

# Extruder Drives

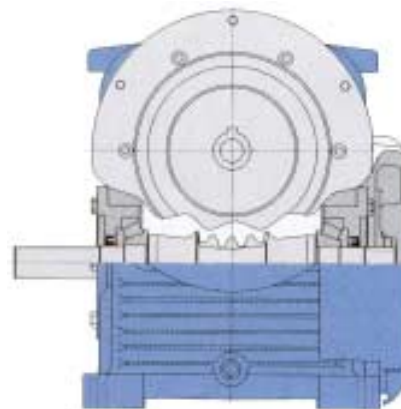
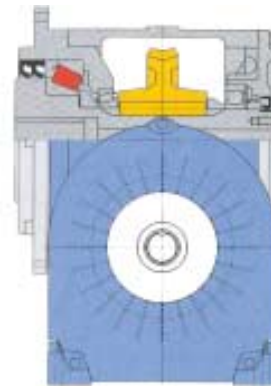
## *Reducer Units for Main Extruders & Co-Extruders*

The exceptional performance, rugged reliability, and compact size of the Extruder Drive reducer unit makes this your best choice for long life and low maintenance.

Our Extruder Drives are designed for screw pressures up to 10,000 PSI. The thrust bearing on the output shaft will provide capacity to take the screw thrust directly without additional external bearings. This convenient thrust arrangement is integrally mounted within the reducer unit to produce a rugged, compact drive package for all your extruder requirements.

### ***Important features of this design:***

- Rigid thrust housing
- Tapered roller thrust bearings
- Rigid input shafts and large bearings permit primary sheaves to be mounted directly, without external support
- Dual output shaft oil seals for severe continuous duty applications
- Motor mounting adaptors for direct mounting of standard C-face motors
- Drive can be mounted in any attitude from horizontal to vertical output; input can be horizontal, under, over, or vertical
- Gearset ratios from 5:1 to 70:1
- Water or fan cooling options available

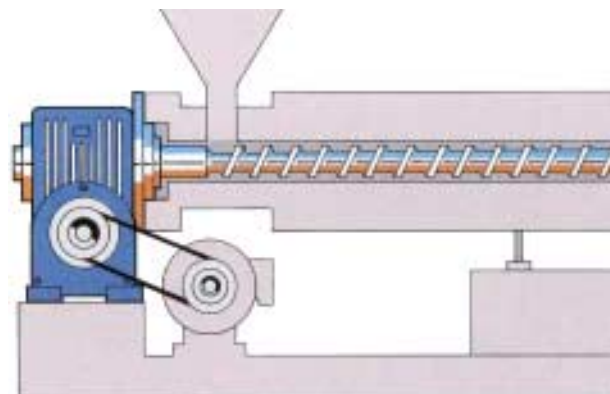


### ***FREE Extruder Drive***

### ***APPLICATION ASSISTANCE***

To ensure optimum performance, our Application Engineers can help you design the ideal reducer unit for your main extrusion or co-extrusion application. We're available to further discuss the Extruder Drive design characteristics and help with specifying screw pressure, ratios, and speeds. Call and tell us about your challenging application.

***Call Us Toll Free at 888-994-2663***



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**Extruder Drive Selection Table**

Screw Size (inches)	Screw Pressure (P.S.I.)	Screw Thrust (pounds)	Reducer Size	Reducer Ctr Distance (inches)	L10 Bearing Life (100 RPM output) (hours)
1"	5000	3930	35	3.5	725000
	7500	5890	35	3.5	188000
	10000	7850	35	3.5	72450
1 1/4"	5000	6135	35	3.5	164630
	7500	9200	40	4.0	182850
	10000	12270	40	4.0	70090
1 1/2"	5000	8840	40	4.0	208880
	7500	13250	40	4.0	54270
	10000	17670	50	5.0	40000
1 3/4"	5000	12030	40	4.0	75000
	7500	18040	60	6.0	120000
	10000	24050	60	6.0	46070
2"	5000	15700	50	5.0	59060
	7500	23560	60	6.0	49360
	10000	31400	70	7.0	83000
2 1/2"	5000	24540	70	7.0	188600
	7500	36800	70	7.0	48900
	10000	49090	80	8.0	39500
3"	5000	35340	70	7.0	64780
	7500	53010	100	10.0	53080
	10000	70686	120	12.0	247090
3 1/2"	5000	48100	100	10.0	73370
	7500	72160	120	12.0	230670
	10000	96210	120	12.0	88512
4"	5000	62830	120	12.0	365790
	7500	94250	120	12.0	94790
	10000	125660	120	12.0	36370
4 1/2"	5000	79520	120	12.0	166930
	7500	119280	120	12.0	43270

Note Bearing life calculated based on 100 RPM of thrust bearing using Timken L10 formula.

For reducer mechanical and thermal ratings, ratio availability, fan and water cooling options- consult the Cone Drive catalog and our application engineering group.

