

TOP TECH Cutting

Purchase direction and Specification



Purchase direction

1. Order number = grinding material+ item number For example: S02C0302
2. The hardness of material is known
 - A. From the left of table sheet, find out the indicated color block of objective hardness, or find the suitable hardness from the remark.
 - B. To search the grinding material to the right in the table sheet
 - C. Find out the item number for the specific cutting machine(the list mentioned the maximum available size of cut-off wheel)
 - D. Refer the specification sheet of abrasive wheel, and to confirm the size and spec.

Example 1 :

Material: HV725(HRC61)

Hardness HV	Remark	Model grinding material
200	Segmented	HW2111
400		HW2112
600		HW2113
800		HW2122
1000		HW2123
1200		HW2100 以下
1400	(HRC58~64)	S02C
1600		S02N
1800	HV670~780	
2000		

A. color block of hardness
B. grinding material

Grinding material	Item no.	Size	OD x ID x thickness	PC/PKG	Application
S02C	0101	9"	Ø230xØ31.75x1	10	HV670~780(HRC58~64)
	0202	10"	Ø255xØ31.75x1.2	10	Special alloy steel , SKD ,
	0302	12"	Ø305xØ31.75x1.2	10	SKH , SKS3 , SCM415 ,
	0403	14"	Ø355xØ31.75x1.5	10	SACM , SNCM439, steel of
	0504	16"	Ø400xØ31.75x3	10	hyper hard & heat-treated

C. item corresponded to machine
D. confirm the size/spec.

- D. confirm the size/spec.
- E. order number S02C0302

C. item corresponded to machine

Purchase direction

3. For the unknown hardness of cutting objective

- Refer to the specification sheet of abrasive wheel, find out the suitable grinding material for cutting.
- Find out the item number for the specific cutting machine (the list mentioned the maximum available size of cut-off wheel)
- Refer the specification sheet of abrasive wheel, and to confirm the size and spec.

Example 2 :



sapphire or PCB board

Diamond Blade (metal bonded)

Grinding material	Item no.	Size	OD x ID x thickness	PC/PKG	Application
HW2112	0502L	4"	Ø100XØ12.7x0.5	1	Hard & brittle material, hard steel, ceramic, glass, mineral, titanium alloy, <u>sapphire base plate</u> , <u>electronic material</u> , <u>PCB</u> , semi-conductor
	0602L	5"	Ø125xØ12.7x0.5	1	
	0702L	6"	Ø152xØ12.7x0.5	1	
	1003L	7"	Ø175XØ25.4x0.6	1	
	1203L	8"	Ø200XØ25.4x0.6	1	
	1207L		Ø200XØ25.4x1.0	1	

A. find out the suitable grinding material



Remark	Model	CL40	CL50
Segmented	HW2111		1207H
Metal Bonded	HW2112		1203L 1207L
Resin Bonded	HW2113	0602L	0207L

B. item corresponded to machine

C. confirm the size/spec.

D. order no. HW21121207L

Specification sheet of abrasive wheel

Grind Material	Item no.	Size	OD x ID x thickness	PC/ PKG	Application
S02A	0101	9"	Ø230xØ31.75x1	10	HV495 ~ 710 (HRC50~60) Alloy Tooling Steel、SKS、SKD、SKT、SK3、SUP、S45C、SCM415、SNCM439, Steel of heat treatment
	0202	10"	Ø255xØ31.75x1.2	10	
	0302	12"	Ø305xØ31.75x1.2	10	
	0403	14"	Ø355xØ31.75x1.5	10	
	0504	16"	Ø400xØ31.75x3	10	
S02B	0101A	9"	Ø230xØ31.75x1	10	HV380 ~ 495 (HRC40 ~ 50) Carbon steel、Stainless Steel、S-C series tooling steel、SK series、Soft steel SS series、Steel of non- heat treatment
	0202A	10"	Ø255xØ31.75x1.2	10	
	0302A	12"	Ø305xØ31.75x1.2	10	
	0403A	14"	Ø355xØ31.75x1.5	10	
	0504A	16"	Ø400xØ31.75x3	10	
S02C	0101	9"	Ø230xØ31.75x1	10	HV670 ~ 780 (HRC58 ~ 64) Special alloy steel、SKD、SKH、SKS3、SCM415、SACM、SNCM439、Steel of hyper hard & heat – treated
	0202	10"	Ø255xØ31.75x1.2	10	
	0302	12"	Ø305xØ31.75x1.2	10	
	0403	14"	Ø355xØ31.75x1.5	10	
	0504	16"	Ø400xØ31.75x3	10	

