

HICKLIN EDECT

BY SUPERFLOW

HEAVY DUTY TRANSMISSION DYNAMOMETER



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1888.442.5546

AXILINE

• DTS

• HICKLIN

• SUPERFLOW

• TCRS

A PIONEER IN HEAVY-DUTY TRANSMISSION TESTING

Hicklin Engineering®, a division of SuperFlow®, has been producing Inline, V-Drive, Angle Drive and Cross Drive Transmission Dynamometers in Des Moines, IA for more than 35 years. The latest Electric Drive Eddy Current Tester (EDECT) represents the culmination of all those years of operational and engineering refinements, experience that is unrivaled in the marketplace. Over 300 Hicklin® Transmission Dynamometers are installed worldwide with 74 of those dynamometers in use at military bases.

Hicklin® Transmission Dynamometers are the industry standard in heavy-duty transmission testing because we never lose sight of our commitment to improve the bottom line of our customers. This allows us to continually offer the latest, most efficient transmission testing products in the industry. It also doesn't hurt to back these products up with the most respected customer service department in the industry.

WORLDWIDE RECOGNITION

The SuperFlow® brands of transmission test equipment (Axiline® & Hicklin®) are installed at over 1000 customer sites in 52 countries around the world. Our customers know that our track record of excellence and our broad knowledge of transmission testing is evidenced by our expertise and skill in delivering world class test equipment. We've designed machines for the US Military and leading automotive manufacturers to ensure that the transmissions they manufacture or rebuild meet their exacting standards.

Our experience over the last 50 years has granted us the opportunity to work closely with the most respected companies in the transmission business to develop a line of products that deliver unmatched results. From handheld diagnostic testers and shifters to full blown transmission dynamometers with advanced data acquisition systems, SuperFlow® has the products you need to get the job done. Come see why thousands of companies worldwide have already chosen SuperFlow® for all of their transmission testing needs.

SUPERFLOW'S® MANY INDUSTRY FIRSTS

WE WERE THE FIRST

To use electric drives on transmission dynos

WE WERE THE FIRST

To install eddy current load units on transmission dynos

WE WERE THE FIRST

With data acquisition and control

WE WERE THE FIRST

to introduce a valve body tester and solenoid tester in one unit: The Axiline VBT 8000

SUPERFLOW®: TRUSTED BY THE BEST

U.S. Army Facilities

Anniston Army Depot, AL
 Red River Army Depot, TX
 Camp Dodge, IA
 Fort Carson, CO
 Fort Hood, TX
 Fort Riley, KS
 Camp Funston, KS
 Camp Carrol, Korea

U.S. Marine Corps Facilities

MCLB-Barstow, CA
 MCLB-Albany, GA
 Camp Kinser,, Japan
 Camp Lejeune, NC
 Camp Johnson, NC
 Camp Pendleton, CA
 29 Palms, CA