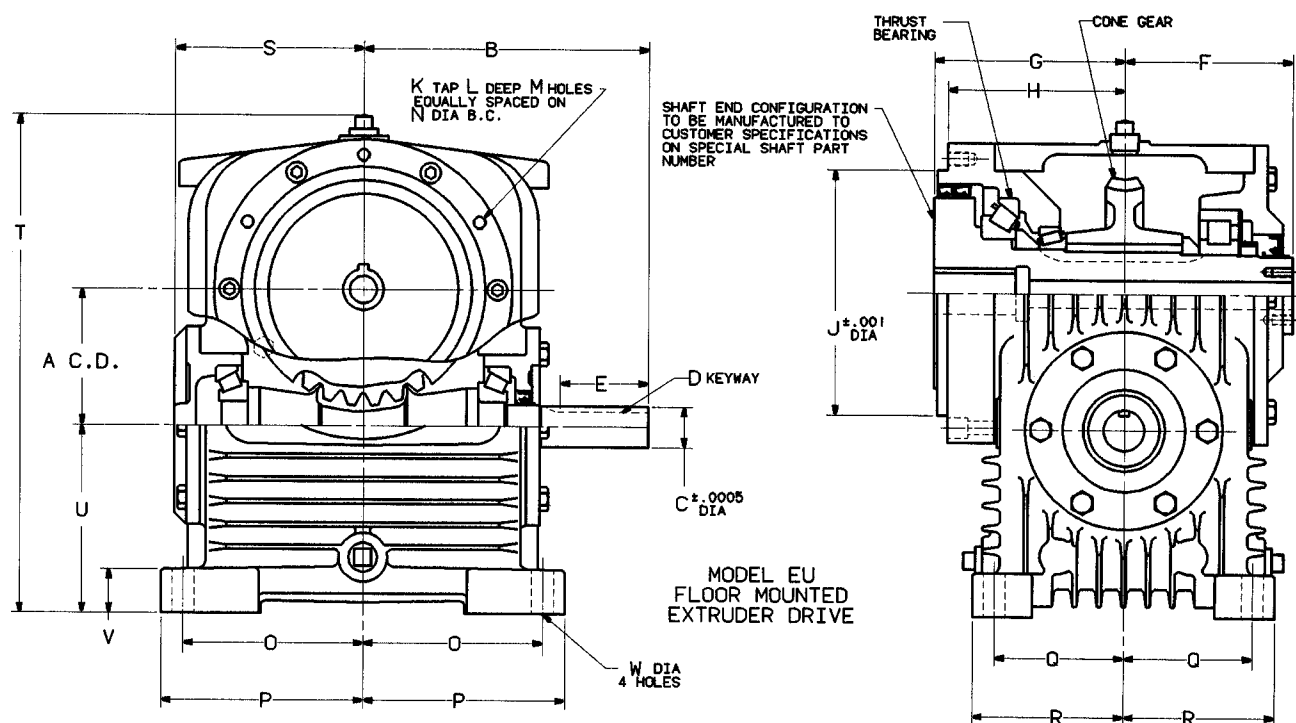
Cone Drive's double-enveloping worm gear speed reducer, with a heavy duty thrust bearing, is perfectly suited to the rugged requirements of extruder service. The double-enveloping design provides more tooth area contact and more teeth in mesh than other worm gear designs. Multi-tooth contact produces lower stress levels in the mesh area, resulting in increased durability, higher load capacity and longer gear life.

### Selection procedure

Based on your screw size and your screw pressure, select the appropriate reducer size from the extruder drive selection table. The calculated L10 bearing life based on 100 RPM output is also shown for your review. With this size selection refer to our standard catalog, section 2, and select the ratio and hand of assembly required. All standard and special ratios can be provided in the extruder drive reducer. The selected reducer size must have a thermal horsepower rating equal to or greater than the motor horsepower and provide a 1.3 service factor based on the mechanical horsepower rating. Fan cooling, water cooling and motor adapter options are available as may be required. The reducer model can be selected from page 4, 5 and 6 of this catalog supplement. All other required ordering information follows the same procedure as standard Cone Drive reducers.

(See section 1 of Cone Drive catalog.)

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The model EU is arranged for foot mounting with the output shaft above the input shaft. Slope mounting arrangements can be provided as required.

All models can be arranged for mounting at any angle from horizontal to vertical and can be used

with belt input, constant speed or variable speed arrangements. All models can be provided with standard "C" face motor adapter and coupling for direct drive.

