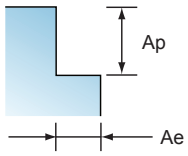
PVE 產品規格表 P110 Specification page
PVES/PVEM/PVEL 產品規格表 P111 Specification page
PVEC 產品規格表 P112 Specification page
PVB/PVBSX 產品規格表 P113 Specification page
PVR 產品規格表 P114 Specification page

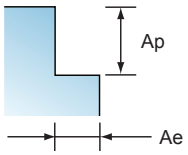
• PVE/PVES/PVEM/PVEL/PVEC/PVB/PVBSX/PVR Series Side Milling
PVE/PVES/PVEM/PVEL/PVEC/PVB/PVBSX/PVR 系列側銑

Side Milling	CARBON STEELS 1018, 1040, 1080, 1090, 10L50, 1140, 1212, 12L15, 1525, 1536			ALLOY STEELS 4140, 4150, 4320, 5120, 5150, 8630, 86L20, 50100			TOOL STEELS A2, D2, H13, L2, M2, P20, S7, T15, W2			TOOL STEELS A2, D2, H13, L2, M2, P20, S7, T15, W2			TOOL STEELS A2, D2, H13, L2, M2, P20, S7, T15, W2		
Hardness BRINELL	≦275			≦375			≦375			>375 ≦475			>475 ≦655		
HRC	≦28.5			≦39.8			≦39.8			>39.8 ≦49.1			>50 ≦65		
Vc (SFM)	155	(150-163)		90	(86-93)		36	(35-38)		60	(58-62)		25	(24-26)	
Ae/Ap	Ae=0.5D Ap=1.5D			Ae=0.5D Ap=1.5D			Ae=0.5D Ap=1.5D			Ae=0.5D Ap=1.5D			Ae=0.5D Ap=1.5D		
MILL DIA. (Metric)	RPM	Fz	Feed 4 Flutes	RPM	Fz	Feed 4 Flutes	RPM	Fz	Feed 4 Flutes	RPM	Fz	Feed 4 Flutes	RPM	Fz	Feed 4 Flutes
3	15,962	0.01016	648.7	9,099	0.00762	277.33	3,729	0.01270	189	6,066	0.01016	246.5	2554	0.00508	51.9
4	13,621	0.01397	761.2	7,764	0.00889	276.09	3,182	0.01715	218	5,176	0.01397	289.2	2179	0.00699	60.9
6	9,081	0.02350	853.4	5,176	0.01842	381.28	2,121	0.02826	240	3,451	0.02350	324.3	1453	0.01175	68.3
8	6,811	0.03683	1003.4	3,882	0.02794	433.86	1,591	0.04445	283	2,588	0.03683	381.3	1090	0.01842	80.3
10	5,449	0.05017	1093.3	3,106	0.03715	461.47	1,273	0.06064	309	2,070	0.05017	415.5	872	0.02508	87.5
12	4,540	0.05969	1084.1	2,588	0.04509	466.73	1,061	0.07176	304	1,725	0.05969	411.9	726	0.02985	86.7
16	3,405	0.07874	1072.5	1,941	0.06096	473.31	795	0.09906	315	1,294	0.08128	420.7	545	0.04064	88.6
20	2,956	0.08128	961.1	1,685	0.06350	427.97	691	0.10668	295	1,123	0.08890	399.4	473	0.04445	84.1
25	2,078	0.08890	739.1	1,185	0.06858	324.99	486	0.12700	247	790	0.09652	304.9	333	0.04826	64.2
Depth of cut															

Unit/單位: mm

PVE 產品規格表 P110 Specification page
PVES/PVEM/PVEL 產品規格表 P111 Specification page
PVEC 產品規格表 P112 Specification page
PVB/PVBSX 產品規格表 P113 Specification page
PVR 產品規格表 P114 Specification page

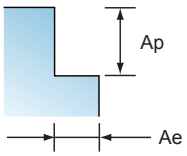
• PVE/PVES/PVEM/PVEL/PVEC/PVB/PVBSX/PVR Series Side Milling
PVE/PVES/PVEM/PVEL/PVEC/PVB/PVBSX/PVR 系列側銑

