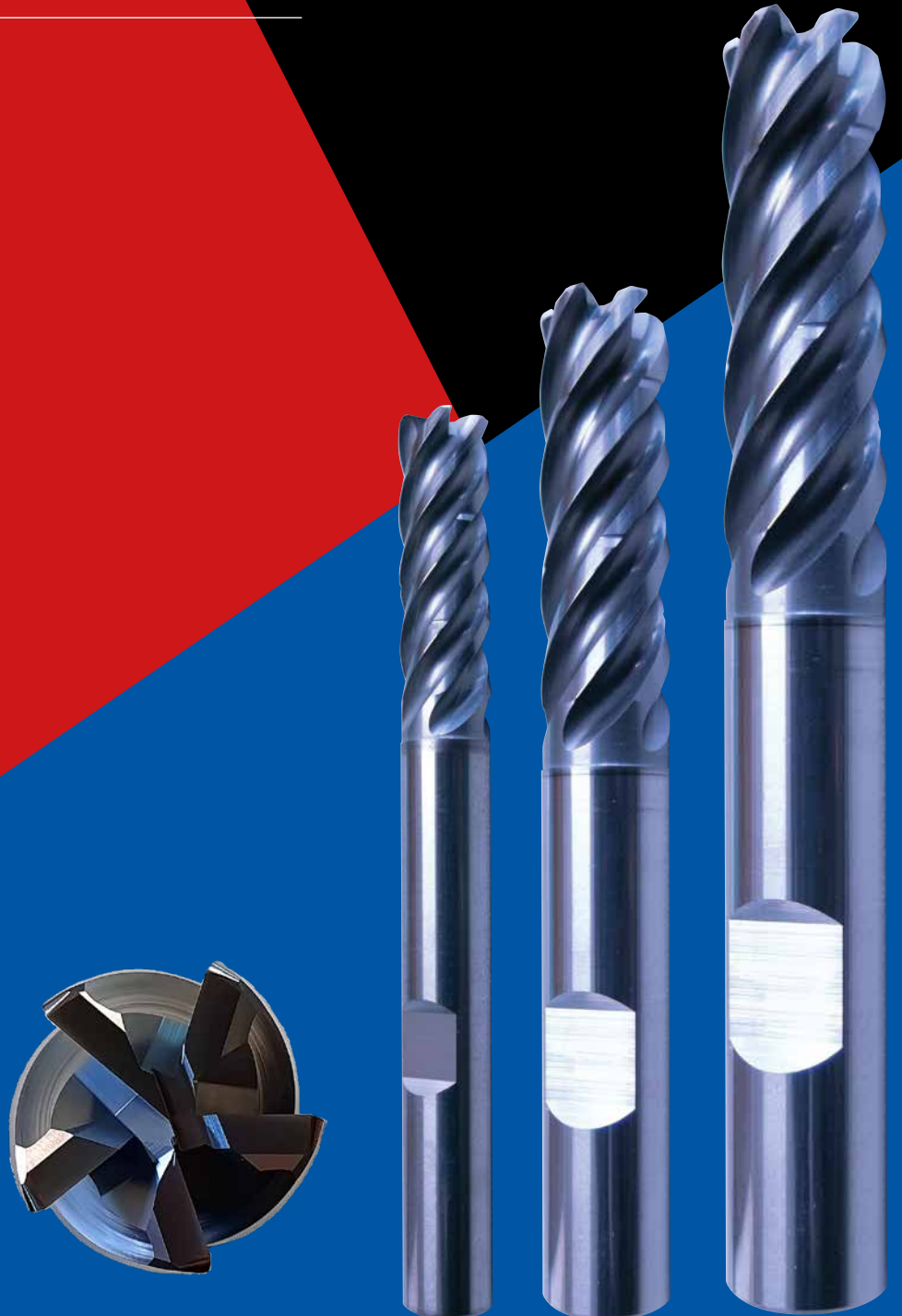


5-flute adaptive end mill

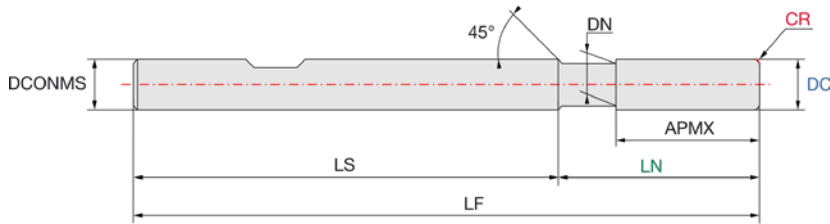
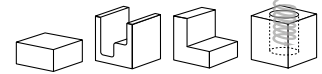
ER5HS-W



