

UQDB Series

Blind-Mate Quick Disconnect Couplings for Liquid Cooling

Engineering Evaluation Overview

The UQDB series is intended for blind-mate liquid cooling connection evaluation where guided engagement, serviceability, and compact fluid interconnection are required.

- 1 **Blind-mate fluid connector candidate**
for guided rack / manifold engagement
- 2 **1 mm offset allowance**
based on available technical drawing
- 3 **UNF threaded connection options**
Thread 1 / Thread 2 by model
- 4 **Available in UQDB02 / UQDB04 / UQDB06 / UQDB08**
sample configurations for evaluation
- 5 **For engineering validation only**
final validation under customer conditions



Model	Thread 1	Thread 2	D1	L	Cv
UQDB02	UNF7/16-20	UNF9/16-18	21.4 mm / 0.84 in	36.4 mm / 1.43 in	0.31
UQDB04	UNF9/16-18	UNF3/4-16	25.4 mm / 1.00 in	44.6 mm / 1.76 in	1.09
UQDB06	UNF3/4-16	UNF7/8-14	28.4 mm / 1.12 in	48.1 mm / 1.89 in	2.03
UQDB08	UNF7/8-14	UNF1-1/16-12	31.4 mm / 1.24 in	52.1 mm / 2.05 in	4.33



APPLICATIONS

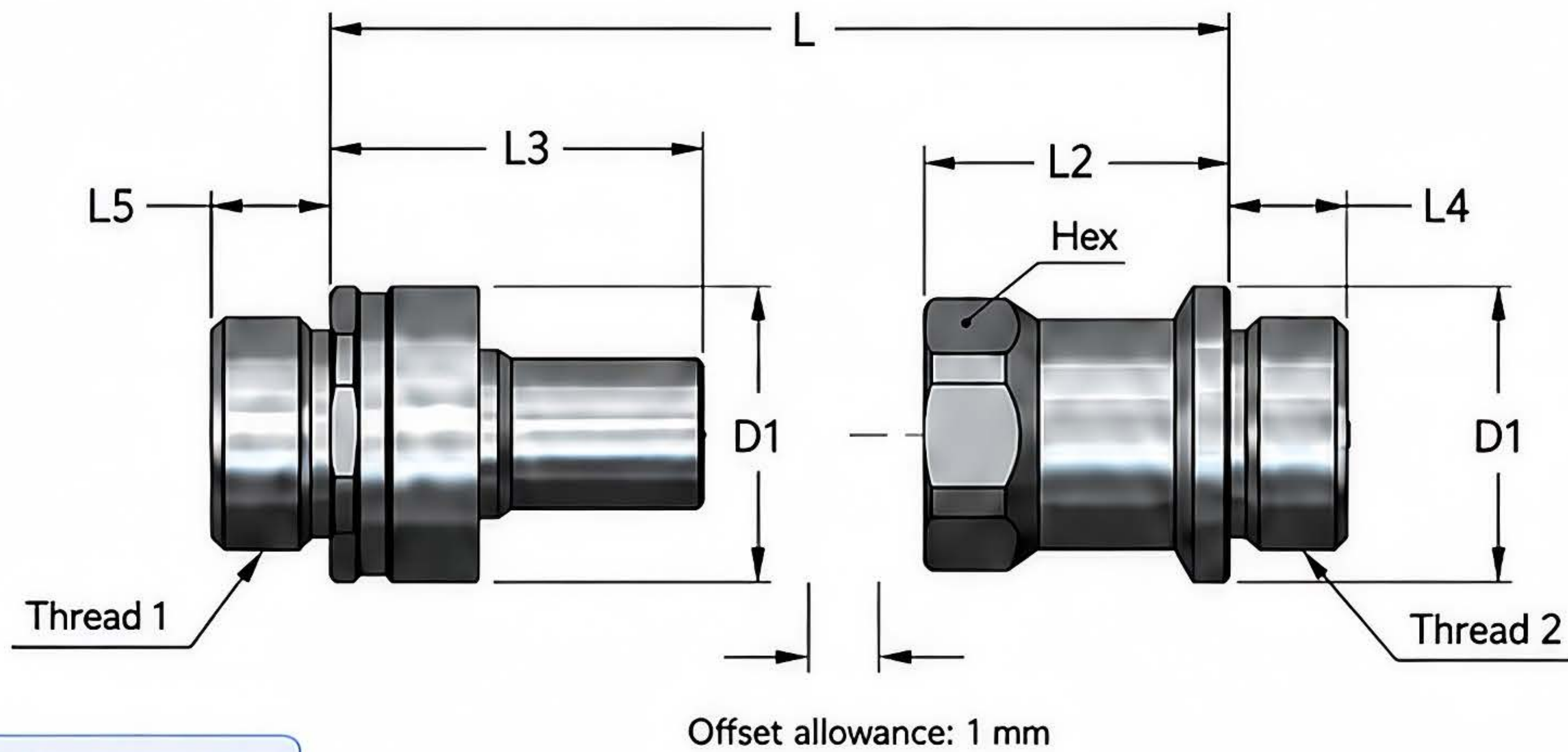
AI Servers • HPC Systems • Data Centers • Rack-level Liquid Cooling

