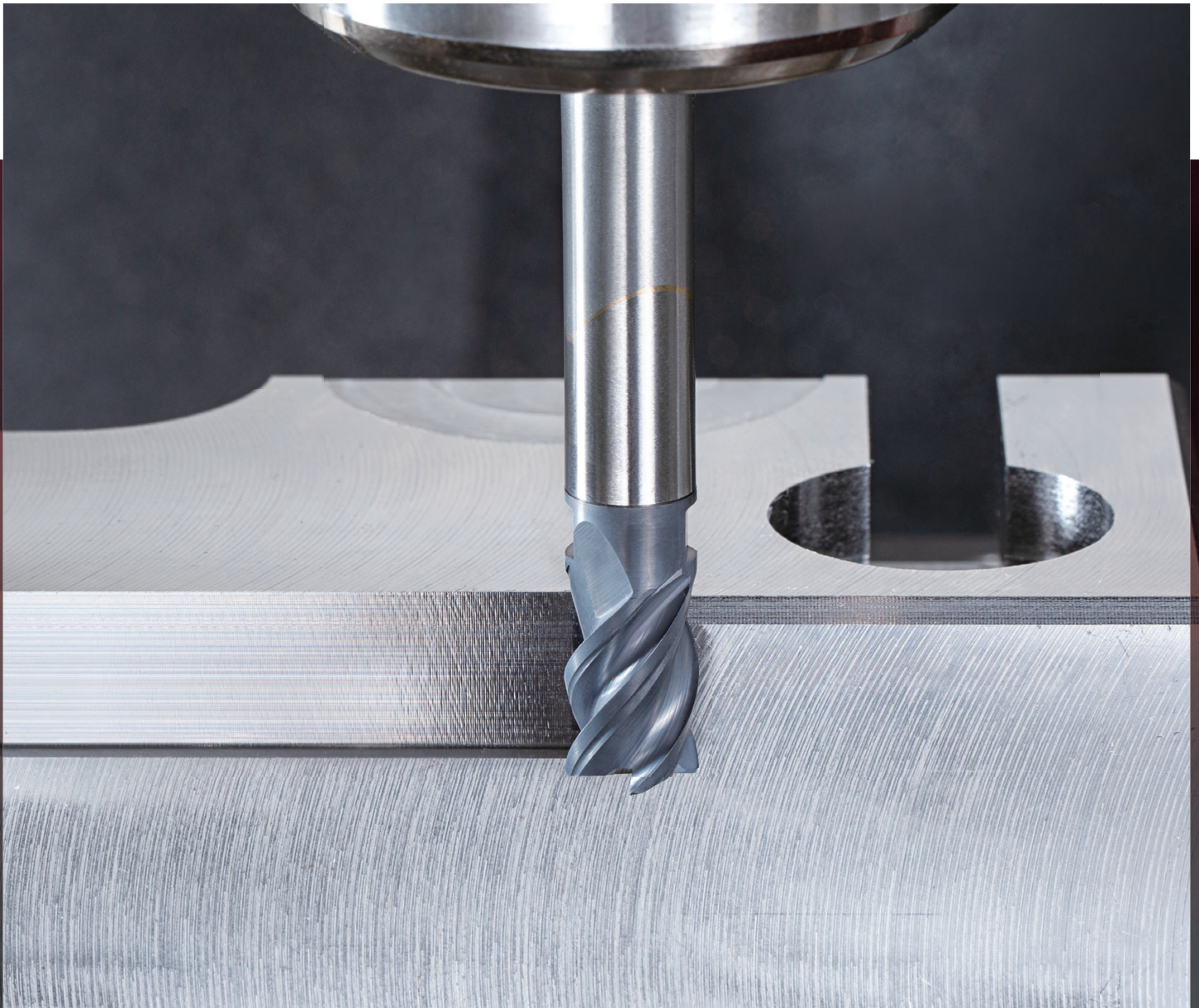


TUNGMEISTER

Tungaloy Report No. 381S4-G

**Now available in AH735 grade along
with additional AH715 grade inserts**

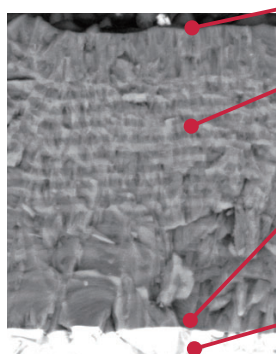




Latest wear and fracture resistant grades for longer and more predictable tool life