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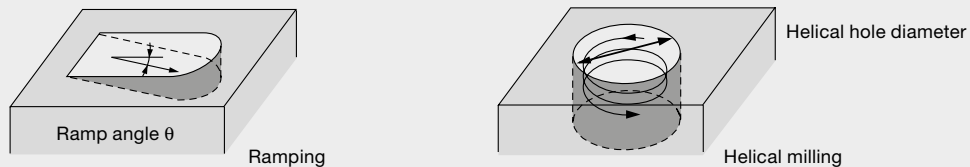
ER5HS-W

NOF 5 Rake angle positive 50 HRC h5 h6 PN coated Carbide



Helix angle	DC Tol. (mm)		DCONMS Tol.		CR Tol. (mm)
45°	DC 6	0/-0.015	DC 6-12	h5	± 0.01
	DC 8-20	0/-0.02	DC 16-20	h6	

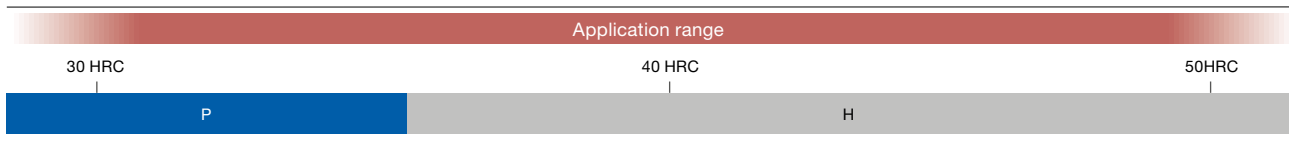
ID code	Item code	Stock	NOF	Size (mm)							
				DC	CR	APMX	LN	DN	LF	LS	DCONMS
EP2595	ER5HS0600R-R0.5-W-PN	●	5	6	0.5	18	21	5.8	59	37.9	6
EP2596	ER5HS0800R-R1.0-W-PN	●	5	8	1.0	24	28	7.8	66	37.9	8
EP2597	ER5HS1000R-R1.0-W-PN	●	5	10	1.0	30	35	9.8	77	41.9	10
EP2598	ER5HS1200R-R1.0-W-PN	●	5	12	1.0	36	42	11.8	89	46.9	12
EP2599	ER5HS1600R-R1.0-W-PN	●	5	16	1.0	48	56	15.8	106	49.5	16
EP2600	ER5HS2000R-R1.0-W-PN	●	5	20	1.0	60	70	19.8	122	51.5	20

Regarding ramping and helical milling


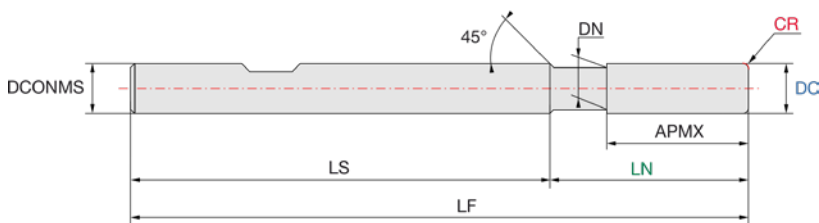
Parameters												
Vc (m/min)	30% of Recommendation											
Max. ramp angle	0.5 - 1°											
DC	6		8		10		12		16		20	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Hole diameter (mm)	7.5	11.0	10.0	14.0	12.5	18.0	15.0	22.0	20.0	30.0	25.0	38.0
Fz (mm)	0.014	0.033	0.018	0.040	0.022	0.050	0.026	0.059	0.031	0.072	0.034	0.081
max. Pitch (mm)	0.082	0.274	0.110	0.329	0.137	0.439	0.165	0.548	0.219	0.768	0.274	0.987

1. The ramp angle should be set within the ranges listed above
2. Ramp angles of 1° or less is recommended
3. For hole diameters outside the ranges listed above, a pilot hole should be drilled before milling
4. Set the helical cutting angle so that the cutting depth per revolution does not exceed 1.2 mm

