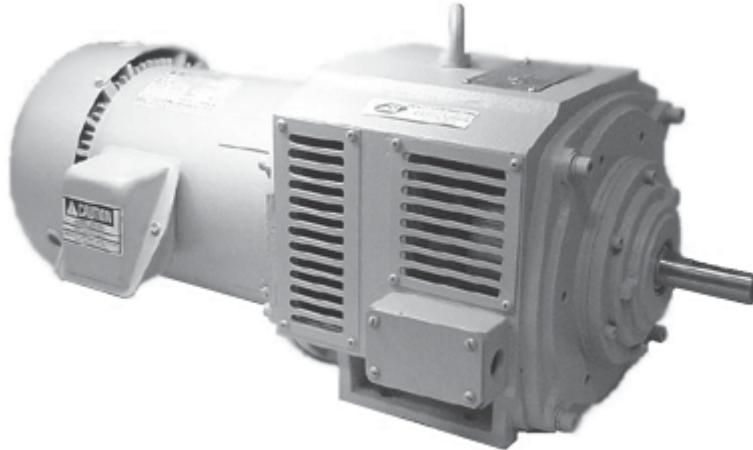


**"DCD" Ajusto-Spede® Drives
3 through 75 HP**

**MODELS DCD-132 THROUGH DCD-225 DRIVES
Drive Information**



Description

Dynumatic® Model DCD Drives is a combination of an air-cooled, adjustable speed clutch and a flange mounted AC induction motor. Simple low cost dependability. Interchangeable with Models TCD and CD. Consult factory for more details. The DCD Drive transmits torque at variable speeds. There is no physical contact between input and output members. This results in smooth response, thereby eliminating shock loading and extending equipment life. All

drives have an integral tachometer generator mounted around the output shaft to provide a feedback signal to the drive's controller. The controller provides the DC excitation for the clutch coil. The feedback signal from the tachometer generator is used as a reference signal within the controller to maintain accurate speed regulation. The controllers for the drives are described starting on Page 72 of this catalog.

Features	Customer Benefits
Simple, rugged, reliable.	Long life cycle.
Operates in hostile environments.	Lower maintenance costs.
No routine maintenance.	Worry free operation.
New improved torque tube.	High torque output.
Two-year warranty on DCD mechanical units.	Lower operating costs.
Aggregate/asphalt duty.	Dependable and reliable.
Self-cleaning rotor.	Dirt/dust free operation.
Standard design.	Replacements for competition.
Interchangeable parts.	Parts cost less, directly interchangeable with competition.

"DCD" Ajusto-Spede® Drives 3 through 75 HP

Specifications for DCD-132 Through DCD-225 Drives

Motor	HP and RPM Totally Enclosed Fan Cooled (TEFC) NEMA Design B Class F insulation, Class B rise 1.15 service factor ***Input power - see note below Two-year warranty	See selection table – page 51 Standard Standard Standard Standard 208/220 through 380V, 3 phase, 50 Hz 230 through 460V, 3 phase, 60 Hz 575V, 3 phase, 60 Hz Standard
Clutch	Stationary coil Coil voltages Rated for constant torque Starting torque Intermittent torque AC tachometer generator Cooling Two-year warranty	Standard 90 VDC - Standard; 45 VDC - Optional Standard Approximately 250% Approximately 250% Standard 100% self ventilated Standard
Controllers (Sold Separately)	Model DSI-700, EC-2000 and PDC-2000 Closed loop speed control Speed regulation Regulated speed range Input power Enclosure Panel mount, open construction Output voltage, to clutch coil One-year warranty	Can be used with DCD-132 through DCD-225 Standard 0.5% Standard; 0.1% Optional (EC-2000 only) 34 to 1 available Line transformer (sold separately) - motor winding transformer not available NEMA 1 - Standard; NEMA 12 - Optional Optional 90 VDC Standard
Status Indication	Speed indicating signal	0-60 VAC from tachometer generator for optional meter
Environmental Ratings	Storage temperature Operating temperature Maximum operating temperature Altitude	-20° to 65° C (-4° to 149° F) Standard 0° to 40° C (32° to 104° F) Standard 65° C (De-rating required) 1000 m (3300 Ft.) Standard
Codes and Standards	Mechanical NEMA, as applicable Mechanical CSA Controllers CSA	Standard Approved Approved
Reliability Testing	Mechanical 100% dynamometer tested Controllers Pre-tested components Computer test and pre-calibrated PCBs	Standard Standard Standard

