



**More Power.
Less Weight.**

WD-E 0343 **Alu Line**

**The Next
Generation of
Slew Drives**



www.imousacorp.com

In IMO development and research, engineers have implemented customer requirements and developed a new generation of the worm-driven slewing drive series: **The WD-E Alu Line series.**

Designed, calculated, and engineered using the finite element method. Subjected to a multitude of challenging tests on the test bench.

30% Higher Performance*



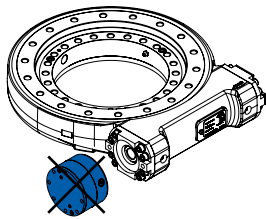
20% Less Weight



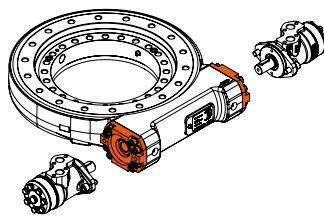
300% Longer Gear Life*



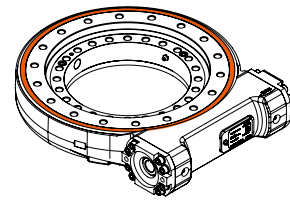
No Brake Necessary**



Symmetrical Drive Input



Optimized Sealing



* at reference base 10,150 Nm nom. torque
** applies to the single start version

Comparison in Detail

Details not listed are congruent. The WD-E slew drive replaces the WD-L without design changes.

Performance

Max. / Nom. Torque
Max. Holding Torque

Housing

Weight (without Motor)

Gearing Operational Life Time (Safety factor against wear $S_w = 1$ at $n = 1 \text{ min}^{-1}$)

Shock Resistance Worm Bearing

Symmetrical Drive Input

Self-locking

Sealing

WD-E series Alu Line 0343 Single Start

13.000 / 13.000 Nm
15.000 Nm

Aluminum

51,5 kg

1577 Hours at 10.150 Nm
960 Hours at 13.000 Nm

+++++

Yes

Yes.
No brake necessary.

Optimized

WD-E series Alu Line 0343 Dual Start

13.000 / 13.000 Nm
15.000 Nm

Aluminum

51,5 kg

2080 Hours at 10.150 Nm
1266 Hours at 13.000 Nm

+++++

Yes

No.
Additional brake necessary.

Optimized

WD-L series 0343 Standard

12.905 Nm / 10.150 Nm
12.905 Nm

Cast Iron

62 kg

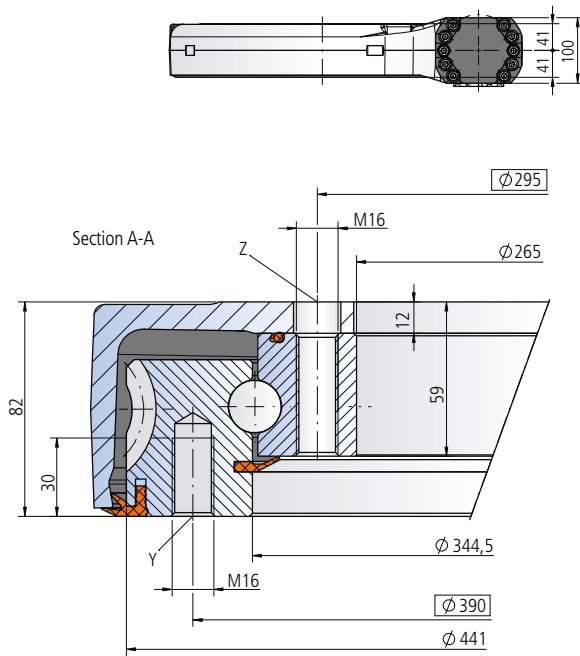
500 Hours at 10.150 Nm

++++

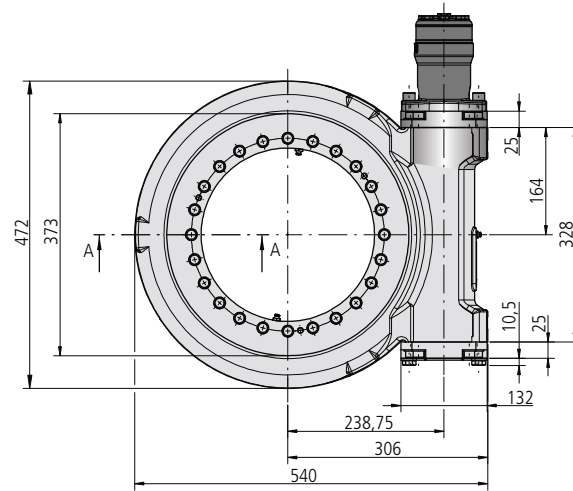
No

No.
Additional brake necessary.