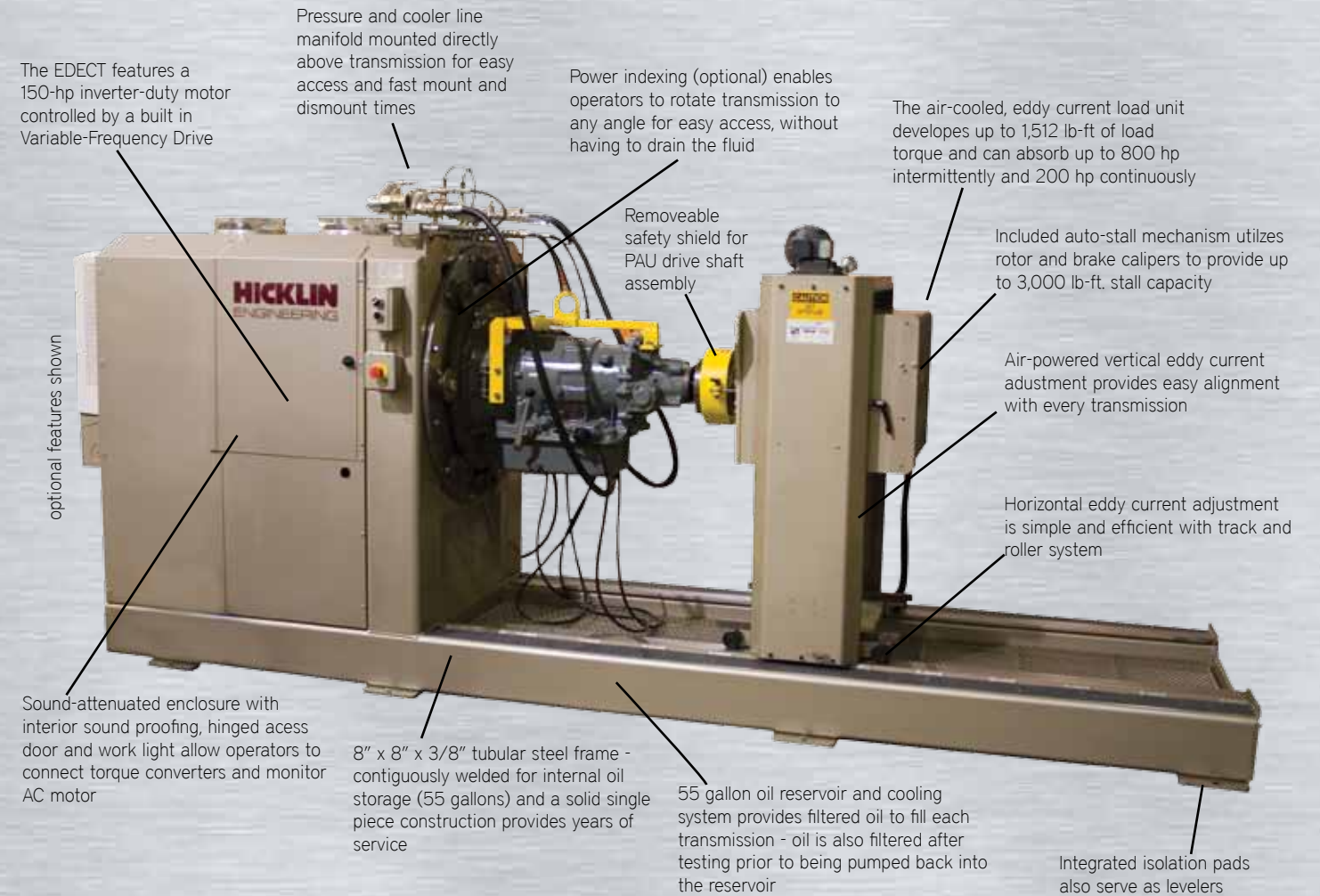
HICKLIN® EDECT - THE INDUSTRY STANDARD

The Hicklin® EDECT transmission dynamometer is designed for heavy-duty transmissions, including all inline, v-drive and angle drive configurations. The EDECT will test the entire family of Allison® transmissions, Dana/Spicer®, Voith®, ZF®, and Renk® transmissions plus many military and off-road applications like CAT® and Clark®. The EDECT accommodates all sizes of off-highway transmissions, powershift and manual shift, including drop-box and remote mounted configurations. It comes standard with a 150 hp (112 kW) direct drive AC Electric motor which is controlled by a precise, variable frequency drive controller. The electric motor delivers full torque capacity from 0 to 4000 RPM bidirectional. The EDECT was designed for extreme versatility so it also easily accommodates several other motor sizes ranging from 100 hp to 2,000 hp should testing requirements specify a different power level.

Dynamic load control is achieved using an air-cooled eddy current load unit which can absorb up to 1,500 lbs-ft (2034 N-m) of torque. The eddy current load unit makes the entire operation nearly maintenance free (no hydrostatic oil... no filters... no leaks). It is also extremely

reliable with just one moving part, the flywheel assembly. The eddy current load unit absorbs up to 800 hp (597 kW) intermittently and up to 200 hp (149 kW) continuously allowing you to perform true full throttle, load-induced downshifts. The load unit can actually push test transmissions into first gear and hold them there, even with the drive system set at full throttle. This creates a test integrity never before possible in service level equipment. Precise load control allows you to infinitely select everything from no-load to full-load with unmatched precision and the stability to perform pinpoint shift detection.

The EDECT's standard SuperShifter Pro® software system gives the operator full digital control of both the dynamometer and the transmission from a simple laptop computer. The laptop is conveniently mounted on a movable tray so the operator can spot oil and pressure leaks, check hydraulic and system controls, and makes minor adjustments while the transmission is mounted on the tester. The EDECT can be upgraded with a WinDyn® Data Acquisition system for applications requiring high level data analysis and advanced testing capabilities.



PRECISE CONTROL

Hicklin's® advanced control strategies allow the dynamometer's electric motor to precisely mimic the characteristics of an internal combustion engine.



