MICRON

TRUE Planetary™ Gearheads

THOMSON®

Linear Motion. **Optimized.**™

Product Overview

NemaTRUE™

Cost-effective and flexible thanks to the modular RediMount™ motor mounting system
Low-backlash planetary gearhead

DuraTRUE™

Precise, compact and low maintenance thanks to TRUE planetary™ gearing
Low-backlash planetary gearhead

DuraTRUE 90™

Up to 98% efficiency with the PowerTRUE™ right-angle gearing
Low-backlash right-angle planetary gearhead

UltraTRUE™

Optimum smooth running characteristics, torque capacity and precision thanks to crowned helical gearing
Low-backlash planetary gearhead

UltraTRUE 90™

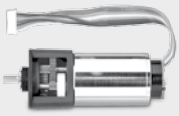
One of the quietest and smoothest right-angle planetary gearheads on the market
Low-backlash right-angle planetary gearhead

EverTRUE™

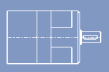
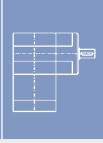
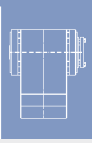
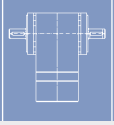
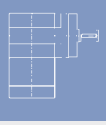
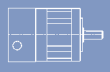
Rigorous design concept to ensure a service life of at least 30,000 hours in continuous operation
Low-backlash planetary gearhead

EQ Series

Low noise and low vibration thanks to patented “Swing Link” technology
Planetary gearhead



Let us provide a unique solution for your specific gearhead requirements
Customised gearhead solutions

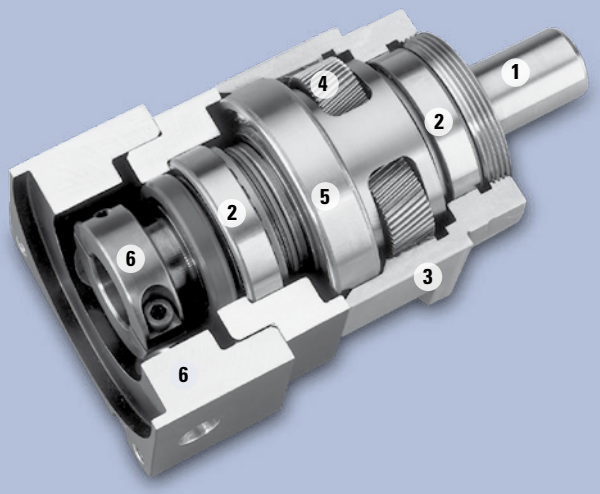
	NemaTRUE™	DuraTRUE™	DuraTRUE 90™			UltraTRUE™	UltraTRUE 90™	EverTRUE™	EQ Series
									
Torque capacity [Nm] up to	180	834	842	865	865	3300	3111	1010	29
Ratio min. i =	3	3	1	1	1	4	1	4	3
max. i =	100	100	500	500	500	100	50	100	100
Radial load capacity [N] up to	3730	11150	11150	11150	11150	37910	37778	44600	1516
Mounting Form									
Right angle			●	●	●		●		
In-line	●	●				●		●	●
Torsional Backlash									
≤ 4 arcmin						●	●	●	
≤ 8 arcmin	●	●	●	●	●				
≤ 13 arcmin	●								
≤ 18 arcmin									●
Input Form									
Motor mounting	●	●	●	●	●	●	●	●	●
RediMount™ system	●	●	●	●	●	●	●	●	●
Output Form									
Single shaft	●	●	●			●	●	●	●
Dual shaft					●				
Hollow shaft				●					
Gearing									
TRUE planetary™ gearing	●	●	●	●	●			●	●
Helical crowned gearing						●	●		
PowerTRUE™ right angle gearing			●	●	●		●		
Frame Size									
60	●	●	●		●	●	●		●
75						●	●		
90	●	●	●	●	●	●	●		
100						●	●	●	
115	●	●	●	●	●	●	●		
140						●	●	●	
142		●	●	●	●				
180						●	●	●	
220						●			

TRUE Planetary™ Gearheads

for high precision motion control applications which require a high torque to volume ratio, high torsional stiffness and low backlash.