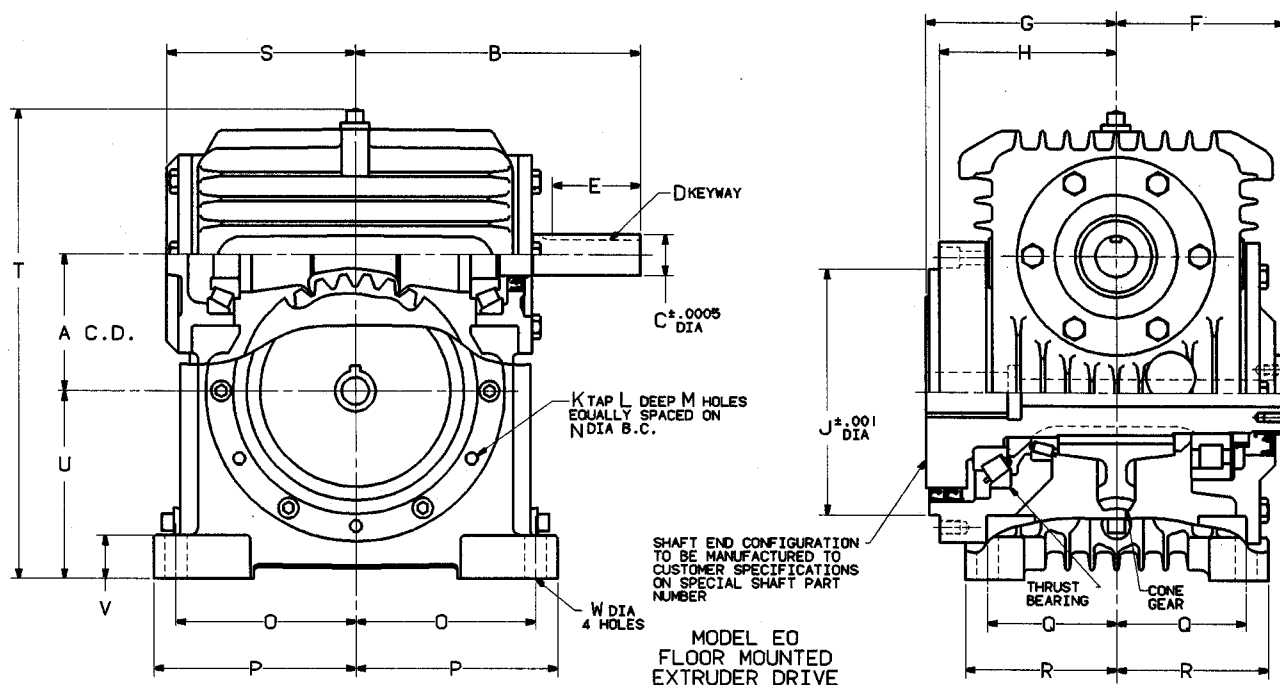
For standard and special ratios, refer to Cone Drive Catalog.

### Dimensional Table

MODEL	"A" C.D.	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"J"	"K"	"L"
EU35	3.500	7.75	1.1870	1/4 X 1/8	2.62	4.89	5.25	4.75	6.248	3/8-24	.56
EU40	4.000	9.31	1.4995	3/8 X 3/16	3.00	5.19	6.62	6.12	7.248	3/8-24	.56
EU50	5.000	10.50	1.4995	3/8 X 3/16	3.25	6.19	7.75	7.25	8.998	1/2-20	.75
EU60	6.000	11.75	1.7495	3/8 X 3/16	4.00	7.00	8.25	7.75	9.998	1/2-20	.75
EU70	7.000	14.50	1.8745	1/2 X 1/4	4.50	7.50	10.00	9.50	12.498	5/8-11	1.00
EU80	8.000	15.50	1.9995	1/2 X 1/4	4.75	8.62	10.00	9.50	13.998	5/8-11	1.00
EU100	10.000	19.25	2.3745	3/4 X 3/8	5.00	9.75	10.88	10.38	17.498	5/8-11	1.00

MODEL	"M"	"N"	"O"	"P"	"Q"	"R"	"S"	"T"	"U"	"V"	"W"
EU35	6	7.250	4.88	5.5	3.75	4.4	5.2	14.6	5.375	1.2	9/16
EU40	6	8.000	5.56	6.33	4.25	5.0	6.1	15.5	6.000	1.4	11/16
EU50	6	9.875	6.62	7.45	4.75	5.6	7.0	18.1	6.875	1.6	13/16
EU60	6	11.375	7.12	7.95	5.62	6.45	7.6	20.9	7.750	1.8	13/16
EU70	6	13.750	8.50	9.5	6.62	7.7	9.4	24.4	9.000	2.1	15/16
EU80	8	15.750	9.88	10.8	7.38	8.4	10.8	27.0	10.000	2.12	15/16
EU100	12	19.125	12.62	13.8	8.38	9.6	14.5	34.6	12.000	2.25	1 1/16

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The model EO is arranged for foot mounting with the output shaft below the input shaft. Wall or slope mounting arrangements can be provided as required.

All models can be arranged for mounting at any angle from horizontal to vertical and can be used

with belt input. constant speed or variable speed arrangements. All models can be provided with standard "C" face motor adapter and coupling for direct drive.

