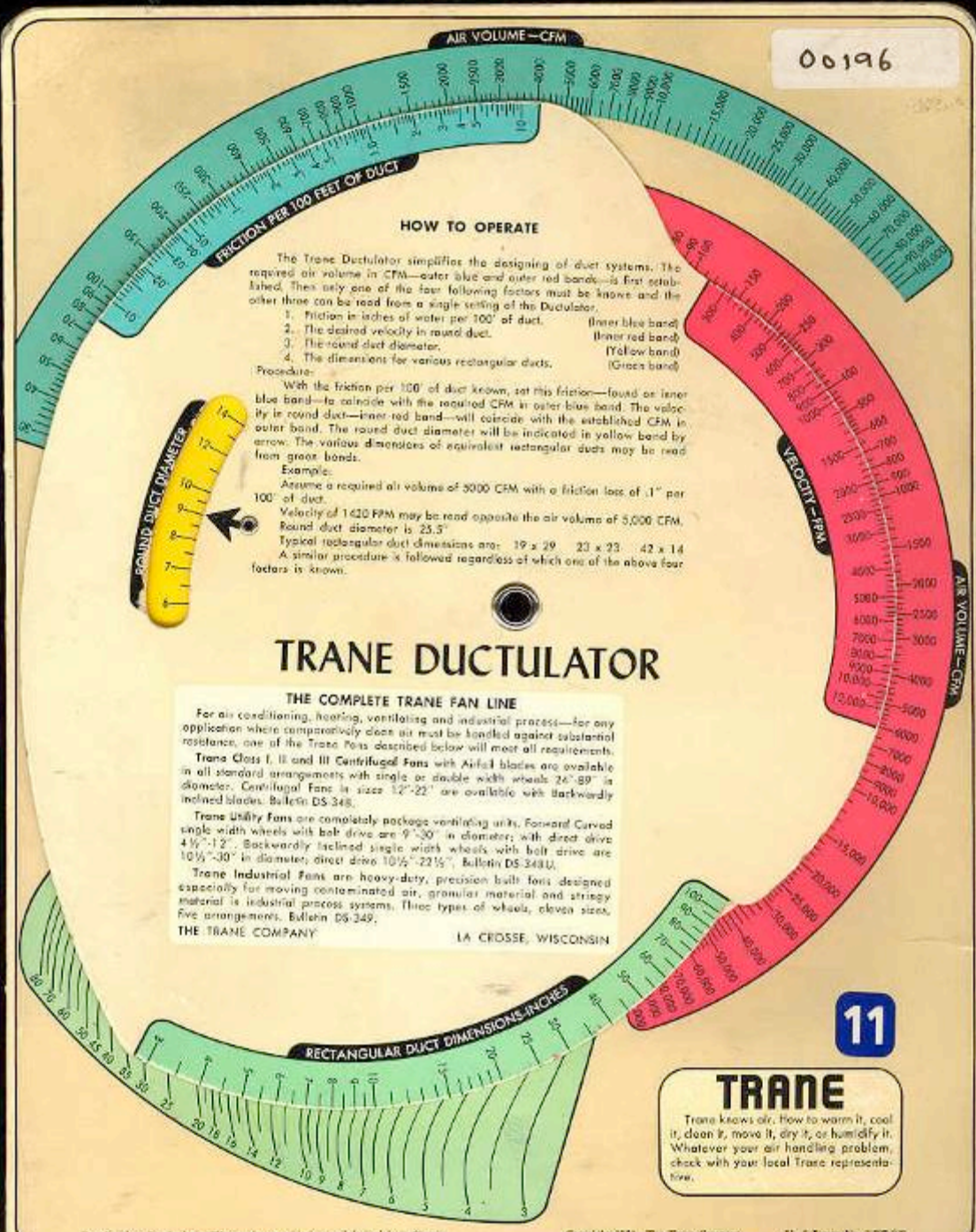


Trane Manual 1938

00196



HOW TO OPERATE

The Trane Ductulator simplifies the designing of duct systems. The required air volume in CFM—outer blue and outer red bands—is first established. Then only one of the four following factors must be known and the other three can be read from a single setting of the Ductulator.

