

GENERAL INFORMATION

THESE VALVES ARE EMPLOYED TO PROTECT PUMPS OR VALVES IN A CIRCUIT FROM EXCESSIVE PRESSURE OR TO LIMIT THE PRESSURE APPLIED BY THE PUMP TO THE CIRCUIT.

REMOTE CONTROL OF SYSTEM PRESSURE MAY BE ACCOMPLISHED BY USING REMOTE CONTROL RELIEF VALVE, DT-01 (E.I. SHEET NO. D9-020010), CONNECTED TO THE VENT PORT OF THE PILOT OPERATED RELIEF VALVE. SYSTEM UNLOADING MAY ALSO BE MADE BY VENTING VENT PORT PRESSURE.

RATINGS

MAXIMUM ADJUSTMENT PRESSURE 3500 PSI
 MINIMUM ADJUSTMENT PRESSURE SEE Fig.2 ON REVERSE SIDE
 MAXIMUM FLOW 210 GPM

PRESSURE SETTING

THE PRESSURE SETTING OF THE RELIEF VALVE SHALL BE SELECTED REFERING TO THE WORKING SYSTEM PRESSURE REQUIRED AND TO THE NOMINAL OVER-RIDE CHARACTERISTICS OF THE RELIEF VALVE IN Fig. 1. (SEE REVERSE SIDE)

PRESSURE ADJUSTMENT

LOOSEN JAM NUT AND TURN ADJUSTMENT HANDLE CLOCKWISE FOR INCREASE AND COUNTER-CLOCKWISE FOR DECREASE. ONE REVOLUTION OF THE ADJUSTMENT HANDLE WILL MAKE SETTING PRESSURE VARIATION OF APPROX. 700 PSI.

TWO SPACING COLLARS ARE MOUNTED ON THE SPINDLE OF THE ADJUSTMENT HANDLE FOR LIMITATION OF THE MAX. SET PRESSURE.

REMOVE COLLAR FOR HIGHER SET PRESSURE. SPACE OF ONE COLLAR GIVES PRESSURE ADJUSTMENT STROKE EQUIVALENT TO 1400 PSI PRESSURE.

INSTALLATION

PRESSURE INLET OR OUTLET PORTS MAY BE USED INTERCHANGEABLY WHEN THE VALVE IS MOUNTED IN THE PRESSURE LINE, OR THE VALVE MAY BE TIED OFF THE PRESSURE LINE WITH ONE OF THE PRESSURE PORT PLUGGED.

HYDRAULIC FLUIDS

PETROLEUM BASE OIL WITH VISCOSITY RANGING BETWEEN 160 AND 270SSU AT 100°F, AND TEMPERATURES BETWEEN 65° AND 140°F ARE RECOMMENDED. PHOSPHATE ESTERS MAY BE USED. THE USE OF SYNTHETIC FLUIDS REQUIRES A VALVE WITH SPECIAL SEALS. SEE MODEL NUMBER DESIGNATION. WATER GLYCOL MAY BE USED. IF THE OTHER SPECIAL FLUIDS ARE TO BE USED, CONSULT FACTORY FOR INFORMATION.

CONNECTION FLANGES

CONNECTION FLANGE KITS WITH BOLTS AND O-RING ARE AVAILABLE ON REQUEST. REFER TO ENGINEERING INFORMATION SHEET NO. D9-105100A AND SPECIFY KITS MODEL AND QUANTITY IN ADDITION TO VALVE MODEL SELECTED.

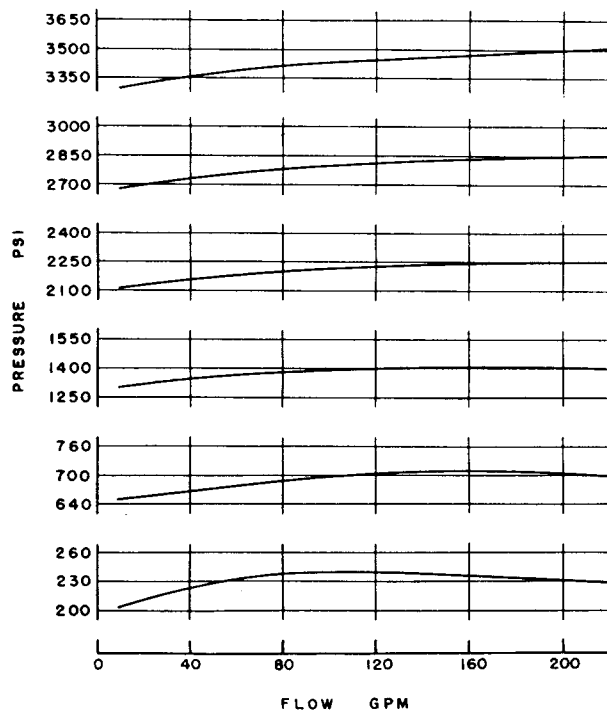
EXAMPLE; BF-16-V-32 VALVE, ONE
 F3-16-A-112 FLANGE, THREE

WEIGHT (APPROX.) 13.4kg
 29.5 LBS.



