



neway

PARTS LIST



STANDARD SERIES VALVE SEAT CUTTERS (for use with standard series pilots, .375" top)

CUTTER HEAD DIA.	ANGLES	# OF BLADES	PART # OF BLADES	PART #
28.6mm 1-1/8"	15°	3	250	243
	30°	3	250	278
	30°	3	253	299
	30° x 45°	3/3	250	274
	45°	3	250	268
	60°	3	252	269
	75°	3	254	279
31.8mm 1-1/4"	0°	3	250	701
	15°	3	250	244
	15°	5	250	604
	15° x 31°	3/5	250	603
	15° x 45°	3/3	250	229
	15° x 46°	3/3	250	204
	15° x 60°	3/3	250/252	273
	15° x 75°	3/3	250/254	212
	20° x 45°	3/3	250	220
	25°	5	250	606
	30°	5	250	607
	30° x 45°	3/3	250	230
	31°	5	250	602
	31° x 46°	3/3	250	203
	37-1/2°	5	250	3731
	45°	5	250	608
	46°	3	250	285
	46°	5	250	609
	60°	3	252	270
	65°	3	254	605
70°	3	252	222	
75°	3	254	206	
80°	5	254	8031	
35mm 1-3/8"	0° x 46°	3/5	250	617
	11° x 45°	3/3	250	286
	15° x 45°	3/5	250	615
	15° x 46°	3/3	250	209
	15° x 46°	3/5	250	612
	20° x 45°	3/3	250/251	221
	20° x 46°	3/5	251/250	613
	30° x 45°	3/3	250/251	232
	30° x 45°	5/5	251	616
	31°	5	250	611
	31° x 46°	3/3	250/251	201
	35° x 60°	5/5	250/252	618

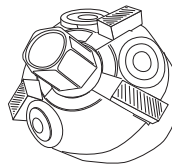
CUTTER HEAD DIA.	ANGLES	# OF BLADES	PART # OF BLADES	PART #
38mm 1-1/2"	0°	3	251	720
	11° x 45°	3/3	251	239
	15°	5	250	629
	15° x 30°	3/5	250	623
	15° x 45°	3/5	251	625
	15° x 46°	3/5	251	621
	15° x 60°	3/3	251/254	213
	15° x 60°	5/5	251/254	619
	15° x 70°	3/3	251/254	297
	15° x 75°	3/3	251/254	217
	15° x 75°	5/5	251/254	624
	25°	5	251	689
	30°	5	250	627
	30° x 45°	3/3	251	234
	30° x 45°	5/5	251	626
	31°	5	251	628
	31° x 46°	3/3	251	208
	31° x 46°	5/5	251	622
	35°	5	251	690
	36°	5	251	692
	40°	5	251	4038
	43° x 52°	5/5	251	691
	45°	5	251	620
	46°	3	251	275
	60°	3	254	205
	65°	3	254	219
	70°	3	254	271
75°	3	254	216	
80°	5	254	8038	
41.3mm 1-5/8"	15° x 45°	5/5	251	635
	15° x 46°	3/5	251	631
	20° x 45°	5/5	251	633
	30° x 45°	3/3	251	237
	30° x 45°	5/5	251	636
	31° x 46°	5/5	251	632
44.5mm 1-3/4"	45°	5	251	634
	0°	3	251	740
	15° x 45°	3/5	251	646
	15° x 46°	3/5	251	641
	15° x 60°	3/3	251/254	292
	15° x 60°	5/5	251/254	643
	15° x 75°	5/5	251/254	697
	25°	5	251	696
	30°	5	250	647
	30° x 45°	5/5	251	645
	31°	5	251	649

! Custom cutters—any angle/diameter—made to order. Call for quotation.

