

Watts Series CSM-81-F

Flow Measurement/Balancing Valves

Sizes: 2½", 3", 4", 5", 6" and 8" (65, 80, 100, 125, 150, 200mm)

Installation Instructions

The Watts Series CSM-81-F Flow Measurement/Balancing Valves are lubricated plug valves designed for applications requiring balancing on medium to large flow rates. The valve flanges are in accordance with ANSI B16.1 Class 125. Face to Face dimensions are in accordance with ANSI B16.10.



CSM-81-F

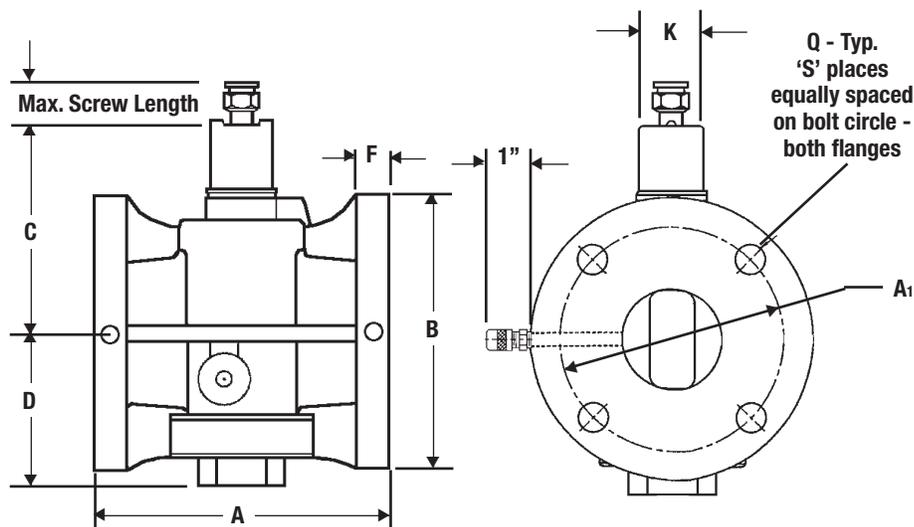
Installation

1. Install valve on return line of equipment to be balanced or as shown on the plans.
2. For maximum accuracy, the flow measurement/balancing valve should be located in an unrestricted straight pipe run so that no fittings (elbow, valve, tee, etc.) is closer to the flow measurement/balancing valve than 5 pipe diameters upstream and 2 pipe diameter downstream. If a balancing valve is located downstream from a circulation pump, allow a distance of ten (10) diameters between the pump and balancing valves.
3. Series CSM-81-F flow measurement/balancing valves are bidirectional and should be installed to insure ease of hooking up meter and adjusting setting