YUKEN KOGYO CO., LTD. TOKYO JAPAN	
NAME	PILOT OPERATED RELIEF VALVES 2, FLANGE CONNECTIONS
MODEL	BF-16-V-32
DATE	'78-04-20
E.I.S. NO.	D9-020800

Fig.1 NOMINAL OVERRIDE CHARACTERISTICS
OIL VISCOSITY: 150 SSU



TIME DELAY CHARACTERISTICS

THE TRANSITIONAL PRESSURE RISE CURVE OF THE RELIEF VALVE WHEN THE PUMP IS "ON LOADED" IN THE TEST CIRCUIT, AS SHOWN IN Fig. 3, IS INDICATED IN Fig. 4. THE TIME DELAY "t" OF THE RELIEF VALVE DEPENDS ON THE FLOW RATE AND OIL VISCOSITY AS IN Fig. 5, BUT IS INDEPENDENT OF THE SET PRESSURE. "T" REPRESENTS THE TIME REQUIRED FOR PRESSURE RISE OF THE SYSTEM AND IS PROPORTIONAL TO THE FLUID VOLUME IN THE PIPE AND THE SYSTEM PRESSURE.

Fig.3 TEST CIRCUIT

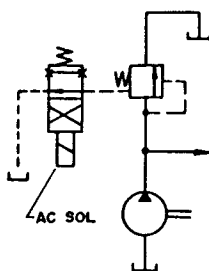
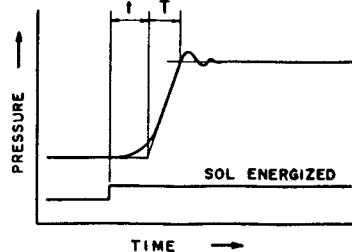


Fig.4 TRANSITIONAL PRESSURE RISE CURVE



VENTING CONNECTION

FOR VALVE VENTING CONNECTION, THE VENT PIPE MAY BE SELECTED TO HAVE MINIMUM LENGTH WITH APPROXIMATELY .16 INCH INNER DIAMETER, SO AS TO AVOID VALVE CHATTERING WHICH WILL BE CAUSED OCCASIONALLY BY LARGE INNER CAPACITY OF THE PIPE.

REQUIRED MINIMUM FLOW

AS THE SET PRESSURE INSTABILITY HAPPENS OCCASIONALLY FOR LOW FLOW RATE, THE RELIEF VALVE MAY BE USED WITH FLOW RATE OVER 8 GPM.

FILTRATION

25 MICRONS OR LESS IS RECOMMENDED.

MODEL NUMBER DESIGNATION

F - BF - 16 - V - 32 ~~80~~
 DESIGN NUMBER*
 HIGH VENTING PRESSURE FEATURE
 (OMIT IF NOT REQUIRED)
 VALVE SIZE
 PILOT OPERATED RELIEF VALVE,
 FLANGE CONNECTIONS
 SPECIAL SEALS (OMIT IF NOT REQUIRED)

* DESIGN NUMBERS SUBJECT TO CHANGE. BUT INSTALLATION DIMENSIONS REMAIN AS SHOWN FOR DESIGN NUMBERS 30 ~~80~~ THROUGH 39 ~~80~~.

Fig.2 MIN. ADJUSTMENT PRESSURE & VENT PRESSURE VS. FLOW
OIL VISCOSITY: 150 SSU

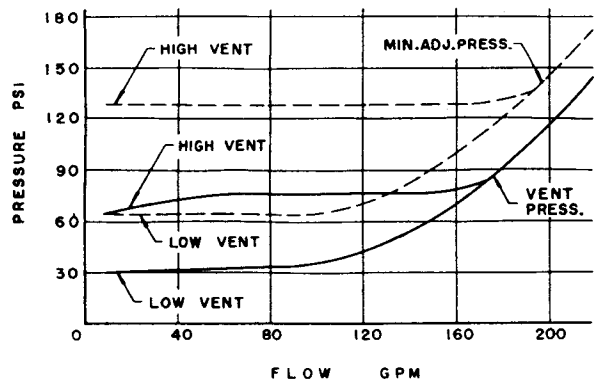


Fig.5 TIME DELAY "t" VS. FLOW

