

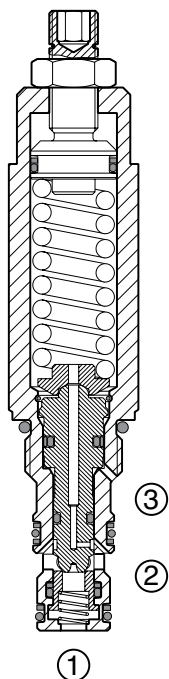
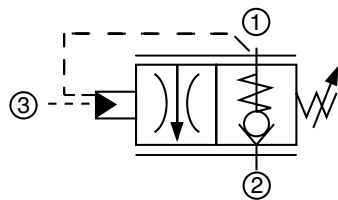
# CHECK & LOAD CONTROL VALVES

## RS08-01

### Counterbalance Valve

Up to 10 gpm (38 l/min) • 5000 psi (350 bar)

#### Hydraulic Symbol



#### Description

A screw-in cartridge, 3-port, externally piloted counterbalance valve for precise control of overrunning loads, with load holding capabilities, thermal relief protection and free reverse flow check features.

#### Operation

The RS08 allows free flow from port 2 (inlet) to port 1 (load). Flow from port 1 to port 2 is blocked until either the pressure setting has been reached or sufficient pilot pressure has been applied to port 3 (pilot). The RS08 has optional 3:1 and 4:1 pilot ratios. It will open when pilot pressure = 1/3 (or 1/4) of the difference between the set pressure and the load pressure.

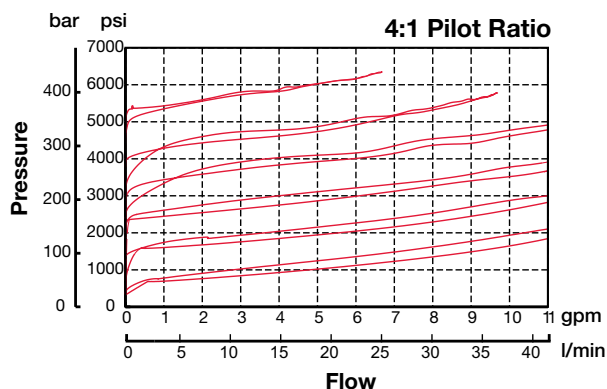
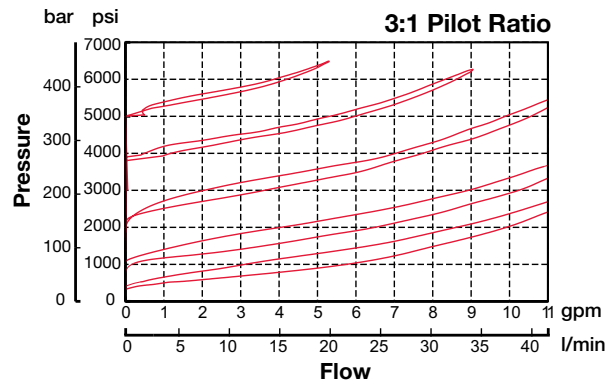
#### Features

- Excellent stability through entire flow range
- Adjustable across specified pressure range
- Positive stop prevents spring from over adjustment (options V, H)
- Stroke limiting device for enhanced safety
- Internal seals to minimize leakage
- Same cavity as the RP08A-01 P.O. Check valve.
- Hardened poppet and seat to ensure extended service life and low leakage
- All external surfaces zinc-plated
- Industry common cavity

