



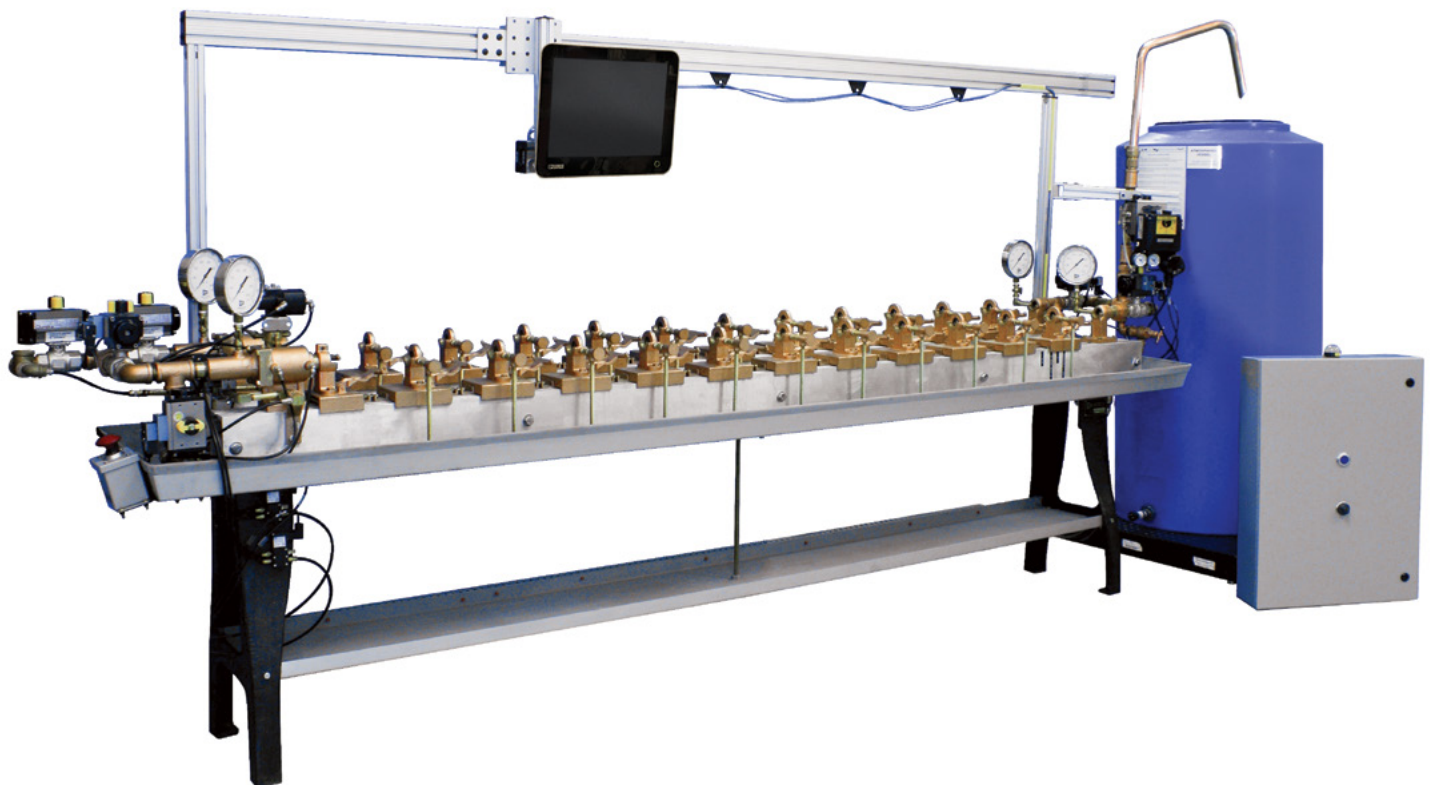
THE FORD METER BOX COMPANY, INC.  
CERTIFIED TO ISO 9001:2015  
10002505

# Section **K**

12/2018

Web Revision 01/21/2020

# Ford<sup>®</sup> Water Meter Test Benches and Accessories



# Ford Water Meter Testing Equipment

## Contents

Why Test Water Meters? . . . . .	3
How to Select Meter Testing Equipment. . . . .	4 - 5
Test Bench Models . . . . .	6 - 7
Ford Standard Test Bench . . . . .	8 - 9
Ford Indianapolis Test Bench . . . . .	10 - 11
Ford Akron Test Bench. . . . .	12 - 13
The Ford Combination Test Bench . . . . .	14 - 15
AMS Automated Measuring System . . . . .	16 - 17
Test Bench Options and Accessories . . . . .	18 - 23
Auto-Stop . . . . .	18
Testerate Indicators / Digital Indicator Outlet . . . . .	19
Calibrated Test Tanks . . . . .	20
Test Bench Recirculating System . . . . .	21
Test Clamps . . . . .	22
Warranty . . . . .	24

The Ford Test Bench is a versatile product and can easily be customized to meet the needs of your meter testing facility. For configurations not listed, please contact the Ford factory or your local Ford Meter Box representative.

The information in this catalog is correct at the time of publication. Item and option availability, including specifications, are subject to change without notice. Items in this catalog section are not returnable and are subject to cancellation charges.

Ford, Ford Meter Box and Uni-Flange are trademarks of The Ford Meter Box Company, Inc. registered in the U.S.

# Why Test Water Meters?

## What Meter Accuracy Means in Dollars and Cents

The accuracy of a water meter is a matter of dollars and cents to the customer and the utility. Over-registration charges customers for water they never received while under-registration denies the utility of its due revenue. Wide variations in the accuracy of meters in a water system means unfair charges to water users and under-registration results in a loss of revenue to the water works.

Some states have adopted regulations that specify limits between meter tests in water utilities, both in time and in volume of water. These limits are necessarily broad, as the composition of water and its effects on meters varies widely in any state. Many utilities profitably test and repair meters more frequently than required by regulation. However, these regulations do show the growing realization that meter testing is important.

## Meter Accuracy and Unaccounted for Water

An important factor in water plant operations is the percentage of "lost" or unaccounted for water. It is determined by deducting total water sales from total production, with allowance for unmetered use, and expressing the difference as a percentage of the total.

There are numerous ways in which water is lost, but many agree meter under-registration, or meter "slip" as it is frequently called, is a major source of water loss. This is particularly true in utilities metered many years ago and that do not have a current meter testing program in place. It is important to remember the close relationship between meter registration and revenue and how much an overall meter accuracy improvement of only a few percent means in revenue.



*A tiny flow of a 1/4 of a gallon per minute will total 360 gallons in a day. The volume of unregistered water that can slip past a meter in poor condition can quickly add up.*

# How to Select Meter Testing Equipment

Selecting proper meter testing equipment can depend on a lot of factors but the main points to consider are size of meter, number of meters in the system that need tested and space available in the meter shop. For the small meter shop with a few meters to test, a single unit bench is adequate, although upgrading to a multi-station bench can offer savings in time and water usage at a small incremental charge.

Additionally, selecting the proper size water tank also depends on similar criteria. Knowing the floor space available in the meter shop is just as important as knowing the size of meter and the flow rate for the test. Conducting a high flow test through a 2" meter will necessitate a much larger tank than performing low flow tests through small 5/8" meters. In cases where both tanks are required, the test bench has a swing arm discharge pipe that will allow usage of multiple test tanks.

For assistance with your meter testing needs, contact your local Ford distributor or your Ford Meter Box Company representative.