*****NOTE: New factory standards for motor input power, two (2) options available:**

- 1) 208/220 through 380 VAC, 3 phase, 50 Hz.; 230 through 460 VAC, 3 phase, 60 Hz.
- 2) 575 VAC, 3 phase, 60 Hz.

**"DCD" Ajusto-Spede® Drives
3 through 75 HP**

Ordering Information

The simple low cost Model DCD drive includes a TEFC AC induction motor, with 230 through 460 VAC, 3 phase, 60 Hz., 208/220 through 380 VAC, 3 phase, 50 Hz. or 575 VAC, 3 phase, 60 Hz. input. The C-face motor is flange mounted to the maintenance free eddy-current coupling. The DCD Drive can produce up to 300% starting torque and can operate with several Dynumatic® speed controllers. The DCD Models are interchangeable with higher priced TCD, or CD models. Contact the factory for more details.

A controller is required, but not included. A Drive/Controller Compatibility and Selection Chart can be found starting on Page 70. Controllers and modifications can be found starting on Page 72. Operator stations can be found starting on Page 117.

Selection Table - 60 Hz

HP	Speed Range (RPM)	Model Number	Motor Frame Size	Poles	Torque (Lb. Ft.)
3	0-1630	DCD-132030-4141	182TC	4	9.2
5	0-1500	DCD-132050-4141	184TC	4	15.0
5	0-3300	DCD-132050-4121	184TC	2	7.5
7.5	0-3300	DCD-132075-4121	213TC	2	11.3
10	0-3250	DCD-132100-4121	215TC	2	15.3
7.5	0-1630	DCD-160075-4141	213TC	4	22.5
10	0-1580	DCD-160100-4141	215TC	4	30.0
15	340-1550	DCD-160150-4141	254TC	4	45.0
15	0-3300	DCD-160150-4121	254TC	2	22.5
20	0-3250	DCD-160200-4121	256TC	2	30.3
25	640-3250	DCD-160250-4121	284TSC	2	37.8
15	0-1655	DCD-180150-4141	254TC	4	45.0
20	145-1615	DCD-180200-4141	256TC	4	60.0
25	450-1600	DCD-180250-4141	284TC	4	75.5
25	0-3350	DCD-180250-4121	284TSC	2	37.6
30	660-1545	DCD-180300-4141	286TC	4	90.0
30	0-3350	DCD-180300-4121	286TSC	2	45.0
30	0-1655	DCD-225300-4141	286TC	4	90.1
40	300-1635	DCD-225400-4141	324TC	4	120.4
50	690-1625	DCD-225500-4141	326TC	4	150.9
60	782-1545	DCD-225600-4141	364TC	4	180.0
75	1050-1515	DCD-225750-4141	365TC	4	212.0