New AH715 / AH735

Unique nano-multilayered coating using Tungaloy's latest technology providing 3 principal features

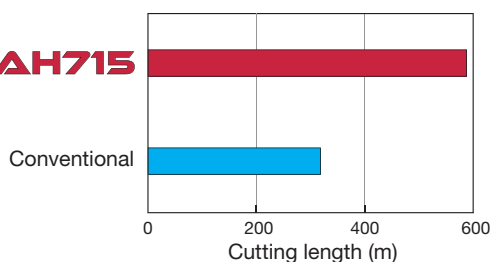


- 1. Resistance to built-up edge**
Coating layer to resist built-up edge
- 2. Resistance to wear, oxidation, and fracture**
Two coating layers for wear and oxidation resistance. Layered alternatively to prevent crack from propagating to fracture
- 3. Strong coating-substrate adhesion**
Coating is provided with strong adhesion between the coating layer and carbide substrate to prevent coating delamination
- Substrate**
Carbide substrate features wear and fracture resistance

■ Tool life comparisons

AH715 and **AH735** provide better tool life performance in comparisons with the previous-generation grades

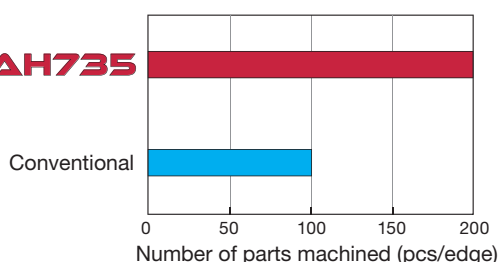
New AH715



Steel

Shank : VSSD16L100S10-S
Head : VED160L12.0R05-04S10
Workpiece material : S55C / C55 (1055)
Cutting speed : $V_c = 150$ m/min
Feed per tooth : $f_z = 0.12$ mm/t
Depth of cut : $a_p = 5$ mm
Width of cut : $a_e = 1.5$ mm
Machine : Vertical M/C, BT40

