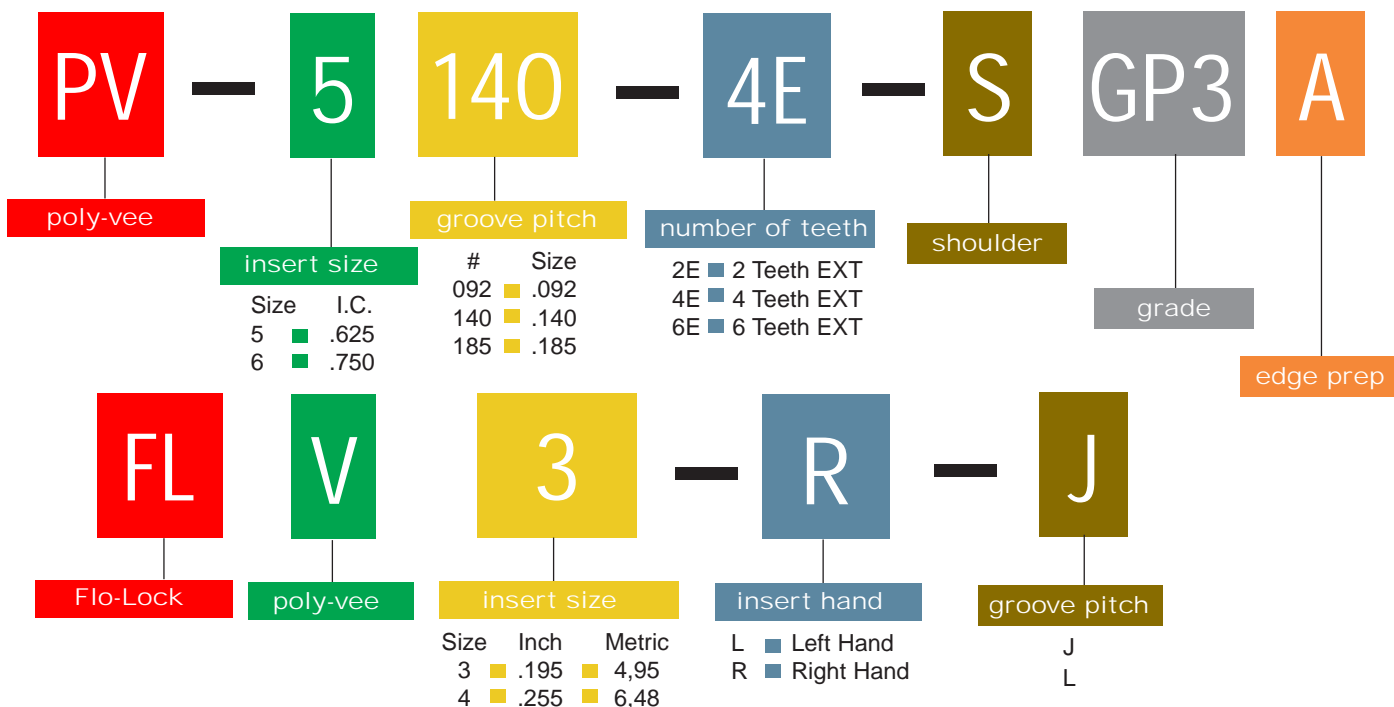


AUTOMOTIVE



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

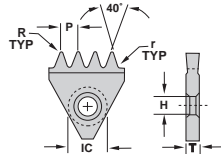
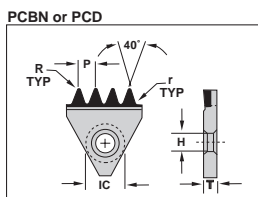
- PV-S**
- Multi-tooth inserts for faster cycle times
 - Inserts are precision ground for premium tolerance
 - Strong cutting edge able to withstand moderate interruption
 - Shoulder configuration produces more finished grooves per plunge

POLY-VEE

PV-S

Multi-Tooth w/ Shoulder

■ For holder STCNR see next page

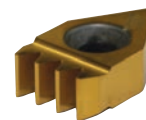
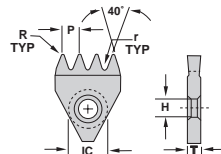
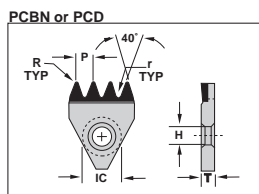


