

# Product Catalog



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# About Us

At Wilspec®, we design and build first-rate pressure, electrical, and valve & line products. Many of our customers work in the HVAC and Refrigeration field, but our products can be found in a wide variety of other applications. We serve some of the biggest names in the industry, and they count on us for consistently exceptional products.

We're fired up about delivering the best products at competitive prices, and we're proud to stand behind those products with customer service and support that's unbeatable in our industry. As a dynamic world-wide team, we're able to combine full-scale design and production capabilities with the personal attention of a nimble, flexible organization. We've staked our reputation on being easy to do business with, from the quality of our products to the long-term relationships we're committed to building.

# Rugged Series

Wilspec® has a long history of providing the most cutting-edge and innovative products for use in the HVAC/R Industry as well as a multitude of other applications, exceeding industry standard design, manufacturing and testing requirements. Our engineering team has worked with customers around the globe identifying and overcoming the use of Wilspec® products in harsh environments, highly specialized applications and with abusive handling.

This expertise in identifying the need for a more robust component led us to launch Wilspec's® new Rugged Series Options. From using quality materials in our manufacturing process, to engineering products to withstand worst-case scenarios and finally putting these products through a rigorous testing process, the Rugged Series Options are sure to provide unparalleled reliability and flexibility for your system needs.

No matter which product your application requires, the Wilspec® Edge is to ensure safety, reliability and performance while maintaining application-critical functionality. The Wilspec® Rugged Series Options are designed to provide you with a more robust product that is specific to your system, and our engineers are here to ensure that you have a product that stands up to rugged-lifecycle, rugged-mechanical and rugged-electrical industry standards.

Rugged Environmental Testing: Dust, Water, Salt, Humidity

Rugged Mechanical Testing: Life Cycles, Product Life, Drop test, Vibration/Shock

Rugged Thermal Testing: Low Temp, High Temp, Temperature Shock

Look for the "Rugged Series Options" section for each individual product's Rugged highlights.

# FORCE SERIES PRESSURE SWITCHES

Designed and Built.

Wilspec® pressure switches are designed to sense and act upon reaching a pre-set pressure threshold. Various pressure switch models are available for low-pressure or high-pressure cutouts, as well as operation control cycling.

Our switches meet a wide array of customer applications, from HVAC/R to Transport and Industrial systems, including situations where extreme conditions or exceptional performance are essential. Durable, reliable and compact, our controls can be equipped with a nearly limitless variety of pressure fittings and electrical connections, making them the ideal controls for any system application.

With a dedicated team of application and support engineers around the globe, Wilspec® also specifically designs and builds custom pressure switches for customers whose systems require a unique and specific pressure solution. Wilspec® pressure switches provide a truly customized sensor in a hermetically sealed design, made out of premium materials, for virtually any application.

**HS Series**  
Auto reset • SPST  
100-250K cycle life

High-grade stainless steel hermetically sealed disc for reliable lifetime performance

Set point stability and high cycle life due to robust mobile arm switch

Robust potting cup with an epoxy seal to ensure quality protection from the elements

Wide variety of pressure fittings, both mechanical and pure copper brazed fittings

Options include a wide variety of plugs and terminals, plus quick connects and bare wire leads



## Series Options

- Auto / Manual Reset
- SPST or SPDT Switch
- Solder or Mechanical Pressure Fittings
- Electrical Connectors or Wire Leads

## Series Specifications

- Pressure: Vacuum – 750 psig / 52 bar / 5.2 MPa
- Life Rating: 0 – 100K, 250K Cycles Optional
- Compatible Media: R500s, 401A, 402A, 404A, R100, 400 and 500 types, such as R12, 134A, 401A, 402A, 404A, 407A, R500s and their lubrication oils.

## Rugged Series Options

- > 1,000,000 Cycle Life
- Gold Contacts
- IP 67 Rating with appropriate Electrical Connection
- Alternative Refrigerants



**HC Series**  
Auto reset • SPST / SPDT  
100-250K Cycle Life



**HR Series**  
Auto reset • SPDT/SPST  
100-250K Cycle Life



**HL Series**  
Manual reset • SPDT/SPST  
6,000 Cycle Life



**HM Series**  
Manual reset • SPST  
6000 Cycle Life

# FORCE SERIES ADJUSTABLE PRESSURE CONTROLS

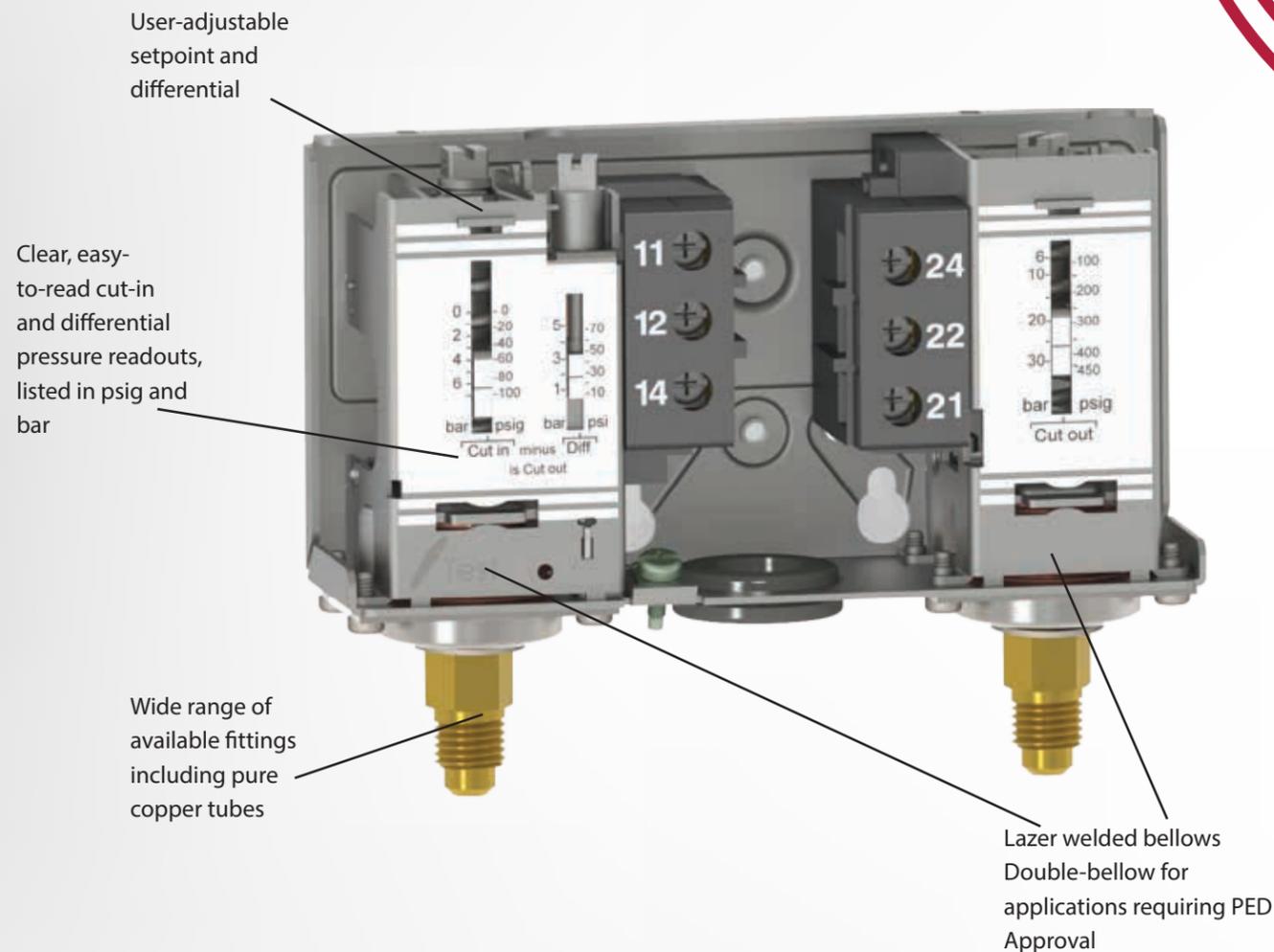
Designed and Built.

Wilspec® adjustable pressure switches are activated by a user-defined pressure threshold, ideal for applications with variable ambient conditions, high operating voltages, or in control cabinet installations. Their versatility and durability ensure suitability for a wide variety of applications.