Grind Material	Item no.	Size	OD x ID x thickness	PC/ PKG	Application
S02D	0101	9"	Ø230xØ31.75x1	10	Cast iron 、 Forged cast iron. Cotton series: not easy to be broken, but it is with less cutting efficiency
	0202	10"	Ø255xØ31.75x1.2	10	
	1002B (cotton)		Ø255XØ32X1.2	10	
	0302	12"	Ø305xØ31.75x1.2	10	
	1102B (cotton)		Ø305XØ32X1.2	10	
	0403	14"	Ø355xØ31.75x1.5	10	
	1203B (cotton)		Ø355XØ32X1.5	10	
	0504	16"	Ø400xØ31.75x3	10	
S02E	0101	9"	Ø230xØ31.75x1	10	Non-ferrous metal: Copper, Aluminum series
	0202	10"	Ø255xØ31.75x1.2	10	
	0302	12"	Ø305xØ31.75x1.2	10	
	0403	14"	Ø355xØ31.75x1.5	10	
	0504	16"	Ø400xØ31.75x3	10	
S02F	0101	9"	Ø230xØ31.75x1	10	Bakelite 、 Plastic 、 Resin 、 Mounting items 、 Sapphire 、 Tungsten steel 、 Ceramic(Aluminum -oxide 、 Zirconium-oxide) 5
	0202	10"	Ø255xØ31.75x1.2	10	
	0302	12"	Ø305xØ31.75x1.2	10	
	0403	14"	Ø355xØ31.75x1.5	10	
	0504	16"	Ø400xØ31.75x3	10	

Grind Material	Item no.	Size	OD x ID x thickness	PC/ PKG	Application
S02N (EU Spec.)	10AD	10"	Ø250xØ32x1.6	10	HV380 ~ 495 (HRC40 ~ 50) Carbon steel、 Stainless Steel、S- C series tooling steel、SK series、 Soft steel SS series、Steel of non- heat treatment
	12AD	12"	Ø300xØ32x2	10	
	14AD	14"	Ø350xØ32x2.5	10	
	16AD	16"	Ø400xØ32x3	10	
	10ATS	10"	Ø250xØ32x1.6	10	HV495 ~ 710 (HRC50~60) Alloy Tooling Steel、SKS、SKD、 SKT、SK3、SUP、 S45C、SCM415、 SNCM439, Steel of heat treatment
	12ATS	12"	Ø300xØ32x2	10	
	14ATS	14"	Ø350xØ32x2.5	10	
	16ATS	16"	Ø400xØ31.75x3	10	
	10ATC	10"	Ø250xØ32x1.6	10	HV670 ~ 780 (HRC58 ~ 64) Special alloy steel、 SKD、SKH、SKS3、 SCM415、SACM、 SNCM439
	12ATC	12"	Ø300xØ32x2	10	
	14ATC	14"	Ø350xØ32x2.5	10	

Diamond blade(Electroforming)

Grind Material	Item no.	Size	OD x ID x thickness	PC/ PKG	Application
HW2111	0107	Ø75	Ø75XØ11.5x1	1	Hard & brittle material、Hard steel、 Ceramic、Glass、 Mineral、titanium alloy, sapphire base plate, electronic material, PCB board、 semi-conductor、 single layer grinding grain、Grinding grain with bulge surface、 Strong cutting ability、 but wearing is more.
	0307	Ø85	Ø85xØ11.5x1	1	
	0808H	6"	Ø150XØ25.4x1.2	1	
	0908H	7"	Ø175XØ12.7x1.2	1	
	1208H	8"	Ø203xØ12.7x1.2	1	

Diamond blade (metal-bonded)

Grind Material	Item no.	Size	OD x ID x thickness	PC/ PKG	Application
HW2112	0502L	4"	Ø100XØ12.7x0.5	1	Hard & brittle material, hard steel, ceramic, glass, mineral, titanium alloy, sapphire base plate, electronic material, PCB, semi-conductor Grinding grain and best wearing resistance. Shape maintained of reprocessing and usage life is better than resin blade and electroforming blade wheels.
	0602L	5"	Ø125xØ12.7x0.5	1	
	0702L	6"	Ø152xØ12.7x0.5	1	
	1003L	7"	Ø175XØ25.4x0.6	1	
	1203L	8"	Ø200XØ25.4x0.6	1	
	1207L		Ø200XØ25.4x1.0	1	

Diamond blade (resin-bonded)

