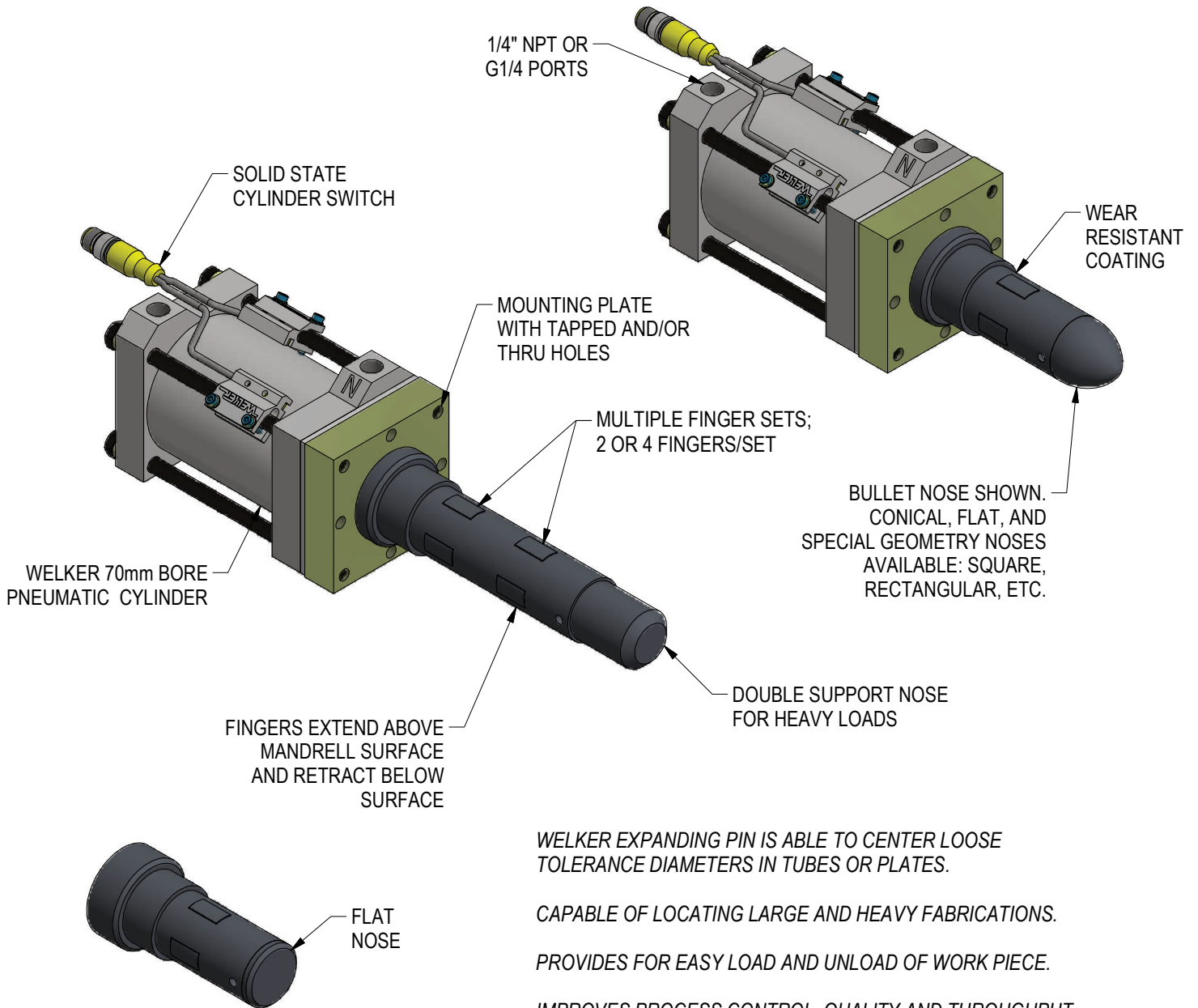


EXPANDING LOCATING PIN



WELKER EXPANDING PIN IS ABLE TO CENTER LOOSE TOLERANCE DIAMETERS IN TUBES OR PLATES.

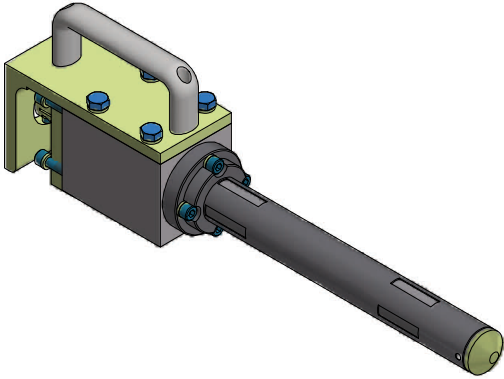
CAPABLE OF LOCATING LARGE AND HEAVY FABRICATIONS.

