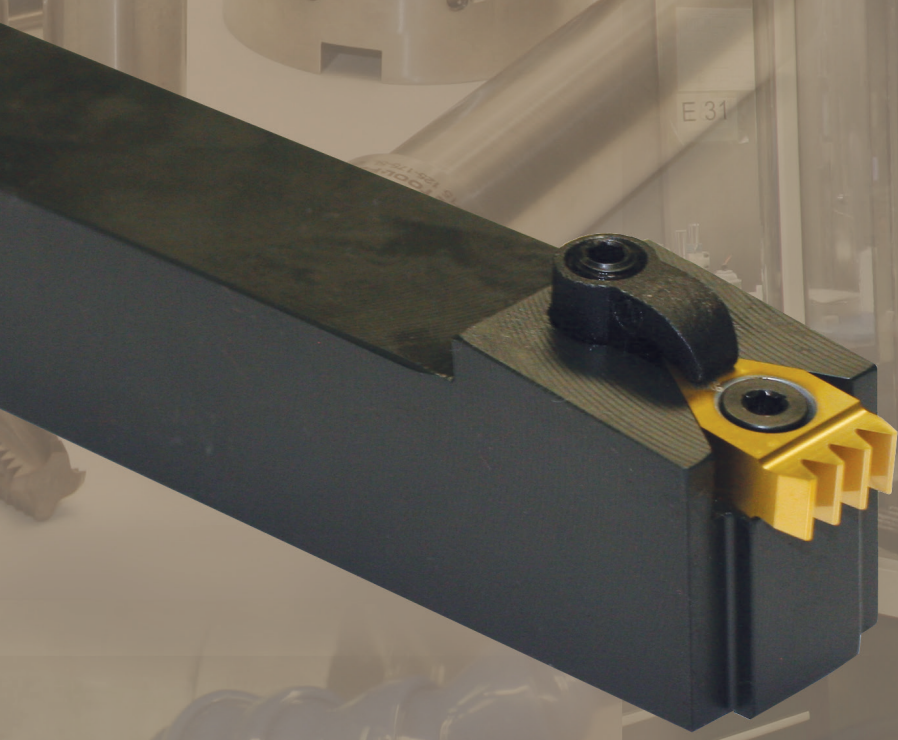




TOOL-FLO

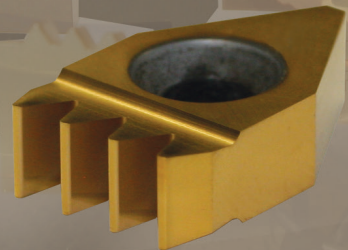
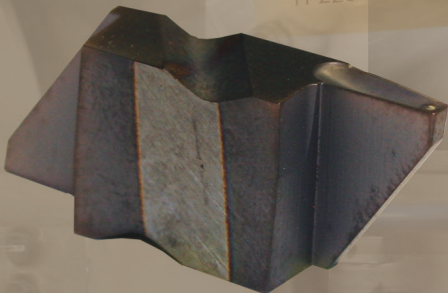