Grind Material	Item no.	Size	OD x ID x thickness	PC/ PKG	Application
HW2113	0502L	4"	Ø101XØ12.7x0.5	1	Hard & brittle material, hard steel, ceramic, glass, mineral, titanium alloy, sapphire base plate, electronic material, PCB, semi-conductor. The flexible blade can reduce the damage during reprocessing.
	0602L	5"	Ø127xØ12.7x0.6	1	
	0702L	6"	Ø152xØ12.7x0.6	1	
	1005L	7"	Ø175XØ25.4x0.6	1	

CBN blade (metal-bonded)

Grind Material	Item no.	Size	OD x ID x thickness	PC/ PKG	Application
HW2122	0602L	5"	Ø127xØ12.7x0.5	1	High speed steel · Ferrous sintering metal · Alloy steel · Tooling steel · Stainless Steel · Bearing steel... Grinding grain and best wearing resistance. Shape maintained of reprocessing and usage life is better than resin blade.
	0702L	6"	Ø152xØ12.7x0.5	1	
	1003L	7"	Ø175XØ25.4x0.6	1	

CBN blade (resin-bonded)

Grind Material	Item no.	Size	OD x ID x thickness	PC/ PKG	Application
HW2123	0602L	5"	Ø127xØ12.7x0.5	1	High speed steel · Ferrous sintering metal · Alloy steel · Tooling steel · Stainless Steel · Bearing steel... The flexible blade can reduce the damage during reprocessing.
	0702L	6"	Ø152xØ12.7x0.5	1	
	1005L	7"	Ø175XØ25.4x0.8	1	

Table Sheet

200	400	600	800	1000	1200	1400	1600	1800	2000	Hardness HV	Remark	Model Grinding material		CL4	CL50	CM35B	CM35C	CH75	CH85	CK200		CK260	CK360		CK460	CF260													
												0								1HP	2HP		5HP	7.5HP		3HP	5HP												
											Diamond (electroforming)	HW2111		0908H	1208H	1208H	0107	0307																					
											Diamond (metal-bonded)	HW2112	060 2L	1003L	1203L 1207L	1203L 1207L																							
											Diamond(Resin)	HW2113	060	1005L	1005L	1005L																							
											CBN(metal)	HW2122	060	1003L	1003L	1003L																							
											CBN(Resin)	HW2123	060	1005L	1005L	1005L																							
											HV2100 (below)	S02F									0101	0202	0302	0302	0504	0504	0302	0403											
											(HRC58~64) HV670~780	S02C									0101	0202	0302	0302	0504	0504	0302	0403											
											(HRC50~60) HV500~710	S02A									0101	0202	0302	0302	0504	0504	0302	0403											
												S02N (Eu)										10ATC	12ATC	12ATC	16ATC	16ATC	12ATC	14ATC											
											(HRC40~50) HV380~500	S02B									0101A	0202A	0302A	0302A	0504A	0504A	0302A	0403A											
												S02N (Eu)										10AD	12AD	12AD	16AD	16AD	12AD	14AD											
											Cast iron	S02D									0101	0202	0302	0302	0504	0504	0302	0403											
											Copper, aluminum	S02E									0101	0202	0302	0302	0504	0504	0302	0403											

200	400	600	800	1000	1200	1400	1600	1800	2000	Hardness HV	Remark	Model Grinding Material		CT260	CF360	CT360	CF450S	CF100	CF120	CF150	CF200	CL35C	CL50C	CL70C	CL60A	CL80A	CL100A
											HV2100(below)	S02F	0302	0504	0504	0504	0202	0302	0302	0504	0101	0202	0202	0202	0302	0403	
											(HRC58~64) HV670~780	S02C	0302	0504	0504	0504	0202	0302	0302	0504	0101	0202	0202	0202	0302	0403	
											(HRC50~60) HV500~710	S02A	0302	0504	0504	0504	0202	0302	0302	0504	0101	0202	0202	0202	0302	0403	
												S02N (Eu)	12ATS	16ATS	16ATS	16ATS	10ATS	12ATS	12ATS	16ATS		10ATS	10ATS	10ATS	12ATS	14ATS	
											(HRC40~50) HV380~500	S02B	0302A	0504A	0504A	0504A	0202A	0302A	0302A	0504A	0101A	0202A	0202A	0202A	0302A	0403A	
												S02N (Eu)	12AD	16AD	16AD	16AD	10AD	12AD	12AD	16AD		10AD	10AD	10AD	12AD	14AD	
											Cast iron	S02D	0302	0504	0504	0504	0202	0302	0302	0504	0101	0202	0202	0202	0302	0403	
											Copper,	S02E	0302	0504	0504	0504	0202	0302	0302	0504	0101	0202	0202	0202	0302	0403	