STANDARD SERIES VALVE SEAT CUTTERS (continued) (for use with standard series pilots, .375" top)

CUTTER HEAD DIA.	ANGLES	# OF BLADES	PART # OF BLADES	PART #
44.5mm	31° x 46°	5/5	251	642
1-3/4"	35°	5	251	695
	37-1/2°	5	251	698
	55°	5	251	5544
	60°	3	254	293
	60°	5	254	644
	70°	5	254	699
	75°	3	254	272
	80°	5	254	8044
50.8mm	0°	3	251	750
2"	15°	5	251	686
	15° x 45°	3/5	251	659
	15° x 60°	3/3	251/254	288
	15° x 60°	5/5	251/254	653
	15° x 75°	5/5	251/254	654
	20°	5	250	681
	30°	5	251	680
	30° x 45°	5/5	251	660
	31° x 46°	5/5	251	652
	36°	5	251	683
	50°	5	251	5051
	60°	5	254	657
	70°	5	254	684
	80°	7	254	8050

CUTTER HEAD DIA.	ANGLES	# OF BLADES	PART # OF BLADES	PART #
55.5mm	20°	5	251	685
2-3/16"				
57.2mm	0°	3	251	760
2-1/4"	15° x 46°	5/9	251	664
	15° x 60°	5/5	251/254	666
	30° x 45°	7/7	251	665
	31° x 46°	7/7	251	662
	50°	5	251	5057
	55°	5	251	5557
63.5mm	15°	5	251	676
2-1/2"	15° x 60°	5/5	251/254	674
	30° x 45°	7/7	251	677
	31° x 46°	7/7	251	672
	38°	7	251	3863
	50°	7	251	5063
	55°	5	251	5563
	60°	5	254	675



! Special order cutters can be made to any angle or diameter you may require (up to 6"). Call for pricing.

SMALL SERIES VALVE SEAT CUTTERS (for use with small series pilots, .297" top)

OUTER DIA. OF BLADES (FIXED)	ANGLES	# OF BLADES	PART #
.760" (19.3mm)	15°	3**	134
.816" (20.7mm)	15°	3**	130
.895" (22.7mm)	15°	3**	141
.870" (22.1mm)	20°	3**	138
.758" (19.3mm)	32°	3**	144
.830" (21.1mm)	32°	3**	132
.925" (23.5mm)	32°	3**	142
.830" (21.1mm)	45°	3**	135
.850" (21.6mm)	45°	3**	131
.925" (23.5mm)	45°	3**	143
.874" (22.2mm)	60°	3**	133

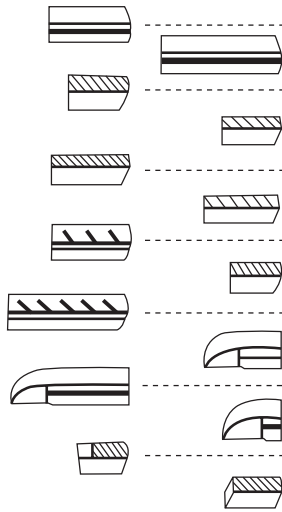
CUTTER HEAD DIA.	ANGLES	# OF BLADES	PART # OF BLADES	PART #
25.4mm	15°	3	553	120
1"	15°	3	355	119
	15°	3	253	121
	20°	3	253	127
	30°	3	250	126
	31°	3	250	115
	31°	3	253	123
	45°	3	253	122
	46°	3	253	110
	60°	3	252	111
	75°	3	254	125
28.6mm	15°	3	250	129
1-1/8"	31° x 46°	3/3	253	103
31.8mm	60°	3	252	114
1-1/4"				
33.3mm	15° x 60°	3/3	251/254	124
1-5/16"	30° x 45°	3/3	250	128
	31° x 46°	3/3	251	102

**Blades are fixed (glued) into cutter head and cannot be adjusted or replaced.

The above cutters are generally used where valve sizes are 22mm (7/8"), or smaller. The diameter listed indicates the outer reach of the blades. To select the appropriate cutter, take the valve size and look for a cutter whose blades are 1mm (.040") to 2.5mm (.100") bigger than the valve.

