

## AIR GAGE ORDER CODE CHECKING . . .

**QUICK REFERENCE GUIDE** --see Western Gage's Dimensional Air Gage Buyer's Guide for complete information on air gage members

### SAMPLE AIR GAGE PART NUMBERS

**APT - 1 2 - C - .5005 / .5005**

member type \_\_\_\_\_  
 series spec. \_\_\_\_\_  
 clearance spec. \_\_\_\_\_

min / max size \_\_\_\_\_  
 material \_\_\_\_\_

*( air probe, thru, Spec 12, chrome, size )*

**APB - 6 4 - S - .2495 - XLC - 3.00**

member type \_\_\_\_\_  
 series spec. \_\_\_\_\_  
 clearance spec. \_\_\_\_\_

extra long \_\_\_\_\_  
 min / max size \_\_\_\_\_  
 material \_\_\_\_\_

*( air probe, blind, Spec 64, steel, size, extra long )*

**ARS - 1 2 - C - .5005 / .5005**

member type \_\_\_\_\_  
 series spec. \_\_\_\_\_  
 clearance spec. \_\_\_\_\_

min / max size \_\_\_\_\_  
 material \_\_\_\_\_

*( air ring, shoulder, Spec 12, chrome, size )*

**ARC - 6 4 - C - .2495-3J**

member type \_\_\_\_\_  
 series spec. \_\_\_\_\_  
 clearance spec. \_\_\_\_\_

3 jets \_\_\_\_\_  
 normal size \_\_\_\_\_  
 material \_\_\_\_\_

*( air ring, center, Spec 64, chrome, size, 3 jet )*

### AIR PROBE THREADS SERIES 10, 40 & 50

| Air Gage Size<br>Above-Incl. | Dash<br>No. | Thread<br>Size |     |
|------------------------------|-------------|----------------|-----|
| .059-.120                    | -3          | .10-32         | UNF |
| .120-.300                    | -4          | .25-28         | UNF |
| .300-.485                    | -3          | .10-32         | UNF |
| .485-.860                    | -4          | .25-28         | UNF |
| .860-UP                      | -8          | .50-20         | UNF |

*For handles, hoses & fittings ... see Accessories -- page 10*

### CHECKLIST FOR ORDERING AIR PROBES & AIR RING GAGES

- (1) **Gaging member type . . .** order code  
 Air Probe, thru-hole .....APT  
 Air Probe, blind ..... APB  
 Air Probe, super blind ..... APS  
 Air Ring, center jet .....ARC  
 Air Ring, shoulder .....ARS  
 Air Ring, extra close ..... ARX
  
- (2) **Series specification . . .** Select the series listing the readout type to be used from page 4, then complete the gaging member specification by changing the last digit of the series number to show the clearance class. See the Buyer's Guide for additional information on selecting clearance specs. Equivalent specs for Mahr-Federal Products gages are given on page 4.
  
- (3) **Material . . .** order code  
 Steel ..... S  
 Chrome ..... C  
 Carbide ..... W  
 D-2 Premium Tool Steel ..... V
  
- (4) **Size or sizes of setting masters . . .**  
 Gaging members for Series 10 to 50 readouts require that both minimum and maximum setting master sizes be specified. Series 60 thru 80 members require only one size.
  
- (5) **Special requirements . . .**  
 Modifications required for the application such as:  
  

**Three Jets** - add suffix "-3J" to order code.  
 (Two jet members are furnished unless otherwise specified)  
  
**Extra length** - add suffix "-XLC" and the dimension required from jet to handle [Dim "C"]. (Extra length is required for small air probes to gage deep holes.)  
  
**Other Specials** - for modification to standard blanks not requiring a custom drawing -- add suffix "-SP" and specify modifications in remarks field.
  
- (6) **Special marking . . .**  
 Gaging member sizes are marked on all members. Customer tool numbers will be marked when requested. Numbers with more than ten characters are subject to additional charge.

