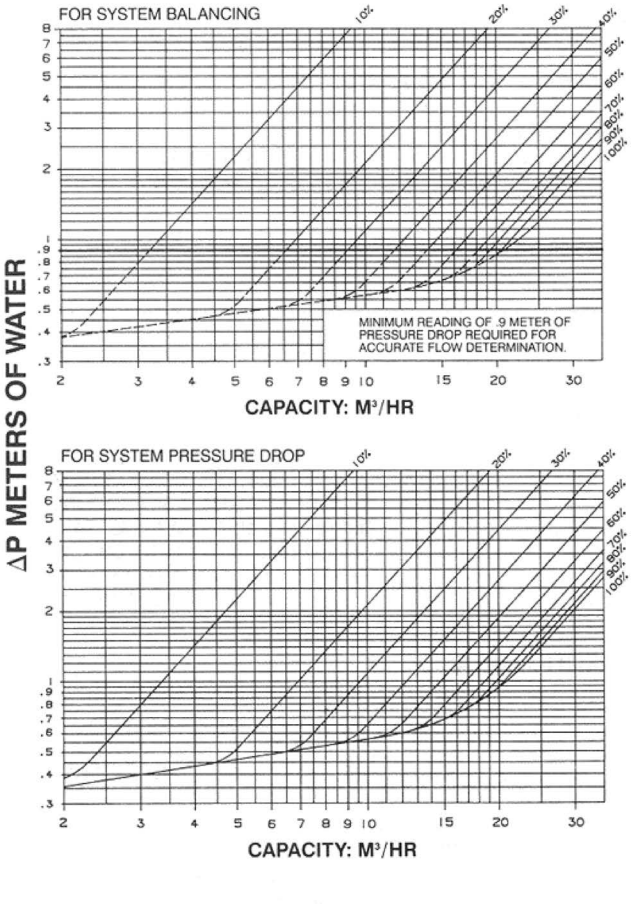
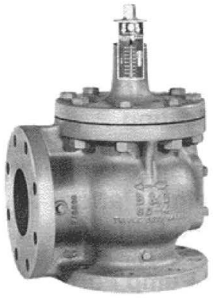
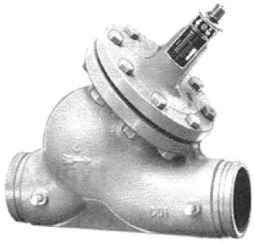






CURVES
BX-860

Triple Duty® Valves

Centrifugal Pump Accessories

Performance Curves in Metric Units

Part of
ESP PLUS™
Equipment Selection Programs

Bell & Gossett
a xylem brand

TABLE OF CONTENTS

MATERIALS OF CONSTRUCTION

Body: NPT & flanged models	Cast iron, ASTM A-126, B
Grooved models	Ductile iron, ASTM A-395
Seat	Brass, ASTM B-584, C93200
Seat insert	EPDM
Disc	Bronze, ASTM B-584, C84400
Stem: Flanged & grooved models	Stainless steel, ASTM A-582, T416
NPT models	Brass, ASTM B-16, C36000
Spring	Stainless steel, ASTM A-313, T302
Packing	Teflon-Graphite

OPERATING DATA

Maximum working pressure	
Cast iron models	175 lb/in² (11.9 Bars)
Ductile iron models	300 lb/in² (20.4 Bars)
Maximum operating temperature	250°F (121°C)

TYPICAL SPECIFICATION (All Models)

Furnish and install as shown on plans, a (select one: straight, angle or straight-angle) _____ pattern valve designed to perform the functions of a nonslam check valve, throttling valve, shutoff valve and calibrated balancing valve.

The valve shall be of heavy-duty (select one: cast iron [NPT & flanged models only] or ductile iron [grooved models only] _____ iron construction with (select one: NPT connections per ANSI B1.20.1-83 suitable for 175 psi (11.9 bars) working pressure [NPT models only], 125 psi (8.5 bars) ANSI flanged connections suitable for 175 psi (11.9 bars) working pressure, or standard cut grooved connections suitable for working pressures up to 300 psi (20.4 bars) [straight pattern models only]) _____ connections for operating temperatures up to 250°F. (121°C). The valve shall be fitted with a bronze seat, replaceable bronze disc with EPDM seat insert, (select one: stainless steel [flanged & grooved models only] or brass [NPT models only]) _____ stem, and chatter preventing stainless steel spring. The valve design shall permit repacking under full system pressure.

The valve Cv rating at the 100% stem rise position shall not be less than (refer to the Cv value shown in column "B" for the required valve) _____ .

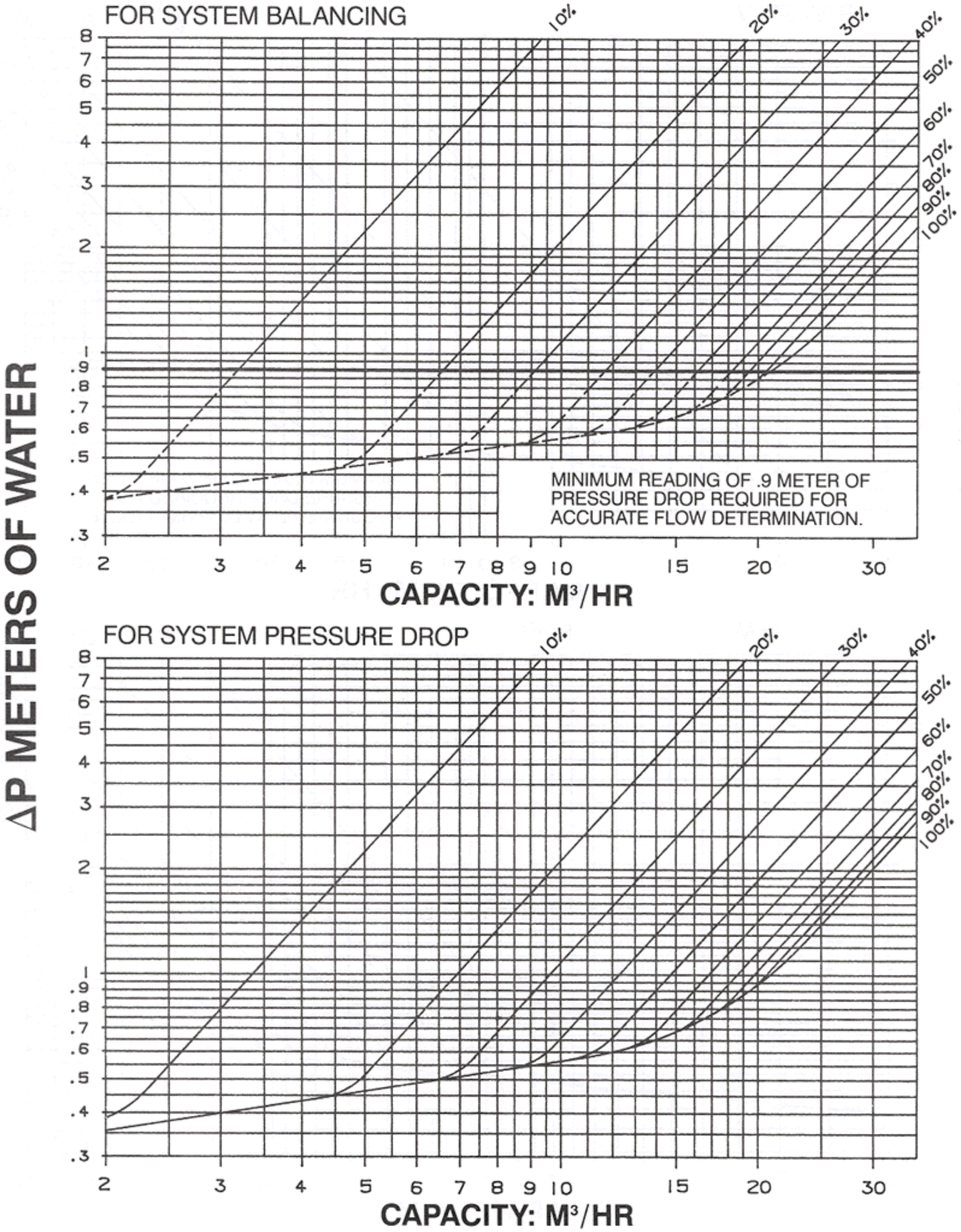
The valve shall be equipped with brass readout valves (with integral check valve) to facilitate taking differential pressure readings across the orifice for accurate system balance.

Each valve shall be Bell & Gossett Model No. 3D-_____, _____ pattern Triple Duty Valve.