Wilspec's® adjustable pressure switch assemblies utilize industry-standard mounting plates and are designed for ease of installation and use. Available in both single and dual models with a choice of manual or automatic resets, each APS can additionally be configured with a variety of pressure fittings and electrical connections.

Laser-welded, double-bellow constructions ensure that Wilspec's® adjustable pressure controls offer uncompromised design and quality, built to withstand the extended pressure ranges of both Hydrofluorocarbons (HFCs) and Hydrochlorofluorocarbons (HCFCs).

Wilspec® uses premium silver contacts for excellent conductivity, low electrical resistance and superior wear characteristics across low, medium or high electrical load capacity. Whether an application requires a standard product or a completely custom arrangement, Wilspec's® options can be engineered to the customer's system.



## Series Options

- Auto / Manual Reset /Convertible
- SPDT Switch
- Flare or Capillary
- Single or Dual models
- Electrical Connection: Internal, Wire Leads or Harness

## Series Specifications

- Pressure: Vacuum – 42 bar
- Electrical: 5 mA to 16 Amps;
- Life Rating: 100K standard

## Rugged Series Options

High Voltage Options



# FORCE SERIES PRESSURE TRANSDUCERS

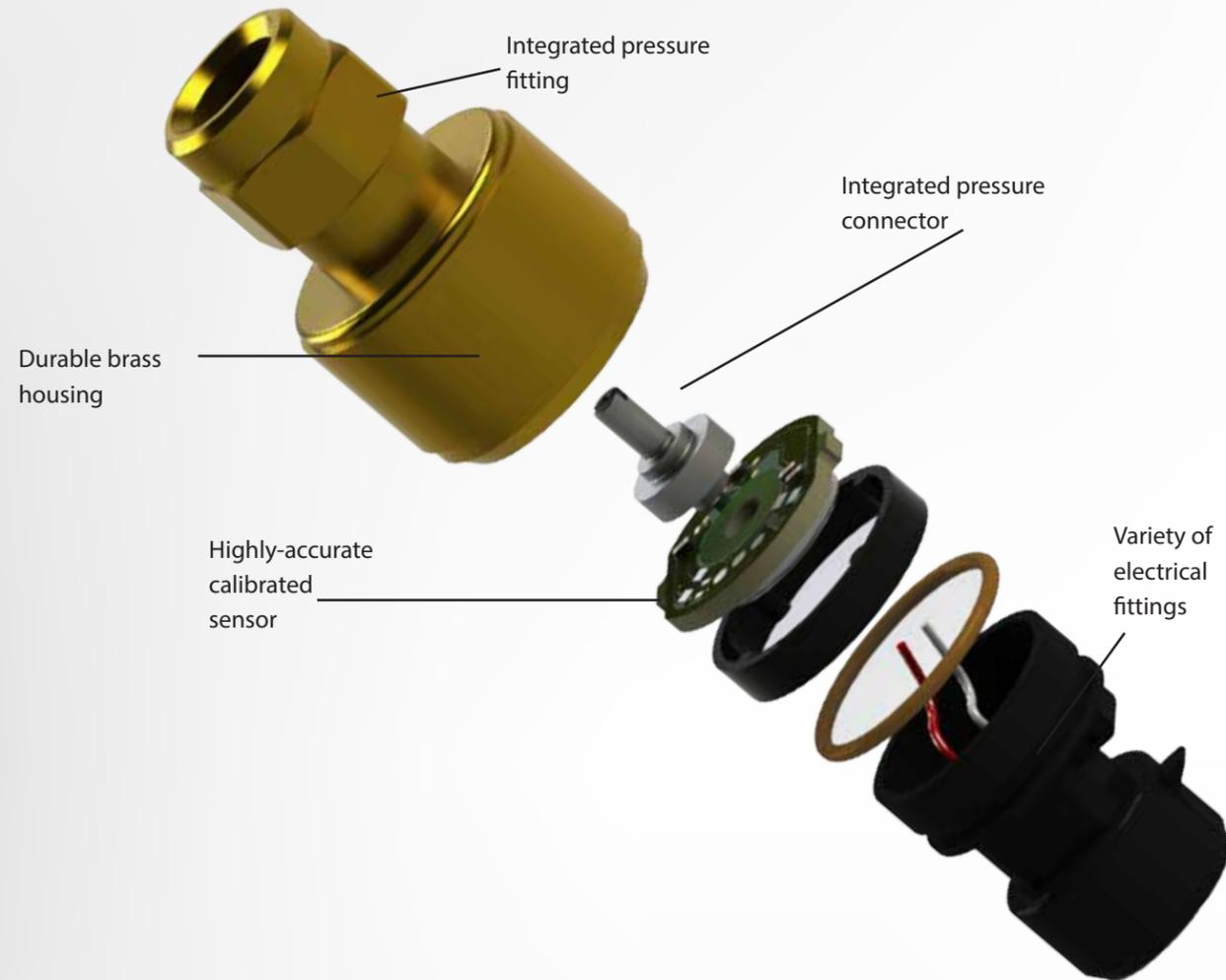
Designed and Built.

Wilspec® pressure transducers convert pressure variations into a steady, accurate analog output signal which can be read by a multitude of devices. Our transducers utilize cost effective, reliable piezo-resistive sensors that offer a wide range of pressure feedback readings for HVAC/R and other industrial markets.

Rigorous testing over extended pressure and temperature ranges, life time reliability testing, as well as burst testing ensure that Wilspec® pressure transducers perform reliably, accurately, repeatedly and safely. Wilspec® reports the totality of the error band for a complete picture of product performance. In addition, all pressure transducers are suitable for monitoring the pressure of: Air, Refrigerants, Mineral Oil, PAG, POE Oils and other similar media.

Wilspec® transducers are designed to fit a multitude of applications thanks to a selection of output options (0.5-4.5Vdc, 0-10Vdc or 4-20mA), along with precision-configured software that allows increased accuracy calibration within a customer's target range.

Our transducers offer highly accurate, reliable industrial sensors with a Wilspec® performance guarantee. Whether you are managing complex environmental systems, safely monitoring critical industrial processes or looking for the most accurate sensors for a wide variety of media, the width and breadth of Wilspec® transducer lineup is without parallel.



## Series Specifications

- Pressure: Vacuum – 60,000 psig / 4137 bar
- Output: 0.5-4.5 VDC Ratiometric, 0-5 VDC Fixed, 0-10VDC, 4-20 mA
- Life Rating: 10,000,000 Cycles
- Over and Reverse BIAS Protection of +/-25V

## Series Options

- Solder or Mechanical Pressure Fittings
- Wide variety of pressure and electrical connection options
- Brass Housings
- Software calibrated accuracy across target range

