

GAGEMAKER

*TP Series
Profile Gage*

OPERATION MANUAL



©2015 Gagemaker, LP

Contents

Introduction

Technical Support	7
Product Information and Updates	7

Operating Procedures

Inspecting Parts	8
------------------	---

Care and Maintenance

Maintenance Tips	11
Warranty Information	11

Congratulations! Your decision to purchase a Gagemaker product above all others on the market demonstrates your confidence in our quality and workmanship.

To ensure the high performance and operation of our product, we urge you to use the included reference materials. They contain important information for proper setup and use of the equipment. Also, we recommend that you follow the care and maintenance tips in this manual to keep the equipment working in top condition.

If your questions have not been addressed in our reference materials, contact your local representative or a customer service representative at 713-472-7360.

Introduction

The thread profile gage is primarily used to verify the correct thread form on the end of pipe or a coupling. Thread form is the profile or shape of each thread and it controls how threads mate and make-up properly. Most importantly, verifying thread form is a recommended inspection for API connections.

Profile gages can also be used to perform a visual inspection of a thread for detecting chipped inserts, steps, flat crested threads, stretched threads, wide first threads or rolled over threads.

Gagemaker manufactures profile gages for tapered, as well as, straight threads that can be used to inspect both internal and external threads. These precision gages are made to tolerances of $\pm.0002$ " using EDM technology. Refer to the tables for tapered and straight threads in the Operating Procedures section of this manual for thread profile gage model numbers.

Profile gages do not require setup or zeroing on a setting standard. To check proper form and pitch, place the correct profile gage template into the threads and shine a light behind the profile template. A template that stands too far out of the threads or allows excess light to shine through can be an indication of lead error. Sweeping the profile gage along the helix of the threads helps find burrs or debris.

Technical Support

Phone: 713-472-7360

Hours: Monday – Friday 8AM – 5PM (CST)

Product Information and Updates

Visit our web site at: www.gagemaker.com

Operating Procedures

Inspecting Parts

Materials Needed:

- Thread profile gage
- Part
- Inspection report

Select the proper thread profile gage based on the type of connection (refer to the tables below for tapered and straight threads).

Tapered Threads		
Connection Type	TPI, TPF Thread Form	Gage Model Number
API 8-Round Casing, Tubing & Drill Pipe	8 TPI, 3/4" TPF, 8 Round	TP-RTC-8R
API 10-Round Tubing	10 TPI, 3/4" TPF, 10 Round	TP-RTC-10R
8V API Line Pipe	8 TPI, 3/4" TPF, 8 V Thread	TP-8V
11½ V API Line Pipe	11½ TPI, 3/4" TPF, 11½ V Thread	TP-11-1/2V
API Buttress Casing, Internal, 4½" - 13¾"	5 TPI, 3/4" TPF	TP-5BTC75-INT
API Buttress Casing, External, 4½" - 13¾"	5 TPI, 3/4" TPF	TP-5BTC75-EXT
API Buttress Casing, Internal, 16" - 20"	5 TPI, 1" TPF	TP-5BTC1-INT
API Buttress Casing, External, 16" - 20"	5 TPI, 1" TPF	TP-5BTC1-EXT
2¾" - 3½" Hughes Slim Line H-90	3TPI, 1.25" TPF, 90-V-0.084	TP-3-1.25-84
3½" - 6⅝" Hughes H-90	3.5 TPI, 2" TPF, 90-V-0.050	TP-3.5-2-50
7" - 8⅝" Hughes H-90	3.5 TPI, 3" TPF, 90-V-0.050	TP-3.5-3-50
2¾" - 3½" P.A.C. Connections 2¾" - 4½" American Open Hole	4 TPI, 1.5" TPF, V-0.076	TP-4-1.5-76
6⅝" API Regular 5½" & 6⅝" API Full Hole	4 TPI, 2" TPF, V-0.050	TP-4-2-50
4" API Full Hole, 2⅞" - 5" Hughes Xtra Hole 2¾" - 4½" Hughes Slim Hole 2¾" - 6⅝" Internal Flush API Numbered Connections #23 - #50	4 TPI, 2" TPF, V-0.038R	TP-4-2-38
API Numbered Connectors #56 - #77	4 TPI, 3" TPF, V-0.038R	TP-4-3-38
5½", 7⅝", & 8⅝" API Regular	4 TPI, 3" TPF, V-0.050	TP-4-3-50
2¾" - 4½" API Regular 2⅞", 3½", 4½" API Full Hole	5 TPI, 3" TPF, V-0.040	TP-5-3-40
API Numbered Connections #10, #12, #13, #16 M.T. (Macaroni Tubing)	6 TPI, 1.5" TPF, V-0.055	TP-6-1.5-55
2¾" & 2⅞" Hughes External Flush	6 TPI, 2" TPF, V-0.032	TP-6-2-32
90° & 60° Threads, Tool Grinding & Setting Gage	Tool Grinding & Setting Gage	TP-9060LS
NPT Threads	8 TPI, 3/4" TPF	TP-NPT-8
NPT Threads	11.5 TPI, 3/4" TPF	TP-NPT-11-1/2
NPT Threads	14 TPI, 3/4" TPF	TP-NPT-14

Inspecting Parts (continued)

Straight Threads	
Gage Description	Gage Model Number
Internal UN series thread gage	TP-UNVI-__P*
External UN series thread gage	TP-UNVE-__P*
Internal/external general purpose Acme thread profile gage	TP-GPA-__P*
Internal/external Stub Acme thread profile gage	TP-SA-__P*
Modified 1 Stub Acme thread profile gage	TP-SAM1-__P*
Modified 2 Stub Acme thread profile gage	TP-SAM2-__P*
Internal ISO metric series thread profile gage	TP-MI-__P*
External ISO metric series thread profile gage	TP-ME-__P*
Internal/external 7° X 45° Buttress thread profile gage	TP-745-__P*

