Droplet2 Extension Package
- Brazed plate heat exchanger, single wall
- Circulator pump (select Option)
- Mechanical Room Controller
  - (4) Storage tank temperature sensors
  - PLC to communicate storage tank conditions with Droplet

Required Field Wiring
- Storage Tank temperature sensor in Tank thermowell (min. one landed)
- Start/Stop signal from Mech. Room Controller to Circulator Pump
- Temperature probe from pump to return pipe thermowell
  - Allows pump to adjust speed to maintain 140°F to Storage Tank
- Ethernet connection from Mech. Room Controller to remote Droplet2
- Mech. Room Controller whip plugged into standard 110VAC wall outlet
- *Optional:* Temp. probe from Mech. Room Controller to return pipe thermowell
  - Can be used to remotely monitor system performance

Heat Exchanger Performance

Heat Load		30,800 Btu/hr	9 kW
High-Lift Conditions	Temperature, Domestic Water (DW) IN	45°F	7.2°C
	Temperature, DW OUT	140°F	60°C
	Temperature, Heat Pump (HP) OUT	145°F	62.8°C
	Temperature, HP RETURN	53.4°F	11.9°C
	Flow, DW	0.65 US gpm	2.46 l/min
	Δp	0.17 ft	0.05 m
End-of-run (EOR) Conditions	Temperature, Domestic Water (DW) IN	115°F	46.1°C
	Temperature, DW OUT	140°F	60°C
	Temperature, Heat Pump (HP) OUT	145°F	62.8°C
	Temperature, HP Return	116.5°F	46.9°C
	Flow, DW	2.5 US gpm	9.5 l/min
	Δp	1.77 ft	0.54 m

Booster Pump Performance

Option 1	Max. Available Head*	17.9 ft	5.5 m
	Min. System Head Loss Required**	3.1 ft @ 0.65 gpm	0.95m @ 2.46 l/min
Option 2	Max. Available Head*	31.0 ft	9.5 m
	Min. System Head Loss Required**	3.1 ft @ 0.65 gpm	0.95m @ 2.46 l/min
Option 3	Max. Available Head*	37.6 ft	11.5 m
	Min. System Head Loss Required**	3.1 ft @ 0.65 gpm	0.95m @ 2.46 l/min
Option 4	Max. Available Head*	57.3 ft	17.5 m
	Min. System Head Loss Required**	3.1 ft @ 0.65 gpm	0.95m @ 2.46 l/min

*Max. Pump Head - Δp (HX) at EOR Flow
**System pressure drop at high-lift flow conditions
to acheive stable deliver temperature at pump min. speed

NOTES:

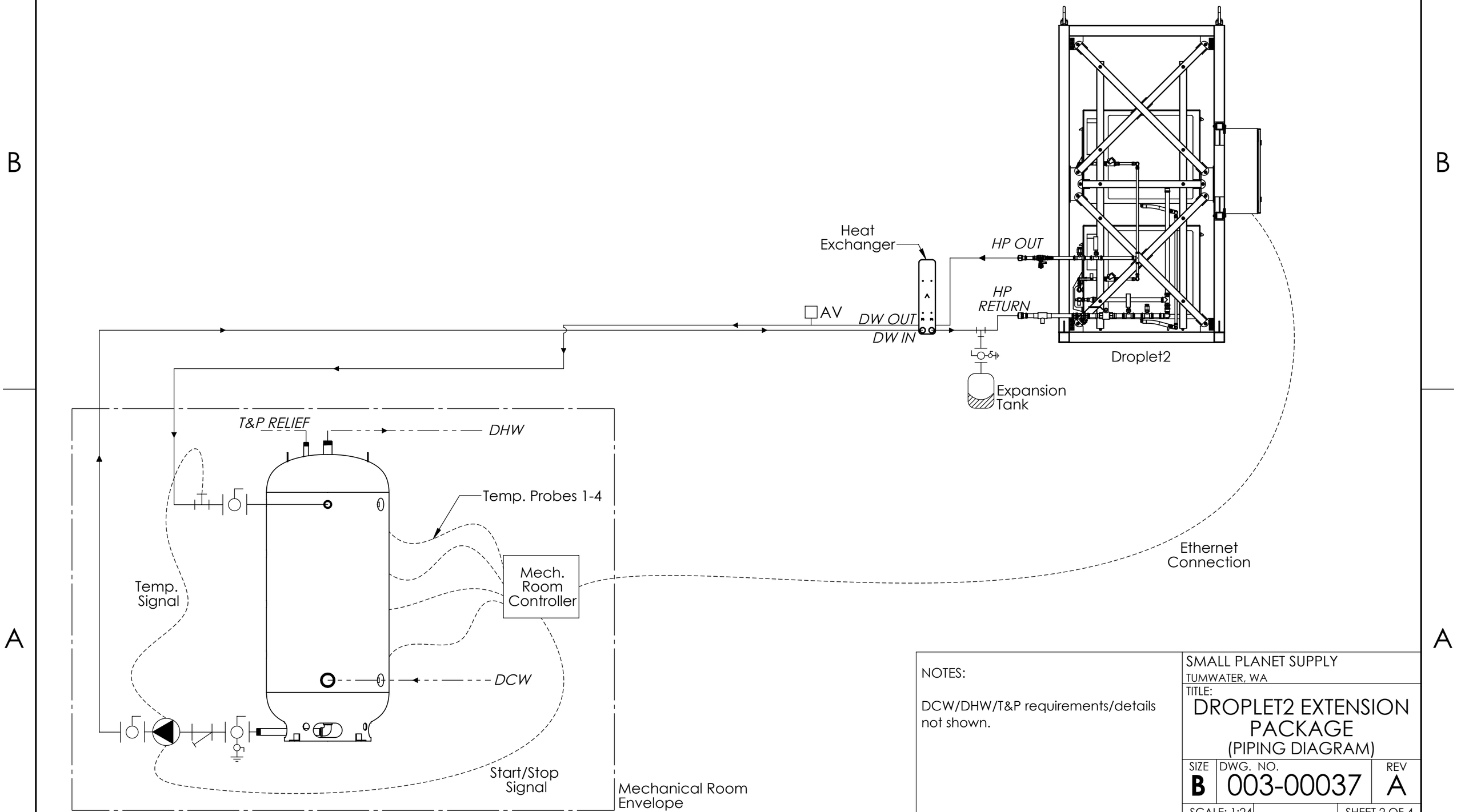
Booster pump varies speed based on constant temperature (140°F at storage tank).
Pump requires pipe thermowell/remote temp. sensor; start/stop signal from Droplet controller. See *Pg.2* for detail.

SMALL PLANET SUPPLY
TUMWATER, WA

TITLE:
DROPLET2 EXTENSION PACKAGE
(TECHNICAL DATASHEET)

SIZE	DWG. NO.	REV
B	003-00037	A

SCALE: 1:1 | SHEET 1 OF 4



NOTES:

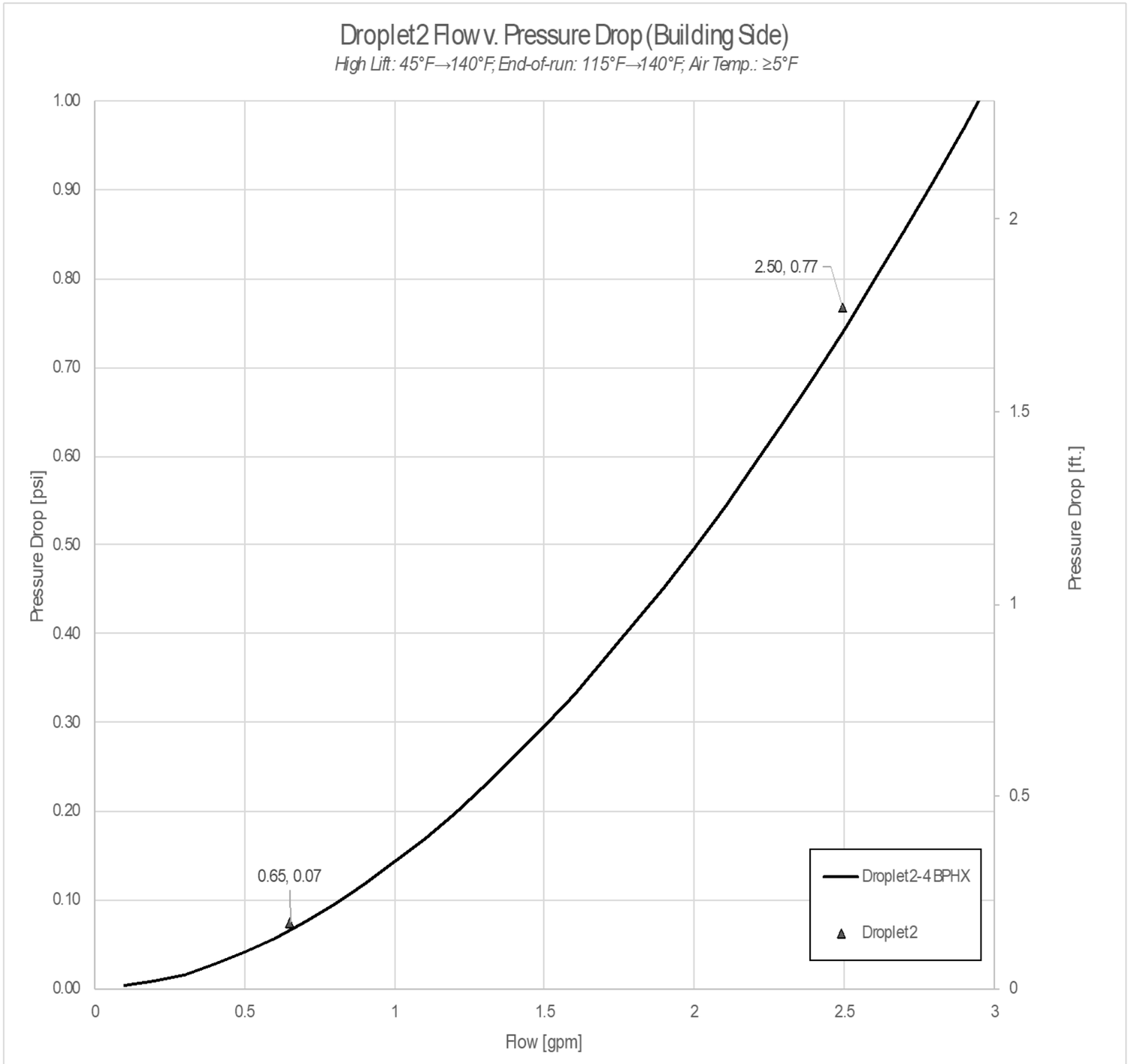
DCW/DHW/T&P requirements/details not shown.

SMALL PLANET SUPPLY
TUMWATER, WA

TITLE:
DROPLET2 EXTENSION PACKAGE
(PIPING DIAGRAM)

SIZE	DWG. NO.	REV
B	003-00037	A

SCALE: 1:24 | SHEET 2 OF 4



NOTES:

Pressure drop of building-side heat exchanger at Droplet2 boundary conditions (high-lift & end-of-run).