# SETTING MASTER ORDER CODES & PRICING NOTES . . .

## CHECKLIST for ORDERING SETTING MASTERS

- (1) **Specify member type . . .** order code

|                            |     |
|----------------------------|-----|
| Ring Gage, Master          | RGM |
| Ring Gage, Go              | RGG |
| Ring Gage, NoGo            | RGN |
|                            |     |
| Plug Gage, Master          | PGM |
| Plug Gage, Go              | PGG |
| Plug Gage, NoGo            | PGN |
| Plug Gage, Go/NoGo set     | PGU |
|                            |     |
| Set Disc, (A.G.D. style 3) | SDS |
| Set Disc, (A.G.D. style 1) | SDL |
- (2) **Specify class tolerance . . .**  
Select class tolerance Z thru XXX (see price table.) Bilaterally toleranced master gages are recommended for air gage applications.
- (3) **Material . . .** order code

|               |   |
|---------------|---|
| Steel .....   | S |
| Chrome .....  | C |
| Carbide ..... | W |
- (4) **Specify size(s) of setting master . . .**  
Sizes are assumed to be in inches unless followed by "mm" (millimeters) ... *Careful checking of required size can avoid expensive mistakes.*
- (5) **Select handle type** **(Plug gages only)**

|                         |     |
|-------------------------|-----|
| Single end handle.....  | SEH |
| Double end handle ..... | DEH |
| Member only .....       | M/O |
- (6) **Specify marking . . .**  
Size and class tolerance are marked on all master gages. Customer tool numbers up to ten characters will be marked at no charge.

## SAMPLE MASTER GAGE PART NUMBERS

**R G M - X X - S - . 2 4 9 5**

member type      class tolerance      size      material

**P G N - X - C - . 5 0 0 5 / . 5 0 0 5 - D E H**

member type      class tolerance      double end handle      min. / max size      material

## (1) MIN - MAX MASTER SETS . . .

Quantity discounts apply only to gages of the exact same size.

## (2) CALIBRATION CERTIFICATES . . .

Prices shown include a certificate of calibration showing the actual size measurements obtained by Western's ISO/IEC 17025:2005 accredited laboratory technicians in our temperature-controlled gage lab, using NIST traceable standards per ANS/NCSL Z540-1-1994.

## (3) MASTER GAGES, GO & NO-GO GAGES

### A.G.D class tolerances . . .

Western's Master gages are finish lapped with the A.G.D. class tolerances split bilaterally. e.g. A master gage with the A.G.D. class tolerance listed as .000020" will be finished to the size specified  $\pm .000010$ ". Unless explicitly specified as Go and No-Go gages when ordered, ring and plug gages are finished to bilateral gage tolerances. GO & NO-GO gages are finished with the A.G.D. standard tolerances taken unilaterally into the tolerance zone for the work piece. Price schedules for unilateral toleranced gages are the same as those for master gages of the same size and class.

## TOLERANCE CONVENTIONS

|  |                            |
|--|----------------------------|
| <b>Master gages</b><br>(rings, plugs or set discs) | Bilateral split tolerance  |
| <b>Go ring gages</b> (max size)                    | Unilateral minus tolerance |
| <b>NoGo ring gages</b> (min size)                  | Unilateral plus tolerance  |
| <b>Go plug gages</b> (min size)                    | Unilateral plus tolerance  |
| <b>NoGo plug gages</b> (max size)                  | Unilateral minus tolerance |

## REPAIR & CALIBRATION SERVICES

- RE-CALIBRATION OF Plain Ring gages,**  
Plug gages & Set discs

| <u>Size (above including)</u><br>inch/(mm) | <u>per member</u> |
|--|-------------------|
| <b>.040-.060</b>                           | (1.02-1.52)       |
| <b>.060-.123</b>                           | (1.52-3.12)       |
| <b>.123-2.010</b>                          | (3.12-51.05)      |
| <b>2.010-4.760</b>                         | (51.05-120.90)    |
| <b>4.760-6.260</b>                         | (120.90-159.00)   |
| <b>6.260-9.010</b>                         | (159.00-228.85)   |

Above prices apply to class tolerances **Z** through **XX**, add 75% to the above prices for **XXX** members  
(\$85.00 minimum repair / calibration charge per order)

- REBUILDING OF SETTING MASTERS . . .**

Setting masters -- AGD standard ring gages, plug gages and setting discs will be rebuilt or replaced at 95% of the new chrome gage cost after evaluation. Inspection fee waived if approved on original PO.

