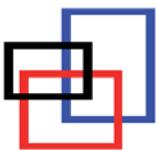


SHAPE	SIZE IN	MULTI TOOL	DIE CLEARANCE								CUTTING THICKNESS (Inch)		
			.002"	.004"	.006"	.010"	.012"	.020"	.03"	.035"	Aluminum	CRS	Stainless steel
Circle	0.040				2	1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.063				2	4					0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.074				2	1					0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.086	TC 2020			1	1					0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.089					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.094				1		1	1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Circle	0.101				2						0.015 TO 0.063	0.017 TO 0.047	0.018 TO 0.036
Circle	0.107				1						0.015 TO 0.063	0.017 TO 0.047	0.018 TO 0.036
Circle	0.113				2		2	2			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Circle	0.120				2	1		1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Circle	0.125		TC2020,200			1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.131				1	1					0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.137	TC2020			2	1		2			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Circle	0.139				1	1					0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.140	TC2020,200			1						0.015 TO 0.063	0.017 TO 0.047	0.018 TO 0.036
Circle	0.143	TC2020				2					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.149					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.156	TC2020,200			1	1					0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.161				1						0.015 TO 0.063	0.017 TO 0.047	0.018 TO 0.036
Circle	0.166	TC2020,200			1	1					0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.169							3			0.100 TO 0.250	0.104 TO 0.134	0.063 TO 0.121
Circle	0.171							1			0.100 TO 0.250	0.104 TO 0.134	0.063 TO 0.121
Circle	0.177				2	1		1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Circle	0.180	TC2020				1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.187	TC2020				1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.188				1	1					0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.189	TC2020,200				1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.190				1						0.015 TO 0.063	0.017 TO 0.047	0.018 TO 0.036
Circle	0.194	TC2020			2	1	1				0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.198	TC2020			2	1	1	1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Circle	0.203	TC2020			1						0.015 TO 0.063	0.017 TO 0.047	0.018 TO 0.036
Circle	0.205					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.211					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.213	TC2020,200			1	1	1				0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.216					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Circle	0.219	TC2020,200						1			0.100 TO 0.250	0.104 TO 0.134	0.063 TO 0.121
Circle	0.221						2				0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.229						1				0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.236	TC2020,200			2			1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Circle	0.244						1				0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.250	TC200				1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.257	TC2020			1	1					0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.266				1	1	1				0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.271	TC2020				1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.277					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.281	TC2020			1	1					0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.285	TC2020			1	1	1				0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.290					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.291					3					0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Circle	0.295					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.313	TC200					1				0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.324						1				0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.328						1	2			0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.332	TC2020				1	1				0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.344	TC2020,200			1						0.015 TO 0.063	0.017 TO 0.047	0.018 TO 0.036
Circle	0.346						2				0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.358					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121

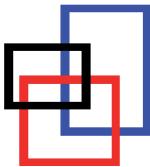


HANSEN Industries Ltd

Tool Library

Regular Shape/Punch Tool

SHAPE	SIZE IN	MULTI TOOL	DIE CLEARANCE							CUTTING THICKNESS (Inch)			
			.002"	.004"	.006"	.010"	.012"	.020"	.030"	.035"	Aluminum	CRS	Stainless steel
Circle	0.360	TC2020				1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.375	TC2020,200			1	1					0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.391				1	1					0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.393	TC2020			1		1				0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.406	TC2020			1	1	1				0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.413	TC2020,200			1		1				0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.415					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.426					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Circle	0.427					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.438				1		1	1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Circle	0.450					2		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Circle	0.453						2				0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.469				1	1	1	1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Circle	0.485					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Circle	0.500				1	1	1				0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.515				2	2					0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.531				1						0.015 TO 0.063	0.017 TO 0.047	0.018 TO 0.036
Circle	0.547					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.551				1	1	2	1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Circle	0.560					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.563				1		1				0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.570				1						0.015 TO 0.063	0.017 TO 0.047	0.018 TO 0.036
Circle	0.594				1		1				0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.600					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.610					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.625				1	1	2	2			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Circle	0.640					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Circle	0.650					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.656						1				0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.675					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.687					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.688				1		1				0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.719										0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.750				1	1	1				0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.787				1	1	1	1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Circle	0.790					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.813				1		1	1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Circle	0.850					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Circle	0.860				1	1					0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.875				2	2					0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.885					2					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.891					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	0.906				1	1		1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Circle	0.938				1		1				0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Circle	0.968					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Circle	0.980					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Circle	1.000				1	2		1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Circle	1.015					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Circle	1.030					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	1.062					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Circle	1.095					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Circle	1.125						1	1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Circle	1.187				1	1		1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Circle	1.250					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121

