

# rotork®

## Gears



## MOW Series

### Modulating Worm Gearbox

#### MOW Modulating Worm Gear Series

Modulating worm gear operators are designed to suit control valves or dampers requiring constant movement.

They are suitable for continuous duty up to 1200 starts per hour and give a positional accuracy of  $\pm 1/2^\circ$ .

#### Features

- Hardened and ground worm shaft
- Aluminium bronze worm wheel
- Special grease
- Totally enclosed gearing
- Grease filled for life & fully sealed
- Adjustable mechanical stops at  $90^\circ \pm 5^\circ$  travel
- Removable output sleeve
- Finished with grey primer.

#### Environmental Specification

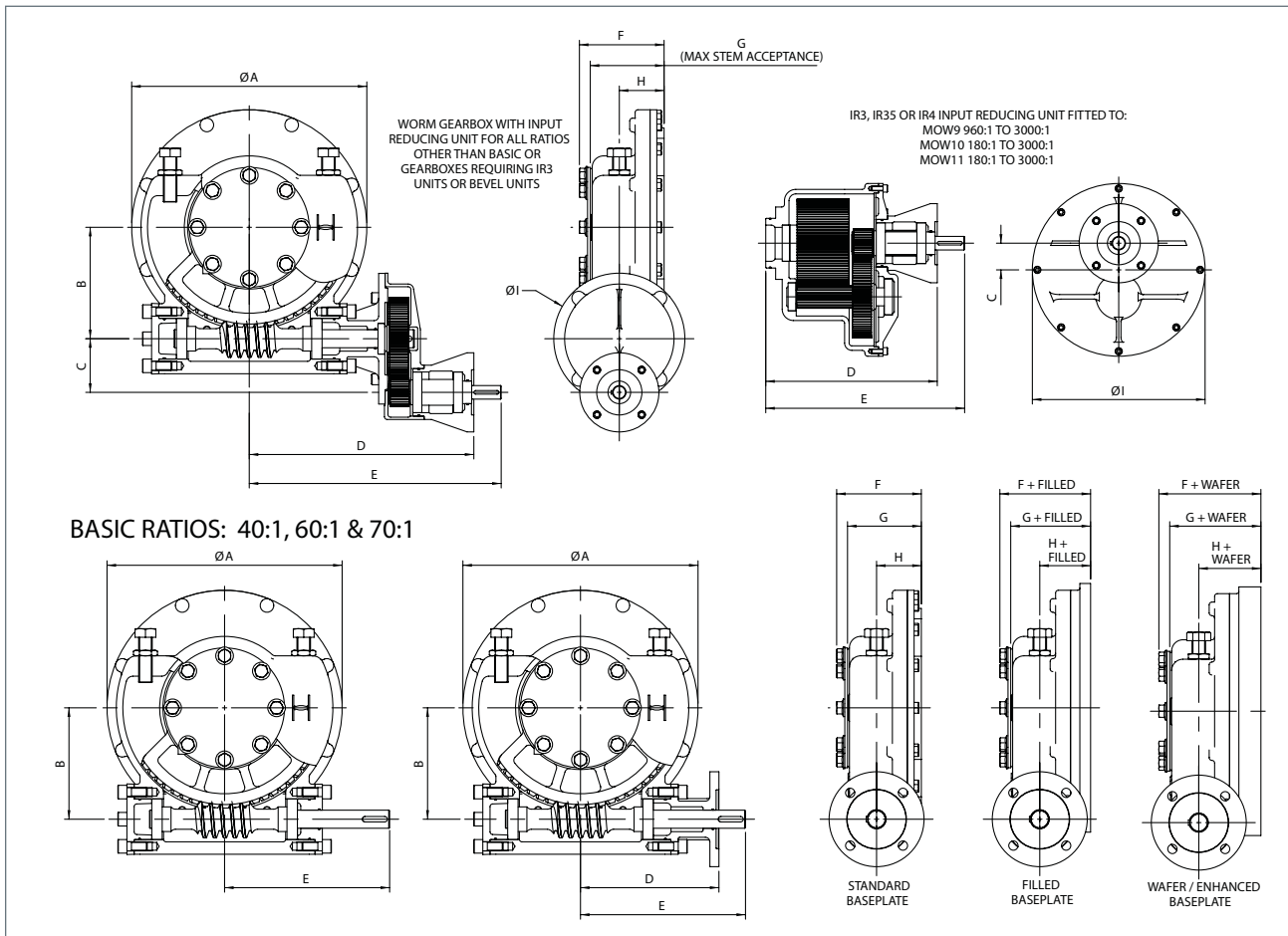
- Enclosure: IP67 standard, IP68 optional
- Temperature:  $-20^\circ\text{C}$  to  $120^\circ\text{C}$

#### Options

- All types of environment
- Submersible, buried service, marinised
- ATEX
- Limit switches
- Lever arms
- Flexible extensions
- Food grade grease