TOOL-FLO
CR-5B75-4E
TF22675 G50

TOOL-FLO
CR-8R-7I
TF14828 AT50

TOOL-FLO
CR-8R-3E
TF19310 AT50

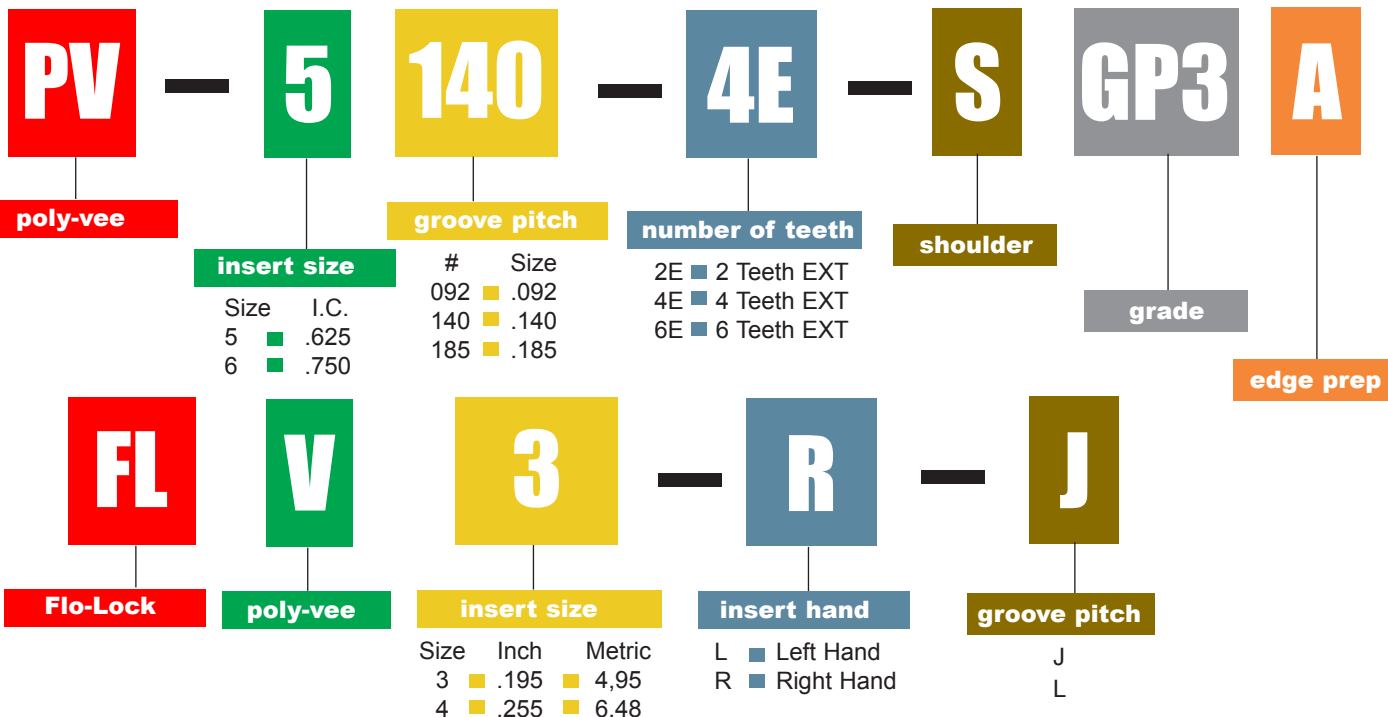
TOOL-FLO
CR-8R-3E
TF19310 GP50



AUTOMOTIVE



Poly-Vee Insert Identification Chart



PV

- Multi-tooth inserts for faster cycle times
- Inserts are precision ground for premium tolerance
- Strong cutting edge able to withstand moderate interruption

FLV

- Single-point insert for flexible programming
- Inserts are precision ground for premium tolerance
- Strong cutting edge able to withstand moderate interruption
- Fits into industry standard holders

PV-S

- Multi-tooth inserts for faster cycle times
- Inserts are precision ground for premium tolerance
- Strong cutting edge able to withstand moderate interruption
- Shoulder configuration produces more finished grooves per plunge

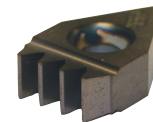
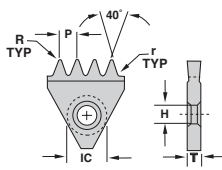
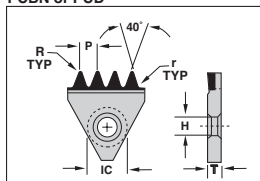
POLY-VEE