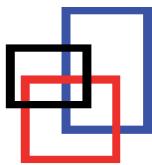


HANSEN Industries Ltd

Tool Library

Regular Shape/Punch Tool

SHAPE	SIZE IN	MULTI TOOL	DIE CLEARANCE								CUTTING THICKNESS (Inch)		
			.002"	.004"	.006"	.010"	.012"	.020"	.030"	.035"	Aluminum	CRS	Stainless steel
Circle	1.300					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	1.312					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Circle	1.350					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	1.375						1				0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	1.500										0.015 TO 0.063	0.017 TO 0.047	0.018 TO 0.036
Circle	1.627					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	1.750					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	1.875						1				0.100 TO 0.250	0.104 TO 0.134	0.063 TO 0.121
Circle	2.000						2	1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Circle	2.119						1		1		0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Circle	2.125							1	1		0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Circle	2.500								1		0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121

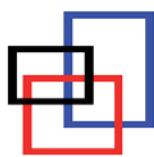


HANSEN Industries Ltd

Tool Library

Regular Shape/Punch Tool

SHAPE	SIZE IN	MULTI TOOL	DIE CLEARANCE							CUTTING THICKNESS (Inch)			
			.002"	.004"	.006"	.010"	.012"	.020"	.030"	.035"	Aluminum	CRS	Stainless steel
Square	0.125	TC2020,200				1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Square	0.166		1		1						0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Square	0.187	TC2020,200	1		1		1				0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Square	0.208				1		1				0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Square	0.235			1							0.015 TO 0.063	0.017 TO 0.047	0.018 TO 0.036
Square	0.250	TC2020		1	1	1	1				0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Square	0.251				1		1				0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Square	0.255	TC200	1		1		1				0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Square	0.281			1	1	1	2				0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Square	0.328			1		1					0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Square	0.335			1		1					0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Square	0.375		1			1	1				0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Square	0.393			1		1					0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Square	0.437			1	1		1				0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Square	0.484			1	1						0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Square	0.505		1	1	1		1				0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Square	0.625			1			1				0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Square	0.640				2		1				0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Square	0.750		1	1			1				0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Square	0.800		1		1		1				0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Square	0.875			1			1				0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Square	1.000			1			1				0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Square	1.375			1	1		1				0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Square	1.500				1		1				0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Square	2.000				1		1				0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121

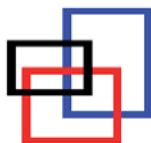


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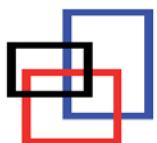
Tool Library