ER5HS-W General technical information



ISO 513 Symbol	Description	Examples
P	Non-alloy steel, low alloy steel, high alloy steel, ferritic/martensitic stainless steel, tool steel	1.2343 / X38CrMoV5-1; 1.2738 / 40CrMnNiMo8; 1.0503 / C45; 1.0570 / ST52-3; 1.1730 / C45W; 1.7131 / 16MnCr5; 1.7225 / 42CrMo4; 1.3343 / HS6-5-2; 1.0511 / C40; 1.2312 / 40CrMnMoS8-6; 1.2311 / 40CrMnMo7; 1.2344 / X40CrMoV5-1; 1.2767 / X45NiCrMo4; 1.2083 / X42Cr13; 1.2085 / X33CrS16; 1.2714 / 55NiCrMoV7; 1.2842 / 90MnCrV8;
M	Austenitic stainless steel	1.4301 / X5CrNi18-9; 1.4401 / X5CrNiMo17-12-2; 1.4404 / X2CrNiMo17-13-2; 1.4828 / X15CrNiSi20 12
K	Grey cast iron (GG), nodular cast iron (GGG), malleable cast iron	0.6025 / GG-25; GGG-40.3; 0.8155 / GTS-55-04
N	Aluminum wrought all, copper alloy, aluminum-cast, alloyed, non-metallic	2.0060 / E-Cu57; 2.0321 / CuZn37; 3.0255 / Al99.5; 3.5103 / MgSE3Zn27r1
S	High temperature alloys, titanium and Ti alloys	1.4864 / X12NiCrSi36 16; 2.4856 / NiCr22Mo9Nb; 1.4977 / X40CoCrNi20 20; 2.4669 / NiCr15Fe7TiAl
H	Hardened steel, chilled cast iron, cast iron	1.2379 / X155CrVMo12; 1.2714 / 55 NiCrMoV 7; 1.2343 / X38CrMoV5-1; 1.2738 / 40CrMnNiMo8; 2738HH; 1.2311 / 40CrMnMo7; 1.2312 / 40CrMnMoS8-6; 1.2344 / X40CrMoV5-1; 1.2767 / 45 NiCrMo 16; 1.2085 / X 33 CrS 16; 1.2367 / X38CrMoV5.3; 1.2842 / 90MnCr18; 1.2379 / X155CrVMo12; 1.2714 / 55 NiCrMoV 7; 1.2379 / X155CrVMo12; 1.2714 / 55 NiCrMoV 7; 1.2343 / X38CrMoV5-1; 1.2738 / 40CrMnNiMo8; 2738HH; 1.2311 / 40CrMnMo7; 1.2312 / 40CrMnMoS8-6; 1.2344 / X40CrMoV5-1; 1.2767 / 45 NiCrMo 16; 1.2085 / X 33 CrS 16; 1.2367 / X38CrMoV5.3; 1.2842 / 90MnCr18; 1.2379 / X155CrVMo12; 1.2714 / 55 NiCrMoV 7



Drawing nomenclature	
APMX	Cutting edge length
CR	Corner radius
DC	Cutting diameter maximum
DCONMS	Connection diameter machine side
DN	Neck diameter
LF	Functional length
LN	Length neck
LS	Length shank

Attentions on Safety

1. Cautions regarding handling

- (1) When removing the tool from its case (packaging), be careful that the tool does not pop out or is dropped. Be particularly careful regarding contact with the tool flutes.
- (2) When handling tools with sharp cutting flutes, be careful not to touch the cutting flutes directly with your bare hands.

2. Cautions regarding mounting

- (1) Before use, check the outside appearance of the tool for scratches, cracks, etc. and that it is firmly mounted in the collet chuck, etc.
- (2) When preparing for use, be sure that the inserts are firmly mounted in place and that they are firmly mounted on the arbor, etc.
- (3) If abnormal chattering, etc. occurs during use, stop the machine immediately and remove the cause of the chattering.

3. Cautions during use

- (1) Before use, confirm the dimensions and direction of rotation of the tool and milling work material.
- (2) The numerical values in the standard cutting conditions table should be used as criteria when starting new work. The cutting conditions should be adjusted as appropriate when the cutting depth is large, the rigidity of the machine being used is low, or according to the conditions of the work material.
- (3) Cutting tools are made of a hard material. During use, they may break and fly off. In addition, cutting chips may also fly off. Since there is a danger of injury to workers, fire, or eye damage from such flying pieces, a safety cover should be attached when work is performed and safety equipment such as safety goggles should be worn to create a safe environment for work.
- (4) There is a risk of fire or inflammation due to sparks, heat due to breakage, and cutting chips. Do not use where there is a risk of fire or explosion. Please caution of fire while using oil base coolant, fire prevention is necessary.
- (5) Do not use the tool for any purpose other than that for which it is intended.

4. Cautions regarding regrinding

- (1) If regrinding is not performed at the proper time, there is a risk of the tool breaking. Replace the tool with one in good condition, or perform regrinding.
- (2) Grinding dust will be created when regrinding a tool. When regrinding, be sure to attach a safety cover over the work area and wear safety clothes such as safety goggles, etc.
- (3) This product contains the specified chemical substance cobalt and its inorganic compounds. When performing regrinding or similar processing, be sure to handle the processing in accordance with the local laws and regulations regarding prevention of hazards due to specified chemical substances.

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The diagrams and table data are examples of test results and are not guaranteed values.

For more details please check our digital tool database



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