UQDB Series

Dimensions & Connection Configurations

Dimensional Drawing & Connection Configuration

Thread 1 / Thread 2, blind-mate configuration, offset allowance, and dimensional references



Offset allowance: 1 mm

Model	Thread 1	Thread 2	D1	Hex	Cv	Conn. Force
UQDB02	UNF7/16-20	UNF9/16-18	21.4 mm / 0.84 in	17 mm / 0.67 in	0.31	35N
UQDB04	UNF9/16-18	UNF3/4-16	25.4 mm / 1.00 in	19 mm / 0.75 in	1.09	65N
UQDB06	UNF3/4-16	UNF7/8-14	28.4 mm / 1.12 in	24 mm / 0.94 in	2.03	TBC
UQDB08	UNF7/8-14	UNF1-1/16-12	31.4 mm / 1.24 in	27 mm / 1.06 in	4.33	TBC

Model	L	L2	L3	L4	L5
UQDB02	36.4 mm / 1.43 in	23.6 mm / 0.93 in	27 mm / 1.06 in	9 mm / 0.35 in	10 mm / 0.39 in
UQDB04	44.6 mm / 1.76 in	28.5 mm / 1.12 in	35.4 mm / 1.39 in	10 mm / 0.39 in	11 mm / 0.43 in
UQDB06	48.1 mm / 1.89 in	31.8 mm / 1.25 in	38.9 mm / 1.53 in	11 mm / 0.43 in	12.7 mm / 0.50 in
UQDB08	52.1 mm / 2.05 in	35.5 mm / 1.40 in	42.9 mm / 1.69 in	12.7 mm / 0.50 in	13.5 mm / 0.53 in

Dimension Reference

- L = overall length after mating / configuration reference
- L2 / L3 / L4 / L5 = technical drawing reference dimensions
- D1 = main outside diameter reference
- Connection force data is currently available for UQDB02 and UQDB04. Larger-size data can be reviewed with the selected sample configuration.

