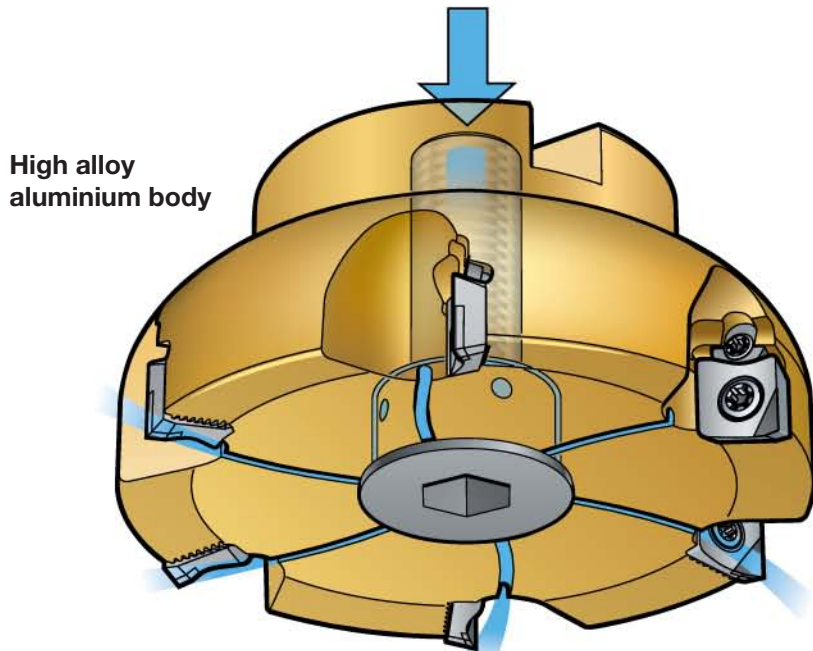


CoroMill Century

Facemill for non-ferrous materials

Designed for High Speed Machining



High alloy aluminium body

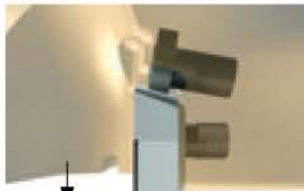
Steel body



Coromant Capto, HSK or arbor mountings

Intensified chip evacuation by accelerated cutting fluid

HSM-security by design



0.1
Easy micro precision seating within 0.1 mm setting range



Serrated location gives a very high speed security against insert movement

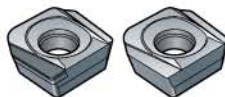
PCD and carbide insert



CD10

H10

Wiper insert option for high feed finishing



CD10

H10



Key for correct tightening torques delivered with the tool

Tailor Made

ISO application areas:



Tool options designed to individual customer requirements are available.

CoroMill Century

Light weight cutters in aluminum and durable steel for high speed machining of non-ferrous metals

Cutters in larger diameters – 80 to 200 mm - are arbor mounted and available in high alloy aluminium for light weight and in hardened steel for durability, both designed for best possible high speed performance.

Smaller cutters are manufactured in steel - either arbor mounted in diameters 50 and 63 mm or integrated with Coromant Capto in the diameter range 40-80 mm. Alternatively HSK couplings in diameters from 40 up to 125 mm are available.

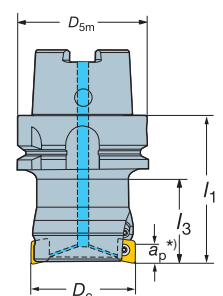
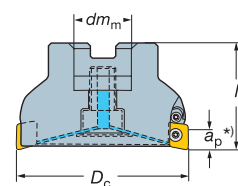
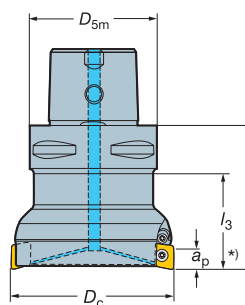
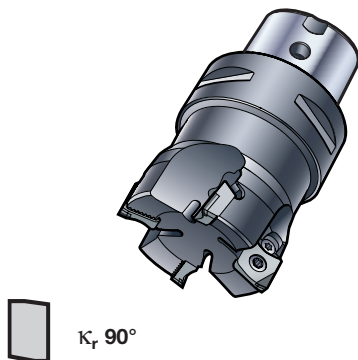
Larger cutters can be made on request with inserts mounted in adjustable cassettes.

- Close tolerances and consistent surface finish.
- Delivered with built in precision – which can be improved still further by easy use of the setting screw.
- Wiper insert option for superior surface finish at high removal rate.
- No burr formation.
- Balanced cutter body, few parts and inserts with edges for high speed located in serrated seats for minimum run out. Features that contribute to the cutter's excellent high speed performance providing reduced, costly production time. Its simplicity and easy handling also makes it possible to reduce non production delays.

