
HV 143-2502	1/4	3/8	3/8	6	2* x 2-1/2"	.015 - .020
HV 143-3125	5/16	5/16	13/16	2 1/2	-	.015 - .020
HV 143-3126	5/16	5/16	13/16	4	2-1/2"	.015 - .020
HV 143-3750	3/8	3/8	1	2 1/2	-	.015 - .020
HV 143-3751	3/8	3/8	1	4	2-1/2"	.015 - .020
HV 143-3752	3/8	3/8	1	6	4"	.015 - .020
HV 143-4375	7/16	7/16	1	2 3/4	-	.015 - .020
HV 143-5000	1/2	1/2	1	3	-	.025 - .030
HV 143-5001	1/2	1/2	1	4	2-1/2"	.025 - .030
HV 143-5002	1/2	1/2	1	6	4"	.025 - .030
HV 143-6250	5/8	5/8	1-1/4	3 1/2	-	.030 - .035
HV 143-6251	5/8	5/8	1-1/4	6	4"	.030 - .035
HV 143-7500	3/4	3/4	1-1/2	4	-	.035 - .040
HV 143-7501	3/4	3/4	1-1/2	5	3"	.035 - .040
HV 143-7502	3/4	3/4	1-1/2	6	4"	.035 - .040
HV 143-1000	1	1	1-1/2	4	-	.035 - .040
HV 143-1001	1	1	1-1/2	5	3"	.035 - .040
HV 143-1002	1	1	1-1/2	6	4"	.035 - .040

**NEW
EXTENDED REACH SIZES
NOW AVAILABLE**



METRIC SIZES

HVM143 SERIES

"METRIC" STANDARD LENGTH
4 FLUTE
CORNER RADIUS END

EDP #	DIA	SHANK	LOC	OAL	RADIUS
HVM143-030	3	3	12	38	.25
HVM143-040	4	4	14	50	.25
HVM143-050	5	5	16	50	.25
HVM143-060	6	6	20	63	.38
HVM143-080	8	8	20	63	.38
HVM143-100	10	10	25	75	.51
HVM143-120	12	12	25	75	.51
HVM143-160	16	16	32	88	.63
HVM143-200	20	20	38	100	.89
HVM143-250	25	25	38	100	.89

STUB LENGTH

HV243 SERIES

STUB LENGTH
4 FLUTE
CORNER RADIUS END

EDP #	DIA	SHANK	LOC	OAL	RADIUS
HV 243-1250	1/8	1/8	3/16	1 1/2	.010 - .015
HV 243-1875	3/16	3/16	3/8	2	.015 - .020
HV 243-2500	1/4	1/4	1/2	2	.015 - .020
HV 243-3125	5/16	5/16	1/2	2	.015 - .020
HV 243-3750	3/8	3/8	5/8	2	.015 - .020
HV 243-4375	7/16	7/16	5/8	2 1/2	.015 - .020
HV 243-5000	1/2	1/2	5/8	2 1/2	.025 - .030
HV 243-6250	5/8	5/8	3/4	3	.030 - .035
HV 243-7500	3/4	3/4	1	3	.035 - .040

