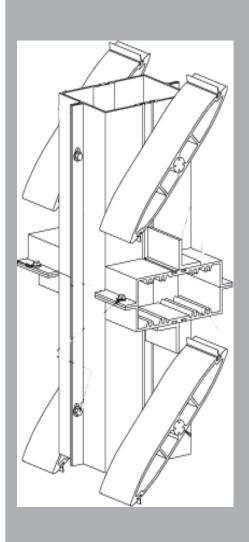
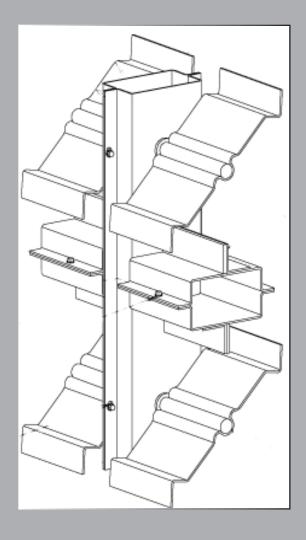


# ARROW UNITED





DAMPER
CONSTRUCTION
DETAILS

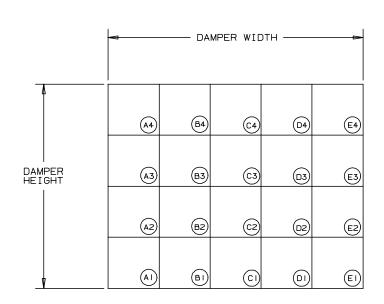
# ALUMINUM AND STEEL CONTROL DAMPER REFERENCE CHART

DETAIL DESCRIPTION	ALUMINUM DAMPERS			STEEL DAMPERS		
	AFD-20	PBDAF	OBDAF	1770	395	182
EXTENDED SHAFT	ı	I	I	5	5	5
VERTICAL MULLION	2	2	2	6	6	6
HORIZONTAL MULLION	3	3	3	7	7	7
HORIZONTAL/VERTICAL INTERNAL MULLION	4	4	4	8	8	8
JUMPER BRACKET	9	9	9	10	10	10
JACKSHAFT BEARING MOUNTING BRACKET ATTACHMENT	1.1	1.1	1.1	11	11	11
JACKSHAFT TO BLADE INTERCONNECTION	12	12	12	13	13	13
JACKSHAFT COUPLING	14	14	14	14	14	14
VERTICAL FACE JUMPER LINKAGE	15	15	15	16	16	16
STANDARD BLADE LINKAGE DIMENSIONS	17	17	17	18	18	18
JACKSHAFT TO JACKSHAFT INTERCONNECTION	19	19	19	20	20	20
INTERNALLY MOUNTED PNEUMATIC "UNI-MOUNT" DRIVING TO A BLADE CLIP	21	21	21	21	21	21
INTERNALLY MOUNTED ELECTRIC "UNI-MOUNT" DRIVING TO A BLADE CLIP	22	22	22	22	22	22
INTERNALLY MOUNTED ELECTRIC OPERATOR BRACKET DRIVING TO A BLADE CLIP	23	23	23	23	23	23
EXTERNALLY MOUNTED ELECTIC OPERATOR DRIVING TO AN EXTENDED SHAFT	24	24	24	24	24	24
EXTERNALLY MOUNTED PNEUMATIC OPERATOR DRIVING TO AN EXTENDED SHAFT	25	25	25	25	25	25
INTERNALLY MOUNTED PNEUMATIC "UNI-MOUNT" DRIVING TO A JACKSHAFT	26	26	26	26	26	26
INTERNALLY MOUNTED ELECTRIC "UNI-MOUNT" DRIVING TO A JACKSHAFT	27	27	27	27	27	27
INTERNALLY MOUNTED ELECTRIC OPERATOR BRACKET DRIVING TO A JACKSHAFT	28	28	28	28	28	28
JAMB LINKAGE	29	29	29	30	30	30
FACE LINKAGE ARRANGEMENTS	-	-	_	31	-	32

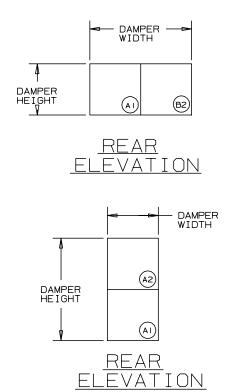
#### NOTES:

- I. DETAILS SHOW GENERAL CONSTRUCTION ONLY FOR ALUMINUM AND STEEL DAMPERS. THE ARROW PINLOCK DAMPER AND THERMAL BREAK DAMPER AND THEIR DETAILS ARE NOT PROVIDED IN THIS REFERENCE.
- 2. ARROW DAMPERS ARE SELF SUPPORTING AFTER INSTALLATION IN ONLY ITS LARGEST SINGLE SECTION SIZE. MULTI-DAMPER SECTION ASSEMBLIES REQUIRE BRACING TO SUPPORT DAMPER WEIGHT AND SYSTEM PRESSURE AND SHALL BE FURNISHED AND INSTALLED BY OTHERS UNLESS OTHERWISE NOTED.
- 3. FACE JACKSHAFT AND INTERNAL OPERATOR MOUNTING BRACKETS ARE SHIPPED LOOSE UNLESS OTHERWISE SPECIFIED.

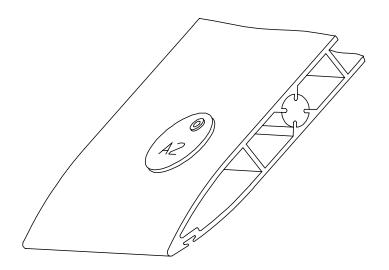
## DAMPER TAGGING



REAR ELEVATION



\*\* ALL TAG IDENTIFICATION WILL BE LOCATED AT THE REAR OF ALL DAMPER SECTIONS, IN THE LOCATIONS SHOWN ON THE ABOVE ELEVATIONS. TAGS WILL BE APPROX. I 1/4" DIA. ALUMINUM, WITH 1/4" HIGH LETTERING STAMPED INTO THE ALUMINUM. TAGS WILL BE RIVETED TO THE BOTTOM HALF OF THE FIRST BLADE OF EACH SECTION.

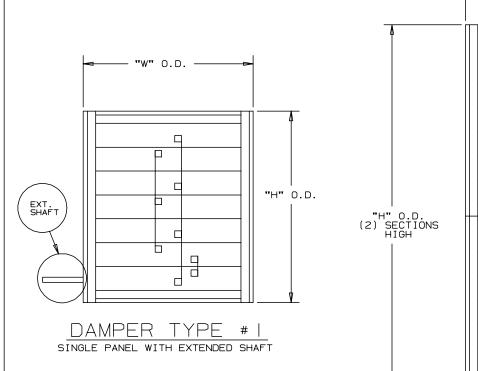


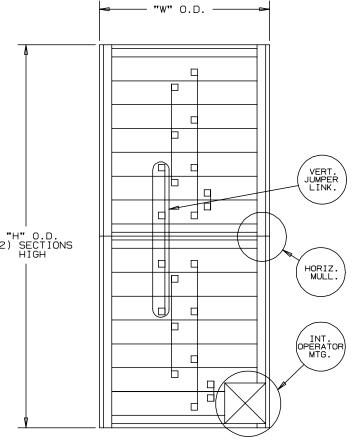
DAMPER TAG MOUNTING DETAIL

• FRAME MEMBERS NOT SHOWN FOR CLARITY.