Flow Measurement Instruction

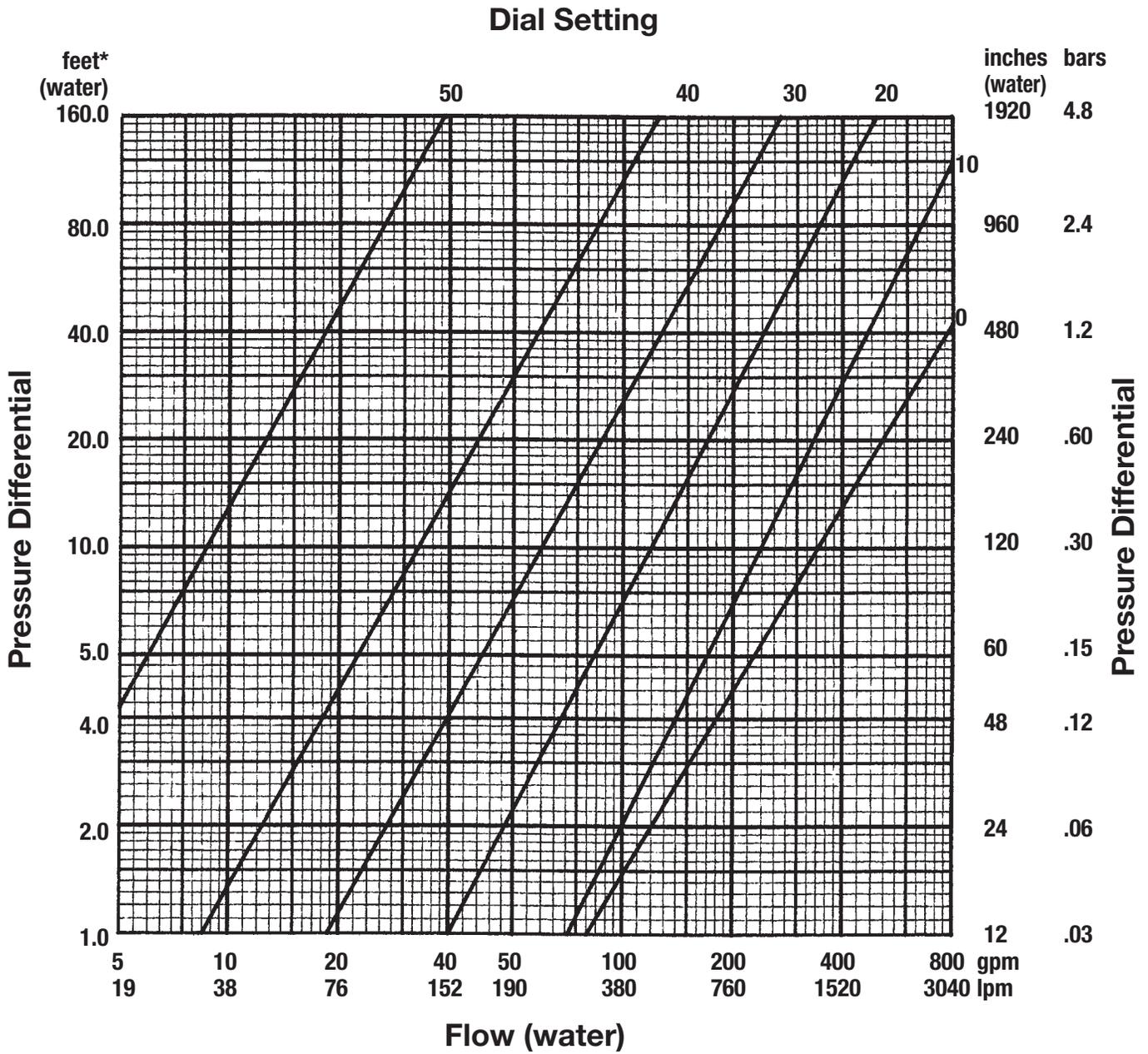
1. With wrench, turn indicator to open position on indicator plate.
2. Connect, vent and prepare the differential gauge. Refer to instructions furnished with the gauge.
3. After initial pressure differential reading is taken, refer to flow rate charts to obtain flow rate based on pressure differential and valve setting. If flow rate is in excess of that specified, turn indicator towards closed position, noting pressure drop and valve setting and determining new flow rates from flow rate chart. The unit or system has now been balanced.
4. Disconnect differential gauge.

Dimensions



MODEL NO.	ORDERING	SIZE (DN)		DIMENSIONS										WEIGHT										
		Code		A Face to Face	A ₁ Bolt Circle	B Flange Dia.	C Center to Top	D Center to Bottom	F Flange Thickness	K Square Stem	Q Dia. of Holes	Screw Length	S No. of Holes	lbs.	kgs.									
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm							
CSM-81-F	036540	2½	65	7½	191	5½	140	7	178	5½	130	3 ¹⁵ / ₁₆	99	1 ¹ / ₁₆	17	1¼	31	¾	19	2½	64	4	29.5	13
CSM-81-F	036541	3	80	8	203	6	152	7½	191	5 ⁷ / ₁₆	137	4 ³ / ₁₆	106	¾	19	1¼	31	¾	19	2½	64	4	39	18
CSM-81-F	036535	4	100	9	229	7½	191	9	229	6½	165	4 ¹⁵ / ₁₆	125	1 ⁵ / ₁₆	24	1½	38	¾	19	2½	64	8	61.5	28
CSM-81-F	036542	5	125	10½	267	8½	216	10	254	7¾	197	6	153	1	25	2	51	7/8	22	3½	92	8	88	40
CSM-81-F	036543	6	150	10½	267	9½	241	11	279	7¾	197	6	153	1	25	2	51	7/8	22	3½	92	8	100	45
CSM-81-F	036544	8	200	11½	292	11¾	299	13½	343	9 ⁹ / ₁₆	233	6½	165	1½	29	2	51	7/8	22	3½	92	8	172	78

