Model 76 Ultrasonic Tube and Bar Testers

The Model 76 family of tube and bar testers employs continuous rotary feed of round material through a glanded water filled test tank. Fixed, multi-axis transducer positioners in the Model 45 series can be mounted on the tank. These are used in conjunction with multi-wheeled in-tank supports for testing small diameter flexible material. For testing larger material which might not be perfectly straight, air-actuated tube and bar followers, such as the Model 411A, can be attached to the same tank mounting rails used to hold fixed transducer positioners when they are used.

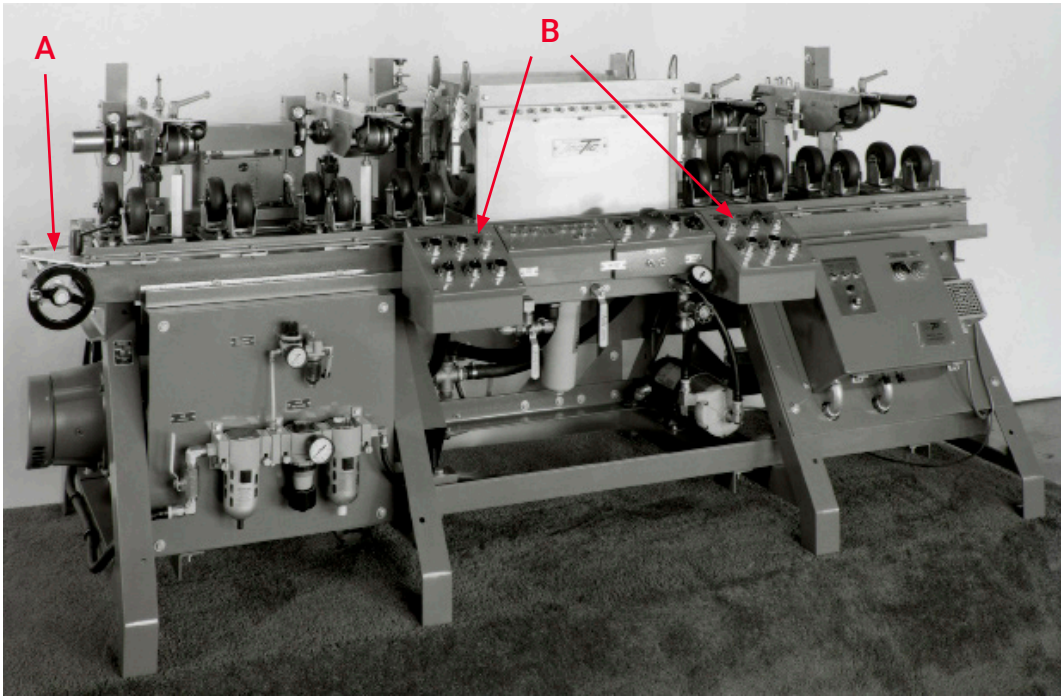
Four basic models of testers are available in this series. These provide a full range of test capability from the lightest to heaviest duty applications. A wide choice of conveyors (Model 600 Series “Idler” Sections) and accessories is available to equip these machines for special testing jobs and various degrees of automatic operation.

Rotary speed and scan pitch (linear advance per revolution of material) are continuously and independently adjustable. Material size changes are accommodated with the utmost ease and a minimum of “down time” because of the simple rubber glanding system in the test tank and coordinated idler wheel angulation control.

All standard TacTic Model 76 series testers include the following features as shown in the photo:

A. “One-knob” Angulation Control

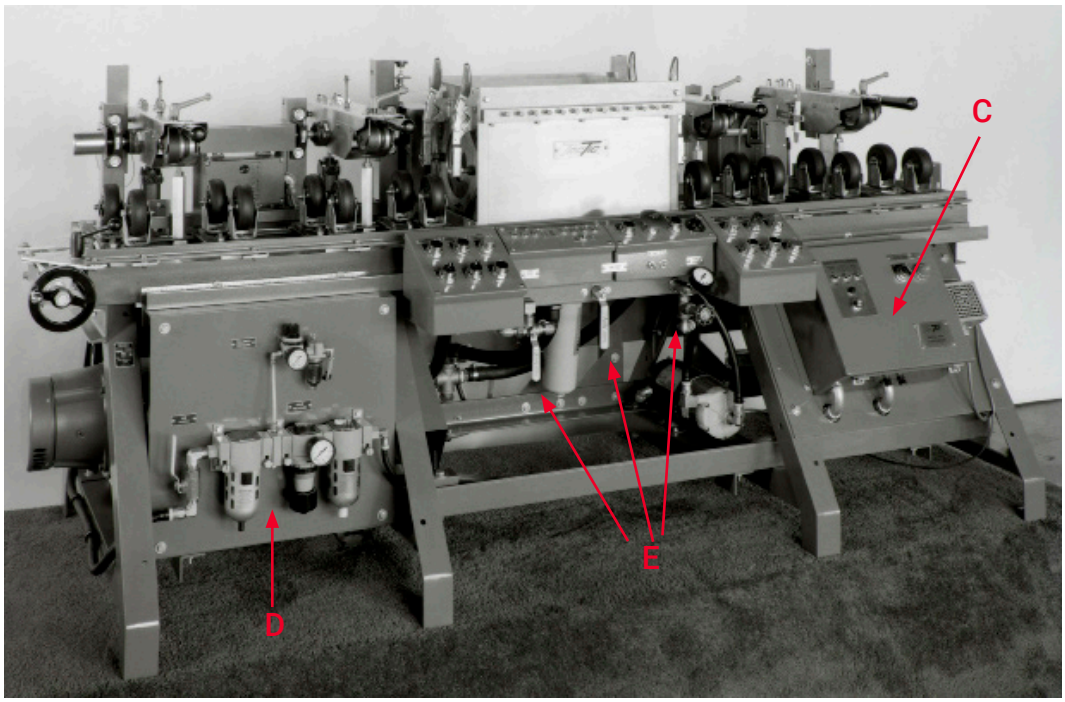
All TacTic testers and idler sections contain a single hand wheel control for idler wheel angulation. This provides adjustment accuracy and is a tremendous time saver when making new “set-ups” or size changes. All angulation controls are clearly calibrated.



Model 76E 3HP Standard-Duty Tester with Model 764-18 (18 inch) Test Tank

B. “Human Engineered” Control Panel

The Model 83 Control Console is designed to permit the operator to stand close to the machine when performing set-ups or making instrument adjustments. Forward and reverse controls are pushbuttons. This reduces the chance of accidental operation. Switches are provided for raising and lowering drive units and followers and to control the water pump. In addition, a large Emergency Stop Button is located where it can be readily activated. Controls for all conveyor system functions such as loading, unloading and sorting are grouped for easy access in logical sequence.



Model 76E 3HP Standard-Duty Tester with Model 764-18 (18 inch) Test Tank

C. Alarm Control Center with "Unitized Construction"

The Model 29A Controller combines in one unit the drive motor control circuits, alarm accessories and some additional features. These include audible and "machine-stop-on-defect" alarm functions and a convenient automatic "recorder stop" feature which allows a strip chart recorder to run only when test material is being driven in the forward direction. This avoids superfluous indications which would otherwise be produced when reversing the tester during defect analysis.

For applications which do not require the alarm control features, the Model 29 Motor Controller may be substituted. This includes the motor control relays with isolated 120 volt supply for the push-button controls.

D. "Air-Function" Control Panel

A separate, front-mounted, control panel contains the shut-off valve, filter, regulators, lubricators and pressure gauges for pneumatic functions on the tester. These include raising and lowering the drive units and followers. The arrangement and location of this panel provides for convenient operation and maintenance.