Side Milling	CAST IRONS (LOW&MEDIUM ALLOY) Gray, Malleable, Ductile			CAST IRONS (HIGH ALLOY) Gray, Malleable, Ductile			STAINLESS STEELS (FREE MACHINING) 303, 416,420F,430F,440F			STAINLESS STEELS (DIFFICULT) 304, 304L,316,316L			STAINLESS STEELS(PH) 13-8 PH,15-5PH,17-4PH, Custom 450		
Hardness BRINELL	≦220			>220 ≦260			≦275			≦275			≦325		
HRC	≦18.8			>18.8 ≦26.6			≦28.5			≦28.5			≦34.4		
Vc (SFM)	100	(96-105)		100	(96-105)		137	(132-143)		100	(96-105)		87	(84-91)	
Ae/Ap	Ae=0.5D Ap=1.5D			Ae=0.5D Ap=1.5D			Ae=0.5D Ap=1.5D			Ae=0.5D Ap=1.5D			Ae=0.5D Ap=1.5D		
MILL DIA. (Metric)	RPM	Fz	Feed 4 Flutes	RPM	Fz	Feed 4 Flutes	RPM	Fz	Feed 4 Flutes	RPM	Fz	Feed 4 Flutes	RPM	Fz	Feed 4 Flutes
3	12658	0.01016	514	9,737	0.00762	296.8	14,047	0.00762	428.2	9,737	0.00508	197.9	8,939	0.00508	181.6
4	10802	0.01397	604	8,309	0.01016	337.7	11,987	0.01016	487.1	8,309	0.00762	253.3	7,628	0.00762	232.5
6	7201	0.02350	677	5,539	0.01651	365.8	7,991	0.01651	527.7	5,539	0.01397	309.5	5,085	0.01397	284.2
8	5401	0.03556	768	4,155	0.02667	443.2	5,993	0.02667	639.4	4,155	0.02159	358.8	3,814	0.02159	329.4
10	4321	0.04763	823	3,324	0.03683	489.6	4,795	0.03683	706.4	3,324	0.02889	384.1	3,051	0.02889	352.6
12	3601	0.05715	823	2,770	0.04318	478.4	3,996	0.04318	690.1	2,770	0.03366	372.9	2,543	0.03366	342.3
16	2700	0.07620	823	2,077	0.05842	485.4	2,997	0.05842	700.3	2,077	0.04572	379.9	1,907	0.04572	348.8
20	2344	0.07874	738	1,803	0.06096	439.7	2,601	0.06096	634.3	1,803	0.04826	348.1	1,655	0.04826	319.6
25	1648	0.08636	569	1,268	0.06350	322.0	1,829	0.06350	464.6	1,268	0.05080	257.6	1,164	0.05080	236.5
Depth of cut															

Unit/單位: mm

PVE 產品規格表 P110 Specification page
PVES/PVEM/PVEL 產品規格表 P111 Specification page
PVEC 產品規格表 P112 Specification page
PVB/PVBSX 產品規格表 P113 Specification page
PVR 產品規格表 P114 Specification page

• PVE/PVES/PVEM/PVEL/PVEC/PVB/PVBSX/PVR Series Side Milling
PVE/PVES/PVEM/PVEL/PVEC/PVB/PVBSX/PVR 系列側銑

