

Ajusto-Spede® Controllers
MODEL 3000 CONTROLLERS



Description

The Model 3000 Dynamatic® Analog Controller is a complete controller on one printed circuit board. Input is 115 VAC, 1 phase, 50/60 Hz. Output is 5.5 Amp, 45 VDC and is available for use with Dynamatic® Air-Cooled Drives rated .25 through 20 horsepower; or 4.3 Amp, 90 VDC which is available for use with Dynamatic® Air-Cooled Drives rated .25 through 200 horsepower. The controller will provide either speed control or torque control, depending on the positioning of an on-board jumper. To accommodate

a wide range of drive sizes and time constants the controller is manufactured in two separate versions to optimize performance: one for integral horsepower drives and the other for fractional horsepower drives. While this controller is not available with modifications, there are a number of standard features included. Not recommended for continuous low speed operation. This controller is the most basic controller we build and it has limited stability at lower than 200 RPM.

Features	Customer Benefits
Linear acceleration circuit, adjustable from 1 to 30 seconds.	Provides soft starts.
Closed loop control keeps drive output speed within 0.5% for load changes from 0 to 100%.	Accurate speed control.
On-board, selectable speed or torque voltage control.	Application versatility.
Stopping brake circuit, adjustable from 0 to 45 VDC.	Controlled braking capability is added.
Small wall mount enclosure is complete with operator's elements.	Easy to understand, install, operate and maintain.
Short circuit and ground fault protection by fused input.	Isolates controller components from short circuits.
Transient suppression by input suppressor.	Prevents controller damage due to transient spikes.
Custom "state-of-the-art" integrated circuits.	Longer controller life.
Compatible with existing wiring and plant power.	Low installation cost.
Controller and operator's station can be mounted up to 500 feet from drive when proper wire size and type is used.	Dynamatic® controllers are capable of remote mounting for drives mounted in hard to get at locations.
Long Life.	Controllers are built to give long, reliable, low cost life in diverse applications.

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Specifications

<p>3000 Controller</p>	<p>Units used with 45 VDC, 5.5 Amp</p> <p>90 VDC, 4.3 Amp</p> <p>Horsepower range</p> <p>Input power, maximum</p> <p>Output power, maximum</p> <p>Speed regulation, no load to full load change</p> <p>Enclosures</p> <p>Built-in modifications</p> <p>Field modifications</p> <p>Controller protective features</p> <p>Line regulation for +/-10% input line voltage change</p> <p>Thermal drift per degree C</p> <p>Minimum regulated speed range</p> <p>Maximum ambient</p> <p>Operator devices (on controller cover)</p> <p>Standards</p>	<p>Fractional HP Drives AS-14 - 25 Drives AT-140 – 280 Drives</p> <p>AS-14 - 27 Drives AT-140 - 440 Drives</p> <p>.25 - 20 HP - 45 VDC .75 - 200 HP - 90 VDC</p> <p>115 VAC +/- 10%, 1 phase, 50/60 Hz, 575 VA</p> <p>45 VDC, 5.5 A, 248 watts, or 90 VDC, 4.3 A, 387 watts</p> <p>0.5% Standard</p> <p>NEMA 1- Standard, panel mount -Optional</p> <p>Linear acceleration, adjustable braking, torque control</p> <p>Not available</p> <p>Input fuses, low line voltage, line transients, isolated signal circuits, output over-current.</p> <p>+/-1.0%</p> <p>+/-0.05%</p> <p>50 RPM</p> <p>113° F (45° C) enclosed 149° F (65° C) panel mount</p> <p>Start pushbutton, Stop pushbutton, adjustable speed potentiometer -Standard</p> <p>CSA approved</p>
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Ordering Information

The Model 3000 Controller includes a single printed circuit board, rated for a 115 VAC, 1 phase, 50/60 Hz input and a 45 volt, 5.5 Amp, 248 watt or 90 volt, 4.3 Amp, 387 watt output with or without operator's elements (Start and Stop pushbuttons and Run Speed potentiometer). Separate configurations are available for fractional horsepower models (FAS) and integral horsepower models (AS & AT). If the mechanical unit includes a spring set brake a larger controller must be used (4000, 4050, Mark III or EC-2000).

3000 Controller Selection Table

Description	45 VDC Part Number	90 VDC Part Number
Model AS & AT NEMA 1 enclosure with operator elements	15-000595-0001	15-000889-0001
Model AS & AT, Panel mount with operator elements	15-000588-0001	
Model AS & AT, Panel mount without operator elements	15-000588-0002	15-000888-0001
Model FD, NEMA 1 enclosure with operator elements	15-000595-0003	--
Model FD, Panel mount with operator elements	15-000588-0003	--
Model FD, Panel mount without operator elements	15-000588-0004	--



DRIVE SOURCE INTERNATIONAL, INC.