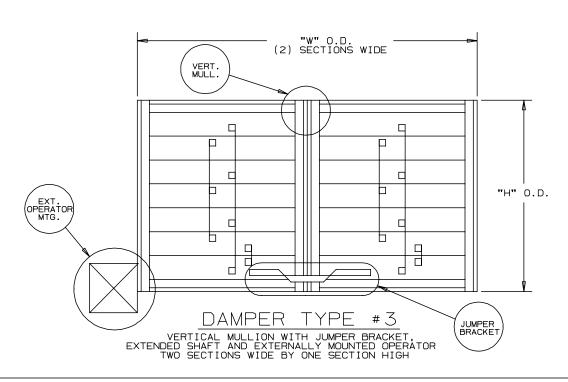
# TYPICAL SCHEMATIC DAMPER ELEVATIONS





#### DAMPER TYPE #2

HORIZONTAL MULLION WITH VERTICAL JUMPER LINKAGE AND INTERNALLY MOUNTED OPERATOR ONE SECTION WIDE BY TWO SECTIONS HIGH



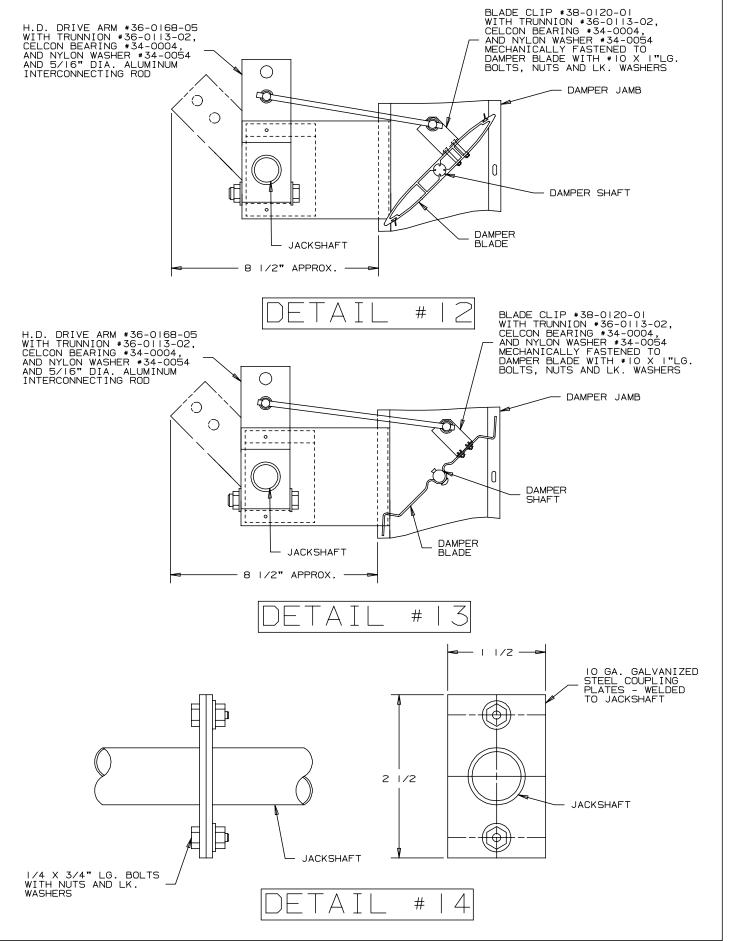
#### TYPICAL SCHEMATIC DAMPER "W" O.D. (3) SECTIONS WIDE VERT. MULL. J'SHAFT BEARING BRKT. / J'SHAFT DRIVE ARM П "H" O.D. Б Б $\Box$ d П □ □ INT. OPER. TO J'SHAF DAMPER TYPE VERTICAL MULLIONS WITH JACKSHAFTING AND INTERNALLY MOUNTED OPERATOR DRIVING TO JACKSHAFTING MULTI-SECTIONS WIDE BY ONE SECTION HIGH "W" O.D. (3) SECTIONS WIDE VERT. MULL. J'SHAFT JUMPER LINK. J'SHAFT DRIVE ARM A $\Box$ ₫ ₫ d "H" O.D. (2) SECTIONS HIGH П П ф J'SHAFT BEARING BRKT. HORIZ. MULL. Ē \_ 4 $\Box$ (J'SHAFT COUPLING d 古 Г П INT. OPER. TO J'SHAF #5 DAMPER TYPE VERTICAL AND HORIZONTAL MULLIONS WITH INTERCONNECTED JACKSHAFTING AND INTERNALLY MOUNTED OPERATOR DRIVING TO LOWER JACKSHAFT MULTI-SECTIONS WIDE BY MULTI-SECTIONS HIGH

### VERTICAL MULLION -DAMPER -BLADE DAMPER BLADE DAMPER JAMB DAMPER SECTIONS MECHANICALLY FASTENED TOGETHER WITH #10 x 5/8" LG. BOLTS, NUTS, AND LK. WASHERS. FURNISHED —BY ARROW UNITED INDUSTRIES 6" (NOMINAL) LENGTH EXTENDABLE SHAFT, SHIPPED IN RETRACTED POSITION 0 0 DAMPER SILL DAMPER SHAFT # # DAMPER BLADE DAMPER DAMPER BLADE -JAMB VERTICAL MULLION DAMPER JAMB 0 ALUMINUM BLADE STOP ALUMINUM BLADE STOP DAMPER SILL HORIZONTAL MULLION DE DOS DE DOS DE 20.707 DAMPER HEAD 200-201 Search Control W Love JOY 1 DAMPER SECTIONS MECHANICALLY FASTENED TOGETHER WITH #10 × 5/8" LG. BOLTS, NUTS, AND LK. WASHERS. FURNISHED BY ARROW UNITED INDUSTRIES DAMPER HEAD 0 DAMPER SHAFT DAMPER SHAFT

