



## Maintain Optimum Fluid Temperature

Parker's thermal bypass valve will modulate fluid temperature by shifting return line flow through the cooler, or bypassing it directly to the reservoir.

Additionally, an integral pressure relief function automatically releases excess pressure to the reservoir if the cooler becomes restricted, and the inlet pressure becomes excessive. Relief crack pressure settings range from 5 to 85 PSI.

These lightweight, aluminum valves are ideal for hydrostatic drive circuits requiring fast warm-up, controlled fluid temperatures, and low return line back pressure.

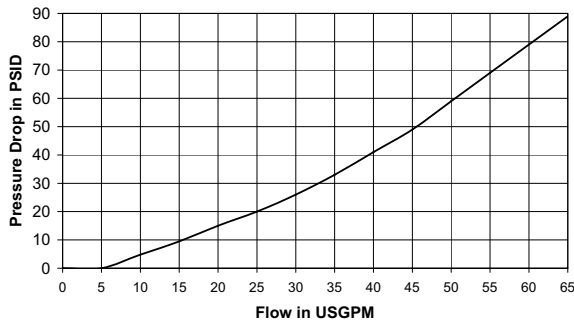
## Features

- Lightweight, corrosion-resistant aluminum housing.
- Available in five shift temperatures.
- Integral relief valve to dump excessive inlet pressures to the reservoir.
- 250 PSI maximum operating pressure.
- Up to 60 GPM flow rates.

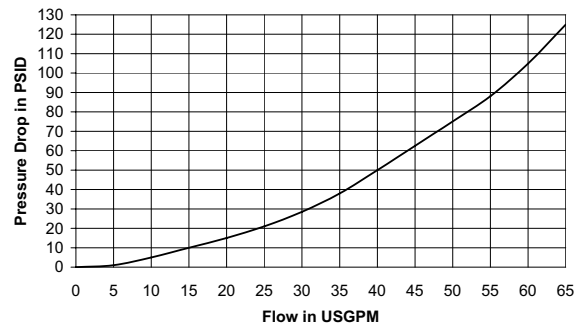
## Flow Data

## Pressure Drop (Mobil DTE 26 oil)

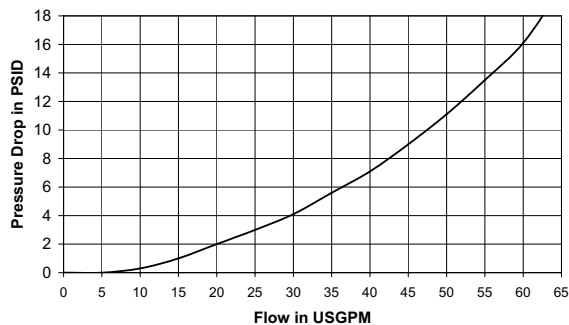
**Inlet Port thru Tank Port  
@ 100°F (300 SUS)**



**Inlet Port over Integral Relief Valve  
@ 170°F (78 SUS Oil)**

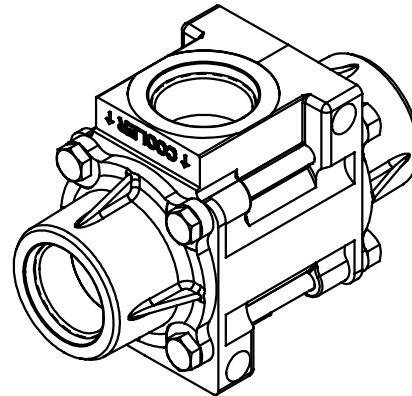
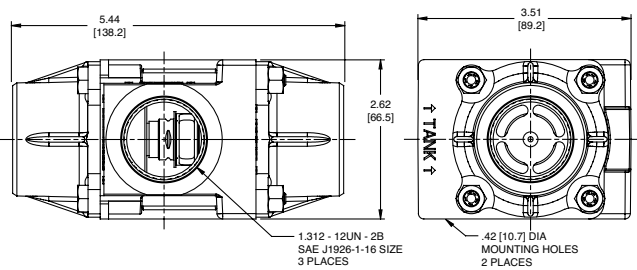


**Inlet Port thru Cooler Port  
@ 145°F (110 SUS Oil)**



TH Series Specifications	
Size	1 inch
Weight	2.00 lbs
Std Shift Temperatures	100° F (38° C), 120° F (49° C), 140° F (60° C), 160° F (71° C), 180° F (82° C)
Full Shift Temperature (cooler port open)	Shift Temperature plus 25° F (14° C)
Proof Pressure	300 PSI (21 bar)
Minimum Burst Pressure	Up to full shift temperature: 325 PSI (22 bar) Above full shift temperature: 600 PSI (41 bar)
Operating Temperature	Min: -30° F (-34° C) Max: Shift temperature plus 75° F (24° C)
Max Flow Rate	60 GPM (227 l/m)

Dimensions



Ordering Information

**TH-1000-16FO-\*\*-\*\***

**VALVE SERIES:**  
Thermal Bypass

**VALVE SIZE:**  
1000 = 1 inch

**CRACK PRESSURE/TEMPERATURE CODE:**  
(see table)

**PORT SIZE & STYLE:**  
16FO = 1 inch SAE O-Ring Boss (1.312 -12UN-2B thread)

Shift Temperature	Crack Pressure PSI																	
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	
100° F (38° C)	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	
120° F (49° C)	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	
140° F (60° C)	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	
160° F (71° C)	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	
180° F (82° C)	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	