

### **Functional PD Thread Gauges**

The Gagemaker PG-6000 and RG-7000 Series gauges measure diameters of internal, and external threads respectively. Both series of these functional diameter gauges inspects the effects of all thread element variations and report deviations.

The gauges must be preset to a Nominal predetermined dimension using gauge blocks, micrometers, or the MIC TRAC measurement centre.







90-PG6000

90-RG7000

90-DPG6000

PG-6000 SERIES, INTERNAL DIAMETERS		
Code No	Description	Range (inch)
90-SPG6000	Internal Thread Roll Gauge, 1" reach	5/8 to 1 1/2
90-PG6000	Internal Thread Roll Gauge, 2 1/2" reach	1 1/2 to 9
90-PG6001	Internal Thread Roll Gauge, 2 1/2" reach	9 to 16
90-PG6002	Internal Thread Roll Gauge, 2 1/2" reach	16 to 24
90-DPG6000	Deep Bore Thread Gauge, 6" reach	3 to 4
Extension arms available	up to 12" depth, and 9.6" diameter for DPG-6000	

RG-7000 SERIES, EXTERNAL DIAMETERS			
Code No	Description	Range (inch)	
90-SRG7000	External Thread Roll Gauge	5/8 to 1 1/2	
90-RG7000	External Thread Roll Gauge	1 to 4	
90-RG7001	External Thread Roll Gauge	4 to 8	
90-RG7002	External Thread Roll Gauge	8 to 12	
90-RG7003	External Thread Roll Gauge	12 to 16	
90-RG7004	External Thread Roll Gauge	16 to 20	
90-RG7005	External Thread Roll Gauge	20 to 24	

Extension arms, handle extensions, and replacement arm sets are available upon request.

Tel: **08708 50 90 50** Fax: **08708 50 90 60** 

Prices do not include thread roll sets.



### **Functional Gauge Thread Rolls**

#### **UN Series Thread Rolls**

These thread rolls inspect the functional fit of machined parts with 60° "V" thread forms. Sold in matched sets of rolls.

<b>UN SERIES</b>	
Code No	Description
90-TRVI-4P	4 Pitch Internal 60° "V"
90-TRVI-5P	5 Pitch Internal 60° "V"
90-TRVI-6P	6 Pitch Internal 60° "V"
90-TRVI-8P	8 Pitch Internal 60° "V"
90-TRVI-10P	10 Pitch Internal 60° "V"
90-TRVI-12P	12 Pitch Internal 60° "V"
90-TRVI-14P	14 Pitch Internal 60° "V"
90-TRVI-16P	16 Pitch Internal 60° "V"
90-TRVI-18P	18 Pitch Internal 60° "V"
90-TRVI-20P	20 Pitch Internal 60° "V"

Code No	Description
90-TRVE-4P	4 Pitch External 60° "V"
90-TRVE-5P	5 Pitch External 60° "V"
90-TRVE-6P	6 Pitch External 60° "V"
90-TRVE-8P	8 Pitch External 60° "V"
90-TRVE-10P	10 Pitch External 60° "V"
90-TRVE-12P	12 Pitch External 60° "V"
90-TRVE-14P	14 Pitch External 60° "V"
90-TRVE-16P	16 Pitch External 60° "V"
90-TRVE-18P	18 Pitch External 60° "V"
90-TRVE-20P	20 Pitch External 60° "V"

#### **ACME and stub ACME Thread Rolls**

TRA & TRSA thread rolls inspect the functional fit of parts with 29° ACME and Stub ACME thread forms.