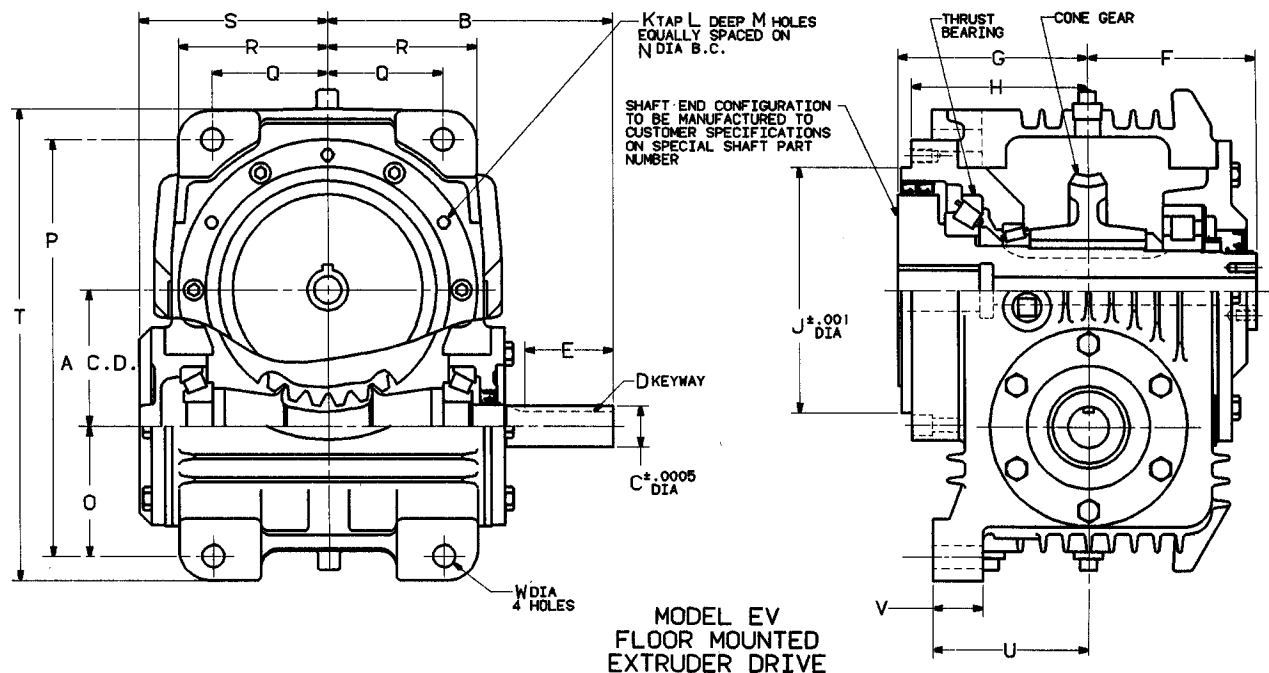
For standard and special ratios, refer to Cone Drive Catalog.

### Dimensional Table

MODEL	"A" C.D.	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"J"	"K"	"L"
EO35	3.500	7.75	1.1870	1/4 X 1/8	2.62	4.89	5.25	4.75	6.248	3/8-24	.56
EO40	4.000	9.31	1.4995	3/8 X 3/16	3.00	5.19	6.62	6.12	7.248	3/8-24	.56
EO50	5.000	10.50	1.4995	3/8 X 3/16	3.25	6.19	7.75	7.25	8.998	1/2-20	.75
EO60	6.000	11.75	1.7495	3/8 X 3/16	4.00	7.00	8.25	7.75	9.998	1/2-20	.75
EO70	7.000	14.50	1.8745	1/2 X 1/4	4.50	7.50	10.00	9.50	12.498	5/8-11	1.00
EO80	8.000	15.50	1.9995	1/2 X 1/4	4.75	8.62	10.00	9.50	13.998	5/8-11	1.00
EO100	10.000	19.25	2.3745	3/4 X 3/8	5.00	9.75	10.88	10.38	17.498	5/8-11	1.00

MODEL	"M"	"N"	"O"	"P"	"Q"	"R"	"S"	"T"	"U"	"V"	"W"
EO35	6	7.250	4.88	5.5	3.75	4.4	5.2	13.1	5.375	1.2	9/16
EO40	6	8.000	5.56	6.33	4.25	5.0	6.1	14.7	6.000	1.4	11/16
EO50	6	9.875	6.62	7.45	4.75	5.6	7.0	17.2	6.875	1.6	13/16
EO60	6	11.375	7.12	7.95	5.62	6.45	7.6	19.4	7.750	1.8	13/16
EO70	6	13.750	8.50	9.5	6.62	7.7	9.4	23.0	9.000	2.1	15/16
EO80	8	15.750	9.88	10.8	7.38	8.4	10.8	24.6	10.000	2.12	15/16
EO100	12	19.125	12.62	13.8	8.38	9.6	14.5	29.8	12.000	2.25	1 1/16

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The model EV is arranged for input shaft horizontal and output shaft vertical when floor mounted. This housing configuration is exceptionally well suited to wall or slope mounting.

All models can be arranged for mounting at any angle from horizontal to vertical and can be used

with belt input, constant speed or variable speed arrangements. All models can be provided with standard "C" face motor adapter and coupling for direct drive.

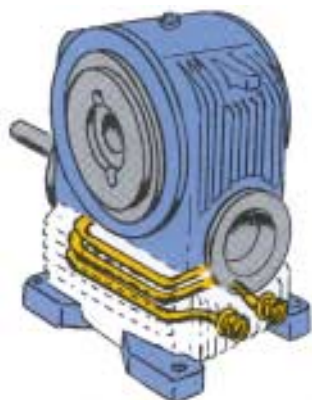
For standard and special ratios, refer to Cone Drive Catalog.

