A complete range of gauges and reamers for I.S. Machine mould production, inspection and repair





#### INSIST ON THE BEST GAUGES - INSIST ON PENICO

For over 30 years Penico has been dedicated to providi ng high quality gauging solutions for the glass container industry in the UK and around the world. Now the global market leader in the design and manufacture of the finest precision gauges, we export to customers in over 50 countries.

At Penico we have on in-depth understanding of the challenges faced by mould makers and repairers and take pride in the relationship s we forge with our customers, working closely with them to create solution s to individual applications. We also previde maximum support to both mould repair shops and manufacturers.

Penico's highly trained and motivated staff are at the heart of our opera tions and unde rpin ou r success in the mar ketp lace. We actively encourage and develop their skills and fo ster job satisfaction through continuous professional development.

With our strong commitment to sustained improvement and investment in state-of-the-art manufacturing fa ci liti es, we consi stent ly respond to the demands of the market, enabling our clients to reduce costs the rough straightforward mould interchangeability, longer mould life and improved overall efficiency of Individual Section (1S) Machines.

#### PENICO'S COMPREHENSIVE RANGE OF MOULD GAUGES INCLUDES:

### DIGITAL NECKRING CALIBRATOR and BLANK/BLOWMOULD PROFILE FLUSH PIN GAUGES



Unique to Penico, these flagship gauges give highly accurate digital readout of doveta il width. Convenient to use and very robust, these gauges offer faster setup, improved manufacturing contral and consistent doveta il sizing. Your machinists no longer have to estimate stock removal and can have total confidence in the gauge calibration status. **See page 6.** 

#### BLANKMOULD and BLOWMOULD DOVETAIL PROFILE FLUSH PIN GAUGES



Used to inspect the shape and size of the dovetail cutout. They gauge only the two surfaces indicated by the bold contact points in the diagrams and have a fixed and moveable member which is held in proper engagement with the cutout by spring tension. The surface end of the gauge in which the moveable member slid es is divided into two steps and the cutout is correct when the foce of the moveable member is flush with either the step or between the two steps. **See page 7.** 

#### BLANKMOULD and BLOWMOULD PLUG GAUGES



**Blankmould gauge** - used to inspect the bottom opening of the dovetail cutout in the blankmould. It consists of Go and No Go ends as indicated.

**Blowmould gauge** - used to inspect the bottom opening of the dovetail cutout. The diameter is correct when the Go end o nly will enter the bottom opening. **See page 8.** 

#### BOTTOMPLATE and NECKRING PINCH DIAMETER GAUGES



Used to inspect the nip diameters below the neckring and bottomplate dovetails. The gauges have a Go and No Go step and the diameters of the neckring and bottomplate dovetail are correct when the Go side only passes through without being forced. **See page 9.** 

#### **NECKRING and BOTTOMPLATE DOVETAIL PROFILE GAUGES**



**Neckring gauges** - used to inspect the shape and size of the neckring dovetai I. They gauge only the two surfaces as indicated by the bold contact points and consist of Go and No Go sides. The dovetail is the co rrect size when it can pass thr ough the Go side on ly, without being forced.

**Bottomplate gauges** - used to inspect the shape and size of the bottom p late doveta il. They gauge only the two surfaces as ind icated by the bold contact points and consist of Go and No Go sides. **See pages 10 and 11.** 

#### **BLANKMOULD REAMERS**



The range includes blank reamers and mould reamers for neckring and bottomplate fittings. These are hand operated tools used for mi nor ad ju stm ents to rep a ired moulds and eliminate the need for expensive m a chining costs. **See pages 12 and 13**.