ACME AND STUB ACME		
Code No	Description	
90-TRA-3P	3 Pitch 29° ACME	
90-TRA-4P	4 Pitch 29° ACME	
90-TRA-5P	5 Pitch 29° ACME	
90-TRA-6P	6 Pitch 29° ACME	
90-TRA-8P	8 Pitch 29° ACME	
90-TRA-10P	10 Pitch 29° ACME	
90-TRA-12P	12 Pitch 29° ACME	
90-TRA-14P	14 Pitch 29° ACME	
90-TRA-16P	16 Pitch 29° ACME	
90-TRA-18P	18 Pitch 29° ACME	

Code No	Description
90-TRSA-3P	3 Pitch 29° Stub ACME
90-TRSA-4P	4 Pitch 29° Stub ACME
90-TRSA-5P	5 Pitch 29° Stub ACME
90-TRSA-6P	6 Pitch 29° Stub ACME
90-TRSA-8P	8 Pitch 29° Stub ACME
90-TRSA-10P	10 Pitch 29° Stub ACME
90-TRSA-12P	12 Pitch 29° Stub ACME
90-TRSA-14P	14 Pitch 29° Stub ACME
90-TRSA-16P	16 Pitch 29° Stub ACME
90-TRSA-18P	18 Pitch 29° Stub ACME

#### **ISO Metric Series Thread Rolls**

TRM thread rolls inspect the functional fit of machine threaded parts with ISO metric 60° "V" thread forms.

ISO METRIC SERIES - INTERNAL		
Code No	Description	
90-TRMI-4P	4mm Pitch Internal 60° "V"	
90-TRMI-35P	3.5mm Pitch Internal 60° "V"	
90-TRMI-3P	3mm Pitch Internal 60° "V"	
90-TRMI-25P	2.5mm Pitch Internal 60° "V"	
90-TRMI-2P	2mm Pitch Internal 60° "V"	
90-TRMI-175P	1.75mm Pitch Internal 60° "V"	
90-TRMI-15P	1.5mm Pitch Internal 60° "V"	

ISO METRIC SERIES - EXTERNAL		
Code No	Description	
90-TRME-4P	4mm Pitch External 60° "V"	
90-TRME-35P	3.5mm Pitch External 60° "V"	
90-TRME-3P	3mm Pitch External 60° "V"	
90-TRME-25P	2.5mm Pitch External 60° "V"	
90-TRME-2P	2mm Pitch External 60° "V"	
90-TRME-175P	1.75mm Pitch External 60° "V"	
90-TRME-15P	1.5mm Pitch External 60° "V"	

#### National 7° x 45° Buttress Thread Rolls

These thread rolls inspect the functional fit of parts with 7° x 45° buttress thread forms. Specify the pitch of thread when ordering.

NATIONAL 7° X 45° BUTTRESS			
Code No	Description		
90-TRB7452P	2 Pitch, 7° x 45°		
90-TRB74535P	3.5 Pitch, 7° x 45°		
90-TRB7454P	4 Pitch, 7° x 45°		
90-TRB7456P	6 Pitch, 7° x 45°		
90-TRB7458P	8 Pitch, 7° x 45°		
90-TRB74510P	10 Pitch, 7° x 45°		
90-TRB74512P	12 Pitch, 7° x 45°		
90-TRB74516P	16 Pitch, 7° x 45°		

Specials - all other thread forms available upon request.





### **Pitch Diameter Inspection Gauges**

The Gagemaker PD-6000 and PD-8000 Series gauges measure Pitch Diameters of internal, and external threads. The gauges can be preset to a nominal predetermined dimension using gauge blocks, micrometers, or the MIC TRAC measurement centre.







90-PD6000

90-PD6001

PD-6000 SERIES,	INTERNAL DIAMETERS
Code No	Description

Code No	Description	Range (inch)
90-PD6000	Internal PD Gauge, "V" & ACME	1 1/2 to 9
90-PD6000-02	Replacement Arm Set, 2 1/2" Length	
90-PD6000-07	Replacement Arm Set, 4 1/2" Length	
90-PD6001	Internal PD Gauge	6 to 24

