



aerospace  
climate control  
electromechanical  
filtration  
fluid & gas handling  
hydraulics  
pneumatics  
process control  
sealing & shielding



# SCR Coolant Valves

DEF Tank Heating Control for the Off-Road Market



ENGINEERING YOUR SUCCESS.

# Proven Reliability in

## Clean Air Doesn't Stop at the End of the Road



### ON-ROAD

With thousands of diverse solenoid valve options for fluid control and a history of success in the on-road market, our highly skilled engineers, global operations, and technical sales support make Parker Fluid Control Division your most valuable partner.

Our innovative and cost-effective solutions have been used by numerous global OEMs and Tier 1 suppliers to help reduce on-road diesel emissions. Many of these proven transportation technologies can now be used in the off-road segment to meet ongoing global regulations for emissions reduction.

### OUR MISSION

Parker Fluid Control Division partners with transportation industry leaders to help limit toxic emissions, reduce greenhouse gases, improve fuel efficiency, and utilize cleaner burning alternative fuels.



# Extreme Conditions

## OFF-ROAD

The continued drive towards lower NOx emissions has led to an increased use of Selective Catalytic Reduction (SCR) in off-highway applications. Incorporating SCR system hardware into off-road engines requires designs and packaging for a wide range of vehicles, including mobile equipment with operating life spans that often far exceed on-highway applications.

At Parker, we recognize that today's SCR systems must remain dependable under severe operating conditions, temperatures, and harsh work environments typically found at construction, farm, forestry, and excavation sites. To help meet this challenge, we use our proven track record of success with on-road applications to develop products ideally suited for the demanding off-road market.



# PARKER OFF ROAD



## BUILDING OFF SUCCESS...

For years, Parker has provided the global transportation market with highly dependable SCR coolant valves for proper DEF tank heating control. Building off this success, we didn't need to change our recipe very much.

For off-road applications, the original Parker SCR valve configuration has stayed intact, but with an improved design focused on increased debris resistance, moisture protection and ease of installation.

As more off-road users of SCR systems require robust, error-proof mounting, Parker focuses on incorporating valve body features to prevent improper installation, while ensuring superior retention in mobile equipment applications.

Our base valve construction combined with a proven IP69K rated solenoid coil, adapts well to higher levels of coolant contamination and increased water exposure found in demanding off-road work environments.



## Glycol Control Valve

### Reliable DEF Tank Heating Control

Parker Fluid Control Division offers glycol control products designed specifically for the off-road & mobile equipment market.

### The Parker Advantage

	Parker	Competition
Function/ Construction:	Pilot operated, less components, simpler	Direct lift more components
Hydraulic connectors:	Integrated --> tight	Screwed --> leakage risk
Low temperature functioning:	Okay: open and closed	Not Okay: does not open
Metallic yoke:	Overmolding outside: temperature expansion free	Overmolding inside: coil over- molding affected (crack) with expansion
Surge diode:	Bidirectional: no polarization	Unidirectional: polarized circuit
Coil orientation:	Any angular orientation	Orientation by 90° step
Weight:	430g	720g

# Superior Protection for Challenging Work Environments

An emissions control valve that holds up to vibration, heat, moisture and debris.

**Selective Catalytic Reduction (SCR) System (NOx)**

**Flexible coil orientation** allows easy installation in tight spaces

**Metallic yoke & coil overmolding** avoids cracking as a result of thermal expansion

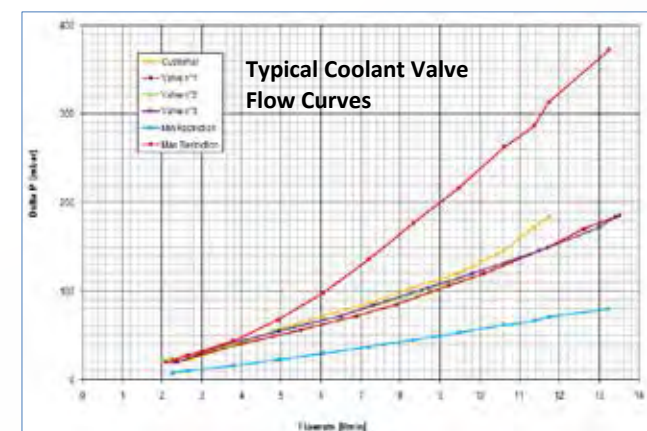
**Debris resistant design** retains valve performance when exposed to coolant contamination

**Error proof mounting** prevents costly DEF system problems caused by backwards installation

**DEF Tank**

- Construction Equipment
- Agricultural Machinery
- Mining Vehicles
- Rail & Transit Systems
- Stationary Generators
- Marine

VALVE	
TYPE:	2-way type Solenoid valve
FUNCTION:	Normally closed, Servo-piloted, Diaphragm valve
DIFFERENTIAL PRESSURE RANGE:	0.2 to 3.0 bar (3.0 to 45 psig)
FLOW RATE:	From 12 to 36 l/min
MEDIA TEMPERATURE:	-40°C to +135°C (water or water with max. 50% glycol solution)
AMBIENT TEMPERATURE:	-40°C to +85°C
ELECTRICAL PART	
PART DESCRIPTION:	Epoxy Molded Coil
COUPLING:	Bayonet twist and lock coupling for tight, vibration resistant connection
SEALING CAPABILITY:	Sealed connector to meet IP69K (per DIN 40050, part 9)
COIL WIRE TYPE:	Class "F" Encapsulate Material Temperature Rating Class "H" High Temperature Wire Rating
COIL RATING:	155° C
OPERATING TEMPERATURE RANGE:	-40°C (-40°F) to 85°C (185°F)
TERMINATIONS:	ISO 15170-A1-2.3-Sn/K2 or A3-2.1-Sn/K2
WATTAGE:	12.5 W at ED 0% / ambient temperature 20°C; 9W / hot conditions
OUTPUT:	12 VDC 11.5 ± 7% ohms at ambient temperature
VOLTAGES:	24 VDC 46.0 ± 7% ohms at ambient temperature
COLOR:	Black; with black male bayonet (24 VDC), red male bayonet (12 VDC)
PIN TERMINATION DIAMETER:	2.5 mm system
SURGE PROTECTION:	Internal bi-directional 50 V diode or without



- Compact valve
- Versatile Mounting Options and Ease of Installation
- Large Operating Voltage Range
- Large operating temperature range (fluid & ambient)
- Proven reliability in harsh environments
- Broad customer base (both on-road & off-road)
- Durability & debris tolerant
- Submersible

# Don't let moisture affect your performance:



## IP69K Rated Seal Connector Coil

- Sealed design for high moisture, high pressure, and short-term submersion environments. Advanced manufacturing technology offers enhanced performance in all environmental conditions.
- Epoxy molded Class F coil with Class H wire suitable for high temperature requirements.
- Meets international environmental standards offering excellent electrical properties and the highest level of process safety.

## OPTIONS

Standard Configuration  
Four (4) Bolt Mount  
Quick Connect  
Integrated with DEF Header



Learn more at [www.parker.com/fcd](http://www.parker.com/fcd) or call us at 860 827 2300

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