PROVIDES FOR EASY LOAD AND UNLOAD OF WORK PIECE.

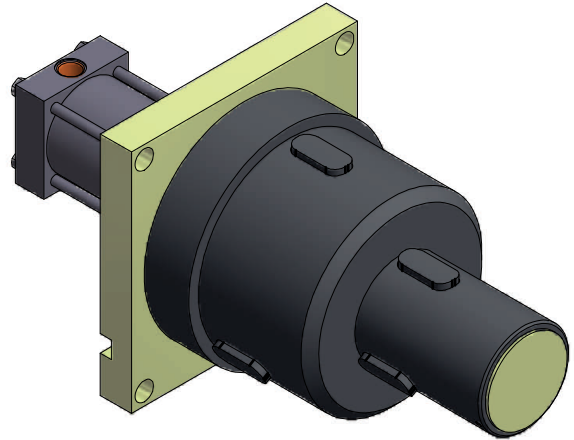
IMPROVES PROCESS CONTROL, QUALITY AND THROUGHPUT.

ENGINEERED TO SPECIFIC APPLICATION REQUIREMENTS.

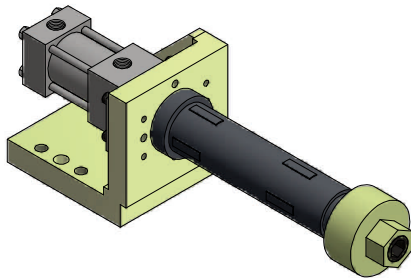
EXPANDING PIN DESIGN STYLES



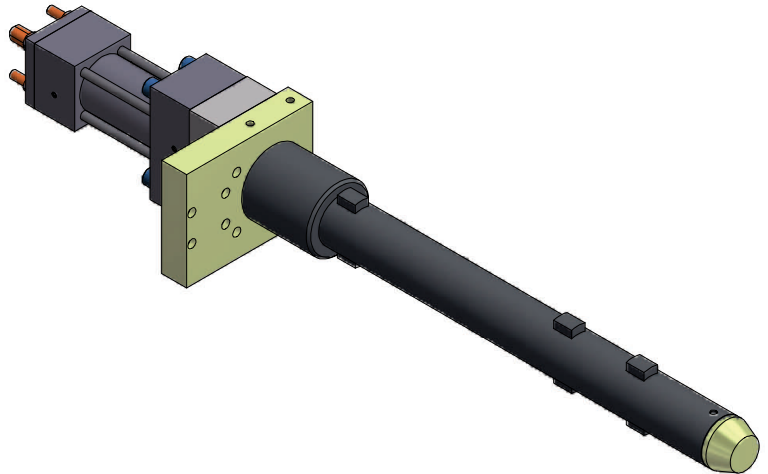
DOUBLE SET OF 4 FINGERS WITH HANDLE.
DRIVEN BY NUT RUNNER



DUAL DIAMETER WITH 3 FINGERS EACH DIA
& HYDRAULIC CYLINDER



DOUBLE SET OF 4 FINGERS
WITH THREAD ON CLAMP
AND HYDRAULIC CYLINDER



TRIPLE SET OF 2 FINGERS
WITH HYDRAULIC CYLINDER

(DO NOT SCALE DRAWING)