Side Milling 	SUPER ALLOYS (NICKEL,COBALT,IRON,BASE) Inconel 601,617,625,Incoly 800,Monel 400			SUPER ALLOYS (NICKEL,COBALT,IRON,BASE) Inconel 718,750X,Incoly 925,Waspalloy,Hastelloy,Rene			TITANIUM ALLOYS Pure Ttanium, Ti6Al4V, Ti6Al2Sn4Zr2Mo, Ti4Al4Mo2Sn0.5Si			TITANIUM ALLOYS (DIFFICULT) Ti10Al2Fe3Al, Ti5Al5V5Mo3Cr, Ti7Al4Mo, Ti3Al8V6Cr4Zr4Mo, Ti6Al6V6Sn, Ti15V3 Cr3Sn3Al		
Hardness BRINELL	≦300			＞300			≦350			＞350 ≦440		
HRC	≦32.1			≦32.1								
Vc (SFM)	22	(21-23)		17	(16-18)		63	(60-65)		22	(21-23)	
Ae/Ap	Ae=0.5D Ap=1.5D			Ae=0.5D Ap=1.5D			Ae=0.5D Ap=1.5D			Ae=0.5D Ap=1.5D		
MILL DIA. (Metric)	RPM	Fz	Feed 4 Flutes	RPM	Fz	Feed 4 Flutes	RPM	Fz	Feed 4 Flutes	RPM	Fz	Feed 4 Flutes
3	2,235	0.00508	45.4	1,756	0.00254	17.8	6,385	0.00508	129.7	2,235	0.00508	45.4
4	1,907	0.00635	48.4	1,498	0.00381	22.8	5,448	0.00699	152.2	1,907	0.00699	53.3
6	1,271	0.00953	48.4	999	0.00699	27.9	3,632	0.01175	170.7	1,271	0.01175	59.7
8	953	0.01524	58.1	749	0.01016	30.4	2,724	0.01905	207.6	953	0.01905	72.7
10	763	0.02096	63.9	599	0.01334	32.0	2,179	0.02635	229.7	763	0.02635	80.4
12	636	0.02413	61.4	499	0.01651	33.0	1,816	0.03112	226.0	636	0.03112	79.1
16	477	0.03302	63.0	375	0.02286	34.3	1,362	0.04064	221.4	477	0.04064	77.5
20	414	0.03556	58.9	325	0.02540	33.0	1,182	0.04318	204.2	414	0.04318	71.5
25	291	0.03810	44.3	229	0.02794	25.6	831	0.04572	152.0	291	0.04572	53.2
Depth of cut												

Unit/單位: mm

PVE 產品規格表 P110 Specification page

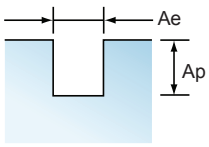
PVES/PVEM/PVEL 產品規格表 P111 Specification page

PVEC 產品規格表 P112 Specification page

PVB/PVBSX 產品規格表 P113 Specification page

PVR 產品規格表 P114 Specification page

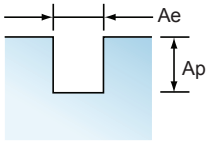
• PVE/PVES/PVEM/PVEL/PVEC/PVB/PVBSX/PVR Series Slotting
PVE/PVES/PVEM/PVEL/PVEC/PVB/PVBSX/PVR 系列溝銑切削