1. Friction in inches of water per 100' of duct. (Inner blue band)
2. The desired velocity in round duct. (Inner red band)
3. The round duct diameter. (Yellow band)
4. The dimensions for various rectangular ducts. (Green band)

Procedure:

With the friction per 100' of duct known, set this friction—found on inner blue band—to coincide with the required CFM in outer blue band. The velocity in round duct—inner red band—will coincide with the established CFM in outer band. The round duct diameter will be indicated in yellow band by arrow. The various dimensions of equivalent rectangular ducts may be read from green bands.

Example:

Assume a required air volume of 5000 CFM with a friction loss of .1" per 100' of duct.
 Velocity of 1420 FPM may be read opposite the air volume of 5,000 CFM.
 Round duct diameter is 25.5"
 Typical rectangular duct dimensions are: 19 x 29 23 x 23 42 x 14
 A similar procedure is followed regardless of which one of the above four factors is known.

TRANE DUCTULATOR

THE COMPLETE TRANE FAN LINE

For air conditioning, heating, ventilating and industrial process—for any application where comparatively clean air must be handled against substantial resistance, one of the Trane Fans described below will meet all requirements.

Trane Class I, II and III Centrifugal Fans with Airfoil blades are available in all standard arrangements with single or double width wheels 26"-89" in diameter. Centrifugal Fan in sizes 12"-22" are available with backwardly inclined blades. Bulletin DS-348.

Trane Utility Fans are completely packaged ventilating units. Forward Curved single width wheels with belt drive are 9"-50" in diameter; with direct drive 4 1/2"-12". Backwardly inclined single width wheels with belt drive are 10 1/2"-30" in diameter; direct drive 10 1/2"-22 1/2". Bulletin DS-348 U.

Trane Industrial Fans are heavy-duty, precision built fans designed especially for moving contaminated air, granular material and stringy material in industrial process systems. Three types of wheels, eleven sizes, five arrangements. Bulletin DS-349.

THE TRANE COMPANY

LA CROSSE, WISCONSIN

11

TRANE

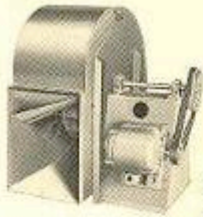
Trane knows air; how to warm it, cool it, clean it, move it, dry it, or humidify it. Whatever your air handling problem, check with your local Trane representative.

Data based on Standard air 70°F, pounds per cubic foot and derived from Chapter 31, Heating, Ventilating, Air Conditioning Guide 1953, used by permission.

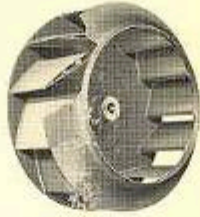
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T-5, Trane No. 2,007,000
Canadian Patent No. 521,002

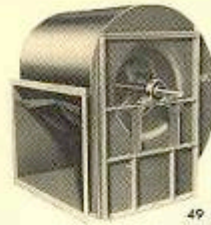
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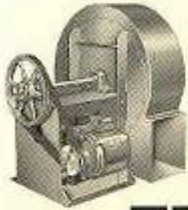
36 AF SW
Arr. 9
Class I



40 AF SW
Class II Fan Wheel



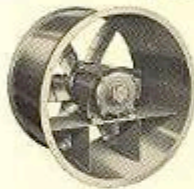
49 AF DW
Arr. 3
Class III



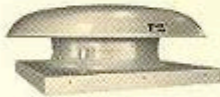
Arrangement 9
Industrial Fan

the complete TRANE FAN LINE

for heating
ventilating
air
conditioning
& industrial
service



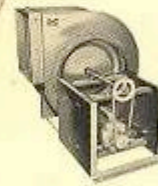
Direct Driven
Duct Fan



Axial Flow
Roof Ventilator



Cutaway
Centrifugal
Roof Ventilator



Belt Driven
Utility Fan

RECOMMENDED AND MAXIMUM DUCT VELOCITIES

DESIGNATION	RECOMMENDED VELOCITIES, FPM			MAXIMUM VELOCITIES, FPM		
	RESIDENCES	SCHOOLS, THEATRES, PUBLIC BUILDINGS	INDUSTRIAL BUILDINGS	RESIDENCES	SCHOOLS, THEATRES, PUBLIC BUILDINGS	INDUSTRIAL BUILDINGS
OUTSIDE AIR INTAKES	500	500	500	800	900	1200
FILTERS*	250	300	350	300	350	350
HEATING COILS*	450	500	600	500	600	700
AIR WASHERS	500	500	500	500	500	500
SUCTION CONNECTIONS	700	800	1000	900	1000	1400
FAN OUTLETS	1000-1600	1300-2000	1600-2400	1700	1500-2200	1700-2800
MAIN DUCT	700-900	1000-1300	1200-1800	800-1200	1100-1600	1300-2200
BRANCH DUCTS	500	600-900	800-1000	700-1000	800-1100	1000-1800
BRANCH RISERS	500	600-700	800	650-800	800-1200	1000-1600

*These velocities are for total face area, not the net free area; other velocities in table are for net free area.