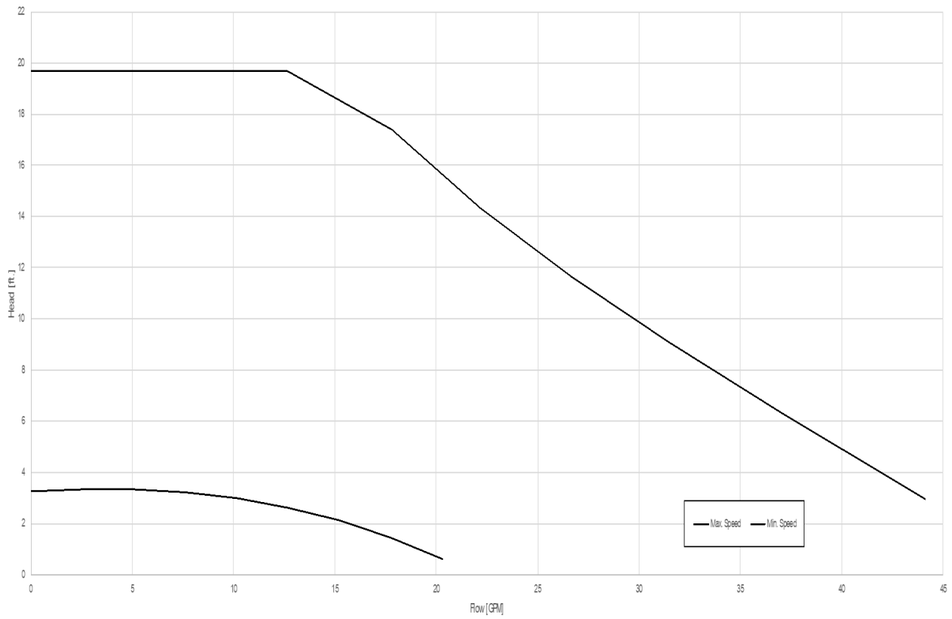
SMALL PLANET SUPPLY
TUMWATER, WA

TITLE:
DROPLET2 EXTENSION PACKAGE
(BPHX PRESSURE DROP CURVE)

