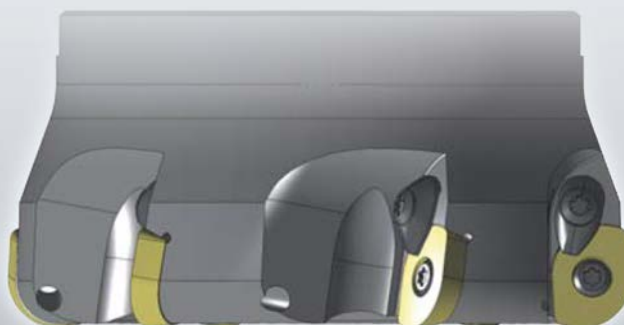
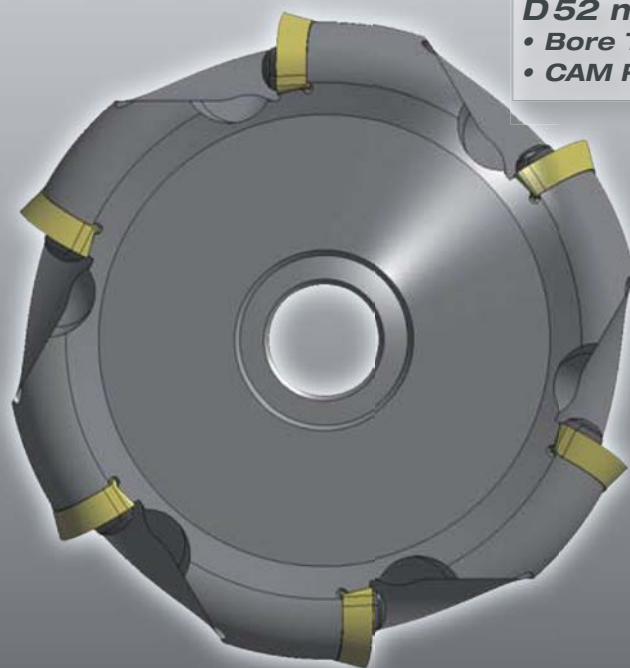
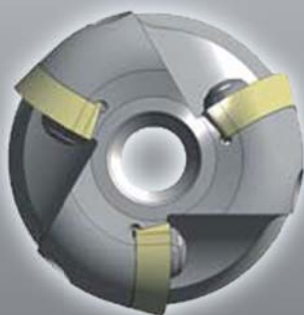


AHR *Advanced Heavy Roughing*

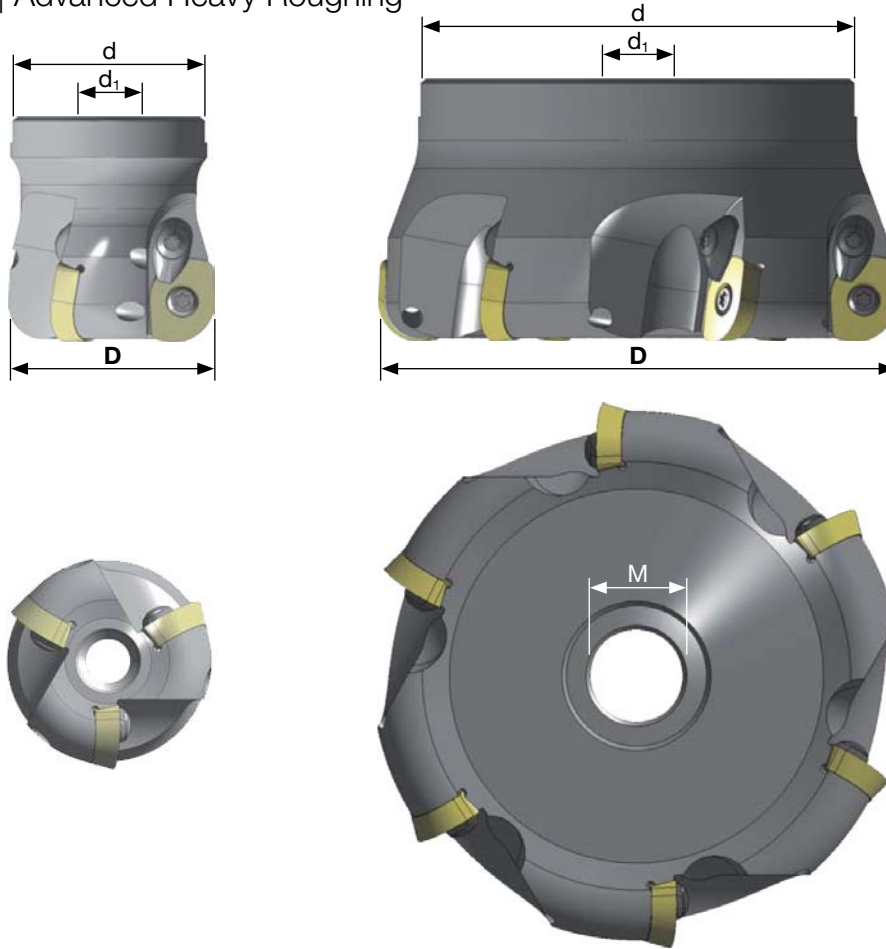
High Performance - Feed & Depth of Cut



D 52 mm ~ D 250 mm
• Bore Type
• CAM Radius: **R10**



AHR | Advanced Heavy Roughing



AHR

Diameter Holder only [mm]		Fastening Torque [Nm]
D52 – 200 mm	0/-0.2 mm	D160 – 250: 4.0 Nm
D250 mm	0/-0.3 mm	D52 – 125: 4.9 Nm