#### Specifications

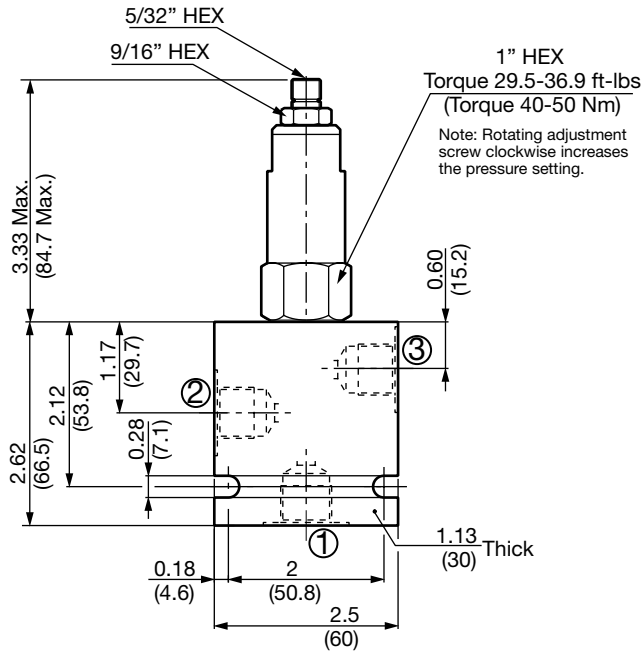
Operating Pressure	5000 psi (350 bar)
Nominal Flow	10 gpm (38 l/min)
Internal Leakage	5 drops/min. (0.25 cc/min) max. to 80% of nominal settings
Pilot Ratios	3:1, 4:1
Check Valve Cracking Pressure	14 psi (1.0 bar)
Fluid Operating Temp. Range	-4° to 248°F (-20° to +120°C) (Consult factory for usage at temp. outside range.)
Fluid Compatibility	Mineral-based or synthetics with lubricating properties
Viscosity	50 to 2000 SUS (7.4 to 420 cSt)
Filtration	21/19/16 or cleaner (per ISO 4406). Use with filter rated $\beta_{10} \geq 200$ .
Installation	No orientation restrictions
Cavity	FC08-3 (see Line Bodies & Cavities section)
Cavity Tools	Rougher: 02580086 Finisher: 02580087
Cartridge Weight	0.58 Lbs. (.266 kg)
Cartridge Material	Steel with hardened work surfaces. Zinc-plated exposed surfaces. Anodized aluminum knobs. (option H) Buna N or Viton® o-rings, and PTFE back-up rings.
Seal Kits	Buna-N P/N: 03054795 Viton® P/N: 02591059

#### Performance



# CHECK & LOAD CONTROL VALVES

## Dimensions



## Model Code

RS08-01-C-N-3-500 V 300

### Valve Model

### Body & Ports

- C = Cartridge only
- AS6 = SAE-6 ports, aluminum body
- SS6 = SAE-6 ports, steel body

### Seals

- N = Buna-N
- V = Viton®

### Pilot Ratio

- 3 = 3:1
- 4 = 4:1

### Adjustment Range

- 500 = 700 to 5000 psi (48 to 350 bar)

### Adjustment Options

- F = Factory pre-set, non-adjustable (must specify setting below)
- H = Knurled Hand Knob
- K = Allen Head (HEX 5/32") w/ cover cap
- V = Allen Head (HEX 5/32")

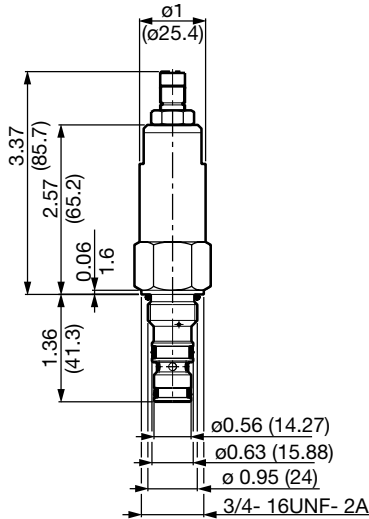
### Setting (optional)

- (omit) = Set at min. pressure for the range
- XXX = Desired psi ÷ 10

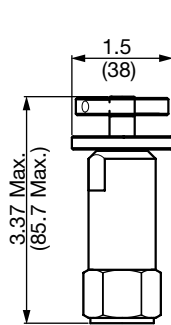
Example: 300 = 3000 psi

## Adjustment Options

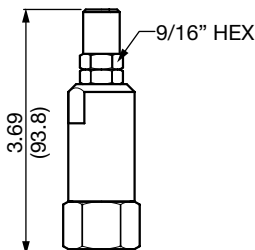
### 'V' - Allen Head (std)