Extension arms available up to 12" depth, and 9.6" diameter for DPG-6000

PD-8000	SERIES,	<b>EXTERNAL</b>	DIAMETERS
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Code No	Description	Range (inch)
90-PD8001	External Ball PD Gauge	0 to 6
90-PD8002	External Ball PD Gauge	6 to 12
90-PD8004	External Ball PD Gauge	12 to 16
90-PD8006	External Ball PD Gauge	16 to 20
90-PD8008	External Ball PD Gauge	20 to 24
90-PD8010	External Ball PD Gauge	24 to 28
90-PD8012	External Ball PD Gauge	28 to 36
90-PD8013	External Ball PD Gauge	36 to 44
90-PD8014	External Ball PD Gauge	44 to 52
90-PD8015	External Ball PD Gauge	52 to 60
90-PD8016	External Ball PD Gauge	60 to 72



### **Thread Disk for Windows Software/Contact Points**

Gagemaker's standard ball contact points are manufactured with spherical chrome balls with threaded shanks of 4-48 UNF. Contact sizes are matched closely to thread inspection wire sizes. The contact diameters listed are used in the TDWIN Thread Disk for Windows software program for pitch diameter inspection.





Thread Type Entry Screen

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	there.	Street	- 4
PO No.	41.987	4000	
Miles	40007	40 EV	
MaDatha	5.0	40 1985	
MaClattic	e 000	40.5768	
Herbita Handfell	670	40.000	
Mind by Bod Feb.	esim	40.568	
Post Parl Man	9.0	80.	
Post Faction	50.	60.	
In regarders	1190	1090	
Prior William	1100	6047	
The Fled-	11007	E167	
West Som	10.0	10002	
Markin Pastry	50	410034	
thrivier/hedry	10000	W100704	
766	1000	69427	
Table Process	1	870	

Thread Dimension Screen

#### **UN SERIES (60°V) THREADS**

Carbide	Thread Pitch
90-T562C	1
90-T288C	2
90-T188C	3 / 3.5
90-T144C	4
90-T128C	4.5
90-T115C	5
90-T105C	5.5

Thread Pitch	
6	
8	
10	
11.5 / 12	
14 / 16	
18	
	6 8 10 11.5 / 12 14 / 16

#### **ACME OR STUB ACME THREADS**

Carbide	Thread Pitch
90-T531TC	1
90-T344TC	1.5
90-T266TC	2
90-T219TC	2.5
90-T188TC	3
90-T144TC	3.5
90-T128TC	4

Carbide	Thread Pitch
90-T105TC	5
90-T090TC	6, 7
90-T062TC	8
90-T050TC	10
90-T041TC	12 / 14
90-T032TC	16

#### **TDWIN THREAD DISK SOFTWARE**

Model	Description
90-TDWIN	Thread Disk for Windows Software
90-TDWIN-UP	Upgrade to TDWIN from TD-100
90-TDWINLIC5	Multi-License Agreement, 5 Users
90-TDWINLIC10	Multi-License Agreement, 10 Users

T = Truncated

C = Carbide





### **TDWIN TAPER Thread Disk for Tapered Threads**

Gagemaker's TDWIN TAPER software program produces dimensional drawings and inspection data for API downhole tubular connectors based on the most current industry standards. Everything you need to machine, inspect, and document tubular connection threads is available in this convenient software program.

TDWIN TAPER provides easy access to information for both preferred and non-preferred Rotary Shouldered Connections, Tubing and Casing Connections, and any combination of Crossover. The program offers standard connection types and sizes. TDWIN TAPER displays connection drawings, inspection gauge information and setup and inspection reports.

The software displays printable drawings suitable for manufacturing that follow ASME Y14.5 standards for industry compatibility. Print gauge setup and inspection reports with your company logo and work order information. The program also offers the choice to save reports and jobs for future reference.