PV-S

Multi-Tooth w/ Shoulder

■ For holder STCNR see next page

PCBN or PCD



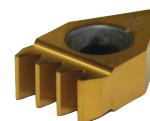
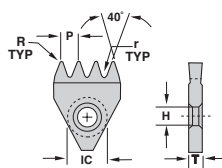
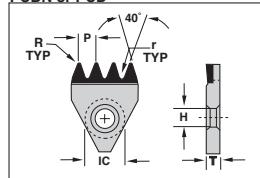
Insert Description	EDP Code	Cross Section*	IC	H	T	P	r	R	# of teeth	C25	GP25	AC25	AC3	AC50	CB200	PC33
PV-5092-4E-S	PV50924ES	J	.625	.203	.252	.092	.008	.012	4	●	●	●	●	●	●	●
PV-5092-6E-S	PV50926ES	J	.625	.203	.252	.092	.008	.012	6	●	●	●	●	●	●	●
PV-5140-2E-S	PV51402ES	K	.625	.203	.252	.140	.013	.016	2	●	●	●	●	●	●	●
PV-5140-4E-S	PV51404ES	K	.625	.203	.252	.140	.013	.016	4	●	●	●	●	●	●	●
PV-6140-6E-S	PV61406ES	K	.750	.203	.250	.140	.013	.016	6	●	●	●	●	●	●	●
PV-6185-4E-S	PV61854ES	L	.750	.203	.250	.185	.021	.013	4	●	●	●	●	●	●	●

PV

Multi-Tooth w/o Shoulder

■ For holder STCNR see next page

PCBN or PCD



Insert Description	EDP Code	Cross Section*	IC	H	T	P	r	R	# of teeth	C25	GP25	AC25	AC3	AC50	CB200	PC33
PV-5092-4E	PV50924E	J	.625	.203	.252	.092	.008	.012	4	●	●	●	●	●	●	●
PV-5092-6E	PV50926E	J	.625	.203	.252	.092	.008	.012	6	●	●	●	●	●	●	●
PV-5140-2E	PV51402E	K	.625	.203	.252	.140	.013	.016	2	●	●	●	●	●	●	●
PV-5140-4E	PV51404E	K	.625	.203	.252	.140	.013	.016	4	●	●	●	●	●	●	●
PV-6140-6E	PV61406E	K	.750	.203	.250	.140	.013	.016	6	●	●	●	●	●	●	●
PV-6185-4E	PV61854E	L	.750	.203	.250	.185	.021	.013	4	●	●	●	●	●	●	●

*See table on page.

In an effort to improve our stock standard grade offering, there are periodic changes. Please see current price list for up-to-date grade offering.

- High performance choice in optimal conditions.
- ▲ Recommended grade under general conditions.

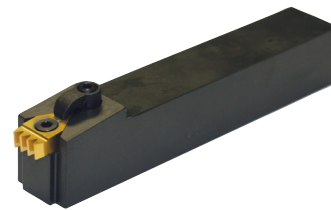
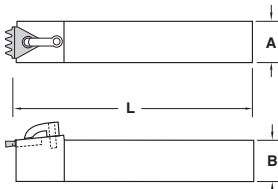
Cast Iron	●	●					
Non-Ferrous	●						
Stainless/High Temp Steel	●						
	●						



AUTOMOTIVE

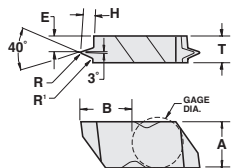
POLY-VEE STCNR

Most holders available with coolant port
(ie: Add CP to end of description)

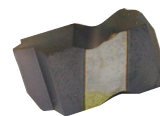


Description	EDP Code	A	B	L	Insert	Insert Screw	Clamp	Clamp Screw
STCNR-165	977064641	1.000	1.000	6.000	PV-5	SD-2	TC-250	STC-11
STCNR-205	9770206641	1.250	1.250	6.000	PV-5	SD-2	TC-250	STC-11
STCNR-206	9770206761	1.250	1.250	6.000	PV-6	SD-2	TC-251	STC-11