## Rugged Series Options

- Stainless Steel Construction
- Specialty Outputs

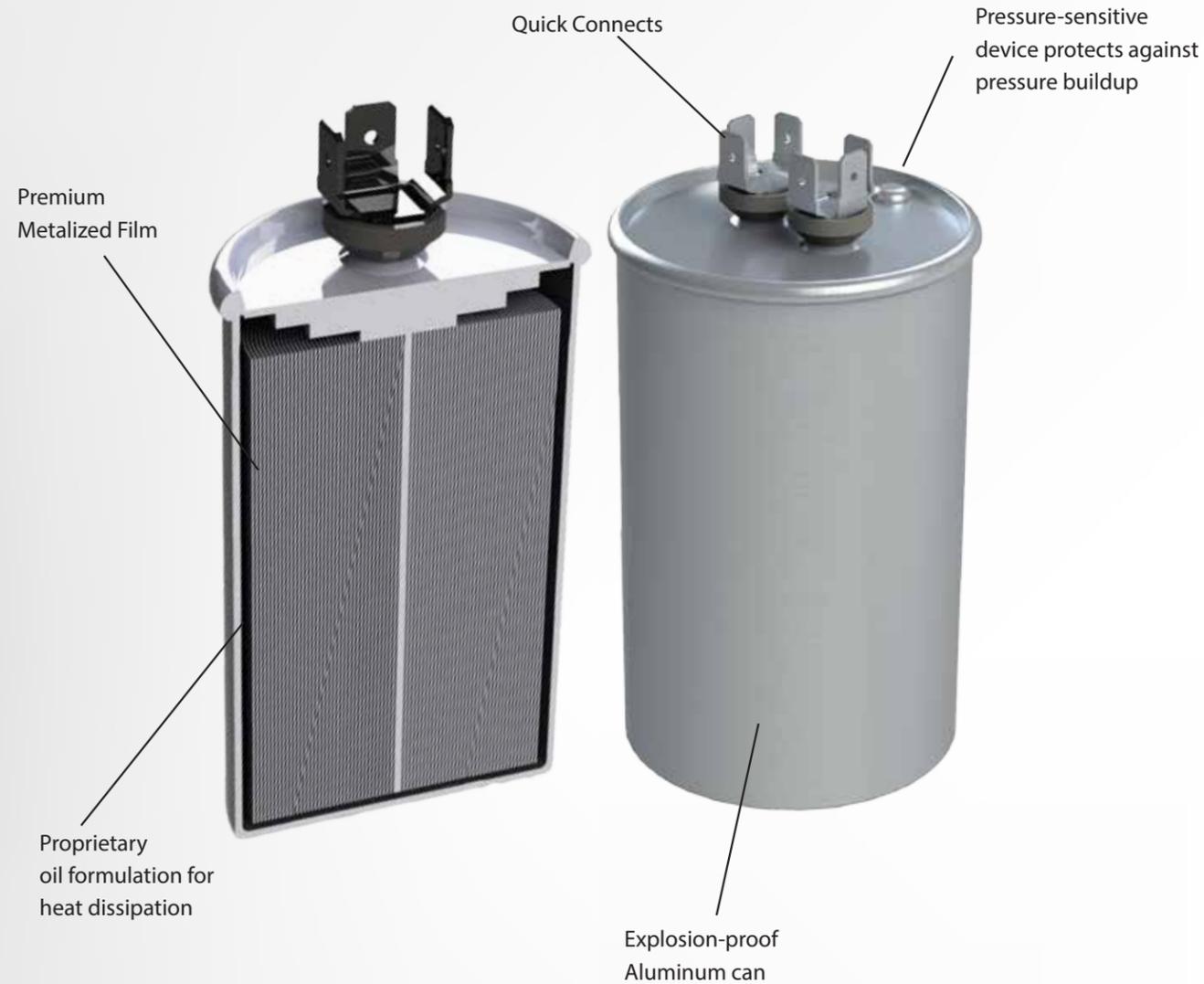
# CONTROL SERIES RUN CAPACITORS

Designed and Built.

Wilspec® run capacitors are built to be compact and low dissipation-factor capacitors, configured in an explosion proof, oil-filled can that is designed for many years of maintenance free operation. From top quality film, sourced from leading producers, to our precision production facilities, these run capacitors are built to withstand the toughest of conditions. Available in various shapes, sizes and connector options, as well as in single or dual core configurations, no matter your single-phase motor needs, Wilspec® matches a run capacitor to your application.

Each capacitor is manufactured with the customer's individual requirements in mind, and built to the highest standards. Built with an expansion-proof aluminum can, and installed with a pressure-sensitive device to prevent pressure build up, Wilspec's® capacitors are capable of withstanding higher temperatures without compromising performance.

The Wilspec® engineering team extensively and repeatedly tests batches of run capacitors in the on-site lab at our Oklahoma City headquarters. The rigorous testing procedures guarantee the highest quality run capacitors every time, capable of continuous operation in high temperature applications.



## Series Specifications

Electrical: 2 to 80  $\mu$ F; up to 600 VAC

Temperature: -40°C to 70°C

Protection Rating: 10,000 AFC

## Series Options

Single or Dual Core Configurations

Standard or High-Temperature Ranges

Aluminum or Plastic Construction

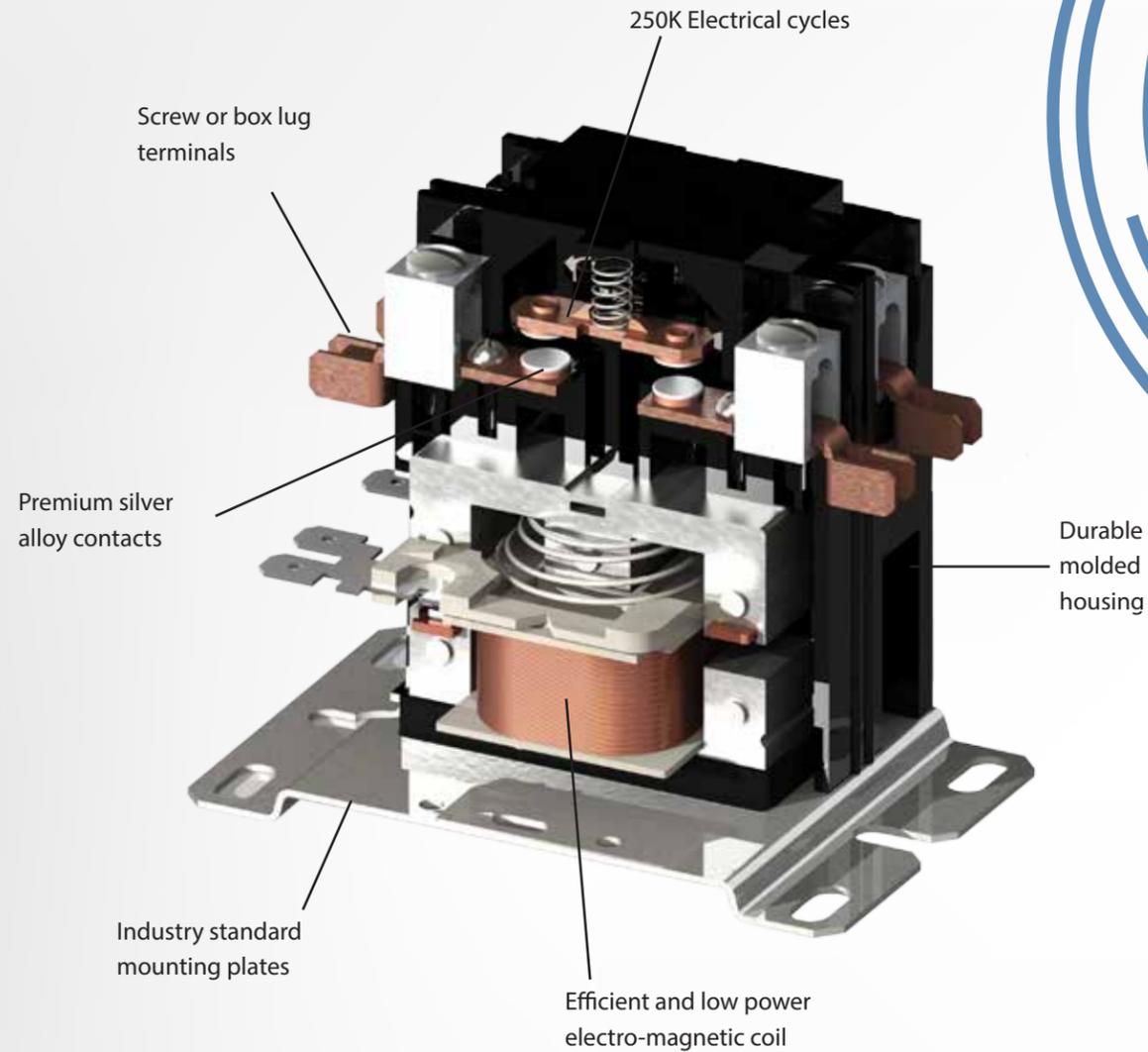
Quick Connects, Wire Leads and Stud Mounts

## Rugged Series Options

High Temp up to 85°C



# CONTROL SERIES CONTACTORS



## Designed and Built.

Wilspec® contactors are designed for a wide range of industrial and motor control applications that require a cost-effective contactor without compromising quality or reliability. Wilspec® contactors meet stringent global electrical and mechanical safety and performance standards, to provide excellent electrical contact and mechanical life in the most demanding applications.

The Wilspec® contactors are engineered to withstand mechanical stress for the rated cycle life, exceeding UL and industry standards. Our contactors are built with silver metal oxide contacts to guarantee electrical performance, and a highly efficient electro-magnetic coil to reduce power requirements. These premium materials and exceptional build quality means perfect contact, every time, at a competitive cost.