*****Consult Factory for Options and competition comparison chart.**

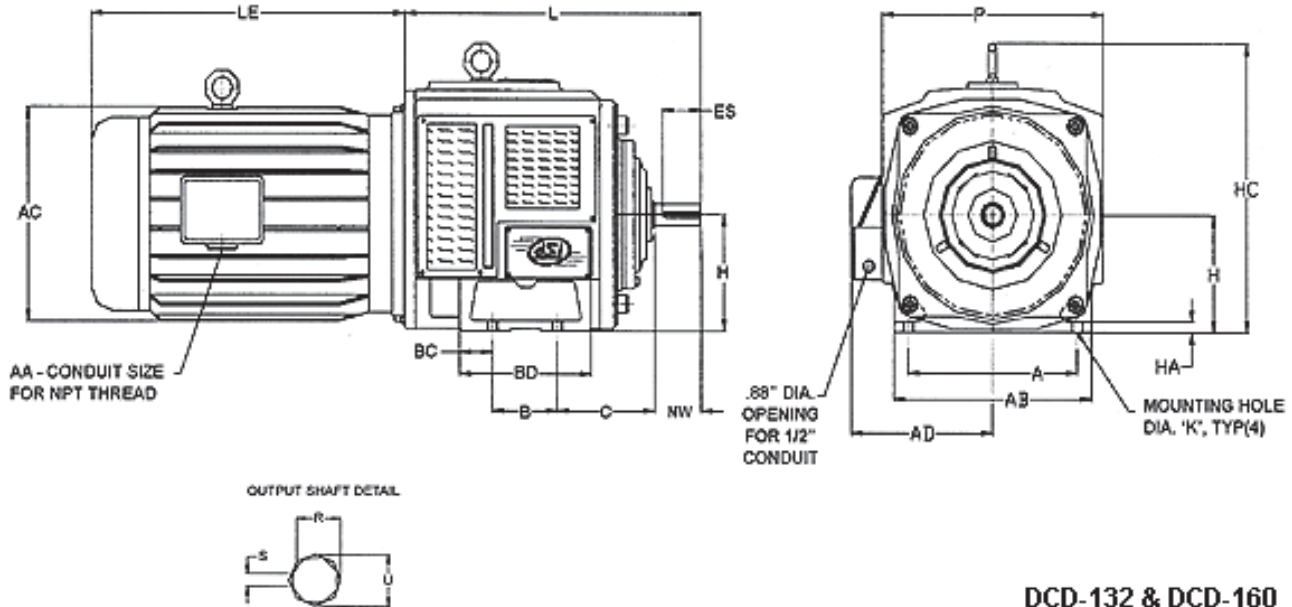
"DCD" Ajusto-Spede® Drives
3 through 75 HP

DCD Technical Data

Model Number	Motor Power HP	Poles	Speed Range RPM	Clutch Volts DC	Clutch <u>OHMS@</u> 20 DEG C	Clutch AMPS Hot	Clutch HP Disp.
DCD-132030-4141	3	4	1630-0	90	27	2.2	3
DCD-132050-4141	5	4	1500-0	90	22	2.7	5
DCD-132050-4121	5	2	3300-0	90	27	2.2	5
DCD-132075-4121	7.5	2	3300-0	90	22	2.7	7.5
DCD-132100-4121	10	2	3250-0	90	22	2.7	10
DCD-160075-4141	7.5	4	1630-0	90	19.5	3.3	7.5
DCD-160100-4141	10	4	1580-0	90	19.5	3.3	10
DCD-160150-4141	15	4	1550-340	90	19	3.4	11.9
DCD-160150-4121	15	2	3300-0	90	19.5	3.3	15
DCD-160200-4121	20	2	3250-0	90	19.5	3.3	20
DCD-160250-4121	25	2	3250-640	90	19	3.4	20.5
DCD-180150-4141	15	4	1655-0	90	26	2.5	15
DCD-180200-4141	20	4	1615-145	90	26	2.5	18
DCD-180250-4141	25	4	1600-450	90	21	3	18
DCD-180300-4141	30	4	1545-660	90	21	3	18
DCD-180250-4121	25	2	3350-0	90	26	2.5	25
DCD-180300-4121	30	2	3350-0	90	26	2.5	30
DCD-180400-4121	40	2	3350-800	90	21	3	30
DCD-180500-4121	50	2	3350-1330	90	21	3	30
DCD-225300-4141	30	4	1655-0	90	22	3	30
DCD-225400-4141	40	4	1635-300	90	20	4.5	33
DCD-225500-4141	50	4	1625-690	90	20	4.5	33
DCD-225600-4141	60	4	1545-782	135	20	6.75	33
DCD-225750-4141	75	4	1515-1050	135	20	6.75	33