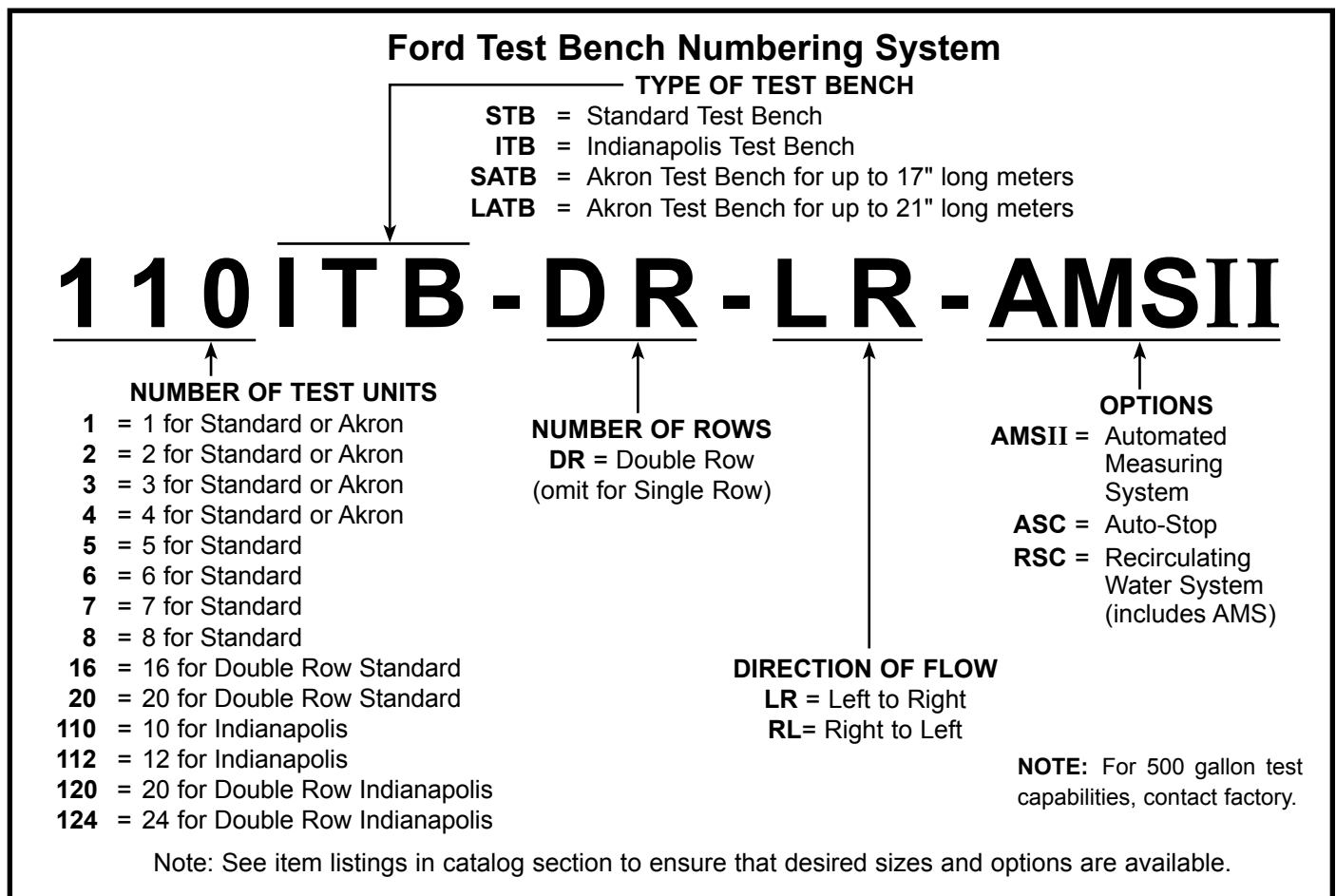


# How to Select Meter Testing Equipment

Another factor to consider in meter test bench selection is manual clamping versus automated clamping. While the Standard Meter Test Bench and the Akron Meter Test Bench both clamp the meters manually, the Indianapolis Meter Test Bench automates the clamping of the meters using hydraulic clamps. This can save a great deal of time when testing many meters.

For advanced controls, Ford offers additional tools for test bench automation. The Ford Auto-Stop is designed to automate testing operations and provide a wide range of flow tests, including low flow tests. With a joystick controller, a meter test can be initiated simply and run unattended as the water will shut off automatically at the end of the test.

For superior computer automation, the Automated Measuring System (AMS) option adds not only the benefit of stopping the test once the water meets a predetermined water volume, but it also includes a menu driven touchscreen controller, scaled tanks and the ability for electronic output of test result data.



# Test Bench Model Overview

## Ford Standard Test Bench

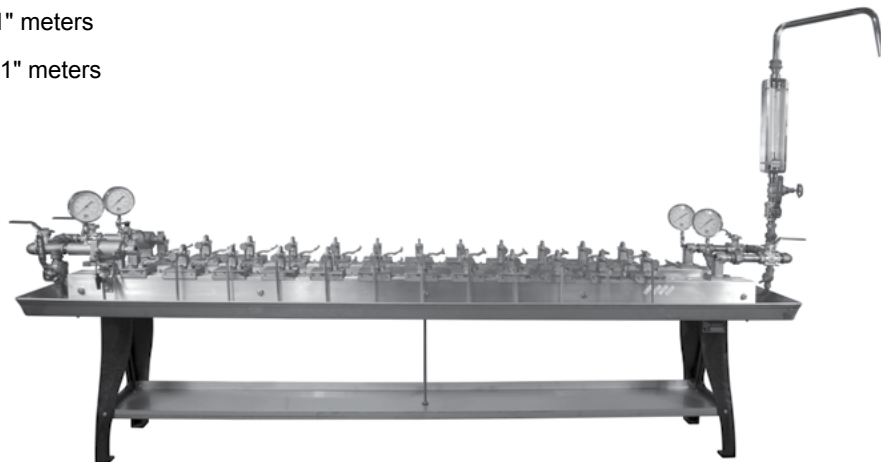
- Available in single row or double row configurations
- For testing 5/8", 5/8" x 3/4", 3/4" and 1" meters
- Adapters included for all 5/8" through 1" meters



---

## Ford Indianapolis Test Bench

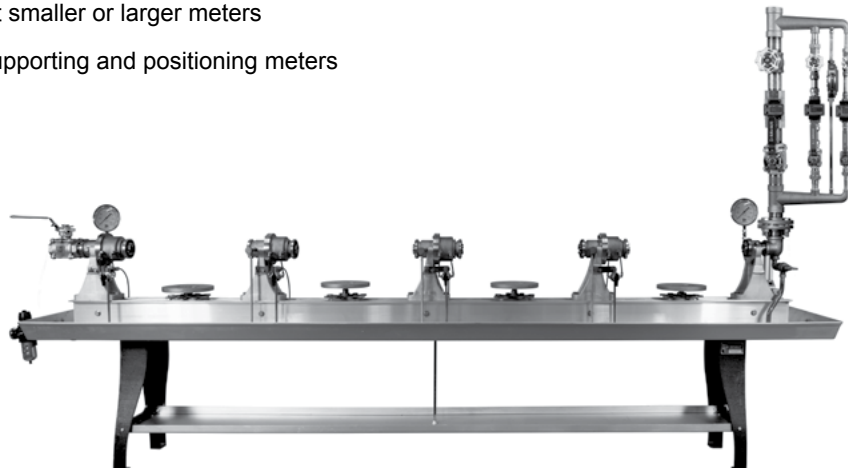
- Available in single row or double row configurations
- For testing 5/8", 5/8" x 3/4", 3/4" and 1" meters
- Adapters included for all 5/8" through 1" meters
- Hydraulic clamping of all meters



---

## Ford Akron Test Bench

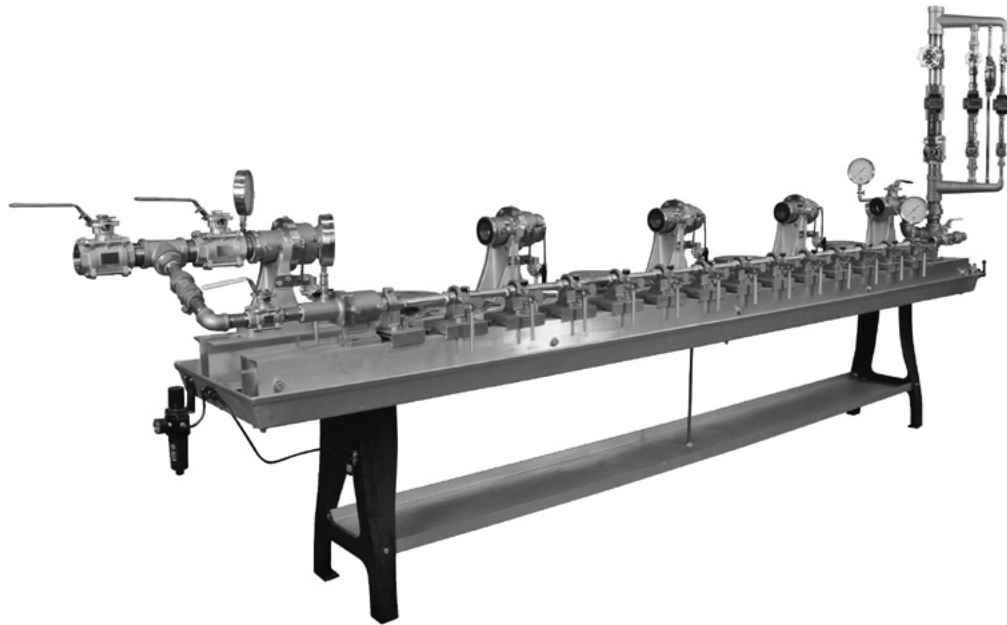
- Designed for testing 1-1/4" through 2" meters
- Optional adapters available to test smaller or larger meters
- Includes an adjustable plate for supporting and positioning meters



# Test Bench Model Overview

## Ford Combination Test Bench

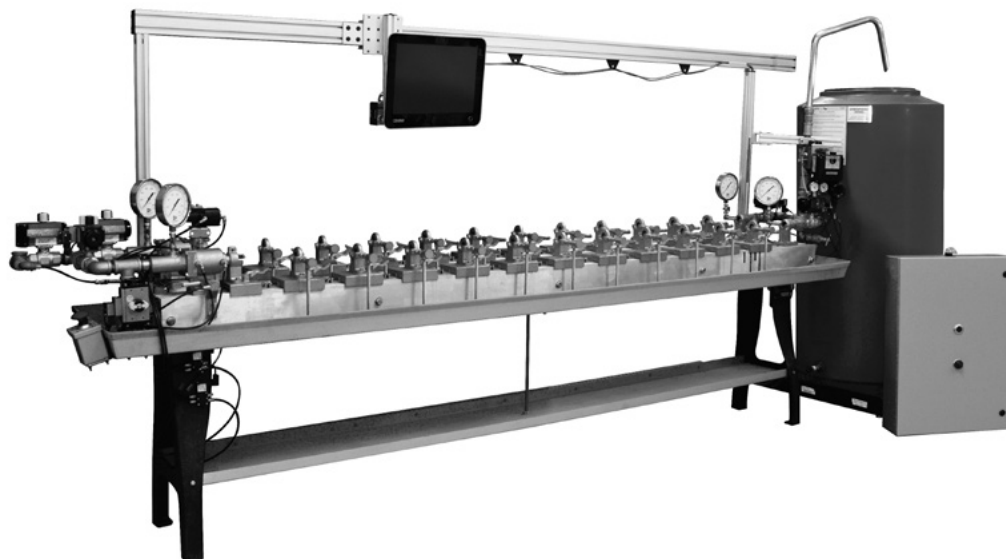
- Combines the Indianapolis and Akron Test Benches into one bench
- Saves time and space by providing the ability to test 5/8" - 2" meters on a single bench