#### **Features**

- Follows API Specification 7.2, Dec. 2008, for Rotary Shouldered
- Follows API Specification 5B, Oct. 2008, for Tubing and Casing Connections
- Presents "preferred" connections as well as interchangeable and obsolete connections
- Organises data compatible with API and industry knowledge offered by resources such as Smith, Joy, and Hughes
- Displays Gagemaker style thread gauges and gauge setting information
- Configures and prints reference drawings for manufacturing including; standard pin/box/coupling, pin/box blanking, pin/box

- Relief groove, box modified bore-back relief, special clearance couplings, and SR grooved couplings
- Produces gauge setup reports for tubing, casing, RSC, and crossover combinations
- Provides inspection reports for all connection configurations selected
- Customises reports with your company logo
- Saves reports to job files and recalls them for future reference
- Provides web links to locate and purchase necessary gauges and



Select from 3 connection categories or review previous jobs and reports



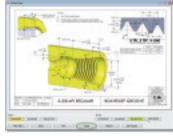
Select a Thread Type



Select a Thread Size



Select View Drawings



Select the desired drawing and view gauge requirements



View gauge details and tolerances



Select the required gauging method and



Customise, preview and print desired reports

#### THREAD DISK FOR WINDOWS (Tapered Threads)

Code No 90-TDWIN-TPR



### **Mic Trac Gauge Setting System**

The Gagemaker MIC TRAC is a multi-use gauge setting system. The system sets or zeros most gauges with the use of interchangeable anvils or blocks. Standard resolution of base unit is 0.00005". Accuracies range from  $\pm$ /- 0.0001" to  $\pm$ /- 0.0004".

The MIC TRAC is also available as a multi-use gauge calibration system. These MIC TRACs incorporate the ForeLok™ feature to provide a constant anvil force that improves repeatability from operator to operator. Please ask the Bowers sales team for details.





#### **BASE UNITS (INCLUDES TF-1F BLOCK SET)**

Code No	Description
90-MT3012-50	MIC TRAC, Range: 0" to 12" Internal, 1 1/2" to 13 1/2" External
90-MT3024-50	MIC TRAC, Range: 0" to 24" Internal, 1 1/2" to 25 1/2" External
90-MT3036-50	MIC TRAC, Range: 0" to 36" Internal, 1 1/2" to 37 1/2" External
90-MT3048-50	MIC TRAC, Range: 0" to 48" Internal, 1 1/2" to 49 1/2" External

A huge range of Tapered, Thread and Special setting blocks are available upon request

#### **SETTING BLOCKS**

Code No	Description
90-TF1F	Face Setting Blocks (1.500" outside Dimension)
90-TFBX	23° Angled Face setting blocks
90-TF10	Tapered Setting Blocks 10° half angle
90-TF15	Tapered setting Blocks 15° half angle
90-TF20	Tapered setting Blocks 20° half angle
90-TF30	Tapered setting Blocks 30° half angle
90-TF45	Tapered setting Blocks 45° half angle
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#### **TUBING AND CASING TAPER SETTING BLOCKS**

Code No	Description
90-TF-STR	Straight Blocks
90-TF75T	3/4" Taper Blocks, 8 & 10 Round, 3/4" TPF Buttress, Line Pipe
90-TF-1.0T	1" Taper Blocks, 1" TPF Buttress
90-TF-1.12T	1 1/8" Taper Blocks, 1.125 TPF Connectors
90-TF-1.75T	1 3/4" Taper Blocks, 1.75 TPF Connectors

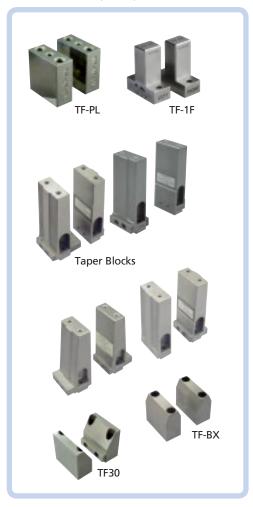
#### **ROTARY SHOULDERED CONNECTOR SETTING BLOCKS**

Code No	Description
90-TF-1.25RSC	1 1/4" Taper Blocks, 1.25 TPF Rotary Shouldered Connectors
90-TF-1.5RSC	1 1/2" Taper Blocks, 1.5 TPF Rotary Shouldered Connectors
90-TF-2.0RSC	2" Taper Blocks, 2.0 TPF Rotary Shouldered Connectors
90-TF-3.0RSC	3" Taper Blocks, 3.0 TPF Rotary Shouldered Connectors