- To suit different demands caused by the property of the aluminium to be machined, arbor mounted cutters bodies are available in aluminium and hardened steel.
 - aluminium bodies for light machining.
 - steel for more demanding operations and in high abrasive aluminium.
- The cutter is built up of a minimum of parts and inserts are securely fixed against radial forces.
- Max. revolution per minute is marked on the cutter body.
- Extremely light cutting performance with high positive edge geometries transfer a minimum load to the spindle assembly and component fixturing.
- Minimal run-out contributes to smooth, stable and vibration free cutting action.
- Light weight cutter body prevents excessive load on spindle bearings.
- Easy to handle – easy to use.
- Indexable inserts eliminates reconditioning costs.

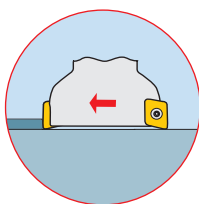


Diameter 40 – 200 mm

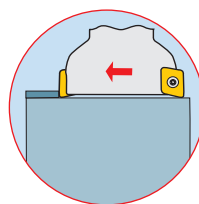


l_1 = programming length

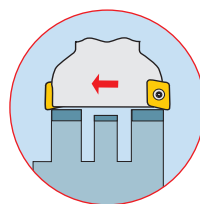
Operations:



General
facemilling



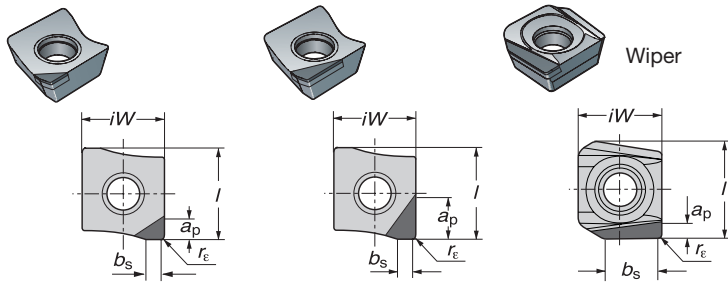
Facemilling to
mirror finish



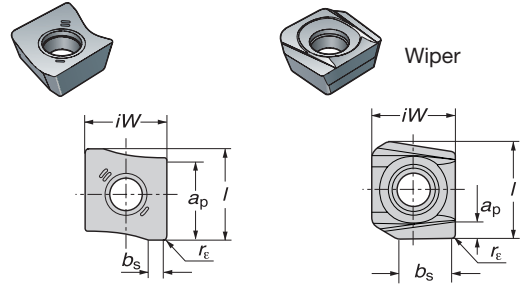
Demanding intermittent
machining

Inserts geometries and grades for CoroMill Century

PCD grade CD10



Coromant grade H10



11	R/L590-	1105H-PS2-NL 1105H-PR2-NL 1105H-PC2-NL 1105H-PS5-NL 1105H-PR5-NL 1105H-PC5-NL 110504H-NL	Dimensions, mm				Max
			l	iW	r _ε	b _s	a _p
			11	11.5	0.25x45°	2.2	2
			11	11.5	0.4	2.2	2
			11	11.5	1x45°	1.5	2
			11	11.5	0.25x45°	2.2	5
			11	11.5	0.4	2.2	5
			11	11.5	1x45°	1.5	5
			11	11.5	0.4	2.2	10
	R/L590-	1105H-RS2-NW 1105H-RR2-NW 1105H-RC2-NW 110504H-NW	11	11.5	0.25x45°	7.0	2
			11	11.5	0.4	7.0	2
			11	11.5	1x45°	6.3	2
			11	11.5	0.4	7.0	2

Example:

BALANCE PROTOCOL	
Coromill Century	
n _{max}	: 20800 rpm
Art Nr.	: R590-125Q40A-11M
Mass	: 0.88 kg
Unbalance	: 8.1 gmm
Order Nr.	: 00257433
Date	: 03-12-17

Inserts

ISO	Cemented carbide Geometry		Polycrystalline diamond	
	L	Wiper		Wiper
Non-ferrous material N				

Cutting data for CoroMill Century

PCD CD10	CMC No.	Cutting speed, m/min			Feed per tooth, mm		
		v _c			f _z		
		min rec	rec	max rec	min rec	rec	max rec
Al alloy non cast	30.1	1000	4000	8000	0.05	0.15	0.3
Al alloy cast	30.2	1000	4000	8000	0.05	0.15	0.3
Al >99%	30.3	1000	2000	4000	0.05	0.15	0.3
Al Si 13-22%	30.4	1000	2000	4000	0.05	0.15	0.3
Carbide H10		Cutting speed, m/min			Feed per tooth, mm		
		v _c			f _z		
		min rec	rec	max rec	min rec	rec	max rec
Al alloy non cast	30.1	500	2500	6000	0.1	0.2	0.4
Al alloy cast	30.2	500	2000	4000	0.1	0.2	0.4
Al >99%	30.3	500	1500	3000	0.1	0.2	0.4
Al Si 13-22%	30.4	500	750	1500	0.1	0.2	0.4

Corner geometries

- PR, RR, NL, NW**
First choice
- PS, RS**
Against burr formation
- PC, RC**
Highest security

Insert edges for cutting of aluminium are very sharp and fragile. The polycrystalline diamond – PCD – edges are particularly sensitive to mishandling.

Measuring equipment

All measuring procedures where the insert edges are positioned in direct contact with the point of a dial indicator carry an inherent risk of insert damage.

