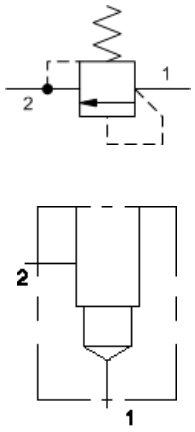
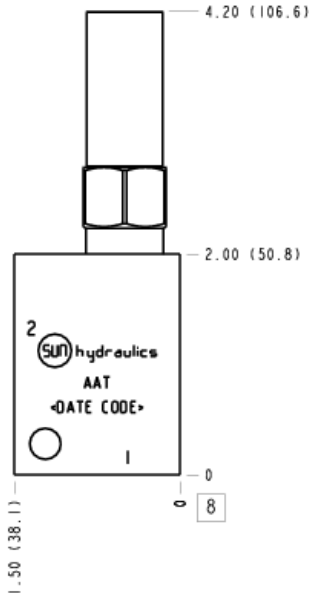
MODEL
RDBACDN-AAT

Direct-acting relief valve
CAPACITY: 45 L/min. | CAVITY: T-162A





CARTRIDGE CONFIGURATION

C	Control	Tamper Resistant - Factory Set
D	Adjustment Range	200 - 800 psi (14 - 55 bar), 400 psi (28 bar) Standard Setting
N	Seal Material	Buna-N
(none)	Material/Coating	

MANIFOLD CONFIGURATION

(none)	Modifier	6061-T651 Aluminum, Buna-N

PORT HEADINGS AND SIZES

Modifiers	Ports
AAT, /10, /11	All Ports: 1/4" BSPP;

NOTES

Important: Carefully consider the maximum system pressure. The pressure rating of the manifold is dependent on the manifold material, with the port type/size a secondary consideration. Manifolds constructed of aluminum are not rated for pressures higher than 3000 psi (210 bar), regardless of the port type/size specified.

Direct-acting relief cartridges are normally closed, pressure-limiting valves used to protect hydraulic components from pressure transients. When the pressure at the inlet (port 1) reaches the valve setting, the valve starts to open to tank (port 2), throttling flow to limit the pressure rise. These valves are smooth and quiet, essentially zero leak, dirt tolerant, immune to silting and are very fast.

CARTRIDGE TECHNICAL DATA

Cavity	T-162A
Series	0
Capacity	45 L/min.
Maximum Operating Pressure	350 bar
Factory Pressure Settings Established at	15 L/min.
Maximum Valve Leakage at Reseat	0,7 cc/min.
Response Time - Typical	2 ms
Reseat	>85% of crack setting
Adjustment - No. of CW Turns from Min. to Max. setting	6
Valve Hex Size	19,1 mm
Valve Installation Torque	27 - 33 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	12,7 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990-162-007
Seal kit - Cartridge	EPDM: 990-162-014
Seal kit - Cartridge	Polyurethane: 990-162-002
Seal kit - Cartridge	Viton: 990-162-006
Model Weight	0.11 kg.

MANIFOLD TECHNICAL DATA

Body Type	Line mount
Interface	None
Body Features	Ninety degree
Mounting Hole Diameter	7,1 mm
Mounting Hole Quantity	1
Open Cavities	1
Cavity	T-162A
Port Size	1/4" BSPP
Model Weight	0.10 kg.