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E. R. STEWART

1950 reverse of Ductulator

TRANE
RECIPROCATING
REFRIGERATION
MANUAL

THE TRANE COMPANY - LA CROSSE, WISCONSIN

1953

TRANE

82

TYPE C CONVECTOR SELECTOR

See Bulletin J-380 for Complete Data

00267

CAPACITY REQUIRED			FORCED HOT WATER 20° TEMP. DROP							
BTU PER HR.	SQ. FT. EDR		STEAM OR VAPOR		20° TEMP. DROP					
	STEAM 240 BTU/HR.	HOT WATER 150 BTU/HR.	215°	180°	190°	200°	210°	220°		
1500	6.25	10.0		4 x 20 x 20 4 x 20 x 24	4 x 20 x 20	4 x 20 x 20				
2000	8.35	13.4	4 x 20 x 20	6 x 20 x 20 4 x 24 x 24	6 x 20 x 20 4 x 24 x 24	4 x 24 x 20 4 x 20 x 24	4 x 20 x 20	4 x 20 x 20		
2500	10.4	16.6	4 x 20 x 24 4 x 24 x 20	6 x 24 x 20 6 x 20 x 24 6 x 20 x 32	4 x 28 x 24 6 x 20 x 20	4 x 24 x 24	4 x 24 x 24	4 x 24 x 24 4 x 20 x 20		
3000	12.5	20.0	4 x 24 x 24	6 x 28 x 20 6 x 24 x 24 6 x 24 x 32	6 x 24 x 20 6 x 20 x 24 8 x 20 x 32	6 x 24 x 20 6 x 20 x 24 4 x 28 x 24	4 x 28 x 24 6 x 20 x 20	4 x 24 x 24 6 x 20 x 20		
3500	14.6	23.3	4 x 28 x 24 6 x 20 x 20	6 x 32 x 20 6 x 28 x 24 6 x 24 x 32	6 x 28 x 20 6 x 24 x 24 6 x 24 x 32	6 x 24 x 20 6 x 24 x 24 6 x 20 x 32	6 x 24 x 20 6 x 20 x 24	4 x 28 x 24 6 x 20 x 20 6 x 20 x 24		
4000	16.7	27.7	6 x 24 x 20 6 x 20 x 24 4 x 28 x 24	6 x 36 x 20 6 x 32 x 24 6 x 28 x 32	6 x 32 x 20 6 x 28 x 24 6 x 24 x 32	6 x 28 x 20 6 x 24 x 24 6 x 24 x 32	6 x 24 x 20 6 x 20 x 24	6 x 24 x 20 6 x 20 x 24 6 x 20 x 32		
4500	18.8	30.0	6 x 24 x 20 6 x 20 x 24 6 x 20 x 32	6 x 40 x 20 6 x 36 x 24 6 x 32 x 32	6 x 36 x 20 6 x 32 x 24 6 x 28 x 32	6 x 32 x 20 6 x 28 x 24	6 x 28 x 20 6 x 24 x 12	6 x 28 x 20 6 x 24 x 24		
5000	20.8	33.3	6 x 28 x 20 6 x 24 x 24 6 x 20 x 32	6 x 44 x 20 6 x 36 x 24 8 x 32 x 20	6 x 40 x 20 6 x 32 x 24 6 x 32 x 32	6 x 36 x 20 6 x 28 x 32	6 x 32 x 20 6 x 28 x 24 6 x 24 x 32	6 x 28 x 20 6 x 24 x 24 6 x 24 x 32		
5500	23.0	36.7	6 x 28 x 20 6 x 24 x 32	6 x 48 x 20 6 x 36 x 32 6 x 40 x 32	6 x 32 x 20 6 x 44 x 20 6 x 36 x 24	6 x 40 x 20 6 x 32 x 32	6 x 36 x 20 6 x 32 x 24 6 x 28 x 32	6 x 32 x 20 6 x 28 x 24 6 x 28 x 32		