#### **RISER BLOCKS FOR THE TAPER BLOCKS**

Code No	Description
90-TF-RISER1	1.00" Riser Block (Set of 2)
90-TF-RISER2	2.00" Riser Block (Set of 2)
90-TF-RISER3	3.00" Riser Block (Set of 2)

Special taper blocks available on request





## **Groove Diameter and Groove Width Gauges Face Grooves - BX-1000 / BXG-1000 Series**

These gauges adjust to cover all sizes of R, RX, and BX ring grooves. The standard gauge measures groove diameters from 2.6-13" and groove widths from .34-1.5". Optional rails extend the range of diameters from 13-36". The face groove gauges accurately measure the ring groove diameter and width at the critical sealing point of the face groove. Gauge indicators show actual deviation from a preset master dimension. The BX-1000 can be used to measure straight or tapered groove diameters, shallow bores, and hole locations. Contact points included are .188". The BXG-1000 measures widths of straight or tapered grooves and includes .072" contact points.

#### **Features**

- Measures face grooves for a range of diameters
- Replaces traditional GO/NOT GO templates
- Provides accurate measurements at the critical sealing point of the face groove
- Allows use in a manufacturing or field environment due to durable construction
- Requires presetting using a micrometer or Gagemaker's MIC TRAC measurement center (setting dimensions and tolerances for API ring grooves supplied with gauge)



#### **GROOVE DIAMETER AND GROOVE WIDTH GAUGES FACE GROOVES**

Code No	Description	Range (inch)
90-BX1000	Groove Diameter Gauge	Diameters 2.6-13"
90-BXG1000	Groove Width Gauge	Widths 0.34-1.5"
90-BXR24	Optional Rail 24"	Groove Diameters to 23 3/4"
90-BXR30	Optional Rail 30"	Groove Diameters to 29 3/4"
90-BXR36	Optional Rail 36"	Groove Diameters to 35 3/4"
90-TDWIN	Thread Disk for Windows Software	

### **Applications**

**BX-1000** 

Groove Diameter Gauge



**BXG-1000** 

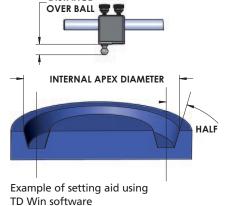
Groove Width Gauge













### **MRP Pitch Diameter & Ovality Gauges**

The MRP series of Pitch diameter gauges measures internal and external pitch diameters of tapered threaded connectors. The gauges use two pivoting thread shoes that rest on the crests of the threads. Variation in diameter is detected by the indicator readout.

The MRP gauges are preset to size before inspecting parts. A variety of setting standards are available. Alternatively the MIC TRAC setting system can be used.