**"DCD" Ajusto-Spede® Drives
3 through 75 HP**

Outline Drawings – DCD-132 & DCD-160



DCD-132 & DCD-160

Model	Poles	Max Speed (RPM)	Motor Power (HP)	Wt. Lbs.	Overall & Mounting Dimensions												
					A	B	C	H	K	AB	AD	BD	BC	HA	HC	L	L⌀
DCD-132	4	1630-0	3	232	8.50	3.15	4.84	5.20	.50	10.63	6.90	6.25	1.50	.56	13.00	14.7	14.7
	4	1500-0	5	247													
	2	3300-0	5	249													
	2	3300-0	7.5	286													
	2	3250-0	10	300													
DCD-160	4	1630-0	7.5	475	10.0	3.935	3.86	6.299	.59	12.80	8.55	11.03	5.14	.55	15.00	17.2	21.26
	4	1580-0	10	498													
	4	1550-340	15	590													
	2	3300-0	15	582													
	2	3250-0	20	625													
	2	3250-640	25	760													

Model	Hp	Frame	AC	LE**	AA	2E	2F	KK
DCD-132	3	182TC	8.8	14.95	.75	--	--	--
	5	184TC	8.8	14.95	.75	--	--	--
	7.5	213TC	10.25	17.12	1.00	--	--	--
	10	215TC	10.25	17.12	1.00	--	--	--
DCD-160	7.5	213TC	10.25	17.12	1.00	8.50	5.50	.41
	10	215TC	10.25	17.12	1.00	8.50	7.00	.41
	15	254TC	12.70	22.60	1.25	10.00	8.25	.53
	20	256TC	12.70	22.60	1.25	10.00	10.00	.53
	25	284TC	14.50	24.75	1.25	11.00	9.50	.53

Output Shaft Data					
Model	ES	NW	U	S	R
DCD-132	1.75	2.75	1.125	.25	.987
DCD-160	2.375	3.375	1.375	.3125	1.201

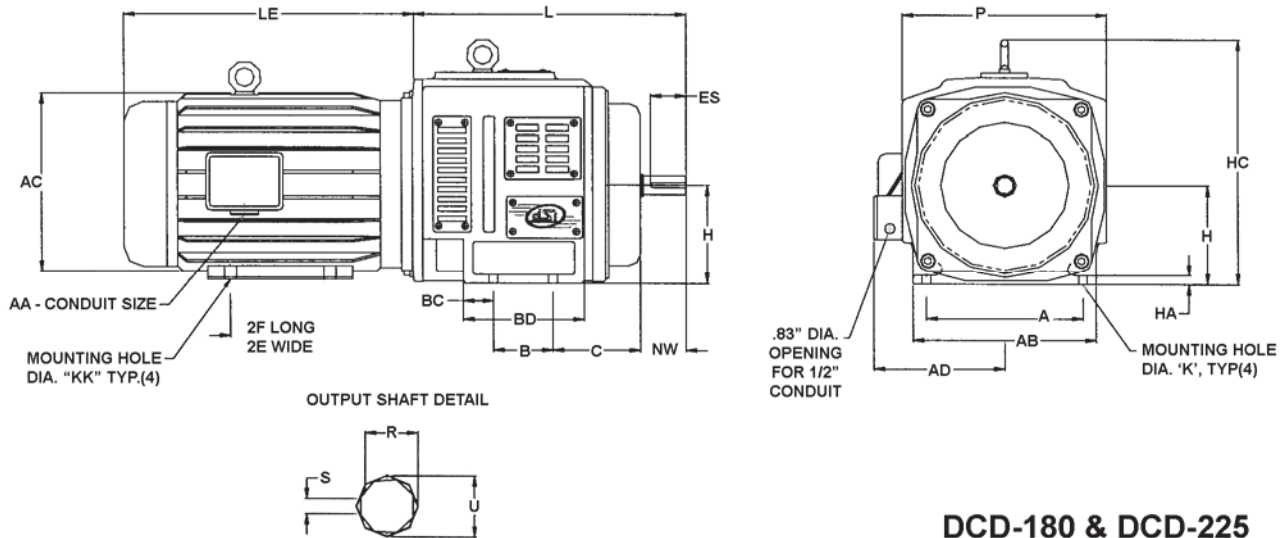
Notes:

Terminal box mounting is optional on right or left side.
 Totally enclosed covers are available for several models.
 Alternate flanges are available for basic and freestanding models (see page 55).
 Weight is approximate and includes motor.
 ● Dimension includes flange (see page 55)
 ** LE Dimension Listed is guaranteed Maximum. Motor may be shorter.

DIMENSIONS ARE IN INCHES

"DCD" Ajusto-Spede® Drives
3 through 75 HP

Outline Drawings – DCD-180 & DCD-225



DCD-180 & DCD-225

Model	Poles	Max Speed (RPM)	HP	Wt. Lbs.	Overall & Mounting Dimensions												
					A	B	C	H	K	AB	AD	BC	BD	HA	HC	L	LⓁ
DCD-180	4	1655-0	15	670	11.00	4.72	4.06	7.087	.59	15.4	10.2	2.05	8.98	.87	14.4	19.3	23.4
	4	1615-145	20	722							10.2			.87	15.75		
	4	1600-450	25	900							11.1			.87	15.75		
	4	1545-660	30	916							11.1			.87	15.75		
	2	3350-0	25	828							11.1			.87	14.4		
	2	3350-0	30	844							11.8			1.65	14.4		
	2	3350-800	40	870							11.8			1.65	14.4		
	2	3350-1330	50	1010							11.8			1.65	14.4		
DCD-225	4	1655-0	30	1470	14.02	7.28	7.28	8.86	.72	18.90	16.02	2.44	12.16	1.97	19.00	27.2	27.2
	4	1635-300	40	1585						18.90	16.02			1.97			
	4	1625-690	50	1672						18.90	16.54			3.15			
	4	1545-782	60	1860						19.00	11.10			.98			
	4	1515-1050	75	2030						19.00	11.81			.98			

Model	HP	Frame	AC	LE**	AA	2E	2F	KK
DCD-180	15	254TC	13.0	22.6	1.25	10.00	8.27	.6
	20	256TC	13.0	22.6	1.25	10.00	10.0	.6
	25	284TC	14.72	24.88	1.50	11.00	11.0	.6
	30	286TC	14.72	24.88	1.50	11.00	11.0	.6
	25	284TC	13.0	24.75	1.50	11.16	9.50	.6
	30	286TC	11.8	24.75	2.00	12.50	12.0	.75
	40	324TC	11.8	26.25	2.00	12.50	12.0	.75
	50	326TC	11.8	26.25	2.00	12.50	12.0	.75
DCD-225	30	286TC	14.72	24.88	1.5	11.00	11.00	.71
	40	324TC	16.61	26.25	2.0	12.52	12.00	.71
	50	326TC	18.66	26.25	2.0	14.00	11.26	.71
	60	364TC	18.66	30.35	2.0	14.00	12.24	.71
	75	365TC	21.00	30.35	2.0	16.00	12.24	.71

Output Shaft Data					
Model	ES	NW	U	S	R
DCD-180	3.25	4.33	1.875	.500	1.591
DCD-225	4.33	5.875	2.375	.625	2.021

Notes:

Terminal box mounting is optional on right or left side.

Totally enclosed covers are available for several models.

Alternate flanges are available for basic and freestanding models (see page 55).