WELKER

ENGINEERED PRODUCTS

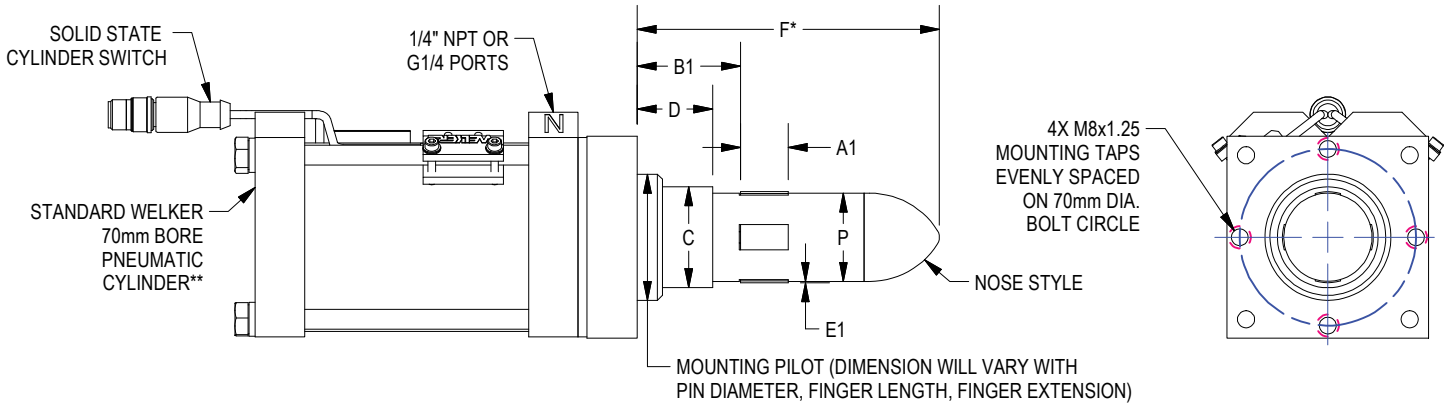
800-229-0890 www.welkerproducts.com

UNIT WITH SINGLE SET OF FINGERS

APPLICATION INFORMATION _____

 APPLICATION ORIENTATION (HORIZ/VERT) _____
 MAXIMUM HOLE DIAMETER _____
 MINIMUM HOLE DIAMETER _____
 BUSHING LENGTH _____

DATE _____
 CUSTOMER _____
 PROJECT _____
 STATION _____
 UNIT _____
 MODEL/PART NUMBER ON STATION _____



NOTES: EACH EXPANDING PIN REQUIRES A SEPARATE WORKSHEET.
 ORDER STANDARD EXPANDING PINS 1mm SMALLER THAN HOLE DIAMETER.
 EXAMPLE: 38mm HOLE, ORDER 37mm DIAMETER PIN

FINGER QUANTITY: _____ 2 OR 4 PART PRINT AVAILABLE?
 A1: FINGER LENGTH _____ 20mm MINIMUM ATTACH IF YES
 B1: FINGER LOCATION _____ 25mm MINIMUM FIXTURE PRINT AVAILABLE?
 C: HUB DIAMETER _____ ATTACH IF YES
 D: HUB LENGTH (OPTIONAL) _____
 E1: FINGER EXTENSION _____ 0.5mm PER SIDE IS STANDARD
 F: MAX. OAL OF PIN _____ LIST IF NECESSARY, FOR CLEARANCE CONDITIONS
 P: PIN DIAMETER _____

NOSE STYLE: FLAT NOSE CONICAL NOSE BULLET NOSE
 DOUBLE SUPPORT NOSE (HEAVY LOADS)
 OTHER: _____

CYLINDER TYPE: PNEUMATIC (AIR) HYDRAULIC** OTHER:
 **HYDRAULIC CYLINDER AVAILABLE. MAX PRESSURE 250 PSI. CONTACT WELKER FOR INFORMATION

PORT TYPE: NPT G OTHER:

SWITCH: L3 WELD FIELD IMMUNE*, COMPARABLE TO WORLD SWITCHES. MFR: WELKER
 4-WIRE, 4-PIN DC (PNP) M12x1 QUICK DISCONNECT
 STANDARD SWITCH OPTION - ALL OTHER OPTIONS MAY AFFECT PRICE & DELIVERY.
 L5 SINGLE SENSOR SWITCH: 2 INSTALLED PER CYLINDER. MFR: IFM EFECTOR #MK5113
 3-WIRE, 4-PIN DC (NPN) M12x1 QUICK DISCONNECT

*Note that some mid and low frequency DC resistance applications (i.e. aluminum resistance welding applications) may cause a fault. In these applications, it is recommended that the sensor be ignored/bypassed during the welding cycle.

ADDITIONAL INFORMATION, SUCH AS SPECIAL ENVIRONMENTAL CONDITIONS, SPECIAL NOSE, HIGH LOAD/FORCE, ETC.

IS THIS A MIG OR EXTREME HEAT APPLICATION WHERE COOLING SHOULD BE CONSIDERED? YES NO
 INTERNAL AIR COOLING OPTION? YES NO
 APPROX. WELD CYCLE TIME: _____

(DO NOT SCALE DRAWING)