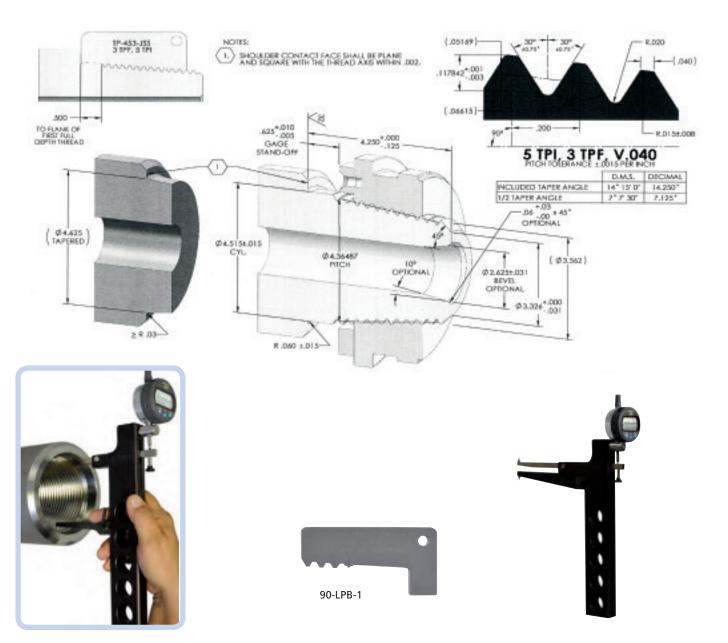
MRP GAUGES		
Code No	Description	Range (inch)
90-MRP1000	Internal / External PD Gauge	1 1/2-4 1/2
90-MRP1500	Internal / External PD Gauge (Solid Frame Style)	1 1/2-4 1/2
90-MRP2001	External PD Gauge with 4 1/4" reach	2 3/8-20
90-MRP20017	External PD Gauge with 7" reach	2 3/8-20
90-MRP200110	External PD Gauge with 10" reach	2 3/8-20
90-MRP2002	Internal PD Gauge with 4 1/4" reach	2 3/8-20
90-MRP2002-7	Internal PD Gauge with 7" reach	2 3/8-20
90-MRP200210	Internal PD Gauge with 10" reach	2 3/8-20
90-MRP2003	Internal / External PD Gauge with 4 1/4" reach	2 3/8-20
90-MRP2003-7	Internal / External PD Gauge with 7" reach	2 3/8-20
90-MRP200310	Internal / External PD Gauge with 10" reach	2 3/8-20
90-MRP2511	External PD Gauge with 4" reach	4 1/2-9 5/8
90-MRP2521	External PD Gauge with 4" reach	4 1/2-13 3/8
90-MRP2512	Internal PD Gauge with 3 3/8" reach	4 1/2-9 5/8
90-MRP2522	Internal PD Gauge with 3 3/8" reach	4 1/2-13 3/8
90-MRP2513	Internal / External PD Gauge with 3 3/8" reach	4 1/2-9 5/8
90-MRP2523	Internal / External PD Gauge with 3 3/8" reach	4 1/2-13 3/8
90-MRP3001	External PD Gauge with 3 3/8" reach	8 5/8-24
90-MRP3002	Internal PD Gauge with 3 3/8" reach	8 5/8-24
90-MRP3003	Internal / External PD Gauge with 3 3/8" reach	8 5/8-24
90-MRP3501	External PD Gauge with 6 1/4" reach	8 5/8-24
90-MRP3502	Internal PD Gauge with 6 1/4" reach	8 5/8-24
90-MRP3503	Internal / External PD Gauge with 6 1/4" reach	8 5/8-24

For a full comprehensive catalogue featuring all the Gagemaker products including many API & Premium gauges not shown here, please contact our sales department.