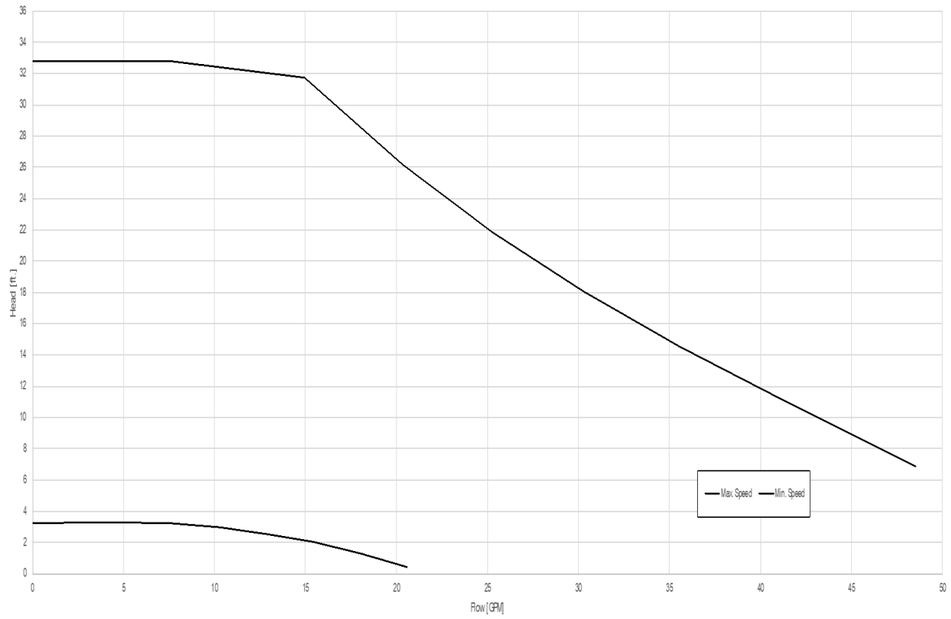
SIZE	DWG. NO.	REV
B	003-00037	A

SCALE: 1:1 | SHEET 3 OF 4

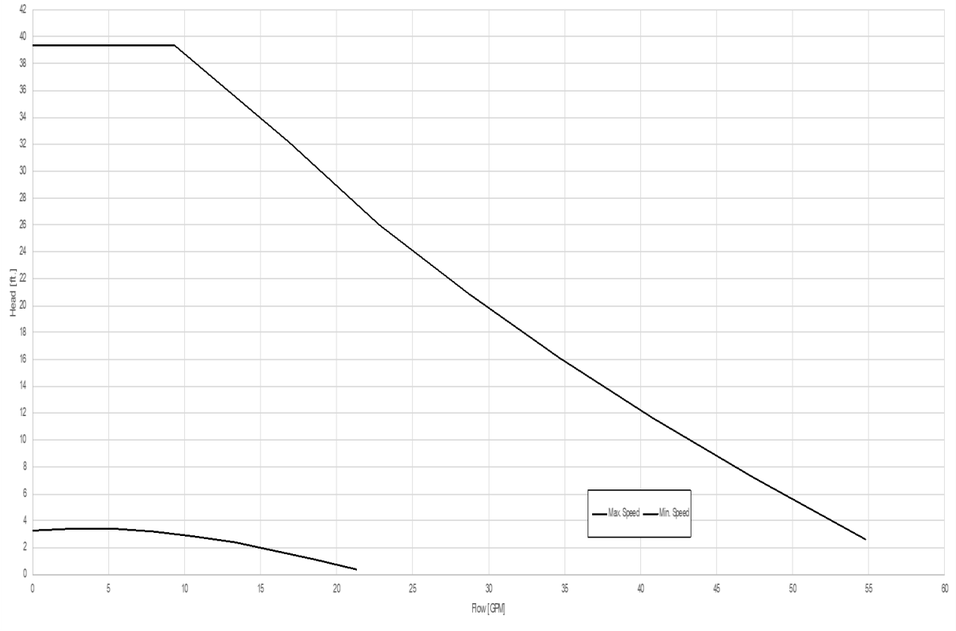
Circulator Pump Option #1
Head v. Flow



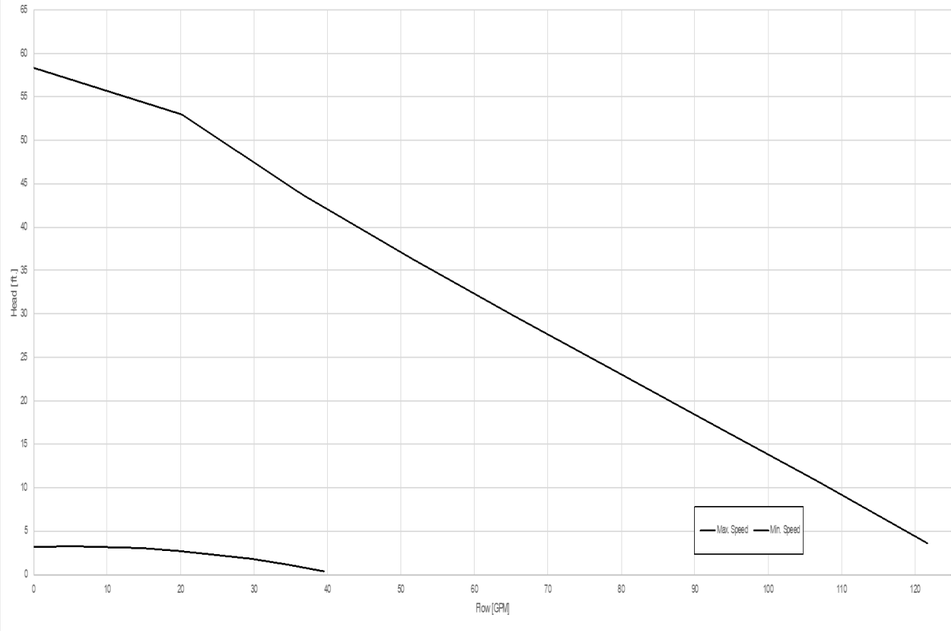
Circulator Pump Option #2
Head v. Flow



Circulator Pump Option #3
Head v. Flow



Circulator Pump Option #4
Head v. Flow



SMALL PLANET SUPPLY
TUMWATER, WA

TITLE:
DROPLET2 EXTENSION PACKAGE
(CIRCULATOR PUMP CURVES)

SIZE	DWG. NO.	REV
B	003-00037	A

SCALE: 1:1 | SHEET 4 OF 4