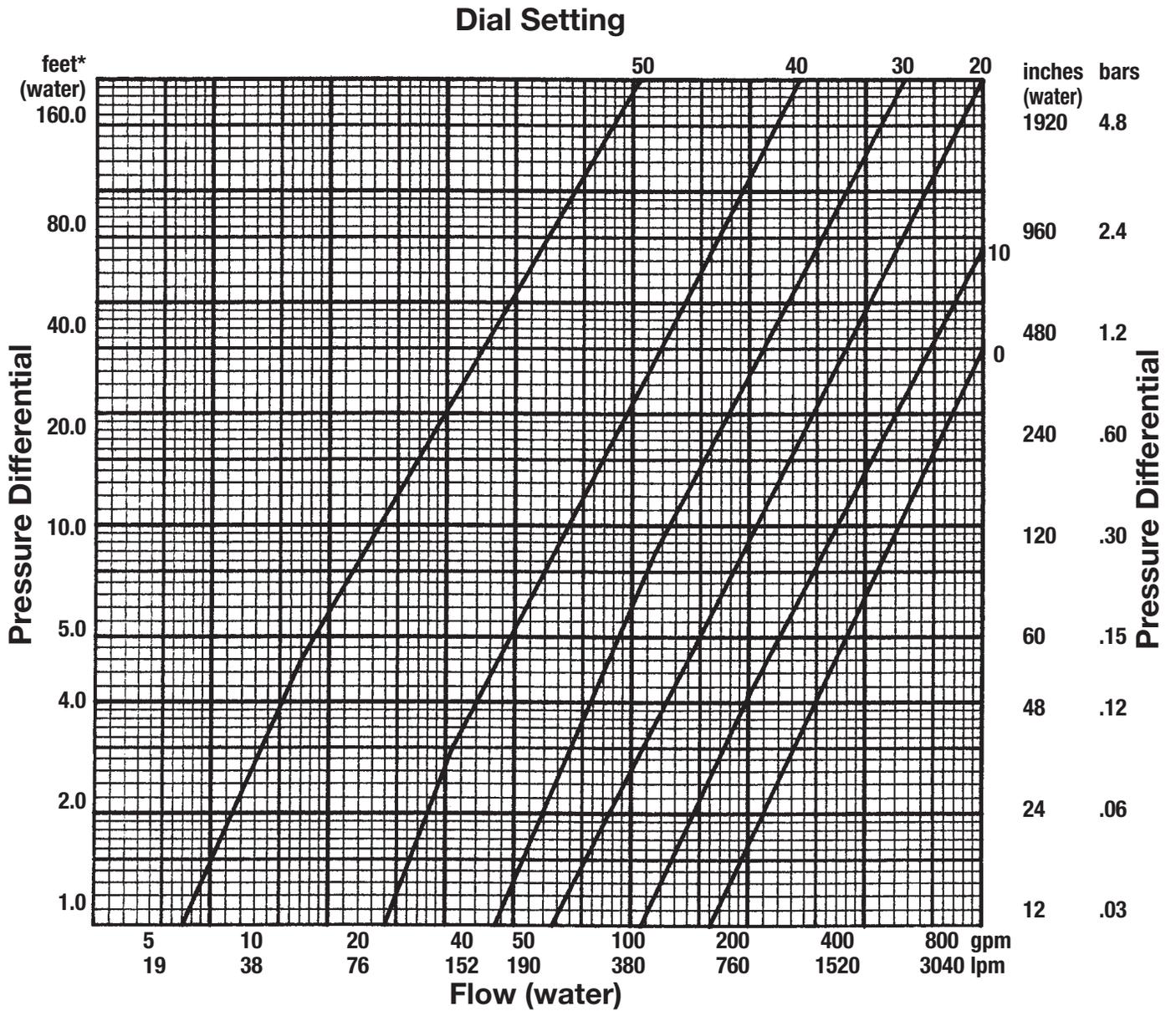
2½" (65mm) CSM-81-F Flow Curve



* To convert to kg/m², multiply feet of water by 304.8

* To convert to psi, multiply feet of water by .4335

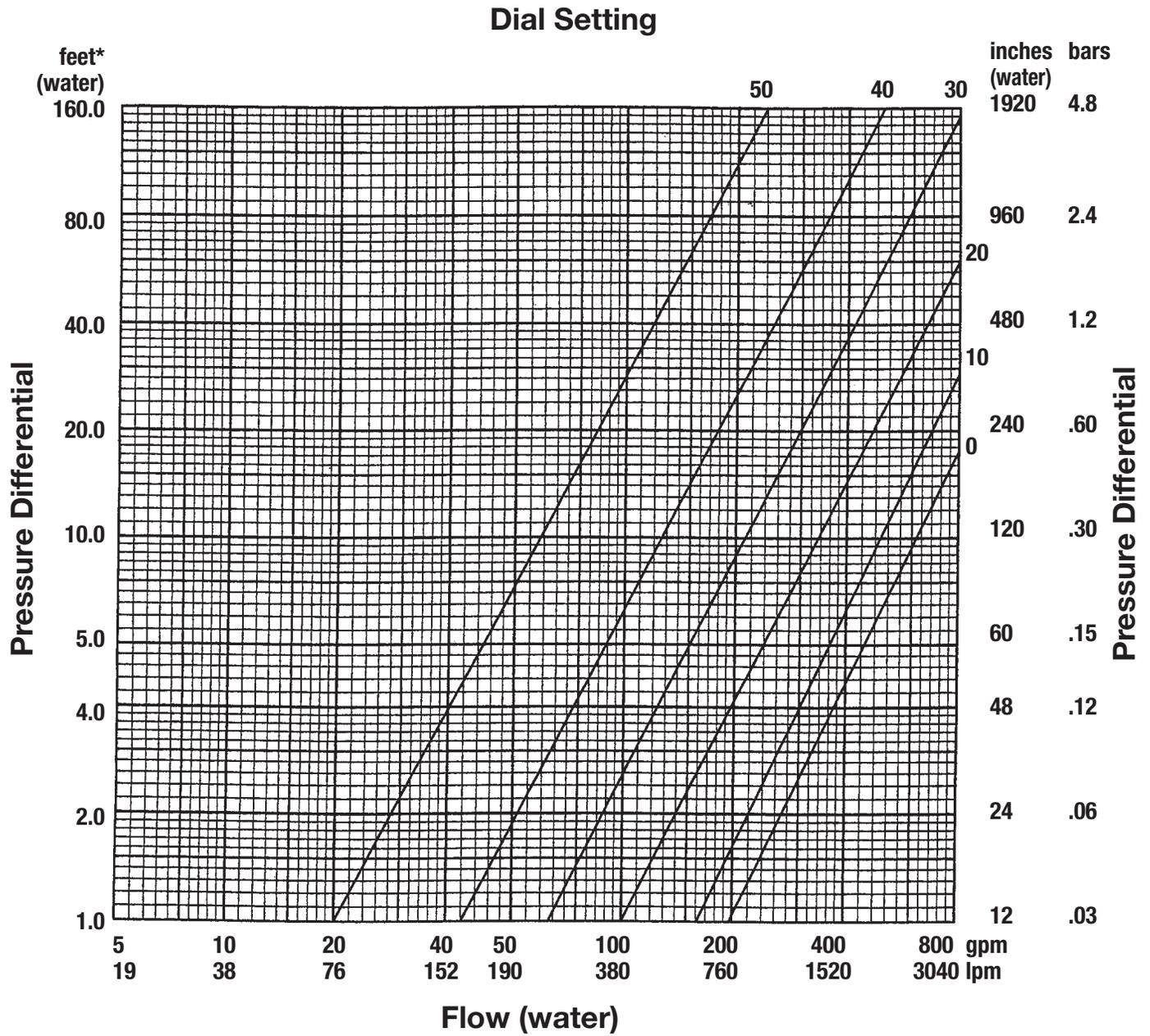
3" (75mm) CSM-81-F Flow Curve



* To convert to kg/m², multiply feet of water by 304.8

* To convert to psi, multiply feet of water by .4335

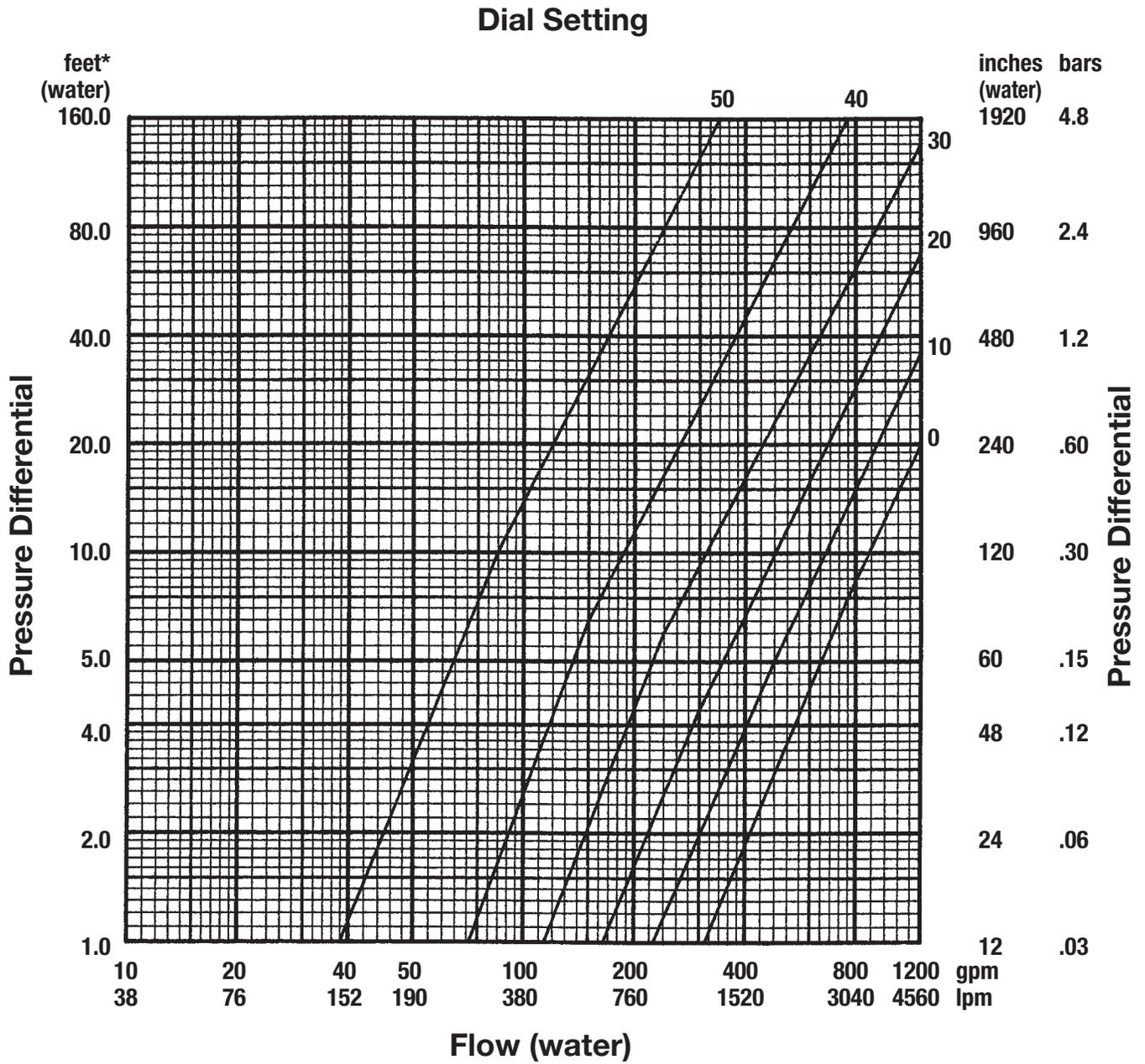
4" (100mm) CSM-81-F Flow Curve



* To convert to kg/m², multiply feet of water by 304.8

