F/M INLINE CHECK VALVE
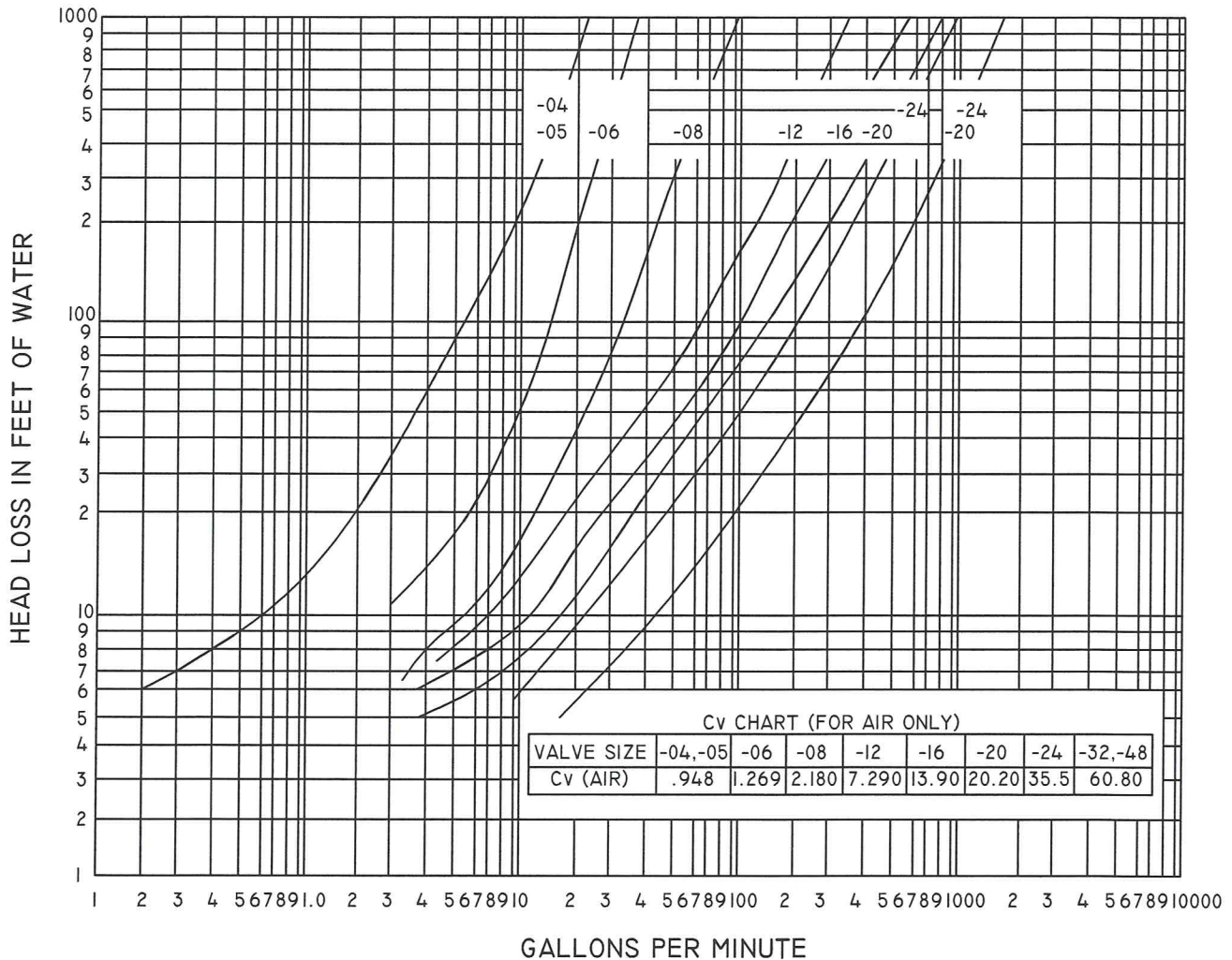## MODEL 2000 - 2100 - 2200 - 2300

HEAD LOSS CURVES AND Cv CHART FOR F/M INLINE CHECK VALVES

Chart: HEAD LOSS IN FEET OF WATER vs. GALLONS PER MINUTE

Curve labels: -04, -05, -06, -08, -12, -16, -20, -24, -24, -20

Cv CHART (FOR AIR ONLY)

VALVE SIZE	-04,-05	-06	-08	-12	-16	-20	-24	-32,-48
Cv (AIR)	.948	1.269	2.180	7.290	13.90	20.20	35.5	60.80

THE ABOVE CHART SHOWS HEAD LOSS IN FEET OF WATER VS. VOLUME IN GALLONS PER MINUTE (GPM). THIS SET OF CURVES WAS OBTAINED EXPERIMENTALLY AND THE Cv CHART, FOR WATER ONLY, WAS CALCULATED USING THE SAME TEST DATA THAT WAS USED TO GENERATE THE CURVES.

TO USE THE ABOVE CURVES, YOU MUST KNOW EITHER THE HEAD LOSS OR GPM. IF YOU HAVE THE HEAD LOSS (IN FEET OF WATER), FOLLOW THE HORIZONTAL LINE AT YOUR HEAD LOSS TO THE RIGHT UNTIL YOU CROSS THE CURVE FOR YOUR PARTICULAR VALVE (EXAMPLE -20). AT THE CURVE (-20), FOLLOW A VERTICAL LINE DOWN TO THE GPM SCALE. WHERE THE VERTICAL LINE CROSSES THE GPM SCALE, READ THE GALLONS PER MINUTE FLOWING THRU THE VALVE. IF YOU KNOW THE VOLUME IN GPM, YOU CAN DETERMINE THE HEAD LOSS THRU THE VALVE IN A SIMILAR MANOR. USING THIS DATA YOU CAN CALCULATE THE THREE VARIABLES SHOWN:

THE FORMULAS FOR CALCULATING Cv, Q & P ARE AS FOLLOWS:

$$Cv = Q / \sqrt{\Delta P \, (62.4/P)}$$

IF P = 62.4 (WEIGHT DENSITY OF WATER) THEN

$$Cv = Q / \sqrt{\Delta P}$$

$$Q = Cv \sqrt{\Delta P \, (62.4/P)}$$

$$\Delta P = (Q/C)^2 / (62.4/P)$$

LEGEND

Cv = FLOW COEFFICIENT FOR VALVES

Q = FLOW OF FLUIDS (GPM)

ΔP = PRESSURE LOSS (PSIG)

P = WEIGHT DENSITY OF FLUID (POUNDS PER CUBIC FOOT) (TEMP. 60°F)