

ARROW MAINTENANCE INSTRUCTIONS

FOR DAMPERS & ADJUSTABLE LOUVERS

Arrow dampers and louvers are designed to be trouble-free under normal operation. Only when installed plumb and square can you expect maximum service life.

Following are some maintenance suggestions to allow continued trouble-free operation. Dampers and louvers should be checked and serviced on at least an annual basis.

1. Check for and remove any foreign matter that may have collected on blades, linkage, birdscreen or other surfaces, which would cause interference with movement or resistance to air flow.
2. Make sure all moving parts (e.g.) blades, linkage, bearings, and shafts, are free and can move easily. Inspect, clean and lightly lubricate these surfaces with moli-spray oil as required. Never use regular lubricating oil as it tends to attract dirt and grit.
3. Should any component be accidentally damaged and part-replacement appears practical, please record information found on the Arrow label (job no., etc.) and contact your Arrow representative.
4. Lubrication is not required on "Double-Sealed", oilite, or nylon bearings. Those dampers and louvers utilizing ball bearings without grease fittings are prelubricated by the manufacturer and fitted with either seals or shields (or both) to prevent dirt and moisture penetration. Remove any particles around bearings and shaft which could interfere with rotation. For bearings with fittings, provide only a very small amount of grease.
5. Check for and remove any foreign materials that may interfere with complete blade-closure or effective sealing.
6. Observe the unit through full operating cycle. Tighten any loose linkage connections at the actuator. If the unit does not open properly or does not close tightly, adjustments should be made at the actuator linkage. It may be advisable to have this adjustment accomplished by a local control contractor.
7. On completion of inspection, all data may be logged and filed for reference. On the back of this sheet is an inspection log. When data is to be compiled, this log may provide a useful product history.

Special instructions (if required): _____

SEE DATA-LOG ON REVERSE SIDE.



ARROW MODEL: _____



ARROW UNITED INDUSTRIES

A Division of Mestek, Inc.

314 RIVERSIDE DRIVE / WYALUSING, PA 18853
TEL: (570) 746-1888 FAX: (570) 746-9286

AGENT _____

Arch./ Eng.: _____

Contr.: _____

Project: _____

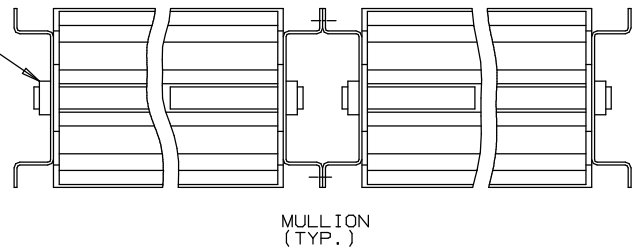
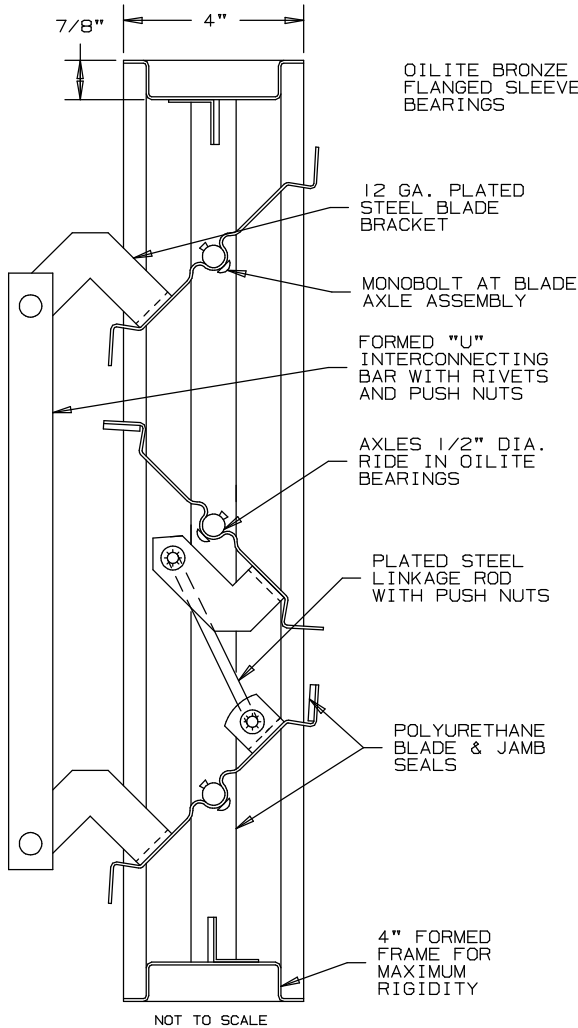
EDR ECN Job No.: _____

Date: _____ DWN Dwg. No.: _____

ARROW STEEL CONTROL DAMPERS

TYPE 1770

AN EFFICIENT DAMPER PARALLEL OR OPPOSED BLADES



SPECIFICATIONS

FRAME: 4" WIDE, 16 GA. GALVANIZED STEEL HAT-SHAPED CHANNEL PROVIDES GREATER RIGIDITY AND STRENGTH.