BELL & GOSSETT

Triple Duty® Valve (Straight Pattern) PERFORMANCE CHARACTERISTICS

PART No. 132121 MODEL No. 3DS-2S
PART No. 132150 MODEL No. 3DS-2G

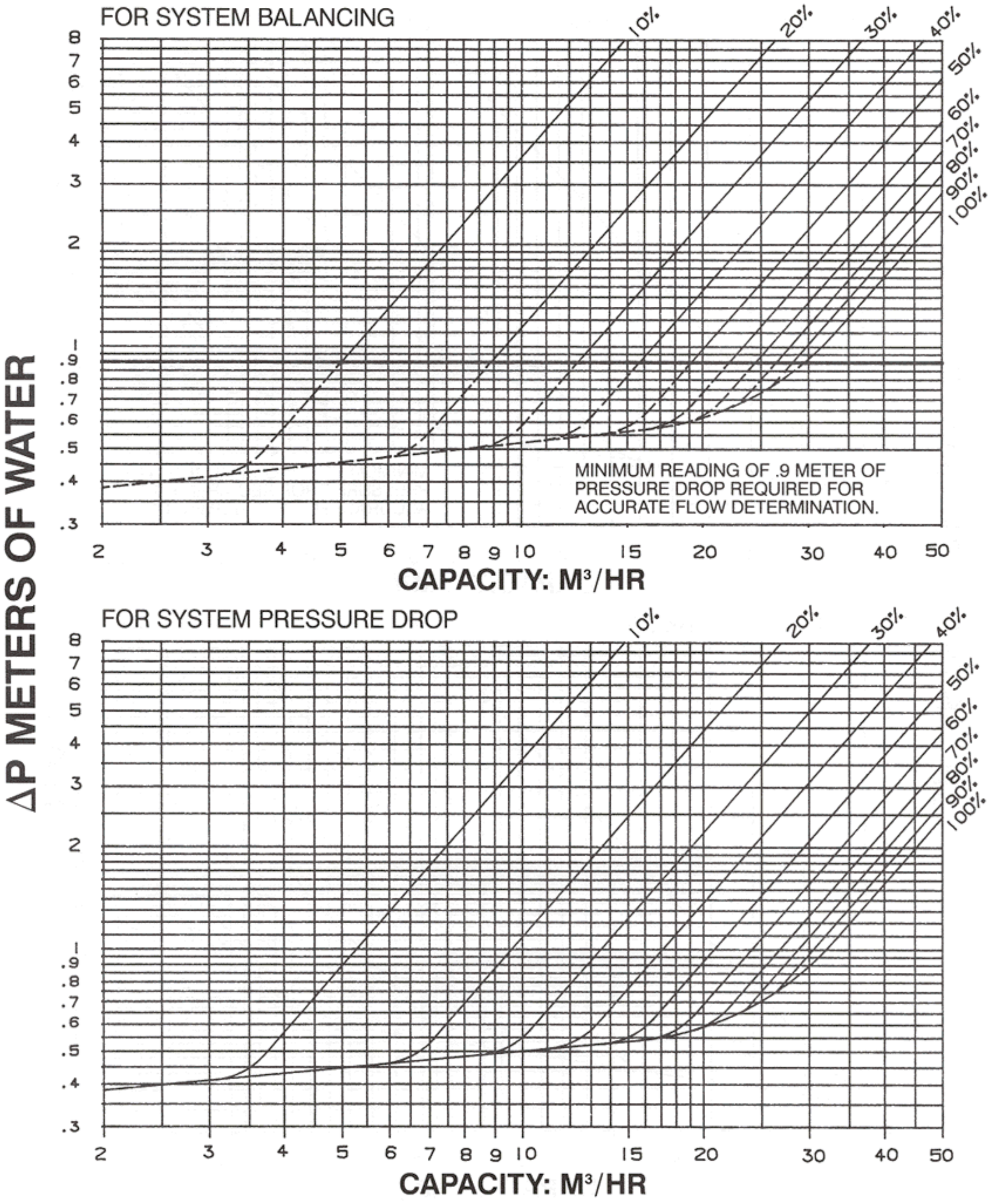


MAXIMUM RECOMMENDED FLOW 30 M³/HR

BELL & GOSSETT

Triple Duty® Valve (Straight Pattern) PERFORMANCE CHARACTERISTICS

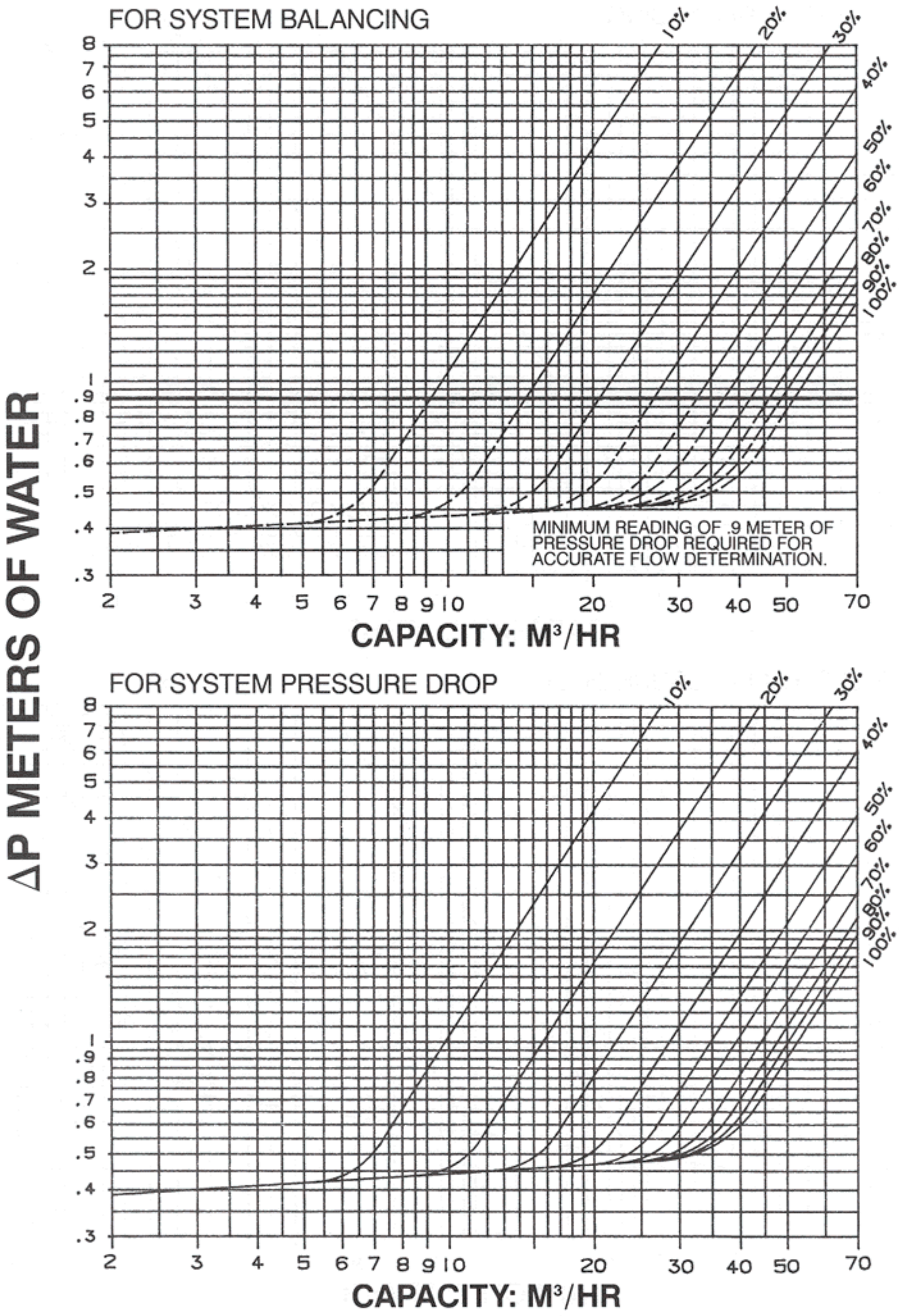
PART No. 132122 MODEL No. 3DS-2½S
PART No. 132151 MODEL No. 3DS-2½G