Wilspec® contactors make sure your systems are getting the power you need. We take pride in the reliability of our products and the strength of our world class Engineering Team to ensure a perfect fit between our contactors and your needs.

## Series Specifications

Electrical: 20 to 90 Amps

Life Rating: 30 - 250K Cycles

## Series Options

1, 2, 3 and 4 Pole Configurations

24, 120, 240, and 480 VAC Coils

Screw, Box or Pressure Plate Connections

NO/NC End Switch Kits

## Rugged Series Options

50% larger contacts for higher life cycle

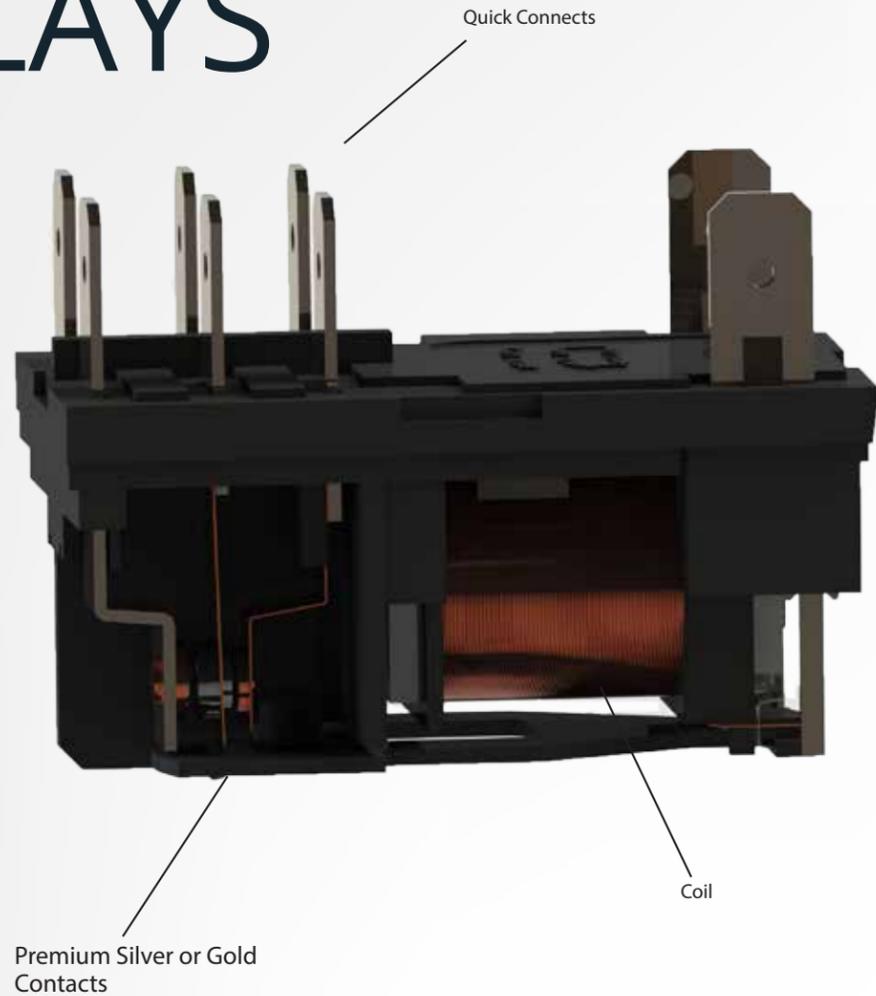
Gold Contacts

# CONTROL SERIES RELAYS

Designed and Built.

Wilspec® relays are designed and built to provide reliable and durable operation for HVAC/R systems and other industrial applications. Employing the latest industry-standard flame-resistant plastic housing, Wilspec® relays can be counted on to handle the rigorous demands of any system, from potential relays that control voltage during motor startup, to power relays that control small compressors, motors, heaters and other auxiliary components.

Available in a variety of contact ratings, coil voltages, electrical connections and form factors, Wilspec® relays are available for a multitude of applications, including for both panel and PCB mount systems. For added reliability, durability, corrosion protection, and heat protection, Wilspec's® relays are also available with optional gold contacts.



## Series Specifications

Electrical: 0-30A, 14-20FLA

Temperature Range: -40 to 65C

Life Rating: 0-100,000 Cycles(Resistive)

## Series Options

SPST, SPDT, DPST, DPDT Configurations

Up to 277 VAC Coils

Flexible mounting options

## Rugged Series Options

50% larger contacts for higher life cycle

CR72 Model Option



CR38 Series

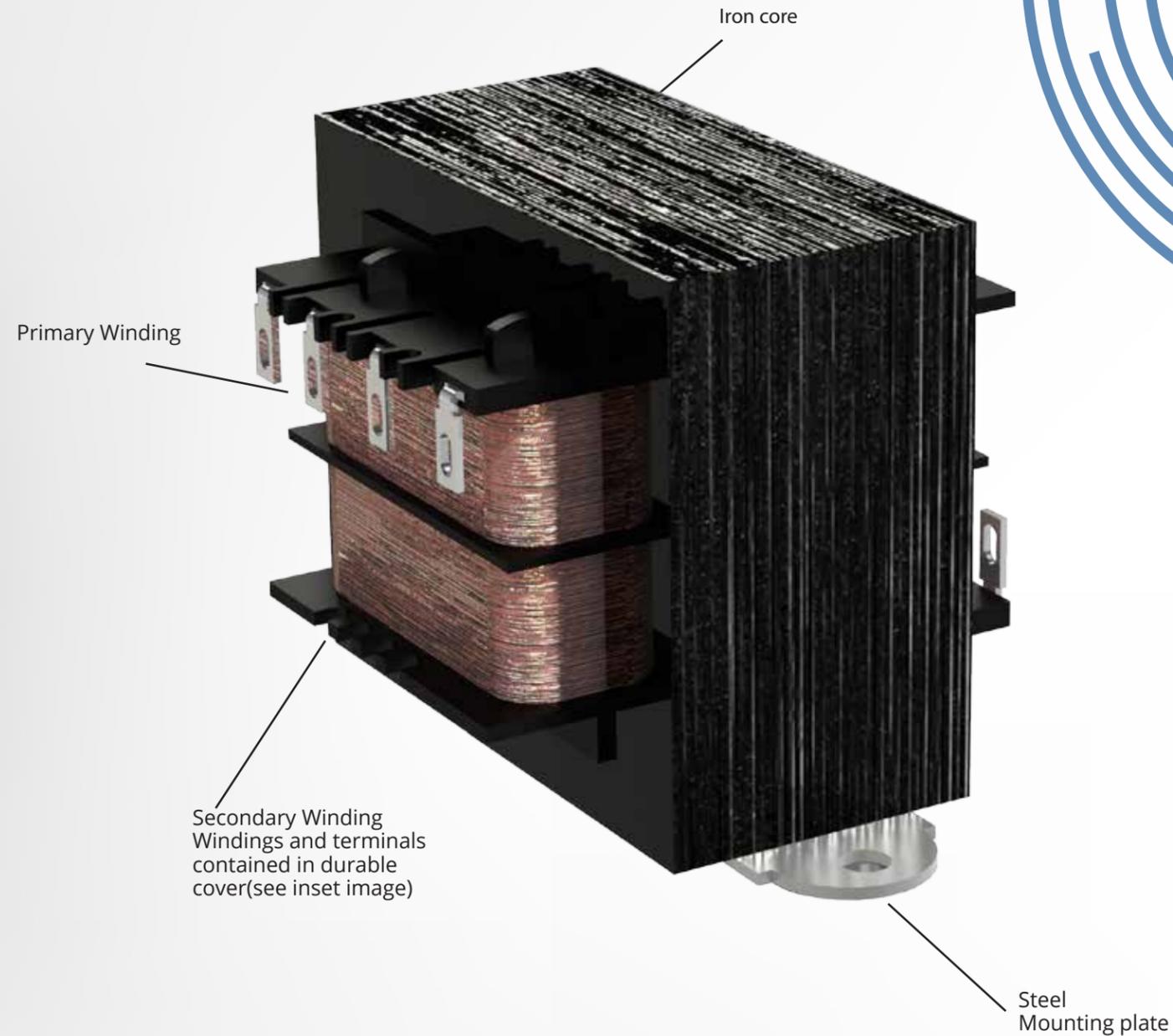


CR72 Series



CR94 Series

# CONTROL SERIES TRANSFORMERS



## Designed and Built.

With an increasing number of lower control voltage components in the HVAC industry, as with other industrial applications, there is a critical need for a high quality, reliable and stable transformer to step down high voltages. Wilspec® transformers provide that reliability for a variety of HVAC components including switches, thermostats and controllers.

