

AXILINE 66K

BY SUPERFLOW

TRANSMISSION DYNAMOMETER



WWW.SUPERFLOW.COM

1.888.442.5546

AXILINE • DTS • HICKLIN • SUPERFLOW • TCRS

OVER 50 YEARS OF EXCELLENCE

What started with the DynaDrome, by Delta Dynamics, circa 1958 has evolved into the most respected brand in light and medium duty transmission testing today: Axiline®, from SuperFlow®. Axiline's® roots date to the industries beginnings, and we are still here today because of one thing, focus. From the engine to the transmission, from the driveshaft to the axles, and throughout the entire drive train rebuilding and testing process 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 with the most respected customer service department in the industry. We strive to find innovative methods to increase customer capabilities and pioneer new technologies. Today, with more than 20 U.S. and foreign patents registered, SuperFlow® is still leading the way in the art and science of transmission testing and rebuilding. From start to finish no other company can provide a turn-key solution backed by more than 50 years of transmission testing excellence.

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

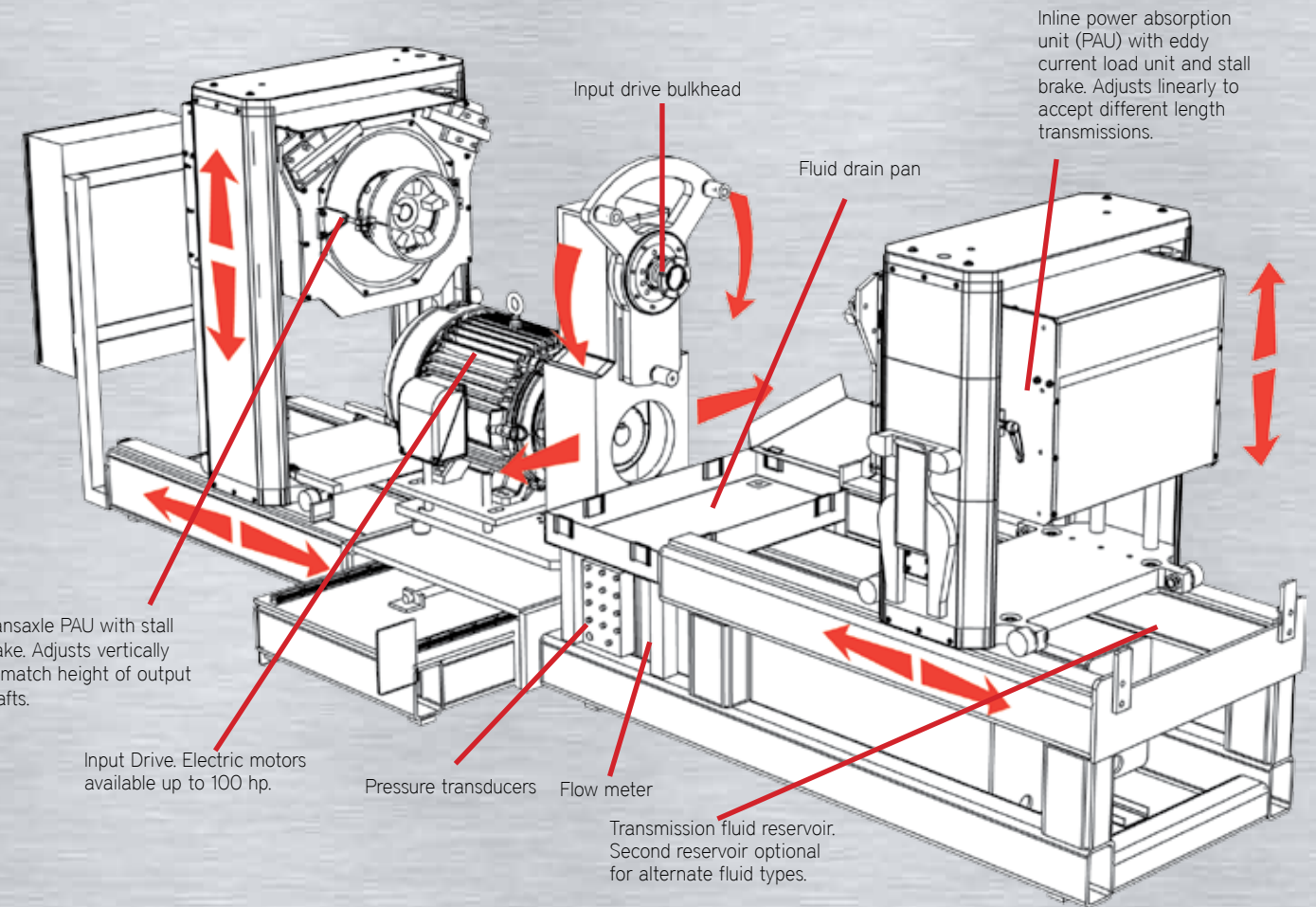
WE WERE THE FIRST

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



LIGHT-MEDIUM DUTY TRANSMISSIONS

The SF-66K handles most foreign and domestic front-wheel drive, rear-wheel and all-wheel drive transmissions, including the Allison 1000/2000. Its rotating head stock can adapt to front wheel drive transverse transmissions, including Honda® and Mitsubishi®, and longitudinal transmissions such as the Chrysler® 42LE. The rotating head stock also makes it easy to switch between different test configurations. The four available motor sizes (40 hp, 60 hp, 75 hp, 100 hp) ensure the correct power for the job. The included auto-stall feature provides a quick yet complete test.