# MOW Series Modulating Worm Gearbox

## MOW Dimensions



Gearbox	Ratio	ØA	B	C	D	E	F	G	H	ØI	Weight (Kg)
MOW3	40,70	172	76		118	158	91	74	49		11
MOW4	40,70	218	102		142	182	102	85	50		22
MOW4	80,120,140,160,210, 280	218	102	64	269	320	104	85	50	190	30
MOW4	200,240,350,420	218	102	96	291	342	104	85	50	248	35
MOW5	40,70	285	136		186	236	132	114	69		45
MOW5	80,120,140,160,210, 280	285	136	64	313	364	132	114	69	190	53
MOW5	200,240,350,420	285	136	96	335	386	132	114	69	248	58
MOW6	70	375	178		186, 196 for F10,FA10	236	139	113	70		68
MOW6	140,210,280	375	178	64	313	364	139	113	70	190	79
MOW6	350,420	375	178	96	342	393	139	113	70	248	84
MOW7	60	450	210		270	329	171	140	86		120
MOW7	120,180,240,360	450	210	119	460	521	171	140	86	290	152
MOW7	480, 540,720	450	210	179	469	530	171	140	86	408	162
MOW8	60	520	246		306	365	192	160	99		180
MOW8	120,180,240,360	520	246	119	496	557	192	160	99	290	212
MOW8	480,540,720	520	246	179	505	566	192	160	99	408	222
MOW9	60	596	279		371	481	200	168	99		220
MOW9	180,240,360,480,540,720	596	279	179	568	631	200	168	99	408	262
MOW9	960,1080,1440,2160,2520, 3000	596	279	59	605	666	200	168	99	382	290
MOW10	60	735	343		397	507	216	180	110		330
MOW10	180,240,360,540,720,960,1080,1440,2160,2520,3000	735	343	59	631	692	216	180	110	382	408
MOW11	60	795	381		414	524	247	200	120		520
MOW11	180,240,360,540,720,960,1080,1440,2160,2520,3000	795	381	59	648	709	247	200	120	382	570

All dimensions in millimetres.

### Material specification for MOW Modulating Worm Gearbox

Component	Material	UK Standard
Gearcase	SG Iron	BS1563 EN-GJS-450-10 or BS1563 EN-GJS-400-15
Baseplate	Cast Iron or SG Iron	BS1561 EN-GJL-250 BS1563 EN-GJS-400-15
End cap	SG Iron Steel	BS1563 EN-GJS-450-10 or BS970 grade 070M20
Input Flange	Cast Iron or SG Iron	BS1561 EN-GJL-250 BS1563 EN-GJS-400-15
Indicator Plate	Protected Steel	BS970 grade 070M20
Wormwheel	Aluminium Bronze	BS1400 grade AB2
Wormshaft	Steel	BS970 grade 045M10
Seals	Nitrile Rubber	
Fixing Screws	Protected Steel	BS3692 and BS4168
Worm Shaft Bearings	Angular Contact Ball Bearings	
Output Sleeve	Cast Iron	BS1561 EN-GJL-250
Grease	Renolit LST 0	

### Mounting Options

Gearbox	Max Bore Rectangle Key BS4235	Max Square Bore AF	ISO Flange Standard Baseplate	ISO Flange Filled Baseplate	ISO Flange Enhanced Baseplate	Filled Baseplate Thickness	Enhanced Baseplate Thickness
MOW3	45	36	F10 - F12	-	F14 - F16	-	22
MOW4	64	51	F10 - F12- F14	-	F16	-	25
MOW5	76	62	F14 - F16	F25	F25	6	32
MOW6	102	83.3	F16 - F25	F16 - F25 - F30	F30	0	23
MOW7	136	108.8	F25 - F30	F30	F35	10	31
MOW8	157	122.9	F25 - F30 - F35 -F40	F25 - F30 - F35	F40 - F48	0	38
MOW9	178	132.1	F30 - F35 - F40	F30 - F35 - F40	F40 - F48	0	27
MOW10	203	152.6	F35 - F40 - F48	F48	F60	0	32
MOW11	203	152.6	F35 - F40 - F48	F60	-	0	-
MOW11BB	270	190	F40 - F48	F60	-	0	-

Note: Because of the company's policy of continuous improvement, Rotork Gears reserves the right to change specification details without prior notice.

### MOW Modulating Worm Gearbox sizing chart

Gearbox	Ratio							Output Torque (Nm)	Max Input Torque (Nm)								Mechanical Advantage ±10%										
MOW3	40							357	24											15							
MOW3	70							357	16												23						
MOW4	40	80						881	59	30											15	29					
MOW4	70							881	38												23						
MOW4	120	160	200					949	22	17	13										43	57	71				
MOW4	140							949	22												44						
MOW4	210	280	350	420				983	15	11	9	7									66	88	110	132			
MOW4	240							983	11												86						
MOW5	40							1424	84												17						
MOW5	70							1424	62												23						
MOW5	80	120	160	200	240			1559	49	32	24	19	16								32	48	65	81	97		
MOW5	140	210	280	350	420			1559	35	24	18	14	12								44	66	88	110	132		
MOW6	70							3390	147												23						
MOW6	140	210						3864	88	59											44	66					
MOW6	280	350	420					4135	47	38	31										88	110	132				
MOW7	60	120	180					5423	217	113	76										25	48	71				
MOW7	240	360	480	540	720			6101	64	43	32	29	21								95	142	189	214	285		
MOW8	60							10169	407												25						
MOW8	120	180	240	360	480	540	720	10846	226	153	114	76	57	51	38						48	71	95	142	189	214	285
MOW9	60	180	240	360	480	540	720	19659	786	277	207	138	104	92	69						25	71	95	142	189	214	285
MOW9	960	1080	1440	2160	2520	3000		21015	55	49	37	25	21	18							380	428	570	855	998	1188	
MOW10	60	180	240	360	540	720		26099	1044	368	275	184	122	92							25	71	95	142	214	285	
MOW10	960	1080	1440	2160	2520	3000		27116	71	63	48	32	27	23							380	428	570	855	998	1188	
MOW11	60	180	240	360				40674	1627	573	428	286									25	71	95	142			
MOW11	540	720	960	1080				44064	206	155	116	103									214	285	380	428			
MOW11	1440	2160	2520	3000				46775	82	55	52	43									570	855	900	1100			

Note: Because of the company's policy of continuous improvement, Rotork Gears reserves the right to change specification details without prior notice. For maximum seating torque please refer to IW series. The published M.A. is achieved after a few cycles.

A full listing of the Rotork sales and service network is available on our website.