



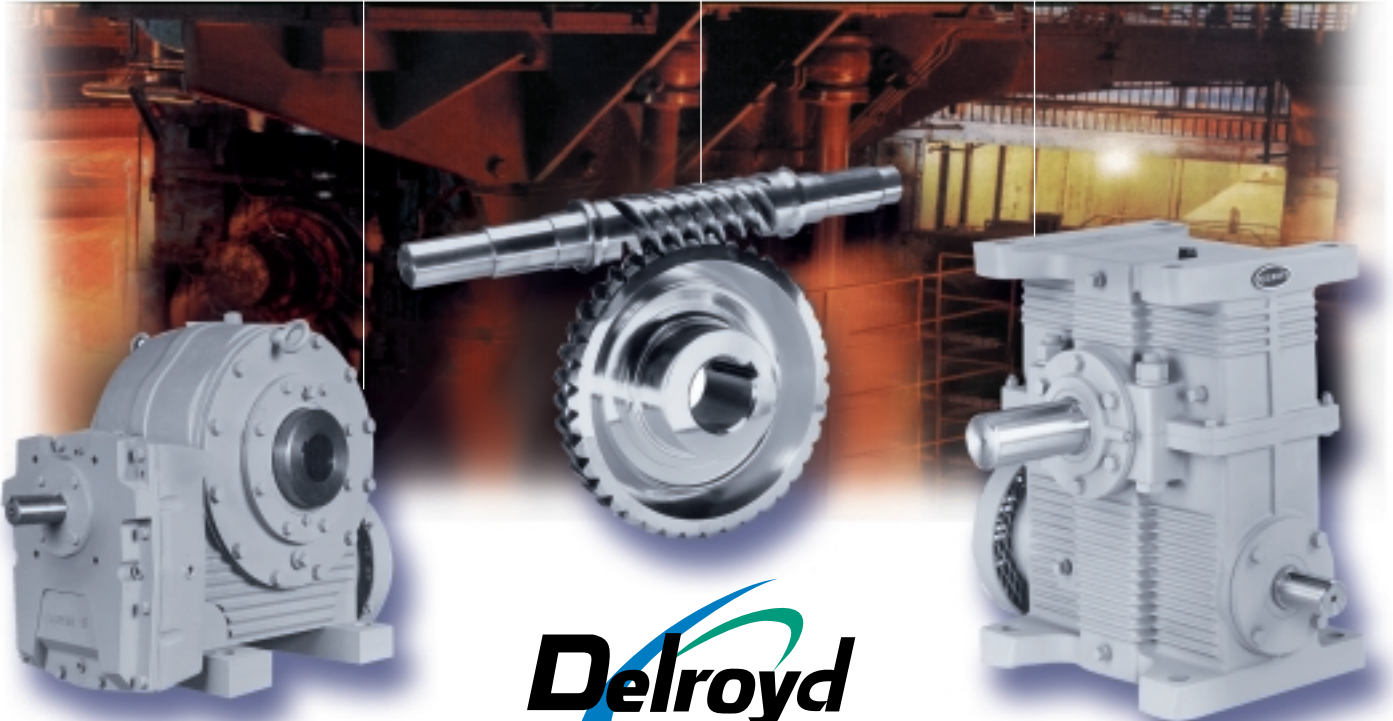
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Delroyd

Worm Gear Products



Delroyd
Worm Gear
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Worm Gear Products

- Helical Worm Gear Speed Reducers
- Worm Gear Speed Reducers
- Worm Gear Sets

Applications

- Hoists, mechanical jack and screw drives
- Log handling and debarking machines
- Grinding and threading machines
- Steel and paper mill machinery
- Sewage treatment equipment
- Chemical processing equipment
- Machine tools, elevators & pumps
- Mining machinery
- Drilling equipment
- Coal handling & pulverizers
- Cement mixers
- Winch drives
- Mixers & agitator drives
- Cable tensioners

Advantages of Delroyd® Worm Gearing

Compactness and High Ratio Reduction

Single reduction worm gearing offers high ratio reduction with few moving parts in a close-coupled compact drive. Compact right angle input and output shaft arrangements can be extended in horizontal or vertical arrangements adaptable to any mounting requirement.

Double reduction units give a wider ratio range beyond practical single reduction limits. Compact right angle or parallel shaft arrangements are provided with the same versatility of shaft extensions.

Triple reduction units provide ultra-slow output speeds and high torques.

Long, Quiet Life

All worm gears incorporated in DELROYD® reducers are made from phosphor bronze. They also incorporate a hardened, ground and polished alloy steel worm which develops a smooth, work hardened surface on the bronze. For this reason, worm gears wear in and improve with prolonged service versus other gear configurations which wear out with prolonged service.