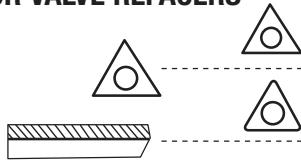
TUNGSTEN CARBIDE REPLACEMENT BLADES

FOR VALVE SEAT CUTTERS



PART #	LENGTH	DESCRIPTION
152	1/2" (12.7mm)	Non-serrated blade correction cutters
154	3/4" (19mm)	Non-serrated blade correction cutters
250	3/8" (9.5mm)	0° thru 46° seat cutters
250 LC	3/8" (9.5mm)	For aggressive stock removal. Good on very hard seats.
251	1/2" (12.7mm)	0° thru 46° seat cutters
251 LC	1/2" (12.7mm)	For aggressive stock removal. Good on very hard seats.
252	1/2" (12.7mm)	60° thru 80° correction cutters
253	5/16" (7.9mm)	0° thru 46° seat cutters
254	3/4" (19mm)	60° thru 80° correction cutters
352	1/2" (12.7mm)	Radius blade — blending purpose
354	3/4" (19mm)	Radius blade — blending purpose
355	3/8" (9.5mm)	Radius blade — blending purpose
353	5/16" (7.9mm)	Honda power products (stepped)
553	5/16" (7.9mm)	Suzuki motorcycles (short-angled)

FOR VALVE REFACERS



VFR 72		For VFR-1000. Best for medium to soft valves.
VFR 74		For VFR-1000, titanium/stainless valves
VFR 75		For VFR-1000. Best for hard valves, stellite valves.
HVR CARB	3/4" (19mm)	For "Gizmatic" and HVR manual valve refacers

STANDARD SERIES SOLID PILOTS — .375" TOP



FRACTIONAL SIZES

PART #	OVERALL LENGTH
140-1/4" Std. (Also -3, -2, -1, +1, +2, +3, +4)	152mm (6")
140-9/32" Std. (Also -1, +1, +2, +3, +4, +5)	152mm (6")
140-5/16" Std. (Also -4, -3, -2, -1, +1, +2, +3, +4, +5, +14, +15, +16)	152mm (6")
140-11/32" Std. (Also -4, -3, -2, -1, +1, +2, +3, +4, +5, +14, +15, +16)	165mm (6-1/2")
140-3/8" Std. (Also -5, -4, -3, -2, -1, +1, +2, +3, +4, +5, +6, +7, +13, +14, +15, +16)	178mm (7")
140-13/32" Std. (Also -1, +1, +2, +3, +4, +5, +8, +9, +10, +11, +12)	178mm (7")
140-7/16" Std. (Also -3, -2, -1, +1, +2, +3, +4, +5)	178mm (7")
140-29/64" Std. (Also -3, -2, -1, +1, +2, +3, +4, +5, +6, +7, +8)	197mm (7-3/4")
140-1/2" Std. (Also -4, -3, -2, -1, +1, +2, +3, +4, +5)	197mm (7-3/4")

METRIC SIZES

PART #	OVERALL LENGTH
140-4.5mm (Also 4.48mm, 4.52mm)	152mm (6")
140-5.0mm (Also 4.98mm, 5.02mm)	152mm (6")
140-5.5mm (Also 5.48mm, 5.52mm, 5.55mm)	152mm (6")
140-6.0mm (Also 5.98mm, 6.02mm)	152mm (6")
140-6.6mm (Also 6.58mm, 6.62mm)	152mm (6")
140-7.0mm (Also 6.98mm, 7.02mm, 7.05mm, 7.10mm, 7.20mm)	152mm (6")
140-7.5mm (Also 7.48mm, 7.52mm)	152mm (6")
140-8.0mm (Also 7.98mm, 8.02mm, 8.05mm, 8.10mm, 8.20mm)	152mm (6")
140-8.5mm (Also 8.48mm, 8.52mm)	165mm (6-1/2")
140-9.0mm (Also 8.98mm, 9.02mm)	165mm (6-1/2")
140-9.5mm (Also 9.48mm, 9.52mm)	178mm (7")
140-10.0mm (Also 9.98mm, 10.02mm)	178mm (7")
140-11.0mm (Also 10.98mm, 11.02mm)	197mm (7-3/4")
140-12.0mm (Also 11.98mm, 12.02mm)	197mm (7-3/4")

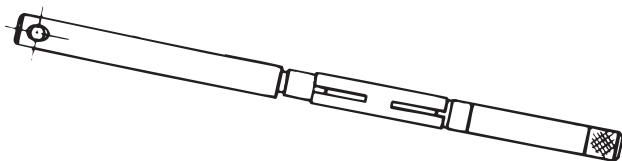
Note: Neway stocks many special sized pilots which do not appear on the parts list. Please call to check availability.