# **Thread Pitch Diameter Measurement for Rotary Shoulder Threads - Internal**





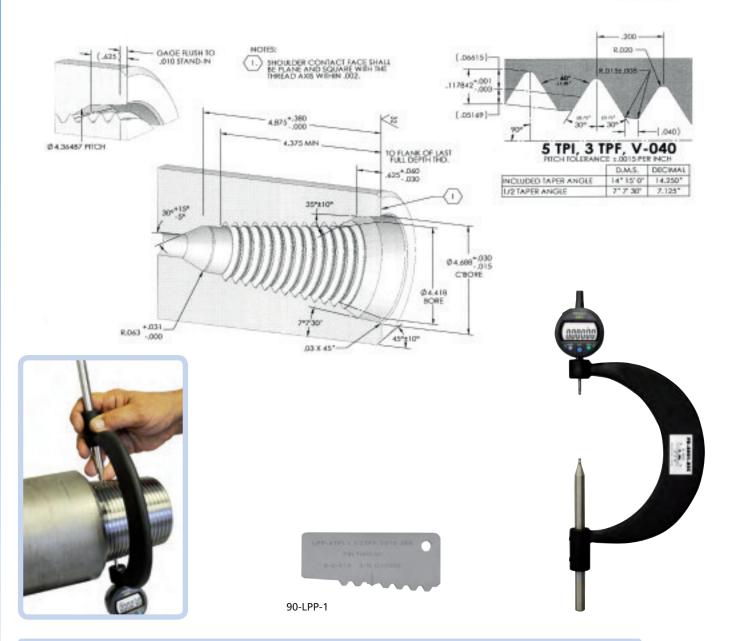
#### THREAD PITCH DIAMETER MEASUREMENT FOR ROTARY SHOULDER THREADS - INTERNAL

Code No	Description
90-IT5104RSC	Box Rotary Shoulder pitch diameter gauge 0-9" w/ Electronic .500" travel digital indicator
90-LPB-1	Box Length Profile template for pitch diameter measurement on rotary shoulder connection. 3TPI-1.25TPF-SL-H90
90-LPB-2	Box Length Profile template for pitch diameter measurement on rotary shoulder connection. 3.5TPI-2TPF-H90
90-LPB-3	Box Length Profile template for pitch diameter measurement on rotary shoulder connection. 3.5TPI-3TPF-H90
90-LPB-4	Box Length Profile template for pitch diameter measurement on rotary shoulder connection. 4TPI-1.50TPF-V076
90-LPB-5	Box Length Profile template for pitch diameter measurement on rotary shoulder connection. 4TPI-2TPF-V038
90-LPB-6	Box Length Profile template for pitch diameter measurement on rotary shoulder connection. 4TPI-2TPF-V050
90-LPB-7	Box Length Profile template for pitch diameter measurement on rotary shoulder connection. 4TPI-3TPF-V038
90-LPB-8	Box Length Profile template for pitch diameter measurement on rotary shoulder connection. 4TPI-3TPF-V050
90-LPB-9	Box Length Profile template for pitch diameter measurement on rotary shoulder connection. 4TPI-3.375TPF-A094
90-LPB-10	Box Length Profile template for pitch diameter measurement on rotary shoulder connection. 5TPI-3TPF-V040
90-LPB-11	Box Length Profile template for pitch diameter measurement on rotary shoulder connection. 6TPI-1.50TPF-V055
90-LPB-12	Box Length Profile template for pitch diameter measurement on rotary shoulder connection. 6TPI-2TPF-V032



### **Thread Pitch Diameter Measurement for Rotary Shoulder Threads - External**





#### THREAD PITCH DIAMETER MEASUREMENT FOR ROTARY SHOULDER THREADS - EXTERNAL

Code No	Description
90-PD8001RSC	Pin Rotary Shoulder pitch diameter gauge 0-6" w/ Electronic .500" travel digital indicator
90-PD8002RSC	Pin Rotary Shoulder pitch diameter gauge 6-12" w/ Electronic .500" travel digital indicator
90-LPP-1	Pin Length Profile template for pitch diameter measurement on rotary shoulder connection. 3TPI-1.25TPF-SL-H90
90-LPP-2	Pin Length Profile template for pitch diameter measurement on rotary shoulder connection. 3.5TPI-2TPF-H90
90-LPP-3	Pin Length Profile template for pitch diameter measurement on rotary shoulder connection. 3.5TPI-3TPF-H90
90-LPP-4	Pin Length Profile template for pitch diameter measurement on rotary shoulder connection. 4TPI-1.50TPF-V076
90-LPP-5	Pin Length Profile template for pitch diameter measurement on rotary shoulder connection. 4TPI-2TPF-V038
90-LPP-6	Pin Length Profile template for pitch diameter measurement on rotary shoulder connection. 4TPI-2TPF-V050
90-LPP-7	Pin Length Profile template for pitch diameter measurement on rotary shoulder connection. 4TPI-3TPF-V038
90-LPP-8	Pin Length Profile template for pitch diameter measurement on rotary shoulder connection. 4TPI-3TPF-V050
90-LPP-9	Pin Length Profile template for pitch diameter measurement on rotary shoulder connection. 4TPI-3.375TPF-A094
90-LPP-10	Pin Length Profile template for pitch diameter measurement on rotary shoulder connection. 5TPI-3TPF-V040
90-LPP-11	Pin Length Profile template for pitch diameter measurement on rotary shoulder connection. 6TPI-1.50TPF-V055
90-LPP-12	Pin Length Profile template for pitch diameter measurement on rotary shoulder connection. 6TPI-2TPF-V032