Regular Shape/Punch Tool

SHAPE	SIZE IN	MULTI TOOL	DIE CLEARANCE							CUTTING THICKNESS (Inch)			
			.002"	.004"	.006"	.010"	.012"	.020"	.030"	.035"	Aluminum	CRS	Stainless steel
Obround	0.094 x 0.188					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Obround	0.094 x 0.300					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Obround	0.100 x 0.400					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Obround	0.100 x 1.000					1					0.015 TO 0.063	0.017 TO 0.047	0.018 TO 0.036
Obround	0.100 x 1.200					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Obround	0.100x 2.500					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Obround	0.125 x 0.218					2					0.015 TO 0.063	0.017 TO 0.047	0.018 TO 0.036
Obround	0.125 x 0.375					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Obround	0.125 x 0.500					1	1	1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Obround	0.125 x 0.875					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Obround	0.125 x 2.200					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Obround	0.147 x 0.194					1					0.015 TO 0.063	0.017 TO 0.047	0.018 TO 0.036
Obround	0.156 x 0.218										0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Obround	0.156 x 0.375					1	1	1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Obround	0.156 x 0.75					1	1	1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Obround	0.170 x 0.375					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Obround	0.187 x 0.250					1		1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Obround	0.187 x 0.375					1	1	1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Obround	0.187 x 0.437							1	1		0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Obround	0.187 x 0.750					1		1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Obround	0.187 x 1.000					2					0.015 TO 0.063	0.017 TO 0.047	0.018 TO 0.036
Obround	0.187 x 2.000					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Obround	0.188 x 0.888					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Obround	0.196 x 0.315					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Obround	0.200 x 1.910					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Obround	0.203 x 0.468					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Obround	0.203 x 1.203					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Obround	0.218 x 0.281							1	1		0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Obround	0.218 x 0.375					1	1	1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Obround	0.218 x 0.500					1		1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Obround	0.250 x 0.307					1		1			0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Obround	0.250x 0.375					1		1			0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Obround	0.250 x 0.437					1		1			0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Obround	0.250 x 0.450							1			0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Obround	0.250 x 0.625					1		1			0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Obround	0.250 x 1.000					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Obround	0.250 x 2.750					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Obround	0.263 x 0.550							1	1		0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Obround	0.266 x 0.500					1		1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Obround	0.281 x 0.437					1		1			0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Obround	0.312 x 0.553							1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Obround	0.312 x 0.984					1		1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Obround	0.327 x 0.406										0.100 TO 0.250	0.104 TO 0.134	0.063 TO 0.121
Obround	0.328 x 0.984					1		1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Obround	0.375 x 0.625					1		1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Obround	0.375 x 2.829										0.100 TO 0.250	0.104 TO 0.134	0.063 TO 0.121
Obround	0.410 x 0.630										0.100 TO 0.250	0.104 TO 0.134	0.063 TO 0.121
Obround	0.420 x 0.660							1			0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Obround	0.420 x 1.750							1			0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Obround	0.437 x 2.000										0.100 TO 0.250	0.104 TO 0.134	0.063 TO 0.121
Obround	0.438 x 0.750										0.100 TO 0.250	0.104 TO 0.134	0.063 TO 0.121
Obround	0.438 x 2.000					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Obround	0.136x0.250					2							