BALLNOSE END

**ALTiN
COATED**

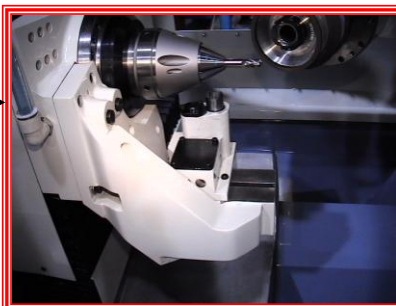
HV142 SERIES

STANDARD LENGTH AND EXTENDED REACH 4 FLUTE BALL END

EDP #	DIA	SHANK	LOC	OAL	EXT. REACH	RADIUS
HV 142-1250	1/8	1/8	1/2	1 1/2	-	BALL
HV 142-1252	1/8	1/8	1/2	2	-	BALL
HV 142-1253	1/8	1/8	1/2	3	-	BALL
HV 142-1875	3/16	3/16	5/8	2	-	BALL
HV 142-1876	3/16	3/16	5/8	3	-	BALL
HV 142-1877	3/16	1/4	1/4	4	2* x 1-3/4"	BALL
HV 142-2500	1/4	1/4	3/4	2 1/2	-	BALL
HV 142-2501	1/4	1/4	3/4	4	2-1/2"	BALL
HV 142-2502	1/4	3/8	3/8	6	2* x 2-1/2"	BALL
HV 142-3125	5/16	5/16	13/16	2 1/2	-	BALL
HV 142-3126	5/16	5/16	13/16	4	2-1/2"	BALL
HV 142-3750	3/8	3/8	1	2 1/2	-	BALL
HV 142-3751	3/8	3/8	1	4	2-1/2"	BALL
HV 142-3752	3/8	3/8	1	6	4"	BALL
HV 142-4375	7/16	7/16	1	2 3/4	-	BALL
HV 142-5000	1/2	1/2	1	3	-	BALL
HV 142-5001	1/2	1/2	1	4	2-1/2"	BALL
HV 142-5002	1/2	1/2	1	6	4"	BALL
HV 142-6250	5/8	5/8	1-1/4	3 1/2	-	BALL
HV 142-6251	5/8	5/8	1-1/4	6	4"	BALL
HV 142-7500	3/4	3/4	1-1/2	4	-	BALL
HV 142-7501	3/4	3/4	1-1/2	5	3"	BALL
HV 142-7502	3/4	3/4	1-1/2	6	4"	BALL
HV 142-1000	1	1	1-1/2	4	-	BALL
HV 142-1001	1	1	1-1/2	5	3"	BALL
HV 142-1002	1	1	1-1/2	6	4"	BALL



**NEW
EXTENDED REACH SIZES
NOW AVAILABLE**



- Speed and feed recommendations are for *profile milling (side cut)* operations up to 20 % of the cutter diameter.
- Decrease values by 20% for *slotting operations*.
- Rates based on *HIGH* values are for optimum working conditions.

