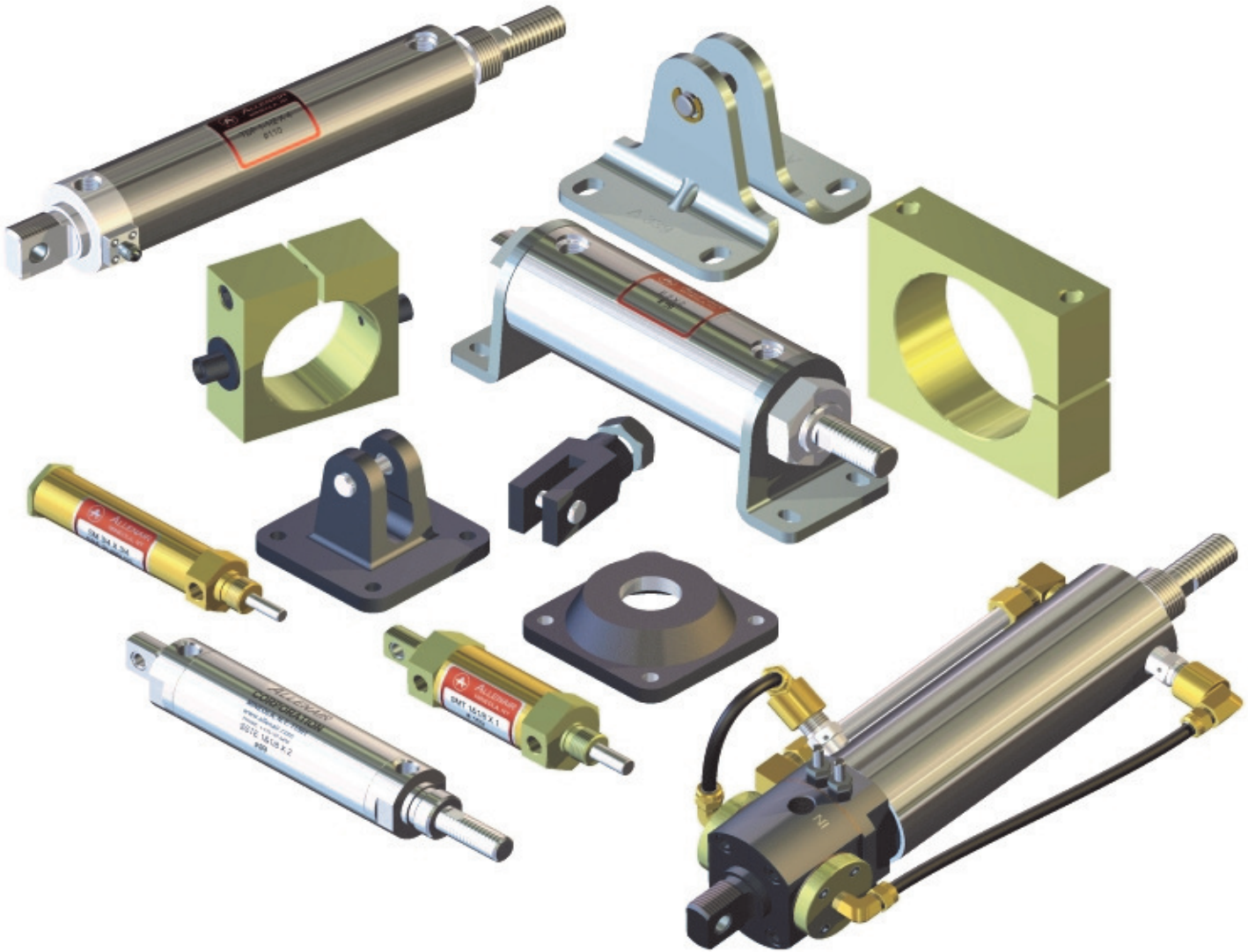


CYLINDERS



**ALLENAIR Cylinders may be used in place of other
Manufactures cylinders.
Please consult factory for “Drop In” or “Cross Over information”**

STANDARD CYLINDERS

DOUBLE ACTING & SPRING RETURN CYLINDERS

STANDARD VARIATIONS OF TYPES A, C & E

The basic construction of these cylinder variations are identical to Types "A", "C" or "E", except where noted.