#### FITTER GAUGES



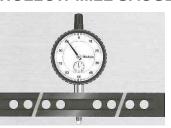
Used to inspect the b la nkmou ld cutout fo r the neckring fitting. Preci se dim ension a i sizes vary according to which standard is required and whether a Go and No Go fa cility is needed. **See page 14.** 

#### BAFFLE AND BAFFLE RECESS GAUGES



Used to check that funnels and baffles match correctly with blankmoulds. The y are available in male and fem a letypes. **See page 15.** 

#### **HOLLOW MILL GAUGE**



Used to measure the hol low mili on the mould joi nt foce. **See page 16.** 

#### PLUNGER DIAMETER AND STRAIGHTNESS INSPECTION GAUGES





**Plunger diameter gauges** - used to inspect plunger diameter. They can be supplied as standalone gauges or as a jig, complete with convenient baseplate. **See page 17.** 

**Plunger straightness gauges** - used to in spect plunger str aig htne ss. They are supp lied as a jig, complete with basep late and a djustable dial gauge. **See page 18.** 

#### • SPECIAL GAUGE MANUFACTURING SERVICE

Penico offers a spec ia I gauge service to su it specific custom er a ppl ication s.

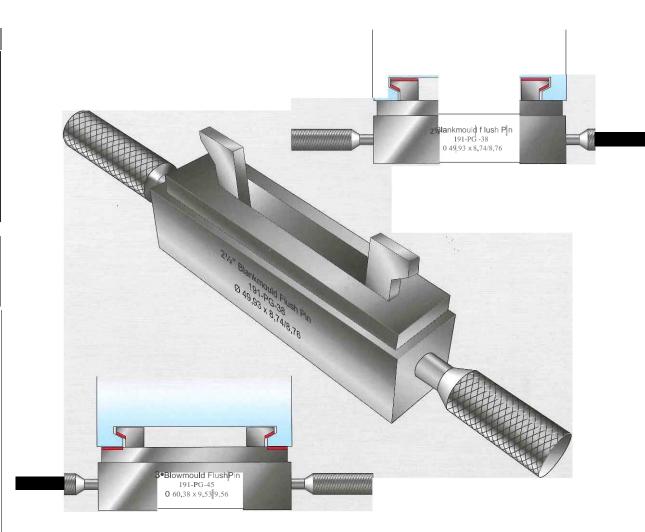
#### • GAUGE CALIBRATION

Gauge calibra tion to UKAS intern ationa I sta n dar ds i s offe red a s a support to customers who wish to maintain the highest sta nda rd s of g aug in g a ccura cy.

# DIGITAL NECKRING CALIBRATOR and BLANK/BLOWMOULD PROFILE FLUSH PIN GAUGES



## BLANKMOULD and BLOWMOULD DOVETAIL PROFILE FLUSH PIN GAUGES



## 15 BLANKMOULD DOVETAIL PROFILE FLU5H PIN GAUGE Dovetail Height = 8.74/8.76

GAUGE NUMBER	SIZE (ins)	PINCH DIAMETER (mm)
191-PG -37	2 <sup>1</sup> /a	40.41/ 40.44
191-PG -38	2½	49.93/ 49.96
191-PG - 102	23/4	56.28 / 56.31
191-PG-143	3	62.63 / 62.66
191 -PG -39	3½	75.33 / 75.36
19 1-PG -95	4	88.03 / 88.06
191-PG -139	41⁄4	94.38/ 94.4 1
19 1-PG -40	4½	100.73/ 100.76
191-PG-41	5	113.43/ 113.46
191-PG -172	51/4	119.78/ 119.81
191-PG-42	5%	129.31/ 129.34
191-PG-43	61/4	145.18/ 145.2 1

## 15 BLOWMOULD DOVETAIL PROFILE FLU5H PIN GAUGE Dovetai Heigh = 9.53/9.56

GAUGE	SIZE	PINCH DIAMETER
NUMBER	(ins)	(mm)
191-PG-44	2	34.98/35.02
191-PG-103	23/4	54.03/ 54.08
191-PG-45	3	60.38/60.43
191-PG-119	3½	73.08/73.13
191-PG -46	4	8 5.78/85.83
191-PG-176	41/2	98.48/ 98.53
191-PG-47	5	111.18/111.23
191-PG-48	6	136.58/ 136.63
191-PG-86	7	161.98/ 162.03
		_