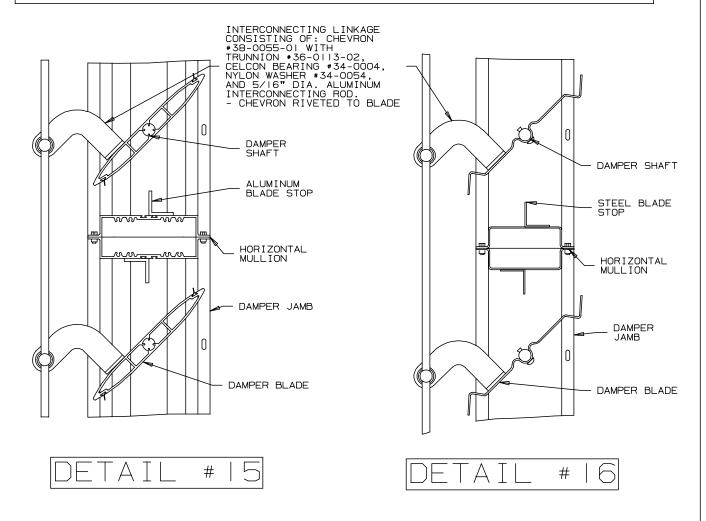
# DAMPER BLADE DAMPER JAMB DAMPER SECTIONS MECHANICALLY FASTENDED TOGETHER WITH #10 x 5/8" LG. BOLTS, NUTS, AND LK. WASHERS. FURNISHED BY ARROW UNITED INDUSTRIES 0 0 6" (NOMINAL) LENGTH EXTENDABLE SHAFT, SHIPPED IN RETRACTED POSITION DAMPER BLADE DAMPER SHAFT DAMPER SILL VERTICAL MULLION # # DAMPER BLADE DAMPER DAMPER BLADE JAMB VERTICAL MULLION DAMPER JAMB DAMPER SHAFT 0 STEEL BLADE STOP DAMPER SILL STEEL BLADE STOP HORIZONTAL MULLION DAMPER HEAD -\*10 x 1/2" SELF TAPPING SCREWS, FURNISHED BY ARROW 0 DAMPER SECTIONS MECHANICALLY FASTENED TOGETHER WITH \*10 × 5/8" LG. BOLTS, NUTS, AND LK. WASHERS. FURNISHED BY ARROW UNITED INDUSTRIES DAMPER SHAFT DETAI #

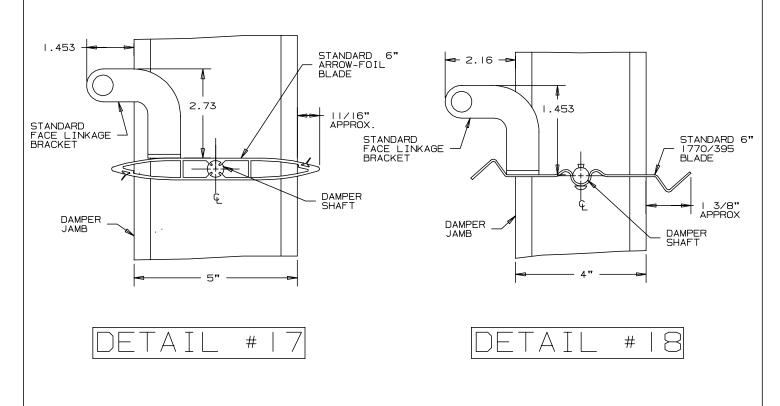
#### DAMPER **=** 3 1/4" **□** BLADE **VERTICAL** MULLION STEEL JUMPER BRACKET STEEL JUMPER BRACKET \*38-0018-01, MECHANICALLY FASTENED TO BLADE WITH \*10 x 1" LG. BOLTS, NUTS, AND LK. WASHERS JUMPER BRACKET EXTENDS | 1/2" FROM FACE OF DAMPER FRAME IN THE CLOSED POSITION $\bigcirc$ $\bigcirc$ $\bigcirc$ $\bigcirc$ - 16 1/2**"** -ETAI 2"0 VERTICAL MULLION DAMPER BLADE STEEL JUMPER BRACKET \*38-0017-01, MECHANICALLY FASTENED TO BLADE WITH \*10 x 5/8" LG. BOLTS, NUTS, AND LK. WASHERS JUMPER BRACKET EXTENDS I" FROM FACE OF DAMPER FRAME IN THE CLOSED POSITION $\bigcirc$ $\bigcirc$ $\bigcirc$ $\bigcirc$ - 16 1/2**"** -STAND-OFF RETAINING BRACKET STRAP \*36-0180 - RIVETED TO DAMPER FRAME # DAMPER \_ DAMPER JAMB JAMB JACKSHAFT BEARING MOUNTING BRACKET \*36-0179-01 WITH OILITE BRONZE FLANGED SLEEVE FLANGED SLEEVE BEARING, MECHANICALLY FASTENED TO FRAME WITH 1/4-20 x 5/8" BOLTS DAMPER BLADE 0 DAMPER SHAFT 0 E 巾 4" I" NOMINAL SCHEDULE 40 GALVANIZED STEEL PIPE JACKSHAFT COTTER PIN #36-0007 E 巾 Φ #13-0063-01 . |© 5" 6" TA #