Two or more teeth are in contact with the worm at all times, transmitting power by a continuous, quiet and shockless action. As a result, the flow of torque is smooth and free from angular velocity changes, thus eliminating vibration, pulsation, chatter, and other customary gear noises.

High Shock Load Capacity

The DELROYD® worm gear tooth form is designed such that the gear teeth operate under a crushing, rather than a bending load. For this reason, extremely high momentary and shock loads, damaging to many forms of gearing, can be successfully withstood. Also, high momentary overloads will seldom cause failure, as worm gear ratings are figured on the wear resistance of the gear teeth.

Safety and Ease of Maintenance

The few moving components are completely enclosed, thus avoiding the hazards of exposed parts. Reducers operate with minimum attention even under the most adverse conditions.

Interchangeability of Components

All parts are manufactured to be interchangeable by the use of limit gages retained as reference standards to assure precision and uniformity. The need for matched gearing is thus avoided. Worms and gears of different ratios can be readily interchanged if revision of speeds becomes necessary.

For whatever the application, DELROYD® has the model, configuration, size, ratio, input and output to meet your power transmission need reliably and efficiently.

- Hardened, shaved or ground helical gears
- Hollow & solid output shafts
- Vertical & horizontal mountings
- Fan cooled (standard)
- Motor mounts
- Cast iron or steel housings available

Ratios 15:1 to 355:1**



Helical Worm Speed Reducers

CATALOG MODELS AVAILABLE*

UNIT SIZE	CENTER DISTANCE			
	CAST IRON		STEEL	
	PRIMARY	SECONDARY	PRIMARY	SECONDARY
35	2.5"	3.5"	—	—
40	3"	4"	—	—
50	3.5"	5"	3.5"	5"
60	4"	6"	4"	6"
70	4.5"	7"	4.5"	7"
80	5"	8"	5"	8"
90	5.5"	9"	5.5"	9"
100	6"	10"	6"	10"
120	7"	12"	7"	12"
140	7"	14"	7"	14"
170	10"	17"	10"	20"
200	10"	20"	10"	20"
218	—	—	10"	21.837"
240	—	—	12"	24"
270	—	—	12"	27"
300	—	—	15"	30"
360	—	—	15"	36"
420	—	—	17"	42"
480	—	—	17"	48"



Single Worm Speed Reducers

Ratios 5:1 to 70:1**

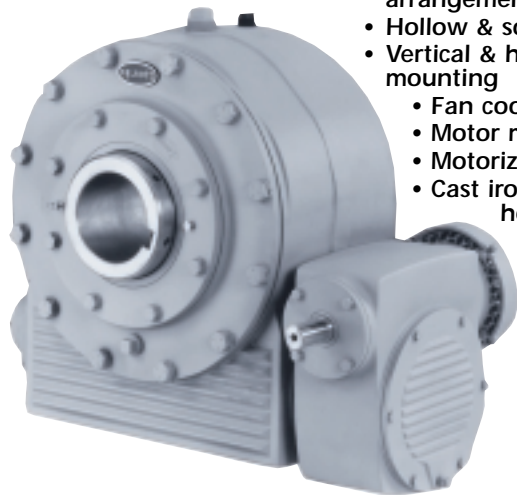
- Hollow & solid output shafts
- Vertical & horizontal mounting
- Fan cooled (standard)
- Motor mounts
- Motorized versions
- Cast iron or steel housings available

CATALOG MODELS AVAILABLE*

UNIT SIZE	CENTER DISTANCE		UNIT SIZE	CENTER DISTANCE	
	CAST IRON	STEEL		CAST IRON	STEEL
20	2"	—	120	12"	12"
25	2.5"	—	140	14"	14"
30	3"	—	170	17"	17"
35	3.5"	—	200	20"	20"
40	4"	—	218	—	21.837"
50	5"	5"	240	—	24"
60	6"	6"	270	—	27"
70	7"	7"	300	—	30"
80	8"	8"	360	—	36"
90	9"	9"	420	—	42"
100	10"	10"	480	—	48"

Ratios 75:1 to 4900:1**

Double Worm Speed Reducers



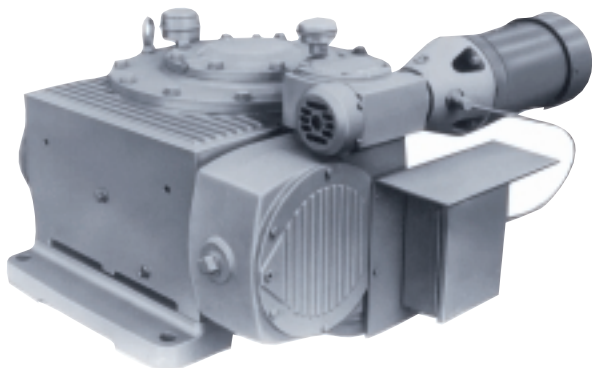
- Right angle & parallel shaft arrangements
- Hollow & solid output shafts
- Vertical & horizontal mounting
 - Fan cooled (standard)
 - Motor mounts
 - Motorized versions
 - Cast iron or steel housings available

