


## DOHRE Carbide Inserts Grade

Grade	Coating Type	Color	Working Type	Application	Characteristic
DH1120	CVD	Yellow	Turning Cutting	P20/P30	Adopted with Co-structure substrate, DH1120 is optimized for the best combination of toughness and wearing resistance. It's wide range applicative and suitable for semi-finishing and finishing ISO P material.
DH1210	CVD	Black	Turning Cutting	P10/P20	Adopted with thick TiCN and thick Al <sub>2</sub> O <sub>3</sub> coating, DH1210 is the best option for semi-finishing and finishing ISO P material, and optimized for impact resistance and wearing resistance. Contracting with prime grade, the cutting speed can be increased over 25%; and the flank wear can be decreased 30% in same cutting speed.
DH1220D	CVD	Black+Yellow	Turning Cutting	P20/P30	Substrate of good toughness and strength combined with the thick TiCN and thick Al <sub>2</sub> O <sub>3</sub> Coating, makes the coating greatly improved in wear-resistance and looks good in appearance. It is suitable for various processing of steel.
DP3120	PVD	Grey	Turning Cutting	M20	Adopted with thick TiCN and thick Al <sub>2</sub> O <sub>3</sub> coating, it optimized for impact resistance and wearing resistance, DP3120 has strength resistance to plastic deformation and blade intensity, suitable for semi-finishing and rough cutting in continuous and interrupted. It can realize high-speed, high-efficiency and environmental cutting.
DP3220	PVD	Purple	Turning Cutting	M10/M20	The highly hard substrate combines both favorable shock resistance and blade security. Used PVD coating with excellent versatility, it is preferred in interrupted turning and milling stainless steel.
DO2220	CVD	Black+Yellow	Turning Cutting	K10	Hard substrate perfectly combined with ultra thick TiCN and ultra thick Al <sub>2</sub> O <sub>3</sub> DO2220 is optimized for excellent spalling resistance. It's suitable for medium and high-speed cutting in cast iron, besides slight interrupted turning. It also has good versatility in milling.
DO2120	CVD	Black	Turning Cutting	K20	Mild-coarse grain substrate combines with hard-wearing alumina CVD coating, DO2120 is optimized for wear resistance and impact resistance and better than DO2120, it is preferred in low-medium speed turning in gray iron.
DP4100	PVD	Grey	Milling Cutting	P、M、K	High Co element substrate combines with PVD AlTiN coating, it has very small coefficient of friction, high antioxidant temperature and good nano hardness. Preferred grade for steel and stainless steel milling and drilling.
DP4200	PVD	Yellow	Milling Cutting	P	The highly hard and thin grained substrate combines with wearing resistance AlTiN coating, it is optimized for impact resistance and wearing resistance, suited for mid-high hardness steel in milling.
DP4130	PVD	purple	Milling Cutting	P、M、K、N	High Co content and fine WC grain substrate, gives wonderful cutting edge strength, combines with good thermal stability silicon coating, it has very small coefficient of friction and good nano hardness. Good at stainless steel semi-finishing turning, parting and grooving processing. Preferred grade for steel and stainless steel milling and drilling.











### DOHRE ChipBreaker

Type of processing	P	M	K	N
精加工 <b>Finishing</b>	DPF/DTF/TF	DMF/DMMK		AK
半精加工 <b>Semi finishing</b>	DPM/DPMK/DTM/TF	DTM/DMM	Gnenral Chipbreaker	ALH
粗加工 <b>Roughing</b>	DPR/DTR	DTR	Flat	

### ChipBreaker for Steel






DPF (P)	DPM (P)	DPR (P)	DPMK (P)	TM (P)	R-S (P)	HM (P/M)	HQ (P)
							
DTF (P/M)	DTM (P/M)	DTR (P/M)	HMP (P/M/K)	C25 (P/M/K)			
							

### ChipBreaker for Stainless Steel






















DMF (M)	DTM (M)	DMM (M)	MA (M/P)	MS (M)	HA (M)	HS (M)	GS (M)
							
MV (M/P)	OG2 (M)						
							