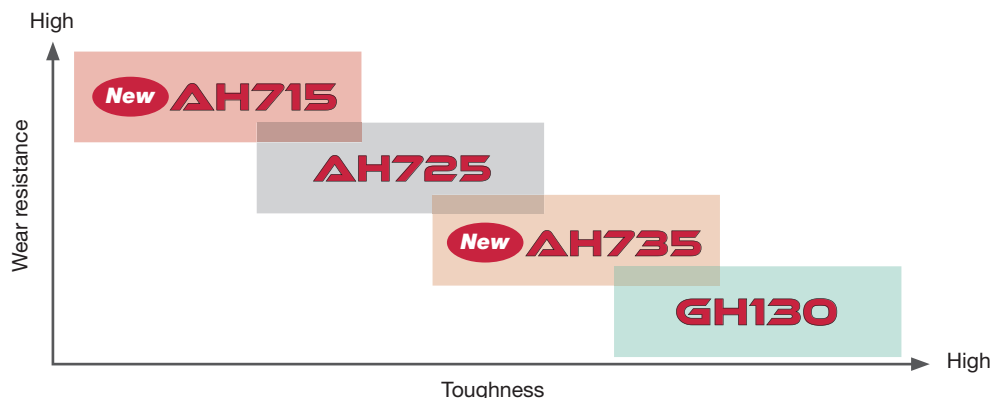
New AH735



Superalloy

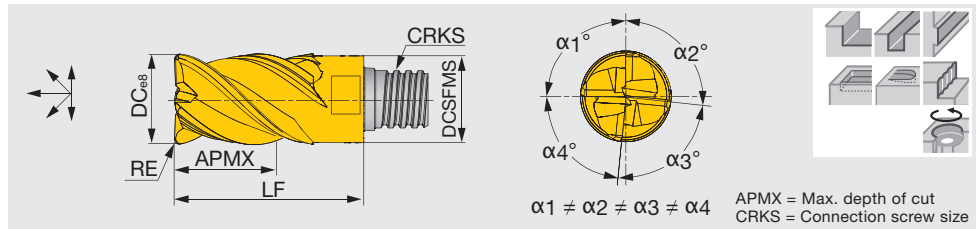
Shank : VSC120L100S08-C-A
Head : VST217W2.50R020-4S08
Workpiece material : Titanium alloy
Cutting speed : $V_c = 50$ m/min
Feed per tooth : $f_z = 0.1$ mm/t
Depth of cut : $a_p = 4$ mm
Width of cut : $a_e = 2.5$ mm
Machine : Vertical M/C, HSK A63

■ APPLICATION RANGE



VEH...

4 flute square head, long cutting edge, for general purpose



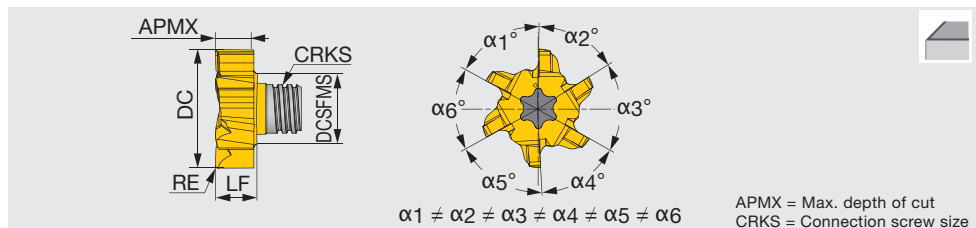
Designation	AH715	NOF	FHA	DC	DCSFMS	APMX	RE	CRKS	LF	Wrench	Torque*
VEH080L12.0R05I04S05	●	4	41° - 45°	8	7.7	12	0.5	S05	18	KEYV-S05	7
VEH080L12.0R10I04S05	●	4	41° - 45°	8	7.7	12	1.0	S05	18	KEYV-S05	7
VEH100L15.0R05I04S06	●	4	41° - 45°	10	9.7	15	0.5	S06	22	KEYV-S06	10
VEH100L15.0R10I04S06	●	4	41° - 45°	10	9.7	15	1.0	S06	22	KEYV-S06	10
VEH120L18.0R05I04S08	●	4	41° - 45°	12	11.7	18	0.5	S08	27	KEYV-S08	15
VEH120L18.0R10I04S08	●	4	41° - 45°	12	11.7	18	1.0	S08	27	KEYV-S08	15
VEH160L24.0R05I04S10	●	4	41° - 45°	16	15.3	24	0.5	S10	33.5	KEYV-S10	28
VEH160L24.0R10I04S10	●	4	41° - 45°	16	15.3	24	1.0	S10	33.5	KEYV-S10	28
VEH200L30.0R05I04S12	●	4	41° - 45°	20	18.45	30	0.5	S12	41	KEYV-S12	28
VEH200L30.0R10I04S12	●	4	41° - 45°	20	18.45	30	1.0	S12	41	KEYV-S12	28

* Recommended clamping torque (N·m)
VEH080 ~ VEH160: 2 pieces per package
VEH200: 1 piece per package

● : Line up

VFM...