USING THE EDECT YOU CAN TEST

- ☞ All gears - planetary, sun, etc.
- ☞ Mechanical noise
- ☞ Hot & cold testing
- ☞ All available pressure ports
- ☞ Shift points
- ☞ Pump capacity & flow pressure
- ☞ Leaks - internal, external
- ☞ Stall speed - forward, reverse
- ☞ Throttle valve pressure
- ☞ Automatic & manual upshift, downshift
- ☞ Vacuum pressure modulator
- ☞ Solenoid functions
- ☞ Converter - lockup and non-lockup types
- ☞ Output & internal loading

THE BEST TRANSMISSION REQUIRE THE BEST DYNAMOMETERS



SPECIFICATIONS

POWER REQUIREMENTS	460V 3-phase, 60 Hz (3 wire)
AIR REQUIREMENTS	1/2" lines (12.8 mm), 100 psi (689 kPa) minimum
WEIGHT	6,000 lbs. (2,722 kg)
DIMENSIONS	162 in. x 42 in. x 60 in. (411 cm x 107 cm x 152 cm)

INPUT DRIVE (PRIME MOVER)

TYPE	Direct-drive AC motor
POWER	150 HP (112 kW)
CONSTANT POWER	1,500 to 2,700 RPM
FULL TORQUE CAPACITY	0 to 4,000 RPM
CONSTANT TORQUE	0 to 1,500 RPM

***OTHER MOTOR SIZES AVAILABLE RANGING FROM 100 HP - 2,000 HP (75 - 1,491 kW)**

INPUT DRIVE (PRIME MOVER)

TYPE	Air Cooled Eddy Current, bi directional
MODEL	K200HI
INERTIA	169.1 lb-ft ² (7.12 Kg ^m ²) - 175 lb-ft ² (with stall brake rotor)
MAXIMUM SPEED	5,300 RPM (4,800 RPM continuous)
MAXIMUM DYNAMIC TORQUE	1,512 lb-ft (2,050 N-m)
PEAK POWER ABSORPTION	800 HP (597 kW) intermittent 200 HP (149 kW) continuous

SUPERSHIFTER PRO® SOFTWARE (STANDARD)

SuperShifter Pro® is the most advanced and user friendly shift module we have ever offered. This easy-to-use Windows® based software system puts both the dyno and transmission controls right at your fingertips plus it gives you access to a whole host of features that make testing easier, quicker and more profitable. It was designed for

extreme versatility so it works with transmission dynamometers, valve body testers and solenoid testers; an advantage that means your technicians only need to learn one software platform to run all SuperFlow® transmission test products.



Data Screen



Manual Shift Screen



Manual Solenoid Control Screen



Solenoid Test Screen

SUPERSHIFTER PRO® FEATURES

- ✔ Precise control of input speed and output load
- ✔ Individual control of up to 12 solenoids
- ✔ Tests most modern late-model transmissions
- ✔ Transmission lookup tool that searches by make and model
- ✔ Built-in solenoid current & resistance tests
- ✔ Real-time digital displays for:
 - PRNDL
 - RPM
 - pressure switches (when available)
 - TOT (when equipped)
 - gear ratio
 - machine pressure
- ✔ Continuously monitors all critical parameters
- ✔ Modulated duty cycle and frequency range
- ✔ Edits shift files for customized testing
- ✔ Computer controlled
- ✔ Learn and save mode to expedite solenoid testing
- ✔ Auto Shift (time delay)
- ✔ PWM programming screen with delay
- ✔ Hot & cold solenoid pass/fail testing
- ✔ Eddy current load unit control
- ✔ Pump and machine on/off control
- ✔ Motor direction control
- ✔ PID loop enabled flow rate
- ✔ Continuing software updates
- ✔ Current measurement at 16-bit resolution



WINDYN® DATA ACQUISITION (OPTIONAL SOFTWARE)

WinDyn® is a complete Data Acquisition System available for all SuperFlow® Transmission Dynamometers.

Upgrading the EDECT to WinDyn® provides 76 channels of data acquisition for inputs like pressure and temperature, as well as, 35 channels for calculations, interpolation tables and memory. WinDyn® runs on desktop or laptop computers running Microsoft Windows® operating systems and it communicates with the dynamometer via an Ethernet connection.