MAXIMUM RECOMMENDED FLOW 45 M³/HR

Triple Duty® Valve (Straight Pattern) PERFORMANCE CHARACTERISTICS

PART No. 132123 MODEL No. 3DS-3S
PART No. 132152 MODEL No. 3DS-3G

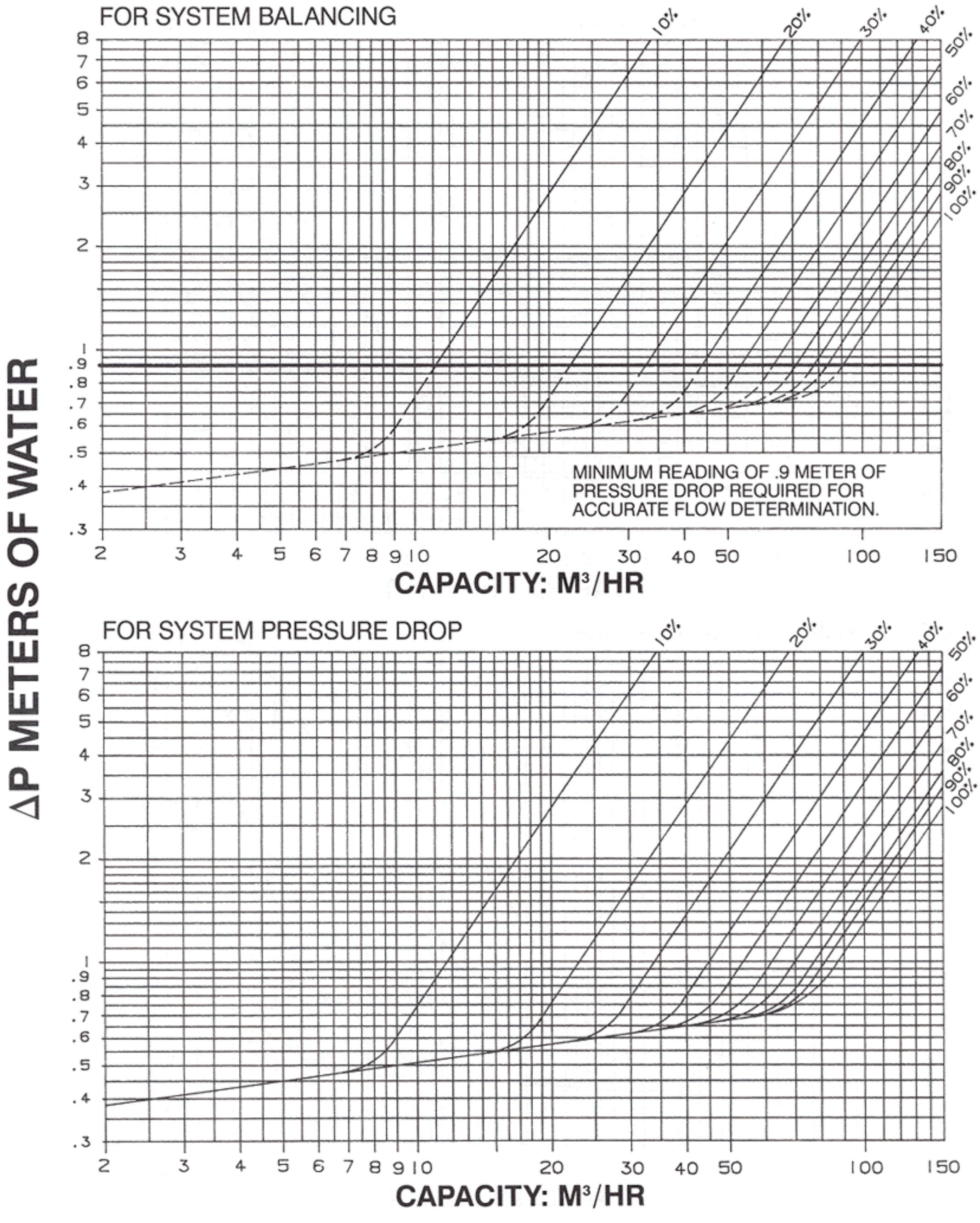


MAXIMUM RECOMMENDED FLOW 65 M³/HR

BELL & GOSSETT

Triple Duty® Valve (Straight Pattern) PERFORMANCE CHARACTERISTICS

PART No. 132124 MODEL No. 3DS-4S
PART No. 132153 MODEL No. 3DS-4G

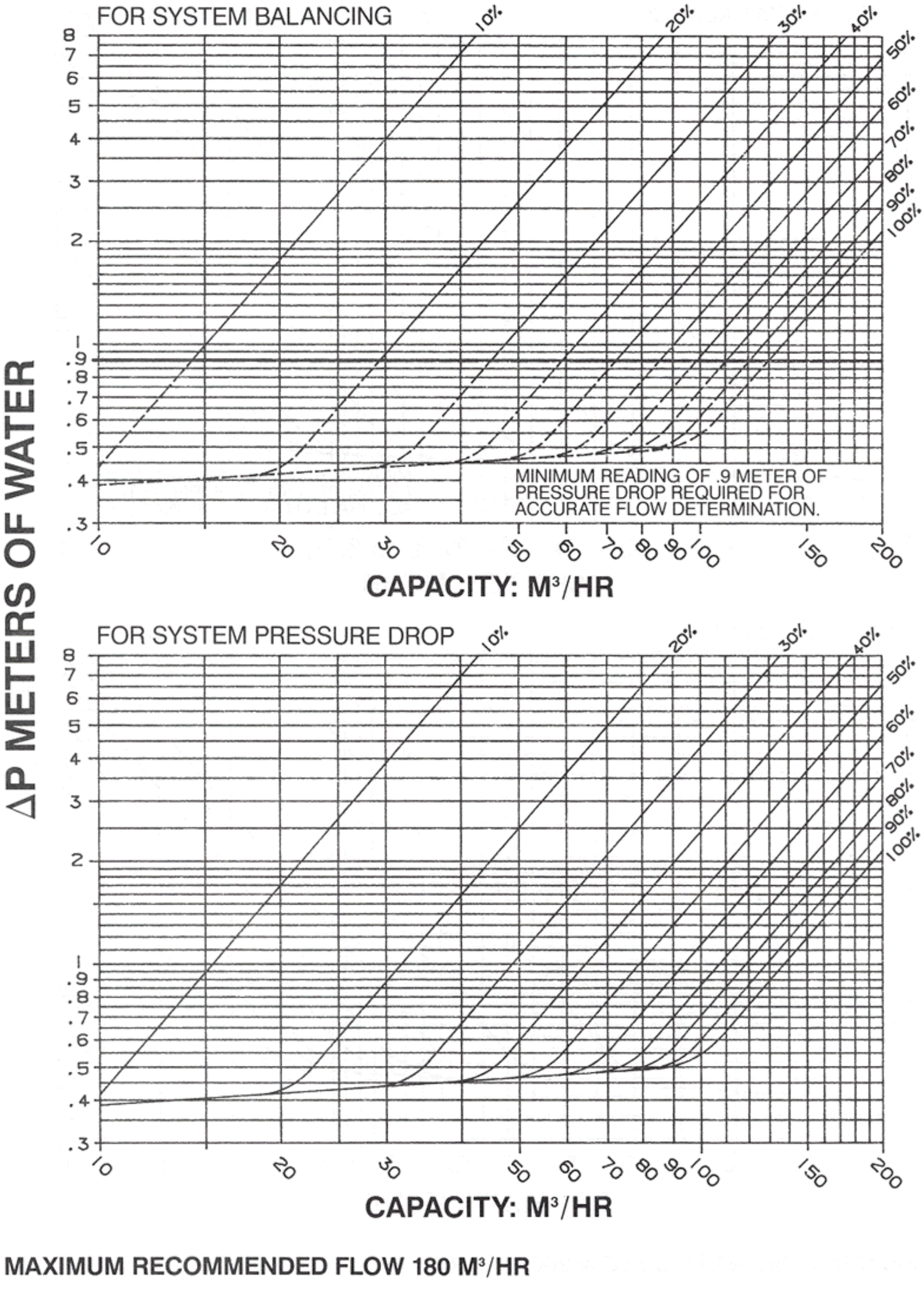


MAXIMUM RECOMMENDED FLOW 115 M³/HR

BELL & GOSSETT