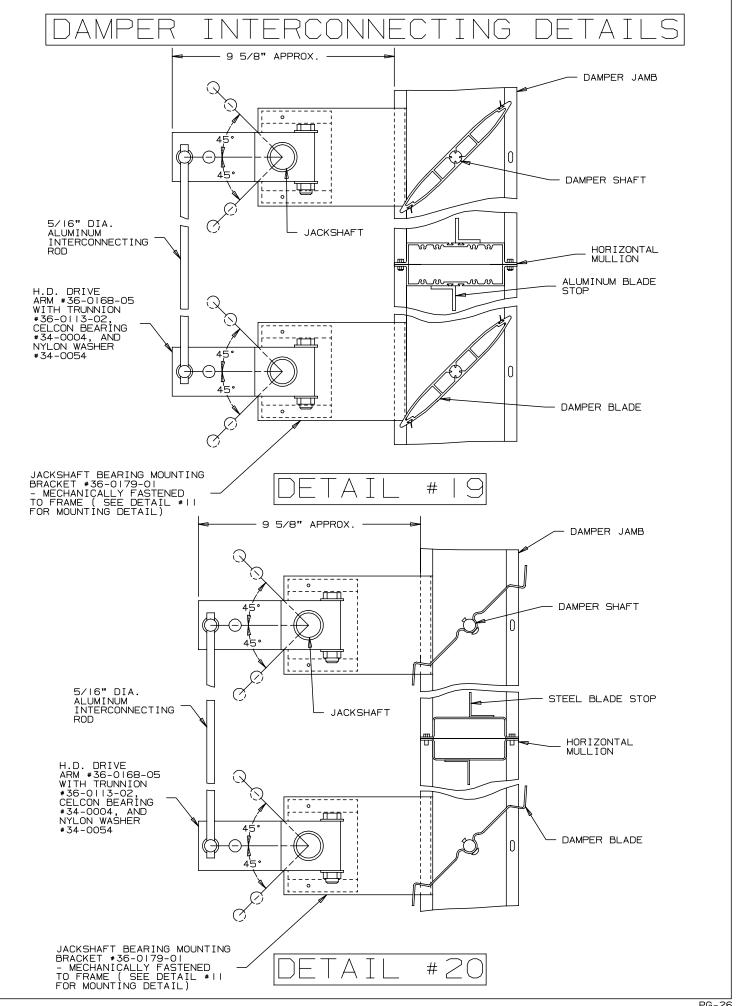
## DAMPER INTERCONNECTING DETAILS

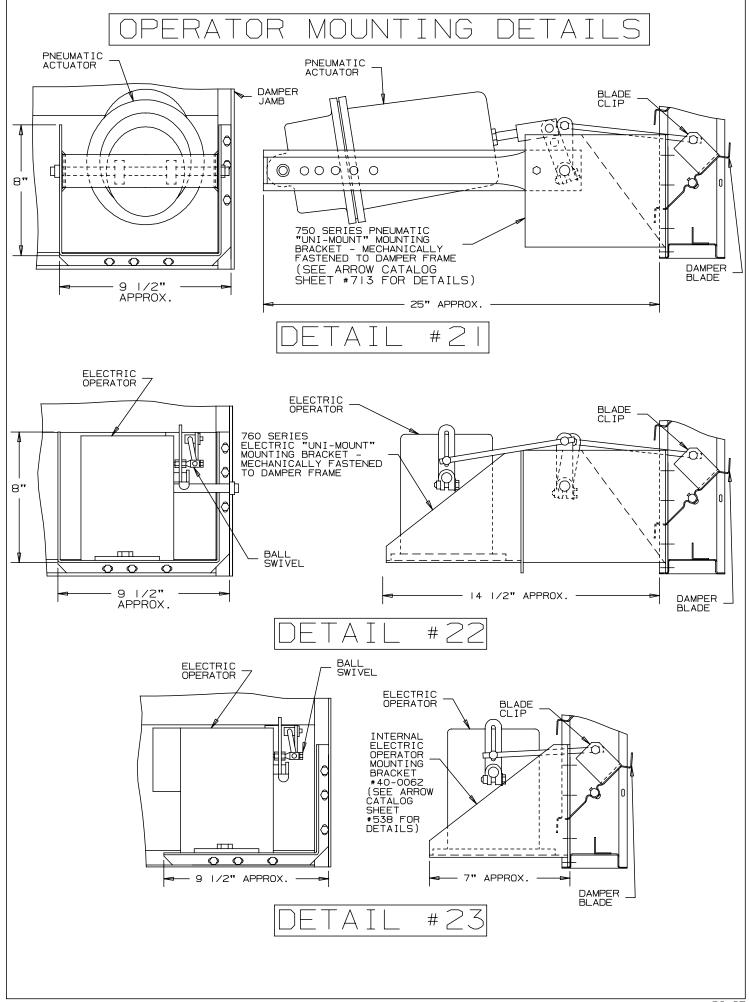