WORK MATERIAL	CUTTING SPEEDS		1/8"		3/16"		1/4"		5/16"		3/8"		1/2"		5/8"		3/4"		1"	
		SFM	RPM - IPM		RPM - IPM		RPM - IPM		RPM - IPM		RPM - IPM		RPM - IPM		RPM - IPM		RPM - IPM		RPM - IPM	
Titanium Alloys	HIGH	250	7640 - 15.3		5093 - 10.2		3820 - 9.2		3056 - 11.0		2547 - 11.2		1910 - 10.7		1528 - 9.2		1273 - 11.2		955 - 9.9	
	LOW	212	6479 - 13.0		4319 - 8.6		3239 - 7.7		2591 - 9.3		2160 - 9.5		1620 - 9.0		1296 - 7.7		1080 - 9.5		810 - 8.4	
	IPT		0.0005		0.0005		0.0006		0.0009		0.0011		0.0014		0.0015		0.0022		0.0026	
High Temp. Alloys	HIGH	125	3820 - 6.1		2547 - 4.1		1910 - 5.4		1528 - 6.8		1273 - 5.6		955 - 6.5		764 - 5.8		637 - 6.1		478 - 4.6	
	LOW	106	3239 - 5.2		2160 - 3.4		1620 - 4.5		1296 - 5.7		1080 - 4.7		810 - 5.5		648 - 4.9		540 - 5.2		405 - 3.9	
	IPT		0.0004		0.0004		0.0007		0.0011		0.0011		0.0017		0.0019		0.0024		0.0024	
Alloy Steels																				
	HIGH	575	17572 - 42.2		11715 - 46.8		8786 - 56.2		7029 - 56.2		5857 - 58.5		4393 - 54.5		3514 - 49.2		2929 - 43.3		2197 - 35.15	
	LOW	450	13752 - 33.0		9168 - 36.7		6876 - 44.0		5501 - 44.0		4584 - 45.8		3438 - 42.6		2750 - 38.5		2292 - 33.9		1719 - 27.5	
	IPT		0.0006		0.001		0.0016		0.002		0.0025		0.0031		0.0035		0.0037		0.004	
4140-4340	HIGH	387	11827 - 28.4		7884 - 31.5		5913 - 37.8		4731 - 37.8		3942 - 39.4		2957 - 36.7		2365 - 33.1		1971 - 29.2		1478 - 23.6	
	LOW	325	9932 - 23.8		6621 - 26.5		4966 - 31.8		3937 - 31.8		3311 - 33.1		2483 - 30.8		1986 - 27.8		1655 - 24.5		1242 - 19.9	
	IPT		0.0006		0.001		0.0016		0.002		0.0025		0.0031		0.0035		0.0037		0.004	
Grey Cast Iron	HIGH	700	21392 - 68.5		14242 - 45.8		10696 - 34.2		8557 - 41.1		7131 - 34.2		5348 - 38.5		4278 - 34.2		3565 - 34.2		2674 - 30.0	
	LOW	575	17572 - 56.2		11715 - 37.5		8786 - 28.1		7029 - 33.7		5857 - 28.1		4393 - 31.6		3514 - 28.1		2929 - 28.1		2197 - 24.6	
	IPT		0.0008		0.0008		0.0008		0.0012		0.0012		0.0018		0.002		0.0024		0.0028	
Tool Steels																				
	HIGH	575	17572 - 35.1		11715 - 32.8		8786 - 49.2		7029 - 53.4		5857 - 46.9		4393 - 46.9		3514 - 43.6		2929 - 37.5		2197 - 30.8	
	LOW	450	13752 - 27.5		9168 - 25.7		6876 - 38.5		5501 - 41.8		4584 - 36.7		3438 - 34.4		2750 - 34.1		2292 - 29.3		1719 - 24.1	
	IPT		0.0005		0.0007		0.0014		0.0019		0.002		0.0025		0.0031		0.0032		0.0035	
Above 36Rc	HIGH	262	8007 - 16.		5338 - 15.0		4003 - 22.4		3203 - 24.3		2669 - 21.4		2002 - 20.0		1601 - 19.9		1334 - 17.1		1001 - 14.0	
	LOW	211	6448 - 12.9		4299 - 12.0		3224 - 18.0		2579 - 19.6		2149 - 17.2		1612 - 16.1		1290 - 16.0		1075 - 13.8		806 - 11.3	
	IPT		0.0005		0.0007		0.0014		0.0019		0.002		0.0025		0.0031		0.0032		0.0035	
Stainless Steels																				
	HIGH	362	11063 - 17.7		7375 - 11.8		5531 - 13.3		4425 - 17.7		3688 - 14.8		2766 - 17.7		2213 - 15.9		1844 - 16.2		1383 - 12.2	
	LOW	325	9932 - 15.9		6621 - 10.6		4966 - 11.9		3973 - 15.9		3311 - 13.2		2483 - 15.9		1986 - 14.3		1655 - 14.6		1242 - 10.9	
	IPT		0.0004		0.0004		0.0006		0.001		0.001		0.0016		0.0018		0.0022		0.0022	
Mild to Machine	HIGH	375	11460 - 22.9		7640 - 15.3		5730 - 16.0		4584 - 20.2		3820 - 16.8		2865 - 19.5		2292 - 17.4		1910 - 17.6		1433 - 13.2	
	LOW	337	10299 - 20.6		6866 - 13.7		5149 - 14.4		4119 - 18.1		3433 - 15.1		2575 - 17.5		2060 - 15.7		1716 - 15.8		1287 - 11.8	
	IPT		0.0005		0.0005		0.0007		0.0011		0.0011		0.0017		0.0019		0.0023		0.0023	
Easy to Machine	HIGH	487	14883 - 35.7		9922 - 23.8		7441 - 23.8		5953 - 28.6		4961 - 23.8		3721 - 26.8		2977 - 23.8		2480 - 23.8		1860 - 17.9	
	LOW	387	11827 - 28.4		7884 - 18.9		5913 - 18.9		4731 - 22.7		3942 - 18.9		2957 - 21.3		2365 - 18.9		1971 - 18.9		1478 - 14.2	
	IPT		0.0006		0.0006		0.0008		0.0012		0.0012		0.0018		0.002		0.0024		0.0024	
Soft Steels	HIGH	762	23287 - 55.9		15524 - 49.7		11643 - 37.3		9315 - 44.7		7762 - 37.3		5822 - 41.9		4657 - 37.3		3881 - 37.3		2911 - 32.6	
	LOW	637	19467 - 46.7		12978 - 41.5		9733 - 31.2		7787 - 37.4		6489 - 31.2		4867 - 35.0		3893 - 31.1		3244 - 31.1		2433 - 27.3	
	IPT		0.0006		0.0008		0.0008		0.0012		0.0012		0.0018		0.002		0.0024		0.0028	
Die Steels	HIGH	387	11827 - 28.4		7884 - 31.5		5913 - 37.8		4731 - 37.8		3942 - 39.4		2957 - 36.7		2365 - 33.1		1971 - 29.2		1478 - 23.6	
	LOW	325	9932 - 23.8		6621 - 26.5		4966 - 31.8		3937 - 31.8		3311 - 33.1		2483 - 30.8		1986 - 27.8		1655 - 24.5		1242 - 19.9	
	IPT		0.0006		0.001		0.0016		0.002		0.0025		0.0031		0.0035		0.0037		0.004	



HI VELOCITY

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