### **BLANKMOULD** and **BLOWMOULD PLUG GAUGES**

### **BOTTOMPLATE** and **NECKRING** PINCH DIAMETER GAUGES





<sup>•</sup> Larger plug gauges incorporate recesses and lightening holes

### IS BLANKMOULD PINCH DIAMETER GAUGE

PINCH DIAMETER GAUGE			
GAUGE NUMBER	SIZE (in s)	PINCH DIAMETER (mm)	
191-PG-18	21/s	40.41/40.44	
191-PG-19	2½	49.93/49.96	
191-PG-104	23/4	56.28/56.31	
191 - PG- 144	3	6 2.63/6 2.66	
191-PG-20	31/2	75.33/75.36	
191-PG-96	4	88.03/88.06	
191-PG-140	41/4	94.38/94.41	
191-PG-21	4½	100.73/ 100 .76	
191-PG-22	5	113.43/113.46	
191-PG-174	51/4	119.78/119.81	
191-PG-23	5%	129.31/129.34	
191 -PG-24	$6^{1/4}$	145 18/145 21	

## IS BLOWMOULD PINCH DIAMETER GAUGE

GAUGE NUMBER	SIZE (ins)	PINCH DIAMEIER (mm)
191-PG-25	2	34.98/35.02
191-PG-105	23/4	54.03/ 54.08
191-PG-26	3	60.38/60.43
191-PG-118	31/2	73.08/73.13
191-PG-27	4	85. 78/85.83
19 1 -PG- 1 79	4½	98.48/98.53
191-PG-28	5	111.18 / 111.23
19 1 -PG-29	6	136 .58/ 136.6 3
191-PG-88	7	161 .98 / 162.03

#### IS NECKRING PINCH DIAMETER GAUGE

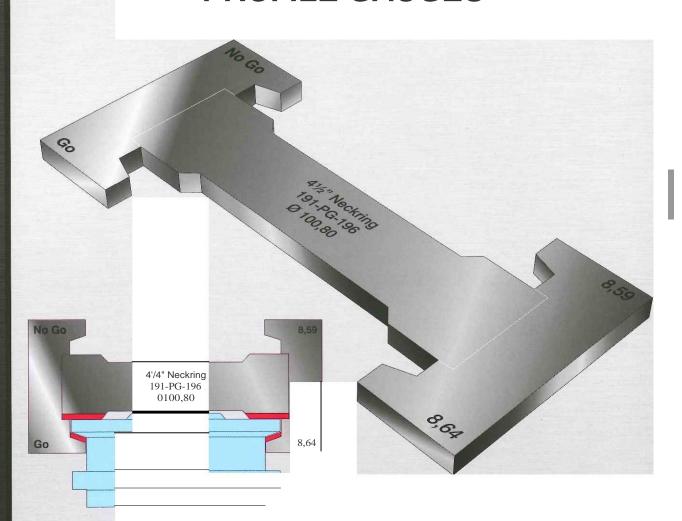
GAUGE NUMBER	SIZE (ins)	PINCH DIAMETER (mm)
191 -PG-11	21/s	40.47/40.49
191 -PG-12	2½	49 .99 / 50 .0 1
191-PG-98	23/4	56.3 4/ 56.36
191-PG-145	3	62.69 / 62.71
191-PG-13	31/2	75.39/75.41
191-PG-93	4	88.09/88.11
191-PG-137	41/4	94.44/94.46
191- PG-l 4	4½	100.79/100.81
191-PG-15	5	1 13.4 9/ 1 1 3.5 2
191-PG-173	51/4	119.84/119.87
191-PG-16	5%	12 9.36/129.39
191 -PG-1 7	61/4	145 .24 / 145 .27