---

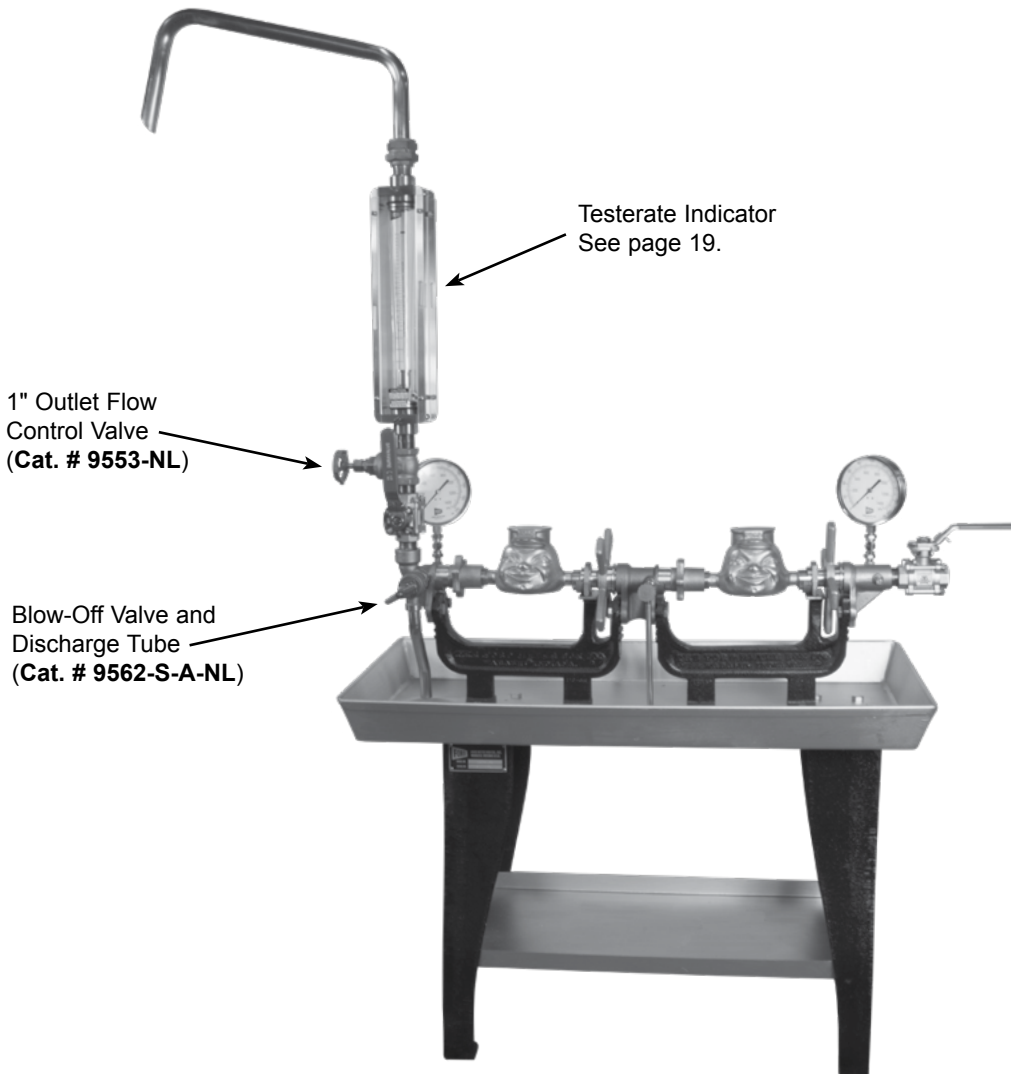
## Ford Automated Measuring System (AMS)

- For automation of manual testing processes
- Touch screen monitor slides across the bench for easy access to data input
- Available for all Ford benches
- Available for new benches or as a retrofit kit for existing benches



# Ford Standard Test Benches

Ford Standard Test Benches are available in a wide range of capacities and with a variety of convenient accessories.



Bench shown is a 2STB-RL Standard Test Bench with right to left water flow.

## Features of Ford Standard Test Benches

- Benches are available for holding from one to eight meters. Double benches can be made with units in two rows, allowing for up to sixteen meters.
- All water passages are brass, except inlet and outlet valves (stainless steel). Test Bench pans are made of stainless steel.
- Any meter can be removed and replaced without disturbing the others. Inlet and outlet piping remains stationary.
- Optional Tester Clamp is available for testing 1-1/4", 1-1/2" and 2" meters – see page 22.
- Each meter is easily clamped water tight between rubber gaskets by turning a hand wheel. There is no excessive force to distort the meter casing.
- Each test bench unit is quickly adaptable to hold a 5/8", 5/8"x3/4", 3/4" or 1" meter.
- The Testerate Indicator, shown on the bench above and described on page 19, indicates accurately the rate of test flow and permits flow control by adjustment of the outlet valve.



# Ford Standard Test Benches

## Standard Test Benches include the following:

1. Adapters and gaskets for 5/8", 5/8"x3/4", 3/4" and 1" meters
2. Ball valve at inlet and outlet
3. Testrate Indicator (see page 19)
4. Pressure gauges at inlet and outlet of each row
5. Bleeder or adjusting valve at outlet of each unit
6. A drain valve at bench outlet
7. 18" copper swinging discharge pipe at outlet
8. Idlers for all but one meter testing station

On all benches, the inlet valve is tapped for a 1" pipe connection.

**Not included:** Calibrated tanks (see page 20).

CATALOG NUMBER		NUMBER OF UNITS	LENGTH OF PAN	WIDTH OF PAN	APPROX. SHIP. WT. LBS.
FLOW LEFT TO RIGHT	FLOW RIGHT TO LEFT				
SINGLE ROW STANDARD TEST BENCHES					
1STB-LR	1STB-RL	1	22"	14"	200.0
2STB-LR	2STB-RL	2	38"	16-1/2"	290.0
3STB-LR	3STB-RL	3	54"	16-1/2"	360.0
4STB-LR	4STB-RL	4	70"	16-1/2"	430.0
5STB-LR	5STB-RL	5	86"	16-1/2"	490.0
6STB-LR	6STB-RL	6	102"	16-1/2"	530.0
8STB-LR	8STB-RL	8	134"	16-1/2"	610.0
DOUBLE ROW STANDARD TEST BENCHES					
8STB-DR-LR	8STB-DR-RL	8	76"	20"	—
16STB-DR-LR	16STB-DR-RL	16	140"	20"	—

## Ordering Information – Options Available

Please order by Catalog Number from the table above. (Picture on page 8 shows bench with water flow from right to left.)

## Options Available for the Standard Test Bench

### Calibrated Water Tanks

Ford offers a wide variety of water tanks for use with our test benches. Refer to page 20 for details and part numbers.

### AMS

Automate the testing process with the next generation Automated Measuring System (AMS). This valuable innovation revolutionizes meter testing by automating manual operations. Order by adding "-AMS" to the end of the part number. See pages 16 and 17 for details.

### Tester Clamp

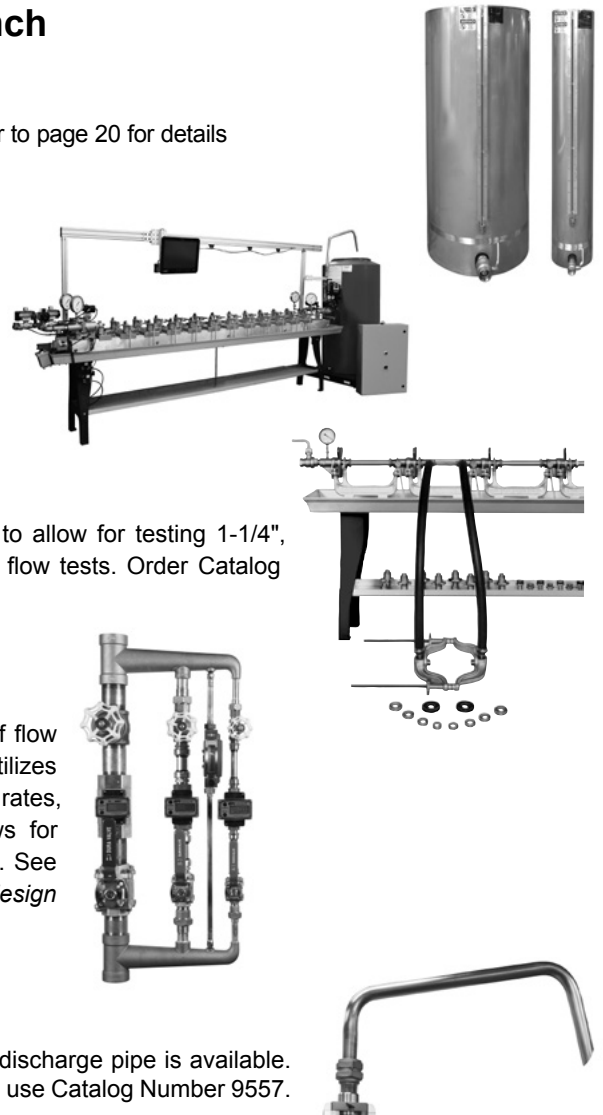
The optional Tester Clamp quickly adapts to any Standard Test Bench to allow for testing 1-1/4", 1-1/2" and 2" meters at minimum and intermediate (36 gpm maximum) flow tests. Order Catalog Number TC (see page 22).