Insert Description	EDP Code	Cross Section*	IC	Dimensions (mm)						# of teeth	Coatings					
				H	T	P	r	R	C25		GP25	AC25	AC3	AC50	CB200	PC33
PV-5092-4E-S	PV50924ES	J	5/8	5.16	6.40	2.34	0.20	0.30	4	●	●	●	●	●	●	●
PV-5092-6E-S	PV50926ES	J	5/8	5.16	6.40	2.34	0.20	0.30	6	●	●	●	●	●	●	●
PV-5140-2E-S	PV51402ES	K	5/8	5.16	6.40	3.56	0.33	0.41	2	●	●	●	●	●	●	●
PV-5140-4E-S	PV51404ES	K	5/8	5.16	6.40	3.56	0.33	0.41	4	●	●	●	●	●	●	●
PV-6140-6E-S	PV61406ES	K	5/8	5.16	6.35	3.56	0.33	0.41	6	●	●	●	●	●	●	●
PV-6185-4E-S	PV61854ES	L	5/8	5.16	6.35	4.70	0.53	0.33	4	●	●	●	●	●	●	●

PV

Multi-Tooth w/o Shoulder

■ For holder STCNR see next page



Insert Description	EDP Code	Cross Section*	IC	Dimensions (mm)						# of teeth	Coatings					
				H	T	P	r	R	C25		GP25	AC25	AC3	AC50	CB200	PC33
PV-5092-4E	PV50924E	J	5/8	5.16	6.40	2.34	0.20	0.30	4	●	●	●	●	●	●	●
PV-5092-6E	PV50926E	J	5/8	5.16	6.40	2.34	0.20	0.30	6	●	●	●	●	●	●	●
PV-5140-2E	PV51402E	K	5/8	5.16	6.40	3.56	0.33	0.41	2	●	●	●	●	●	●	●
PV-5140-4E	PV51404E	K	5/8	5.16	6.40	3.56	0.33	0.41	4	●	●	●	●	●	●	●
PV-6140-6E	PV61406E	K	3/4	5.16	6.35	3.56	0.33	0.41	6	●	●	●	●	●	●	●
PV-6185-4E	PV61854E	L	3/4	5.16	6.35	4.70	0.53	0.33	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.

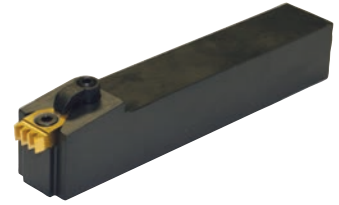
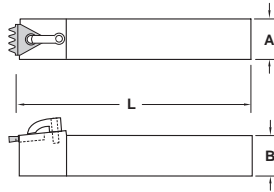
Material	GP25	AC25	AC3	AC50	CB200	PC33
Cast Iron	●					
Non-Ferrous	●					
Stainless/High Temp	●					
Steel		●				



AUTOMOTIVE

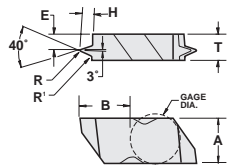
AUTOMOTIVE

POLY-VEE STCNR

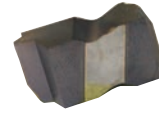


Description	EDP Code	Dimensions (mm)			Insert	Insert Screw	Clamp	Clamo Screw
		A	B	L				
STCNR-25M5	977025M4641	25.00	25.00	150.00	PV-5_	SD-2	CLM-20	STCM11
STCNR-32M5	977032M6641	32.00	32.00	150.00	PV-5_	SD-2	CLM-20	STCM11
STCNR-32M6	977032M6761	32.00	32.00	150.00	PV-6_	SD-2	CLM-20	STCM11