## IS BOTTOMPLATE PINCH DIAMETER GAUGE

	GAUGE	SIZE	PINCH DIAMETER
	NUMBER	(ins)	(mm )
	191-PG-1	2	34.92/ 34.95
	19 1- PG-l 00	23/4	53.97/54.00
	19 1 - PG-2	3	60.32 /60.35
	19 1- PG-116	3½	73.02/ 73.05
	191-PG-3	4	85.7 2/85 .75
	1 91-PG - 1 78	4½	98 .42/98 .45
	191 -PG-4	5	111 .1 2/ 111.15
	191 -PG-5	6	136 .5 2/ 136 .55
	191-PG-92	7	161.92/161.95
ĺ	·	'	

## NECKRING DOVETAIL PROFILE GAUGES

## BOTTOMPLATE DOVETAIL PROFILE GAUGES





## 15 NECKRING DOVETAIL PROFILE GAUGE Dovetail Height = 8.59/8.64

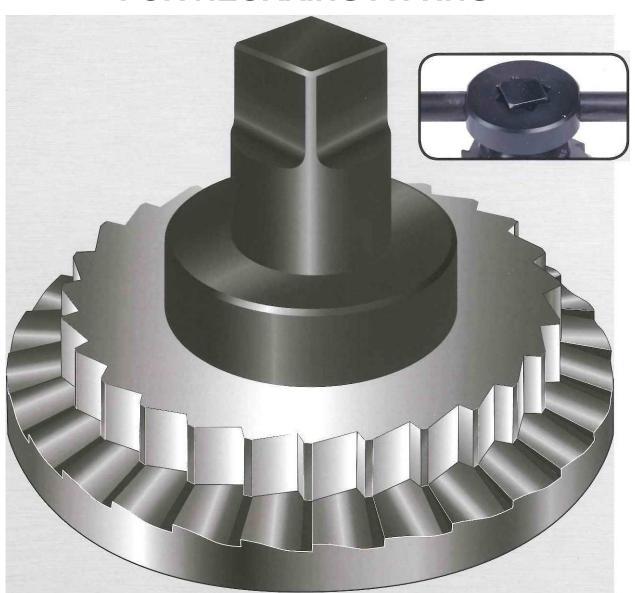
GAUGE NUMBER	SIZE (ins)	PINCH DIAMETER (mm)
191 -PG-1 89	21/a	40.47/40.49
191-PG-1 90	21/2	49.99/50.01
191-PG-191	23/4	56.34/56.36
191-PG-192	3	62.69/62.71
191-PG-193	3½	75.39/75.41
191-PG-194	4	88.09/ 88.11
191-PG-195	41/4	94.44/94.46
1 91 -PG-196	4½	100 .79/100.81
191-PG- 1 97	5	113.49/113.52
191-PG-198	51/4	11 9.8 4/ 11 9.8 7
191-PG-199	5%	129.36/129.39
191-PG-200	61/4	145.24/145.27

## 15 BOTTOMPLATE DOVETAIL PROFILE GAUGE Dovetail Height = 9.63/ 9.68

GAUGE NUMBER	SIZE (ins)	PINCH DIAMETER (mm)
191-PG-204	2	34.92/34.95
191-PG-228	2½	47.62/47.65
191-PG-205	23/4	53.97/ 54.00
191-PG-206	3	60.32/ 60.35
1 91-PG-207	3½	73.02/ 73.05
191-PG-208	4	85.7 2/85 .75
1 91-PG-209	4½	98 .42/ 98 .45
1 91-PG-21 O	5	111.12/111.15
191-PG-211	6	136.5 2/ 1 36.55
191-PG-212	7	1 61. 9 2/ 161.95