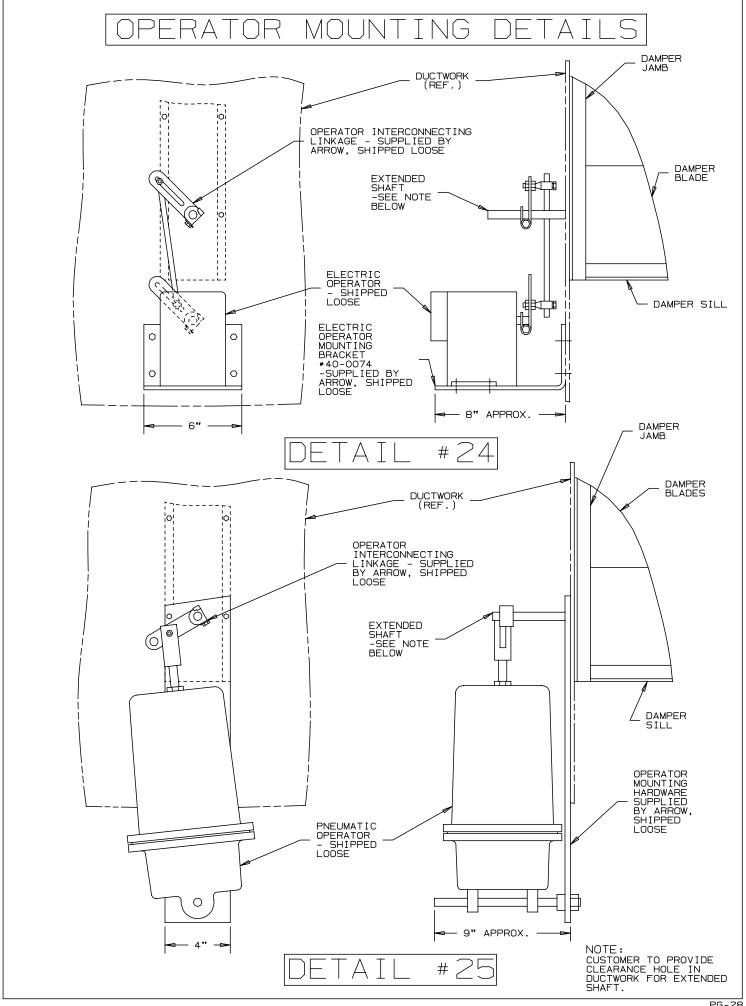
## DAMPER INTERCONNECTING DETAILS











## OPERATOR MOUNTING DETAILS

