

PROSPECTUS SUPPLEMENT DATED August 20, 2025
(To Prospectus dated May 30, 2025)

VYOME HOLDINGS, INC.

Up to \$12,000,000

COMMON STOCK

This prospectus supplement supplements, modifies and supersedes, only to the extent indicated herein, certain information contained in our prospectus supplement dated May 30, 2025, which together with the accompanying prospectus dated May 14, 2025 contained in our Registration Statement on Form S-3 (Registration No. 333-287168), we refer to as the prospectus, relating to the offering, issuance and sale of shares of our common stock, par value \$0.001 per share, from time to time through our sales agent, Maxim Group LLC, or Maxim. These sales, if any, will be made pursuant to the terms of the Equity Distribution Agreement, as amended, or the EDA, we entered into with Maxim.

This prospectus supplement should be read in conjunction with, is not complete without, and may not be delivered or utilized except in connection with, the prospectus, including all supplements thereto and documents incorporated by reference therein. If there is any inconsistency between the information in the prospectus and this prospectus supplement, you should rely on the information in this prospectus supplement. Any information that is modified or superseded in the prospectus shall not be deemed to constitute a part of the prospectus, except as modified or superseded by this prospectus supplement.

As of August 20, 2025, the aggregate market value of our outstanding common stock held by non-affiliates, or the public float, was approximately \$57,367,048, which was calculated based on 3,658,613 shares of our outstanding common stock held by non-affiliates at a price of \$15.68 per share, the closing price of our common stock on August 14, 2025. Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell shares pursuant to this prospectus supplement with a value of more than one-third of the aggregate market value of our common stock held by non-affiliates in any 12-month period, or \$19,122,349. As of the date of this prospectus supplement, we have sold approximately \$7,066,399 of securities pursuant to General Instruction I.B.6 of Form S-3 during the 12 calendar months prior to, and including, the date of this prospectus supplement, and are therefore eligible to sell up to an additional \$12,055,950 of our securities pursuant to General Instruction I.B.6 of Form S-3. Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell securities registered on this registration statement in a public primary offering with a value exceeding more than one-third of the aggregate market value of our voting and non-voting common equity held by non-affiliates in any 12-month period so long as our public float remains below \$75 million.

We are filing this prospectus supplement to supplement and amend, as of August 20, 2025, the prospectus, as supplemented, to increase the maximum aggregate offering price of our common stock that may be offered, issued and sold under the prospectus, as supplemented and amended by this prospectus supplement, pursuant to the EDA with Maxim to up to approximately \$12,000,000. From and after the date hereof, pursuant to General Instruction I.B.6 of Form S-3, we are offering to issue and sell up to approximately \$12,000,000 from time to time through Maxim, acting as our sales agent or principal in accordance with the EDA, as amended.

Our common stock is traded on The Nasdaq Capital Market under the symbol “HIND.” The closing price of our common stock on August 19, 2025 was \$9.02 per share.

Sales of our common stock, if any, under this prospectus supplement and accompanying prospectus may be made in sales deemed to be “at the market offerings” as defined in Rule 415 under the Securities Act of 1933, as amended, or the Securities Act. Maxim is not required to sell any specific number or dollar amount of securities but will act as a sales agent using commercially reasonable efforts consistent with its normal trading and sales practices, on terms mutually agreed to by Maxim and us. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

The compensation to Maxim for sales of common stock sold pursuant to the EDA will be up to 3.0% of the gross proceeds of any shares of common stock sold under the Sales Agreement. In connection with the sale of the common stock on our behalf, Maxim will be deemed to be an “underwriter” within the meaning of the Securities Act and the compensation of Maxim will be deemed to be underwriting commissions or discounts. We have also agreed to provide indemnification and contribution to Maxim with respect to certain liabilities, including liabilities under the Securities Act or the Securities Exchange Act of 1934, as amended, or the Exchange Act.

Investing in our securities involves a high degree of risk. Before buying any of our securities, you should carefully consider the risk factors described in “Risk Factors” on page S-5 of the prospectus supplement dated May 30, 2025, on page 6 of the prospectus and under similar headings in other documents that are incorporated by reference into this prospectus supplement and the prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is August 20, 2025.