### Auto-Stop

Designed to automate testing operations and to provide a wide range of flow tests without the need for a computerized system, the Ford Auto-Stop utilizes a single joystick control to perform three user-adjusted (preset) flow rates, automatically stops the test at pre-determined tank levels, and allows for the joystick control to stop and start tests as well as drain the test tank. See page 18 for ordering information. *Photograph at right depicts new design projected for 2019 release.*

### Extended Length Discharge Pipe

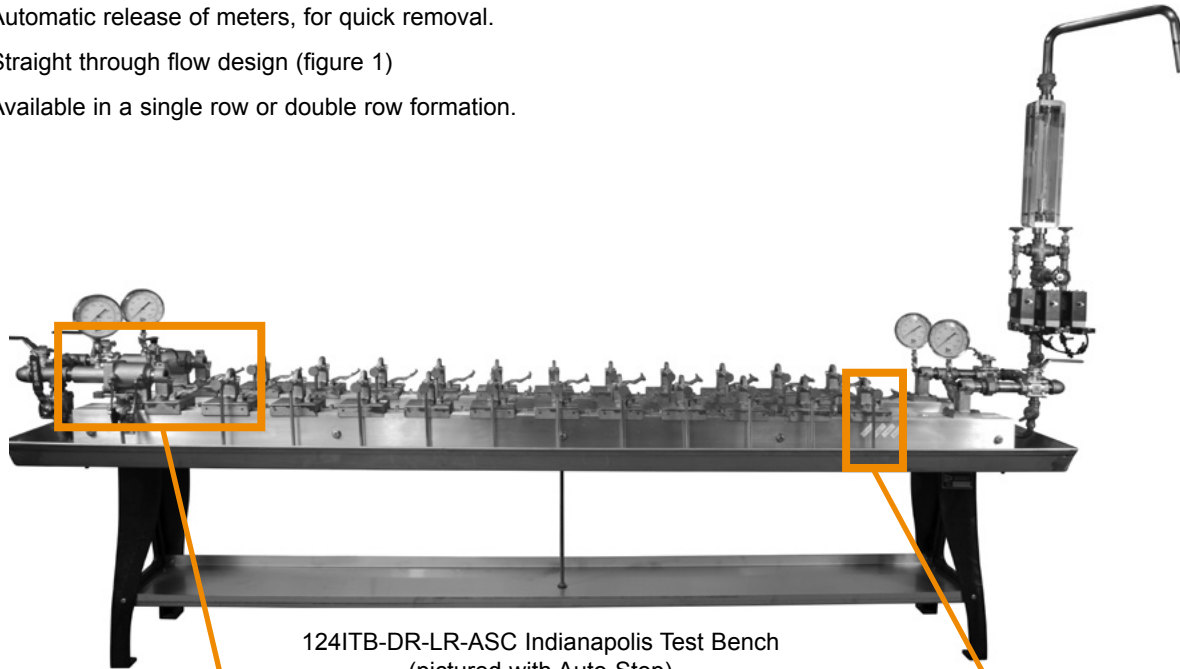
For positioning water tanks further from the bench, an optional 24" long discharge pipe is available. Order Catalog Number 9558. To order a standard 18" long discharge pipe, use Catalog Number 9557.



# Ford Indianapolis Type Test Benches

The Indianapolis Test Bench provides maximum efficiency for testing 5/8", 5/8"x3/4", 3/4" and 1" meters.

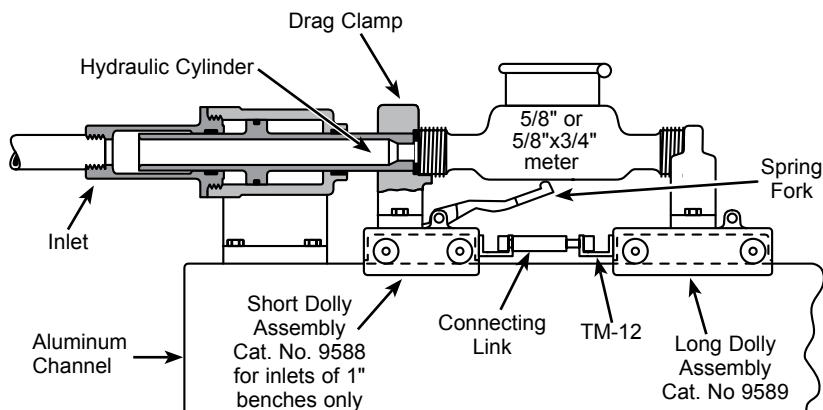
1. Automatically sets proper spacing for meters using spring forks to hold the meters upright for fast and easy insertion.
2. Pressure compensating hydraulic clamping of all meters with single valve operation, providing adequate, but not excessive, pressure for water tightness.
3. Automatic release of meters, for quick removal.
4. Straight through flow design (figure 1)
5. Available in a single row or double row formation.



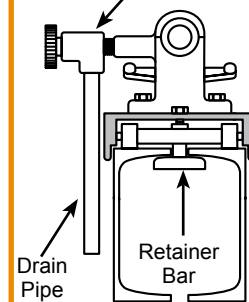
124ITB-DR-LR-ASC Indianapolis Test Bench  
(pictured with Auto-Stop)

Meters are supported in saddles mounted on roller dollies, free to move easily along aluminum tracks. Motion of the dollies is limited by links that control spacing of saddles for the meters to be tested. Time for loading and unloading meters in the test bench is reduced to a minimum.

Figure 1



Bleeder valve assembly with drain pipe to adjust the initial reading of each meter to an exact mark before the test is started



# Ford Indianapolis Type Test Benches

## Indianapolis Test Benches include the following:

1. Hydraulic cylinder at inlet for clamping of meters
2. Ball valve at inlet and outlet
3. Testrate Indicator (see page 19)
4. Pressure gauges at inlet and outlet of each row
5. Bleeder or adjusting valve at outlet of each unit
6. Drain valve at outlet of bench
7. 18" copper swinging discharge pipe
8. All necessary gaskets and adapters for testing
9. Idlers for all but one meter testing station

**Not included:** Calibrated tanks (see page 20).

Inlet valve is tapped for 1" pipe connection.

NOTE: The Double Row Indianapolis Test Bench for 5/8", 5/8"x3/4", 3/4" and 1" meters (124ITB-DR) has two rows of test stations that are plumbed so the two rows can be tested in series, or each row tested separately.

The 110 and 112 Indianapolis Test Benches can be used for efficient testing of 1" and smaller meters. The 110ITB style bench holds six 1", seven 3/4" or ten 5/8" or 5/8"x3/4" meters. The 112ITB style bench holds eight 1", ten 3/4" or twelve 5/8" or 5/8"x3/4" meters. All adapters are included, and the benches can be changed from one size to another in less than five minutes. Each change must be complete; these benches are not functional to a mixture of meter sizes.

INDIANAPOLIS TEST BENCHES FOR 5/8", 5/8"x3/4", 3/4" AND 1" METERS

CATALOG NUMBER		NUMBER OF UNITS	LENGTH OF PAN	WIDTH OF PAN	APPROX. SHIP. WT. LBS.
FLOW LEFT TO RIGHT	FLOW RIGHT TO LEFT				
SINGLE ROW INDIANAPOLIS TEST BENCHES					
110ITB-LR	110ITB-RL	10	102"	16-1/2"	650.0
112ITB-LR	112ITB-RL	12	118"	16-1/2"	700.0
DOUBLE ROW INDIANAPOLIS TEST BENCH					
120ITB-DR-LR	120ITB-DR-RL	20	108"	20"	1000.0
124ITB-DR-LR	124ITB-DR-RL	24	124"	20"	1000.0

**Note:** For configurations not listed above, contact the factory.

## Options Available for the Indianapolis Test Bench

### Calibrated Water Tanks

Ford offers a wide variety of water tanks for use with our test benches. Refer to page 20 for details and part numbers.

### AMS

Automate the testing process with the next generation Automated Measuring System (AMS). This valuable innovation revolutionizes meter testing by automating manual operations. Order by adding "AMS" to the end of the part number. See pages 16 and 17 for details.