SHAPE	SIZE IN	MULTI TOOL	DIE CLEARANCE								CUTTING THICKNESS (Inch)		
			.002"	.004"	.006"	.010"	.012"	.020"	.030"	.035"	Aluminum	CRS	Stainless steel
Rectangle	0.040 x 0.300	TC2020	1	1	2		1	1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Rectangle	0.040 x 0.400				1		1				0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Rectangle	0.040 x 0.500				1	1					0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Rectangle	0.052 x 0.200				2	1					0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Rectangle	0.055 x 0.300										0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Rectangle	0.063 x 0.500				1	1		1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Rectangle	0.066 x 0.500							1			0.100 TO 0.250	0.104 TO 0.134	0.063 TO 0.121
Rectangle	0.072 x 0.316				1	1		1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Rectangle	0.072 x 0.375				1	1		1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Rectangle	0.080 x 1.000					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Rectangle	0.090 x 0.188					1	1				0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Rectangle	0.090 x 0.550					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Rectangle	0.100 x 0.250							1			0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Rectangle	0.100 x 2.750				1	1		1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Rectangle	0.112 x 0.600				1		1				0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Rectangle	0.120 x 0.240							1			0.100 TO 0.250	0.104 TO 0.134	0.063 TO 0.121
Rectangle	0.122 x 0.600				1	1		1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Rectangle	0.125 x 0.500	TC2020	1	1	1						0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Rectangle	0.125 x 1.000		1		2		1				0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Rectangle	0.125 x 2.000			1	1		1				0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Rectangle	0.126 x 0.251				1		1				0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Rectangle	0.138 x 0.220				1		1				0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Rectangle	0.140 x 0.300				1	1					0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Rectangle	0.150 x 0.625				1		1				0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Rectangle	0.150 x 1.050						1				0.100 TO 0.250	0.104 TO 0.134	0.063 TO 0.121
Rectangle	0.156 x 0.500				1	1		1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Rectangle	0.156 x 1.000				1		1				0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Rectangle	0.157 x 0.315						1				0.100 TO 0.250	0.104 TO 0.134	0.063 TO 0.121
Rectangle	0.170 x 0.385							1			0.100 TO 0.250	0.104 TO 0.134	0.063 TO 0.121
Rectangle	0.178 x 0.312					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Rectangle	0.178 x 0.626					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Rectangle	0.187 x 0.312			1	1		1				0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Rectangle	0.187 x 1.000			1		1		1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Rectangle	0.215 x 0.250			1		1		1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Rectangle	0.220 x 0.710				1		1				0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Rectangle	0.225 x 2.450					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Rectangle	0.236 x 0.750				1	1		1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Rectangle	0.245 x 0.385							1			0.100 TO 0.250	0.104 TO 0.134	0.063 TO 0.121
Rectangle	0.245 x 0.52				1	2		1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Rectangle	0.250 x 0.438				1		1				0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Rectangle	0.250 x 1.000	1	1	1	1				1		0.015 TO 0.090	0.017 TO 0.074	0.018 TO 0.059
Rectangle	0.250 x 2.101				1		1				0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Rectangle	0.250 x 2.750				1	1		1	2	2	0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Rectangle	0.286 x 2.750				1		1				0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Rectangle	0.313 x 2.750					1					0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Rectangle	0.330 x 1.430					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Rectangle	0.375 x 0.500					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Rectangle	0.375 x 0.750					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Rectangle	0.375 x 1.180			1	1		1				0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Rectangle	0.376 x 1.251							1			0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Rectangle	0.475 x 0.875				1		1	1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Rectangle	0.562 x 0.875					1		1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Rectangle	0.634 x 1.759							1			0.100 TO 0.250	0.104 TO 0.134	0.063 TO 0.121
Rectangle	0.687 x 0.875			1	1		1				0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Rectangle	0.695 x 0.795				1			1			0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Rectangle	0.800 x 1.000							1			0.100 TO 0.250	0.104 TO 0.134	0.063 TO 0.121
Rectangle	0.820 x 2.100			1		1		1			0.015 TO 0.250	0.017 TO 0.134	0.018 TO 0.121
Rectangle	0.875 x 1.125				1		1	1			0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Rectangle	0.432x2.069				1								

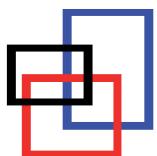


HANSEN Industries Ltd

Tool Library

Regular Shape/Punch Tool

SHAPE	SIZE IN	MULTI TOOL	DIE CLEARANCE								CUTTING THICKNESS (Inch)		
			.002"	.004"	.006"	.010"	.012"	.020"	.030"	.035"	Aluminum	CRS	Stainless steel
Rounded Rectangle	0.118 x 0.433, R 0.031				1						0.015 TO 0.063	0.017 TO 0.047	0.018 TO 0.036
Rounded Rectangle	0.118 x 0.630, R 0.031								1		0.100 TO 0.250	0.104 TO 0.134	0.063 TO 0.121
Rounded Rectangle	0.255 x 2.575, R 0.063									1	0.100 TO 0.250	0.104 TO 0.134	0.063 TO 0.121
Rounded Rectangle	0.580 x 0.940, R 0.031						1			1	0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Rounded Rectangle	0.730 x 1.539, R 0.250						1				0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059
Rounded Rectangle	0.787 x 1.103, R 0.157						1		1		0.080 TO 0.250	0.059 TO 0.134	0.048 TO 0.121
Rounded Rectangle	0.900 x 1.200, R 0.234								1		0.100 TO 0.250	0.104 TO 0.134	0.063 TO 0.121
Rounded Rectangle	1.351 x 1.473, R 0.065						1				0.080 TO 0.090	0.059 TO 0.074	0.048 TO 0.059



TOOL / DIE SUMMARY

Shape	Tool	Die
Circle	122	251
Square	25	63
Obround	52	98
Rectangle	58	131
Rounded rectangle	8	10
Custom	113	113
TOTAL	378	666

OVER 1000 PIECES OF TOOLING TO SUIT YOUR DESIGN NEEDS!