POLY-VEE FLO-LOCK FLV



RH Shown

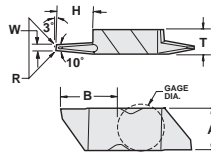


Insert Description	EDP Code	Dimensions (mm)								Coatings				
		R	R1	T	E	H	A	B	C25	GP3	GP50	AC3	AC50	
FLV-3RJ	623800R	0.30	0.20	4.95	3.18	2.21	8.74	10.19	●	●	●	●	●	
FLV-3RK	623900R	0.41	0.33	4.95	2.54	3.45	8.74	10.16	●	●	●	●	●	
FLV-4RL	624800R	0.30	0.38	6.48	3.00	5.11	11.51	15.97	●	●	●	●	●	
FLV-3LJ	623800L	0.30	0.20	4.95	3.18	2.21	8.74	10.19	●	●	●	●	●	
FLV-3LK	623900L	0.41	0.33	4.95	2.54	3.45	8.74	10.16	●	●	●	●	●	
FLV-4LL	624800L	0.30	0.38	6.48	3.00	5.11	11.51	15.97	●	●	●	●	●	

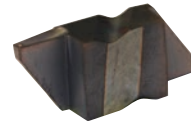
PISTON GROOVING KEYSTONE FLG

Chipbreaker

Exclusive patented design!



RH Shown



Insert Description	EDP Code	Dimensions (mm)						Coatings				
		W	R	H	T	A	B	C25	GP3	GP50	AC3	AC50
FLG-4R W.059 TF19908	TF19908	1.50	0.30	6.99	6.48	11.51	15.97	●	●	●	●	●

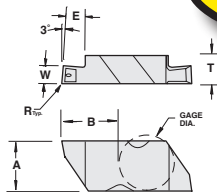
GROOVING CHIP-FLO FLG-CB

Chipbreaker

Exclusive patented design!

See page 85 for a complete listing!

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



RH Shown



Insert Description	EDP Code	Dimensions (mm)								Coatings					
		W	R	E	T	A	B	Gage Dia.	C3	GP3	GP50	AC3	AC50	AC22	
FLG-2M100R-CB	562M100PR	1.00	0.13/0.25	1.90	3.81	5.56	6.86	4.76	●	●	●	●	●	●	
FLG-2M100L-CB	562M100PL	1.00	0.13/0.25	1.90	3.81	5.56	6.86	4.76	●	●	●	●	●	●	
FLG-2M150R-CB	562M150PR	1.50	0.13/0.25	2.79	3.81	5.56	6.86	4.76	●	●	●	●	●	●	
FLG-2M150L-CB	562M150PL	1.50	0.13/0.25	2.79	3.81	5.56	6.86	4.76	●	●	●	●	●	●	
FLG-2M170R-CB	562M170PR	1.70	0.13/0.25	2.79	3.81	5.56	6.86	4.76	●	●	●	●	●	●	
FLG-2M170L-CB	562M170PL	1.70	0.13/0.25	2.79	3.81	5.56	6.86	4.76	●	●	●	●	●	●	
FLG-2M195R-CB	562M195PR	1.95	0.13/0.25	2.79	3.81	5.56	6.86	4.76	●	●	●	●	●	●	
FLG-2M195L-CB	562M195PL	1.95	0.13/0.25	2.79	3.81	5.56	6.86	4.76	●	●	●	●	●	●	
FLG-2M200R-CB	562M200PR	2.00	0.13/0.25	2.79	3.81	5.56	6.86	4.76	●	●	●	●	●	●	
FLG-2M200L-CB	562M200PL	2.00	0.13/0.25	2.79	3.81	5.56	6.86	4.76	●	●	●	●	●	●	
FLG-2M220R-CB	562M220PR	2.20	0.13/0.25	2.79	3.81	5.56	6.86	4.76	●	●	●	●	●	●	
FLG-2M220L-CB	562M220PL	2.20	0.13/0.25	2.79	3.81	5.56	6.86	4.76	●	●	●	●	●	●	
FLG-2M225R-CB	562M225PR	2.25	0.13/0.25	2.79	3.81	5.56	6.86	4.76	●	●	●	●	●	●	
FLG-2M225L-CB	562M225PL	2.25	0.13/0.25	2.79	3.81	5.56	6.86	4.76	●	●	●	●	●	●	
FLG-2M250R-CB	562M250PR	2.50	0.13/0.25	2.79	3.81	5.56	6.86	4.76	●	●	●	●	●	●	
FLG-2M250L-CB	562M250PL	2.50	0.13/0.25	2.79	3.81	5.56	6.86	4.76	●	●	●	●	●	●	

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		▲	▲

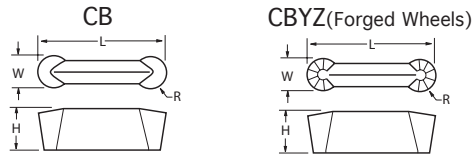
Available in PCD!
Any width or configuration!
Call us with your piston grooving needs!