WINDYN® FEATURES & CAPABILITIES

- ☞ Custom, user-defined screens
- ☞ Custom, user-defined tests
- ☞ Real-time data viewing
- ☞ Playback mode
- ☞ Full graphing capabilities (bar, X-Y & strip charts)
- ☞ Graph overlays for multiple test comparison
- ☞ 12 solenoid control channels
- ☞ 8 high speed 0-10V DC analog inputs
- ☞ 4 high speed 0-10V DC analog outputs
- ☞ 4 thermocouple inputs (type k)
- ☞ 4 thermistor inputs (for items like Transmission oil temperature)
- ☞ 4 frequency inputs (configurable for mag pick-up or TTL)
- ☞ 16 digital inputs
- ☞ 16 digital outputs
- ☞ 2 load cell inputs
- ☞ 1 USB port for device
- ☞ 1 USB port for host
- ☞ Ethernet for WinDyn® 10/100 mHz
- ☞ Network ready
- ☞ 3 RS232 Serial com ports
- ☞ Current Measurement at 16-bit resolution

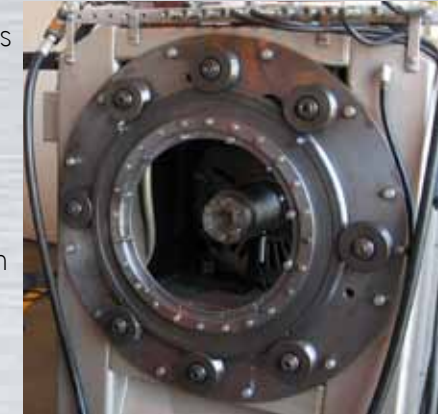
OPTIONAL

- ☞ 16 pressure inputs
- ☞ 16 0-10V DC inputs
- ☞ 1 load cell input
- ☞ 12 relay outputs
- ☞ 2 PWM outputs

OPTIONAL EQUIPMENT

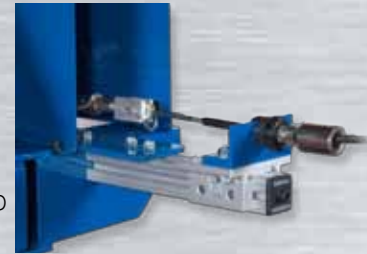
POWER INDEXING

Power indexing enables operators to rotate transmissions to any angle for easy access, without having to drain the fluid



AUTO SHIFT

This linear shift actuator controls the manual detent position of the transmission. Since it uses a cable, the Auto shift can connect to most every transmission. It can also be fitted with torque measurement, up to 50 lb-ft.



CUSTOM MACHINES

Hicklin® Engineering has built custom transmission testers for companies all over the world for nearly 30 years. We've designed both eddy-current and hydrostatic dynamometers for all types of transmission configurations. If you need a custom dynamometer, please contact us about our literature covering our experience with custom transmission dynamometers. Our ability to take our customers needs and turn them into a one of a kind transmission dynamometer is unmatched in the industry.

OUTPUT TORQUE

The pancake style load cell measures static or dynamic torque, up to 3,000 lb-ft.



More options available, call 1.888.442.5546 for more info.

SHIFT CONSOLES

Shift Consoles allow you to exercise and control several brands of transmissions while outside the vehicle. These control consoles have the capacity to hold up to four Transmission Control Modules (TCMs) and they will operate transmissions on any test stand. Consoles are available for Allison, ZF, Voith and Renk transmissions. Please ask about our Shift Console brochure for more information.

BASE EXTENSIONS

Optional base extensions for angle-drive and v-drive transmissions are available should your testing needs require. These extensions make the EDECT the most versatile heavy-duty transmission dynamometer on the market today.

SUPERFLOW® DYNAMOMETERS & FLOWBENCHES

HICKLIN® EDECT HEAVY DUTY TRANSMISSION DYNAMOMETER

SuperFlow® is a global market leader specializing in high-performance automotive testing and rebuilding equipment. Since the early 1970's SuperFlow® products have been used daily by professional engine builders, the military, technical schools, professional race teams, speed shops, transmission rebuilders, universities, and leading automotive manufacturers to produce powerful

and efficient vehicles. Our commitment to providing the best products and service at a great value has given us the opportunity to work with some of the most notable companies in the automotive industry. Come see why thousands of businesses have already chosen SuperFlow® for all of their testing needs.

CALL 1.888.442.5546 for more information on the Hicklin® EDECT Heavy-Duty Transmission Dynamometer.

Or visit us at superflow.com



THE ONLY SOURCE FOR ALL YOUR TESTING NEEDS

- Chassis Dynos
- Flowbenches
- Driveshaft Rebuilding Equipment
- Engine Dynos
- Solenoid Testers
- Torque Converter Rebuilding Systems
- Transmission Dynos
- Valve Body Testers
- Transmission Testers

Manufactured in Colorado Springs, CO and Des Moines, IA U.S.A. Offices Worldwide; Des Moines, IA, Colorado Springs, CO, Pulle, Belgium
For Europe sales & service please call +32-3-4846511 or email info@superflow.be
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