### Dimensional Table

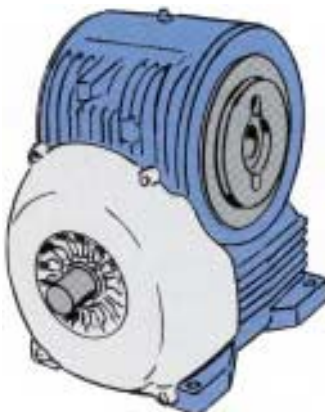
MODEL	"A" C.D.	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"J"	"K"	"L"
EV35	3.500	7.75	1.1870	1/4 X 1/8	2.62	4.89	5.25	4.75	6.248	3/8-24	.56
EV40	4.000	9.31	1.4995	3/8 X 3/16	3.00	5.19	6.62	6.12	7.248	3/8-24	.56
EV50	5.000	10.50	1.4995	3/8 X 3/16	3.25	6.19	7.75	7.25	8.998	1/2-20	.75
EV60	6.000	11.75	1.7495	3/8 X 3/16	4.00	7.00	8.25	7.75	9.998	1/2-20	.75
EV70	7.000	14.50	1.8745	1/2 X 1/4	4.50	7.50	10.00	9.50	12.498	5/8-11	1.00
EV80	8.000	15.50	1.9995	1/2 X 1/4	4.75	8.62	10.00	9.50	13.998	5/8-11	1.00
EV100	10.000	19.25	2.3745	3/4 X 3/8	5.00	9.75	10.88	10.38	17.498	5/8-11	1.00

MODEL	"M"	"N"	"O"	"P"	"Q"	"R"	"S"	"T"	"U"	"V"	"W"
EV35	6	7.250	3.25	11.31	3.25	4.0	5.2	12.7	4.625	1.3	9/16
EV40	6	8.000	4.25	13.50	4.25	5.0	6.1	15.0	5.000	1.6	11/16
EV50	6	9.875	4.75	15.25	4.25	5.5	7.0	17.25	5.750	1.86	13/16
EV60	6	11.375	5.50	17.38	4.88	6.4	7.6	19.9	6.625	2.12	13/16
EV70	6	13.750	6.62	20.62	6.12	8.0	9.4	23.3	7.375	2.4	15/16
EV80	8	15.750	5.56	21.00	7.00	8.9	10.8	24.3	8.375	2.8	15/16
EV100	12	19.125	6.81	27.06	8.50	10.8	14.5	29.9	9.500	2.8	1 1/16

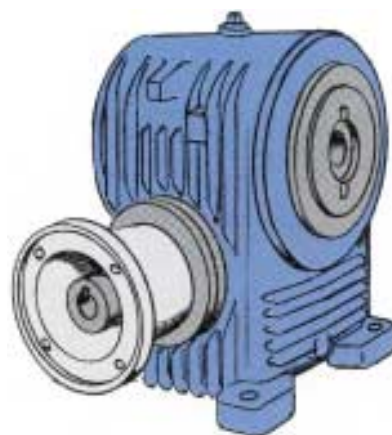
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Water Cooling



Fan Cooling



Reducer with Motor Adaptor

### **Water and Fan Cooling**

Reducer thermal capacity can be increased by the addition of water cooling coils or with a fan attachment option. Cone Drive water or fan cooled units are extremely compact requiring no more space than non-cooled units of the same center distance. Please contact our application engineering group or your nearest representative for selection assistance.

### **Lubricants**

Lubricating oils for use in Cone Drive Double Enveloping worm gear reducers must be selected from Cone Drive's approved list of lubricants. An oil level tag and plug are provided at proper location to suit the specified mounting position and the name tag indicates the type of oil to be selected from the list. These approved lubricants are acceptable for an ambient temperature range of 15 to 100 degrees F. If ambient temperatures above 100 are anticipated, please contact Cone Drive for specific

### **Motor Adaptor**

A motor adaptor is available for direct mounting of NEMA "C" face motors. Refer to Cone Drive catalog section 2 for details or contact our application engineering group for assistance (see back page for factory direct address and telephone number).

recommendations.

Cone Drive includes an Approved Lubricants List with each reducer. This document lists products and manufacturers which meet the American Gear Manufacturers Association (AGMA) standards for no.7, 8, and 8A compounds. All units are shipped from the factory without oil.

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## IMPORTANT

**General** - The following information is important in ensuring safety. It **must** be brought to the attention of personnel involved in the selection of Textron Power Transmission equipment, those responsible for the design of the machinery in which it is to be incorporated and those involved in its installation, use and maintenance.

Textron Power Transmission equipment will operate safely provided it is selected, installed, used and maintained properly. As with any power transmission equipment **proper precautions must** be taken as indicated in the following paragraphs, to ensure safety.

**Potential Hazards** - these are **not** necessarily listed in any order of severity as the degree of danger varies in individual circumstances. It is important therefore that the list is studied in its entirety:

- 1) Fire/Explosion
  - (a) Oil mists and vapor are generated within gear units. It is therefore dangerous to use naked lights in the proximity of gearbox openings, due to the risk of fire or explosion.
  - (b) In the event of fire or serious overheating (over 570 °F (300°C)), certain materials (rubber, plastics, etc.) may decompose and produce fumes. Care should be taken to avoid exposure to the fumes, and the remains of burned or overheated plastic/rubber materials should be handled with rubbergloves.
- 2) Guards - Rotating shafts and couplings must be guarded to eliminate the possibility of physical contact or entanglement of clothing. It should be of rigid construction and firmly secured.
- 3) Noise - High speed gearboxes and gearbox driven machinery may produce noise levels which are damaging to the hearing with prolonged exposure. Ear plugs should be provided for personnel in these circumstances. Reference should be made to state and federal regulations for reducing exposure of employed persons to noise.
- 4) Lifting - Where provided (on larger units) only the lifting points or eyebolts must be used for lifting operations (see maintenance manual or general arrangement drawing for lifting point positions). Failure to use the lifting points provided may result in personal injury and/or damage to the product or surrounding equipment. Keep clear of raised equipment.
- 5) Lubricants and Lubrication
  - (a) Prolonged contact with lubricants can be detrimental to the skin. The manufacturer's instruction must be followed when handling lubricants.
  - (b) The lubrication status of the equipment must be checked before commissioning. Read and carry out all instructions on the lubricant plate and in the installation and maintenance literature. Heed all warning tags. Failure to do so could result in mechanical damage and in extreme cases risk of injury to personnel.
- 6) Electrical Equipment - Observe hazard warnings on electrical equipment and isolate power before working on the gearbox or associated equipment, in order to prevent the machinery being started.
- 7) Installation, Maintenance and Storage
  - (a) In the event that equipment is to be held in storage, for a period exceeding 6 months, prior to installation or commissioning, Textron must be consulted regarding special preservation requirements. Unless otherwise agreed, equipment must be stored in a building protected from extremes of temperature and humidity to prevent deterioration.

The rotating components (gears and shafts) must be turned a few revolutions once a month (to prevent bearings brinelling).

- (b) External gearbox components may be supplied with preservative materials applied, in the form of a "waxed" tape overwrap or wax film preservative. Gloves should be worn when removing these materials. The former can be removed manually, the latter using white spirit as a solvent.

Preservatives applied to the internal parts of the gear units do not require removal prior to operation.
- (c) Installation must be performed in accordance with the manufacturer's instructions and be undertaken by suitably qualified personnel.
- (d) Before working on a gearbox or associated equipment, ensure that the load has been removed from the system to eliminate the possibility of any movement of the machinery and isolate power supply. Where necessary, provide mechanical means to ensure the machinery cannot move or rotate. Ensure removal of such devices after work is complete.
- (e) Ensure the proper maintenance of gearboxes in operation. Use only the correct tools and Textron approved spare parts for repair and maintenance. Consult the Maintenance Manual before dismantling or performing maintenance work.
- 8) Hot Surfaces and Lubricants
  - (a) During operation, gear units may become sufficiently hot to cause skin burns. Care must be taken to avoid accidental contact.
  - (b) After extended running the lubricant in gear units and lubrication systems may reach temperatures sufficient to cause burns. Allow equipment to cool before servicing or performing adjustments.
- 9) Selection and Design
  - (a) Where gear units provide a backstop facility, ensure that back-up systems are provided if failure of the backstop device would endanger personnel or result in damage.
  - (b) The driving and driven equipment must be correctly selected to ensure that the complete machinery installation will perform satisfactorily, avoiding system critical speeds, system torsional vibration, etc.
  - (c) The equipment must not be operated in an environment or at speeds, powers, torques or with external loads beyond those for which it was designed.
  - (d) As improvements in design are being made continually the contents of this catalog are not to be regarded as binding in detail, and drawings and capacities are subject to alterations without notice.

The above guidance is based on the current state of knowledge and our best assessment of the potential hazards in the operation of the gear units.

# Extruder Drives

## STANDARD CONDITIONS OF SALE

## FOR ALL PRODUCTS

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### Applicable to All Orders and Quotations

#### APPLICABILITY

These Standard Conditions of Sale shall apply to all quotations issued and orders accepted by Cone Drive Operations, Inc. (the "Company"), and shall take precedence over any terms and conditions set forth in any purchase order or other communication issued by the purchaser. The Company's failure to object to provisions in such purchase orders or communications shall not be deemed a waiver of these Conditions of Sale or acceptance of such provisions. These Conditions of Sale may not be modified except in writing by an authorized representative of the company.

#### PRICE POLICY

#### QUOTATIONS

Written quotations are valid for 30 days including the date of quotation unless otherwise stated in writing. Verbal quotations are valid only on the day in which they are made. Stenographic and clerical errors are subject to correction. Prices shown in published price lists or other literature are not offers to sell by the Company and are subject to confirmation by specific quotations. All price lists and discounts are subject to change without notice.

#### ORDERS

All orders are received subject to acceptance by the Company. All orders must be bona fide commitments showing complete description of equipment, quantity, price and shipping dates required by the purchaser. Shipping dates are subject to final confirmation or change by the Company and are based on prompt receipt of all necessary information regarding the order. Stenographic and clerical errors are subject to correction. Prices will be firm for 90 days from the date of acceptance of the purchase order for all products except motors. Motors are subject to pricing at the time of shipment. Material scheduled for shipment beyond 90 days will be subject to price negotiation.

#### TERMS

Terms of payment are net 30 days from date of shipment. Extended payments are subject to deferred payment charges of 2% per month on the unpaid balance. No deductions are to be made from amounts due unless specifically authorized by the Company in writing. If in the judgment of the Company, the financial condition of the purchaser at any time does not justify continuance of production or shipment on the terms of payment specified, the Company may require full or partial payment in advance.

