



# PRODUCT BULLETIN

## Electrohydraulic Brake Valve EBV Series

### DESCRIPTION

The ZF Electrohydraulic Brake Valve, EBV series, is a full power valve for modulating output pressures in proportion to the input current. This valve, in a full power brake system, provides hydraulic power for normal and emergency power-off braking for electrohydraulic brake systems, anti-lock brake systems, and traction control systems.

### FEATURES

Patented design makes maximum use of the solenoid stroke and force to improve reliability and performance.

Valve can be remotely mounted - moving the hydraulic plumbing noise away from the operator.

Direct acting valve simplifies design, which eliminates the continuous flow and small orifices of a pilot valve.

Low valve leakage keeps accumulator sizes small for emergency power-off braking.

High force solenoid reduces the effects of friction and contamination.

Low resistance coil allows full pressure output with low input voltage, higher temperature operation, or continuous use.

Optimized specifically for the unique performance characteristics of full power braking or clutching applications.

Manual override provides a way to mechanically open the valve if electrical power is lost.



Single EBV

Dual EBV

### OPTIONS

For 12 VDC and 24 VDC systems.

Various output pressure ranges.

Various circuit configurations (traction control, ABS, hydraulic apply spring release HASR, spring apply hydraulic release SAHR, etc.)

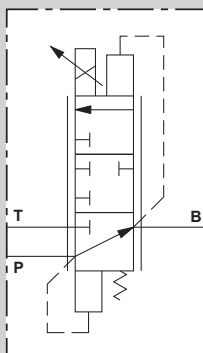
Multiple valves and accessories integrated into a single housing.

High impedance coil options for controllers with limited current capabilities.

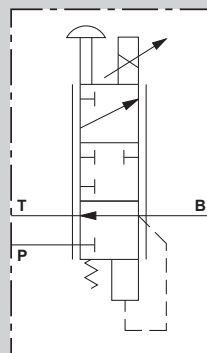
Brake pressure with no current can be zero, maximum, or intermediate values.

Sub-plate manifold mounting.

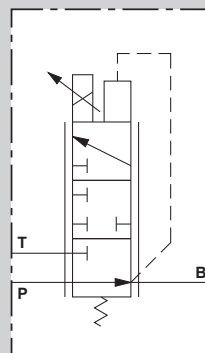
### Symbols



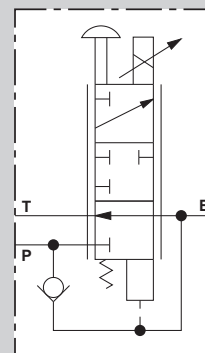
ABS  
Anti-lock  
Brake Valve



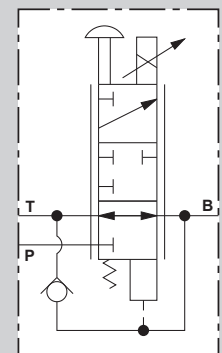
HASR  
Modulating  
Brake Valve



Reverse  
Modulating  
Brake Valve



SAHR  
Modulating  
Brake Valve



Electronic  
Traction  
Brake Valve

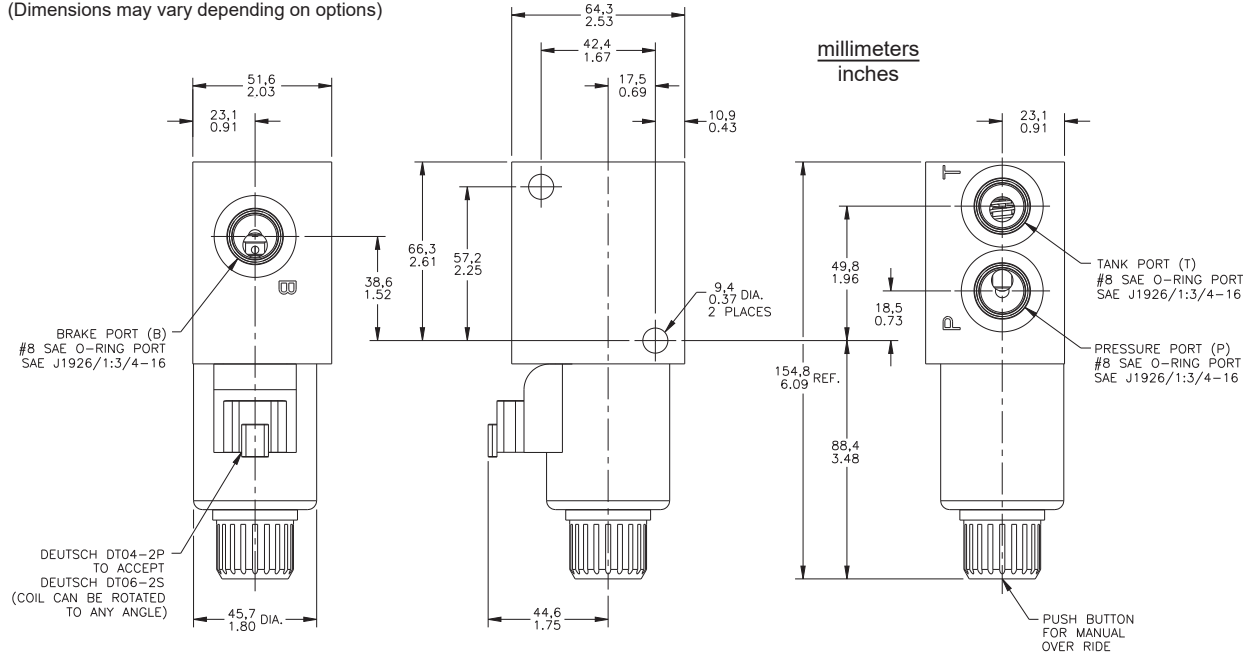
## GENERAL SPECIFICATIONS

Coil resistance..... 2 - 18 Ohms at 25 °C (77 °F)  
 100% duty cycle rating..... 1.0 - 3.2 Amps  
 Maximum leakage (each valve)..... 32 cc/min with 138 bar (2000 PSI) supply  
 and 32 cSt (150 SUS) oil  
 Ambient Temperature range (for 100% duty cycle continuous use)..... -50 °C to 60 °C ( -58 °F to 140 °F)  
 Rated supply pressure..... 207 bar (3000 PSI)  
 Approximate weight..... 2.1 Kg (4.7 lb)  
 Fluid type..... mineral base hydraulic oil

**Additional options are available. Contact ZF Off-Highway Solutions Minnesota Inc. for more information.**

### Single EBV

(Dimensions may vary depending on options)



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