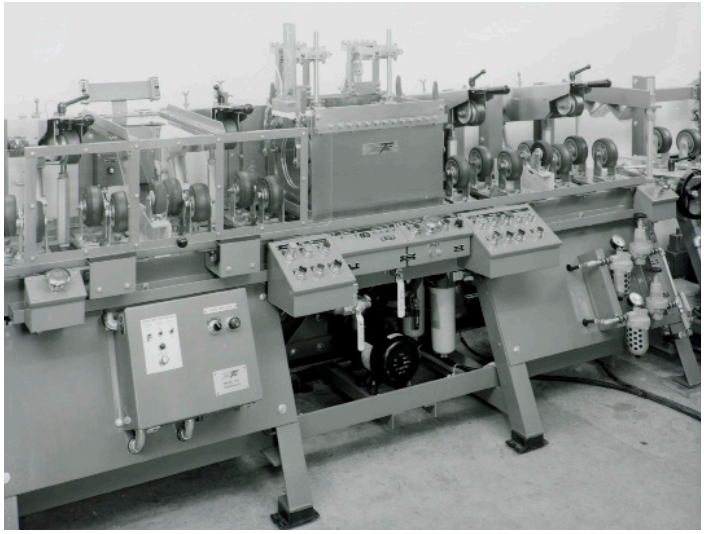
E. Conveniently Located Water Supply Functions

Water inlet, recirculation and drain valves and the water strainer and filter are located for easy access from the front of the tester. Valves with large orifices, and hoses and fittings of large diameter, are provided for fast tank filling. Switching the pump from recirculating to filling service is accomplished by operating only one V4-turn ball valve.

Magnetic Analysis Corporation ~ 103 Fairview Park Drive, Elmsford, New York 10523-1544 USA ~
Tel +1-914-530-2000 ~ info@mac-ndt.com ~ **www.mac-ndt.com**

Heavy-Duty Testers

"Standard-Duty" testers (Model 76E) may be used for occasional pieces which exceed the weight limitations indicated in the table of specifications. However, for full production use on larger and heavier tubes and bars, the "Heavy-Duty" Models 76F and 76FB are more appropriate. These have larger drive and idler wheels, a more rugged frame and more powerful drive motors. They are in daily use in many countries testing solid bars to 5 inches (127 mm) in diameter, and even an occasional 6 inch (152 mm) piece, and pipes and tubes of similar weights and even larger diameters.



Model 76FB 7 1/2 HP Heavy-Duty Tester with 18" (457 mm) tank and special input guard

SPECIFICATIONS (ALL MODEL76 SERIES TESTERS)	
Helical Scan Pitch Angle	0-18° (This provides maximum pitch = material diameter for diameters over 1 inch)
Direction of Feed	Left-to-right or Right-to-left
Construction	Stainless steel tank, idler wheel plates and drive unit housings; painted steel frame and plated steel drive shafts and pulleys
Power Requirements	230/460 V. 3-phase, 60 Hz standard. 50 Hz and other voltages available)
Tank Lengths (inside)	6, 111/2, 15, 18, 24, 30 inches (152, 292, 381, 457, 610, 762 mm)
Tank Depths (inside)	Models 76D, E: 13" (330 mm) - Models 76F, FB: 141/4" (362 mm); 16- 3/4" (425 mm)

MODEL NO.	76-	76E	76F	76FB
Motor Horsepower	1 1/2	3	5	7 1/2
Test Material Size Range (with appropriate tank)	1/8" - 6" (3 - 150 mm)	1/8" - 6" (3 - 150 mm)	5/8" - 8-5/8" (16 - 220 mm)	5/8" - 8-5/8" (16 - 220 mm)
Recommended Maximum Weight of Test Material	6 lbs./ft. (9 KG/M)	20 lbs./ft. (30 KG/M)	40 lbs./ft. (60 KG/M)	70 lbs./ft. (105 KG/M)
Net Length (Add inside tank depth for overall height)	76 1/2" (1945 mm)	76 1/2" (1945 mm)	89 1/2" (2275 mm)	89 1/2" (2275 mm)
Net Height (Add inside tank depth for overall height)	34" ± 1 1/4" (860 ± 30 mm)	34" ± 1 1/4" (860 ± 30 mm)	32 1/4" (820 mm)	32 1/4" (820 mm)
Overall Depth	36" (915 mm)	36" (915 mm)	43" (1095 mm)	43" (1095 mm)
Approximate Shipping Weight (with 18" tank)	1300 lbs. (590 Kg)	1800 lbs. (820 Kg)	2900 lbs. (1315 Kg)	3000 lbs. (1360 Kg)

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