- High torque to size ratio - allows compact design
- Low backlash - eliminates positioning errors due to lost motion
- Inertia matching - keeps servo system stable and in control
- High rigidity - optimizes system response
- Self re-lubrication - eliminates costly maintenance and downtime
- High radial load capacity - mount pulleys and pinions directly on the output shaft

1. **Output shaft**
2. **Tapered roller bearings** provide high axial and radial load carrying capacity
3. **Anodized aluminum housing (DuraTRUE™) Stainless steel housing (UltraTRUE™, EverTRUE™)**
4. **HRC 55-60 steel gears** provide superior wear resistance and increased backlash integrity
5. **Sealed deep groove ball bearing** provides high radial load carrying capability
6. **RediMount™ system** provides error-free motor installation



Custom Engineered Solutions developed in close cooperation with you.

- Concept to prototype within weeks
- Compact integrated servo-actuator solutions
- Precision gearing to AGMA 14 standards
- ISO 9001 certified with in-house product testing and fully accredited metallurgical lab

Helical Crowned TRUE Planetary™ Gearheads

combine the positive attributes of gear crowning and helical gearing with the planetary construction to create the smoothest operating gearhead on the market.

- High Torque Capacity
- Low Backlash
- Smooth Operation
- Greater Load Sharing
- Whisper Quiet

Helical gears are known for their quiet and smooth operation along with their ability to transmit higher loads than spur gears.
Crowning is a modification to the gear tooth profile which optimizes gear mesh alignment. It also enhances distribution of loading on the tooth flank, thereby reducing high stress regions which can result in surface pitting.

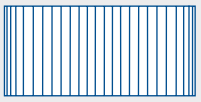
Spur vs. helical gearing

The Contact ratio is defined as the number of teeth in mesh at any given time. The higher the contact ratio, the higher the torque rating of the gearing. Helical gearing has more than 2x the contact ratio of spur gearing.

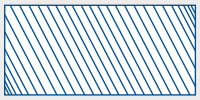
Crowned vs. non-crowned

Crowning optimizes the gear mesh alignment within a gear train to increase the torque capacity and reduce noise. It also enhances load distribution on the tooth flank to reduce high stress regions.

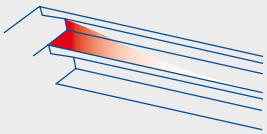
UltraTRUE in-line planetary™ gearhead with helical gearing



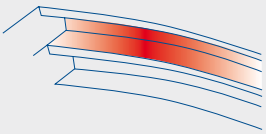
Typical contact ratio is 1.5 for spur gearing.



Contact ratio for equivalent helical gear is 3.3... more than double the contact ratio.



Non-crowned
High stress region



Crowned
Even load distribution

TRUE Planetary™ Gearheads

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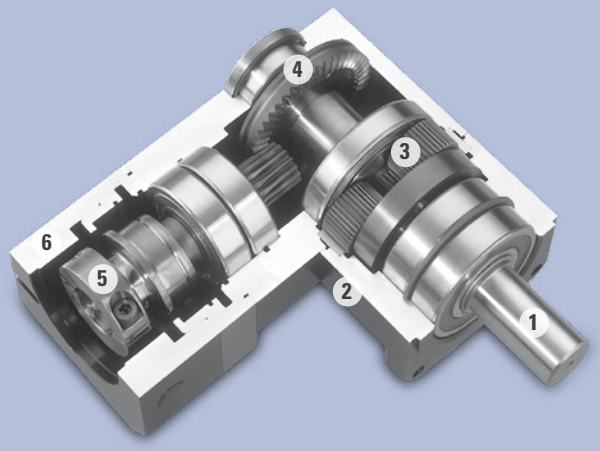
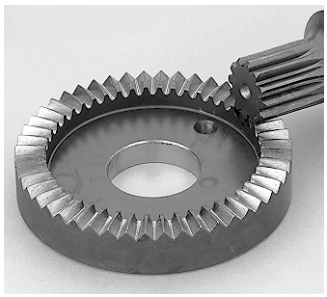
- Inertia matching - keeps servo system stable and in control
- High rigidity - optimizes system response
- Self re-lubrication - eliminates costly maintenance and downtime
- High radial load capacity - mount pulleys and pinions directly on the output shaft