UNIT WITH DOUBLE SET OF FINGERS

APPLICATION INFORMATION _____

APPLICATION ORIENTATION (HORIZ/VERT) _____

MAXIMUM HOLE DIAMETER _____

MINIMUM HOLE DIAMETER _____

BUSHING LENGTH _____

DATE _____

CUSTOMER _____

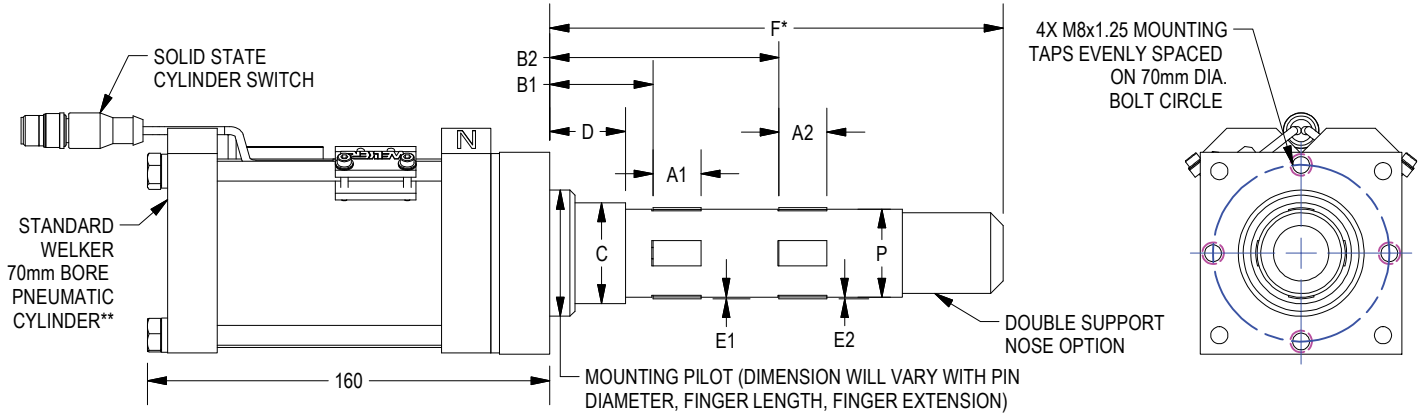
PROJECT _____

STATION _____

UNIT _____

MODEL/PART NUMBER ON STATION _____

CAD MODEL OR SCREENSHOT REQUIRED WITH WORKSHEET



NOTES: EACH EXPANDING PIN REQUIRES A SEPARATE WORKSHEET.
 ORDER STANDARD EXPANDING PINS 1mm SMALLER THAN HOLE DIAMETER.
 EXAMPLE: 38mm HOLE, ORDER 37mm DIAMETER PIN

A1: FINGER QUANTITY: _____ A2: FINGER QUANTITY: _____ PART PRINT AVAILABLE? _____

A1: FINGER LENGTH _____ A2: LENGTH _____ 20mm MIN ATTACH IF YES _____

B1: FINGER LOCATION _____ B2: LOCATION _____ 25mm MIN

C: HUB DIAMETER _____ FIXTURE PRINT AVAILABLE? _____

D: HUB LENGTH (OPTIONAL) _____ ATTACH IF YES _____

E1: FINGER EXTENSION _____ E2: FINGER EXTENSION _____ 0.5mm PER SIDE IS STANDARD

F: MAX. OAL OF PIN _____ LIST IF NECESSARY, FOR CLEARANCE CONDITIONS

P: PIN DIAMETER _____

NOSE STYLE: FLAT NOSE CONICAL NOSE BULLET NOSE

DOUBLE SUPPORT NOSE (HEAVY LOADS)

OTHER: _____

CYLINDER TYPE: PNEUMATIC (AIR) HYDRAULIC** OTHER: _____

**HYDRAULIC CYLINDER AVAILABLE. MAX PRESSURE 250 PSI. CONTACT WELKER FOR INFORMATION

PORT TYPE: NPT G OTHER: _____

SWITCH: L3 WELD FIELD IMMUNE*, COMPARABLE TO WORLD SWITCHES. MFR: WELKER
 4-WIRE, 4-PIN DC (PNP) M12x1 QUICK DISCONNECT
 STANDARD SWITCH OPTION - ALL OTHER OPTIONS MAY AFFECT PRICE & DELIVERY.

L5 SINGLE SENSOR SWITCH: 2 INSTALLED PER CYLINDER. MFR: IFM EFECTOR #MK5113
 3-WIRE, 4-PIN DC (NPN) M12x1 QUICK DISCONNECT

*Note that some mid and low frequency DC resistance welding applications (i.e. aluminum resistance welding applications) may cause a fault. In these applications, it is recommended that the sensor be ignored/bypassed during the welding cycle.

ADDITIONAL INFORMATION, SUCH AS SPECIAL ENVIRONMENTAL CONDITIONS, SPECIAL NOSE, HIGH LOAD/FORCE, ETC.

IS THIS A MIG OR EXTREME HEAT APPLICATION WHERE COOLING SHOULD BE CONSIDERED? YES NO

INTERNAL AIR COOLING OPTION? YES NO

APPROX. WELD CYCLE TIME: _____

(DO NOT SCALE DRAWING)

ENGINEERED PRODUCTS

800-229-0890 www.welkerproducts.com