Slot Milling 	CARBON STEELS 1018, 1040, 1080, 1090, 10L50, 1140, 1212, 12L15, 1525, 1536			ALLOY STEELS 4140, 4150, 4320, 5120, 5150, 8630, 86L20, 50100			TOOL STEELS A2, D2, H13, L2, M2, P20, S7, T15, W2			TOOL STEELS A2, D2, H13, L2, M2, P20, S7, T15, W2			TOOL STEELS A2, D2, H13, L2, M2, P20, S7, T15, W2		
Hardness BRINELL	≦275			≦375			≦375			>375 ≦475			>475 ≦655		
HRC	≦28.5			≦39.8			≦39.8			>39.8 ≦49.1			>50 ≦65		
Vc (SFM)	125	(120-130)		57	(55-60)		29	(28-30)		48	(46-50)		20	(19-21)	
Ae/Ap	Ae=1D Ap=1D			Ae=1D Ap=1D			Ae=1D Ap=1D			Ae=1D Ap=1D			Ae=1D Ap=1D		
MILL DIA. (Metric)	RPM	Fz	Feed 4 Flutes	RPM	Fz	Feed 4 Flutes	RPM	Fz	Feed 4 Flutes	RPM	Fz	Feed 4 Flutes	RPM	Fz	Feed 4 Flutes
3	12,770	0.01016	519.0	5,832	0.00762	177.77	3,007	0.01270	153	4,853	0.01016	197.2	2043	0.00508	41.5
4	10,897	0.01397	608.9	4,977	0.00889	176.98	2,566	0.01715	176	4,141	0.01397	231.4	1744	0.00699	48.7
6	7,265	0.02350	682.7	3,318	0.01842	244.41	1,711	0.02826	193	2,761	0.02350	259.4	1162	0.01175	54.6
8	5,449	0.03683	802.7	2,489	0.02794	278.12	1,283	0.04445	228	2,070	0.03683	305.0	872	0.01842	64.2
10	4,359	0.05017	874.6	1,991	0.03715	295.82	1,026	0.06064	249	1,656	0.05017	332.4	697	0.02508	70.0
12	3,632	0.05969	867.3	1,659	0.04509	299.19	855	0.07176	246	1,380	0.05969	329.6	581	0.02985	69.4
16	2,724	0.07874	858.0	1,244	0.06096	303.40	642	0.09906	254	1,035	0.08128	336.6	436	0.04064	70.9
20	2,365	0.08128	768.9	1,080	0.06350	274.34	557	0.10668	238	899	0.08890	319.6	378	0.04445	67.3
25	1,663	0.08890	591.3	759	0.06858	208.33	392	0.12700	199	632	0.09652	243.9	266	0.04826	51.4
Depth of cut															

Unit/單位: mm

PVE 產品規格表 P110 Specification page
PVES/PVEM/PVEL 產品規格表 P111 Specification page
PVEC 產品規格表 P112 Specification page
PVB/PVBSX 產品規格表 P113 Specification page
PVR 產品規格表 P114 Specification page

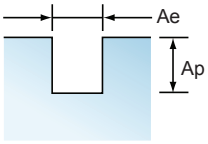
• PVE/PVES/PVEM/PVEL/PVEC/PVB/PVBSX/PVR Series Slotting
PVE/PVES/PVEM/PVEL/PVEC/PVB/PVBSX/PVR 系列溝銑切削

Slot Milling 	CAST IRONS (LOW&MEDIUM ALLOY) Gray, Malleable, Ductile			CAST IRONS (HIGH ALLOY) Gray, Malleable, Ductile			STAINLESS STEELS (FREE MACHINING) 304, 416,420F,430F,440F			STAINLESS STEELS (DIFFICULT) 304, 304L,316,316L			STAINLESS STEELS(PH) 13-8 PH,15-5PH,17-4PH, Custom 450		
Hardness BRINELL	≦220			>220 ≦260			≦275			≦275			≦325		
HRC	≦18.8			>18.8 ≦26.6			≦28.5			≦28.5			≦34.4		
Vc (SFM)	64	(62-67)		61	(59-64)		88	(84-92)		61	(59-64)		56	(54-59)	
Ae/Ap	Ae=1D Ap=1D			Ae=1D Ap=1D			Ae=1D Ap=1D			Ae=1D Ap=1D			Ae=1D Ap=1D		
MILL DIA. (Metric)	RPM	Fz	Feed 4 Flutes	RPM	Fz	Feed 4 Flutes	RPM	Fz	Feed 4 Flutes	RPM	Fz	Feed 4 Flutes	RPM	Fz	Feed 4 Flutes
3	8,114	0.01016	330	6,242	0.00762	190.2	9,005	0.00762	274.5	6,242	0.00508	126.8	5,730	0.00508	116.4
4	6,924	0.01397	387	5,326	0.01016	216.5	7,684	0.01016	312.3	5,326	0.00762	162.3	4,890	0.00762	149.0
6	4,616	0.02350	434	3,551	0.01651	234.5	5,123	0.01651	338.3	3,551	0.01397	198.4	3,260	0.01397	182.2
8	3,462	0.03556	492	2,663	0.02667	284.1	3,842	0.02667	409.9	2,663	0.02159	230.0	2,445	0.02159	211.1
10	2,770	0.04763	528	2,131	0.03683	313.9	3,074	0.03683	452.8	2,131	0.02889	246.2	1,956	0.02889	226.0
12	2,308	0.05715	528	1,775	0.04318	306.7	2,561	0.04318	442.4	1,775	0.03366	239.0	1,630	0.03366	219.4
16	1,731	0.07620	528	1,332	0.05842	311.2	1,921	0.05842	448.9	1,332	0.04572	243.5	1,222	0.04572	223.6
20	1,503	0.07874	473	1,156	0.06096	281.9	1,668	0.06096	406.6	1,156	0.04826	223.1	1,061	0.04826	204.8
25	1,057	0.08636	365	813	0.06350	206.4	1,172	0.06350	297.8	813	0.05080	165.1	746	0.05080	151.6
Depth of cut															

