

MS+RS HPsRZ

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Further development in Yamawa's Roll Taps for Miniature Threads



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Features of Products

Standard type

MS+RS



High performance type

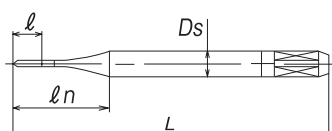
HPsRZ



■ Features

- Using new blanks, Roll Taps improve their rigidity, bending strength and run-out tolerance.
- Marking position is moved to shank square portion to keep high shank concentricity.
- Adoption of new thread limits (GS classes) improves the thread accuracy of internal threads machined.

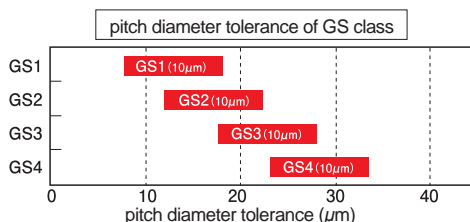
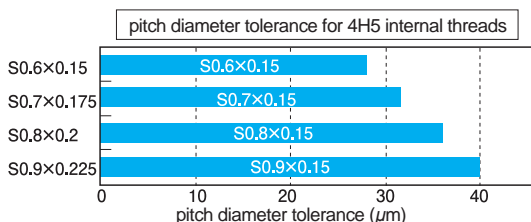
Table of dimensions and sizes



| size | class | L | l | l _n | D _s | number of lobes | bored hole size for class 4H5 | | MS+RS | HPsRZ |
|------------|-------|----|-----|----------------|----------------|-----------------|-------------------------------|------|-----------|-----------|
| | | | | | | | Max | Min | code | code |
| S0.6X0.15 | GS2 | 36 | 2.5 | 11 | 3 | 4 | 0.55 | 0.54 | MSP20.6-B | HPS20.6-B |
| S0.7X0.175 | GS3 | 36 | 2.5 | 11 | 3 | 4 | 0.64 | 0.62 | MSP30.7-B | HPS30.7-B |
| S0.8X0.2 | GS3 | 36 | 3.0 | 11 | 3 | 4 | 0.73 | 0.71 | MSP30.8-B | HPS30.8-B |
| S0.9X0.225 | GS4 | 36 | 3.0 | 11 | 3 | 4 | 0.82 | 0.80 | MSP40.9-B | HPS40.9-B |

- Above bored hole size is for reference. Please adjust the hole size depending on material, material hardness, parts' geometry. They can influence the deforming condition.
- Bent hole, machine vibration and misalignment can cause tapping troubles. Please pay attention to avoid such causes.

New thread class=GS



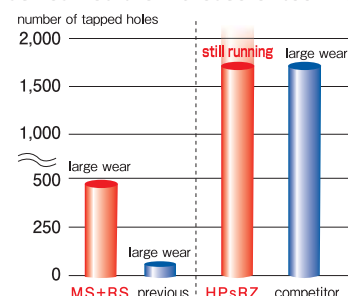
Recommendations of tapping conditions

| material | tool | tapping speed (m/min) |
|-----------------------------------|-------|-----------------------|
| low carbon steels ~S25C | MS+RS | ~10 |
| | HPsRZ | ~12 |
| aluminum, cast aluminum AL·ADC | MS+RS | ~12 |
| | HPsRZ | ~14 |
| cold rolled steel SPCC·SPCE | MS+RS | ~12 |
| | HPsRZ | ~14 |
| stainless steel SUS304 | MS+RS | ~5 |
| | HPsRZ | ~10 |

Tapping data

- Special design on thread lobes has realized the increase of tool life.

| | | |
|-----------------|--------------------|------------------|
| Tool size | S0.8X0.2 | |
| tool | MS+RS previous | HPsRZ competitor |
| coating | — | TiCN |
| tapping speed | 4m/min | 8m/min |
| material | SUS304 (88HRB) | |
| bored hole size | φ0.73 | |
| tapping length | 1.2mm (1.5D) | |
| machine | CNC tapping center | |
| oil | water soluble | |



※ Judgement of tool life
Crest wear at the 1st full thread

Warning

- ◆ Tools may shatter. Wear cover or eye glass to avoid injury during tapping.
- ◆ Tools may be shatter. Use tools under the proper tapping condition.
- ◆ Never wear gloves during turning operations as the gloves may get caught with the tools.
- ◆ Wear safety shoes to avoid injuring yourself by the falling tools.
- ◆ On attaching tools to the machine, fasten firmly to avoid chattering and run-out.
- ◆ Fasten the workpieces firmly so that they never move during operation. Never use worn tools or damaged tools with chipping.
- ◆ Take a special care to fire trouble. High temperature during machining may cause fire.

Please note that specification may change without advance notice.