- RE-SIZING OF STEEL MASTERS . . .**

Re-sizing of ring gages upward or plug gages downward:  
0.002 max. stock removal.....75% of new steel \$  
0.02 max. stock removal.....85% of new steel \$

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## ORDERING INFORMATION . . .

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### TERMS OF PAYMENT

Payment terms are net 30 from invoice date and subject to credit approval. All international orders must be prepaid in U.S. dollars via wire transfer or credit card.

### DELIVERY TERMS

F.O.B. Camarillo, Ca. Customer is responsible for risk of loss during transit.

### MINIMUM ORDER

The minimum purchase per order is \$85.00 for all standard catalog products.

### RESTOCKING CHARGE

All sales are final. However, under certain conditions, we may allow the customer to return standard products subject to a 15% restocking charge. Custom finished air gage members and setting master are non-returnable.

### CANCELLATIONS

Cancellations will be subject to applicable material and labor charges for work in progress as determined by Western Gage.

### LIMITED WARRANTY . . .

Western Gage Corporation backs its gaging products to perform as stated for a period of 12 months from the time of shipment. Normal wear, user maltreatment such as contaminated air supply, voltage surges, and physical damage are exceptions to this warranty. Repairs or adjustments, will be done, if necessary, at no charge provided the equipment is delivered to Western Gage's Camarillo facility at customer's expense. No liability for consequential damages or costs other than repair or replacement of defective components is expressed or implied.

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## INTERCHANGEABILITY DATA . . .

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### FOR DUAL MASTER SYSTEMS . . .

#### SERIES 10 READOUTS

- Western Gage Corporation
- Edmunds Gage
- Moore Products
- Air Gage Products
- Sheffield A - E columns
- Other adjustable type gages & adjustable air-electronic columns

#### SERIES 40 READOUTS

- Sheffield flow meter (glass tube) columns (air gage members with two Ø.078" nozzles). Series 40 members are not available in sizes below .323".

#### SERIES 50 READOUTS

- Sheffield flow meter columns used with small nozzle gaging members. These members require the use of fractional amplification scales:

| <u>Jet size</u> | <u>Scale correction</u> |
|-----------------|-------------------------|
| 0.078           | full amplification      |
| 0.047           | 3/4 amplification       |
| 0.031           | 1/2 amplification       |
| 0.023           | 3/8 amplification       |

### FOR SINGLE MASTER SYSTEMS . . .

#### SERIES 63 READOUTS

Mahr-Federal Dimensionair D-5000, D-8000 / EAG-32XXX  
Scale  $\pm .00075"$  Tool Code 20

#### SERIES 64 READOUTS

Mahr-Federal Dimensionair D-2500, D-4000 / EAG-31XXX  
Scale  $\pm .0015"$  Tool Code 50

#### SERIES 71 READOUTS

Mahr-Federal Dimensionair D-20000, D-32000 / EAG-34XXX  
Scale  $\pm .00015"$  Tool Code 5

#### SERIES 72 READOUTS

Mahr-Federal Dimensionair D-10000, D-16000 / EAG-33XXX  
Scale  $\pm .0003"$  Tool Code 10

#### SERIES 85 READOUTS

Mahr-Federal Dimensionair D-1250 / EAG-30XXX  
Scale  $\pm .003"$  Tool Code 100

#### SERIES 22 TOOLING

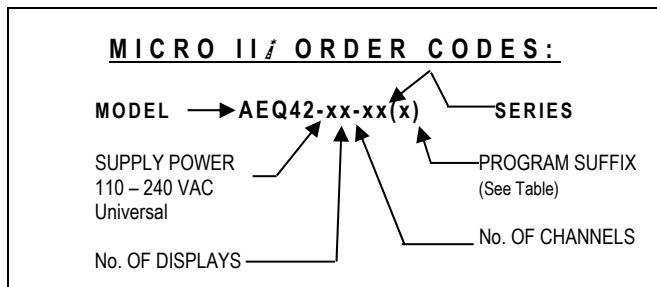
Mahr-Federal Universal Dimensionair

# AIR GAGE READOUTS . . .

## MICRO *II* DIGITAL READOUTS

### MODEL AEQ42. *Micro II* Digital Air Gage Readout

Basic Model AEQ 42 with single input circuit, one seven digit backlit LCD display 81 segment bar graph, high - low limit markers, RS-232 & USB serial data port, process control outputs, CE certified, and power cord.