### ChipBreaker for Cast Iron









### ChipBreaker for Aluminum Alloy

GH	code G chipbreak	code A chipbreak			ALH	AK	
							

DOHRE ChipBreaker Introduction Chart

Workpiece	Sharp	Dohre Chip Breaker	Type of processing	Characteristic
P		DPF	Finishing	Negative insert chipbreaker, special designed for cutting ISO P material, -DPF can efficiently control and break chip; with sharp cutting edge, it has low cutting forces and good chip-controlling, which help it obtains excellent precision and surface quality, suitable for finishing ISO P material.
		DPM	Simi-finishing	Negative chamfer designed on sharp blade, blade intensity and impact-resistance are increased, it can efficiently break chip and extend chip break filed. DPM is suitable for semi-finishing and slight interrupted cutting ISO P material.
		DPR	Roughing	Negative insert chipbreaker,, three-dimension designed with double rake angle, wide margin and negative chamfer, -DPR get balance between blade intensity and sharp. It can efficiently guide chip's flow direction and suitable for rough cutting and interrupted cutting.
		DPMK	Simi-finishing	Negative insert chipbreaker, the special three-dimensional groove design of double rake angle and variable edge width makes the cutting force small, the chip breaking range is wide, and the edge edge is sharper than epmk. Therefore, even when cutting alloy steel with high viscosity, it can obtain good surface quality; it also has good performance in the case of uneven processing of blank.
		TM	General Type	It is suitable for steel machining and has wide application
		M	General Type	It is suitable for steel machining and has wide application
		DTF	Finishing	Positive insert chipbreaker ,suitable for finishing ISO P and M materials.
		DTM	Simi-finishing	Positive insert chipbreaker, special chipbreaker design to cutting edge sharp and safe; Good anti impact resistance; Excellent tool life time; Suitable for steel semi-finishing.
		DTR	Roughing	Positive insert chipbreaker ,suitable for roughing ISO P and M materials.
		HMP	General Type	General chip breaker, suitable for ISO P materials
		C25	General Type	General chip breaker, suitable for ISO P materials
		HM	Semi-finishing	General chip breaker, suitable for ISO P materials
		TF	General Type	Double-sided trigon insert, positive rake angle that varies along the edge to negative in order to prevent chipping. Special design reduces cratering. Used for carbon and alloy steel, stainless steel and high temp. alloys.
	M		DMF	Finishing
		DTM	Simi-finishing	Special chip breaker design to keep both sharp cutting edge and good impact resistance, which can efficiently avoid accumulated and suited for semi-finishing ISO M material.
		DMM	Finishing and Simi-finishing	Suitable for finishing and semi-finishing ISO M materials
		DTR	Roughing	Positive insert chipbreaker ,suitable for roughing ISO P and M materials.
		MA	General	General chip breaker, suitable for ISO M materials
		MS	Semi-finishing	General chip breaker, suitable for ISO M materials
		MV	Finishing	Suitable for finishing ISO M materials
		OG2	General	General chip breaker, suitable for ISO M materials

DOHRE ChipBreaker Introduction Chart

Workpiece	Sharp	Dohre Chip Breaker	Type of processing	Characteristic
Yellow		HA	Finishing	Suitable for finishing ISO M materials
		HS	Semi-finishing	Suitable for Semi-finishing ISO M materials
		GS	Semi-finishing or roughing	Suitable for Semi-finishing ISO M materials
Red		GH	General	Suitable for ISO K materials
		chipbreak code	General	Suitable for ISO K materials
		chipbreak code	Roughing	Suitable for roughing ISO K materials
Aluminum Alloy		ALH	Roughing and Semi-finishing	Used for semi-finishing and rough turning, Aluminum alloy and other non-ferrous metal. Procedure, turning, endface and copying cutt. Advantages, open positive rake angle chip breaker in high cutting speed cutting. Used as far as possible the high cutting speed can be obtained more production efficiency.
		AK	Finishing	The unique three-dimensional chip breaking groove and large chip holding groove design effectively ensure the chip breaking and chip removal performance of the blade; the large front angle and rear angle make the blade edge sharper, the cutting speed is faster, and the cutting load is effectively reduced; the design of the edge inclination angle effectively controls the chip flow direction; the mirror effect of the blade rake surface effectively reduces the possibility of chip sticking with the rake face, In addition, it can effectively prevent the formation of chip accretion, so as to obtain high surface quality and blade life.