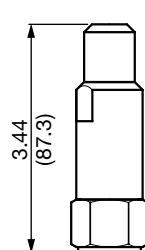
### 'H' - Hand Knob



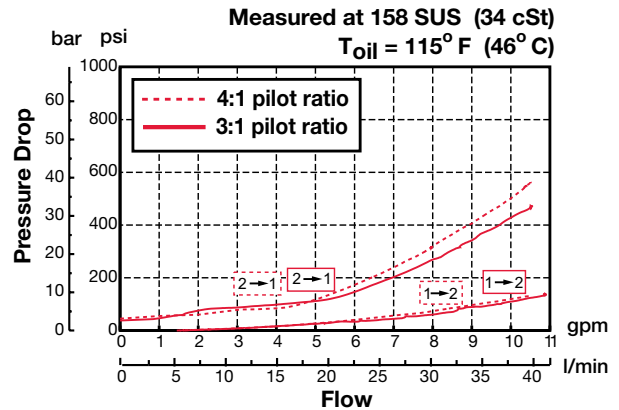
### 'K' - Protective Cap



### 'F' - Tamper Proof Cap



## Performance



## Standard Line Bodies\*

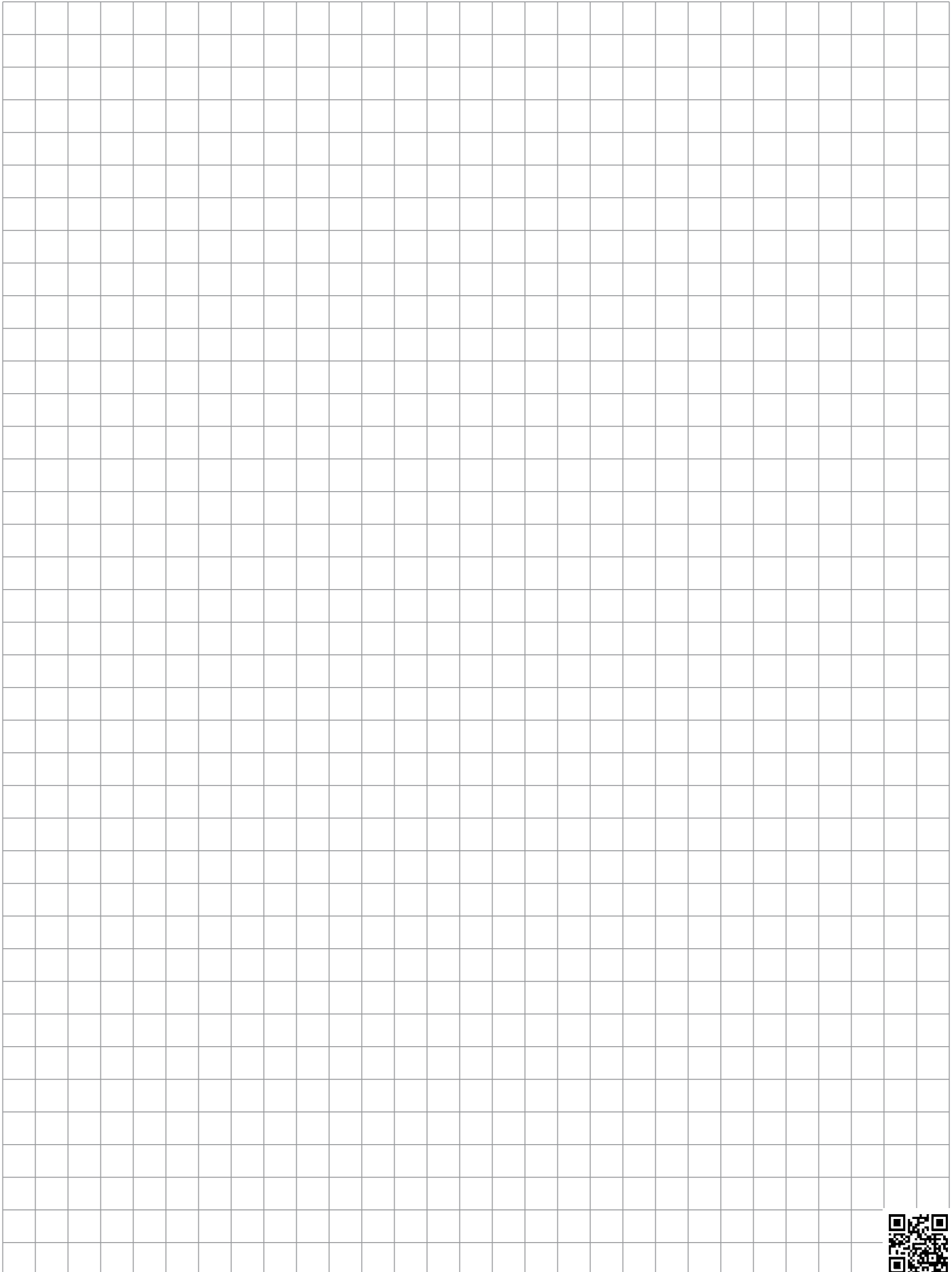
Code	Part No	Material	Pressure Rating	Weight
FH083-AS6	03011424	Aluminum, anodized	3500 psi (245 bar)	0.58 lb (0.26 kg)
FH083-SS6	00560920	Steel, Zinc plated	6000 psi (420 bar)	1.70 lb (0.77 kg)

\*Please refer to Line Bodies & Cavities section for details

All measurements in inches (mm).  
Subject to technical modifications

# CHECK & LOAD CONTROL VALVES

## Notes

A large grid of graph paper for taking notes, consisting of 20 columns and 30 rows of small squares.