

| <b><u>TOLERANCE GUIDE - SAND CASTINGS</u></b>  |  |
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| <b>Functional Dimensions</b>   |  |
| <p><b>MILLIMETRES</b><br/>Dimension Tolerance</p> <p>0 + to 175 <math>\pm</math> 0.53<br/> 175 + to 200 <math>\pm</math> 0.58<br/> 200 + to 250 <math>\pm</math> 0.63<br/> 250 + to 300 <math>\pm</math> 0.68<br/> 300 + to 350 <math>\pm</math> 0.73<br/> 350 + to 400 <math>\pm</math> 0.78<br/> 400 + to 450 <math>\pm</math> 0.83<br/> 450 + to 500 <math>\pm</math> 0.88<br/> 500 + to 550 <math>\pm</math> 0.93<br/> 550 + to 600 <math>\pm</math> 0.98<br/> 600 + to 650 <math>\pm</math> 1.03</p> <p>Each Additional 25mm<br/>ADD <math>\pm</math> 0.025mm</p> | <p><b>INCHES</b><br/>Dimension Tolerance</p> <p>0 + to 7.000 <math>\pm</math> .021<br/> 7.000 + to 8.000 <math>\pm</math> .023<br/> 8.000 + to 10.000 <math>\pm</math> .025<br/> 10.000 + to 12.000 <math>\pm</math> .027<br/> 12.000 + to 14.000 <math>\pm</math> .029<br/> 14.000 + to 16.000 <math>\pm</math> .031<br/> 16.000 + to 18.000 <math>\pm</math> .033<br/> 18.000 + to 20.000 <math>\pm</math> .035<br/> 20.000 + to 22.000 <math>\pm</math> .037<br/> 22.000 + to 24.000 <math>\pm</math> .039<br/> 24.000 + to 26.000 <math>\pm</math> .041</p> <p>Each Additional Inch<br/>ADD <math>\pm</math> .001"</p> |
| Additional tolerance across mould and core joints.<br>+/- 0.25mm <span style="float: right;">+/- 0.0099"</span>  |  |
| <b>CLOSER TOLERANCES CAN BE ACHIEVED BY USING EXTRA OPERATIONS – AT EXTRA COST</b>   |  |
| <b>Non Functional Dimensions</b>   |  |
| 50% Additional Tolerance up to 5.000" .125mm<br>33% Additional Tolerance above 5.000" .125mm   |  |
| Wall Thickness Tolerance<br><br>$\pm$ .008" - $\pm$ 0.20mm   | Straightness/Flatness Tolerance<br>.004" per in. -0.10mm per 25mm excluding localised pattern depressions  |
| Angular Tolerance<br>$\pm$ ° UP to 3" - 75mm   | Typical Surface Finish<br>- 80 MICROINCHES<br>- 2.0 MICROMETRES  |
| We would advise that the above tolerances be incorporated into your drawings immediately.<br>Dimensions requiring close tolerances should be discussed with HCL's Technical Sales.   |  |