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Number	Type	Description	Number	Type	Description
800	CUTTING	"L" Ø 0.166" X 0.188" KEY SLOT	840	CUTTING	DIAMOND "<—>": 0.05" X 0.35"
903	CUTTING	"—" 1.185" X .465" BELT CLIP BLANK	101	FORMIMG	DIMPLE: 2.362 X 2.242 X H0.059 [↓ TOP DOWN]
004	FORMING	10-32 EXTRUSION [↑ BOTTOM UP]	123	FORMIMG	DIMPLE: ID0.312" ODO.770" H0.20" [↑ BOTTOM UP]
300	FORMING	6-32 EXTRUSION [↑ BOTTOM UP]	915	FORMIMG	DIMPLE: ID0.480" ODO.810" H0.16" [↑ BOTTOM UP]
003	FORMING	8-32 EXTRUSION [↑ BOTTOM UP]	2058	FORMIMG	DIMPLE: ID0.480" ODO.960" H0.25" [↑ BOTTOM UP]
530	CUTTING	BANANA: I.R. 0.886" / O.R. 1.102"	129	FORMIMG	DIMPLE: ID0.570" ODO.880" H0.14" [↓ TOP DOWN]
531	CUTTING	BANANA: I.R. 1.220" / O.R. 1.437"	128	FORMIMG	DIMPLE: ID0.570" ODI.020" H0.18" [↓ TOP DOWN]
532	CUTTING	BANANA: I.R. 1.625" / O.R. 2.000" (85°)	910	FORMIMG	DIMPLE: ID1.040" ODI.450" H0.10" [↑ BOTTOM UP]
103	CUTTING	BANANA: I.R. 2.820" / O.R. 2.945"	120	FORMIMG	DIMPLE: ID1.125" ODI.125" H0.20" [↓ TOP DOWN]
802	CUTTING	BANANA: I.R. 2.940" / O.R. 3.065"	4131	CUTTING	Dumbell Slot (37.95 x 6.2)mm "□=□"
1006	CUTTING	BANANA: I.R. 4.281" / O.R. 4.719"	170	CUTTING	HALF OBOUND: 0.17X0.357 "□"
122	FORMING	BEAD: 0.680" X 0.350" X H.10" [↑ BOTTOM UP]	770	CUTTING	HALF OBOUND: 0.25X0.75 "□"
895	FORMING	BEND DIMPLE [↑ BOTTOM UP]	125	FORMIMG	HALF SHEAR: Ø0.125" [↓ TOP DOWN]
795	FORMING	BEND DIMPLE [↓ TOP DOWN]	187	FORMIMG	HALF SHEAR: Ø0.187" [↓ TOP DOWN]
127	FORMING	CENTER PUNCH: [↑ BOTTOM UP]	902	CUTTING	HEART MARKER ▼ 1.050" X 0.517"
124	FORMING	CENTER PUNCH: [↓ TOP DOWN]	037	CUTTING	HEXAGON: 0.468", Ø0.541"
996	CUTTING	CLUSTER: 4 HITS - SQ 0.251; 0.680" SPACING	911	FORMIMG	K.O.: DOUBLE ID 0.870" OD 1.080" [↑ BOTTOM UP]
992	CUTTING	CLUSTER: 5 HITS - Ø 0.074; 0.250" SPACING	901	FORMIMG	K.O.: DOUBLE ID 0.875" OD 1.125" [↑ BOTTOM UP]
991	CUTTING	CLUSTER: 5 HITS - Ø 0.156; 0.500" SPACING	907	FORMIMG	K.O.: DOUBLE ID 1.094" OD 1.375" [↑ BOTTOM UP]
993	CUTTING	CLUSTER: 5 HITS - Ø 0.171; 0.500" SPACING	975	FORMIMG	K.O.: SINGLE Ø 0.500 [↑ BOTTOM UP]
990	CUTTING	CLUSTER: 5 HITS - Ø 0.156; 0.437" SPACING	978	FORMIMG	K.O.: SINGLE Ø 0.875" [↓ TOP DOWN]