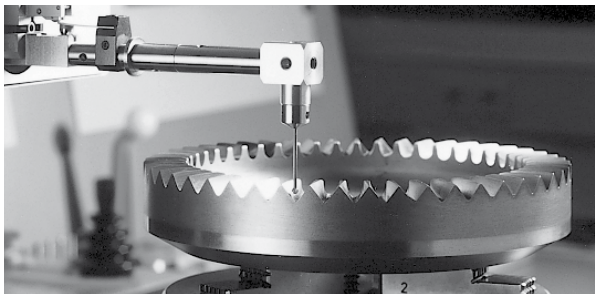
1. **Output shaft**
2. **Anodized aluminum housing (DuraTRUE™)**
   Stainless steel housing (UltraTRUE™, EverTRUE™)
3. **HRC 55-60 steel gears** provide superior wear resistance and increased backlash integrity
4. **Innovative PowerTRUE™ gearing** delivers smooth, quiet geared reduction
5. **RediMount™ hub** provides error-free motor installation
6. **RediMount™ input housing** provides error-free motor installation





PowerTRUE™ right angle gearset

CNC machining of a PowerTRUE™ right angle gear



Computerized mapping of gear tooth profile

RediMount™ Motor Mounting System

allows an easy, error free and quick connection of our Micron gearheads to any current motor in the market. The innovative design with adapter sleeve and input housing features mounting the Micron gearhead within one working process.

- Self-aligning hub - Maintains concentricity between motor shaft and gearhead
- Pre-installed pinion - Eliminates pinion setting procedure
- Modular design - Allows gearhead and input housing to be stocked separately
- Flexibility - Allows easy changeover to alternate motors
- Interchangeability - Same RediMount™ system is used throughout 7 product lines

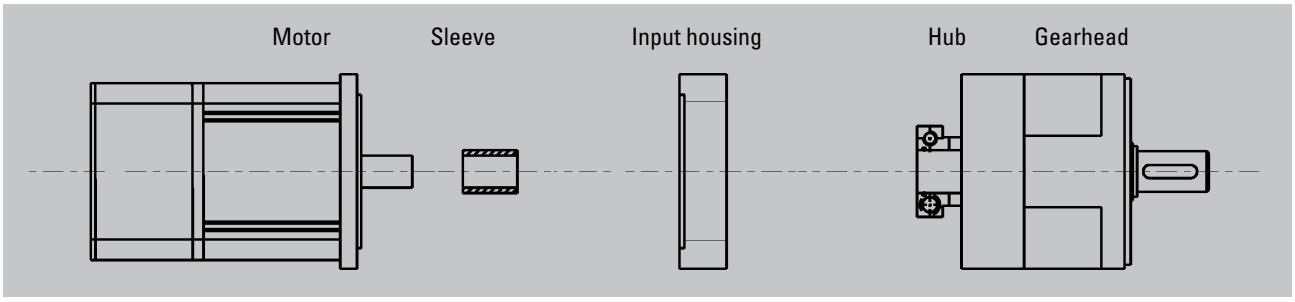
RediMount™ offers an easy and error free connection between motor and gearhead in only a few minutes:

1. Slide the supplied sleeve into the gearhead hub.

2. Slide the gearhead hub onto the motor shaft.

3. Tighten the hub bolts through the assembly holes of the input housing.

4. Bolt the motor to the gearhead with the bolts provided.



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