STANDARD SERIES EXPANDABLE PILOTS — .375" TOP

FRACTIONAL SIZES

PART #	COLLET LENGTH	OVERALL LENGTH
150-1/4"	38mm (1-1/2")	152mm (6")
150-9/32"	38mm (1-1/2")	159mm (6-1/4")
150-5/16"	38mm (1-1/2")	165mm (6-1/2")
150-11/32"	38mm (1-1/2")	165mm (6-1/2")
150-3/8"	38mm (1-1/2")	178mm (7")
150-25/64"	38mm (1-1/2")	178mm (7")
150-13/32"	38mm (1-1/2")	178mm (7")
150-7/16"	38mm (1-1/2")	178mm (7")
150-1/2"	38mm (1-1/2")	178mm (7")

PART #	COLLET LENGTH	OVERALL LENGTH
200-5/16"	44mm (1-3/4")	197mm (7-3/4")
200-11/32"	44mm (1-3/4")	197mm (7-3/4")
200-3/8"	44mm (1-3/4")	197mm (7-3/4")
200-25/64"	50.8mm (2")	203mm (8")
200-13/32"	50.8mm (2")	203mm (8")
200-7/16"	50.8mm (2")	203mm (8")
200-1/2"	50.8mm (2")	203mm (8")



METRIC SIZES

PART #	COLLET LENGTH	OVERALL LENGTH
150-5.5mm	29mm (1-1/8")	152mm (6")
150-6mm	29mm (1-1/8")	152mm (6")
150-6.5mm	29mm (1-1/8")	152mm (6")
150-7mm	38mm (1-1/2")	159mm (6-1/4")
150-7.5mm	38mm (1-1/2")	159mm (6-1/4")
150-8mm	38mm (1-1/2")	165mm (6-1/2")
150-8.5mm	38mm (1-1/2")	165mm (6-1/2")
150-9mm	38mm (1-1/2")	178mm (7")
150-9.5mm	38mm (1-1/2")	178mm (7")
150-10mm	38mm (1-1/2")	178mm (7")
150-10.5mm	38mm (1-1/2")	178mm (7")
150-11mm	38mm (1-1/2")	178mm (7")
150-11.5mm	38mm (1-1/2")	178mm (7")
150-12mm	38mm (1-1/2")	178mm (7")
150-12.5mm	38mm (1-1/2")	178mm (7")

PART #	COLLET LENGTH	OVERALL LENGTH
200-8mm	44mm (1-3/4")	197mm (7-3/4")
200-8.5mm	44mm (1-3/4")	197mm (7-3/4")
200-9mm	44mm (1-3/4")	197mm (7-3/4")
200-9.5mm	44mm (1-3/4")	197mm (7-3/4")
200-10mm	50.8mm (2")	203mm (8")
200-10.5mm	50.8mm (2")	203mm (8")
200-11mm	50.8mm (2")	203mm (8")
200-11.5mm	50.8mm (2")	203mm (8")
200-12mm	50.8mm (2")	203mm (8")
200-12.5mm	50.8mm (2")	203mm (8")
200-13mm	50.8mm (2")	203mm (8")

SMALL SERIES SOLID PILOTS — .297" TOP (FOR USE WITH SMALL SERIES CUTTERS)

FRACTIONAL SIZES

PART #	OVERALL LENGTH
100-1/4" (Also -1, +1)	114mm (4-1/2")
100-9/32"	114mm (4-1/2")
100-5/16" (Also +1)	114mm (4-1/2")
100-11/32"	114mm (4-1/2")