#### TAXES

The Company's prices do not include sales, use, or excise taxes. In addition to the purchase price, there shall be added to the billing price an amount equal to any applicable sales, use, excise or other tax levies on the sale or use of the apparatus ordered by the purchaser. In lieu thereof, the purchaser may provide the Company with a tax-exempt certificate acceptable by the taxing authorities.

#### HELD ORDERS

Should shipment of an order be delayed beyond the original scheduled shipping date for the convenience of the buyer or because of lack of shipping instructions, such an order is referred to as a held order. Changes will be made for storage, deferred payment and any other expenses incurred by the delay. Billing will be issued immediately for all held equipment and charges, and payment in full is due 30 days from invoice date. Charges on held orders will, in some instances, be equal to cancellation charges. Held material will be stored at buyer's expense and risk. Held orders may be released and continued subject to the same prices, schedule and conditions as apply to a new order entered on the date the held order is continued.

#### RESCHEDULED ORDERS

The Company requires an advance notice of 60 days to readjust schedules on shipping dates revised by the purchaser. All reschedules must include new scheduled shipping dates or the order will be considered a "held" order.

#### BLANKET ORDERS

Prices on blanket orders are firm for a period of 6 months from date of order. Unshipped balances of a blanket order will be subject to price and delivery renegotiations.

#### DELIVERY

Shipments are F.O.B. point of manufacture, freight collect. Shipments of 20 pounds or less will generally be shipped Parcel Post or U.P.S. and the shipping costs will be included on the invoice. The routing of shipments will be chosen by the Company unless a routing is specified by the purchaser.

#### PACKING

Price includes the Company's standard packing for domestic shipment. Extra charge is made for "export boxing" or "special boxing". No credit or deduction from the selling price will be allowed if the purchaser specifies no packing.

#### SHIPPING DATES

The Company shall not be responsible or liable for any loss, damage, detention or delay resulting from causes beyond its control, including but not limited to fire, strike or other labor action, civil or military authority, preference ratings issued by the United States Government or any department branch or representative thereof, insurrection or riot, embargoes, or delays in transportation or inability to obtain necessary labor, materials or manufacturing facilities due to such causes, nor in any event for consequential damages. The Company expressly rejects any penalty or liquidated damage clauses in purchase orders or contract which relate to the Company's failure to meet target shipping dates, except in those specific cases where such clauses are required by law and approved in writing by the Company.

#### SERVICE CALLS

The services of Cone Drive Factory Representatives performed outside Company plants are available when not specifically covered by a Company warranty or contract. For rates, contact Main Sales Office.

#### OBSOLESCENCE

Special charges apply when exact duplication of obsolete equipment is required. Propositions involving obsolete equipment must be approved by the Main Office of the Company to determine availability and shipping schedule as well as prices.

#### WARRANTY

For the specified warranty term commencing from the date of shipment (see chart below) Cone Drive Operations Inc. warrants that products delivered will conform to the specifications provided by the Company for such products, and will be free from defects in material and workmanship.

Product Type	Warranty Term
Precision Products including right angle worm and in-line planetary reducers	2 years
David Brown label products including Series A, C, F, G, K, M and Q	2 years
Cone Drive Brand Standard Reducers (as advertised in the catalog) including single, double and triple reduction units (HP and Cone Classic)	5 years
Cone Drive label modified standard products, stand alone gearsets, special or engineered products, any products not specified as standard in the catalog	1 year

Any claims under this warranty must be made in writing to the Company at the address set forth above within thirty days of the discovery thereof. The Company's obligation under this warranty shall be limited to the repair or replacement, at the Company's option, of the product, or any part thereof, when the Company has determined the product is not as warranted; any product or parts repaired or replaced pursuant to this warranty will be warranted for the remainder of the original warranty period. The warranty on normal wear items such as oil seals is limited to one year. The warranties for motors, brakes, couplings and all other add on items shall be the warranties provided by, and shall be the responsibility of, the original equipment manufacturer. The Company is not responsible for and does not warrant equipment furnished by the purchaser or any defects caused thereby. The Company shall not be responsible for any claims, which the Company determines are due to improper installation, operation, above rated capacity or accident, or because the product has been used, adjusted, altered, handled, maintained or stored other than as directed by the Company. THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES AND REPRESENTATIONS, EXPRESS OR IMPLIED OR STATUTORY, WHETHER WRITTEN OR ORAL, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE, AND ANY IMPLIED WARRANTY ARISING FROM ANY COURSE OF PERFORMANCE OR DEALING OR TRADE USAGE. THIS WARRANTY IS ALSO IN LIEU OF ANY OTHER OBLIGATIONS, LIABILITIES, RIGHTS OR CLAIMS, WHETHER IN CONTRACT OR IN TORT, INCLUDING ANY RIGHT IN STRICT LIABILITY IN TORT OR ANY RIGHT ARISING FROM NEGLIGENCE ON THE PART OF THE COMPANY. IN NO EVENT, WHETHER AS A RESULT OF A BREACH OF WARRANTY, CONTRACT CLAIM OR ALLEGED NEGLIGENCE, SHALL THE COMPANY BE LIABLE FOR SPECIAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS OR REVENUES, LOSS OF USE OF THE EQUIPMENT ON WHICH THE PRODUCT IS INSTALLED OR REPLACEMENT OF SUCH EQUIPMENT.