Designed and engineered specifically for the HVAC/R industry, Wilspec® Transformers are optimized to provide long, efficient and reliable performance, while protecting temperature sensitive coils and other control components from damaging over-voltage and excessive heat.

As Class 2 Transformers, Wilspec's® transformers are rated for up to 100 VA and a final output of 75V or less. Wilspec transformers are designed with quality materials for reliable field performance, and are rated for input voltage up to 600V. High temperature winding insulation, together with an optimized voltage regulation curve ensure that Wilspec® transformers perform with a stable output voltage under the rated load.

Wilspec® transformers, although designed for the rigorous requirements of the HVAC/R industry, are suited for a wide array of electrical systems that need to step down voltage without sacrificing stability or performance over an extended period of time.

## Series Specifications

Primary Voltages: 120-575Vac(Single or Multi-tap)  
 Secondary Voltage Rating: 12 or 24Vac  
 Secondary Output Ratings: 20-100VA  
 Over-current Protection: Fuse or Circuit Breaker  
 Operating Frequency: 50/60hz

## Series Options

Quick connect, wire leaded, or solder pin constructions  
 Standard or high temperature insulation types  
 Mounting Plate Options  
 Conduit Hub Options  
 Circuit Breaker Options

## Rugged Series Options

> 100 VA Control Transformers



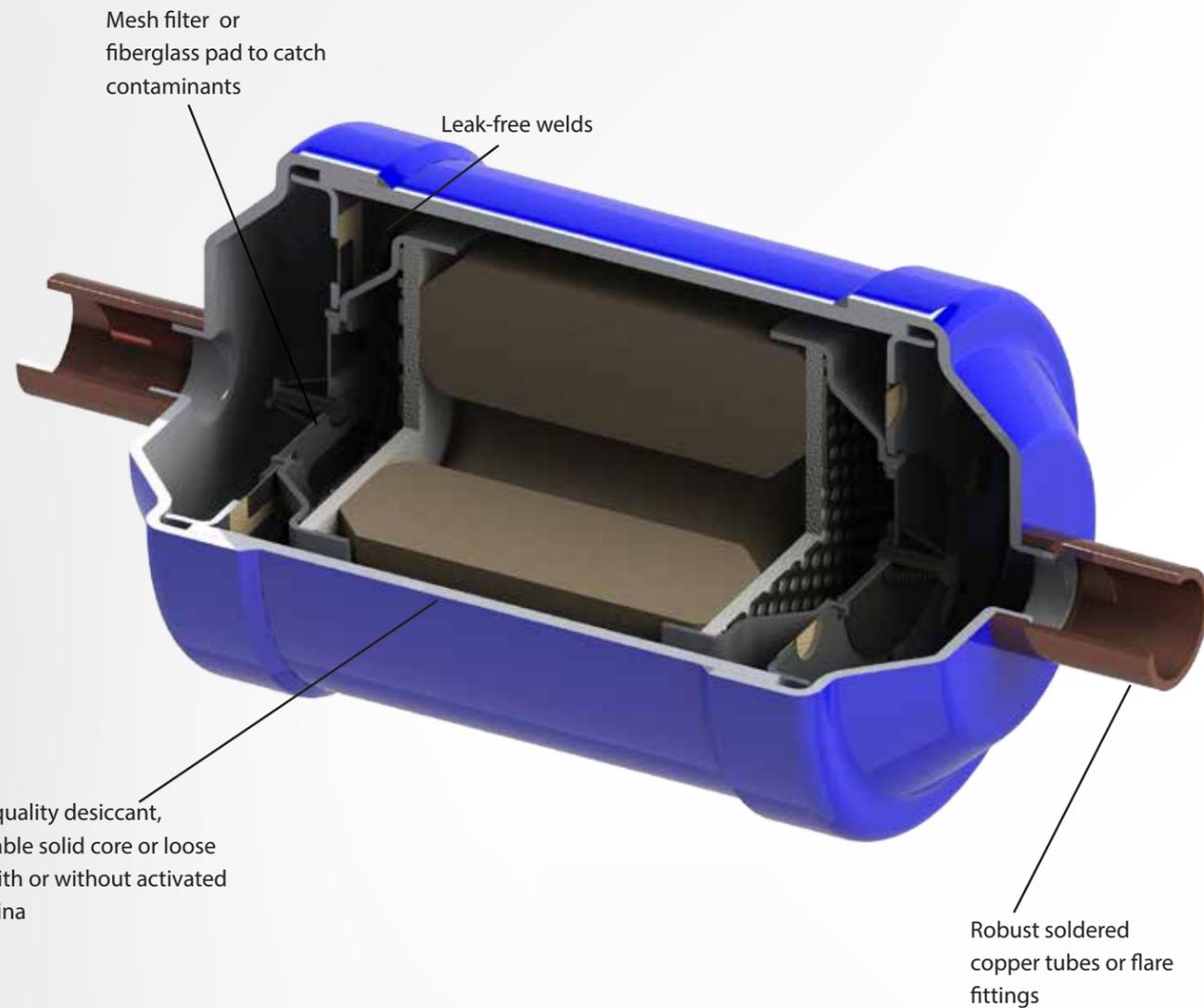
# SHIFT SERIES FILTER DRIERS

Designed and Built.

Metal chips, varnish, dirt, debris, acids and moisture can wreak havoc on valves, tubes and compressors, affecting an HVAC/R system's performance, and often bringing it to a complete halt. Wilspec's® filter driers are designed to stop contaminants and remove moisture from refrigerants to protect those sensitive system parts.

Available in both single direction and bi-flow models, Wilspec® filter driers are compatible with R22, R134, R404A, R407C, R410A and R507 refrigerants, and rated for 1-50 Tons. A filter pad removes particles down to an industry-leading 20µm, and top-quality desiccant, available in either loose or solid core configurations, induces and sustains a state of dryness. Optional activated alumina added to the desiccant also helps remove inorganic acids present in refrigerant.

To provide superior protection and excellent filtration in a leak-free steel body assembly, Wilspec® filter driers go through thorough design, production, testing and quality processes. Wilspec's® team of engineers from around the globe set out to design the most durable and efficient filter driers that will keep systems running safely for years to come. Our ISO 9001:2008 certified manufacturing facilities then exercise the highest level of craftsmanship in manufacturing, ensuring that every part exceeds your expectations.



## Series Specifications

Capacity: 1 to 50 tons (93.5 kW to 176 kW)  
 Operating Pressure: 0 to 700 psig (48 bar/4.8 MPa)  
 Temperature Range: -40°C to 70°C  
 Fluids: R22, R134A, R404A, R407C, R410A, R502, R507, R290