POLY-VEE FLO-LOCK FLV



RH Shown



Insert Description	EDP Code	R	R1	T	E	H	A	B	C25	GP3	GP50	AC3	AC50
FLV-3RJ	623800R	.012	.008	.195	.125	.087	.344	.4013	●	●	●	●	●
FLV-3RK	623900R	.016	.013	.195	.100	.136	.344	.4000	●	●	●	●	●
FLV-4RL	624800R	.012	.015	.255	.118	.201	.453	.6288	●	●	●	●	●
FLV-3LJ	623800L	.012	.008	.195	.125	.087	.344	.4013	●	●	●	●	●
FLV-3LK	623900L	.016	.013	.195	.100	.136	.344	.4000	●	●	●	●	●
FLV-4LL	624800L	.012	.015	.255	.118	.201	.453	.6288	●	●	●	●	●

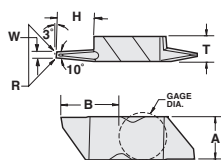
PISTON GROOVING

KEYSTONE

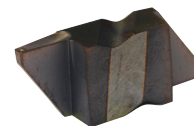
FLG

Chipbreaker

Exclusive patented design!



RH Shown



Insert Description	EDP Code	W	R	H	T	A	B	C25	GP3	GP50	AC3	AC50
FLG-4R W.059 TF19908	TF19908	.059	.012	.275	.255	.453	.6288	●	●	●	●	●

Available in PCD!

TNMA
TNMC
FLG

Any width or configuration!
Call us with your piston grooving needs!

GROOVING

CHIP-FLO

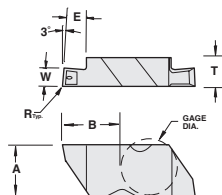
FLG-CB

Chipbreaker

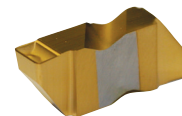
Exclusive patented design!
See page 92 for a complete listing!

Features:

- Patented chipbreaker - Patent No. 6,146,064
- Maximum chip control
- Industry standard widths



RH Shown



Insert Description	EDP Code	Metric	Inch	R	Metric	Inch	T	A	B	Gage Dia.	C3	GP3	GP50	AC3	AC50	AC22
FLG-2M100R-CB	562M100PR	1,00	.039	.005/.010	1,90	.075	.150	.219	.2700	.1875	●	●	●	●	●	●
FLG-2M100L-CB	562M100PL	1,00	.039	.005/.010	1,90	.075	.150	.219	.2700	.1875	●	●	●	●	●	●
FLG-2M150R-CB	562M150PR	1,50	.059	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●	●
FLG-2M150L-CB	562M150PL	1,50	.059	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●	●
FLG-2M170R-CB	562M170PR	1,70	.067	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●	●
FLG-2M170L-CB	562M170PL	1,70	.067	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●	●
FLG-2M195R-CB	562M195PR	1,95	.077	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●	●
FLG-2M195L-CB	562M195PL	1,95	.077	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●	●
FLG-2M200R-CB	562M200PR	2,00	.079	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●	●
FLG-2M200L-CB	562M200PL	2,00	.079	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●	●
FLG-2M220R-CB	562M220PR	2,20	.087	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●	●
FLG-2M220L-CB	562M220PL	2,20	.087	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●	●
FLG-2M225R-CB	562M225PR	2,25	.089	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●	●
FLG-2M225L-CB	562M225PL	2,25	.089	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●	●
FLG-2M250R-CB	562M250PR	2,50	.098	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●	●
FLG-2M250L-CB	562M250PL	2,50	.098	.005/.010	2,79	.110	.150	.219	.2700	.1875	●	●	●	●	●	●

In an effort to improve our stock standard grade offering, there are periodic changes. Please see current price list for up to date grade offering.

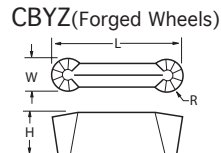
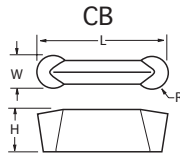
● High performance choice in optimal conditions.
▲ Recommended grade under general conditions.