Triple Duty® Valve (Straight Pattern) PERFORMANCE CHARACTERISTICS

PART No. 132125 MODEL No. 3DS-5S
PART No. 132154 MODEL No. 3DS-5G

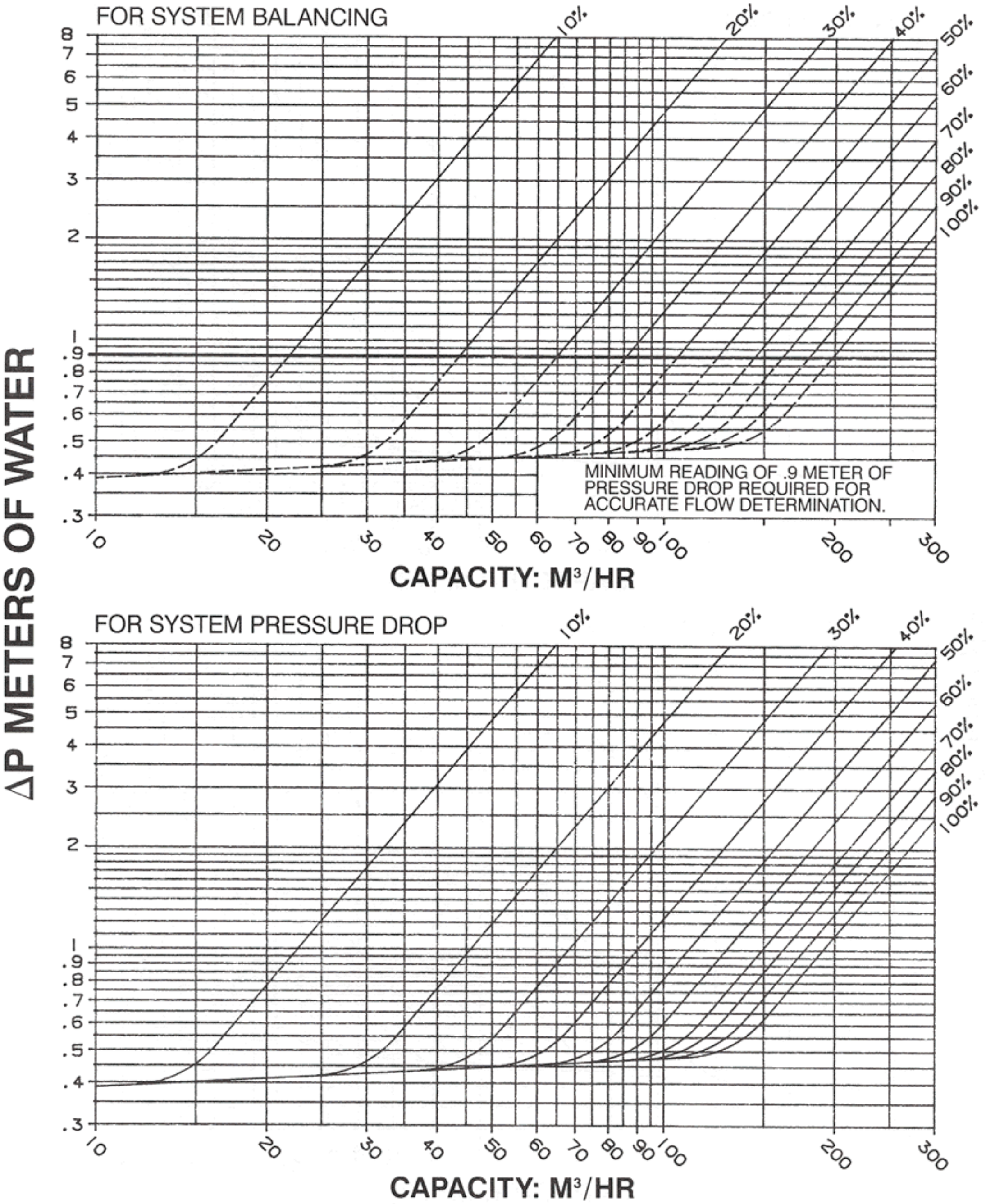


MAXIMUM RECOMMENDED FLOW 180 M³/HR

BELL & GOSSETT

Triple Duty® Valve (Straight Pattern) PERFORMANCE CHARACTERISTICS

PART No. 132126 MODEL No. 3DS-6S
PART No. 132155 MODEL No. 3DS-6G

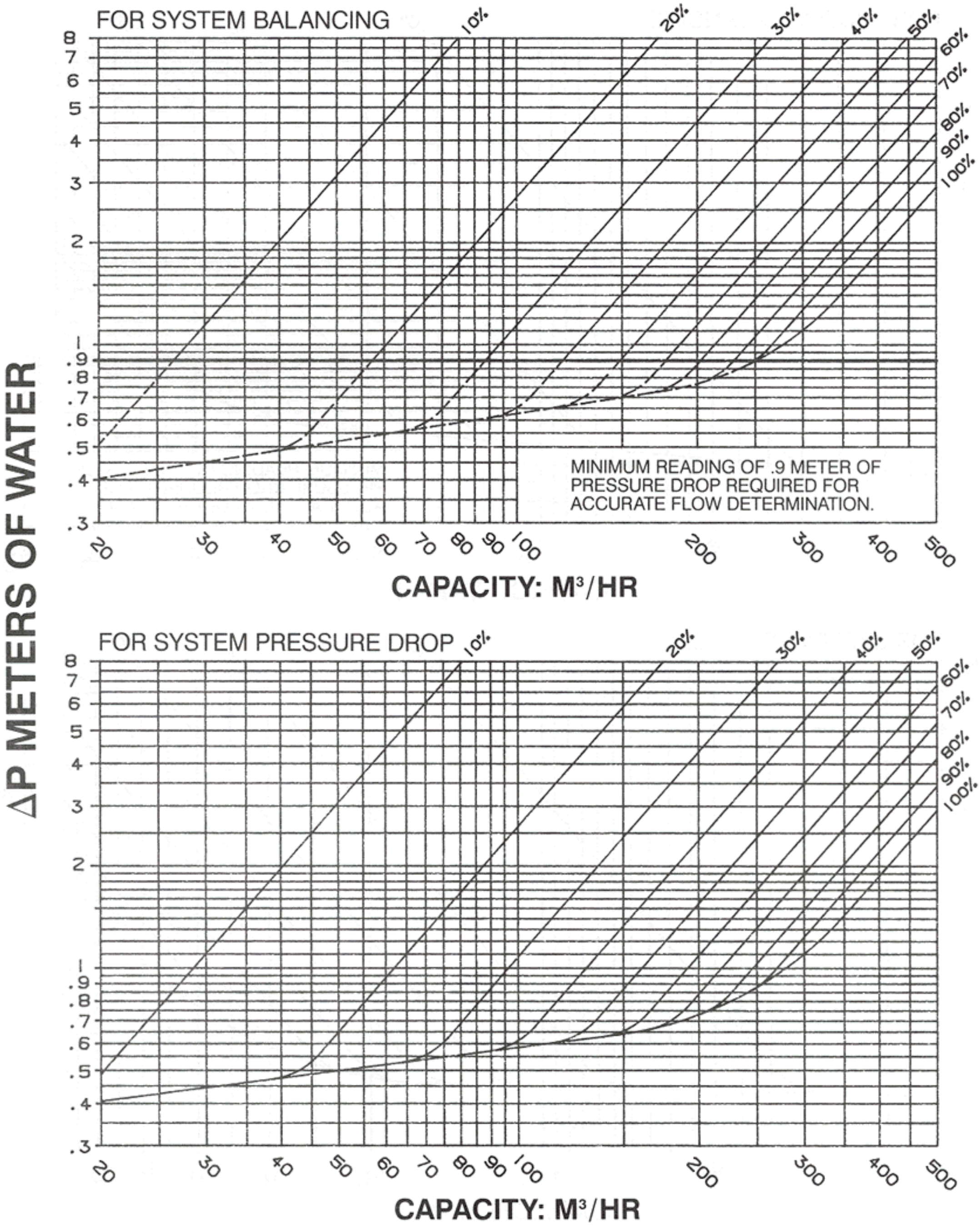


MAXIMUM RECOMMENDED FLOW 260 M³/HR

BELL & GOSSETT

Triple Duty® Valve (Straight Pattern) PERFORMANCE CHARACTERISTICS

PART No. 132127 MODEL No. 3DS-8S