CARTRIDGE TECHNICAL FEATURES

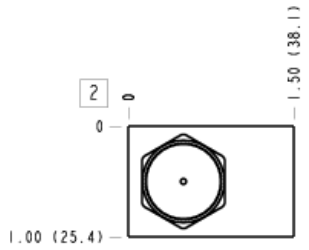
- Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.
- The seals on the adjust screw are exposed to system pressure which means this valve can only be adjusted when the pressure is removed. The setting procedure is; check the setting, remove the pressure, adjust the valve, check the new setting.
- Valve is relatively insensitive to varying oil temperatures and oil borne contamination.
- Select a spring range where the desired relief setting is approximately mid-range to high between the minimum and maximum pressure to ensure maximum valve repeatability.
- Suitable for use in load holding applications.
- Back pressure on the tank port (port 2) is directly additive to the valve setting at a 1:1 ratio.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- Test pressure for each range is as follows: A range - 2000 psi (138 bar), B range - 1000 psi (69 bar), C range - 4000 psi (276 bar), D range - 800 psi (55 bar), E range - 400 psi (28 bar), S range - 150 psi (10 bar), W range - 3000 psi (207 bar).
- Reseat meets or exceeds 85% of crack pressure at test setting. Settings lower than the test pressure may result in lower reseat percentages.
- All 2-port relief cartridges (except pilot reliefs) are physically and functionally interchangeable (same flow path, same cavity for a given frame size).
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

ASSEMBLY FACES

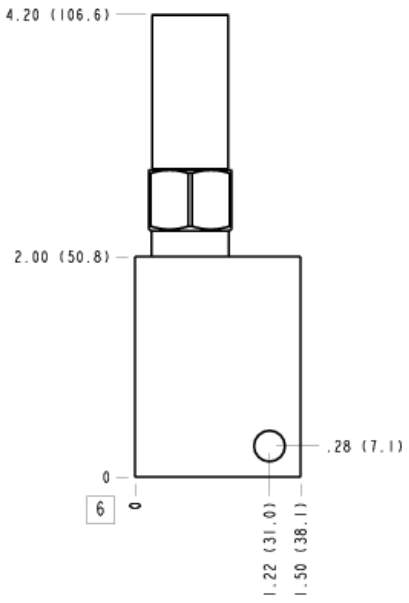
FACE GRID

1	2	3	4
5	6	7	8
9	10	11	12

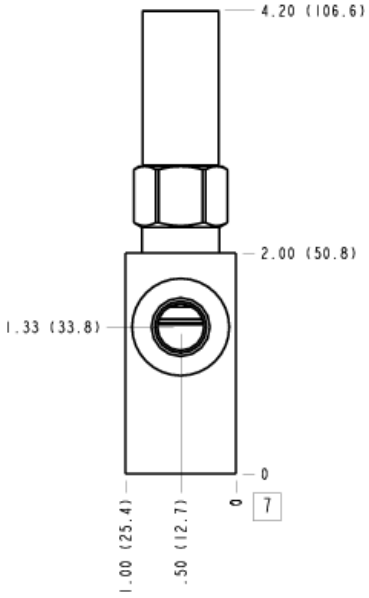
Face 2



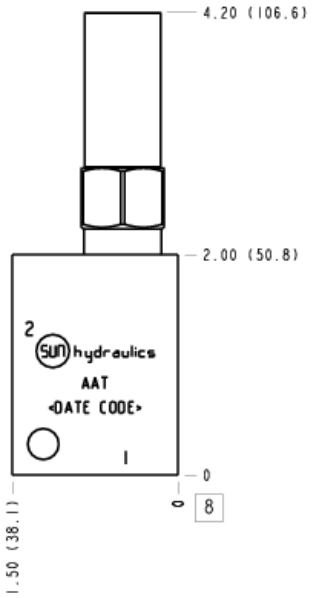
Face 6


4.20 (106.6)
2.00 (50.8)
.28 (7.1)
0
6
0
1.22 (31.0)
1.50 (38.1)

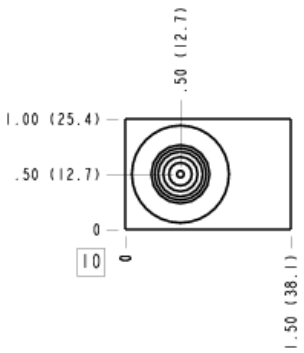
Face 7


4.20 (106.6)
2.00 (50.8)
1.33 (33.8)
0
7
0
1.00 (25.4)
.50 (12.7)

Face 8



Face 10



Copyright © 2002-2026 Sun Hydraulics. All rights reserved.