INPUT DRIVE & TRANSMISSION SUPPORT

The supports used for both input drive and transmission will pivot to accommodate longitudinal and transverse transmissions. The SF-66K is powered with an electric motor for clean, quiet operation and precise control. There are four motor options available in 40, 60, 75 and 100 hp sizes. And, it tests in either rotational direction, to accommodate all types of inline T-drive, or transaxles transmissions.



POWER ABSORPTION UNITS

The SF-66K power absorption units (PAUs) apply load to the output shaft(s) of the transmission to simulate road conditions such as hills, air resistance and towed weight. The standard air-cooled eddy current PAU is virtually maintenance-free and extremely reliable. Unlike hydrostatic load units, there's no oil, water or filter to maintain, and just one moving part. The PAU allows you to perform true full-throttle, load-induced downshifts. It can load test

transmissions all the way to first gear and maintain them, even when the drive system is set at full throttle. The optional trunnion-mounted eddy current absorber dynamically measures the output torque of the transmission. It's also equipped with an air-actuated brake rotor and caliper to test stall force. All PAU configurations can be adjusted vertically and side-to-side to accept a wide range of test transmissions.

USING THE 66K YOU CAN TEST

- ☞ Test all gears.
- ☞ Evaluate noise – converter, pump noise, planetary set.
- ☞ Perform hot and cold testing.
- ☞ Find leaks at all available pressure ports. (cooler lines, clutch pressure taps, etc.)
- ☞ Test shift points.
- ☞ Test front pump capacity – flow pressure.
- ☞ Test stall speed – forward, reverse.
- ☞ Measure throttle valve pressure.
- ☞ Perform automatic and manual upshift, downshift.
- ☞ Test vacuum pressure modulator.
- ☞ Test solenoid functions.
- ☞ Test converter performance (lockup, non-lockup).
- ☞ Measure input and output torque.*
- ☞ Evaluate internal transmission losses.*
- ☞ Measure all output shaft speeds.
- ☞ Measure fluid temperature and flow.
- ☞ Test hydraulic function of governor, clutch valve body and overdrive.
- ☞ And more!!