6 flute face milling head



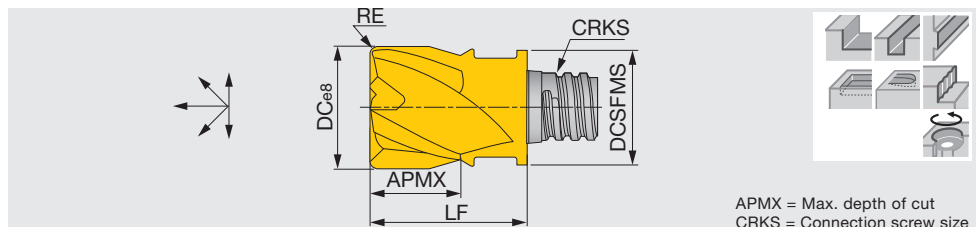
Designation	AH715	NOF	FHA	DC	DCSFMS	APMX	RE	CRKS	LF	Wrench	Torque*
VFM120L03.6R02I06S05	●	6	10°	12	7.7	3.6	0.2	S05	4.4	KEYV-T20	7
VFM160L04.8R04I06S06	●	6	10°	16	9.7	4.8	0.4	S06	5.6	KEYV-T25	10
VFM200L06.0R04I06S08	●	6	10°	20	11.7	6	0.4	S08	7	KEYV-T40L	15

* Recommended clamping torque (N·m)
2 pieces per package

● : Line up

VEE**-04..., VED**-04...

4 flute square head, for general purpose



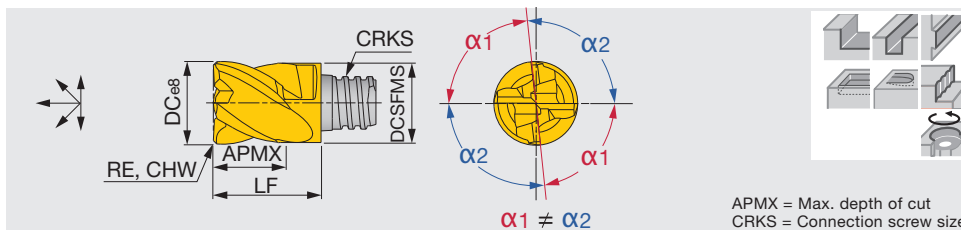
Designation	AH715	AH725	NOF	FHA	DC	DCSFMS	APMX	RE	CRKS	LF	Wrench	Torque*
VEE060L05.0R00-04S05	●	●	4	45°	6	7.7	5	-	S05	10	KEYV-S05	7
VEE160L12.0R00-04S10	●	●	4	45°	16	15.3	24	-	S10	20.5	KEYV-S10	28
VED160L12.0R05-04S10	●	●	4	30°	16	15.3	24	0.5	S10	20.5	KEYV-S10	28

* Recommended clamping torque (N·m)
2 pieces per package

● : New
● : Line up

VEE**I...

4 flute square head, variable pitch, for chatter damping



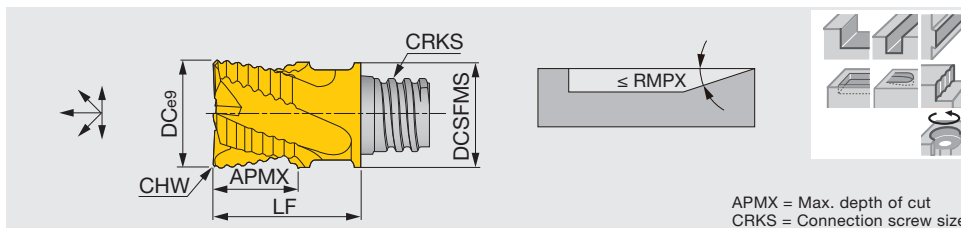
Designation	AH715	AH725	NOF	FHA	DC	DCSFMS	APMX	RE	CHW	CRKS	LF	Wrench	Torque*
VEE160L12.0C60I04S10	●	●	4	38°	16	15.3	12	-	0.6	S10	20.5	KEYV-S10	28

* Recommended clamping torque (N·m)
2 pieces per package

● : Line up

VEE**R...