DOUBLE ENDED: TYPES AD, CD & ED Cylinders are constructed with a common single rod, which protrudes from both ends. As one end retracts, the other extends.

Bore Sizes Available: 7/8", 1-1/8", 1-1/2", 2", 2-1/2", 3" & 4".

Maximum Stroke Available: 65".

NOTE: Due to piston construction, 3/32" of stroke is lost on Type AD 1-1/2", 2", 2-1/2" and 3" bore sizes.

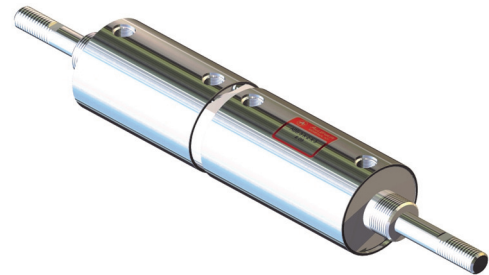


FOR DIMENSIONS AND MOUNTS SEE PAGES 17 thru 21.

BACK-TO-BACK: TYPES ABB, CBB & EBB Units consist of two separate single ended Cylinders, joined together by a common rear head. Their strokes can be either identical or different. By fastening one rod end to a fixed object, these units can perform as 3 and 4 position Cylinders.

Bore Sizes Available: 7/8", 1-1/8", 1-1/2", 2", 2-1/2", 3" & 4".

NOTE: Options must be indicated for each stroke.



FOR DIMENSIONS AND MOUNTS SEE PAGES 17 thru 21.

INTEGRAL REAR SWIVEL: TYPES AN, CN & EN Cylinders are constructed with a female clevis end, including clevis pin.

Bore Sizes Available: 7/8", 1-1/8", 1-1/2", 2", 2-1/2", 3" & 4".



FOR DIMENSIONS AND MOUNTS SEE PAGES 17 thru 21.

INTEGRAL SQUARE HEAD:

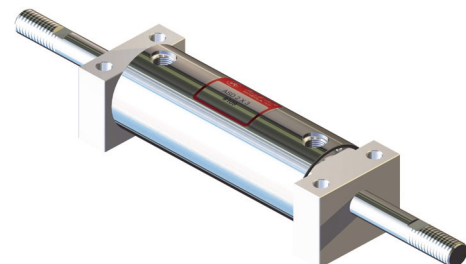
TYPES AS, CS & ES

TYPES ASD, CSD & ESD

Units incorporate the use of square heads, thus eliminating the need for separate Foot Mounts.

Bore Sizes Available: 7/8", 1-1/8", 1-1/2" & 2".

NOTE: Due to piston construction, 3/32" of stroke is lost on Type ASD 1-1/2" and 2" bore sizes.



FOR DIMENSIONS AND MOUNTS SEE PAGES 17 thru 21.

STANDARD CYLINDERS

DOUBLE ACTING & SPRING RETURN: 7/8" - 5" BORES

THREE POSITION:

TYPES: AP, CP & EP SINGLE ENDED

TYPES: APD, CPD & EPD DOUBLE ENDED

Cylinders feature two separate piston rod assemblies which provide three definite and positive positions. Any combination of first stroke and total stroke is available. **Both rods fully retracted are first position.**

Port #1 Extends rod first stroke to second position.

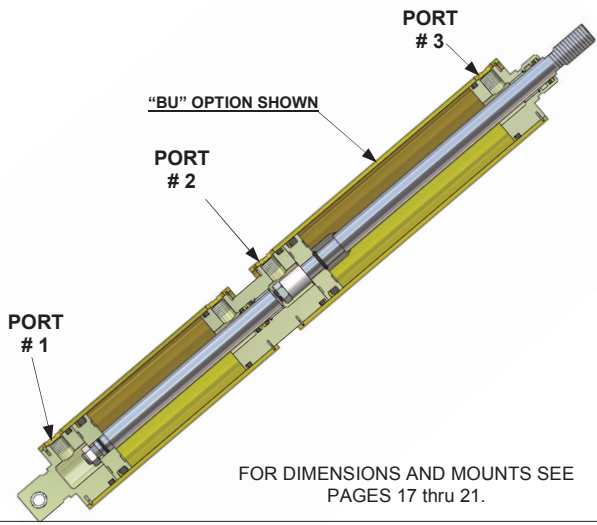
Port #2 Extends rod full stroke to third position.