### Tester Clamp

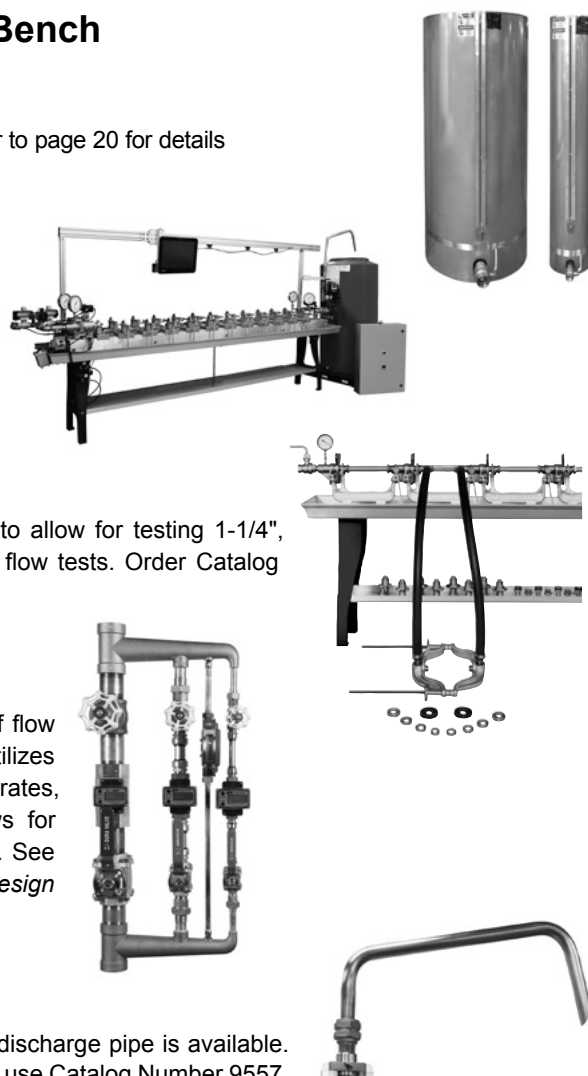
The optional Tester Clamp quickly adapts to any Standard Test Bench to allow for testing 1-1/4", 1-1/2" and 2" meters at minimum and intermediate (36 gpm maximum) flow tests. Order Catalog Number TC (see page 22).

### Auto-Stop

Designed to automate testing operations and to provide a wide range of flow tests without the need for a computerized system, the Ford Auto-Stop utilizes a single joystick control to perform three user-adjusted (preset) flow rates, automatically stops the test at pre-determined tank levels, and allows for the joystick control to stop and start tests as well as drain the test tank. See page 18 for for ordering information. *Photograph at right depicts new design projected for 2019 release.*

### Extended Length Discharge Pipe

For positioning water tanks further from the bench, an optional 24" long discharge pipe is available. Order Catalog Number 9558. To order a standard 18" long discharge pipe, use Catalog Number 9557.

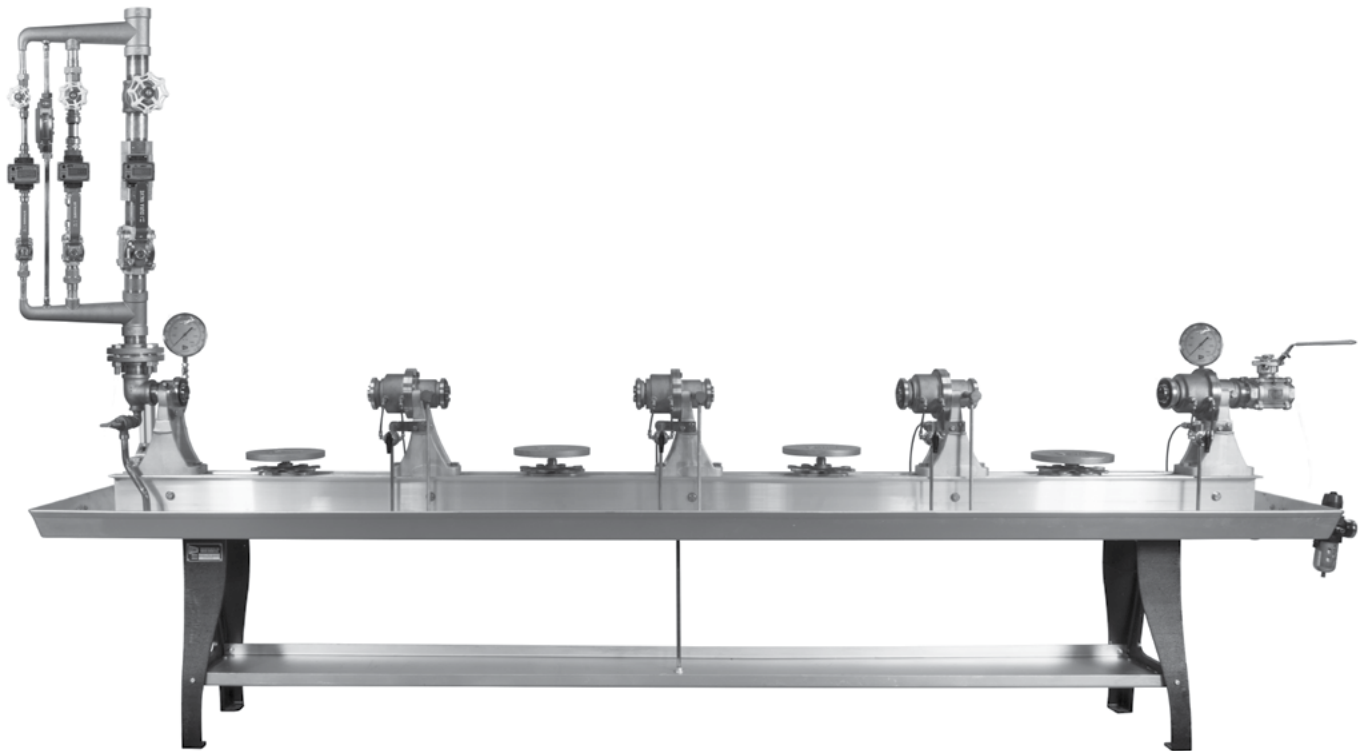


# Ford Akron Type Test Benches

## For Large Meters

Akron Test Benches are designed primarily for testing 1-1/4" through 2" meters but can hold smaller sizes with optional adapters. Benches are available for testing from one to four meters at a time. Each unit includes an adjustable plate for supporting and positioning the meters and a hydraulic cylinder for clamping the meter water tight. Benches are made in two models: the S style for testing up to 2" disc type meters 17" long, and the L style for testing up to 2" compound meters 21" long.

Each bench includes adapters for 1-1/4", 1-1/2" and 2" meters. Optional adapters, not included, are available for 1" meters (Catalog Number AD-4), 3/4", 5/8"x3/4" and 5/8" meters (Catalog Number AD-3S or AD-3L).



4SATB-RL Akron Test Bench

**Note:** In testing 5/8" and 5/8" x 3/4" meters (both 7-1/2" long), place two meters in each space with an optional removable center support. Place two 3/4" meters in each space on the L style bench and only one per space on the S style. If a large number of 5/8" through 1" meters are to be tested, we recommend a Standard or Indianapolis Type Bench. Akron Benches are designed for only occasional testing of small meters.

# Ford Akron Type Test Benches

## Akron Test Benches include the following:

1. Hydraulic clamping cylinder and adjustable pedestal for each meter test space
2. 2" valve at inlet and outlet
3. Bleeder, or adjusting valve, at outlet of each unit
4. Pressure gauges at inlet and outlet of each row
5. Digital Indicator Outlet for easy and accurate flow control with flow adjusting valve at bench outlet
6. All necessary adapters and gaskets for 1-1/4", 1-1/2" and 2" meters
7. 2" idlers for all but one meter testing station
8. Globe style blow-off valve at outlet of bench

Inlet valve is tapped for 2" pipe connection.

**NOT INCLUDED:** Discharge pipe (see below), calibrated test tanks (see page 20) and adapters for 5/8" through 1" meters.

CATALOG NUMBER		No. OF UNITS	MAXIMUM LENGTH OF METER	LENGTH OF PAN	WIDTH OF PAN	APPROX. SHIPPING Wt. LBS.
FLOW LEFT TO RIGHT	FLOW RIGHT TO LEFT					
1SATB-LR	1SATB-RL	1	17"	54"	16-1/2"	550.0
2SATB-LR	2SATB-RL	2	17"	70"	16-1/2"	700.0
3SATB-LR	3SATB-RL	3	17"	102"	16-1/2"	880.0
4SATB-LR	4SATB-RL	4	17"	134"	16-1/2"	990.0
1LATB-LR	1LATB-RL	1	21"	54"	16-1/2"	600.0
2LATB-LR	2LATB-RL	2	21"	86"	16-1/2"	750.0
3LATB-LR	3LATB-RL	3	21"	118"	16-1/2"	940.0
4LATB-LR	4LATB-RL	4	21"	134"	16-1/2"	1090.0

## Ordering Information – Options Available

Please order by catalog number. Indicate desired direction of flow – right to left or left to right as operator faces bench. (Picture on page 12 shows flow as right to left). Specify adapters for 5/8", 5/8"x3/4", 3/4" and 1" meters if desired. Akron Benches include the Digital Indicator Outlet (See page 19).

**Note:** For configurations not listed above, contact the factory.

## Options Available for the Akron Test Bench

### Calibrated Water Tanks

Ford offers a wide variety of water tanks for use with our test benches. Refer to page 20.



### Auto-Stop

Designed to automate testing operations and to provide a wide range of flow tests without the need for a computerized system, the Ford Auto-Stop utilizes a single joystick control to perform three user adjusted (preset) flow rates, automatically stops the test at pre-determined tank levels, and allows for the joystick control to stop and start tests as well as drain the test tank. See page 18 for ordering information.