6000	25.0	40.0	6 x 32 x 20 6 x 28 x 24 6 x 24 x 32	6 x 44 x 24 6 x 40 x 32 8 x 40 x 20	6 x 44 x 20 6 x 40 x 24 6 x 36 x 32 6 x 32 x 24	6 x 40 x 20 6 x 36 x 24 6 x 32 x 32 6 x 32 x 20	6 x 36 x 20 6 x 32 x 24	6 x 36 x 20 6 x 24 x 24 6 x 28 x 32		
6500	27.1	43.3	6 x 32 x 20 6 x 28 x 24 6 x 28 x 32	6 x 56 x 20 6 x 48 x 24 6 x 44 x 32 8 x 40 x 24	6 x 48 x 20 6 x 44 x 24 8 x 40 x 32	6 x 44 x 20 6 x 40 x 24 6 x 36 x 32 8 x 32 x 24	6 x 40 x 20 6 x 36 x 24 6 x 32 x 32 8 x 32 x 20	6 x 36 x 20 6 x 32 x 24		
7000	29.2	46.7	6 x 36 x 20 6 x 32 x 24 6 x 28 x 32	6 x 48 x 32 8 x 40 x 24 8 x 40 x 32 10 x 40 x 20	6 x 48 x 24 8 x 40 x 20	6 x 48 x 20 6 x 44 x 24 8 x 32 x 32	6 x 44 x 20 6 x 36 x 32	6 x 40 x 20 6 x 32 x 32 8 x 32 x 20		
7500	31.3	50.0	6 x 40 x 20 6 x 36 x 24 6 x 32 x 32	6 x 64 x 20 6 x 56 x 24 8 x 48 x 20 8 x 40 x 32	6 x 56 x 20 6 x 48 x 24 8 x 40 x 32 8 x 40 x 24	6 x 44 x 24 6 x 40 x 32 8 x 40 x 20	6 x 40 x 24 6 x 36 x 32 8 x 32 x 24	6 x 44 x 20 6 x 36 x 24 8 x 32 x 20		
8000	33.4	53.3	6 x 40 x 20 6 x 36 x 24 6 x 32 x 32 8 x 32 x 20	6 x 56 x 32 8 x 48 x 24 10 x 40 x 24	6 x 48 x 32 8 x 48 x 20 8 x 40 x 32	6 x 56 x 20 6 x 48 x 24 6 x 44 x 32 8 x 40 x 20	6 x 48 x 20 6 x 44 x 24 6 x 40 x 32 8 x 32 x 32	6 x 44 x 20 6 x 40 x 24 6 x 36 x 32 8 x 32 x 24		
8500	35.5	56.7	6 x 44 x 20 6 x 32 x 32 8 x 32 x 20	6 x 64 x 24 6 x 56 x 32 8 x 56 x 20	6 x 64 x 20 6 x 56 x 24 8 x 48 x 20	6 x 56 x 20 6 x 44 x 32 8 x 40 x 20	6 x 44 x 24 6 x 40 x 32 8 x 40 x 20	6 x 48 x 20 8 x 32 x 32		
9000	37.5	60.00	6 x 44 x 20 6 x 40 x 24 6 x 36 x 32 8 x 32 x 24	6 x 64 x 24 8 x 56 x 20 8 x 48 x 32	6 x 64 x 20 6 x 56 x 32 10 x 40 x 24	6 x 48 x 32 8 x 40 x 24	6 x 56 x 20 6 x 48 x 24 6 x 44 x 32	6 x 44 x 24 6 x 40 x 32 8 x 40 x 20		
9500	39.6	63.3	6 x 48 x 20 6 x 44 x 24 8 x 32 x 32	6 x 64 x 32 8 x 56 x 24 10 x 48 x 24	6 x 56 x 32 8 x 48 x 24	6 x 64 x 20 6 x 56 x 24 8 x 48 x 20 8 x 40 x 32	6 x 56 x 20 6 x 48 x 32 8 x 40 x 24	6 x 56 x 20 6 x 48 x 24 8 x 40 x 20		

The image shows the front cover of a manual. The cover is a solid, textured blue color. In the center, the word "TRANE" is printed in a large, stylized, outlined font. Below it, the words "Air Conditioning Manual" are printed in a smaller, white, serif font. The entire cover is framed by a thin red border.