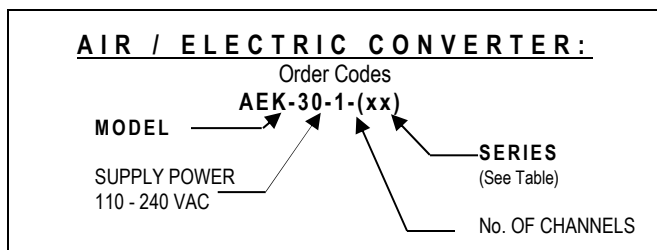
### COMMON CONFIGURATIONS

| WGC P/N         | DESCRIPTION                                 |
|-----------------|---|
| AEQ-42-11-XX    | Single Channel, Single Display .....        |
| AEQ-42-12M-XX   | Dual Channel (A-B Display) .....            |
| AEQ-42-22-XX    | Dual Channel (A & B Displays) .....         |
| AEQ-42-22M-XX   | Dual Channel (A, A-B Displays) .....        |
| AEQ-42-32N-XX   | Dual Channel (A, B, A-B Displays) .....     |
| AEQ-42-33-XX    | Triple Channel (A, B & C Displays) .....    |
| AEQ-42-33M-XX   | Triple Channel (A, A-B, A-C Displays) ..... |
| AEQ-42-44-XX    | Quad Channel (A, B, C, D Displays) .....    |
| AEQ-42-14A-(XX) | 1DSP Auto Select .....                      |

*Consult Factory for Additional Configurations*

### AIR GAGE READOUT FITTINGS .....Series 60-70

|        |  |
|--------|--|
| ACF-60 | Fitting, <b>Micro II</b> p Ser. 60   |
| ACF-70 | Fitting, <b>Micro II</b> p Ser. 70   |
| ACF-80 | Fitting, for use on Mahr-Federal comparators<br>D1250-D8000/EAG-31,-32xxx        |
| ACF-90 | Fitting, for use on Mahr-Federal comparators<br>D10, 000-D32, 000/EAG-33, -34xxx |



AEK 3X-1-(XX)  
AEK 3X-2-(XX)  
AEK 3X-3-(XX)  
AEK 3X-4-(XX)

|        |   |
|--------|---|
| PSR-30 | Power Supply (110v)<br>Replacement part, <b>MILLI-CHECK</b> Readouts only |
| PSR-31 | Power Supply (220v)<br>Replacement part, <b>MILLI-CHECK</b> Readouts only |

### READOUT FITTINGS, Series 10-50

|       |   |
|-------|---|
| ACA-0 | Chuck adapter -- male flare               |
| ACA-1 | Chuck adapter -- female, quick disconnect |
| ACA-3 | Chuck adapter -- .19-32 UNF               |
| ACA-4 | Chuck adapter -- .25-28 UNF               |
| ACA-8 | Chuck adapter -- .50-20 UNF               |

### AIR FILTERS for all Readouts

|             |   |
|-------------|---|
| AFR-12 / 13 | Production filter & regulator assembly<br>(regulator, pre-filter, and coalescing filter with automatic bowl dump) |
| AFA-1       | Filter, 1.1 oz<br>(Replacement for comparator mini-filters)   |
| AFA-3       | Filter element only   |

### FOOT SWITCH & Mini Printer Accessory Pack

|             |   |
|-------------|---|
| AFS-2-( X ) | Foot switch for remote output<br>(For use with <b>Micro II &amp; Ili</b> readouts only)                                   |
| AFS-1       | Foot switch for remote output<br>(For use with Micro-Air readouts only)   |
| AFS-5-( X ) | Heavy duty foot switch for remote output<br>(For use with <b>Micro II &amp; Ili</b> readouts only)<br>(-P Print, -T TIR ) |

# AIR GAGE ACCESSORIES . . . FOR ALL SERIES . . .

## AIR PROBE THREADS, Series 10, 40 & 50

| Air Gage Size<br>Above-Incl. | Dash<br>No | Thread<br>Size |
|------------------------------|------------|----------------|
| .059 - .120                  | -3         | .19-32 UNF     |
| .120 - .300                  | -4         | .25-28 UNF     |
| .300 - .485                  | -3         | .19-32 UNF     |
| .485 - .860                  | -4         | .25-28 UNF     |
| .860 - UP                    | -8         | .50-20 UNF     |