The maximum acceptable contact pressure between the contact point and the edge should not exceed 0.25N – the quality provided by qualified linear gauges.

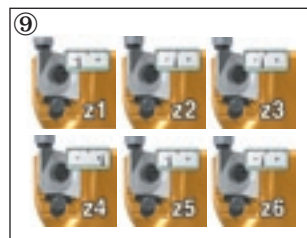
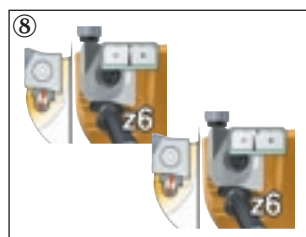
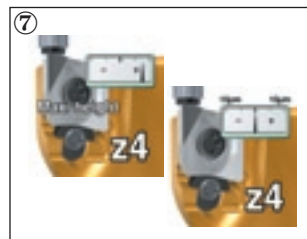
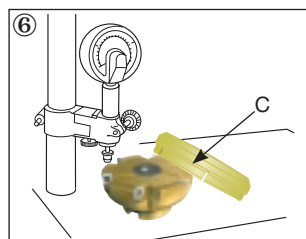
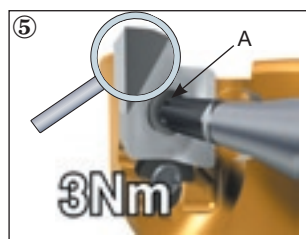
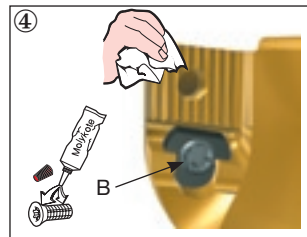
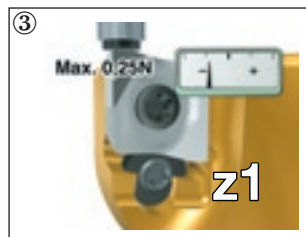
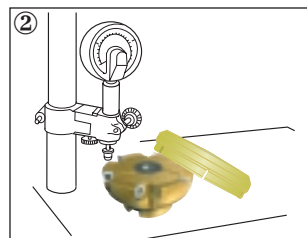
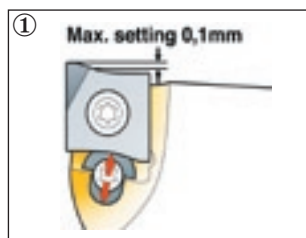
However, optical setting by projecting the cutting edge is recommended.

Setting of wiper inserts

When mounting a wiper insert, resetting is necessary since it is manufactured to the same size as the conventional inserts and is recommended to set 0.05 mm below the milling inserts.

Depending on the work material and whether edge frittering occurs in the workpiece, a reduction of this dimension to about 0.03 mm might be necessary.

High radial accuracy by design and axial by easy setting.



- ① The axial position of the inserts can be adjusted by an easily operated setting screw. The maximum setting range is 0.1 mm/.004 in.
- ② Measuring equipment.
All measuring procedures where the insert edges are positioned in direct contact with the point of a dial indicator carry an inherent risk of insert damage. Optical setting by projecting the cutting edge is recommended.
- ③ Insert edges for cutting of aluminium are very sharp and fragile. The polycrystalline diamond - PCD - edges are particularly sensitive to all unskilful handling. The maximum acceptable contact pressure between the contact point and the edge should not exceed 0.25N/.06 lbf - the quality provided by qualified linear gauges.
- ④ Lubricate the insert screws (A) with Molykote – included in the tool box. Make sure the serrations in the insert seats are free from dirt and damage. Keep the serrations dry.
- ⑤ Mount the inserts.
Make sure the correct corner geometry has been selected. Tighten the insert screw to 3Nm/26.6 lbf.in using the Torx Plus torque key included in the tool box.
- ⑥ Check, using the measuring equipment, the position of the parallel land of each insert.
- ⑦ Determine the highest positioned insert.
Raise the position of this insert by approximately five microns/.02 µin, by turning the adjusting screw (B) carefully clockwise.
- ⑧ Zero set the indicator at this level.
- ⑨ Adjust the position of all remaining inserts to this zero level in same way as indicated above.
If the zero position is exceeded, return to a level of about five microns/.02 µin below zero and repeat the setting again.

⚠ Indexing inserts/Changing to new inserts.

- Untighten the setting screw.
- Undo the insert screw and remove the insert.
- **When changing to new PCD inserts, always change to new insert screws.**

Setting of the wiper insert.

- When using a wiper insert, resetting of the system is normally required.
- Setting follows the same procedure as given above.
- The parallel land of the wiper insert should be adjusted to a level 0.05 mm/.002 in below the zero position of the conventional inserts.
- Depending on the workpiece material and whether edge frittering occurs in the workpiece, a reduction of this dimension to about 0.03 mm/.001 in might be necessary.
- A CoroMill Century cutter with inserts mounted should always be protected with the cover (C) included in the package see fig. 6 when not in use.

This catalogue has been split into smaller parts
to enhance downloading speeds.

If you want to view the next page
please click [HERE!](#)