<sup>•</sup> Please note - variations to the above sizes are ava ilable

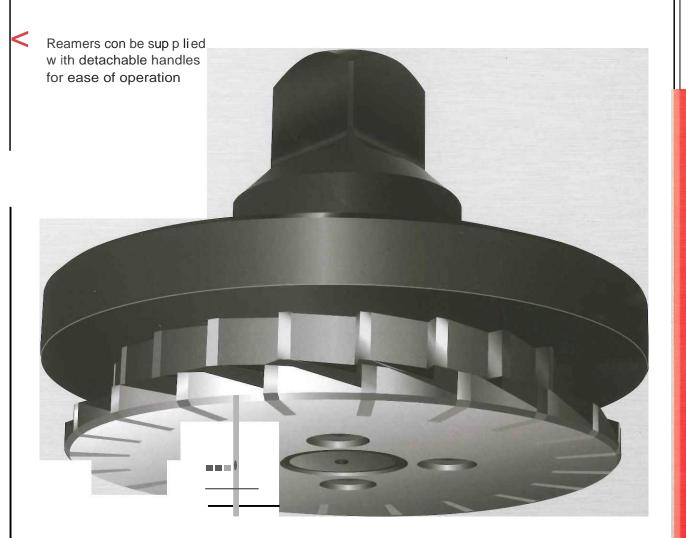
## BLANKMOULD REAMER FOR NECKRING FITTING



BLANKMOULD DOVETAIL REAMER Dovetail Height = 8.74/8.76			
GAUGE NUMBER	SIZE (ins)	PINCH DIAMETER (mm)	
BR-PG-I	21/a	40.41/ 40.44	
BR-PG-2	2½	49.93/49.96	
BR-PG-3	23/4	56.28/56.31	
BR-PG-4	3	62.63/62.66	
BR-PG-5	3½	75.33/75.36	
BR-PG-6	4	88.03/88.06	
BR-PG-7	41⁄4	94.38/94.41	
BR-PG -8	4½	100.73/ 100.76	
BR-PG-9	5	113.43/113.46	
BR-PG-1 O	51/4	119.78/119.81	
BR-PG- 11	55/a	129.31/129.34	
BR-PG-12	61/4	145.18/145.21	

#### Please note - variations to the above sizes are available

### BLOWMOULD REAMER FOR BOTTOMPLATE FITTING



## BLOWMOULD DOVETAIL REAMER Dovetail Height = 9.53/9.56

GAUGE NUMBER	SIZE (ins)	PINCH DIAMETER (mm)
MR-PG-1	2	34.98/35.02
MR-PG-2	23/4	54.03 / 54.08
MR-PG-3	3	60.38 / 60.43
MR-PG-4	3½	73.08/ 73.13
MR-PG-5	4	85. 78 / 85.83
MR-PG-6	4½	98.48 / 98.53
MR-PG-7	5	111.18/ 111.23
MR-PG-8	6	136.58/ 136.63
MR-PG-9	7	161.98/ 162.03

### FITTER GAUGES



## FITTER GAUGES Go=S.74 NoGo=S.76

GAUGE NUMBER	GAUGE NUMBER	SIZE (ins)
FG-PG-1-G (Go)	FG-PG-1-NG (NoGo)	21/a
FG -PG -2 -G (Go)	FG-PG-2-NG (NoGo)	2½
FG-PG-3-G (Go)	FG-PG-3-NG (NoGo)	23/4
FG-PG-11-G (Go)	FG-PG-11-NG (NoGo)	3
FG-PG-4-G (Go)	FG-PG-4-NG (NoGo)	3½
FG-PG-5-G (Go)	FG -PG -5-N G (N oGo)	4
FG-PG-12-G (Go)	FG-PG- 12-NG (N oGo)	41/4
FG-PG-7-G (Go)	FG-PG-7-NG (NoGo)	5
FG-PG-8-G (Go)	FG-PG-8-NG (NoGo))	51/4
FG-PG-9-G (Go)	FG-PG-9-NG (NoGo)	5%
FG-PG- 10-G (Go)	FG-PG-10-NG (NoGo)	61⁄4