4 flute square head, with serrated edges, for roughing



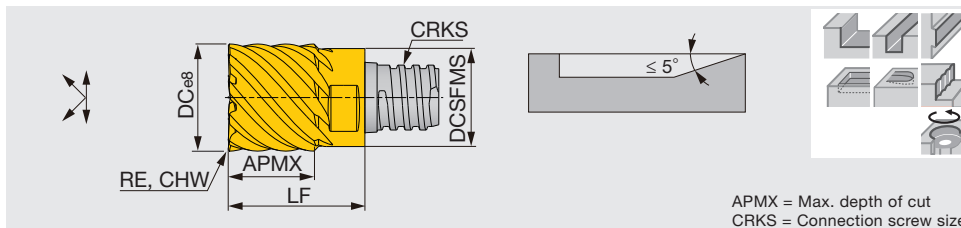
Designation	AH715	AH725	NOF	FHA	DC	DCSFMS	APMX	CHW	CRKS	LF	RMPX	Wrench	Torque*
VEE120L09.0C35R04S08	●	●	4	45°	12	11.7	9	0.35	S08	16.5	90°	KEYV-S08	15
VEE160L12.0C40R05S10	●	●	4	45°	16	15.3	12	0.6	S10	20.5	7°	KEYV-S10	28

* Recommended clamping torque (N·m)
2 pieces per package

● : New
● : Line up

VED**-08...

8 flute square head, for difficult-to-cut material



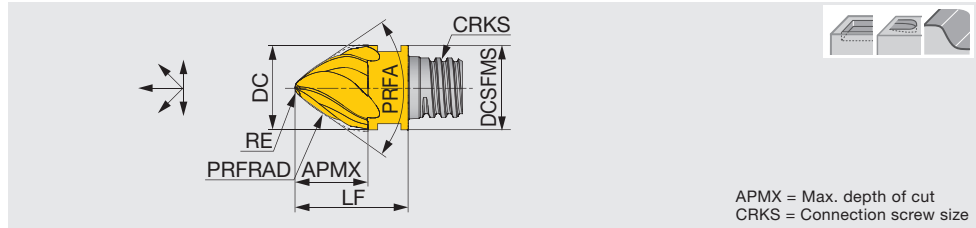
Designation	AH715	AH725	NOF	FHA	DC	DCSFMS	APMX	RE	CHW	CRKS	LF	Wrench	Torque*
VED160L12.0R10-08S10	●	●	8	30°	16	15.3	12	1	-	S10	20.5	KEYV-S10	28

* Recommended clamping torque (N·m)
2 pieces per package

● : New
● : Line up

VBO**S...

Short type barrel head with 4 flute, for 3D profiling with 5-axis machine



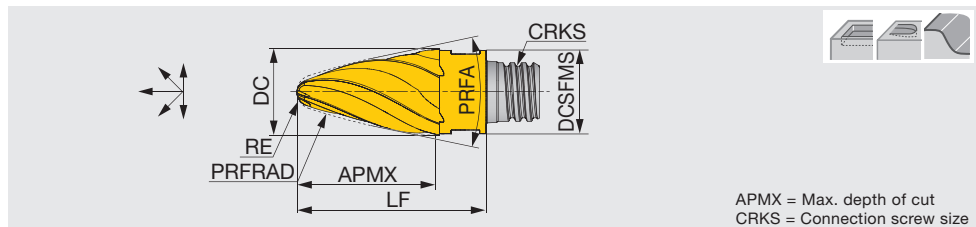
Designation	AH715	NOF	FHA	DC	DCSFMS	APMX	RE	PRFRAD	PRFA	CRKS	LF	Wrench	Torque*
VBO100L08.0R250-4S06	●	4	30°	10	9.7	8	0.8	25	70.8°	S06	13	KEYV-S06	10
VBO120L09.0R300-4S08	●	4	30°	12	11.7	9	1.2	30	71.6°	S08	16.5	KEYV-S08	15
VBO160L13.0R400-4S10	●	4	30°	16	15.3	13	1.6	40	70.3°	S10	20.5	KEYV-S10	28

* Recommended clamping torque (N·m)
2 pieces per package

● : Line up

VBO**L...