* Requires optional equipment

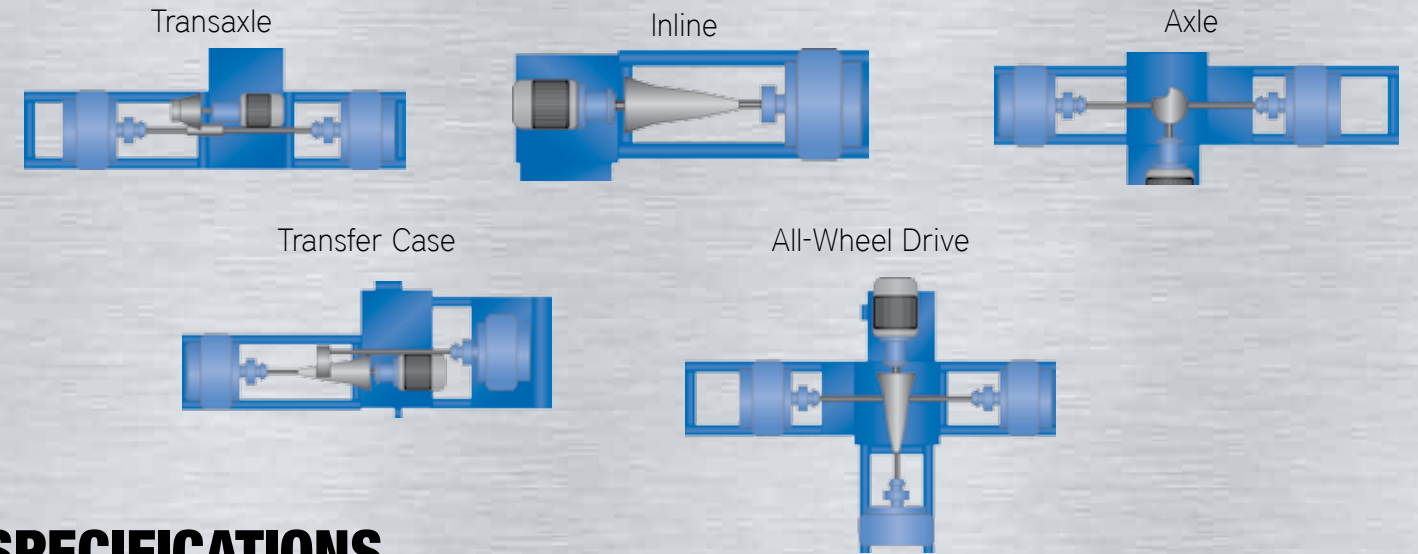
SUPPORT SUBSYSTEMS

The SF-66K's air-actuated disc brake tests stall speeds. Its fluid fill and evacuation system is comprised of a tank, pumps, motors flow blocks, pressure distribution manifolds and pressure hoses. It fills and evacuates transmission fluid before and after testing. The optional fluid fill and evacuation system allows you to deliver and store different types of transmission fluid and quickly make the changeover between transmissions with different fluid requirements. SuperFlow® can provide adapters for most modern transmissions.



Air/oil booster for stall brake and linear adjustment. Shown along side fluid fill and evacuation system.

OPTIONAL CONFIGURATIONS



SPECIFICATIONS

POWER REQUIREMENTS

220/240 V 3-phase, 50-60 Hz or 460/480 V, 50-60 Hz & 110/120V Single Phase (380 V available upon request)

AIR REQUIREMENTS

1/2" lines (12.8 mm), 100 psi (689.5 kPa) minimum

WEIGHT

Input Drive: 2,700 lbs. (1225 kg)
 Inline PAU: 4,300 lbs. (1,950 kg)
 Transaxle PAU: 4,200 lbs. (1,905 kg)

DIMENSIONS

Inline: 154" x 48" (391 cm x 122 cm)
 Cross Slide: 195" x 70" (495 cm x 178 cm)
 T-Drive: 183" x 96" (465 cm x 244 cm)

INPUT DRIVE (PRIME MOVER)

TYPE	Direct-drive AC motor
CONSTANT POWER	1,750 to 3,600 RPM
CONSTANT TORQUE	0 to 1,750 RPM
MAXIMUM SPEED	3,600 RPM
STANDARD	60 hp (45 kW) / 180 lb-ft (244 N-m)
OPTIONAL 1	40 hp (30 kW) / 120 lb-ft (163 N-m)
OPTIONAL 2	75 hp (56 kW) / 225 lb-ft (305 N-m)
OPTIONAL 3	100 hp (75 kW) / 300 lb-ft (407 N-m)

EDDY CURRENT POWER ABSORBER

TYPE	Air Cooled, bidirectional
MODEL	K90 (other sizes and types available)
INERTIA	13 lb-ft ² (.55 kgm ²)
MAXIMUM SPEED	5,300 RPM
PEAK TORQUE	686 lb-ft (930 Nm)

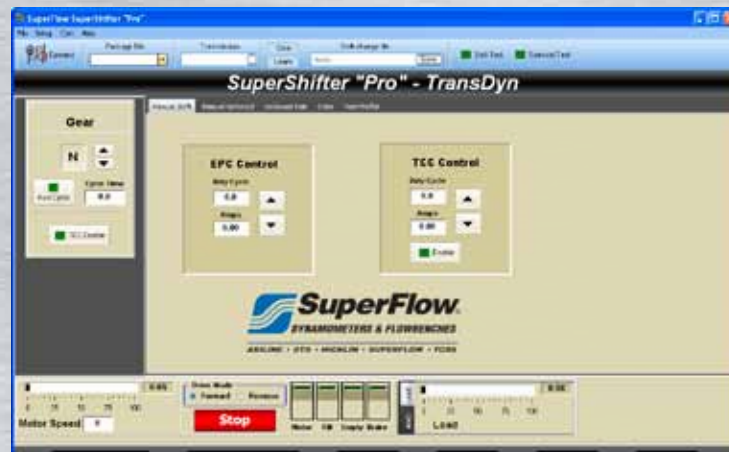
SUPERSHIFTER PRO® SOFTWARE (STANDARD)

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 Axiline® 66K 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

OUTPUT TORQUE

Load cell measures static and dynamic torque.



INPUT TORQUE

This custom input shaft is instrumented with a torque transducer to measure torque directly before the converter for highly accurate readings. 60 pulse per revolution encoder. 450 lb-ft rating.



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.



INLINE COOLER

The inline oil cooler connects to the cooler lines of the transmission to maintain proper oil temperature during testing. It is ideal for long test sequences or endurance testing.



More options available, call 1.888.442.5546 for more info.

SUPERFLOW® DYNAMOMETERS & FLOWBENCHES

AXILINE® 66K 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 Axiline® 66K Transmission Dynamometer.

Or visit us at superflow.com



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THE ONLY SOURCE FOR ALL YOUR TESTING NEEDS

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