PART No. 132156 MODEL No. 3DS-8G



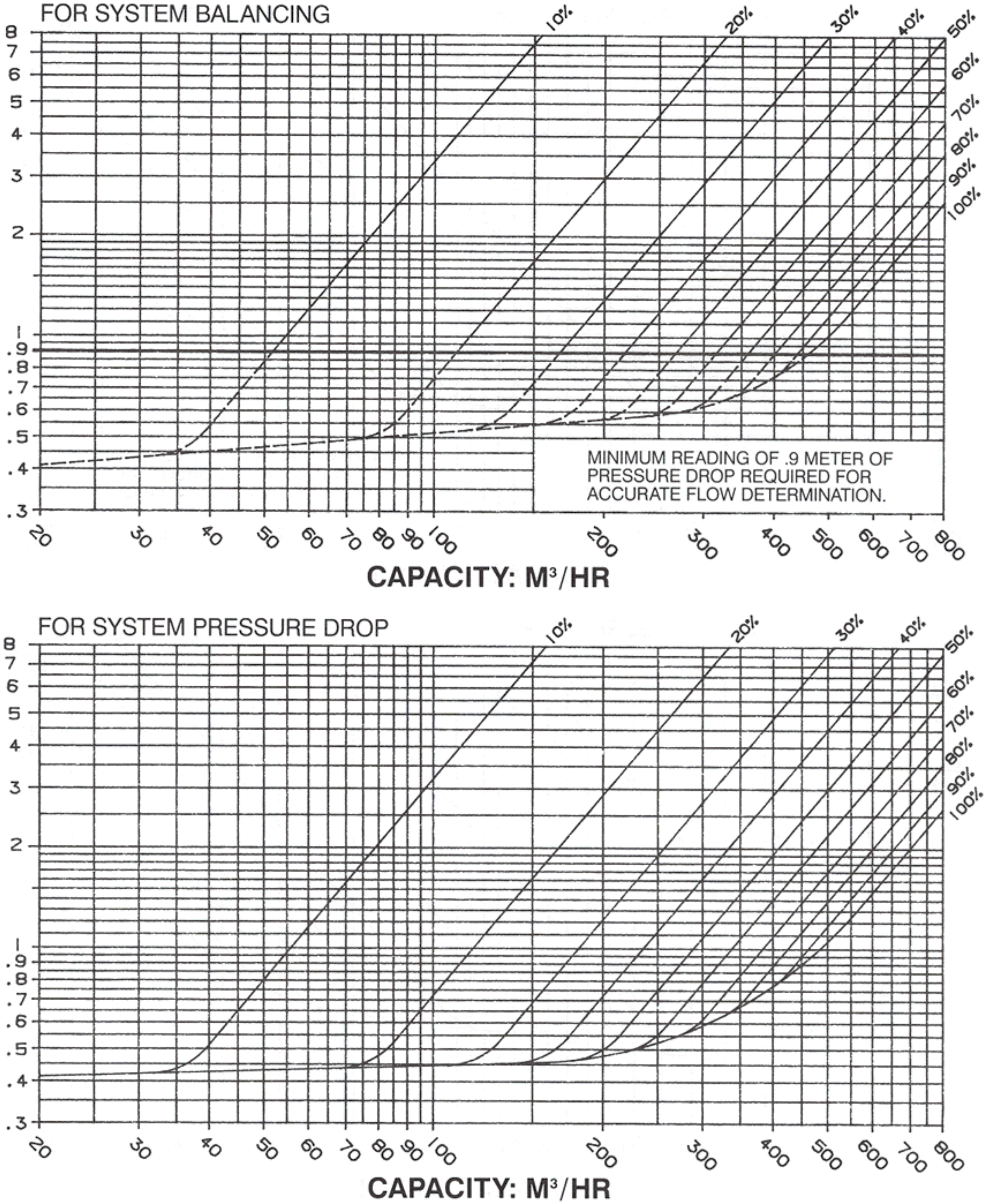
MAXIMUM RECOMMENDED FLOW 460 M³/HR

BELL & GOSSETT

Triple Duty® Valve (Straight Pattern) PERFORMANCE CHARACTERISTICS

PART No. 132128 MODEL No. 3DS-10S
PART No. 132157 MODEL No. 3DS-10G

FOR SYSTEM BALANCING



FOR SYSTEM PRESSURE DROP

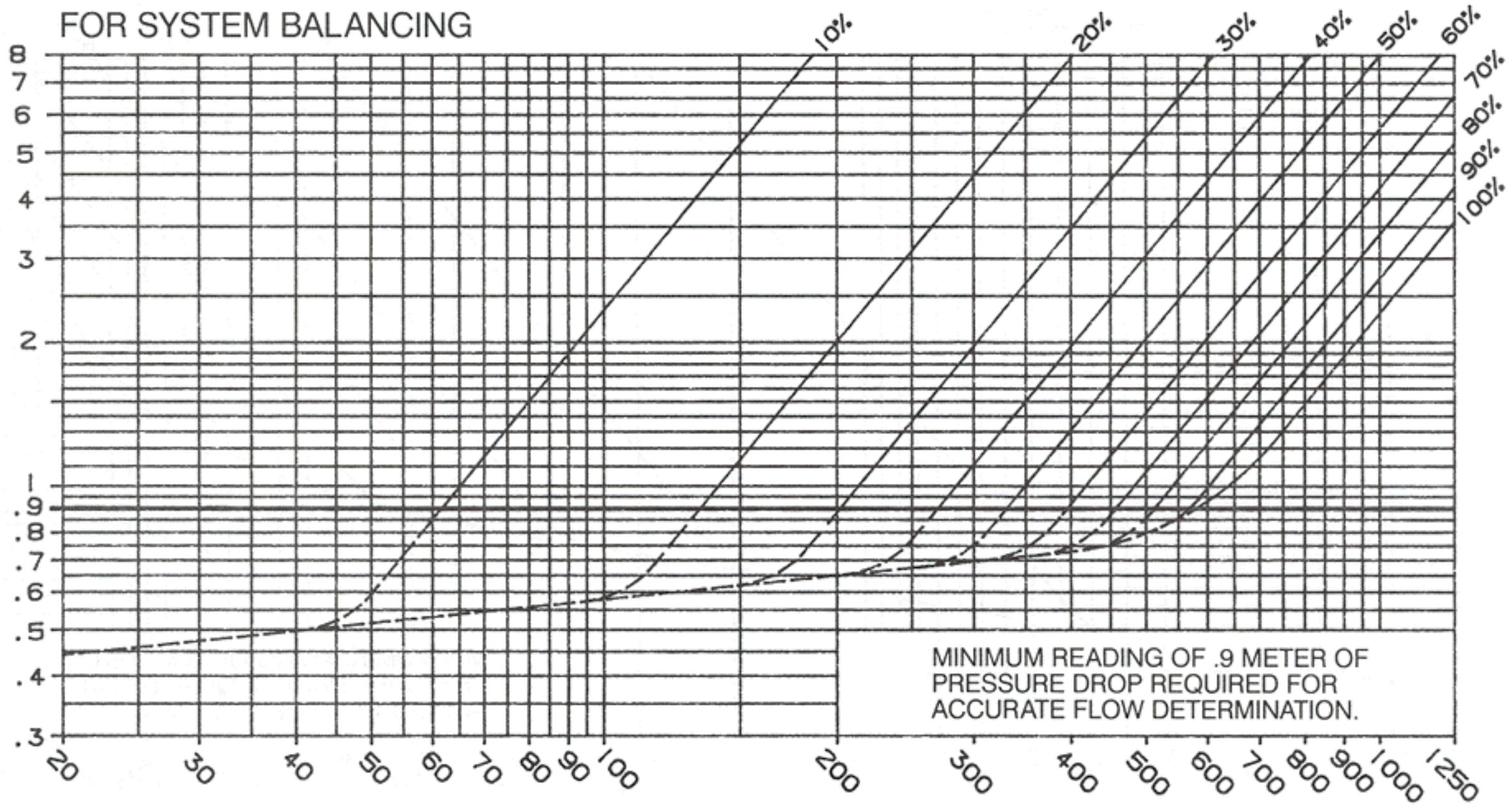
MAXIMUM RECOMMENDED FLOW 720 M³/HR

BELL & GOSSETT

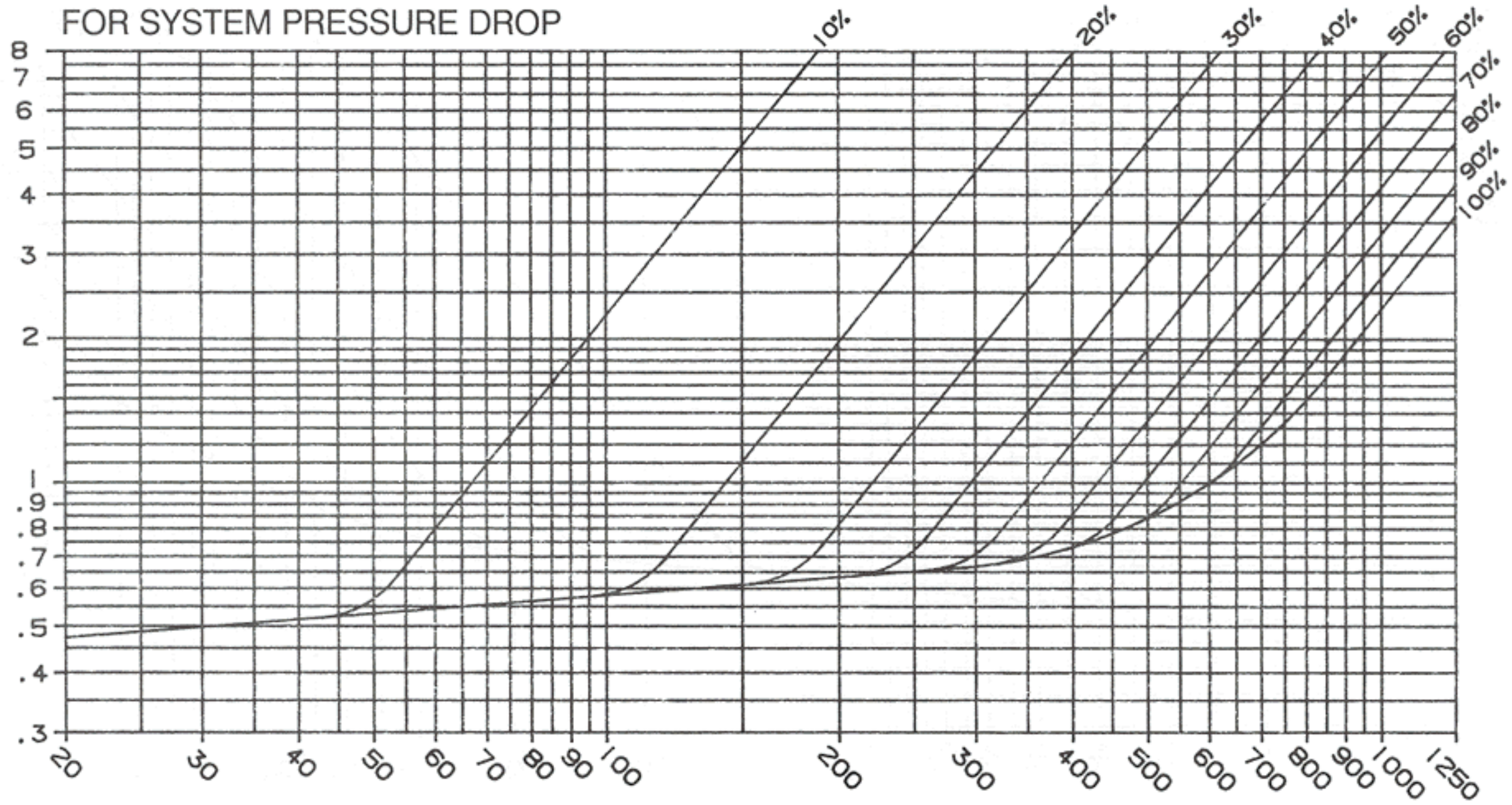
Triple Duty® Valve (Straight Pattern) PERFORMANCE CHARACTERISTICS