Long type barrel head with 5 flute, for 3D profiling with 5-axis machine



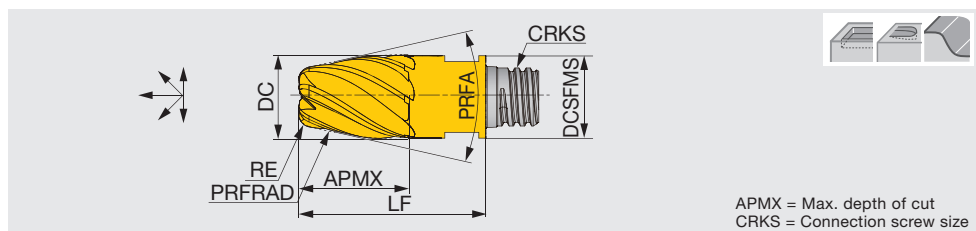
Designation	AH715	NOF	FHA	DC	DCSFMS	APMX	RE	PRFRAD	PRFA	CRKS	LF	Wrench	Torque*
VBO100L15.0R850-5S06	●	5	30°	10	9.7	15	2	85	27.3°	S06	22	KEYV-S06	10
VBO120L19.0R800-5S08	●	5	30°	12	11.7	19	2	80	29.3°	S08	27	KEYV-S08	15
VBO160L25.0R750-5S10	●	5	30°	16	15.3	25	3	75	26.7°	S10	33.5	KEYV-S10	28

* Recommended clamping torque (N·m)
2 pieces per package

● : Line up

VBN...

Bull nose head with 6 flute, for 3D profiling with 5-axis machine



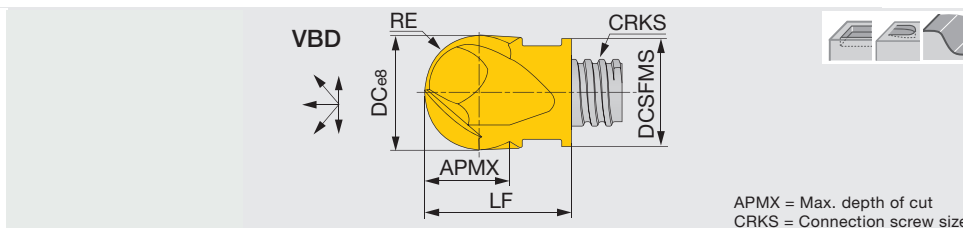
Designation	AH715	NOF	FHA	DC	DCSFMS	APMX	RE	PRFRAD	PRFA	CRKS	LF	Wrench	Torque*
VBN100L13.0R450-6S06	●	6	35°	10	9.7	13	1.5	45	15.1°	S06	22	KEYV-S06	10
VBN120L15.0R500-6S08	●	6	35°	12	11.7	15	2	50	15.1°	S08	27	KEYV-S08	15
VBN160L18.0R600-6S10	●	6	35°	16	15.3	18	2	60	15.1°	S10	33.5	KEYV-S10	28

* Recommended clamping torque (N·m)
2 pieces per package

● : Line up

VBD**-BG...

Ball nose head with 4 ground flutes for finishing



APMX = Max. depth of cut
CRKS = Connection screw size

Designation	AH715	AH725	NOF	FHA	DC	DCSFMS	APMX	RE	CRKS	LF	Wrench	Torque*
VBD160L12.0-BG-04S10	●	●	4	30°	16	15.3	12	7.978	S10	20.5	KEYV-S10	28

RE tolerance: ± 0.012

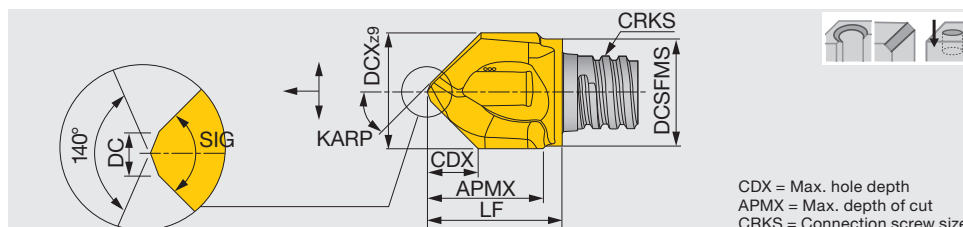
* Recommended clamping torque (N.m)

2 pieces per package

● : Line up

VCP**-02...