ID Code	Item Code	Z	D	d	d ₁	M	Insert on Body
FH541	AHR-5052RM-3-22	3	52	48	22	10 *	ZDNW1505100TRT JX1005 JX1045 JX1060
FH542	AHR-5066RM-4-27	4	66	60	27	12	
FH543	AHR-5080RM-5-32	5	80	75	32	16	
FH544	AHR-5100RM-6-40	6	100	95	40	20	
FH545	AHR-5125RM-6-40	6	125	105	40	20	
FH189	AHR-5160RM-8-40 **	8	160	–	40	14	
FH190	AHR-5200RM-10-60 **	10	200	–	60	18	
FH191	AHR-5250RM-12-60 **	12	250	–	60	18	

* AHR D52 M10*, connected by special screw | ** Caution: Different Clamping System – 4 Screws required!

Inserts



ID Code	Item Code	Tolerance Class	Grade
WF657	ZDNW1505100TRT	N	JX1005
WF659	ZDNW1505100TRT		JX1045
WF660	ZDNW1505100TRT		JX1060

CAM Radius R10



Parts

ID Code	Item Code	Description
ET162	555-141	Clamp Screw
ET164	CM5-147	Clamp Piece
ET014	105-T20	Wrench

Fastening Torque [Nm]
D160 – 250: 4.0 Nm
D52 – 125: 4.9 Nm

AHR | Advanced Heavy Roughing – Recommended Cutting Conditions

Work piece material	Insert Grade	Parameter Overhang	Dia. 52-3 < 3xD	Dia. 66-4 < 3xD	Dia. 80-5 < 3xD	Dia. 100-6 < 3xD	Dia. 125-6 < 3xD
Carbon Steels Alloy Steels <30HRC	JX1045 JX1060	V_c	180	170	170	150	150
		n	1,100	820	680	480	385
		f_z	0.7	0.7	0.7	0.7	0.7
		V_f	2,310	2,300	2,380	2,020	1,620
		a_p	3	5	5	8	8
		a_e	42	50	60	80	105
		Q	291	575	714	1,293	1,359
Pre-Hardened Steels Alloy Steels 30–40HRC	JX1045 JX1060	V_c	180	170	170	140	140
		n	1,100	820	680	450	360
		f_z	0.6	0.6	0.6	0.6	0.6
		V_f	1,980	1,970	2,040	1,620	1,300
		a_p	3	5	5	8	8
		a_e	42	50	60	80	105
		Q	250	493	612	1,037	1,092
Pre-Hardened Steels Alloy Steels 40–50HRC	JX1005 JX1045	V_c	160	150	150	130	130
		n	980	730	600	420	335
		f_z	0.6	0.6	0.6	0.6	0.6
		V_f	1,770	1,755	1,800	1,515	1,210
		a_p	3	4	4	6	6
		a_e	42	50	60	80	105
		Q	223	351	432	728	763
Pre-Hardened Steels Alloy Steels 50–55HRC	JX1005 JX1015	V_c	140	130	130	110	110
		n	860	630	520	350	280
		f_z	0.6	0.6	0.6	0.6	0.6
		V_f	1,550	1,515	1,560	1,260	1,010
		a_p	2	3	3	3,5	3,5
		a_e	42	50	60	80	105
		Q	131	228	281	353	372
Pre-Hardened Steels Alloy Steels 55–62HRC	JX1005 JX1015	V_c	80	80	80	80	80
		n	490	390	320	255	205
		f_z	0.2	0.2	0.2	0.2	0.2
		V_f	300	312	320	310	250
		a_p	1	1	1	1	1
		a_e	42	50	60	80	105
		Q	13	16	19	25	27
Cast Iron FC / FCG GG / GGG	JX1045 JX1060	V_c	190	190	190	150	150
		n	1,170	920	760	480	385
		f_z	0.7	0.7	0.7	0.7	0.7
		V_f	2,460	2,580	2,660	2,020	1,620
		a_p	4	5	5	8	8
		a_e	42	50	60	80	105
		Q	413	645	798	1,293	1,359

- **Maximum a_p** for cast iron 15mm, steel 5mm
- ***Pre-Hardened steel application** requires high stable and rigid machine, low overhang and necessary force on spindle
- **D 100 & D 125** is recommended for big volume application on base and surface roughing

Always up to date: Please check our P50 QuickFinder



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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