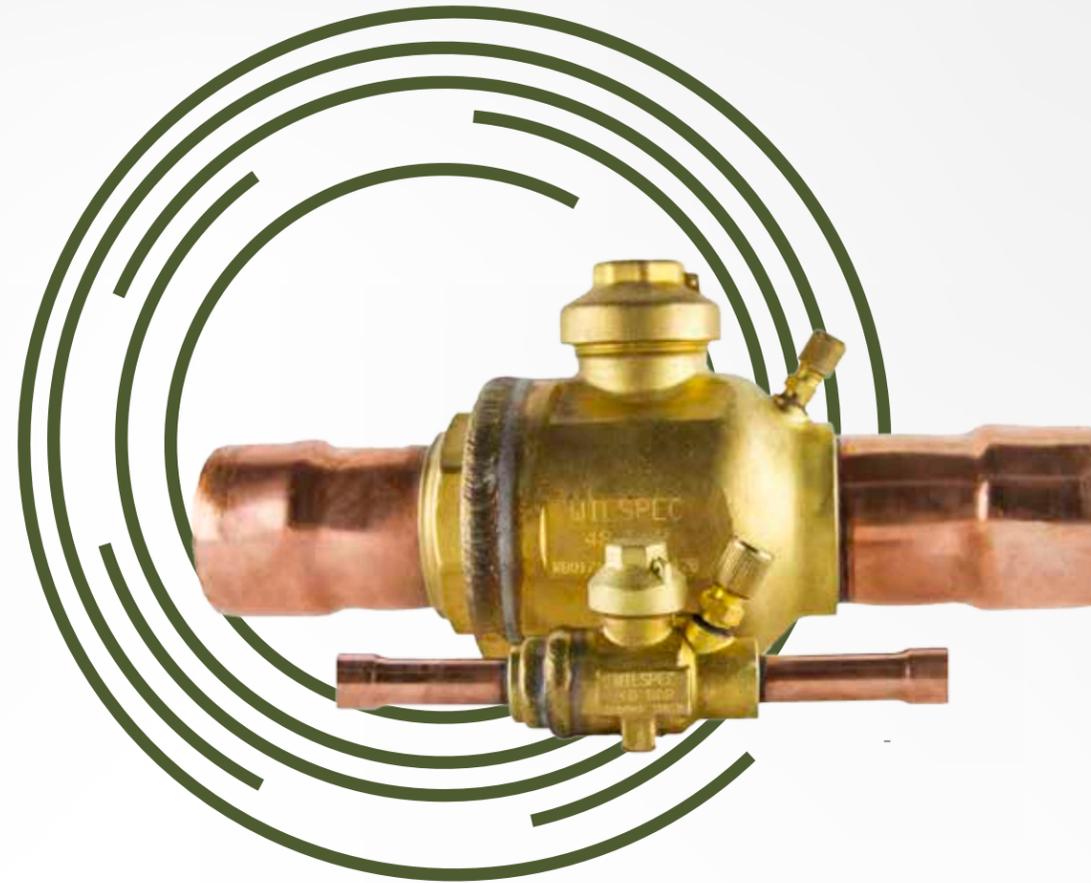
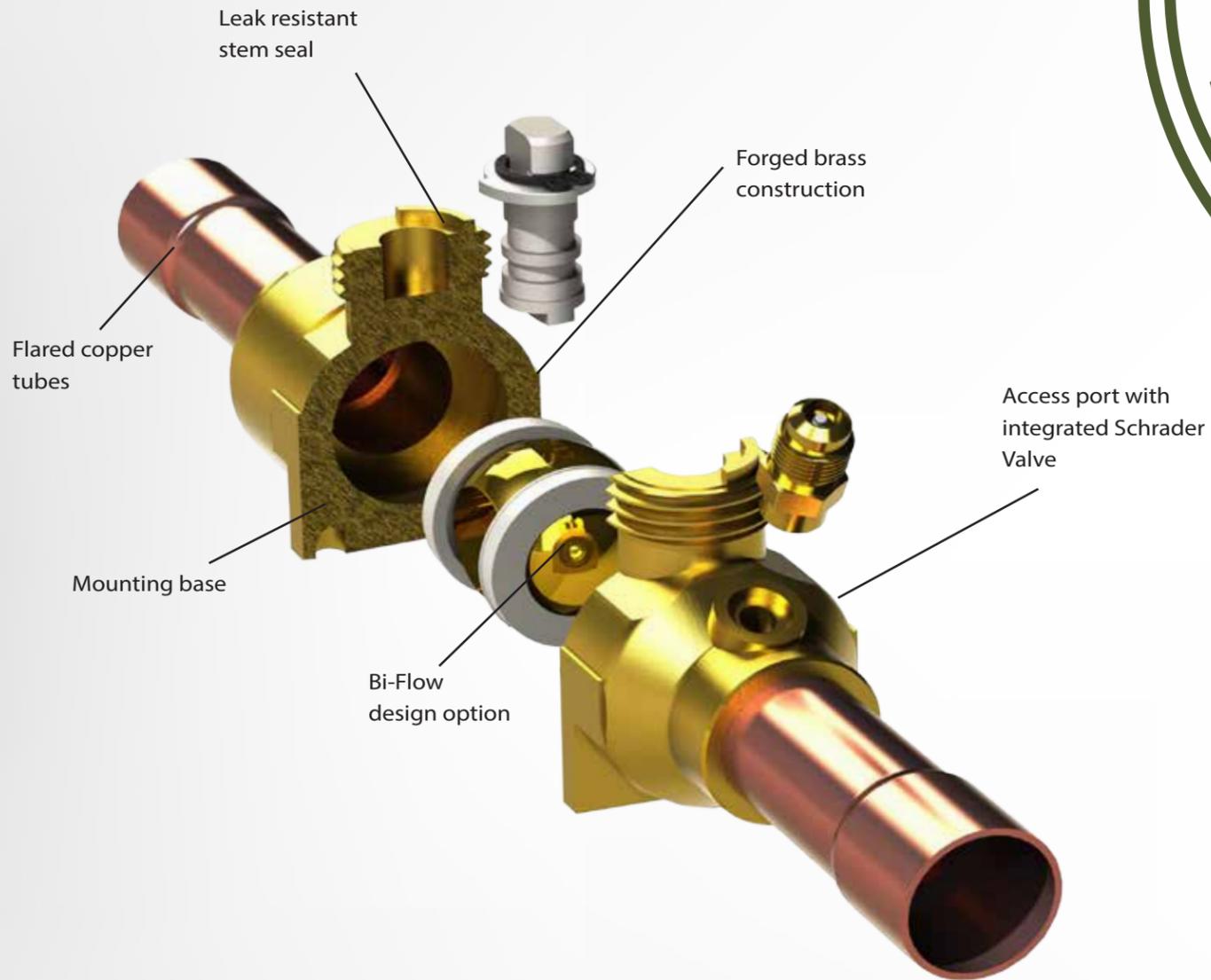
## Series Options

Single Direction or Bi-Flow Configurations  
 Solid Core or Loose Molecular Sieve  
 Solder or Mechanical Fittings  
 Steel or Copper Spun  
 Activated Alumina Blend

## Rugged Series Options

Stainless Steel Construction  
 With built-in Sight Glass

# SHIFT SERIES REFRIGERANT BALL VALVES



## Series Specifications

Operating Pressure: 0 to 700 psig / 48 bar / 4.8 MPa

Temperature Range: -40°C to 150°C

Fluids: R22, R134A, R404A, R407C, R410A, R507

## Series Options

1/4" to 3-1/8" Copper Connections

Stem Cover

Mounting Bracket

Schrader Valve/Charge Port

## Rugged Series Options

Stainless Steel Construction

## Designed and Built.

Wilspec® refrigerant ball valves, built to control fluid flow, are designed to withstand high pressure air conditioning and refrigeration applications, delivering leak-free performance with minimal pressure drop. Wilspec® ball valves are forged from brass and precision machined to guarantee optimum refrigerant flow with low close-off torque.

The proprietary bi-flow design, utilizing an internal equalization system in the precision-engineered sphere, allows the user to mount the valve in any application without consideration of the flow direction. Wilspec's® refrigerant ball valves feature flared copper tubes for efficient brazing of the valves into the refrigerant system and optional access ports are available with or without an integrated Schrader valve.

Wilspec's® ball valves feature bi-directional flow in a precision laser-welded body that is available in a variety of connection and port sizes to fit each customer's application requirements.