PART No. 132129 MODEL No. 3DS-12S
PART No. 132158 MODEL No. 3DS-12G

FOR SYSTEM BALANCING



FOR SYSTEM PRESSURE DROP

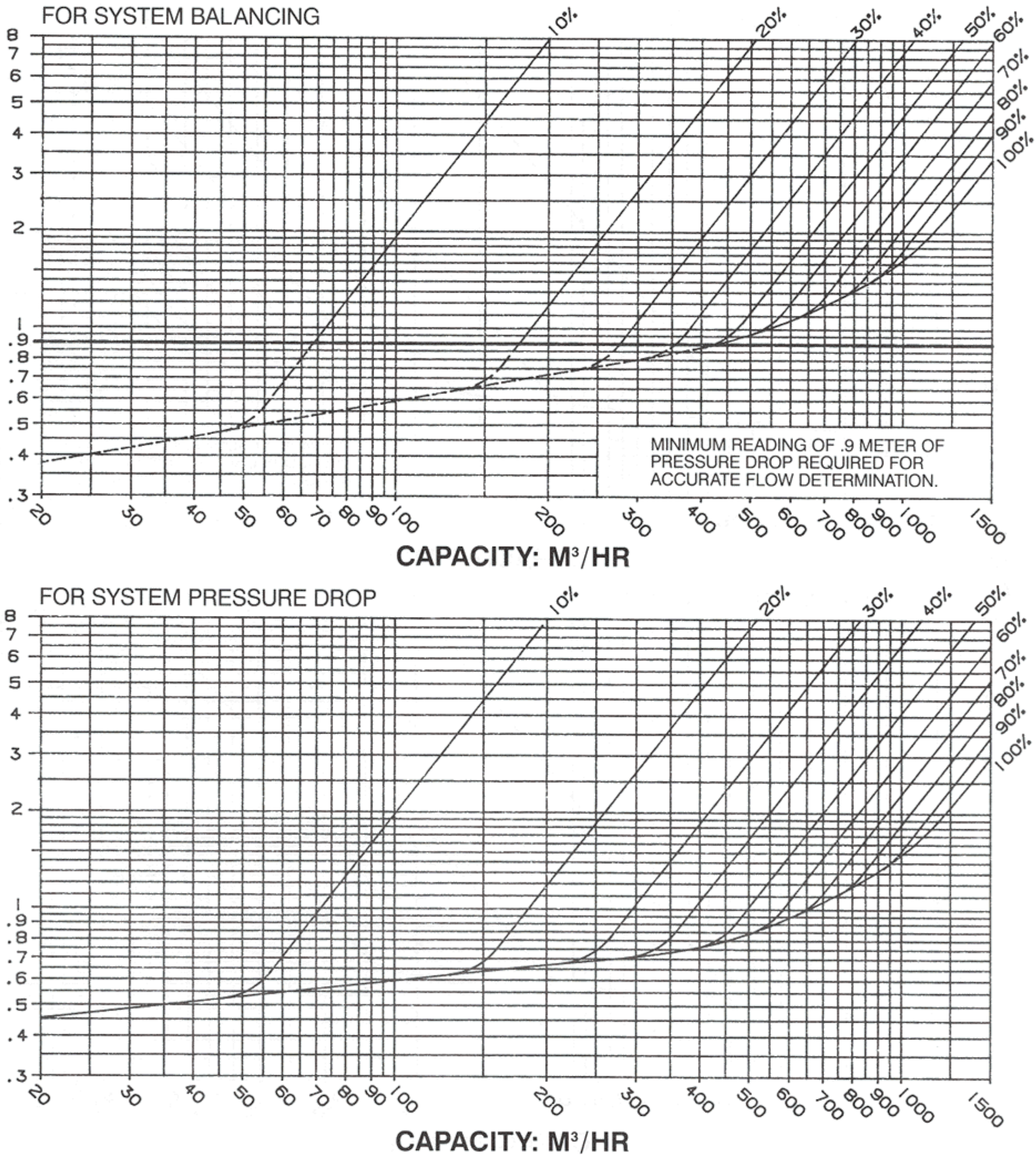


MAXIMUM RECOMMENDED FLOW 1035 M³/HR

BELL & GOSSETT

Triple Duty® Valve (Straight Pattern) PERFORMANCE CHARACTERISTICS

PART No. 132120 MODEL No. 3DS-14S

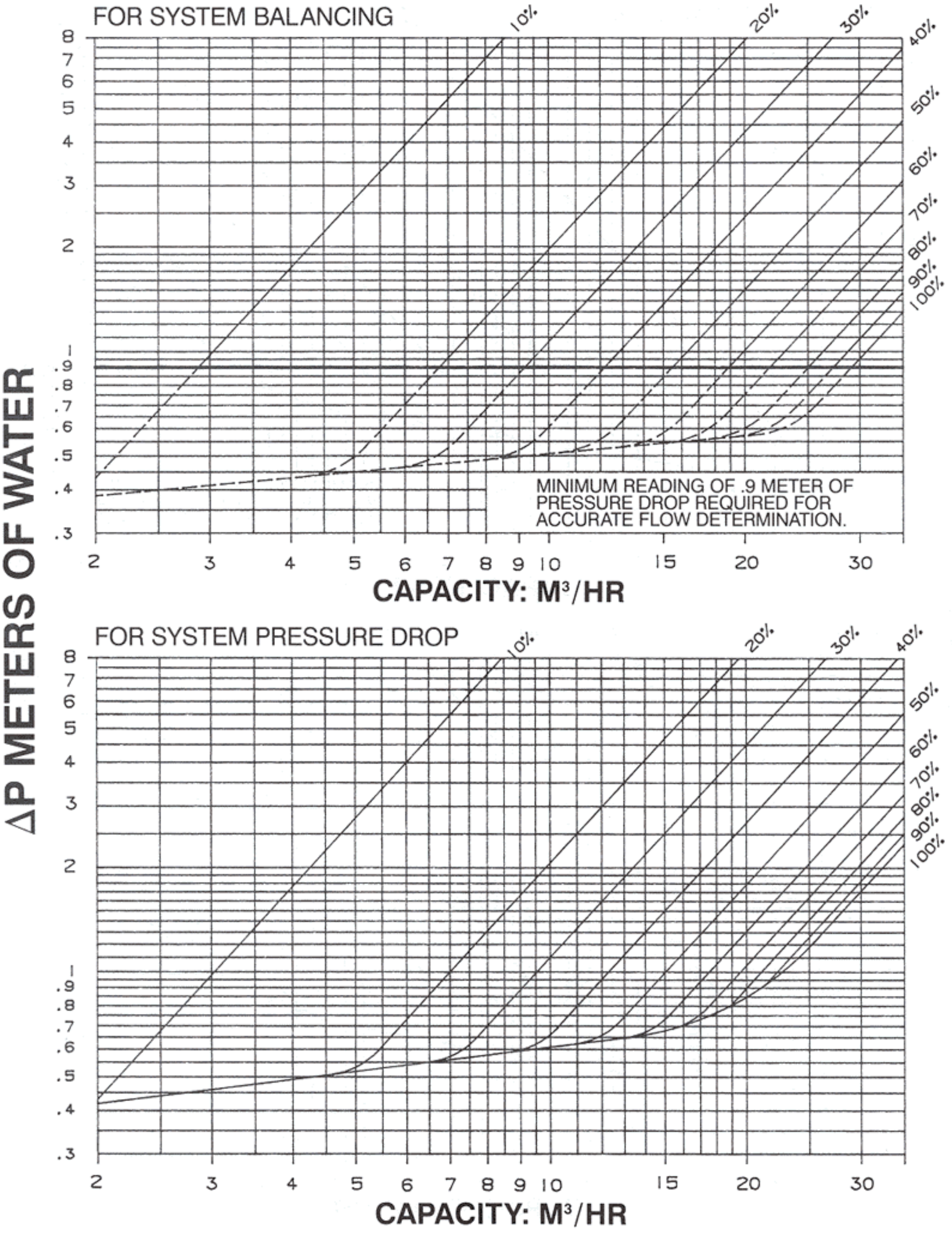


MAXIMUM RECOMMENDED FLOW 1260 M³/HR

BELL & GOSSETT

Triple Duty® Valve (Angle Pattern) PERFORMANCE CHARACTERISTICS

PART No. 132131 MODEL No. 3D-2S

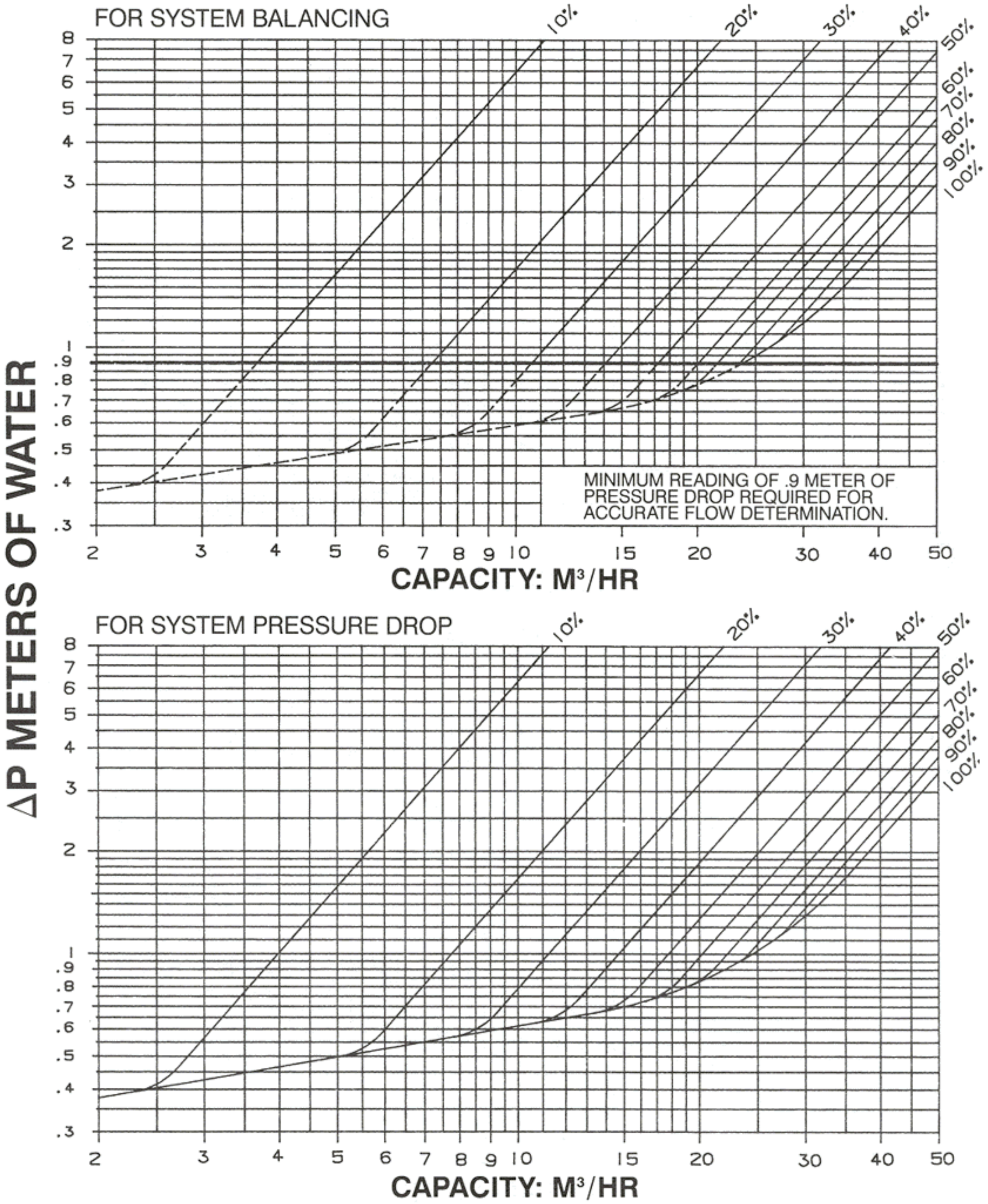


MAXIMUM RECOMMENDED FLOW 30 M³/HR

BELL & GOSSETT

Triple Duty® Valve (Angle Pattern) PERFORMANCE CHARACTERISTICS

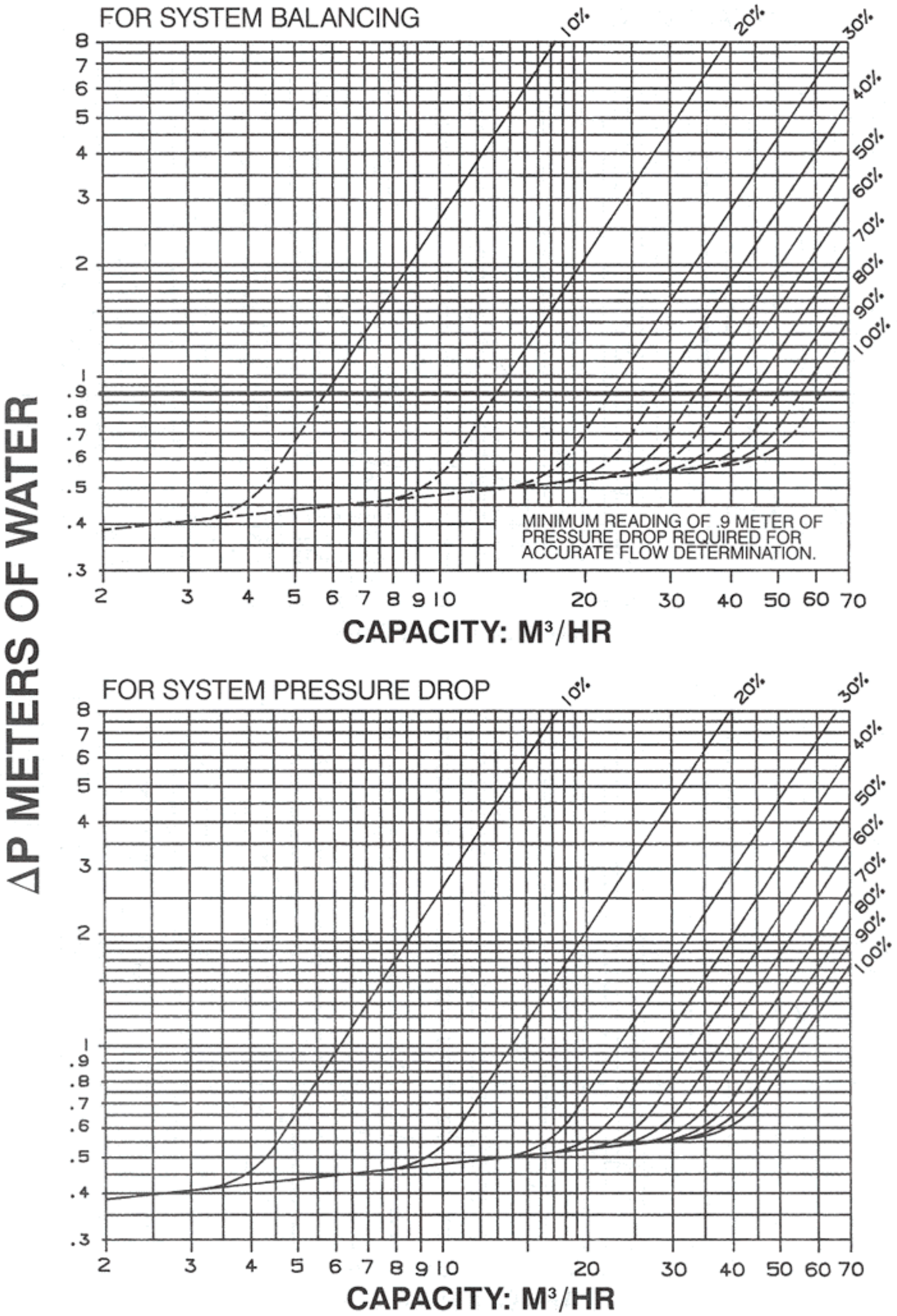
PART No. 132132 MODEL No. 3D-2½S



MAXIMUM RECOMMENDED FLOW 45 M³/HR

Triple Duty® Valve (Angle Pattern) PERFORMANCE CHARACTERISTICS

PART No. 132133 MODEL No. 3D-3S

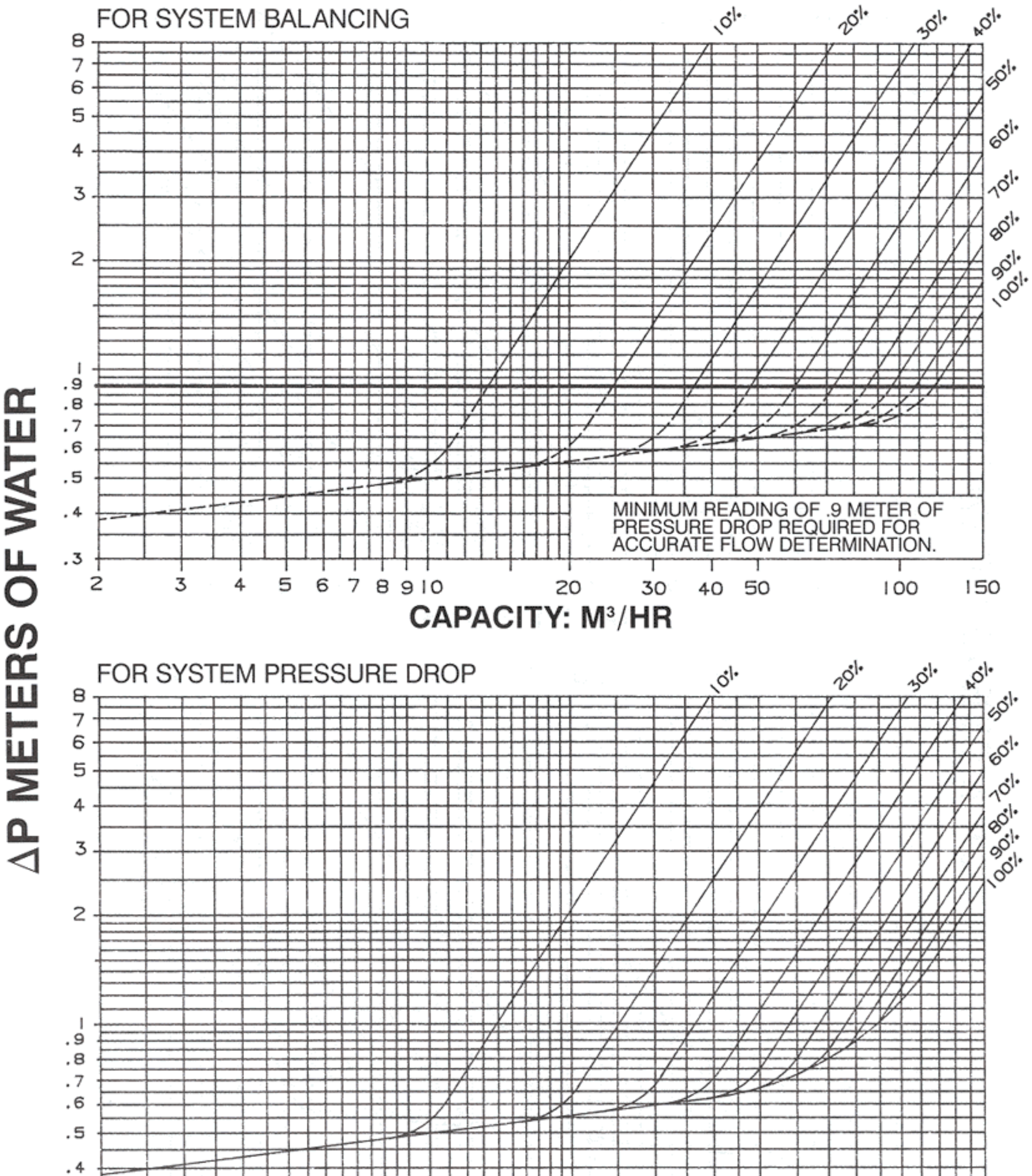


MAXIMUM RECOMMENDED FLOW 65 M³/HR

BELL & GOSSETT

Triple Duty® Valve (Angle Pattern) PERFORMANCE CHARACTERISTICS

PART No. 132134 MODEL No. 3D-4S

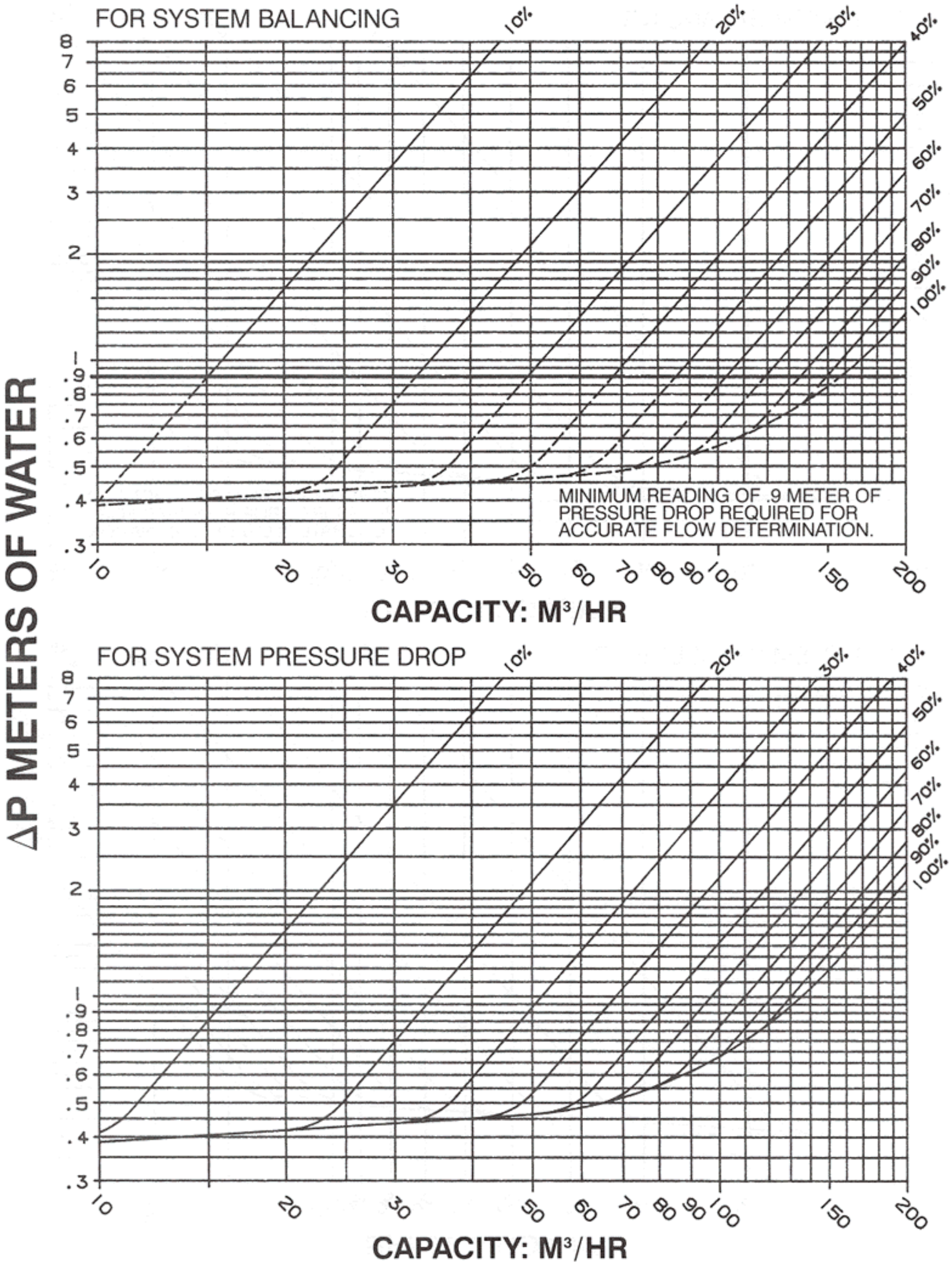