## AIR PROBE THREADS, Series 60, 70, 80

| Air Gage<br>Series | Thread<br>Size |
|--------------------|----------------|
| 60                 | .38-32 UNEF    |
| 70                 | .28-40 UNS     |
| 80                 | .38-32 UNEF    |

See Western Gage's Dimensional Air Gage Buyer's Guide for application

## ACCESSORIES for Series 10 thru 50 gages

### ACCESSORIES, Series 10 – 50

AHH-3 Handle & hose assembly - 10-32 UNF  
 AHH-4 Handle & hose assembly - .25-28 UNF  
 AHH-8 Handle & hose assembly - .50-20 UNF

AHL-3 Handle only -- 10-32 UNF  
 AHL-4 Handle only -- .25-28 UNF  
 AHL-8 Handle only -- .50-20 UNF

ASC-3 Short coupling & hose - 10-32 UNF  
 ASC-4 Short coupling & hose - .25-28 UNF  
 ASC-8 Short coupling & hose - .50-20 UNF

ASL-3 Short coupling only -- 10-32 UNF  
 ASL-4 Short coupling only -- .25-28 UNF  
 ASL-8 Short coupling only -- .50-20 UNF

AHE-34 Extension, 4 inch - 10-32 UNF  
 AHE-36 Extension, 6 inch - 10-32 UNF  
 AHE-44 Extension, 4 inch - .25-28 UNF  
 AHE-46 Extension, 6 inch - .25-28 UNF  
 AHE-84 Extension, 4 inch - .50-20 UNF  
 AHE-86 Extension, 6 inch - .50-20 UNF

AHR-3 Rt. Angle adapter - 10-32 UNF  
 AHR-4 Rt. Angle adapter - .25-28 UNF  
 AHR-8 Rt. Angle adapter - .50-20 UNF

### ALTERNATE FITTINGS, Series 10 - 50

AFQ-2 Male quick disconnect - .160 hose  
 AFQ-4 Female quick disconnect - male 1/8 NPT  
 AFF-2 Male flare - 1/8 NPT  
 ACA-1 Female quick disconnect - Ø.50" shank  
 AFS-0 Set lock adapter - male flare

### REPAIR PARTS, Series 10 - 50

AHO-4 Air hose only (.125 I.D.)  
 AHO-5 Air hose only (.160 I.D.)  
 AHO-2 Air hoses only ( 4.000mm I.D. 6.000mm O.D.)  
 AFF-0 Female flare fitting (.160 I.D. hose)  
 AOR-3 O-rings for -3 accessories, 10 pcs  
 AOR-4 O-rings for -4 accessories, 10 pcs  
 AOR-8 O-rings for -8 accessories, 10 pcs

## ACCESSORIES for Series 60 thru 80 gages

### ACCESSORIES, Series 60 – 80

AHA-63 Hose assembly, 3 ft - .38-32 UNEF  
 AHA-65 Hose assembly, 5 ft - .38-32 UNEF  
 AHA-66 Hose assembly, 6 ft - .38-32 UNS  
 AHA-73 Hose assembly, 3 ft - .28-40 UNS

AHL-62 Handle/ext., 2 in x .38-32 UNEF  
 AHL-64 Handle/ext., 4 in x .38-32 UNEF  
 AHL-66 Handle/ext., 6 in x .38-32 UNEF  
 AHL-72 Handle/ext., 2 in x .28-40 UNEF  
 AHL-74 Handle/ext., 4 in x .28-40 UNEF

AHD-60 Heavy duty handle 6 in x Ø1.20  
 AHM-64 Medium duty handle 4 in x Ø.74  
 AHM-66 Medium duty handle 6 in x Ø.74

AHR-6 Right Angle adapter, .38-32 UNEF

### AIR RING ACCESSORIES, Series 60 – 80

(See listing under air probes for hose assemblies)

### REPAIR PARTS, Series 60 – 80

AOR-10 O-ring kit for series 60, 10 pcs  
 AOR-7 O-ring kit for series 70, 10 pcs

### HOSE FITTINGS, Series 60 - 80

AKM-60 Hose Fitting, Male, .38-32 UNEF  
 AKF-60 Hose Fitting, Female, .38-32 UNEF  
 AHO-6 Air hose only (.312 O.D. x .188 I.D.)