114	FORMING	C'SINK: I.D. 0.088" O.D. 0.373",100° [↓ TOP DOWN]	007	FORMIMG	LANCE_130WX.220HX.232LTX.680LB [↑ BOTTOM UP]
115	FORMING	C'SINK: I.D. 0.100" O.D. 0.228",100° [↓ TOP DOWN]	118	FORMIMG	LANCE_170WX.160HX.21LTX.557LB [↑ BOTTOM UP]
070	FORMING	C'SINK: I.D. 0.100" O.D. 0.250",120° [↓ TOP DOWN]	748	FORMIMG	LOUVER: 2.00LX.40WX.25HX.125GAP[↑ BOTTOM UP]
110	FORMING	C'SINK: I.D. 0.110" O.D. 0.255",90° [↓ TOP DOWN]	748	FORMIMG	LOUVER: 2.00LX.40WX.25HX.15GAP[↑ BOTTOM UP]
100	FORMING	C'SINK: I.D. 0.125" O.D. 0.225",82° [↓ TOP DOWN]	748	FORMIMG	LOUVER: 2.00LX.40WX.25HX.20GAP[↑ BOTTOM UP]
080	FORMING	C'SINK: I.D. 0.125" O.D. 0.280",120° [↓ TOP DOWN]	749	FORMIMG	LOUVER: 2.36LX.50WX.25HX.15GAP[↑ BOTTOM UP]
111	FORMING	C'SINK: I.D. 0.150" O.D. 0.375",90° [↓ TOP DOWN]	997	FORMIMG	MARKER: BEND LINE 1.050" "—" [↓ TOP DOWN]
880	FORMING	C'SINK: I.D. 0.162" O.D. 0.280",82° [↓ TOP DOWN]	995	FORMIMG	MARKER: BEND LINE 1.072" "—" [↑ BOTTOM UP]
090	FORMING	C'SINK: I.D. 0.170" O.D. 0.350",82° [↓ TOP DOWN]	313	FORMIMG	MARKER: WELD STUD Ø0.313" [↑ BOTTOM UP]
060	FORMING	C'SINK: I.D. 0.180" O.D. 0.343",120° [↓ TOP DOWN]	555	FORMIMG	OFFSET: 0.047" DEEP 10° ▲—▲
020	FORMING	C'SINK: I.D. 0.187" O.D. 0.372",82° [↓ TOP DOWN]	556	FORMIMG	OFFSET: 0.080" DEEP 10° ▾—▼
112	FORMING	CSINK: I.D. 0.200" O.D. 0.400",90° [↓ TOP DOWN]	005	FORMIMG	PART NUMBER: 2 X 10 [↓ TOP DOWN]
008	FORMING	C'SINK: I.D. 0.234" O.D. 0.343",82° [↑ BOTTOM UP]	904	FORMIMG	PART NUMBER: 1X16@2.05"X0.28" [↑ BOTTOM UP]
113	FORMING	C'SINK: I.D. 0.240" O.D. 0.514",90° [↓ TOP DOWN]	914	FORMIMG	PART NUMBER: 2X14@1.75"X0.6" [↑ BOTTOM UP]
050	FORMING	C'SINK: I.D. 0.266" O.D. 0.410",82° [↓ TOP DOWN]	981	CUTTING	QUAD: FAN 1.000X1.800
010	FORMING	C'SINK: I.D. 0.390" O.D. 0.665",82° [↓ TOP DOWN]	126	CUTTING	QUAD: R1, R1.5, R2, R2.5, r0.03
030	FORMING	C'SINK: I.D. 0.391" O.D. 0.528",82° [↓ TOP DOWN]	413	CUTTING	RAD: R0.030 4-WAY
040	FORMING	C'SINK: I.D. 0.500" O.D. 0.665",82° [↓ TOP DOWN]	116	CUTTING	RAD: R0.063 4-WAY
806	CUTTING	DB9: 0.816" X 0.450"	418	CUTTING	RAD: R0.125 4-WAY
998	CUTTING	DD: 0.115 X Ø 0.156 "□"	188	CUTTING	RAD: R0.187 CRESCENT
131	CUTTING	DD: 0.130 X Ø 0.232 "□"	414	CUTTING	RAD: R0.250 4-WAY