MAXIMUM RECOMMENDED FLOW 115 M³/HR

BELL & GOSSETT

Triple Duty® Valve (Angle Pattern) PERFORMANCE CHARACTERISTICS

PART No. 132135 MODEL No. 3D-5S

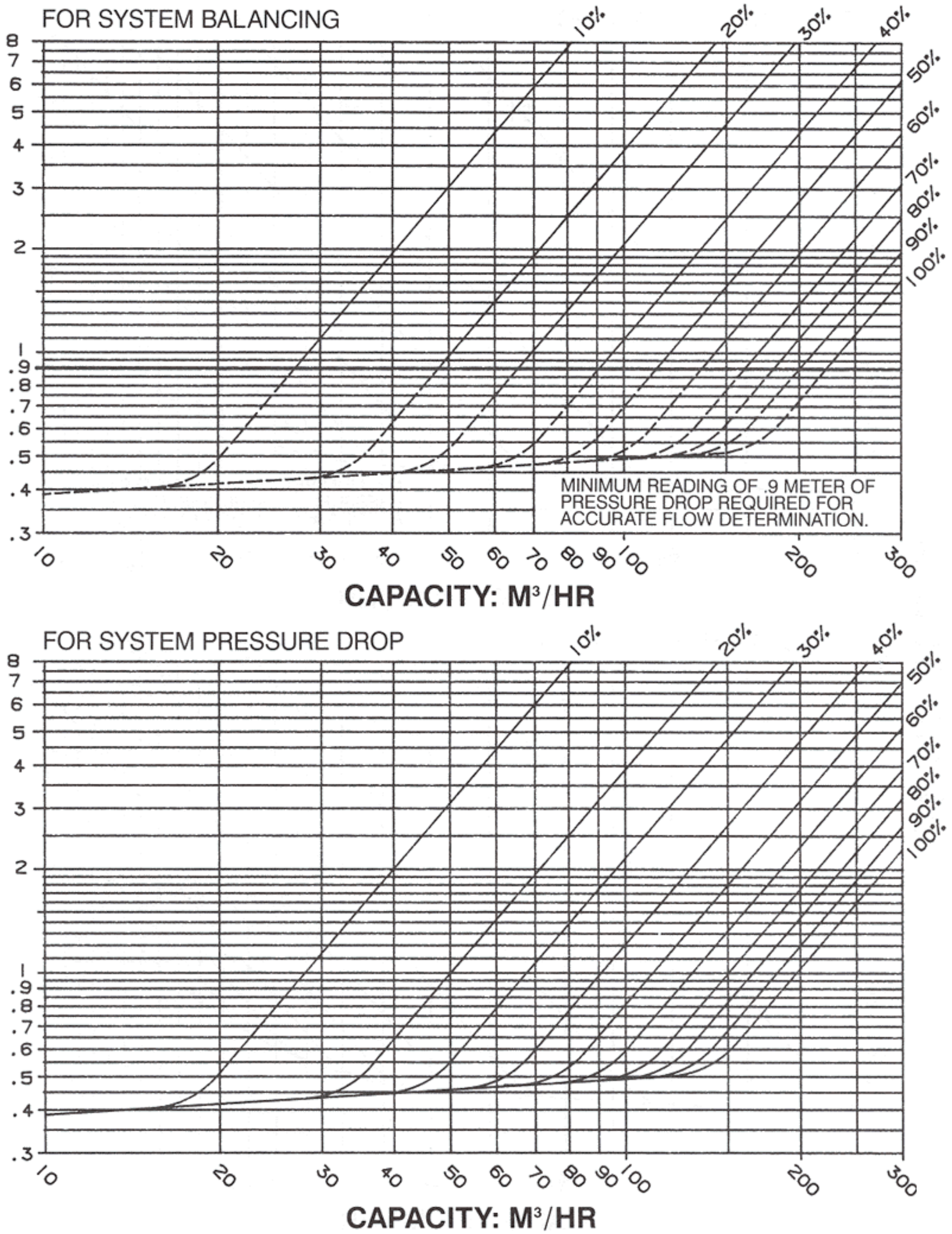


MAXIMUM RECOMMENDED FLOW 180 M³/HR

BELL & GOSSETT

Triple Duty® Valve (Angle Pattern) PERFORMANCE CHARACTERISTICS

PART No. 132136 MODEL No. 3D-6S

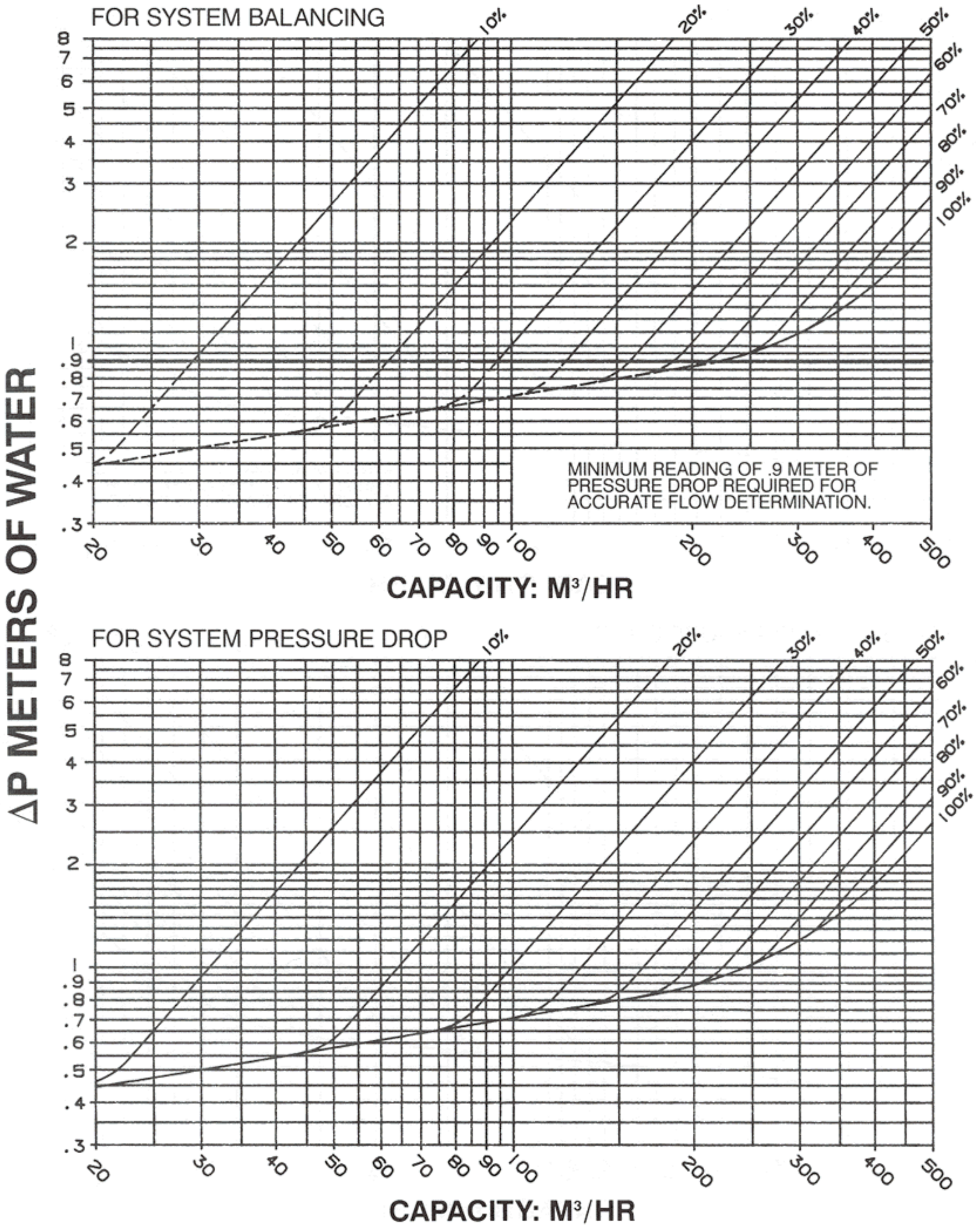


MAXIMUM RECOMMENDED FLOW 260 M³/HR

BELL & GOSSETT

Triple Duty® Valve (Angle Pattern) PERFORMANCE CHARACTERISTICS

PART No. 132137 MODEL No. 3D-8S

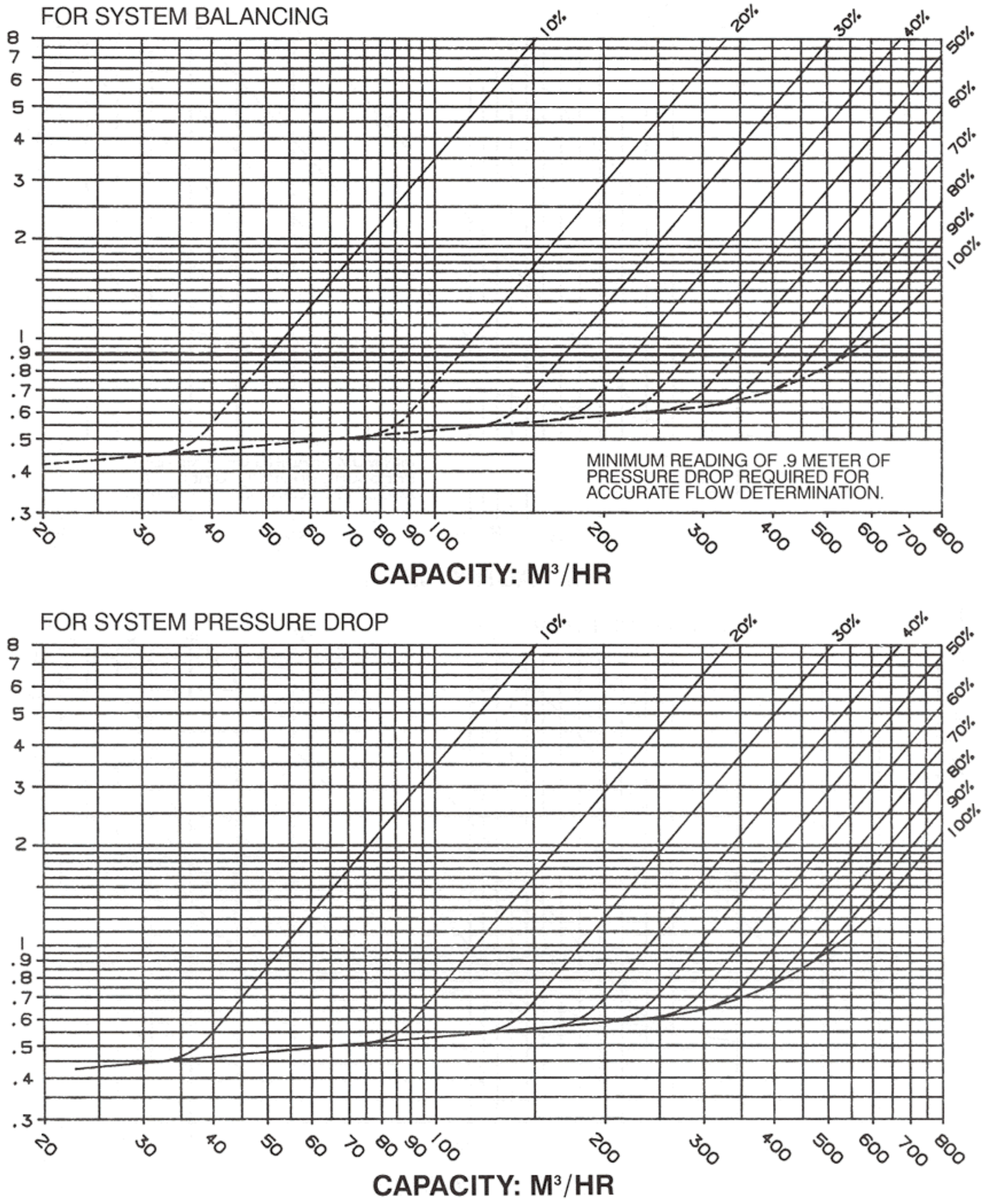


MAXIMUM RECOMMENDED FLOW 460 M³/HR

BELL & GOSSETT

Triple Duty® Valve (Angle Pattern) PERFORMANCE CHARACTERISTICS

PART No. 132138 MODEL No. 3D-10S



MAXIMUM RECOMMENDED FLOW 720 M³/HR

USEFUL PUMP FORMULAS

$$\text{Pressure (PSI)} = \frac{\text{Head (Feet)} \times \text{Specific Gravity}}{2.31}$$

$$\text{Head (Feet)} = \frac{\text{Pressure (PSI)} \times 2.31}{\text{Specific Gravity}}$$

$$\text{Vacuum (Inches of Mercury)} = \text{Dynamic Suction Lift (Feet)} \times .883 \times \text{Specific Gravity}$$