#### PATENTS

The Company shall defend any suit or proceeding brought against the purchaser based on a claim that any apparatus, or any part thereof, furnished under the contract infringes any patent of the United States, provided the Company is notified promptly in writing and given authority, information and assistance (at the Company's expense) for the defense of such suit or proceeding. The Company will pay all damages and costs awarded therein against the purchaser. If said apparatus or any part thereof is held to infringe and the use thereof is enjoined, the Company shall, at its own expense either procure for the purchaser the right to continue using said apparatus or part, or replace same with noninfringing apparatus; or modify it so that it becomes noninfringing; or remove said apparatus and refund the purchase price and the transportation and installation costs thereof. The foregoing states the entire liability of the Company for patent infringement.

#### RETURN APPARATUS

The purchaser must apply for authorization through the Main Office of the Company before returning an apparatus to the factory for credit. The Company will advise the purchaser of the credit to be allowed and necessary restocking charges on unused materials, subject to our inspection and acceptance when received. No estimate of allowance for used material can be made except upon receipt and inspection at Traverse City, Michigan, as directed by our Main Office. No material should be returned to this address except upon receipt of written authorization. In addition to the usual restocking charges, the purchaser must pay the actual transportation expense which the Company paid, plus the return transportation. When the outgoing transportation paid by the Company is not known, the purchaser pays double the return transportation charges, plus the restocking charges. Motors and special parts will not be accepted for return or credit.

#### TERMINATION

In the event purchaser, due to the change in design or other good and sufficient cause, desires to effect cancellation of his purchase order, notice shall be given in writing to the Company. The Company shall cease work and ship to the purchaser all completed and partially completed material. The purchaser will pay the Company all estimated expenditures made by the Company relating to the order plus a minimum of 20%.

#### PRODUCT USAGE

IN ANY APPLICATIONS OF CONE DRIVE PRODUCTS WHERE BREAKAGE, DAMAGE, DISCONNECTION, ANY OTHER MALFUNCTION OF ANY DRIVE TRAIN COMPONENT, OR EXCESSIVE WEAR COULD RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE, A FAIL SAFE DEVICE CAPABLE OF STOPPING AND HOLDING THE LOAD IN THE EVENT OF SUCH AN OCCURRENCE MUST BE INCORPORATED AFTER THE DRIVE TRAIN.

The Horsepower or output torque rating shown on the face of this order is in accordance with AGMA and must not be exceeded for normal operation. Starting or momentary overload must be limited to 300% of AGMA class 1 rating.

**WE HEREBY CERTIFY THAT GOODS WERE PRODUCED IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF SECTIONS 6, 7, AND 12 OF THE FAIR LABOR STANDARD ACT AS AMENDED, AND OF REGULATIONS AND ORDERS OF THE UNITED STATES DEPARTMENT OF LABOR, ISSUED UNDER SECTION 14 THEREOF.**

# Contact Textron Power Transmission

0107

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AGRICULTURE

AUTOMOTIVE

CEMENT

CHEMICAL

CONSTRUCTION

DEFENCE

ENERGY

FOOD & BEVERAGE

FORESTRY

MARINE

METALS

MINING

PULP & PAPER

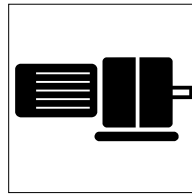
QUARRYING

RUBBER & PLASTICS

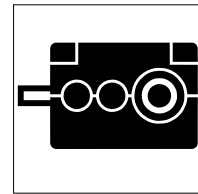
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TRANSPORTATION

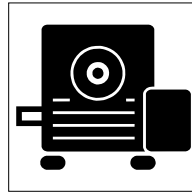
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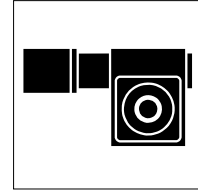
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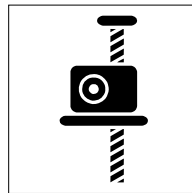
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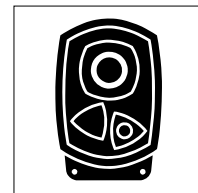
Worm



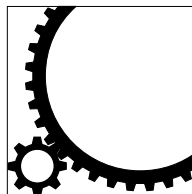
Precision products



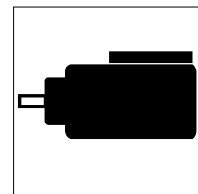
Screwjacks



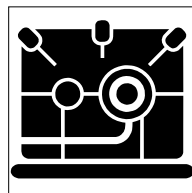
Shaftmount



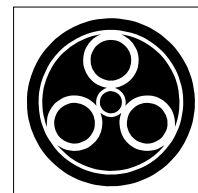
Horizontal mill drives



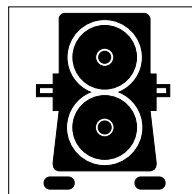
Vertical mill drives



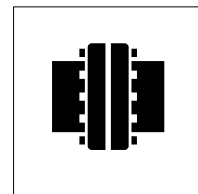
High speed



Planetary units



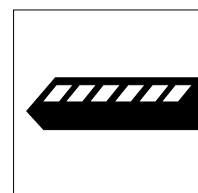
Specialist drives



Couplings



Defence Systems



Rail

**TEXTRON** POWER TRANSMISSION

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