# spline













#### **INTRODUCING SPLINE**

Spline is the one of the world's largest producer of spline gauges and master gears - a position of authority based on absolute specification and supreme quality.

### **Authority • Performance • Trust**











#### **GO AND NOGO SPLINE RING GAUGES**



Profiles:- Involute, Serration, Parallel (straight or helical)

## UKAS CALIBRATION





ISO 14001:2004 EMS 525187

### Conform to any of the following standards:-

ISO (International)
DIN (Germany)
ANSI /AGMA (American)
JIS (Japanese)

#### Range:-

Max. diameter 350mm Min. diameter 3mm

Max. number of teeth 500

Max. pitch 25.4 module

Min. pitch 0.1 module

Max. tooth length 150

#### **Typical Tolerances:-**

Profile 0.005mm

Total Spacing 0.005mm

Runout 0.005mm

Tooth Alignment 0.0025mm

Space Width 0.005mm



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#### GO SPLINE RING GAUGE AND TAPER MASTER PLUG



Taper tooth master plugs with fit and wear lines. These are used to monitor the wear of ring gauges during component manufacture. The ring gauge is ground to fit the master plug for original and replacement ring gauges.





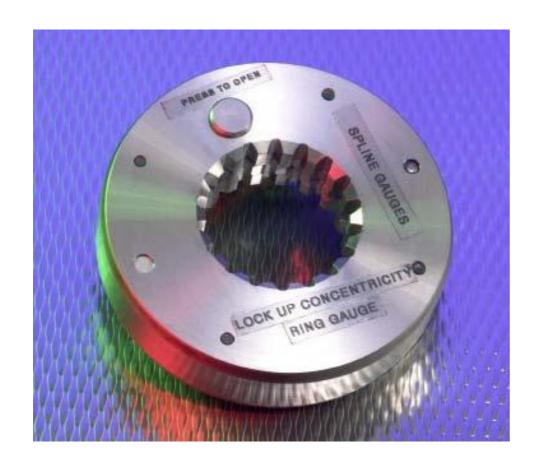








#### SPLINED LOCK UP CONCENTRICITY RING GAUGE



The component is mounted on centres whilst the concentricity ring is clamped onto it.

The outside diameter of the concentricity ring is concentric to the pitch circle diameter, hence with the aid of a runout checking device i.e. dial indicators or transducers, inspection of the component datum faces or diameters can be carried out.

#### Range :-

Max. diameter 300mm

Min. diameter 10mm

Max. tooth length of component 300mm Concentricity tolerance between outside diameter and spline pitch circle diameter is 0.005mm











#### VARIABLE SPLINE INDICATOR RING GAUGE WITH SETTING MASTER PLUG

For measuring component effective tooth thickness.\*



Can be supplied with analogue or digital indicators. Alternatively, a transducer port can be incorporated for SPC type analysis on PC.

\* Spline indicators having 2 opposite sectors of teeth can be supplied for measuring actual tooth thickness.





ISO 9001:2008 FS 503702



ISO 14001:2004 EMS 525187





# VARIABLE SPLINE INDICATOR RING GAUGE WITH SETTING MASTER PLUG

For measuring component effective tooth thickness.\*



Can be supplied with analogue or digital indicators. Alternatively, a transducer port can be incorporated for SPC type analysis on PC.

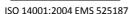
\* Spline indicators having 2 opposite sectors of teeth can be supplied for measuring actual tooth thickness.





ISO 9001:2008 FS 503702









# HELICAL VARIABLE SPLINE INDICATOR RING GAUGE WITH SETTING MASTER PLUG

For measuring component effective tooth thickness.\*



Can be supplied with analogue or digital indicators. Alternatively, a transducer port can be incorporated for SPC type analysis on PC.

\* Spline indicators having 2 opposite sectors of teeth can be supplied for measuring actual tooth thickness.