Port #3 Retracts both rods to first position.

When ordering, second stroke must be specified as total stroke, as second Cylinder rod moves through both strokes. For example, if first stroke required is 4" and second stroke is 2", order should read: **AP- 3 X 4 X 6.** 6" being the total stroke (4+2).

Bore Sizes Available: 1-1/2", 2", 2-1/2", 3" & 4".

NOTE: Options must be indicated for each stroke.



FOR DIMENSIONS AND MOUNTS SEE PAGES 17 thru 21.

TANDEM:

TYPE: ET SINGLE ENDED

TYPE: ETD DOUBLE ENDED

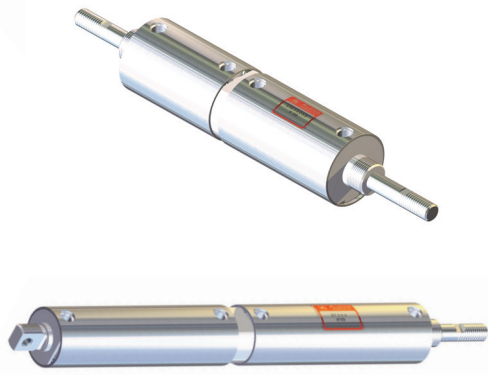
The basic construction of these Cylinders is identical to Type "E" and feature two Cylinders in tandem having two pistons mounted on one common rod. Pneumatic operation with hydraulic control can be obtained by operating the rear Cylinder pneumatically and filling the front Cylinder with oil and piping its ports in series using a flow control valve. The output force of a single Cylinder can be almost doubled using a Tandem Cylinder and piping both rear ports together and both front ports together, which will apply the working pressure to both Cylinders at the same time. This is particularly useful when space limitations preclude the use of large bore Cylinders, and the force required is greater than that supplied by smaller bore units.

Bore Sizes Available: 1-1/2", 2", 2-1/2", 3" & 4".

Maximum Stroke Available:

Type "ET" : 60".

Type "ETD": 40".



FOR DIMENSIONS AND MOUNTS SEE PAGES 17 thru 21.

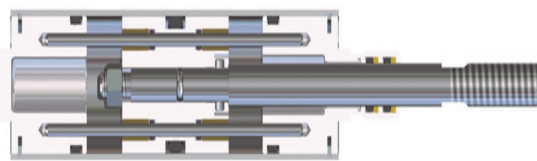
NON-ROTATING:

TYPE: AR, ARD

The Piston Rod Assembly of conventional double acting air and hydraulic cylinder will rotate a few degrees with each operation of the cylinder. Where this is objectionable and where the piston rod cannot be guided externally, A NON-ROTATING CYLINDER should be used.

ALLEN AIR TYPES "AR" and "ARD" CYLINDERS are built with two (2) guide rods extending between cylinder heads and thru piston guide rod bearings. This prevents piston rod rotation completely. Service life of these cylinders is excellent, in no way different from our conventional construction. All other construction features are the same as our standard cylinders.

BORE SIZES: 2", 3" & 4" **STROKES:** Same as for other Allentair Cylinders up to 20" Maximum.



FOR DIMENSIONS AND MOUNTS SEE PAGES 17 thru 21.

ORDERING PROCEDURE

TYPE SEE PAGES 9, 10, 11 & 12	BORE SIZE SPECIFY	STROKE SPECIFY	OPTIONS SEE PAGES 13 thru 16
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EXAMPLE: **E 3 x 4 BC BU HTP IB OS RG**

- BC..... Cushion Both Ends
- BU..... Brass Tube
- HTP..... High Temperature (Viton) Seals
- IB AB Accessory Pin installed in both ends
- OS Oversized Rod
- RG Outboard Rod Guide installed

NOTE: When ordering back-to-back and three position cylinders, options must be specified for each cylinder. All mounts are ordered separately. See pages 20 & 21.