130	CUTTING	DD: 0.130 X Ø 0.240 "□"	433	CUTTING	RAD: R0.330 4-WAY
214	CUTTING	DD: 0.214 X Ø 0.280 "□"	375	CUTTING	RAD: R0.375 CRESCENT
295	CUTTING	DD: 0.295 X Ø 0.410 "□"	425	CUTTING	RAD: R0.394 4-WAY (R 10MM)
430	CUTTING	DD: 0.430 X Ø 0.480 "□"	979	CUTTING	RAD: R0.500 CRESCENT
470	CUTTING	DD: 0.470 X Ø 0.505 "□"	376	CUTTING	RAD: R2.000 CRESCENT
500	CUTTING	DD: 0.500 X Ø 0.563 "□"	415	CUTTING	RAD: R2.750 CRESCENT
520	CUTTING	DD: 0.520 X Ø 0.625 "□"	908	CUTTING	RECT WITH 2 CORNER RAD: 1.20"X1.12"XR0.2"
510	CUTTING	DD: 0.550 X Ø 0.625 "□"	876	CUTTING	RECT WITH 2 NOTCH: 1.575"X1.271" "□"
502	CUTTING	DD: 0.550 X Ø 0.650 "□"	801	CUTTING	RECT: 0.157X0.540 SPECIAL
571	CUTTING	DD: 0.571 X Ø 0.630 "□"	900	CUTTING	RECT: 0.195X0.625 SPECIAL "□—□"
625	CUTTING	DD: 0.625 X Ø 0.750 "□"	921	CUTTING	RECT: 0.820X0.870 WITH NOTCH & R.317 CORNER
650	CUTTING	DD: 0.650 X Ø 0.750 "□"	920	CUTTING	RECT: 0.920X1.640 WITH NOTCH & R.090 CORNER
669	CUTTING	DD: 0.670 X Ø 0.709 "□"	609	FORMIMG	RECT: IRREGULAR 0.162X0.750 LEFT
983	CUTTING	DD: 0.750 X Ø 0.875 "□"	610	FORMIMG	RECT: IRREGULAR 0.162X0.750 RIGHT
787	CUTTING	DD: 0.787 X Ø 0.906 "□"	976	CUTTING	RECT: IRREGULAR 0.307X2.820
875	CUTTING	DD: 0.875 X Ø 1.000 "□"	240	CUTTING	SD: 0.226 X Ø 0.240
419	CUTTING	DD: 1.122 X Ø 1.362 => 28.5mm X 34.6mm	235	CUTTING	SD: 0.235 X Ø 0.250
189	CUTTING	STAR Punch: 0.320"X0.732" "<=□=>"	380	CUTTING	SD: 0.346 X Ø 0.380
135	FORMING	SYMBOL: ARROW "<=" 0.5X0.225 [↓ TOP DOWN]	505	CUTTING	SD: 0.465 X Ø 0.505
994	FORMING	SYMBOL: GROUND Ø 0.500 [↑ BOTTOM UP]	473	CUTTING	SD: 0.473 X Ø 0.505
420	FORMING	SYMBOL: GROUND Ø 0.500 [↓ TOP DOWN]	525	CUTTING	SD: 0.488 X Ø 0.525
421	FORMING	SYMBOL: LOCK Ø 0.290 [↓ TOP DOWN]	570	CUTTING	SD: 0.570 X Ø 0.610
422	FORMING	SYMBOL: UNLOCK Ø 0.290 [↓ TOP DOWN]	001	CUTTING	SD: 0.593 X Ø 0.625
912	FORMING	SYMBOL: 0.250" CORNER STAMP " " [↓ TOP DOWN]	701	CUTTING	SD: 1.455 X Ø 1.510
913	FORMING	SYMBOL: 0.250" LINE "—" [↑ BOTTOM UP]	909	CUTTING	TRIANGLE: 0.480X0.480X0.600 @ 30°,30°,60° R.025
916	FORMING	TOOTH SHAPE: 0.430"X0.495" ["□"]	999	CUTTING	TRIANGLE: 0.537X0.537X0.690 @ 30°,30°,60°
750	FORMING	TRAP: 0.250 X 0.750 @ 45° "□"	1009	CUTTING	TRIANGLE: 1.448"X1.408"X1.245" @ 51.7°,62.5°,65.8°