Cast Iron	▲	●	▲
Non-Ferrous	●	●	●
Stainless/High Temp	▲	●	▲
Steel	▲	●	▲

WHEEL TURNING

DBV

High Polish



		C2P	Uncoated
	▲	●	TiB ₂ Coated
	●		AlTiN Coated
	●		
			AC3
			AC50

Insert Description	EDP Code	W	R	L
DBV-315 FNR-CB	TF17420	.315	.157	1.18
DBV-315 FNR-CBYZ	TF22487	.315	.157	1.18

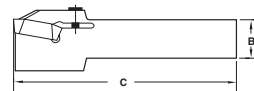
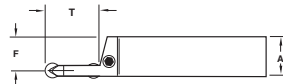
In an effort to improve our stock standard grade offering, there are periodic changes. Please see current price list for up to date grade offering.

● High performance choice in optimal conditions.
▲ Recommended grade under general conditions.

Aluminum
Steel

WHEEL TURNING

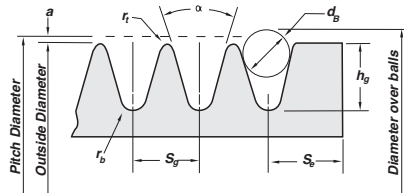
TFHDR/L



RH SHOWN

Description	EDP Code	Insert	T	A	B	C	F	Screw
TFHDR-25.4-8	9828168	DBV	1.000	1.000	1.000	6.000	.884	S-412
TFHDL-25.4-8	9827168	DBV	1.000	1.000	1.000	6.000	.884	S-412
TFHDR-31.7-8	9828208	DBV	1.000	1.250	1.250	6.700	1.133	S-412
TFHDL-31.7-8	9827208	DBV	1.000	1.250	1.250	6.700	1.133	S-412

POLY-VEE TECHNICAL INFORMATION



Face width = $S_e(N_g - 1) + 2S_e$, where N_g is number of grooves

Cross Section	Minimum Recommended Outside Diameter	Groove Angle ± 0.25 (deg)	S_g^a	r_t + 0.005 - 0.000	2_a	r_b	h_g (mm)	d_B ± 0.0005	S_e
H	0.50	40	0.063 ± 0.001	0.005	0.020	0.013 + 0.000 - 0.005	0.041	0.0469	0.080 + 0.020 - 0.010
J	0.80	40	0.092 ± 0.001	0.008	0.030	0.015 + 0.000 - 0.005	0.071	0.0625	0.125 + 0.030 - 0.015
K	1.50	40	0.140 ± 0.002	0.010	0.038	0.020 + 0.000 - 0.005	0.122	0.1093	0.125 + 0.050 - 0.000
L	3.00	40	0.185 ± 0.002	0.015	0.058	0.015 + 0.000 - 0.005	0.183	0.1406	0.375 + 0.075 - 0.030
M	7.00	40	0.370 ± 0.003	0.030	0.116	0.030 + 0.000 - 0.010	0.377	0.2812	0.500 + 0.100 - 0.040

Other Sheave Tolerances

Outside Diameter	Radial Runout	Axial Runout
Up through 2.9 in. outside diameter ± 0.010 in.	Up through 2.9 in. outside diameter ± 0.005 in.	0.001 in. per inch of outside diameter
Over 2.9 in. to and including 8.0 in. outside diameter ± 0.020 in.	Over 2.9 in. to and including 10.0 in. outside diameter ± 0.010 in.	
For each additional inch of outside diameter over 8.0 in., add ± 0.025 in. add 0.0005 in.	For each additional inch of outside diameter over 10.0 in.,	

All dimensions in inches.

^aSummation of the deviations from S for all groovers in any one sheave shall not exceed + 0.010 in.

^aVariations in pitch diameter between groovers in any one sheave must be within the following limits: Up through 2.9 in. outside diameter and up through 6 grooves, 0.002 in. (add 0.001 in. for each additional groove); over 2.9 in. to and including 19.9 in. and up through 10 grooves, 0.010 in. (add 0.0005 in. for each additional groove.) This variation can be obtained by measuring the distance across two measuring balls or rods placed in the grooves diametrically opposite each other. Comparing this

This variation can be obtained by measuring the distance across two measuring balls or rods placed “diameter-over-balls or -rods” measurement between grooves will give the variation in pitch diameter.

^cTotal indicator reading.