### BAFFLE AND BAFFLE RECESS GAUGES



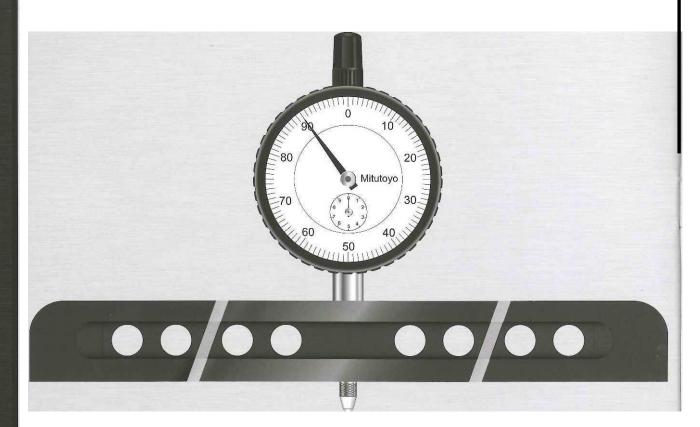
#### **BAFFLE GAUGES**

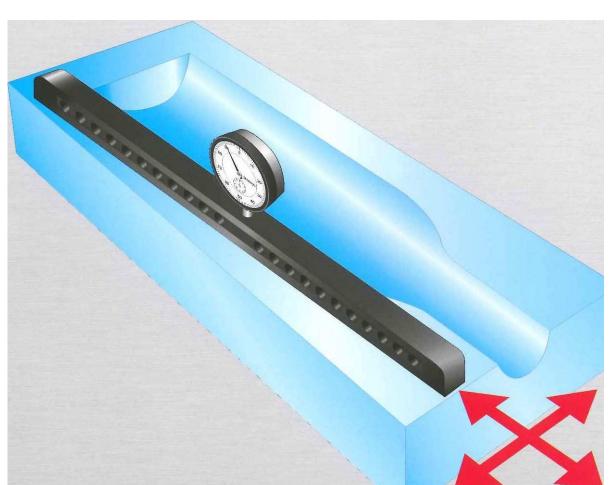
GAUGE NUMBER	SIZE (mm)
BG-PG-1	46.00 / 46.05
BG-PG-2	53.95/ 54.00
BG-PG-3	58. 70/ 58.75
BG-PG-4	65.05/ 65.10
BG-PG-5	77.75/ 77.80
BG-PG-6	85.70/85.75
BG-PG-7	90.4 5/90.50
BG-PG-8	I 01.57/ 101.62
BG-PG-9	120.62 / 120.67

#### **BAFFLE RECESS GAUGES**

GAUGE NUMBER	SIZE (mm)
BRG-PG-1	46 .13/ 46.18
BRG-PG-2	54.08/ 54.13
BRG-PG-3	58.83/ 58.88
BRG-PG-4	65.18 / 65.23
BRG -PG -5	77.88/ 77.93
BRG -PG - 6	85.83 / 8 5.88
BRG-PG - 7	90.58 / 90.63
BRG-PG-8	I 0 1.70/ 101.75
BRG-PG-9	120. 75/ 120.80

### HOLLOW MILL GAUGE





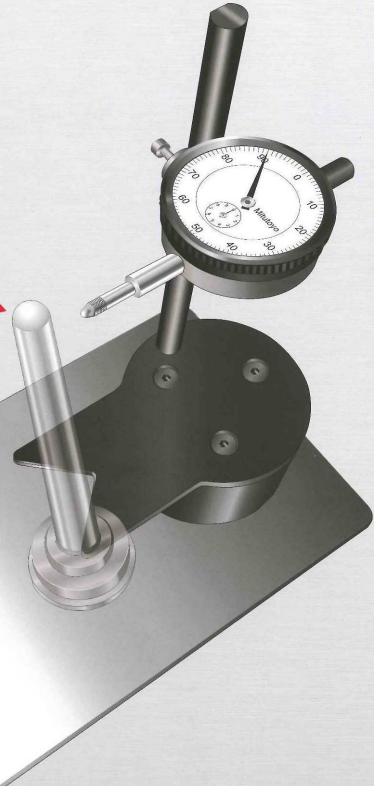
## PLUNGER DIAMETER INSPECTION GAUGE



## PLUNGER STRAIGHTNESS GAUGE









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