$$\text{Horsepower (Brake)} = \frac{\text{GPM} \times \text{Head (Feet)} \times \text{Specific Gravity}}{3960 \times \text{Pump Efficiency}}$$

$$\text{Horsepower (Water)} = \frac{\text{GPM} \times \text{Head (Feet)} \times \text{Specific Gravity}}{3960}$$

$$\text{Efficiency (Pump)} = \frac{\text{Horsepower (Water)}}{\text{Horsepower (Brake)}} \times 100 \text{ Per Cent}$$

$$\text{NPSH (Available)} = \text{Positive Factors} - \text{Negative Factors}$$

Affinity Laws: Effect of change of speed or impeller diameter on centrifugal pumps.

	GPM Capacity	Ft. Head	BHP
Impeller Diameter Change	$Q_2 = \frac{D_2}{D_1} Q_1$	$H_2 = \left(\frac{D_2}{D_1}\right)^2 H_1$	$P_2 = \left(\frac{D_2}{D_1}\right)^3 P_1$
Speed Change	$Q_2 = \frac{RPM_2}{RPM_1} Q_1$	$H_2 = \left(\frac{RPM_2}{RPM_1}\right)^2 H_1$	$P_2 = \left(\frac{RPM_2}{RPM_1}\right)^3 P_1$

Where Q = GPM, H = Head, P = BHP, D = Impeller Dia., RPM = Pump Speed

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2) a leading global water technology company.

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xylem
Let's Solve Water

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