Standard



The mounting structure must support the housing to at least $\phi 343$ and at most to $\phi 449$



Mounting holes

Y = 18 drill holes $M16 \times 30$ deep, evenly distributed

Z = 24 drill holes $\phi 18 \times 12$ deep / $M16$, evenly distributed

Lubricating ports

2 conical grease nipples on internal diameter

2 conical grease nipples on housing exterior

Slew drive supplied pre-lubricated

Drawing number WD-E 0343/3-13622				
Drawing number WD-E 0343/3-13621				
Module	m	[mm]	4,5	4,5
Number of starts wormshaft		[-]	1	2
Gear ratio	i	[-]	95	47,5
Self-locking gears			Yes**	No**
Max. torque	M_{d max}	[Nm]	13.000	13.000
Nom. torque at $n = 1 \text{ min}^{-1}$	M_{d nom}	[Nm]	13.000	13.000
Max. holding torque (static)	M_{h max}	[Nm]	15.000	15.000*
Static load, radial	C_{o rad}	[kN]	338	338
Static load, axial	C_{o ax}	[kN]	905	905
Dynamic load, radial	C_{rad}	[kN]	157	157
Dynamic load, axial	C_{ax}	[kN]	183	183
Weight, incl. 6 kg for hydraulic motor MPY160		[kg]	57,5	57,5

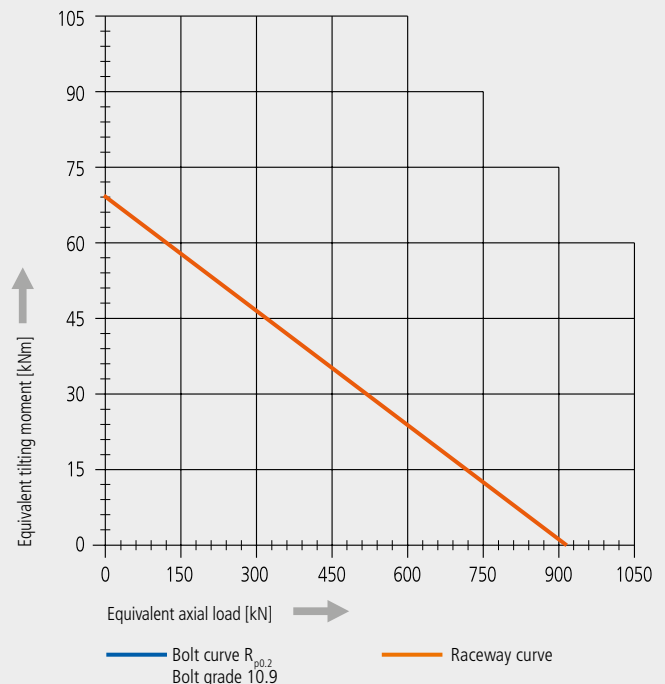
* Optionally with brake

** See: Technical information, section Self-locking in Catalog

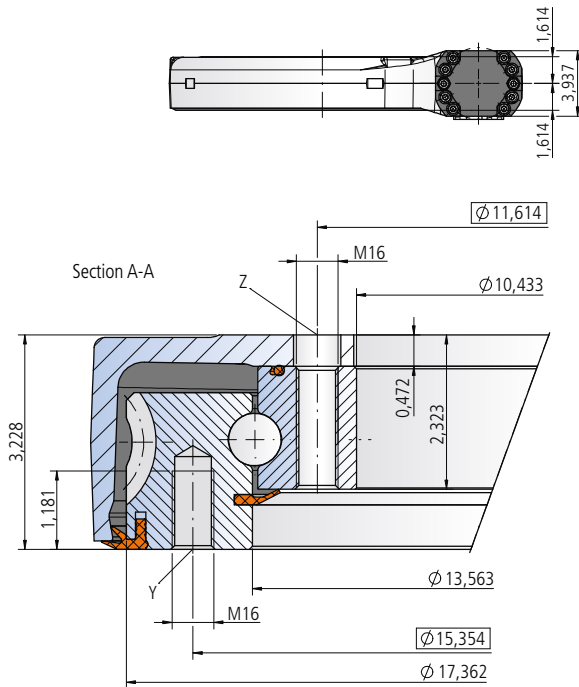
Selection example:

Performance data with two hydraulic motor			MPY160	RE300
Pressure differential	Δp	[bar]	155	115
Oil flow	Q	[l/min]	20	17
Output speed	n	[min ⁻¹]	1	1
Max. achievable torque	M_d	[Nm]	13.000	13.000

