### **MATE TOOLING SOLUTIONS**



Committed to delivering the world's finest tooling to the sheet metal industry

www. Mate Tooling Solutions. co.uk

## **Mate Precision Tooling**

Mate offers high performance tooling for every major CNC punch press:

Thick Turret, Trumpf Style, Murata Wiedemann, Multi Tool Systems, Pullmax Trumpf Style, Thin Turret and Salvagnini.





#### **Wila Press Brake Productivity People**

Wila bending technology combines accuracy, durability, flexibility and speed; all equally important when producing the longest-lasting press brake tooling in the world.

Wila's universal press brake concept, means that you can standardise your tooling range across the machines by purchasing either the Wila with the machine or afterwards.







# **Press Brake Bending Chart**

A	AIR BENDING CHART FORCE REQUIRED FOR 90° AIR BENDING, SHEET RESISTANCE R-45 KG/MMQ																		
		6	8	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	V
		4	5.5	7	8.5	11	14	17.5	22	28	35	45	55	71	89	113	140	175	
		1	1.3	1.6	2	2.6	3.3	4	5	6.5	8	10	13	16	20	26	33	41	
>	0.5	3																	
>	0.6	4	4																
>	8.0	7	5	4															
>	1	11	8	7	6														
>	1.2	16	12	10	8	6													
>	1.5		17	15	13	9	8												
>	2			27	22	17	13	11											
>	2.5				35	26	21	17	13										
>	3					38	30	24	19	15									
>	4						54	42	34	27	21								
>	5							67	52	42	33	26							
>	6								<b>75</b>	60	48	38	30						
>	8									107	85	68	53	43					
>	10										134	105	85	67	53				
>	12											153	120	96	78	60			
>	15												188	150	120	95	75		
>	20													270	215	170	135	108	

#### **Die Clearance Chart**

DIMENSIONS IN	MILLIMETERS	PIERCING	BLANKING		
MATERIAL TYPE (Typical Shear Strength)	MATERIAL THICKNESS (T)	TOTAL DIE CLEARANCE (% of T)	TOTAL DIE CLEARANCE (% of T)		
ALUMINIUM	Less than 2.5	15%	15%		
25K psi	2.5 through 5.0	20%	15%		
(.1724kN/mm²)	Greater than 5.0	25%	20%		
MILD STEEL	Less than 3.0	20%	15%		
50K psi	3.0 through 6.0	25%	20%		
(.3447kN/mm²)	Greater than 6.0	30%	20%		
	Less than 1.5	20%	15%		
STAINLESS STEEL	1.5 through 2.8	25%	20%		
75K psi (.5171kN/mm²)	2.8 through 4.0	30%	20%		
,	Greater than 4.0	35%	25%		

The information in this chart is a fine-tuned version of more general clearance charts that are published in our various catalogues and in other industry publications. The chart is based on experience from our customer's who enjoy superior piece part quality and the longest possible tool life.

Blanking tools are generally assigned with less clearance than piercing tools, so that the burnished area of the piece part (slug) is greater. This leads to a higher quality piece part. However, due to the smaller clearances, blanking tools become dull more quickly.

### **Tecnostamp Press Brake Tooling**

Tecnostamp are one of Europe's largest independent manufacturers of press brake tooling.

Tecnostamp produce more than 900 profiles to suit nearly every press brakes machine including:

- Amada
- Promecam
- Edwards/Beyeler
- **Bystronic**
- Trumpf
- LVD
- EHT
- SafanDarley
- Baykal Durma







#### **Consumables**

Centricut manufacture nozzles for all major CO2 laser cutting systems.

With continuous updates to their product offering, are able to provide the latest products and innovations to customers:

- Hypertherm Manufacturing quality
- Guaranteed OEM compatibility
- Extensive product lines
- Ceramics and nozzle holders
- Chrome plated for greater consumable life



#### Waterjet Consumables.

Accustream produce replacement parts for pumps, cutting heads, abrasive delivery systems and high pressure plumbing and tubing for;

- Flow
- WJS
- ► KMT
- Jet Edge
- Omax

Ophir's CO2 Optics Division offers a full range of CO2 Laser Optics and CO2 laser spare parts for High power CO2 lasers.

The replacement laser optics and components includes: focusing lenses, beam-delivery laser mirrors, silicon (Si) mirrors and copper (Cu) Mirrors and cavity optics, output couplers (partial reflectors), rear mirrors (Ge, GaAs) and total reflectors windows and optics maintenance tools.

Ophir delivers OEM-approved optics for fiber and disc lasers. The 1 micron optics properties include ultra-low absorption (<50 ppm at 1.03-1.07 microns), a focal length tolerance of  $\pm 0.5\%$  and a laser-damage threshold of >10J. Ophir supply fiber lenses and protective windows as well as high reflection windows for the 1.03-1.07 wavelength.









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