METRIC SIZES

PART #	OVERALL LENGTH
100-3.8mm (Also 3.82mm)	95mm (3-3/4")
100-4.0mm (Also 3.98mm, 4.02mm, 4.05mm)	114mm (4-1/2")
100-4.5mm (Also 4.48mm, 4.52mm, 4.55mm)	114mm (4-1/2")
100-4.8mm	89mm (3-1/2")
100-5.0mm (Also 4.98mm, 5.02mm)	114mm (4-1/2")
100-5.5mm (Also 5.48mm, 5.52mm, 5.55mm)	114mm (4-1/2")
100-6.0mm (Also 5.98mm, 6.02mm, 6.05mm)	114mm (4-1/2")
100-6.5mm	133mm (5-1/4")
100-6.6mm (Also 6.58mm, 6.62mm)	133mm (5-1/4")
100-7.0mm (Also 7.02mm, 7.05mm)	114mm (4-1/2")
100-7.5mm	114mm (4-1/2")
100-8.0mm	114mm (4-1/2")
100-9.0mm	114mm (4-1/2")

CARBIDE PILOTS — .297" TOP

PART #	OVERALL LENGTH
PMC 100-4.0 (Also 4.02)	114mm (4-1/2")
PMC 100-4.5 (Also 4.52)	114mm (4-1/2")

SMALL SERIES EXPANDABLE PILOTS — .297" TOP (FOR USE WITH SMALL SERIES CUTTERS)

FRACTIONAL SIZES

PART #	COLLET LENGTH	OVERALL LENGTH
120-1/4"	29mm (1-1/8")	133mm (5-1/4")
120-9/32"	38mm (1-1/2")	159mm (6-1/4")
120-5/16"	38mm (1-1/2")	159mm (6-1/4")
120-11/32"	38mm (1-1/2")	165mm (6-1/2")

METRIC SIZES

PART #	COLLET LENGTH	OVERALL LENGTH
120-5.5mm	29mm (1-1/8")	133mm (5-1/4")
120-6mm	29mm (1-1/8")	133mm (5-1/4")
120-6.5mm	29mm (1-1/8")	133mm (5-1/4")
120-7mm	38mm (1-1/2")	159mm (6-1/4")
120-7.5mm	38mm (1-1/2")	159mm (6-1/4")
120-8mm	38mm (1-1/2")	159mm (6-1/4")
120-8.5mm	38mm (1-1/2")	165mm (6-1/2")

TOOL CASES

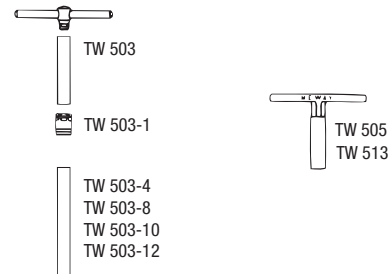
PART #	CAPACITY	CASE DIMENSIONS
CA 303 Case*	3 Cutters	7-1/2" x 10" (19cm x 25cm)
CA 160 Case	6 Cutters	8" x 12" (20cm x 30.5cm)
CA 497 Case	11 Cutters	12-1/2" x 15-1/2" (32cm x 39cm)

*For small series only



WRENCHES

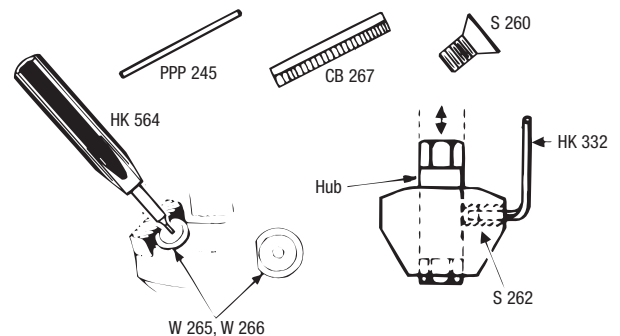
PART #	DESCRIPTION
TWEZ	Easy-Turn Wrench (see page 8)
TW 503*	1/2" Hex metal T-wrench (for standard series cutters)
TW 503-1	Adaptor 1/2" to 3/8" (for small series cutters)
TW 503-4	503 Extension 4-1/4" (108mm) tube only
TW 503-8	503 Extension 8" (203mm) tube only
TW 503-10	503 Extension 10" (254mm) tube only
TW 503-12	503 Extension 12" (305mm) tube only
TW 505	T-wrench, 1/2" hex, nylon fiber (for standard series cutters)
TW 513	T-wrench, 3/8" hex, nylon fiber (for small series cutters)



*T-Wrench consists of two pieces: handle and tube.