TRANE
Air Conditioning Manual

1965

Robert F-2
TRANE[®]

Acoustics in Air Conditioning

9



M-ACQU

1969

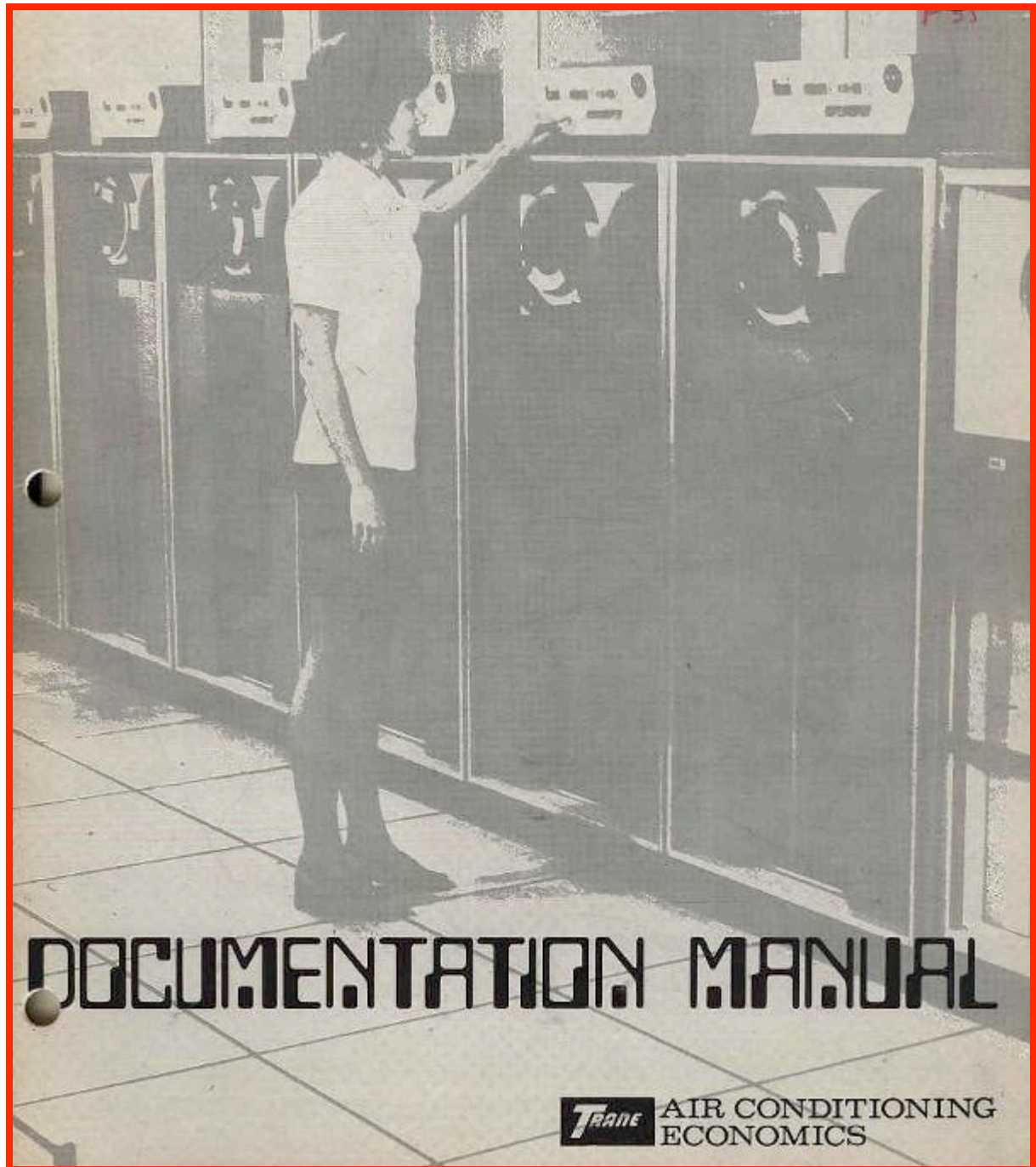
fans and their application in air conditioning



TRANE
AIR CONDITIONING

APPLICATIONS ENGINEERING SEMINAR

1971



DOCUMENTATION MANUAL

TRANE AIR CONDITIONING
ECONOMICS

1972



conserve energy by design



APPLICATIONS ENGINEERING MANUAL



AS LONG AS THERE ARE SEASONS

A10 CI 010 N