* To convert to psi, multiply feet of water by .4335

5" (125mm) CSM-81-F Flow Curve

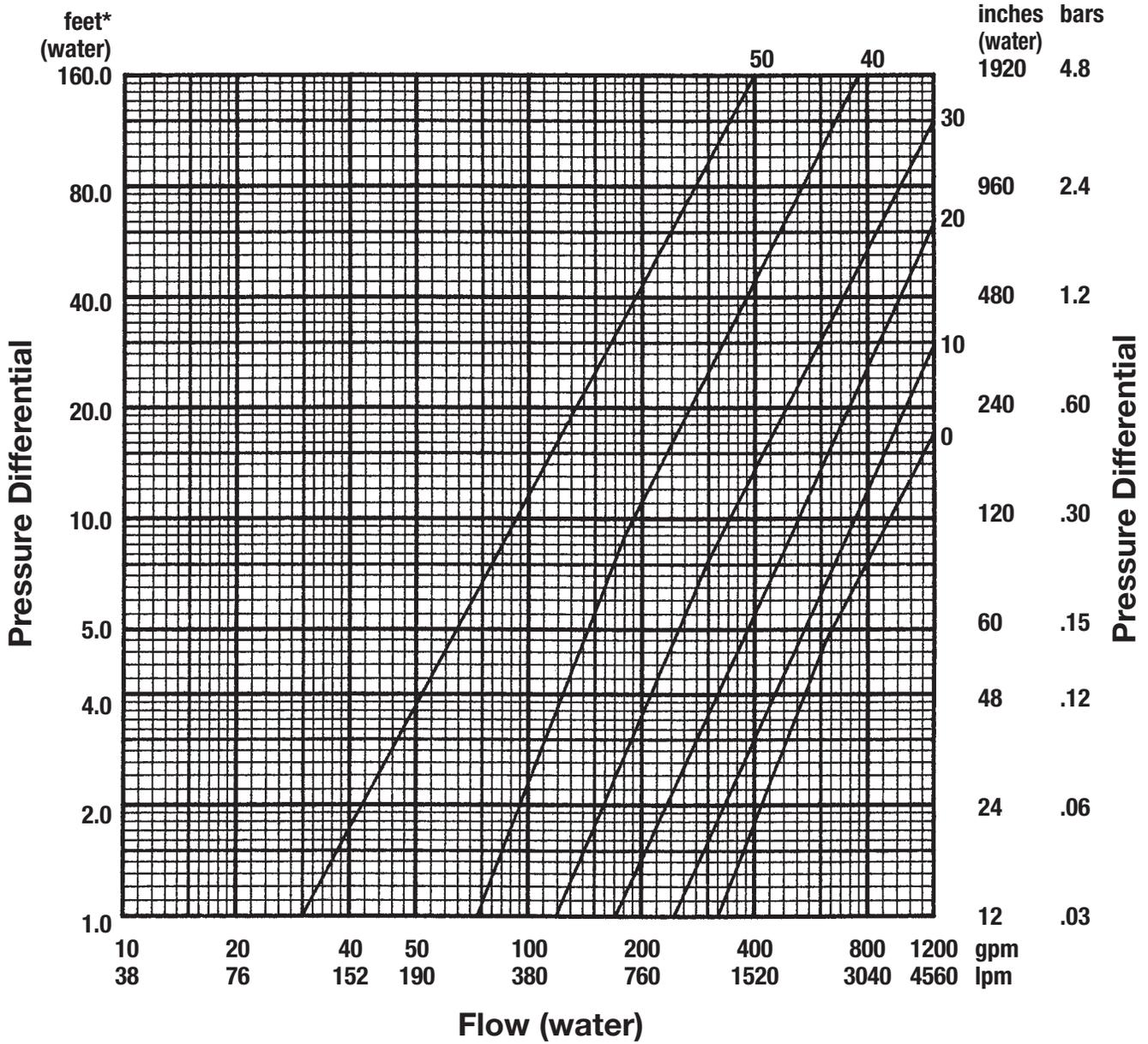


* To convert to kg/m², multiply feet of water by 304.8

* To convert to psi, multiply feet of water by .4335

6" (150mm) CSM-81-F Flow Curve

Dial Setting

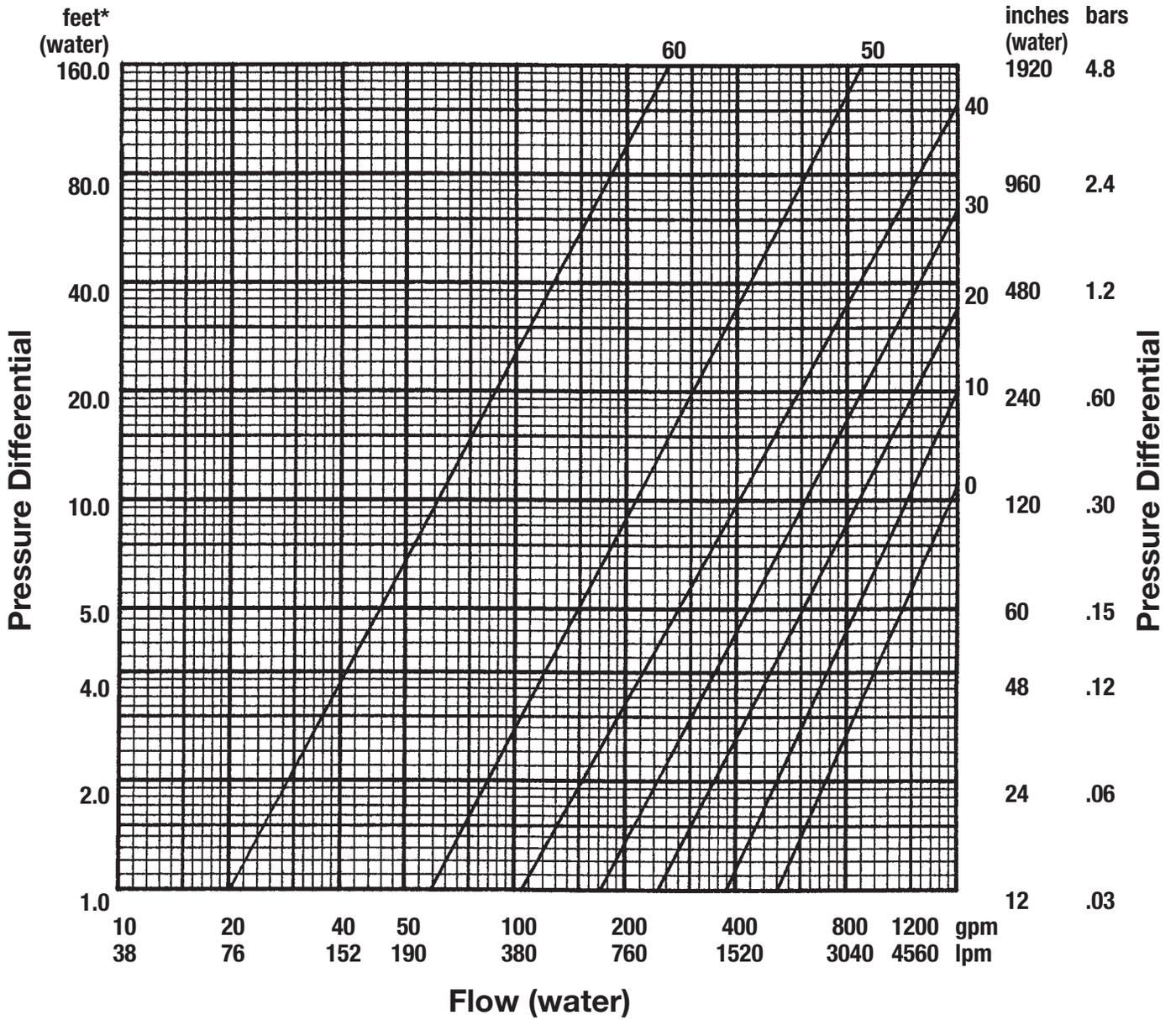


* To convert to kg/m², multiply feet of water by 304.8

* To convert to psi, multiply feet of water by .4335

8" (200mm) CSM-81-F Flow Curve

Dial Setting



* To convert to kg/m², multiply feet of water by 304.8

* To convert to psi, multiply feet of water by .4335

CALIFORNIA PROPOSITION 65 WARNING

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. (California law requires this warning to be given to customers in the State of California.)

For more information: www.watts.com/prop65

Limited Warranty: Watts Regulator Co. (the "Company") warrants each product to be free from defects in material and workmanship under normal usage for a period of one year from the date of original shipment. In the event of such defects within the warranty period, the Company will, at its option, replace or recondition the product without charge.

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The remedy described in the first paragraph of this warranty shall constitute the sole and exclusive remedy for breach of warranty, and the Company shall not be responsible for any incidental, special or consequential damages, including without limitation, lost profits or the cost of repairing or replacing other property which is damaged if this product does not work properly, other costs resulting from labor charges, delays, vandalism, negligence, fouling caused by foreign material, damage from adverse water conditions, chemical, or any other circumstances over which the Company has no control. This warranty shall be invalidated by any abuse, misuse, misapplication, improper installation or improper maintenance or alteration of the product.

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Water Safety & Flow Control Products