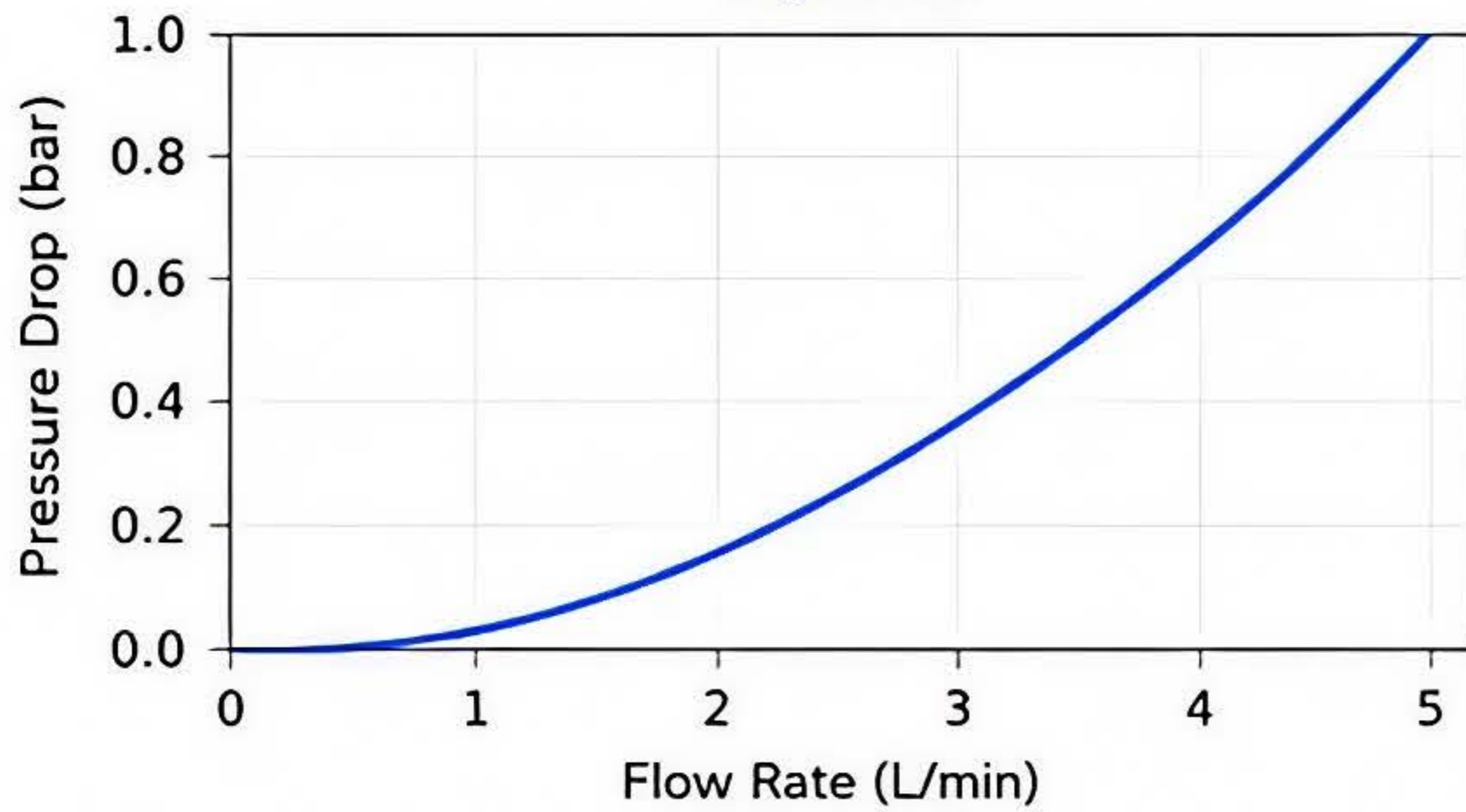
UQDB Series

Flow Performance & Technical Characteristics

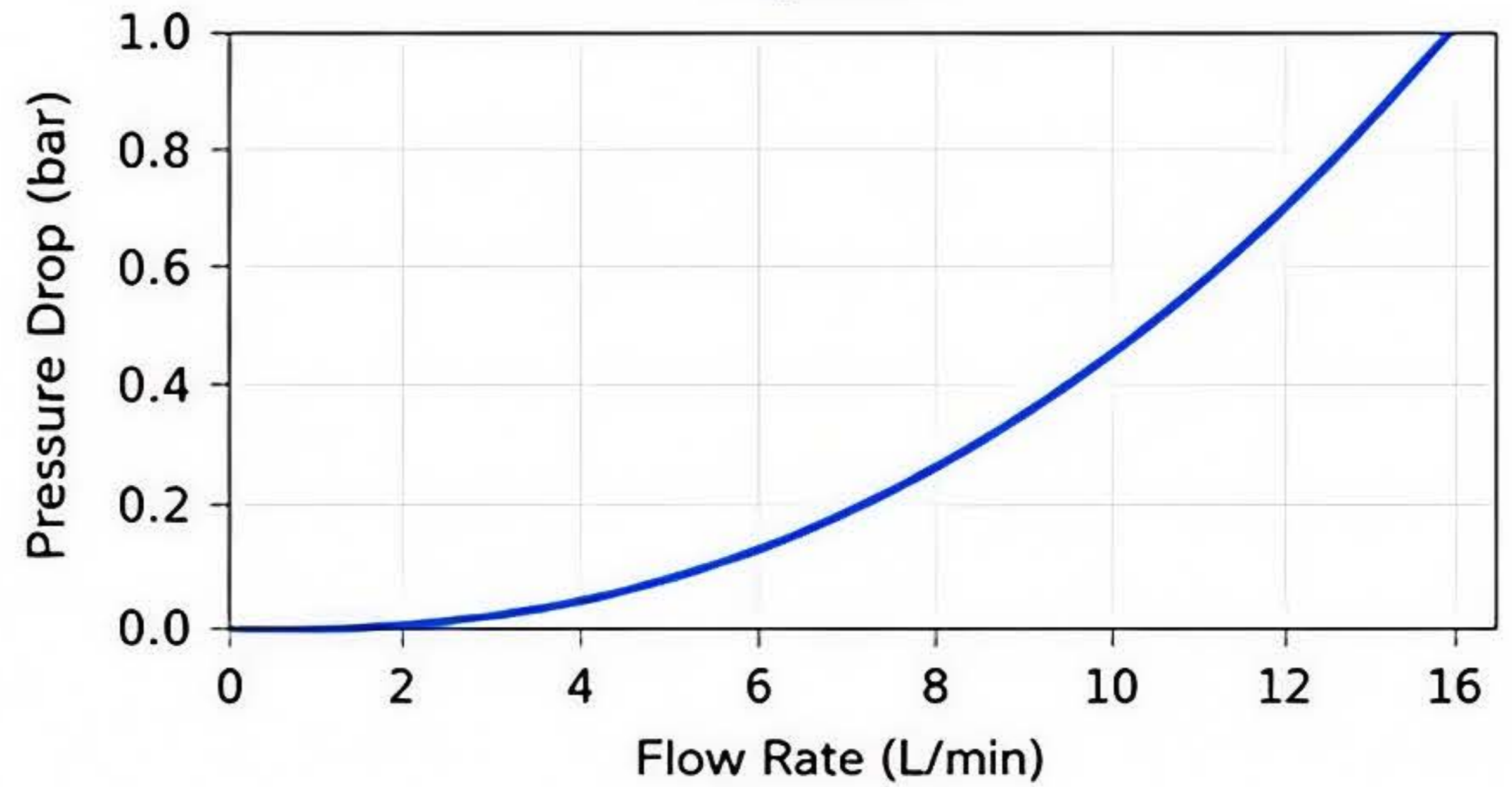
Pressure-Drop Curves by Model

Calculated from Cv values • Based on water at 20 °C

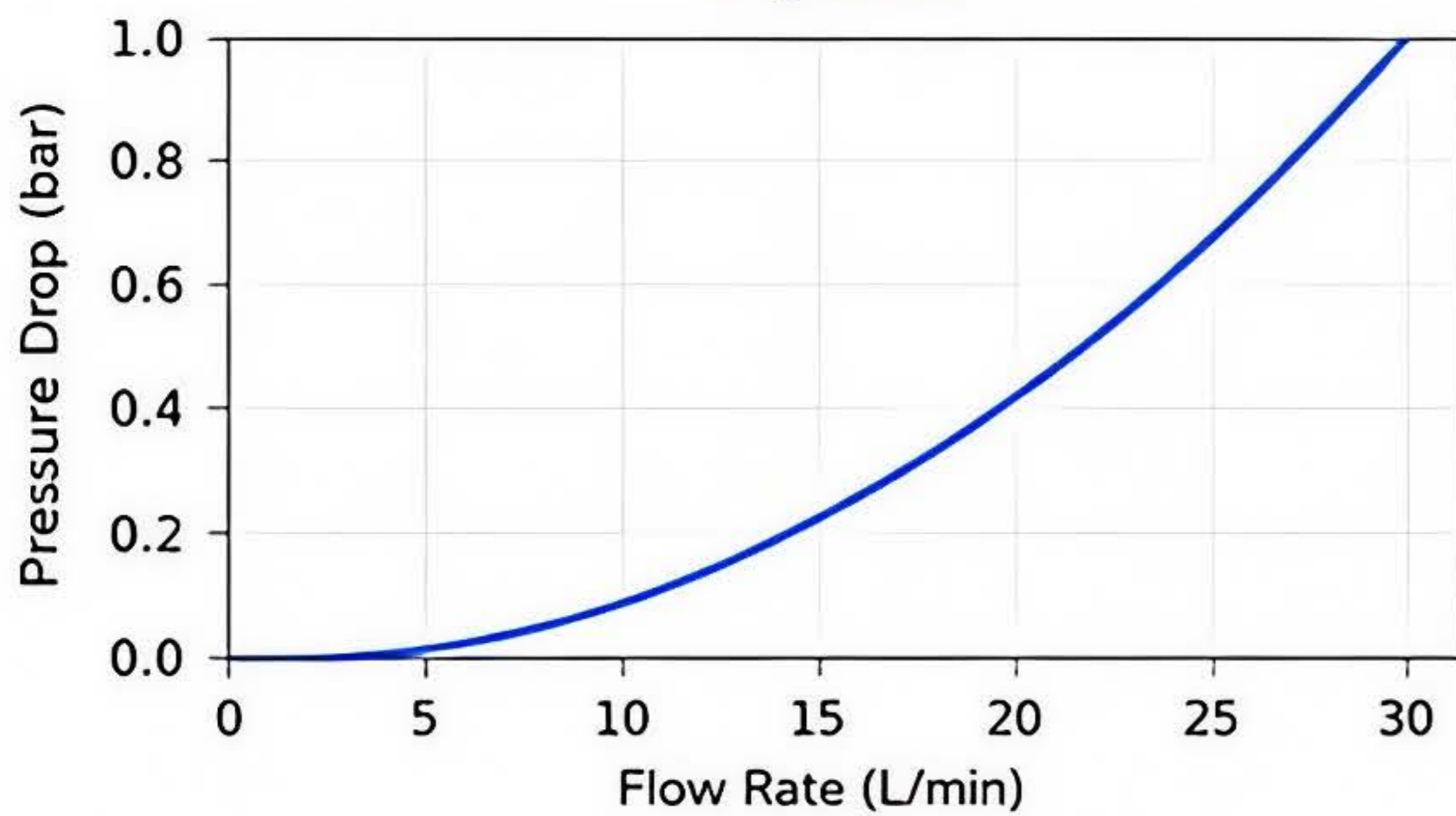
UQDB02



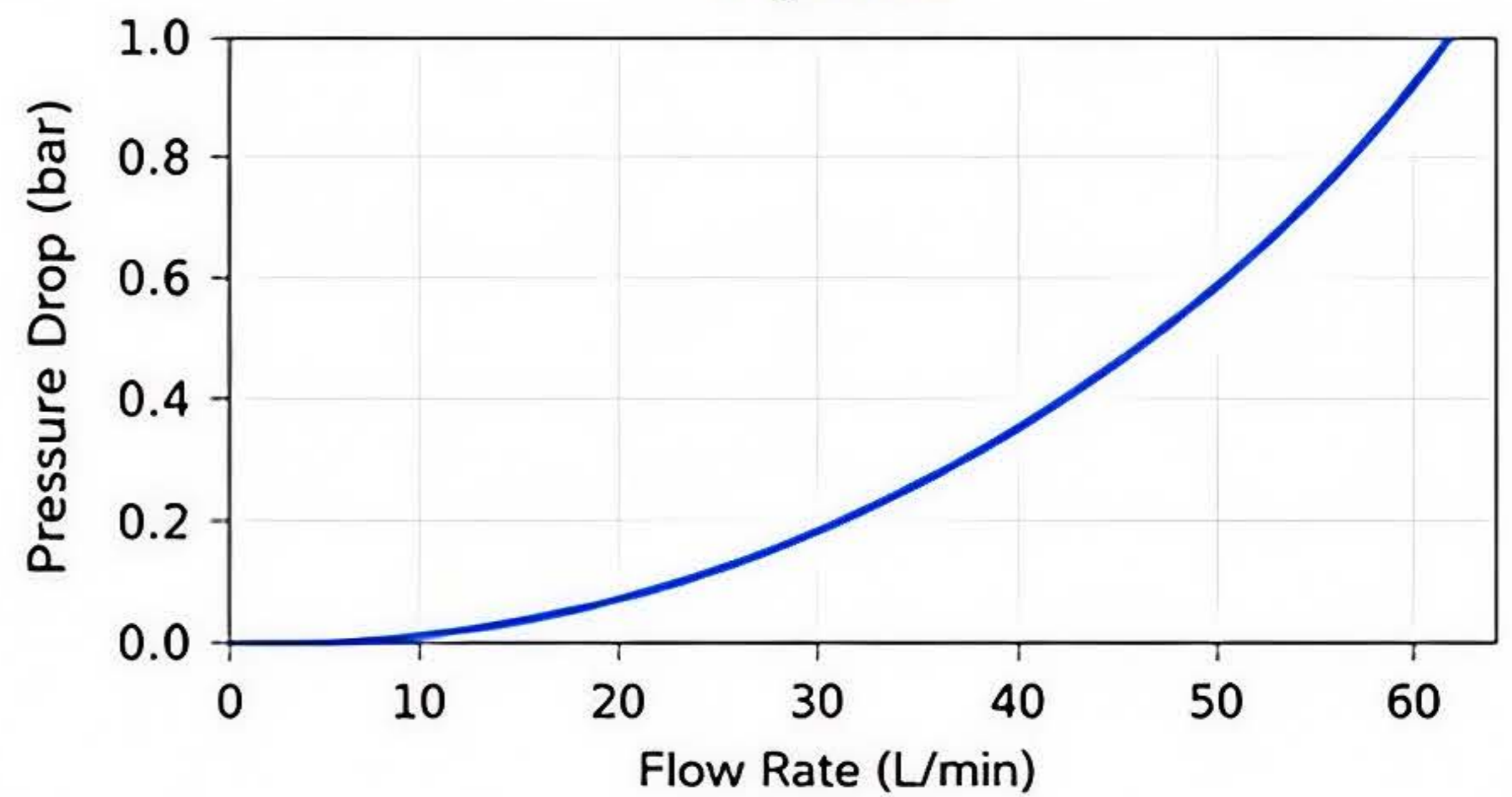
UQDB04



UQDB06



UQDB08



Pressure-drop curves are calculated from Cv values and based on water at 20 °C. For engineering reference only. Actual performance may vary under customer operating conditions.

Available Technical Data

Model range	UQDB02 / UQDB04 / UQDB06 / UQDB08
Offset allowance	1 mm shown in technical drawing
Thread options	UNF Thread 1 / Thread 2 by model
Dimensional data	L, L2, L3, L4, L5, D1, Hex
Cv data	0.31 / 1.09 / 2.03 / 4.33
Connection force	35N / 65N / TBC / TBC
Working fluid	Water (20 °C) for curves above
Notes	Performance may vary with fluid, temperature and system conditions

Engineering Evaluation Notes

- Blind-mate fit should be validated with the customer's rack, manifold, and guide structure.
- Leakage, pressure, pressure cycling, coolant compatibility, and mating-cycle tests should be verified under customer operating conditions.
- Material, seal, pressure rating, and leakage performance should be confirmed with the selected UQDB sample configuration before production use.
- Do not use this sheet as production approval or final BOM approval.

Engineering Note

This sheet is prepared for early-stage engineering evaluation and sample identification only. Final specifications should be confirmed against the selected sample configuration and available validation records.