# AIR GAGE ACCESSORIES CONT. & TAPER GAGES . . .

## MISCELLANEOUS ACCESSORIES FOR GAGES

### AIR RING STANDS & GUIDE CHUTES, ALL SERIES

ABA - ( ) Air ring gage bench stand, factory mounted:

Sizes .120 to .760 .....

Sizes .760 to 3.010 .....

(Consult factory for complete order code)

ABV - ( ) Guide chute, Vee type, factory mounted, including bench stand:

-9 Sizes .100 to .183 (Single end)

-10 Sizes .100 to .183 (Double end)

-11 Sizes .183 to .300 (Single end)

-12 Sizes .183 to .300 (Double end)

-21 Sizes .300 to .760 (Single end)

-22 Sizes .300 to .760 (Double end)

-31 Sizes .760 to 1.760 (Single end)

-32 Sizes .760 to 1.760 (Double end)

-41 Sizes 1.760 to 3.010 (Single end)

-42 Sizes 1.760 to 3.010 (Double end)

### MANIFOLDS, Series 10, 60, 70, 80

AMD-2M 2-Way manifold, match fitting

AMD-2T 2-Way manifold, toggle valve

AMD-3T 3-Way manifold, toggle valve

AMD-4T 4-Way manifold, toggle valve

AMD-5T 5-Way manifold, toggle valve

..... additional channels consult factory.....

(Specify series & model when ordering)

### EXTRA POWER SUPPLY

PSR-2 Power Supply, Remote .....  
(Replacement part for Micro-Air readouts only)

### LVDT GAGING

LVS-1 LVDT gaging cartridges.....  
For **Micro II** readout

LVS-2 LVDT gaging cartridges.....  
For **GageChek / Metro** readout

EVD-1 VeeCheck LVDT OD gage.....  
.060 - .300 diameter range

EVD-2 VeeCheck LVDT OD gage.....  
.090 - .600 diameter range

EVD-3 VeeCheck LVDT OD gage.....  
.100 - 1.100 Range

## TAPER GAGES

Air gages for A.N.S.I. Standard Machine Tool Tapers  
(3.500"/ft. per A.N.S.I. B5.10)

Order codes specify either air ring (ATR) for external or male member measurement or air probe (ATP) for internal or female member measurement, followed by A.N.S.I. Taper number, which is followed by WGC Series number. Masters conform to ISO-1947 Grade AT1, AT2 or AT3.

| Order Code          | Taper No. | Gage Line        |
|---------------------|-----------|------------------|
|                     |           | Diam. X Length   |
| ATP -20- (series #) | 20        | .875" X 1.312"   |
| ATR -20- (series #) | 20        | .875" X 1.312"   |
| ATP -30- (series #) | 30        | 1.250" X 1.875"  |
| ATR -30- (series #) | 30        | 1.250" X 1.875"  |
| ATP -40- (series #) | 40        | 1.750" X 2.562"  |
| ATR -40- (series #) | 40        | 1.750" X 2.562"  |
| ATP -45- (series #) | 45        | 2.250" X 3.3125" |
| ATR -45- (series #) | 45        | 2.250" X 3.3125" |
| ATP -50- (series #) | 50        | 2.750" X 4.000"  |
| ATR -50- (series #) | 50        | 2.750" X 4.000"  |

Above prices are for 2-circuit air taper gage members with two jets per circuit, hard chrome wear surfaces, Grade AT2 setting master, hoses and fittings. **Micro II** air gage readout is not included (see page 5 or consult factory for application).

ATP or ATR master upgrade to AT1 .....Price on application

### Sample Taper Gage Order Code with Description

**ATP-40-10.** Air Probe, Taper, 2 Circuit, series 10, chrome taper seating type, checks #40 standard machine tool taper per ANSI B5.10 (1.750 gage line diameter. X 2.562 length with 3.500" taper/ft); complete with hoses, fittings and min/max master per ISO 1947 Grade AT2.

See Western Gage's Dimensional Air Gage Buyer's Guide for additional information on specifying air gage components