Weight is approximate and includes motor.

Ⓛ Dimension includes flange (see page 55).

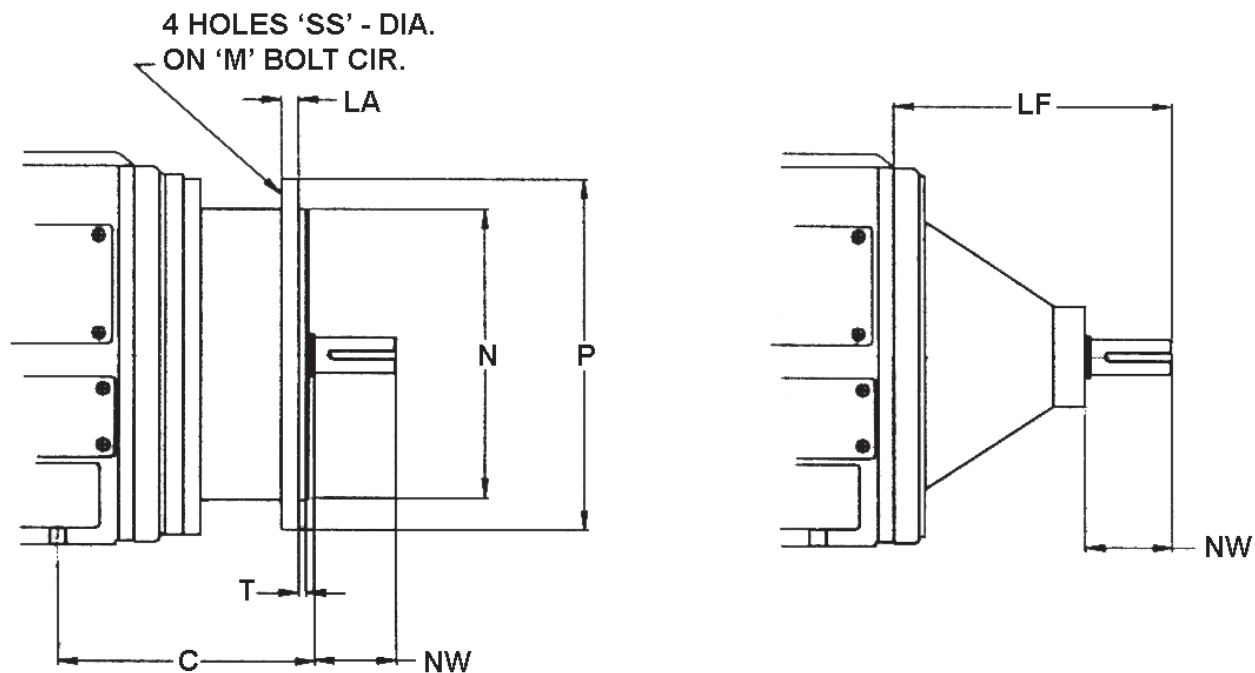
** LE Dimension Listed is guaranteed Maximum.

Motor may be shorter.

DIMENSIONS ARE IN INCHES

**"DCD" Ajusto-Spede® Drives
3 through 75 HP**

Alternate Flange Outline Dimensions



Model	C	LA	LF	M	N	P	T	NW	SS
DCD-132	4.84	.74	7.4	6.10	8.46	9.84	.16	2.75	.6
DCD-160	7.87	.63	8.74	10.43	9.06	14.0	.16	3.375	.6
DCD-180	8.18	.63	9.53	11.81	9.842	13.8	.2	4.33	.75
DCD-225	7.28	.98	13.96	13.78	11.81	18.5	.20	5.875	.75

DIMENSIONS ARE IN INCHES

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, 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 two year from the date of shipment to the Buyer, except certain specific products as otherwise noted in the product literature.

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.

To remedy the defect, the Seller may at its option, repair, rebuild or replace the defective component or complete product, using new or remanufactured 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.

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.