### Tester Clamp

The optional Tester Clamp quickly adapts to any Akron Test Bench to allow for testing 3", 4" and 6" meters at minimum and intermediate (160 gpm maximum) flow tests. Order Catalog Number TC-A (see page 22).



### Extended Length Discharge Pipe

2" Swing Discharge Pipe with 24" reach (complete with swivel union) is available. Catalog Number SDP-7-NL.



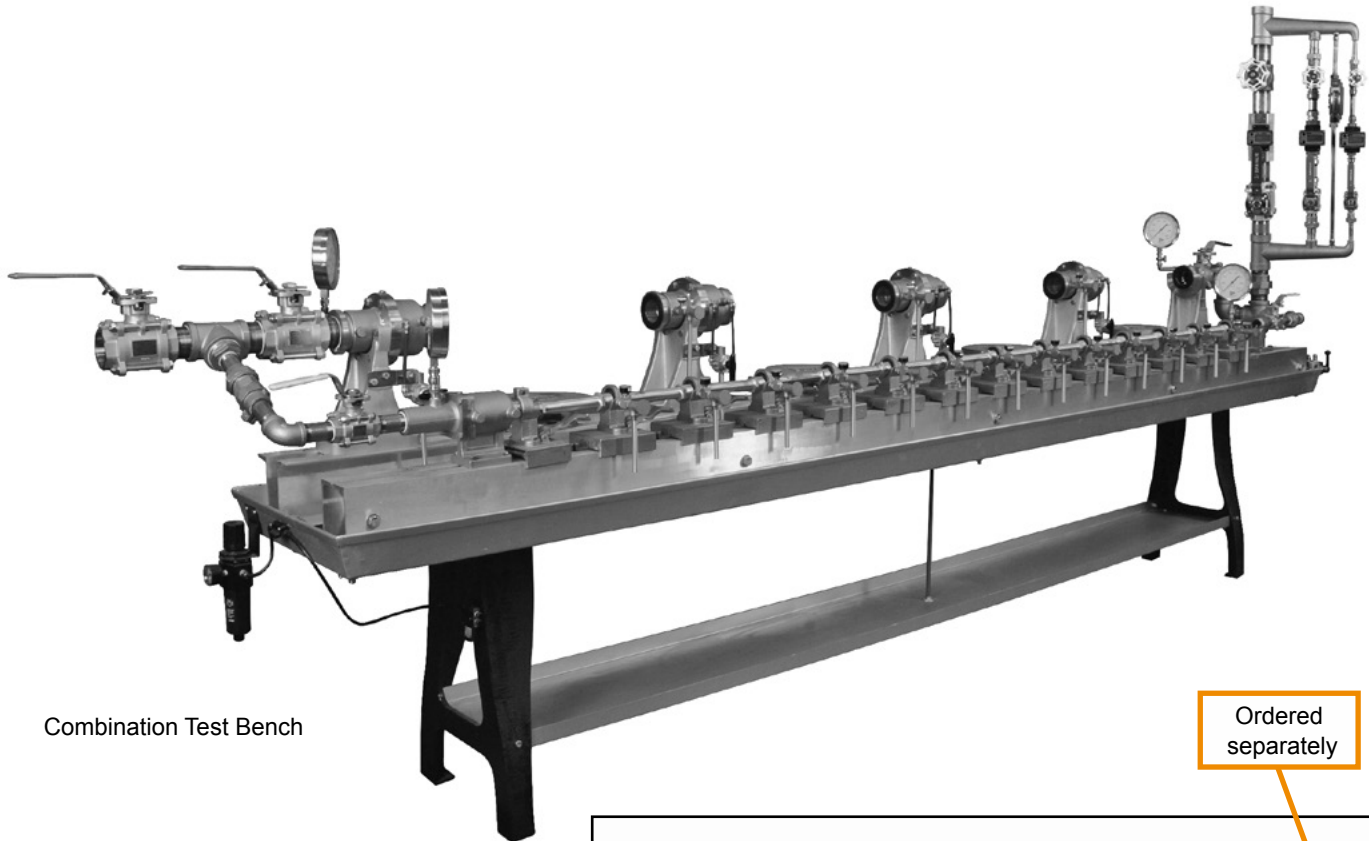
# Ford Combination Test Bench

## For Large and Small Meters

The Combination Test Bench is a hybrid test bench that brings together the best features of our Indianapolis and Akron test benches. This combination bench allows testing of 5/8" through 2" meters on the same bench. With the ability to hold up to 14 meters (on the smaller side) and four meters (on the larger side), the Combination bench provides an extremely efficient use of space. The "Indy/Akron" bench can also be equipped with our Automatic Measuring System (AMS) for automating operations.

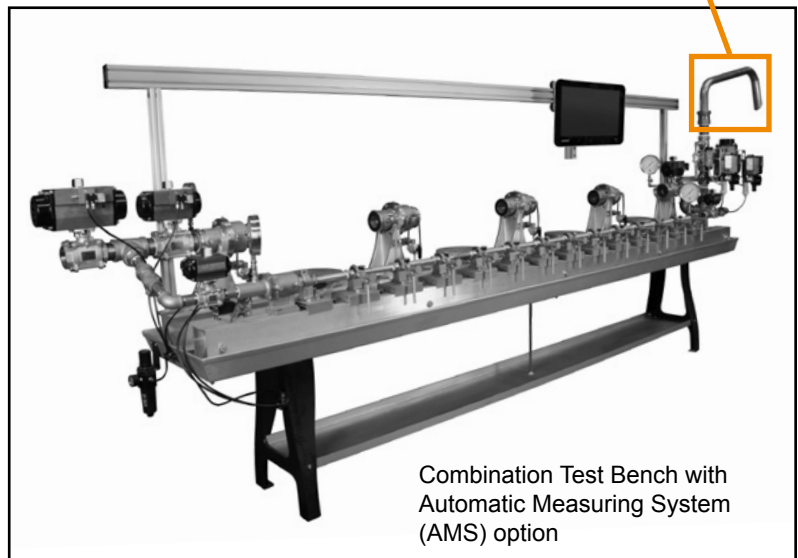
The Indianapolis side (small meters) automatically sets proper spacing for meters making the insertion of meters quick and simple. The meters are then supported in saddles mounted on roller dollies, free to move easily along aluminum tracks (see page K-10 for more details).

The Akron side (large meters) is primarily used for testing 1-1/4" through 2" meters up to 21" in length. An adjustable plate is included to support and position large water meters. Additional features of the Akron bench are shown on page K-13.



Combination Test Bench

Ordered  
separately



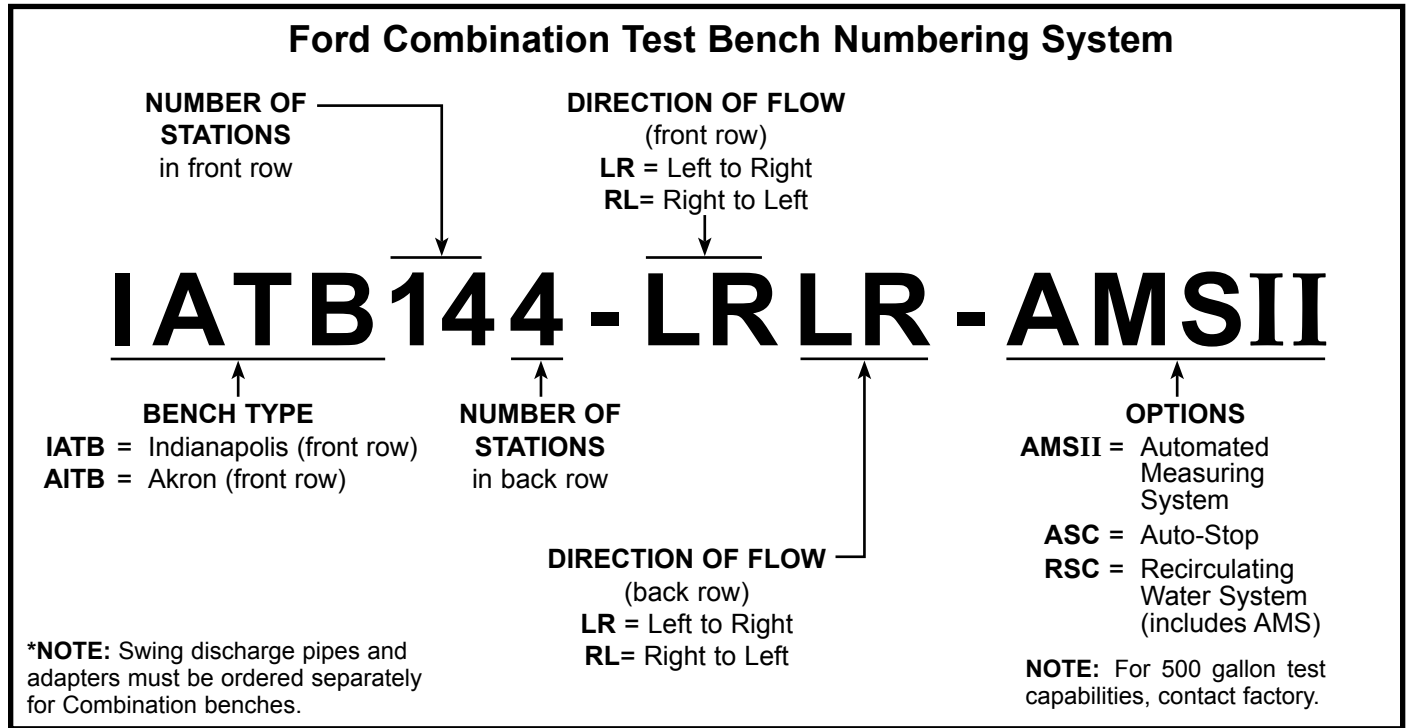
Combination Test Bench with  
Automatic Measuring System  
(AMS) option



# Ford Combination Test Bench

## For Large and Small Meters

To order, please refer to the numbering system below or contact factory for more details.