Number	Type	Description	Number	Type	Description
009	FORMING	ROLLER DEBURR	103	CUTTING	R2.820 CRESCENT
012	CUTTING	HEXAGON:0.250	1159	FORMING	DIMPLE .150
013	FORMING	FORM DOWN OB 0.200X1.910	140	FORMING	DIMPLE .37 FORM UP
014	FORMING	ID.317XOD.483XH.080 DIMPL UP	2058	FORMING	ID.42XOD1.02XH.244 DIMPLE UP
018	CUTTING	0.25" CHAMBER SQ CLUSTER .125" SPACING	313	FORMING	WELD STUD MARKER UP
021	CUTTING	BANANA:IR0.618 OR0.835	375	CUTTING	RAD: R0.375 R0.625 CRESCENT
022	CUTTING	BANANA:IR0.953 OR1.169	425	CUTTING	RAD:R0.394(10MM) 4-WAY
027	CUTTING	CB-9	433	CUTTING	RAD:R0330 4-WAY
028	CUTTING	AH-10	611	CUTTING	RECTANGLE WITH NOTCH DT60-009 RIGHT
029	CUTTING	HDMI CUTOUT	613	CUTTING	.791 RAD SQUAREKEY SLOT
033	FORMING	LOUVRE CONTINOUS L2.360	780	FORMING	CSK DOWN
034	FORMING	OFFSET TAB UP L.419 W.230 H.200	869	CUTTING	CF-TB-CB
035	CUTTING	CLUSTER ; 4HITS-DIA 0.250, 0.787 SPACING	870	CUTTING	CF-TB-CCP
038	CUTTING	ELECTRICAL CUTOUT	907	FORMING	KO DOUBLE 1.094/1.375 UP
039	FORMING	ID 1.031XOD2.065XH0.3 DIMPL DOWN	975	FORMING	KO SINGLE 0.500
042	FORMING	KO SINGLE 1.375 DOWN	977	CUTTING	AIM 512-020-102
044	FORMING	KO SINGLE 1.734 DOWN	997	FORMING	0.550" LINE DOWN
045	FORMING	OFFSET H0.125"XW0.830" DOWN	049	CUTTING	URETHANE REC 0.125 X 2.000
046	CUTTING	RAD: R0.045 4-WAY	003	FORMING	8-320EXTRUSION UP
50	CUTTING	URETHANE REC : 0.187 X 1.000	004	FORMING	10-32 EXTRUSION UP
40	FORMING	DIMPL ID.700XOD1.00XH.170 UP	010	FORMING	RAD SQ 1.120" DIMOL DOWN .03" DEEP
047	CUTTING	RAD: R0.090 4-WAY	020	CUTTING	BANANA: IR1.287 OR 1.504
048	CUTTING	CLUSTER ; 4HITS-DIA 0.313, 0.750 SPACING	030	FORMING	0.300" FLANGE
032	CUTTING	MILLSON PUNCH			