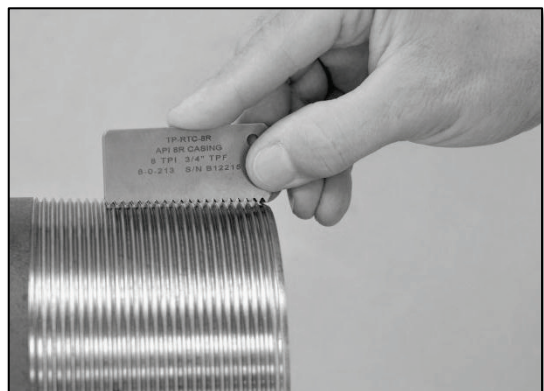
*Order Example: TP-UNVI-2P

Inspecting parts using the thread profile gages does not require setup or zeroing the gage on a setting standard.

1. Be sure that the profile gage is free from debris or is not damaged.



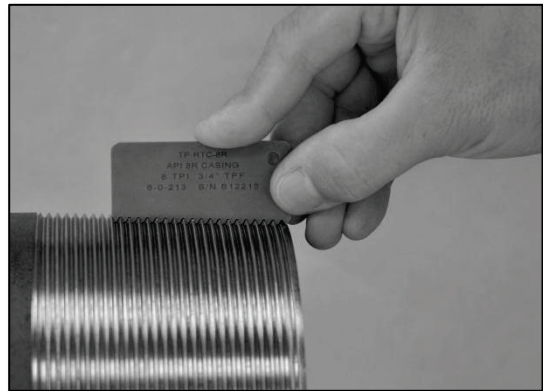
2. Place the profile gage into the thread form (in full depth threads).



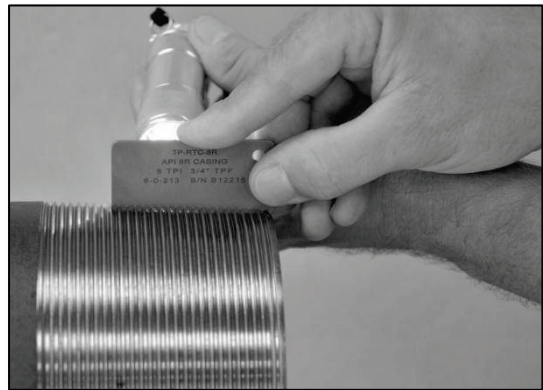
Inspecting Parts (continued)

- Pivot the profile gage in the threads to achieve the best fit.
- Using your index finger, apply pressure to the front of the gage.

Apply just enough pressure to maintain the gage's contact with the thread flanks.

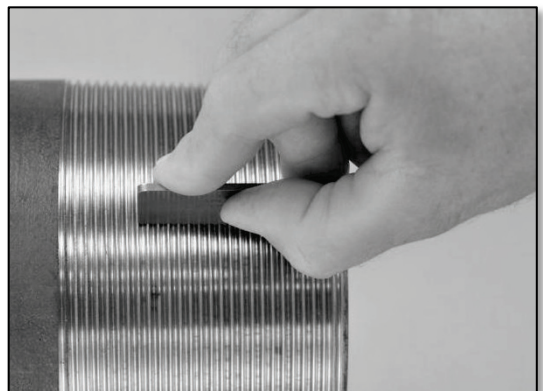


- Shine a light behind the profile gage and note the fit of the mating thread forms. Repeat on remaining threads.
- Record findings on an inspection report.



- Slide the profile gage counter clockwise around the connection and remove any debris. Repeat on remaining threads.

If you encounter a burr, slide the profile gage in the opposite direction, to avoid grinding the burr into the thread.



Care and Maintenance

Maintenance Tips

- Keep all unprotected metal surfaces coated with light oil.
- Avoid dropping the gage or subjecting it to any vibration or impact.
- Keep the gage dry and away from any machine coolant spray.

Warranty Information

Gagemaker warrants its products to be free from defects in material and workmanship under normal operating conditions for 12 months from the date of shipment. This warranty is limited to repairing, or at Gagemaker's option, replacing any product which is proven to have been defective at the time it was shipped and/or suffered damage during shipping; provided buyer has given Gagemaker written notice of any such claimed defect within 15 days of receipt. Any defective product must be properly packed and shipped to the Gagemaker factory in Pasadena, Texas USA. This warranty applies to all products when used in a normal industrial environment. Any unauthorized tampering, misuse or neglect will make this warranty null and void. Under no circumstances will Gagemaker or any affiliate have any liabilities for loss or for any indirect or consequential damages. The foregoing warranties are in lieu of all other warranties expressed or implied, including but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

Products Requiring Repair or Calibration Return Process

1. Prior to sending any products to Gagemaker, please call 713-472-7360 and request a Returned Material Authorization (RMA) number from Sales.
2. Include a Purchase Order or work instructions with the returned product.
3. Return to: Gagemaker LP
712 East Southmore Ave.
Pasadena, TX 77502-110

GAGEMAKER

Quality Thread Inspection Equipment

Gagemaker, LP, P.O. Box 87709, Houston, Texas 77287-7709

712 East Southmore Ave., Pasadena, Texas 77502

Phone: 713-472-7360

Fax: 713-472-7241

Web site: www.gagemaker.com