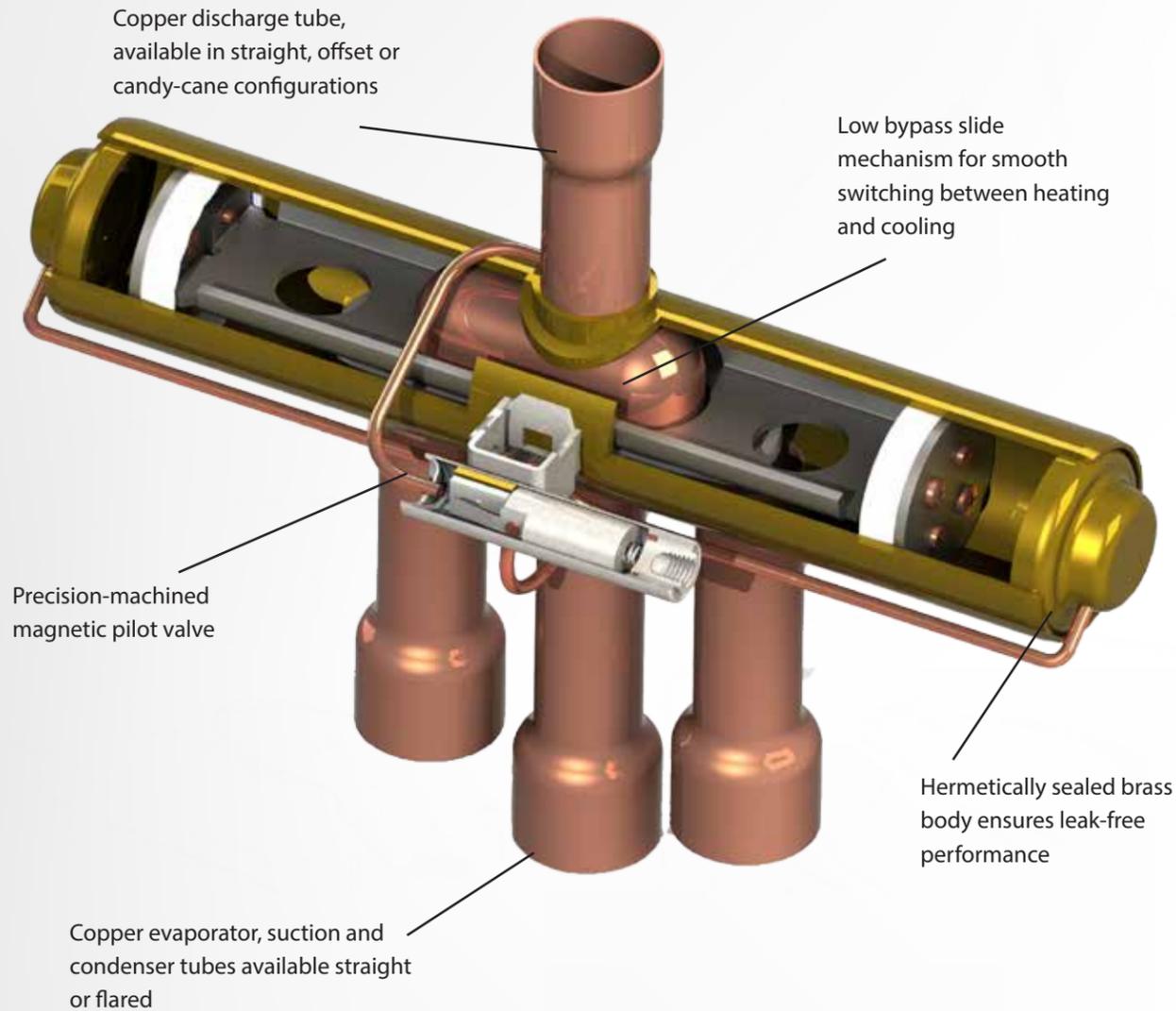
# SHIFT SERIES REVERSING VALVES

Designed and Built.

Wilspec® reversing valves are made for smooth and efficient switching, designed for both residential and commercial heat pump applications, reversing the flow of refrigerant as required by the system. With nearly two decades of experience supplying high quality reversing valves, Wilspec's® reversing valves are recognized as the leading provider of durable, reliable valves for all types of heat pumps.

With a brass body and copper tube connections, Wilspec® reversing valves ensure every application is equipped with a durable, long-lasting solution. All valves are backed with industry standard certifications and excellent performance, designed and tested thoroughly to meet the most demanding applications. In addition, every moving part, from the magnetic pilot valve, to the low-leakage slide mechanism and hermetic seals, is precision designed and engineered for maximum efficiency and durability.

Wilspec® has a long history with the heat pump industry and our detailed understanding of the challenges faced by the industry results in a superior design and build of our reversing valves. Our engineering and application teams will work to determine the perfect tube sizes and tonnage needed for specific applications, including duplex and parallel models.



## Series Specifications

Capacity: 1 to 20 tons (3.5 kW to 140 kW)  
 Operating Pressure: 690 psig / 47.6 bar  
 Fluids: R22, R134A, R404A, R407C, R410A

## Series Options

5/16" to 1-3/8" Solder Connections  
 24, 120, 240 and 277 Vac Solenoid Coils

## Rugged Series Options

Duplex Reversing Valves  
 25, 30, 40, 60 Ton models  
 Parallel Reversing Valves  
 80, 100, 120, 160, 200 Ton models



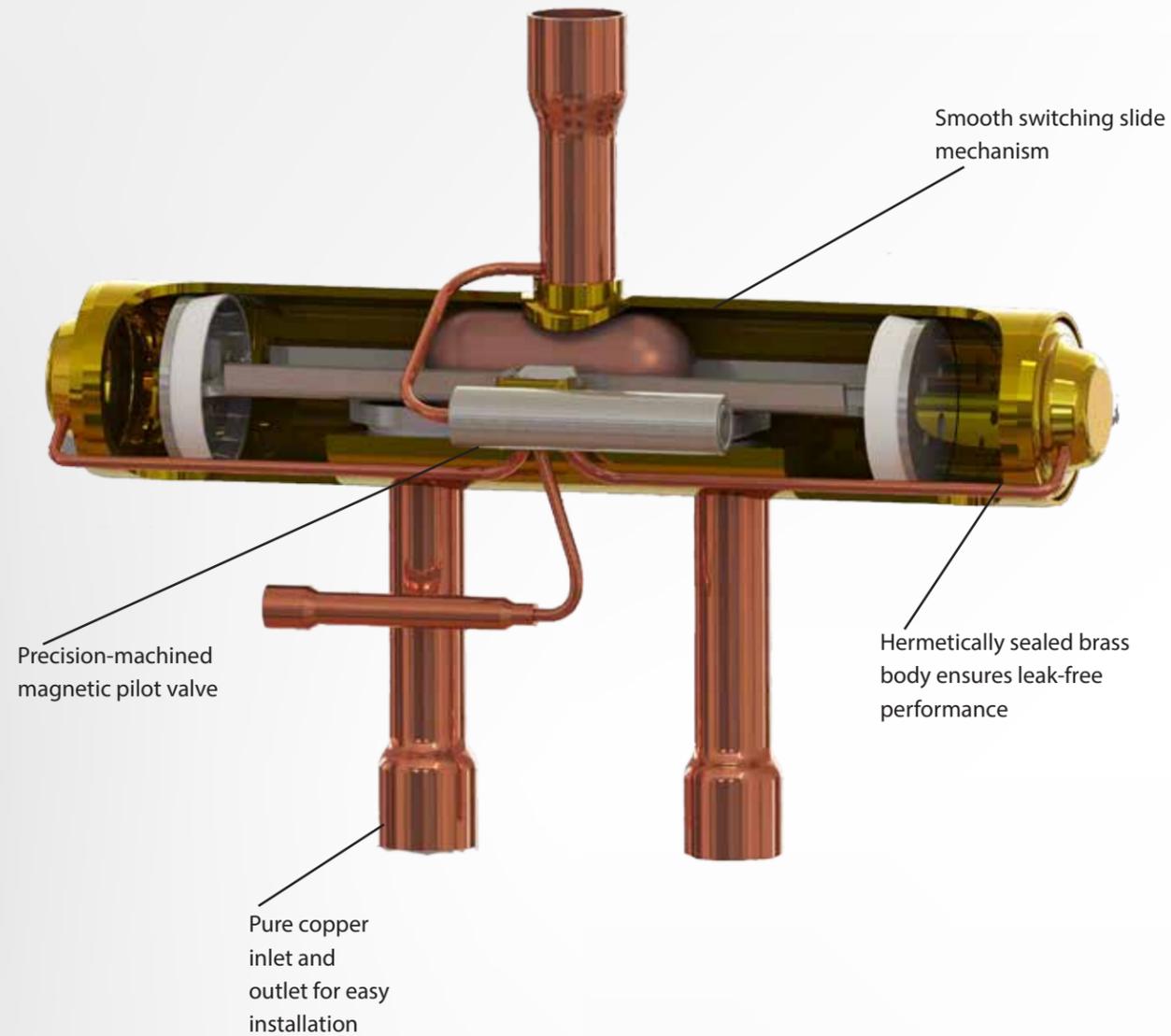
# SHIFT SERIES REHEAT VALVES

Designed and Built.

Wilspec® reheat valves are built for applications needing to redirect refrigerant flow, such as in defrost applications or heat recovery systems. The design is based on the existing technology and infrastructure of the existing Wilspec® reversing valves platform, with the same leak-free brazed construction and high-quality seal components, along with the low-power coil to reduce energy consumption.