## Options Available for the Combination Test Bench

### Calibrated Water Tanks

Ford offers a wide variety of water tanks for use with our test benches. Refer to page 20.



### Auto-Stop

Designed to automate testing operations and to provide a wide range of flow tests without the need for a computerized system, the Ford Auto-Stop utilizes a single joystick control to perform three user adjusted (preset) flow rates, automatically stops the test at pre-determined tank levels, and allows for the joystick control to stop and start tests as well as drain the test tank. See page 18 for ordering information.



### Tester Clamp

The optional Tester Clamp quickly adapts to any Akron Test Bench to allow for testing 3", 4" and 6" meters at low and intermediate (160 gpm maximum) flow tests. Order Catalog Number TC-A (see page 22).



### Extended Length Discharge Pipe

2" Swing Discharge Pipe with 24" reach (complete with swivel union) is available. Catalog Number SDP-7-NL. See note above.\*



# Ford AMS

## Features

Automate your test bench with the Ford AMS. For use on all Ford benches, the Automated Measuring System (AMS) automates the testing process, offering the versatility, convenience, accuracy and productivity required for the modern meter shop. The AMS technology offers impressive results that will enhance any meter shop.

Ford has been the leading manufacturer of meter test benches for over 75 years. Combine the dependability of the traditional Ford Meter Test Bench with the AMS to create the best meter testing device available today.

### Easy setup

- AMS works with new or existing Ford Test Benches
- Efficient set up and fast installation
- AMS components are compact and will easily fit in your existing location
- Eliminates manual operation of valves

### Proven methods for testing

- The Ford AMS combines the trusted method of weighing metered water with computer automation to ensure accurate measurements
- Automated operations such as clamping (for Indianapolis style benches only), air purge, and test start and stop
- Weighing metered water eliminates possible problems with optical, mechanical or volume measuring devices.
- The AMS computer compensates for the weight of the tank, shop altitude and water temperature. Calculating these factors ensures that the Ford AMS test bench is the most accurate water meter test system on the market today.

### Gathering Data

- Choose from a variety of pre-programmed AWWA Standard M6 tests
- Once a test is started, the AMS monitors the test and automatically stops the water flow at the end of the test
- The Ford AMS uses an easy to operate touchscreen, menu-driven computer
- The data gathered during the test is compiled by the AMS computer and is visible to the operator on the screen as it is readied for output
- OPC server is built in for easy data access, and interface to existing databases





# Components of a Ford Meter Box AMS equipped Test Bench

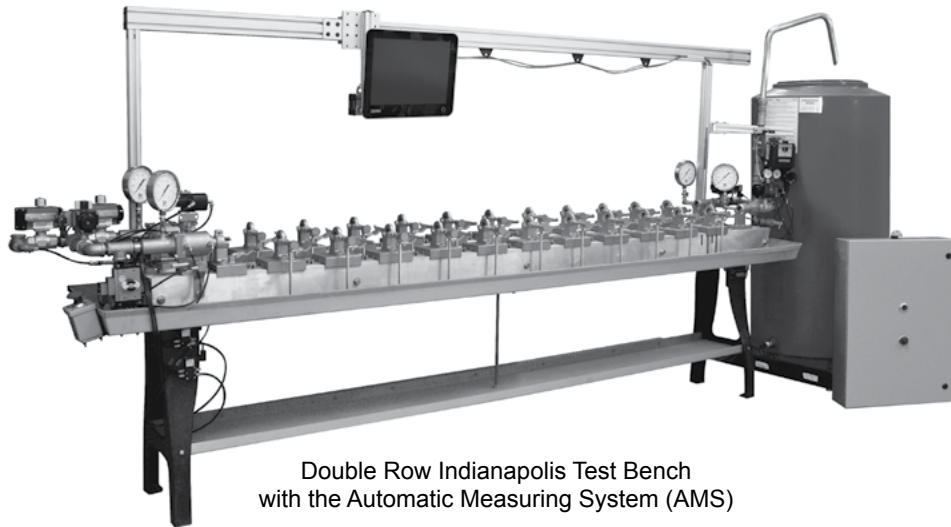
## COMPONENTS OF AMS

- Adjustable touchscreen system
- 140-gallon plastic tank includes a temperature probe and pneumatic discharge valve
- Scale for tank

- Pneumatic valve for inlet and automatic row selection on double row bench
- Outlet assembly includes pneumatic flow control valve
- Cables, hoses and connectors
- NEMA12 electrical enclosures for all controls

**NOTE:** Air compressor not included

To order a new test bench with the AMS option, add “-AMSII” to the end of the catalog number. Example: 112ITB-LR-AMSII



Double Row Indianapolis Test Bench  
with the Automatic Measuring System (AMS)

## AMS Retrofit Kits



CATALOG NUMBER	DESCRIPTION
ITB-AMSII-RK	AMS Retrofit Kit for Indianapolis and Standard Style Test Benches
ITB-DR-AMSII-RK	AMS Retrofit Kit for Double Row Indianapolis Style Test Bench
ATB-AMSII-RK	AMS Retrofit Kit for Akron Style Test Bench
ATB-DR-AMSII-RK	AMS Retrofit Kit for Double Row Akron Style Test Bench

**NOTE:** Retrofit kits include Test Tanks (not pictured).

# Test Bench Options and Accessories

## The Ford Auto-Stop

Designed to automate testing operations and provide a wide range of flow tests on water meter test benches, Ford introduces the Auto-Stop. Performing up to three user-adjusted flow rate tests, the Auto-Stop utilizes a joystick control to stop and start tests as well as drain the test tank. With sensors on each tank, the test is terminated automatically once the water level reaches preset tank levels.

### Features of the Ford Auto-Stop:

- Designed to work with all Ford test benches
- Single joystick control
- Three user-adjustable (preset) flow rates
- Sensor monitors tank to stop test at preset levels
- No calibration required
- Overflow protection
- Adjustable valve closure rate for consistent tank level as well as water hammer prevention



## Auto-Stop

### NEW BENCH

To order the Auto-Stop on a new bench, add “-ASC” to the end of the test bench catalog number. Example: I6STB-DR-LR-ASC

### EXISTING BENCH

To order the Auto-Stop for an existing bench, order one ASCB Control Box and one valve package.

Existing benches (require two parts)

#### Step 1:

ASCB	Auto-Stop Control Box
------	-----------------------

#### Step 2: Chose one

OVPKG-4	For Standard or Indianapolis Test Benches	Outlet Valve Package
OVPKG-7	For Akron or Combination Test Benches	Outlet Valve Package with digital readout

**Note:** A small compressor (not included) capable of 90 to 100 psi is required to operate the Auto-Stop valves.

For a replacement Auto-Stop tank water level sensor, order TB-ASC-SENSOR-070512.

---

## Optional Drain Valve Kit

To order a tank with an optional automated drain valve, add “-DVP” to the end of the tank catalog number. Example: 100-GF-SS-DVP

**Note:** For information on adding a drain valve kit to an existing tank, contact factory.

# Test Bench Options and Accessories

## Ford Testerate Indicator



### The Ford Testerate Indicator

The Testerate Indicator is a special Rotameter designed for use in water meter testing. It consists of a tapered, calibrated clear glass tube in which a stainless steel rotor is free to move up and down on a stainless steel guide in the center of the tube. The rate of flow (1/4 to 35 gpm) passing through the Testerate Indicator is indicated by the figure even with the flat top of the rotor body. These figures are on the surface of the glass tube and can be read easily.

As compared with other Rotameters, the Testerate Indicator has an extended range of registration. The triple taper of the glass tube permits wide spacing of the calibration marks at low rates of flow, where accuracy of reading is most important.

*The Testerate Indicator is included on all non-AMS Standard and Indianapolis Test Benches and is also available as a separate item. Thousands of these unique instruments are in use in water utility meter shops and by meter manufacturers.*

### Ordering Information

Order by Catalog Number from the table below.

CATALOG NUMBER	HOW CALIBRATED	APPROX. WEIGHT LBS.
KTi	U.S. Gallons/Minute	10.0
KTi-IG	Imperial Gallons/Minute	10.0
KTi-L	Liters/Hour	10.0
KTi-LM	Liters/Minute	10.0

The Testerate Indicator has a length of 17-5/8". Both ends are tapped 1" I.P. thread.



### The Ford Digital Indicator Outlet

Designed with three separate flow meters and control valves, the Digital Indicator Outlet (DIO) allows for easy and accurate flow control. Each branch includes a separate digital LCD screen for accurate reading of the testing flow rates. The three branches can simplify testing of the standard AWWA meter testing requirements by allowing each branch to be pre-set.