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World's leading manufacturer of Eddy Current drives, brakes and controls

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DSI - STANDARD TERMS AND CONDITIONS OF SALE

1. PRICE BOOKS

Price books are intended only as sources of general information. They are not to be construed as quotations or as representations that products described therein are available, or will be made available for immediate delivery.

2. QUOTATIONS

Seller may make quotations verbally or in writing. Verbal quotations shall expire automatically unless Seller receives Buyer's purchase order number on the day the quotation is made. Written quotations shall expire automatically unless Seller receives Buyer's written purchase order within 15 days after the date appearing on the quotation. No quotation is to operate as an offer to sell but only as a description of products. Accordingly, even prior to its expiration date, any quotation is subject to change by Seller at any time upon verbal or written notice to Buyer. All quotations are deemed to incorporate Seller's Standard Terms and Conditions of Sale.

3. ACCEPTANCE OF PURCHASE ORDERS.

Notwithstanding any contrary language contained in Buyer's purchase order, each purchase order shall be subject to acceptance by an authorized employee of Seller's plant, and each purchase and sale transaction shall be governed exclusively by these Standard Terms and Conditions of Sale. Seller reserves the right at any time before delivery and payment to correct clerical, stenographic or other errors in quotations, purchase orders or acknowledgments.

4. PRICE POLICY

Regardless of prices set forth in quotations, acknowledgments or elsewhere, Buyer shall pay a purchase price as follows:

- (a) For the following products: Fractional Horsepower Adjusto-Spede®, AC Motors, renewal parts and service, Buyer shall pay Seller's published prices in effect on the date when shipment is made or service performed.
- (b) For all other products, Buyer shall pay a purchase price equal to the smaller of: (a) Seller's published prices in effect on the date when shipment is made or (b) the prices set forth in Seller's acknowledgment increased by 1% for each month or fraction thereof that elapses between the date when the acknowledgment is mailed from Seller's factory to Buyer (designated as the "Issue Date" on the acknowledgment) and the date when shipment is made or the date for which shipment was originally scheduled (as stated on the acknowledgment) by Seller, whichever occurs sooner. However, in the event that shipment is originally scheduled to occur in excess of 12 months after Issue Date, Buyer shall pay Seller's published prices in effect on the date when shipment is made; and in any case where shipment is delayed beyond Seller's originally scheduled date for shipment by Buyer's actions or at Buyer's request,

Buyer shall pay escalation charges based on the revised delivery schedule.

5. MINIMUM BILLING

The minimum billing for each purchase order shall be \$100.00 net.

6. TAXES

Any and all sales, use, personal property or other excise taxes which the Seller may be required to pay or collect, including first destination taxes, will be added to each invoice and shall be payable by Buyer on the same terms as the purchase price unless the Buyer has furnished the Seller a tax exemption certificate acceptable to the taxing authority.

7. PAYMENT TERMS

Payment terms shall be net 30 days except for International orders, which will be cash in advance. However, on orders of \$100,000.00 or more and having delivery schedule 6 months or longer from date of order, the payment terms shall be as specified by Seller at time of quotation.

8. SHIPPING TERMS

Except as otherwise agreed, Seller shall be entitled to select carrier and make delivery in more than one shipment, in which event Buyer shall pay separately for each partial shipment.

All shipments shall be made F.O.B. point of shipment. Seller shall prepay freight (UPS shipments only), which shall be billed to Buyer as a separate item on the product invoice at Seller's standard rates applicable to the destination, or at Buyer's option, shipment shall be made freight collect. All truck shipments shall be made freight collect, unless otherwise agreed.

9. PACKAGING

At no additional charge, all products shall be packaged for domestic shipment in accordance with Seller's standard specifications. Additional charge shall be made if Buyer specifies special domestic packaging, packaging in accordance with government or military standards, overseas packaging or other special packaging. Refer to Seller's plant, nearest sales office or representative for further information.

10. TITLE AND RISK OF LOSS

Risk of loss in transit shall be borne entirely by Buyer at all times after the products are delivered to the carrier for shipment. However, title to the products and right to stop delivery in transit shall remain with Seller until Seller receives payment in full.

11. DELAYS OR DEFAULT IN DELIVERY

Seller shall have no liability to Buyer, and Buyer shall not be entitled to cancel any purchase order, for Seller's delay or default in delivery due to strikes, secondary boycotts, riots,

wars, accidents, fires, floods, explosions, vandalism, government embargoes, priorities or regulations, shortages of labor, fuel, materials, supplies, power or transportation facilities, or other similar or dissimilar causes beyond Seller's reasonable control. Under no circumstances shall Seller have any liability for penalties or consequential damages of any kind resulting in whole or in part from Seller's delay in delivering, or failure to deliver, any products ordered by Buyer.