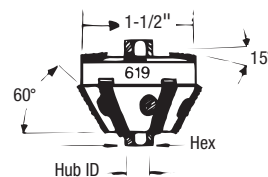
MISCELLANEOUS SEAT CUTTER PARTS

PART #	DESCRIPTION
HK 564	5/64" Hex Driver
HK 332	3/32" Hex Key
PPP 245	Pilot Puller Pin
S 260	5-40 Flat Head Screw
S 262	10-32 Set Screw
W 265	Wedge, for heads over 25.4mm (1") diameter
W 266	Wedge, for 25.4mm (1") diameter heads
CB 267	Cleaning Brush
KACC 246	ACCESSORIES KIT, includes: HK564, 5/64" Hex Driver, PPP245, Pilot Puller Pin, HK 332, 3/32" Hex Key, CB267, Cleaning Brush
KACC 100	REPAIR KIT, includes: 12 W265 Wedges, 1 HK564, 5/64" Hex Driver, 36 S260 Screws, 1 CB267, Cleaning Brush



CUTTERS — TECHNICAL INFORMATION

HUB HEX SIZE	HUB ID	APPLICATION
3/8"	.297"	Small Series — designed for use on small seats.
1/2"	.375"	Standard Series — designed for use on most valve seats up to 2-1/2".
3/4"	.572"	4000 Series — designed for use on large engines with valve guides exceeding 1/2" (12.7mm) in diameter and seats larger than 2-1/4" (57mm) in diameter. Used with .572 or 9/16" pilots.

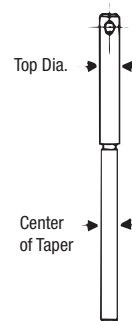


SOLID PILOTS — TECHNICAL INFORMATION

Solid pilot diameters are measured at center of taper (taper .0007"/inch).

PART #	DIAMETER AT CENTER OF TAPER
140-3/8 Std.	.375" (3/8") diameter
140-3/8-1	.374" (3/8"-.001") diameter
140-7mm	.275" (7mm) diameter
140-7.02mm	.276" (7.02mm) diameter

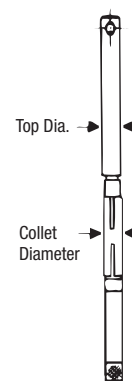
TOP DIA.	APPLICATION
.297"	Small Series (100) — for use with small series cutters only.
.375"	Standard Series (140) — for use with standard series cutters only.



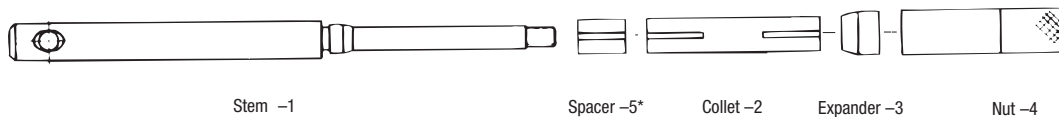
EXPANDABLE PILOTS — TECHNICAL INFORMATION

TOP DIA.	APPLICATION
.297"	Small Series (120) — for use with small series cutters only.
.375"	Standard Series (150) — for use with standard series cutters only. Fits the majority of valve guides.
.375"	Standard Series (200) — for use with standard series cutters only. Fits heads with extra long valve guides.

Note: Expandable pilot diameters are measured at center of collet which is .003" under the stated diameter. Collets expand a total of .020" (0.5mm) from .003" (0.1mm) under stated diameter to .017" (0.4mm) over stated diameter.



EXPANDABLE PILOTS — SPARE PARTS



Note: Orders for expandable pilot spare parts MUST include PILOT PART NUMBER, SUFFIX, and DESCRIPTION.

*Spacer available only for 150-8mm (5/16") expandable pilot. Used on VW Rabbit or any engine with valve guides less than 1-1/2" (38mm) long.