# spline

#### **GO AND NO GO SPLINE PLUG GAUGES**



### Conform to any of the following standards:-

ISO (International)
DIN (Germany)
ANSI /AGMA (American)
JIS (Japanese)

#### Range:-

Max. diameter 375mm

Min. diameter 5mm

Max. number of teeth 500

Max. pitch 25.4 module

Min. pitch 0.1 module

Max. tooth length 300

#### **Typical Tolerances:-**

Profile 0.005mm

Total Spacing 0.005mm

Runout 0.005mm

Tooth Alignment 0.0025mm

Space Width 0.005mm







ISO 14001:2004 EMS 525187





#### **TAPERED AND HELICAL SPLINED MANDRELS**



#### **Principle:-**

Tapered splines (involute or serrated) to allow the pitch line location of component internal splines.

Tooth thickness taper accommodates full spread of part space width tolerance.

#### **Application:-**

Rotate on centres to allow runout inspection of component datum faces or diameters.

#### Range:-

Max. diameter 300mm Min. diameter 6mm













# HELICAL VARIABLE SPLINE INDICATOR PLUG GAUGE WITH SETTING MASTER RING

For measuring component effective tooth thickness.\*



Can be supplied with analogue or digital indicators. Alternatively, a transducer port can be incorporated for SPC type analysis on PC.

\* Spline indicators having 2 opposite sectors of teeth can be supplied for measuring actual tooth thickness.











#### **ROTALOCK MANDREL**





Machine face plate mounted mandrel

Used for the clamping of splined components.
This particular type is suitable for side fitting splines.
Clamping is on spline flanks.

**Function:**- Grinding, Turning.











#### **EXPANDING KEY TYPE MANDREL**



Used for the clamping of splined components. Expanding keys make this type of mandrel suitable for major diameter fitting splines.

Function:Grinding, Turning.

Machine face plate mounted mandrel using machine drawbar to actuate.





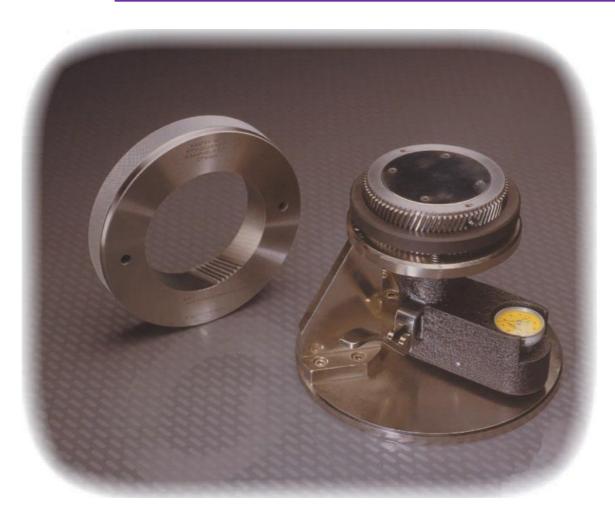








#### **HELICAL SPLINE FIXTURE GAUGE AND SETTING RING**



#### **Function:-**

Measurement between balls of an internal helical splined component.













#### **SPUR AND HELICAL MASTER GEAR**







### Conform to any of the following standards:-

ISO (International)
DIN (Germany)
ANSI /AGMA (American)
JIS (Japanese)

#### Range:-

Max. diameter 300mm

Min. diameter 6mm

Max. number of teeth 550

Max. pitch 25.4 module

Min. pitch 0.1 module

Max. tooth length 150

#### **Typical Tolerances:-**

Total Profile 0.003mm

Adjacent Pitch Error 0.0025mm

Total Pitch Error 0.009mm

Total Tooth Alignment Error 0.0025mm

Radial Runout 0.005mm













#### **HELICAL INTERNAL MASTER COMPONENT REPLICA**



## Conform to any of the following standards:-

ISO (International), DIN (Germany), AGMA (American) & JIS (Japanese)

#### Range:-

Max. diameter 300mm

Min. diameter 6mm

Max. number of teeth 550

Max. pitch 25.4 module

Min. pitch 0.1 module

Max. tooth length 75

#### **Typical Tolerances:-**

Cylindricity of Outside diameter 0.005mm

End Face Parallelism 0.002mm

Runout of Outside diameter to

Pitch diameter of teeth 0.010mm

Total Profile 0.003mm

Adjacent Pitch Error 0.0025mm

Total Pitch Error 0.009mm

Total Tooth Alignment Error 0.0025mm













#### **GEAR ARTEFACT**



#### **Function:-**

Highly accurate lead and involute artefact for verification and calibration of gear testing machines.













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