12. CHANGES TO ORDERS IN PROCESS

There shall be a charge for any and all changes in specification after an order is in process, based on the status of the order at the time the change is made. The additional charge shall be a minimum of \$50 net per item when engineering has not been started or is not required and a minimum of \$100 net per item when re-engineering is required. The additional charge shall be in addition to any change in the price of the product resulting from the change in specification. The order "Issue Date" will be moved forward to the date of the change and shipment will be rescheduled in accordance with the then current lead times. Buyer shall pay escalation charges based on the new "Issue Date" and scheduled shipping date as defined in paragraph B.

13. CANCELLATION

After Seller accepts Buyer's purchase order by faxing Seller's written acknowledgment, Buyer's cancellation of any order or portion thereof may be accomplished only upon (i) Seller's receipt of written cancellation notice at Seller's plant (cancellation notice by telephone will be deemed only as authorization for Seller temporarily to suspend performance on Buyer's order pending written confirmation of cancellation) and ii) Buyer's payment of the following cancellation charges:

Notwithstanding anything to the contrary contained herein, the minimum cancellation charges for products shall be 50% per line item or 50% per complete order.

With respect to all costs and expenses described above, Seller shall provide such substantiating documentation as Buyer may reasonably request, and Seller's computations, thus documented, and shall be conclusive and binding between the parties. With respect to all canceled products, materials and supplies described above, Seller shall, upon payment of the applicable cancellation charges, make such disposition as Buyer may specify in writing within 30 calendar days after Seller notifies Buyer of the applicable cancellation charges. Buyer's failure to so specify within said 30-day period shall constitute Buyer's authorization for Seller to make such disposition as Seller chooses with no further obligation to Buyer.

14. PATENT INFRINGEMENT

With respect to all products manufactured to Buyer's design, Buyer shall indemnify and hold Seller harmless from and against any and all loss, cost, expense, claims, demands, suits and judgments resulting from actual or alleged patent infringements. With respect to all other products sold by Seller, Seller shall defend any suit or proceeding brought against Buyer on a claim that such a product, or any part thereof when employed in the manner intended by Seller, infringes any U.S. patent, provided that Seller is notified promptly in writing and given all necessary information, assistance and authority to defend same. Seller shall pay all damages and costs awarded against Buyer as a result thereof. If the court finds such an infringement, and the use

of any product, in the manner intended by Seller is enjoined, Seller shall at its sole expense, at Buyer's option (a) procure for Buyer the right to continue using said product, (b) replace said product with a non-infringing product, (c) modify said product so that it becomes non-infringing or (d) remove said product and refund its purchase price and transportation and installation costs. Seller shall have no further liability for actual or alleged patent infringement except as provided herein.

15. PRODUCT WARRANTY AND DISCLAIMER

Seller warrants to Buyer, subject to the limitations, conditions and disclaimers stated herein, that all new products manufactured by Seller shall be free from defect in material and workmanship and shall deliver their rated output as indicated on the nameplates for a period of one (1) year from the date of shipment to the Buyer. Buyer must notify Seller in writing of defect or failure to deliver rated output within the applicable warranty period and give Seller the opportunity to determine that the defect or failure exists. Buyer shall, at Buyer's expense, make each allegedly defective product available for Seller's inspection at Buyer's place of business or, at Seller's option, return each such product to Seller's plant or service center as designated by Seller, freight both ways to be paid by Buyer. No products shall be returned to Seller's plant or service center except in accordance with Seller's prior written instructions. Determination of any defect is made at Seller's sole discretion and Seller's decision is final. To remedy any defect, the Seller may at its option, repair, rebuild or replace the defective component or complete product, using new or re-manufactured components or complete product. In any case the repaired, rebuilt or replaced product shall be warranted hereunder for the then non-expired portion of the original warranty period. Seller's sole obligation to Buyer, and Buyer's sole remedy against Seller, for any breach of this warranty shall be Seller's obligation to repair or replace the product as provided herein or, at Seller's option, to repay, upon return of the defective product, the price paid for such product by Buyer.

Any tampering, misuse, mis-application, and/or improper installation of the product by Buyer or Buyer's representatives may void warranty. Additionally, any service/repair work performed by any personnel not pre-authorized by Seller to perform the service/repair work voids warranty. Products sold by Seller, but not manufactured by Seller, shall be warranted as to defects in material and workmanship consistent with the warranty policy of the original manufacturer of the products. In no event shall Seller have any liability for incidental or consequential damages of any kind resulting from a breach of this warranty. THIS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY FOR MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

16. RETURNS

No products shall be returned to Seller, whether for inspection, repair, replacement or any other reason, without prior written consent from Seller's plant, sales office or representative

Revised April 12, 2018