2 flute head, for spot drilling and chamfering



CDX = Max. hole depth
APMX = Max. depth of cut
CRKS = Connection screw size

Designation	AH715	AH725	SIG	NOF	FHA	DCX	DCSFMS	APMX	CDX	CRKS	LF	DC	KAPR	Wrench	Torque*
VCP080L07.7A45-02S05	●	●	90	2	0°	8	7.6	7.5	3.7	S05	9.75	1	45°	KEYV-S05	7
VCP100L09.0A45-02S06	●	●	90	2	0°	10	9.5	9.5	4.4	S06	11.75	1.5	45°	KEYV-S06	10
VCP160L15.0A45-02S10	●	●	90	2	0°	16	15.2	15	7.1	S10	18.8	1.5	45°	KEYV-S10	28

Minimum hole diameter $\phi 1.5$ mm

* Recommended clamping torque (N.m)

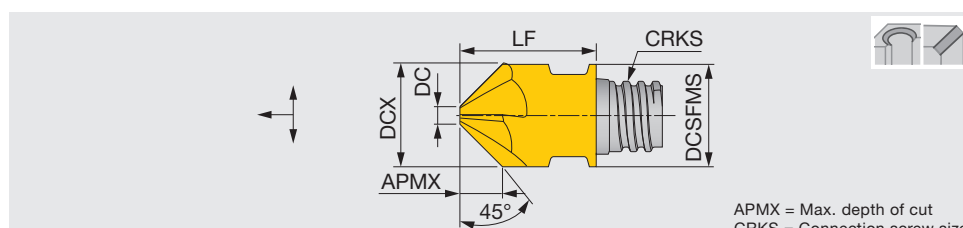
2 pieces per package

● : New

● : Line up

VCA**-04, 06...

4 or 6 flute head, without center cutting edge, for countersinking and chamfering



APMX = Max. depth of cut
CRKS = Connection screw size

Designation	AH715	AH725	NOF	FHA	DCX	DCSFMS	APMX	DC	CRKS	LF	Wrench	Torque*
VCA100L04.0A45-04S06	●	●	4	0°	10	10	4	1.95	S06	13	KEYV-S06	10
VCA160L06.5A45-06S10	●	●	6	0°	16	16	6.5	3	S10	20.3	KEYV-S10	28

* Recommended clamping torque (N.m)

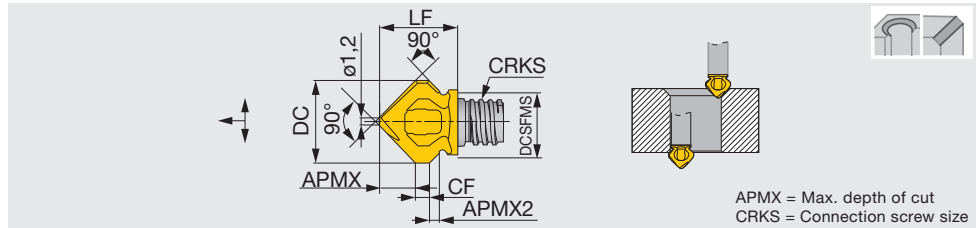
2 pieces per package

● : New

● : Line up

VCW**-02

2 flute head, for front and back chamfering



Designation	AH715	AH725	NOF	FHA	DC	DCSFMS	APMX	APMX2	CF	CRKS	LF	Wrench	Torque*
VCW118L05.0A45-02S06	●	●	2	0°	11.8	9.3	5	1.2	2	S06	11.2	KEYV-S06	10

Also capable of reverse chamfering

* The wrench size for these heads is different from the ones for the other head types.