Unit/單位: mm

PVE 產品規格表 P110 Specification page
PVES/PVEM/PVEL 產品規格表 P111 Specification page
PVEC 產品規格表 P112 Specification page
PVB/PVBSX 產品規格表 P113 Specification page
PVR 產品規格表 P114 Specification page

• PVE/PVES/PVEM/PVEL/PVEC/PVB/PVBSX/PVR Series Slotting
PVE/PVES/PVEM/PVEL/PVEC/PVB/PVBSX/PVR 系列溝銑切削

Slot Milling 	SUPER ALLOYS (NICKEL,COBALT,IRON,BASE) Inconel 601,617,625,Incoly 800,Monel 400			SUPER ALLOYS (NICKEL,COBALT,IRON,BASE) Inconel 718,750X,Incoly 925,Waspalloy,Hastelloy,Rene			TITANIUM ALLOYS Pure Ttanium, Ti6Al4V, Ti6Al2Sn4Zr2Mo, Ti4Al4Mo2Sn0.5Si			TITANIUM ALLOYS (DIFFICULT) Ti10Al2Fe3Al, Ti5Al5V5Mo3Cr, Ti7Al4Mo, Ti3Al8V6Cr4Zr4Mo, Ti6Al6V6Sn, Ti15V3 Cr3Sn3Al		
Hardness BRINELL	≦300			＞300			≦350			＞350 ≦440		
HRC	≦32.1			≦32.1								
Vc (SFM)	14	(13-15)		11	(10-12)		40	(38-42)		14	(13-15)	
Ae/Ap	Ae=1D Ap=1D			Ae=1D Ap=1D			Ae=1D Ap=1D			Ae=1D Ap=1D		
MILL DIA. (Metric)	RPM	Fz	Feed 4 Flutes	RPM	Fz	Feed 4 Flutes	RPM	Fz	Feed 4 Flutes	RPM	Fz	Feed 4 Flutes
3	1,433	0.00508	29.1	1,126	0.00254	11.4	4,093	0.00508	83.2	1,433	0.00508	29.1
4	1,222	0.00635	31.0	960	0.00381	14.6	3,493	0.00699	97.6	1,222	0.00699	34.2
6	815	0.00953	31.0	640	0.00699	17.9	2,328	0.01175	109.4	815	0.01175	38.3
8	611	0.01524	37.3	480	0.01016	19.5	1,746	0.01905	133.1	611	0.01905	46.6
10	489	0.02096	41.0	384	0.01334	20.5	1,397	0.02635	147.3	489	0.02635	51.5
12	407	0.02413	39.3	320	0.01651	21.1	1,164	0.03112	144.9	407	0.03112	50.7
16	306	0.03302	40.4	240	0.02286	22.0	873	0.04064	141.9	306	0.04064	49.7
20	265	0.03556	37.7	208	0.02540	21.2	758	0.04318	130.9	265	0.04318	45.8
25	187	0.03810	28.4	147	0.02794	16.4	533	0.04572	97.5	187	0.04572	34.1
Depth of cut												

Unit/單位: mm