TNMA
TNMC
FLG



WHEEL TURNING

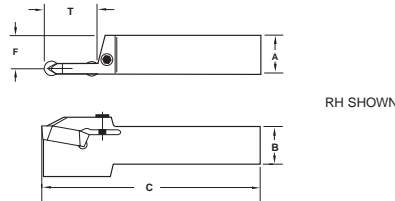
DBV
High Polish



Insert Description	EDP Code	Dimensions (mm)				C2P	ALS2	AC3	AC50
		W	R	L	H				
DBV-315 FNR-CB	TF17420	8.00	3.99	29.97	8.13	●	●		
DBV-315 FNR-CBYZ	TF22487	8.00	3.99	29.97	8.13	●	●		
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	●

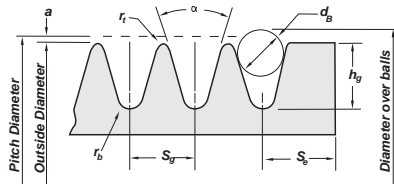
WHEEL TURNING

TFHDR/L



Description	EDP Code	Insert	Dimensions (mm)					Screw
			T	A	B	C	F	
TFHDRM-25.4-8	9828M258	DBV	25.00	25.00	25.00	150.00	22.45	TS-61
TFHDLM-25.4-8	9827M258	DBV	25.00	25.00	25.00	150.00	22.45	TS-61
TFHDRM-31.7-8	9828M328	DBV	25.00	32.00	32.00	170.00	28.78	TS-61
TFHDLM-31.7-8	9827M328	DBV	25.00	32.00	32.00	170.00	28.78	TS-61

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 ± 6.35 (deg)	S_g^a	r_1 + 0.027 - 0.000	2_a	r_2	h_g (mm)	d_b ± 0.0127	S_e
H	12.70	40	1.600 ± 0.025	0.127	0.508	0.330 + 0.000 - 0.127	1.041	1.191	2.032 + 0.508 - 0.254
J	20.32	40	2.337 ± 0.025	0.203	0.762	0.381 + 0.000 - 0.127	1.803	1.589	3.175 + 0.762 - 0.381
K	38.10	40	3.556 ± 0.051	0.254	0.965	0.508 + 0.000 - 0.127	3.099	2.776	3.175 + 1.270 - 0.000
L	76.20	40	4.699 ± 0.051	0.381	1.473	0.381 + 0.000 - 0.127	4.648	3.571	9.525 + 1.905 - 0.762
M	177.80	40	9.398 ± 0.076	0.762	2.946	0.762 + 0.000 - 0.254	9.576	7.142	12.700 + 2.540 - 1.016

Other Sheave Tolerances

Outside Diameter	Radial Runout	Axial Runout
Up through 73.66 mm outside diameter ± 0.254 mm. Over 73.66 mm to and including 203.20 mm outside diameter ± 0.508 mm. For each additional mm of outside diameter over 203.20 mm add ± 0.635 mm.	Up through 73.66 mm outside diameter ± 0.127 mm. Over 73.66 mm to and including 254.00 mm. outside diameter ± 0.254 mm. For each additional mm of outside diameter over 254.0 mm, add 0.0127 mm.	0.0254 mm per mm of outside diameter

All dimensions in mm.

^aSummation of the deviations from S for all groovers in any one sheave shall not exceed ± 0.254 mm.

^bVariations in pitch diameter between groovers in any one sheave must be within the following limits: Up through 73.66 mm. outside diameter and up through 6 grooves, 0.051 mm. (add 0.0254 mm for each additional groove); over 73.66 mm to and including 505.46 mm and up through 10 grooves, 0.254 mm (add 0.0127 mm 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 "diameter-over-balls or -rods" measurement between grooves will give the variation in pitch diameter.

^cTotal indicator reading.