CATALOG MODELS AVAILABLE*

UNIT SIZE	CENTER DISTANCE			
	CAST IRON		STEEL	
	PRIMARY	SECONDARY	PRIMARY	SECONDARY
35	2"	3.5"	—	—
40	2"	4"	—	—
50	2.5"	5"	2.5"	5"
60	3"	6"	3"	6"
70	3.5"	7"	3.5"	7"
80	4"	8"	4"	8"
90	5"	9"	5"	9"
100	5"	10"	5"	10"
120	6"	12"	6"	12"
140	6"	14"	6"	14"
170	8"	17"	8"	17"
200	9"	20"	9"	20"
218	—	—	10"	21.837"
240	—	—	12"	24"
270	—	—	12"	27"
300	—	—	14"	30"
360	—	—	14"	36"
420	—	—	17"	42"
480	—	—	17"	48"

- HP from 0.09 to 6.25
- Output torque to 583,000 in. lbs.
- Output rpm as low as 0.01 with a 1750 rpm input
- Ideal for ultra-slow speed, high torque applications

Ratios 5000:1 to 175,000:1



Triple Worm Speed Reducers

Delroyd® DDVM series triple-reduction worm gear speed reducers are available in ratios from 5000:1 to 175,000:1 and center distances from 7 to 20 in. (larger sizes are available on request). Output torque ranges from 33,000 in. lbs. for the 7-in. CD DDVM-70 to 582,900 in. lbs. for the DDVM-200. Mechanical HP input requirements are from 0.09 for the 175,000:1 7-in. CD reducer to 6.246 for the 5000:1 20-in. CD unit.

These reducers are available in any four configurations: horizontal, vertical, shafted and shaft-mounted.

They are ideal for water/wastewater equipment drive applications such as thickeners and clarifiers which require a vertical downshaft. Other available configurations also make DELROYD® triple reduction reducers perfect for use on mixers, elevators, solar panels, astronomical telescopes, indexing tables, hoists, conveyers or other process or materials handling systems where large torques/slow speeds are needed.

These reducers are also available with a helical primary reduction stage and are termed the HDVM series.

Worm Gear Sets

Ratios 5:1 to 180:1



CATALOG MODELS AVAILABLE

CENTER DISTANCE	GEAR	FAN
2"	Shafted	With or without
2.5"	Shafted	With or without
3"	Shafted & shaft mount	With or without
3.5"	Shafted & shaft mount	With or without
4"	Shafted & shaft mount	With or without
5"	Shafted & shaft mount	With or without
6"	Shafted & shaft mount	With or without
7"	Shafted & shaft mount	With or without
8"	Shafted & shaft mount	With or without
9"	Shafted & shaft mount	With or without
10"	Shafted & shaft mount	With or without
12"	Shafted & shaft mount	With or without
14"	Shafted & shaft mount	With or without
17"	Shafted & shaft mount	With or without
18"	Shafted & shaft mount	With or without
20"	Shafted & shaft mount	With or without
21.837"	Shafted & shaft mount	Without
24"	Shafted & shaft mount	Without
26.5"	Shafted & shaft mount	Without
27"	Shafted & shaft mount	Without
28"	Shafted & shaft mount	Without
30"	Shafted & shaft mount	Without
36"	Shafted & shaft mount	Without
42"	Shafted & shaft mount	Without
48"	Shafted & shaft mount	Without

STANDARD COMPONENTS

The lowest cost and shortest delivery schedules are normally achieved through the use of standard worm and gear sets described in this catalog.

In addition to using standard shaft center distances, ratios and bearing mounting parts, designs should also include standard bores, flanges, and bolt circles where possible. Since the use of non-standard hubs is not uncommon to the worm gear industry, Delroyd provides for this by having a flanged rim design available for mounting on any adaptable center

Refer to DELROYD® Worm and Gear Set Catalog 8805R for complete selection, ratings, and dimensions

Nuttall Gear / Delroyd® Worm Gear

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Delroyd® Worm Gear Speed Reducers and Worm Gear Sets
 Type TDS / HPD Parallel & Right Angle Shaft Speed Reducers
 Moduline® Concentric Shaft Speed Reducers & Gearmotors
 Type SU & Type SD High Speed Gear Drives
 Type RV Right Angle Vertical Speed Reducers
 Veri-Dri Vertical Concentric and Parallel Shaft Drives
 Metals Industry Gear Drives
 Custom Engineered Drives



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