

# COMPENDIUM OF TYPICAL HAZARDS ASSOCIATED WITH POWER PRESS AND THEIR CONTROL MEASURES IN THE METALWORKING INDUSTRY

## POWER PRESS

No.	Hazards	Possible Control Measures	Useful Links/Tips
<b>1. Mount and removal of tool/die-set from machine</b>			
1.1	Cut by sharp edges	<ul style="list-style-type: none"> <li>• Conduct training on mounting techniques</li> <li>• Provide, maintain and use appropriate PPE (gloves)</li> </ul>	
1.2	Struck by falling object	<ul style="list-style-type: none"> <li>• Fasten work-holding device</li> <li>• Ensure that all tools are properly mounted</li> <li>• Provide and use appropriate safety footwear</li> </ul>	
1.3	Caught in between objects	<ul style="list-style-type: none"> <li>• Provide safety inter-lock/photo-electric sensor/double hand control</li> <li>• Conduct regular maintenance of existing interlocking devices (e.g. safety door with safety switches, safety curtains)</li> </ul>	<a href="#">See Appendix Figure 1</a>
1.4	Strains from awkward postures during changing process	<ul style="list-style-type: none"> <li>• Provide proper platform for tool change</li> </ul>	
<b>2. Stamping Operation</b>			

2.1	Struck by flying chips from breaking tool	<ul style="list-style-type: none"> <li>• Conduct regular inspection and maintenance on tool and holding device</li> <li>• Provide and use appropriate eye protection</li> </ul>	
2.2	Excessive noise exposure	<ul style="list-style-type: none"> <li>• Provide and use noise dampers</li> <li>• Conduct good maintenance program for the machine</li> <li>• Provide and use enclosure to reduce noise exposure</li> <li>• Conduct regular audiometric tests for exposed workers (If noise is more than 85 dBA)</li> <li>• Implement hearing conservation programme</li>   <li>• Conduct regular noise monitoring</li> <li>• Display warning sign at entrance</li> <li>• Provide and use appropriate hearing protection</li> </ul>	<p><a href="#">See Appendix Figure 2</a></p> <p><a href="#">Refer to Hearing Conservation Programme<sup>1</sup></a></p>
2.3	Vibration hazards	<ul style="list-style-type: none"> <li>• Provide and use vibration dampers</li> <li>• Provide and use vibration isolators</li> <li>• Conduct good maintenance program for the machine</li> <li>• Implement safe work procedures</li> </ul>	
2.4	Crushed fingers from being caught in between machine press	<ul style="list-style-type: none"> <li>• Provide machine guarding</li> <li>• Develop and adopt safe work procedures</li> </ul>	<a href="#">See Appendix Figure 3</a>
<b>3. Troubleshooting of Die</b>			
3.1	Struck by moving object	<ul style="list-style-type: none"> <li>• Implement lock-out procedures</li> </ul>	<a href="#">See Appendix Figure 4</a>

		<ul style="list-style-type: none"> <li>• Troubleshooter must be designated and trained service and maintenance personnel</li> </ul>
<b>3.2</b>	Struck by flying object	<ul style="list-style-type: none"> <li>• Provide and use appropriate PPE</li> </ul>

#### 4. Removal of work piece

<b>4.1</b>	Cut by sharp edges	<ul style="list-style-type: none"> <li>• Provide proper hand tools for removal of work piece</li> <li>• Provide auto ejection and feeding mechanism for work piece</li> <li>• Provide and use appropriate PPE</li> </ul>
<b>4.2</b>	Struck by falling object	<ul style="list-style-type: none"> <li>• Ensure that all tools are properly mounted</li> <li>• Fasten work-holding device</li> <li>• Provide and use appropriate safety footwear</li> </ul>
<b>4.3</b>	Caught in between objects	<ul style="list-style-type: none"> <li>• Provide safety interlock/photo-electric sensor/double hand control</li> </ul>

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<sup>1</sup> This document can be retrieved from [http://www.mom.gov.sg/building\\_capabilities.html](http://www.mom.gov.sg/building_capabilities.html) under Managing Workplace Hazards  
 →Guidelines Factsheets and Circulars→Noise and Vibration

Figure 1: Safety light curtain with two hand control



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Figure 2: Noise enclosure



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Figure 3: Guarding round power press



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Figure 4: Lock-out and Tag-out



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**\*Contents of this resource are originated from the Risk Assessment workshops organised by the Singapore Manufacturers' Federation with the support of the Occupational Safety and Health Division of the Ministry of Manpower and the Metalworking Industry Safety Promotion Committee.**

**This material is not intended to be an exhaustive list of hazards and control measures for the above-mentioned activities. Companies are to conduct risk assessment on the work activities specific to their workplaces by identifying the hazards, evaluating the risk and determining suitable control measures where appropriate. References should be made to the relevant regulations and code of practices when in doubt.**