BLADE: MAXIMUM 6" SPACING. 16 GA. GALVANIZED STEEL, OVERLAP COVERAGE. MAXIMUM LENGTH 48".

LINKAGE: 12 GA. PLATED STEEL BRACKETS ARE RIVETED TO THE BLADES. A .030" ALUMINUM BAR (U-FORMED) INTERCONNECTS THE BLADES. THE OPPOSED-ACTION LINKAGE CONSISTS OF A .25 DIA. "U"-SHAPED, PLATED STEEL ROD WITH PUSH-NUT FASTENERS.

BEARINGS: OILITE BRONZE.

AXLES: 1/2" DIAMETER PLATED STEEL.

DRIVESHAFT: 1/2" DIA. PLATED STEEL, EXTENDABLE 6" BEYOND DAMPER FRAME.

SEALS: BLADE AND JAMB OF POLYURETHANE.

SIZES: MADE TO EXACT SIZE AS REQUIRED:
MAXIMUM PANEL: 48" W X 96" H
MINIMUM PANEL: 6" W X 8 3/4" H

DAMPERS LESS THAN 11" HIGH WILL BE A SINGLE BLADE.

DAMPERS BETWEEN THE HEIGHT OF 11" AND 14 3/4" WILL HAVE TWO BLADES, OPPOSED ACTION ONLY.

DAMPERS LESS THAN 8 3/4" IN HEIGHT WILL BE PROVIDED WITH A 5/8" x 2" x 5/8" EXTRUDED ALUMINUM FRAME.

NOTE: SERIES 1770 DAMPERS ARE RATED FOR SYSTEMS UP TO 2,000 FPM OR UP TO 4" S.P. IF BEING USED FOR APPLICATIONS BEYOND THIS, PLEASE ADVISE WHEN ORDERING

SHIPPING WEIGHT: 6 1/2" LBS. PER SQ. FT.

OPTIONAL
SPECIAL FRAMES
PAINT FINISHES

SEE REVERSE SIDE FOR PERFORMANCE DATA

NOMINAL DEDUCTIONS WILL BE MADE TO THE OPENING SIZE GIVEN.

ITEM	QTY.	WIDTH	HEIGHT	PAR.	OPP.	SEALS	ACTUATOR MODEL	INT.	EXT.	N.C.	N.O.	TAG	UNION MADE
		DAMPER SIZE (O.D.)						LOCATION		FUNCTION			

 ARROW UNITED INDUSTRIES A DIVISION OF MESTEK, INC. 314 RIVERSIDE DRIVE WYALUSING, PA 18853 TEL: (570) 746-1888 FAX: (570) 746-9286 AGENT: _____	ARCH./ENG. :
	CONTR. :
	PROJECT :
	EDR: _____ ECN: _____ JOB: _____
	DATE: _____ DWN.: _____ DWG.: _____

CONTROL DAMPER MODEL 1770

PERFORMANCE DATA

RECENT TESTS SHOW VERY EFFICIENT PRESSURE DROP

PRESSURE DROP TESTS ARE BASED ON AMCA STANDARD 500 USING TEST SET-UP
FIGURE 5.3 FOR DAMPERS INSTALLED WITH DUCT UPSTREAM AND DOWNSTREAM.
STATIC PRESSURES ARE CORRECTED TO .075 LB./CU. FT. AIR DENSITY.

MODEL 1770 - PARALLEL - 24" x 24" I.D.

PRESSURE DROP vs. DUCT VELOCITY

DUCT VELOCITY (FPM)	100	200	300	400	500	600	700	800	900	1000	1250	1500	1750	2000	3000	4000	6000
1/4 OPEN				.40	.60	.85	1.20	1.50	1.90	2.30	3.50	5.00					
1/2 OPEN		.025	.052	.088	.13	.18	.25	.33	.42	.50	.80	1.20	1.60	2.10	4.40		
3/4 OPEN					.032	.045	.060	.078	.10	.12	.18	.26	.36	.46	1.10	1.80	
FULL OPEN						.014	.018	.024	.032	.037	.056	.078	.11	.14	.30	.52	

PRESSURE DROP / INCHES OF WATER

MODEL 1770 - OPPOSED - 24" x 24" I.D.

PRESSURE DROP vs. DUCT VELOCITY

DUCT VELOCITY (FPM)	100	200	300	400	500	600	700	800	900	1000	1250	1500	1750	2000	3000	4000	6000
1/4 OPEN			.65	1.15	1.75	2.40	3.30	4.25	5.25	6.50							
1/2 OPEN			.145	.26	.40	.575	.79	1.00	1.30	1.70	2.50	3.60	4.75	6.30			
3/4 OPEN					.059	.080	.115	.145	.18	.22	.345	.475	.65	.85	1.75		
FULL OPEN						.016	.020	.026	.031	.039	.059	.085	.12	.15	.34	.58	1.20

PRESSURE DROP / INCHES OF WATER