**NOTE:** The DIO replaces the KTi Double Range Testerate Indicator.

### Flow Valve Desiccant Dryer

Over time, moisture from compressed air within the flow valve can cause rust and corrosion. The flow valve desiccant dryer (TB-DESICCANT-200704) prevents moisture build-up within the valve to ensure a long valve life.



# Test Bench Options and Accessories

## Ford Calibrated Stainless Steel Test Tanks

In water meter shops, a calibrated tank (or tanks) is essential. It provides an accurate volume against which meter registration is compared in testing. *All tanks are guaranteed accurate within one-fourth of one percent at full scale.*

### Calibration of Tanks

All Ford Calibrated Stainless Steel Tanks have a gauge glass strip marked clearly to show volumes in gallons, cubic feet, or both. All tanks are also marked to show percentage fast or slow, when the test flow through a single meter is stopped at a specified registered volume. In series testing, the flow is ordinarily stopped when the required volume is reached in the tank. The accuracy of each meter is then computed by dividing its registered volume by the actual volume in the tank.

Tank volumes are ordinarily chosen to correspond to one or more revolutions of the test hand on the meter dial. Thus, tanks are calibrated at 1-cubic foot, 10-gallons, 10-cubic feet and 100-gallons. Larger tanks are available as listed below.

### Tank Design and Construction

These Calibrated Tanks are made of stainless steel, unless otherwise noted. All have non-swirling vanes to provide for quick and complete drainage. All have quick opening drain valves and aluminum gauge strips with brass fittings. Each gauge glass has a red stripe at the back which is magnified by the water so readings are easy and accurate.

### Special Large Tanks

All calibrated tanks above the 100-gallon size can be made special order if your meter shop requires limitations in height or diameter. Dimensions shown in the table below are standard.

**Note:** On custom tanks, the position of the gauge glass can be specified or expressed in degrees clockwise or counter-clockwise from the drain valve as viewed from above. Standard positioning of the glass gauge is above the drain valve.



Pictured above are the 10-gallon and 100-gallon tanks (10-GF-SS and 100-GF-SS), ordinarily used together, as are the 1-cubic foot and 10-cubic foot tanks (1-F-SS and 10-GF-SS). In nearly all cases two tanks are recommended, the smaller for low and intermediate tests and the larger for high-flow tests.

CATALOG NUMBER	NOMINAL SIZE	DIA.	HEIGHT	CALIBRATION POINTS	SIZE DISCHARGE	APPROX. SHIPPING WT. LBS.
1-F-SS	1 cu. ft.	7"	60"	1 & 1/2 cu. ft.	1"	105.0
10-GF-SS	10 gal.	9"	60"	10 & 5 gal. - 1 cu. ft.	1"	120.0
100-GF-SS	100 gal.	26"	60"	100 & 50 gal. - 10 cu. ft.	2"	240.0
50-F-SS	50 cu. ft.	47"	72"	50 & 25 cu. ft.	3"	690.0
500-G-SS	500 gal.	54"	72"	500 & 250 gal.	3"	800.0
100-F-SS	100 cu. ft.	67"	72"	100 & 50 cu. ft.	3"	1230.0
1000-G-SS	1000 gal.	73"	78"	1000 & 500 gal.	3"	1600.0
1000-GF-SS	1000 gal.	73"	78"	1000 & 500 gal. - 100 cu. ft.	3"	1680.0
25-L-SS	25 liters	7"	60"	AS SPECIFIED BY PURCHASER	1"	110.0
50-L-SS	50 liters	9"	60"		1"	117.0
150-L-SS	150 liters	16"	60"		1-1/2"	215.0
200-L-SS	200 liters	19"	60"		1-1/2"	275.0
400-L-SS	400 liters	26"	60"		2"	375.0
500-L-SS	500 liters	30"	60"		2"	420.0
600-L-SS	600 liters	32"	60"		2"	480.0
1000-L-SS	1 cu. meter	39"	72"		3"	505.0
2000-L-SS	2 cu. meters	54"	72"		3"	970.0
3000-L-SS	3 cu. meters	67"	72"		3"	1500.0
4000-L-SS	4 cu. meters	73"	78"		3"	1925.0
5000-L-SS	5 cu. meters	84"	78"		3"	2550.0

**NOTE:** For powered drain option, contact factory.

# Test Bench Options and Accessories

## Ford Recirculating System

Designed to reuse water through the use of a two tank system, the Ford Recirculating System seamlessly integrates with any Ford AMS Test Bench.



### Recirculating System for Standard and Indianapolis Test Benches:

- Vertical turbine pump with frequency speed control
- Low water alarm with auto pump shut-down
- All equipment pre-mounted at factory on structural steel skid
- Reversible frequency drive mount to facilitate left-hand or right-hand mounting
- Poly water supply tank
- Hose connections for drain pump return line
- Various electrical control cables required for operation
- Return pump
- Flexible hose from collection tank to pump

CATALOG NUMBER	DESCRIPTION	APPROX. SHIPPING WEIGHT LBS.
<b>TB-IRS</b>	Recirculating System for Indianapolis Benches	1500
<b>TB-ARS</b>	Recirculating System for Akron Benches	1500

**NOTE:** To order a Recirculating System with a new bench, add “-RCS” to the end of the catalog number.

Contact factory for price and availability.

# Test Bench Options and Accessories

## Test Clamps

### Akron Type Tester Clamp for 3", 4" and 6" Meters

The Akron Type Test Bench can be adapted for testing 3", 4" and 6" meters by means of accessory equipment shown in the picture at right. The two ells, connected by a solid bar, are clamped in one of the bench units, the same as a 2" meter. Two 6-foot lengths of 2" diameter hose connect the ells to meter flanges of 3", 4" or 6" sizes, which are interchangeable and will bolt to meters for testing.

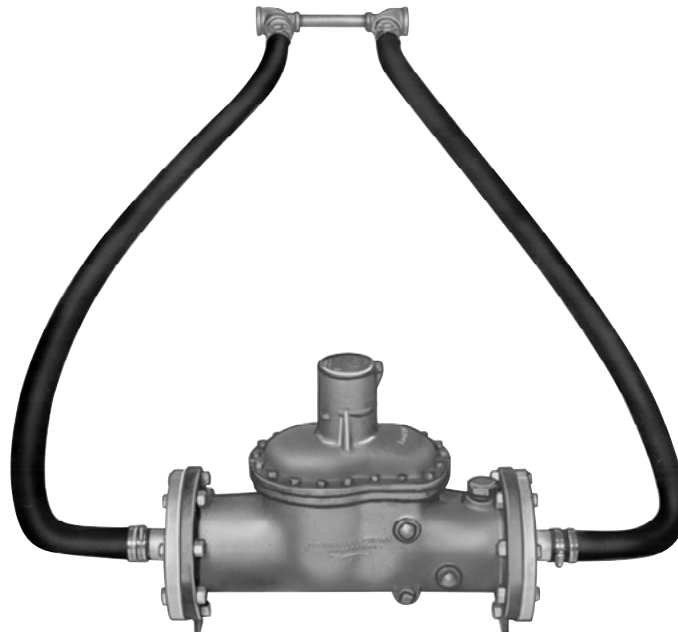
Even with moderate pressure available, the rate of flow is well beyond the 100 gpm recommended for low rate testing of many types of 6" meters. NOTE: Flow tests may not be accurate due to specific meter application requirements, which may include straight runs before and after the meter.

The large meter can be placed on the floor, or in a pan, in front of the Akron Type Bench. The bench with the tester clamp provides convenience in connecting the meter for test, valves for control and adjustment of test flows, and the Double Range Testrate Indicator for accurate indication of test flow rates.

Each Akron Type Tester Clamp includes parts shown in the picture at right, plus flanges for 3", 4" or 6" meters.

### Ordering Information

Order by Catalog Number: **TC-A**





# Section **K**

# **Ford<sup>®</sup> Water Meter Test Bench and Accessories**

## **Warranty**

All merchandise is warranted to be free from defects in material and factory workmanship for one year from date of shipment from our factory. We will provide, free of charge, new products in equal quantities for any that prove defective within one year from date of shipment from our factory. Manufacturer shall not be liable for any loss, damage, or injury, direct or consequential, arising out of the use of or the inability to use the product. Before using, user shall determine the suitability of the product for user's intended use and user assumes all risk and liability whatever in connection therewith. No claims for labor or consequential damage will be allowed. The foregoing may not be changed except by agreement signed by an officer of the manufacturer.

No other warranties are applicable or may be implied, including the implied warranty of merchantability and the implied warranty of fitness for particular purpose and any warranty relating to infringement or the like, all of which are disclaimed.

**Parties responsible for monitoring and maintaining proper water system design must exercise full responsibility in understanding the full intent and scope of applicable lead laws.**

### **Please Note:**

Consult The Ford Meter Box Company, Inc. website ([www.fordmeterbox.com](http://www.fordmeterbox.com)) for the most recent catalog information. The Ford Meter Box Company considers the information in this catalog to be correct at the time of publication. Items and option availability, including specifications, are subject to change without notice. Please verify that your product information is current.



**The Ford Meter Box Co., Inc.** 775 Manchester Avenue, P.O. Box 443, Wabash, Indiana, USA 46992-0443  
Telephone: 260-563-3171 FAX: 800-826-3487 Overseas FAX: 260-563-0167 [www.fordmeterbox.com](http://www.fordmeterbox.com)