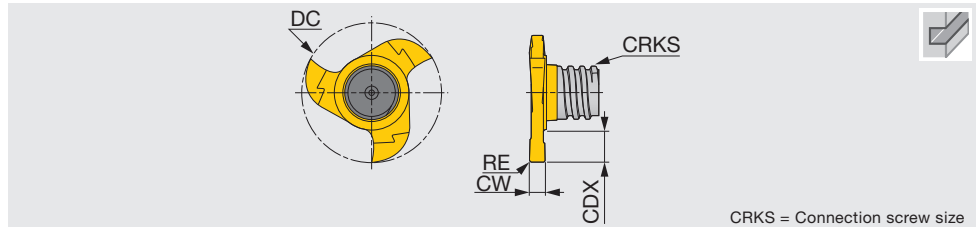
* Recommended clamping torque (N·m)

2 pieces per package

● : New
● : Line up

VST**-3...

3 tooth slotting head, 3 mm slot width



Designation	AH735	GH130	NOF	FHA	DC	CW±0.02	RE	CRKS	CDX	Wrench	Torque*
VST177W3.00R020-3S06	●	●	3	0°	17.7	3	0.2	S06	3.8	KEYV-177	10

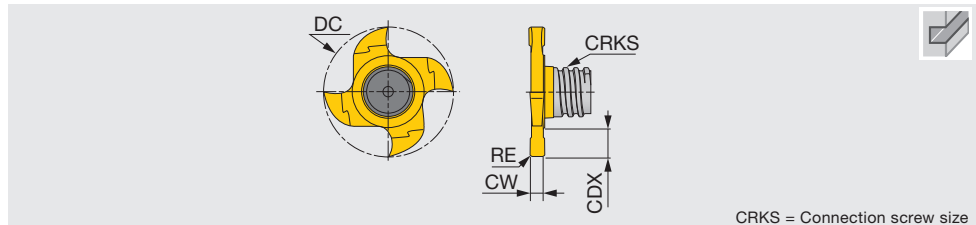
* Recommended clamping torque (N·m)

2 pieces per package

● : New
● : Line up

VST**-4...

4 tooth slotting head, 2.5, 3 mm slot width



Designation	AH735	GH130	NOF	FHA	DC	CW±0.02	RE	CRKS	CDX	Wrench	Torque*
VST217W2.50R020-4S08	●	●	4	0°	21.7	2.5	0.2	S08	4.5	KEYV-217	15
VST217W3.00R020-4S08	●	●	4	0°	21.7	3	0.2	S08	4.5	KEYV-217	15

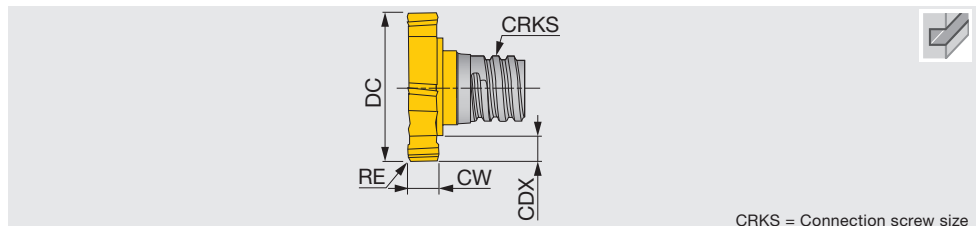
* Recommended clamping torque (N·m)

2 pieces per package

● : New
● : Line up

VTB**-06...

6 tooth T-slotting head, 6 mm slot width



Designation	AH735	GH130	NOF	FHA	DC-0.008	CW±0.02	CDX	CRKS	RE	Wrench	Torque*
VTB250W6.00R04-06S10	●	●	6	0°	25	6	4.3	S10	0.4	KEYV-S06	28

* Recommended clamping torque (N·m)

2 pieces per package

● : New
● : Line up

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