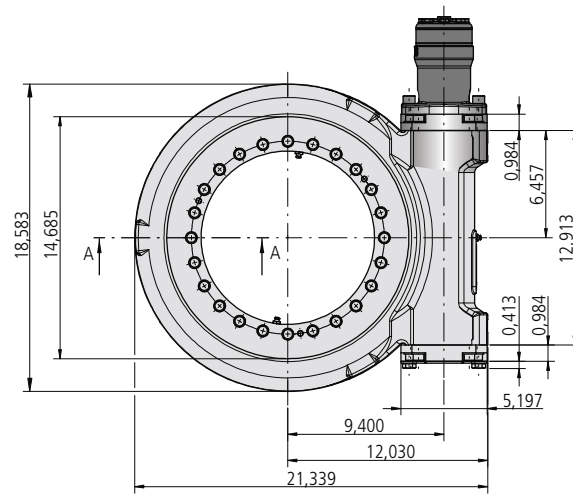
Limiting load diagram for compressive loads



Please always observe the technical information in the catalog!



The mounting structure must support the housing to at least $\phi 343$ and at most to $\phi 449$



Mounting holes

Y = 18 drill holes M16-30 deep, evenly distributed

Z = 24 drill holes $\phi 18$ -12 deep / M16, evenly distributed

Lubricating ports

2 conical grease nipples on internal diameter

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Drawing number WD-E 0343/3-13622				
Drawing number WD-E 0343/3-13621				
Module	m	[mm]	4,5	4,5
Number of starts wormshaft		[-]	1	2
Gear ratio	i	[-]	95	47,5
Self-locking gears			Yes**	No**
Max. torque	$M_{d\max}$	[ft·lbf]	9.588	9.588
Nom. torque at $n = 1 \text{ min}^{-1}$	$M_{d\text{nom}}$	[ft·lbf]	9.588	9.588
Max. holding torque (static)	$M_{h\max}$	[ft·lbf]	11.063	11.063*
Static load, radial	$C_{o\text{rad}}$	[lbf x 1000]	76	76
Static load, axial	$C_{o\text{ax}}$	[lbf x 1000]	203	203
Dynamic load, radial	C_{rad}	[lbf x 1000]	116	116
Dynamic load, axial	C_{ax}	[lbf x 1000]	135	135
Weight, incl. 13,2 lbs hydraulic motor MPY160		[lbs]	127	127

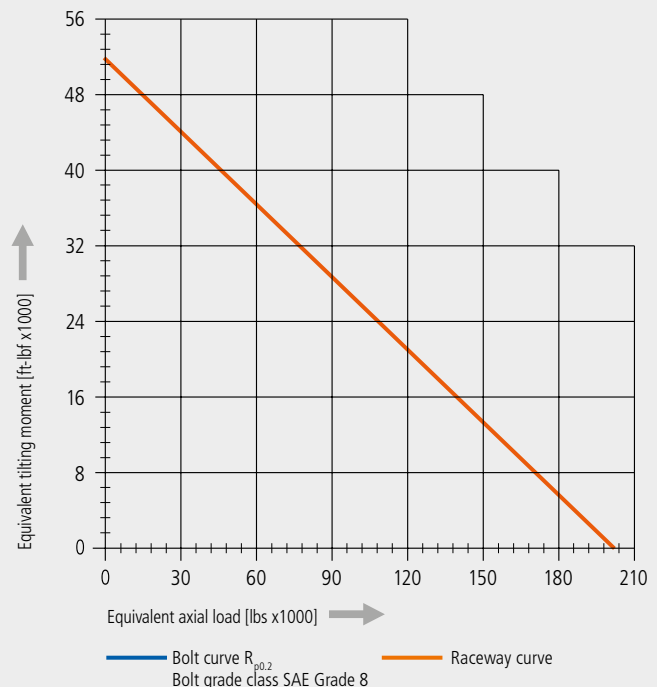
* Optionally with brake

** See: Technical information, section *Self-locking* in Catalog

Selection example:

Performance data with two hydraulic motor			MPY160	RE300
Pressure differential	Δp	[psi]	2.248	1.668
Oil flow	Q	[gal(us)/min]	5,28	4,49
Output speed	n	[min ⁻¹]	1	1
Max. achievable torque	M_d	[ft·lbf]	9.588	9.588

Limiting load diagram for compressive loads



Please always observe the technical information in the catalog!



Variety of Applications:

Examples of
IMO WD-E 0343
Alu Line



IMO

IMO USA Corp.

4000 Faber Pl Dr, North
Charleston, SC 29405

Telephone: +1 (843) 480-4001

Telefax: +49 9193 6395-1140

info@imo.us

www.imousacorp.com