With the HVAC/R Industry's push towards higher efficiency standards, manufacturers are required to reclaim and recycle heat typically rejected during the refrigeration cycle. Wilspec® reheat valves are the perfect complement to Variable Air Volume (VAV) and Variable Fan Speed (VFS) systems. Additionally, reheat valves are useful in providing efficient zone control for large buildings, as well as heat recovery for varied industrial applications.

Exposed to high pressures, volatile refrigerants and changing atmospheric conditions, Wilspec® reheat valves are designed and manufactured to stringent industry standards and go through extensive testing and quality control.



## Series Specifications

Capacity: 1 to 20 Tons (3.5 kW - 70 kW)  
 Max Operating Pressure: 690 psig / 47.6 bar  
 Fluids: R22, R134A, R404A, R407C, R410A

## Series Options

5/16" to 1-3/8" Solder Connections  
 24, 120, 240 and 277 VAC Solenoid Coils  
 Electrical Quick Connections or Wire Leads

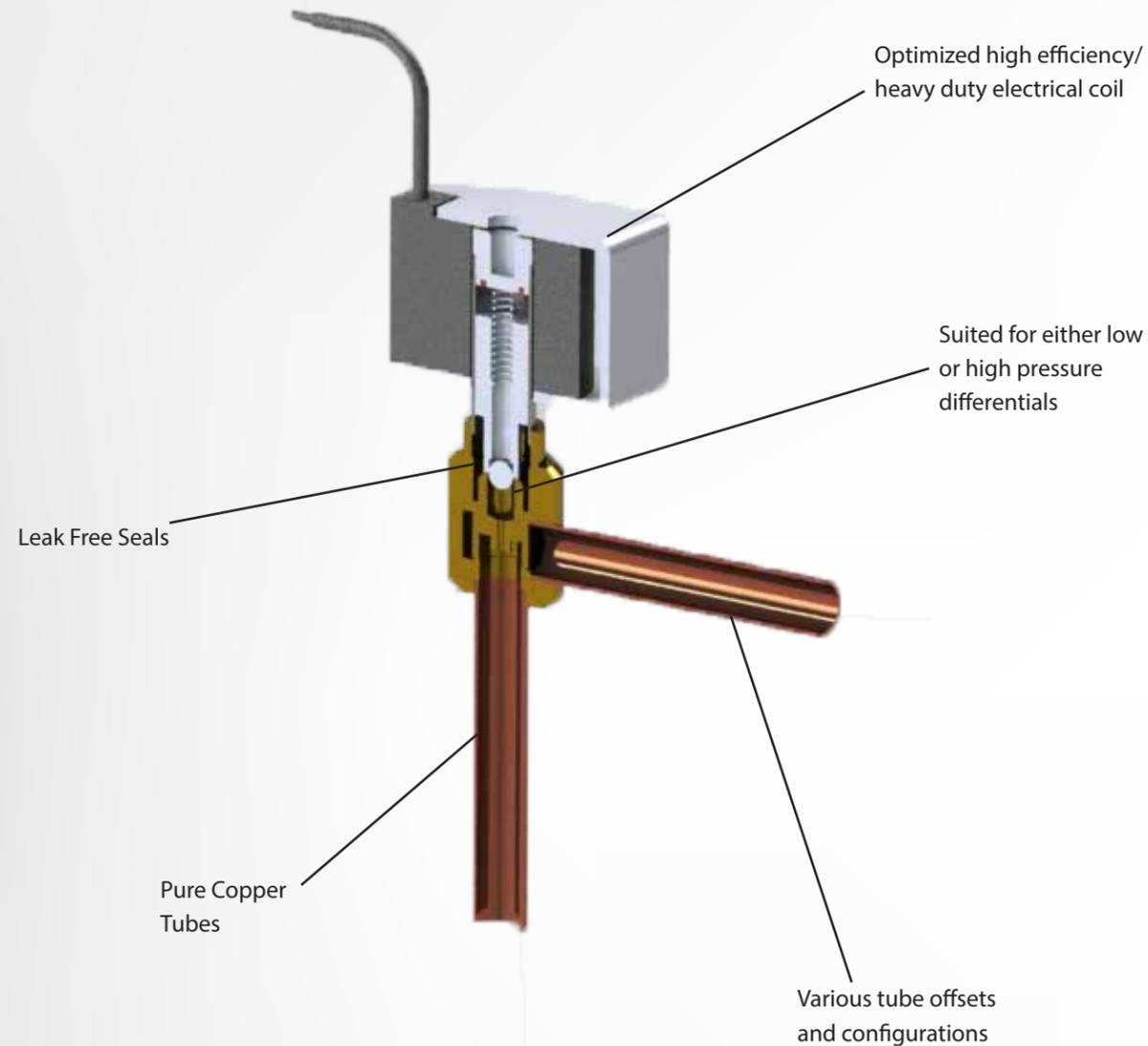
# SHIFT SERIES SOLENOID VALVES

Designed and Built.

Wilspec® solenoid valves offer a reliable solution to both manipulate and control the flow of liquid in your system. With both direct operated and pilot operated solenoid valves available, our engineers have engineered a range of options to meet the needs of both commercial and residential systems.

Wilspec® is always pushing towards becoming more efficient and is continuously engineering components to meet the robust system requirements of the industries we serve. Our solenoid valves' solenoid coil are specifically designed for low energy consumption with multiple options to better suit your systems' operations. All of our solenoid valves are rated for a 300K cycle life and are able to maintain a stable response rate over the life of the product.

Wilspec® is here to help you find the right valve to match your system's needs, and to assist in the fluid controls in your systems. With form, function and reliability in mind, our solenoid valves are engineered and manufactured to meet your needs.



## Series Specifications

Fluid Temperature: -35°C to +130°C

Ambient Temperature: -20°C to +55°C

Max Operating Pressure: 609psi

Max Actuating Pressure Differential: 377psi

Max Opening Pressure: 362psi

Min Opening Pressure: 43psi

Cycle Life: 300K

## Series Options

Compatible Fluids: R22, R407C, R134A, R410A

Port Size: 1.9mm-31.7mm

Configurations:

90°, 180°, Offset, Custom Configuration

# WIRE HARNESSSES



Wilspec® wire harnesses are completely customized to your needs. We provide you with the product you need for your power and sensor harness needs.

## Wire Types

- UL AWM types
- Jacketed cables,
- Automotive Wires
- Halogen free wires and cables

## Connector Options

- Quick connects
- Wire to board connectors
- Weather resistant connectors
- Environmentally sealed connectors
- Panel mount connectors
- Conduit adapters

# Didn't find what you were looking for?

Wilspec® Engineers have designed and introduced thousands of product combinations for the global markets, with each product designed using state-of-the-art 3-D mechanical design software and produced with the utmost precision.

Wilspec's® global team of Product Design Engineers, Manufacturing Engineers and Market Specialists are hard at work developing additional world class products to fit your application's needs. We are working to bring the future into the present: creating a range of new solutions that will support the next generation of advanced systems and systems management.

Please complete and return the Product Request Form below for inquiries relating to products not listed in this catalog.

Name: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Email: \_\_\_\_\_  
 Phone: \_\_\_\_\_

Product: \_\_\_\_\_  
 Current Supplier: \_\_\_\_\_  
 Annual Usage: \_\_\_\_\_  
 Part Number: \_\_\_\_\_

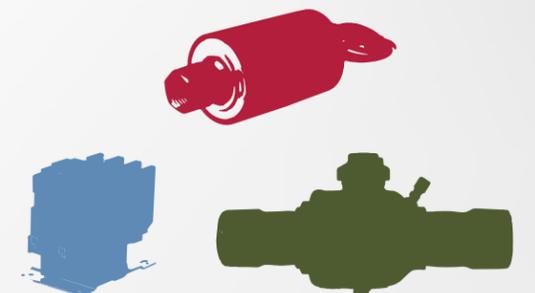
Application: \_\_\_\_\_  
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Functionality: \_\_\_\_\_  
 \_\_\_\_\_  
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Specifications: \_\_\_\_\_  
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Drawing Available:  Yes  No  
 Attached

Notes: \_\_\_\_\_  
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 \_\_\_\_\_



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