



Pressure Setup Guide

How to Change the Operating Pressure & Set Units to PSI
Screw Air Compressor Controller — field setup guide

Document	Pressure Setup Guide
Revision	A - 2026
Contact	aeropressuresystems.com · support@aeropressuresystems.com · (415) 991-9119

Step 1 — Set the Controller to PSI (do this first)

Before touching any pressure value, switch the display unit to PSI. Then every pressure field you edit afterwards is already in PSI — no conversion, no guessing.

1. From the main screen, press MENU (or the ► / right-arrow button).
2. Open USER PARA (User Parameter) and enter the **user password : 1788**.
3. Scroll to **PRESSURE UNIT** and set it to **PSI**.

How to tell you are NOT in PSI yet

In PSI, working pressures read as whole numbers in the hundreds — like 117, 131, 145.

If a main pressure (LOAD P, UNLOAD P, MOTOR VSD P) is showing a small value between 0 and 1, the controller is still on the old unit — go back and switch PRESSURE UNIT to PSI before continuing.

Note: a few minor fields (small difference alarms) can be under 1 even in PSI, so judge by the main pressure values, not every field.

Step 2 — How to Edit a Value

1. Move the cursor to the field with the UP / DOWN buttons.
2. Press ◀ or ▶ to enter edit mode (digits blink).
3. Use ◀ / ▶ to pick the digit and **UP / DOWN** to change it.
4. Press **S (Set)** to save and exit.

Touch screen: tap the value box directly (password must already be verified).

Step 3 — Understand the Three Pressures (VSD)

On a variable-speed machine the motor does not just switch on and off — it speeds up and slows down to hold a steady pressure. Three settings work together:

- **LOAD P** — bottom of the band. Pressure drops to here, the machine loads.
- **UNLOAD P** — top of the band. Pressure reaches here, the machine unloads.
- **MOTOR VSD P** — the steady target the inverter actually holds. The controller constantly compares real pressure to this number and adjusts motor speed to park the pressure right here.

⚠ The golden rule for VSD

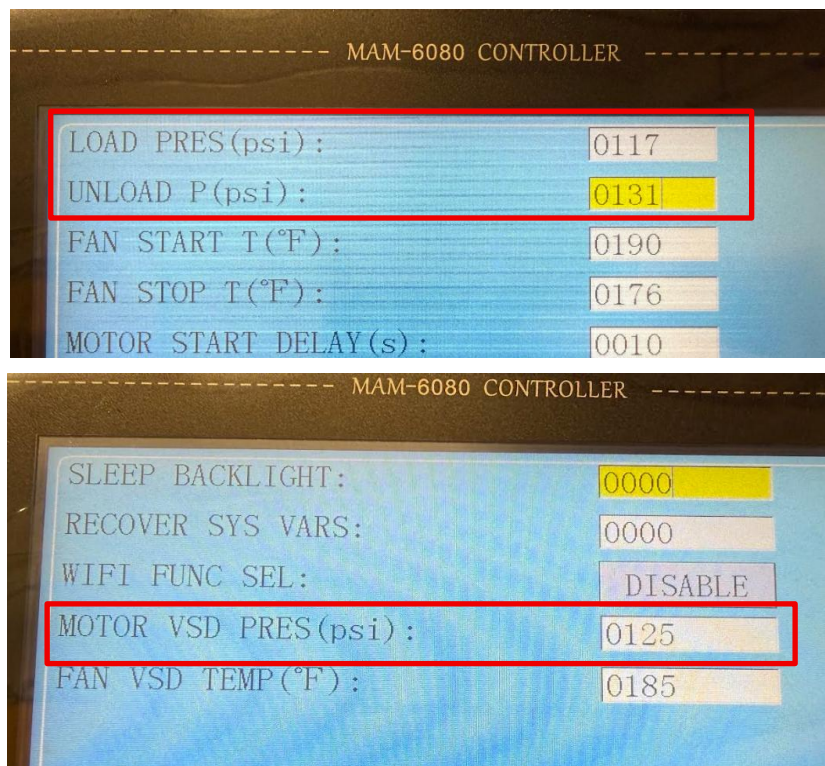
MOTOR VSD P must sit INSIDE the band — between LOAD P and UNLOAD P, roughly in the middle.

Required order: LOAD P < MOTOR VSD P < UNLOAD P.

If MOTOR VSD P is set above UNLOAD P, the inverter keeps pushing toward a target it can never reach — it hits UNLOAD P first and unloads. The machine then hunts up and down (load / unload / load / unload) instead of running smoothly, which wastes energy and wears the machine. You lose the whole benefit of VSD.

Step 4 — Set the Pressures

Location: MENU → USER PARA → **user password : 1788**. Set them in this order: LOAD P, then UNLOAD P, then MOTOR VSD P.



Parameter	PSI	Role
LOAD P	117	Bottom of band — loads here (compressor starts)
MOTOR VSD P	125	Steady target the inverter holds (mid-band)
UNLOAD P	131	Top of band — unloads here (compressor stops)

This example keeps MOTOR VSD P (125) safely between LOAD P (117) and UNLOAD P (131). To run higher or lower, slide all three numbers together and keep the same shape.

Bad example — do NOT do this

LOAD P 117 / UNLOAD P 131 / MOTOR VSD P 140. Here MOTOR VSD P (140) is ABOVE

UNLOAD P (131).

The inverter chases 140 but gets cut off at 131 every time → constant hunting, wasted energy, never reaches target. Works as a Fixed Speed.

Step 5 — Quick Reference

Setting	Where to find it
Pressure unit (PSI)	USER PARA → PRESSURE UNIT
LOAD P / UNLOAD P	USER PARA
MOTOR VSD P	USER PARA (also shown in the MOTOR VSD menu)

Checklist before leaving the machine:

- ☐ Controller shows pressures as whole numbers (PSI), not small decimals.
- ☐ LOAD P < MOTOR VSD P < UNLOAD P — all three in order.
- ☐ Pressed S to save each value.
- ☐ Watched one full cycle: pressure should settle near MOTOR VSD P and run steady, not hunt up and down.