

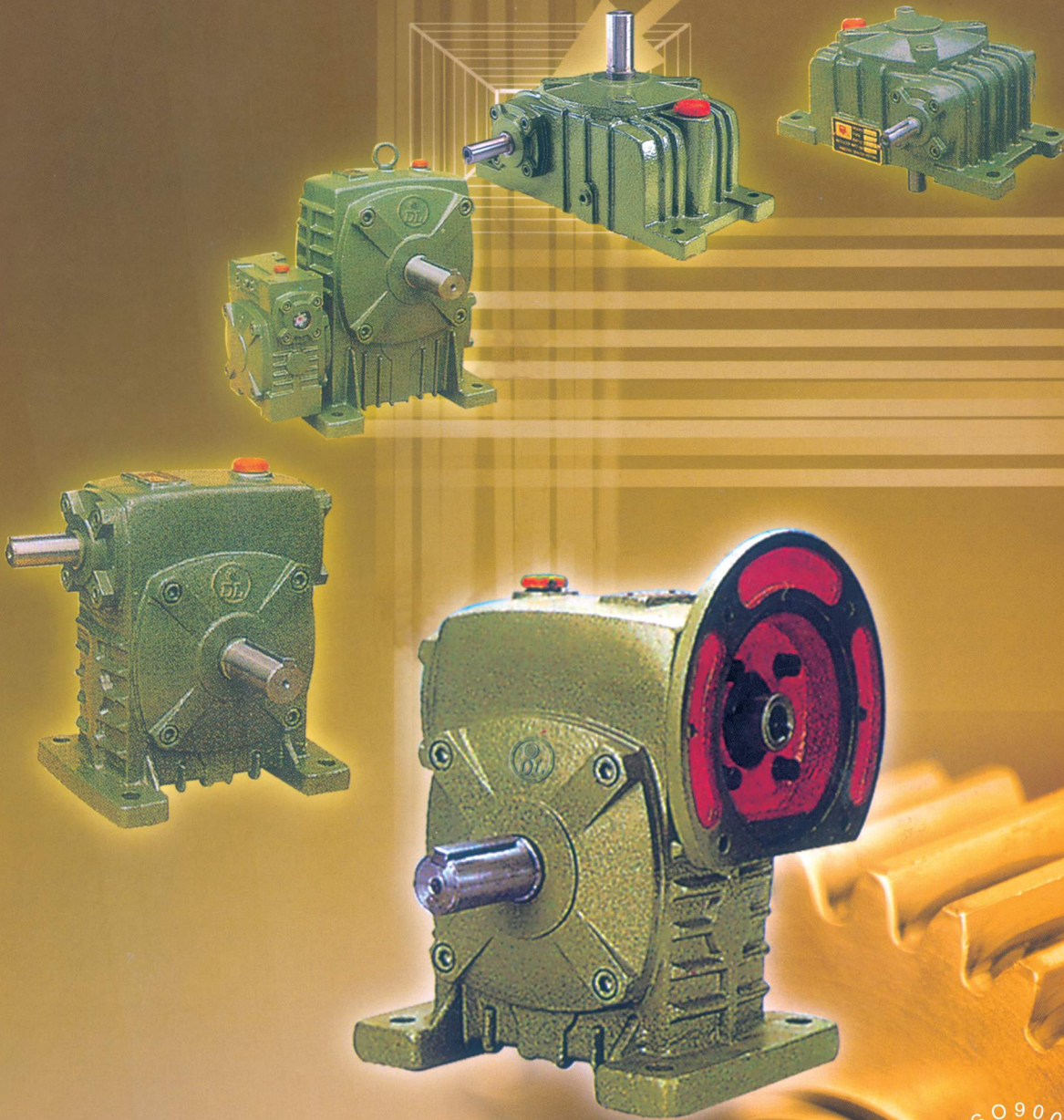


DOLIN[®]
品質. 服務. 創新



DONG LING[®]
QUALITY . SERVICE . INNOVATION

蝸輪減速機系列
WORM REDUCER SERIES



 **東菱機電科技制造有限公司**
DONG LING M&E TECHNOLOGY MANUFACTURE CO., LTD



專業製造廠



敬業、務實、團結、拚搏

Devoted Career, Pragmatic, United, Efforts

- 企業目標：做精、做強、做大
Business Objective: Refined, Strong, Large
- 經營理念：質量第一、服務真誠、不斷創新
Management Philosophy: First Quality, Sincere Service, Vncreasing Innovation
- 質量觀：質量是品牌的基石、品牌是企劃的生命
Values: Quality is foundation stone of brand, Brand is life of business
- 營銷理念：以市場為導向、以質量求生存、以信譽求發展
Marketing Philosophy: Market-Oriented, Living is in quality, Developing is in reputation



台灣東菱集團公司
TAIWAN DONG LING GROUP CO.LTD

專業製造廠
Professional manufacturing factory

企業簡介

Company Biography

- 1988 東菱機電台灣公司創立
DOLIN was established in Taiwan.
- 2003 通過ISO9001:2000質量管理體系認證
Acquired ISO9001:2000 Quality Management System Certificate.
通過首批強制性產品(CCC)認證
Acquired CCC Certification.
- 2004 首次推出高精度生產設備系列：分條機、複卷機、分切機、以及薄膜貼合機
Introduced new precision-machinery series: Slitting Machines, Rewinding Machines, Cutting Machines, and Laminating Machines.
- 2011 東菱企業更趨壯大穩固，成為擁有超過 200 員工的中型企業。
我們的產品市場遍布整個中國大陸、台灣、以及東南亞等地區。
DOLIN has developed steadily and become a medium-size manufacturer with more than 200 professional employees.
Our market has expanded all over mainland China, Taiwan area and other countries and regions in Southeast Asia.
- 2012 東菱集团在越南平陽省設立分公司。越南東菱責任有限公司
Dolin Group established a branch in Vietnam, Binh Duong province. Dong Ling M&E Technology Manufacture CO.LTD
- 2016 東菱集团在越南河內成立分公司。河內分公司
Dolin Group established a branch in Vietnam, Ha Noi province. Branch in Hanoi

至今 東菱企業不斷致力於服務客戶，可信賴的產品品質已成為東菱不可抹滅的品牌形象並帶領我們的產品迎向全世界。
Currently DOLIN does not stop trying our best to serve customers. Our quality and reliability have strongly consolidated our brand reputation and brought our products to worldwide markets.

● 通過ISO9001:2000品質認證

ISO9001:2000 quality management system certification

● 通過國家強制性產品認證

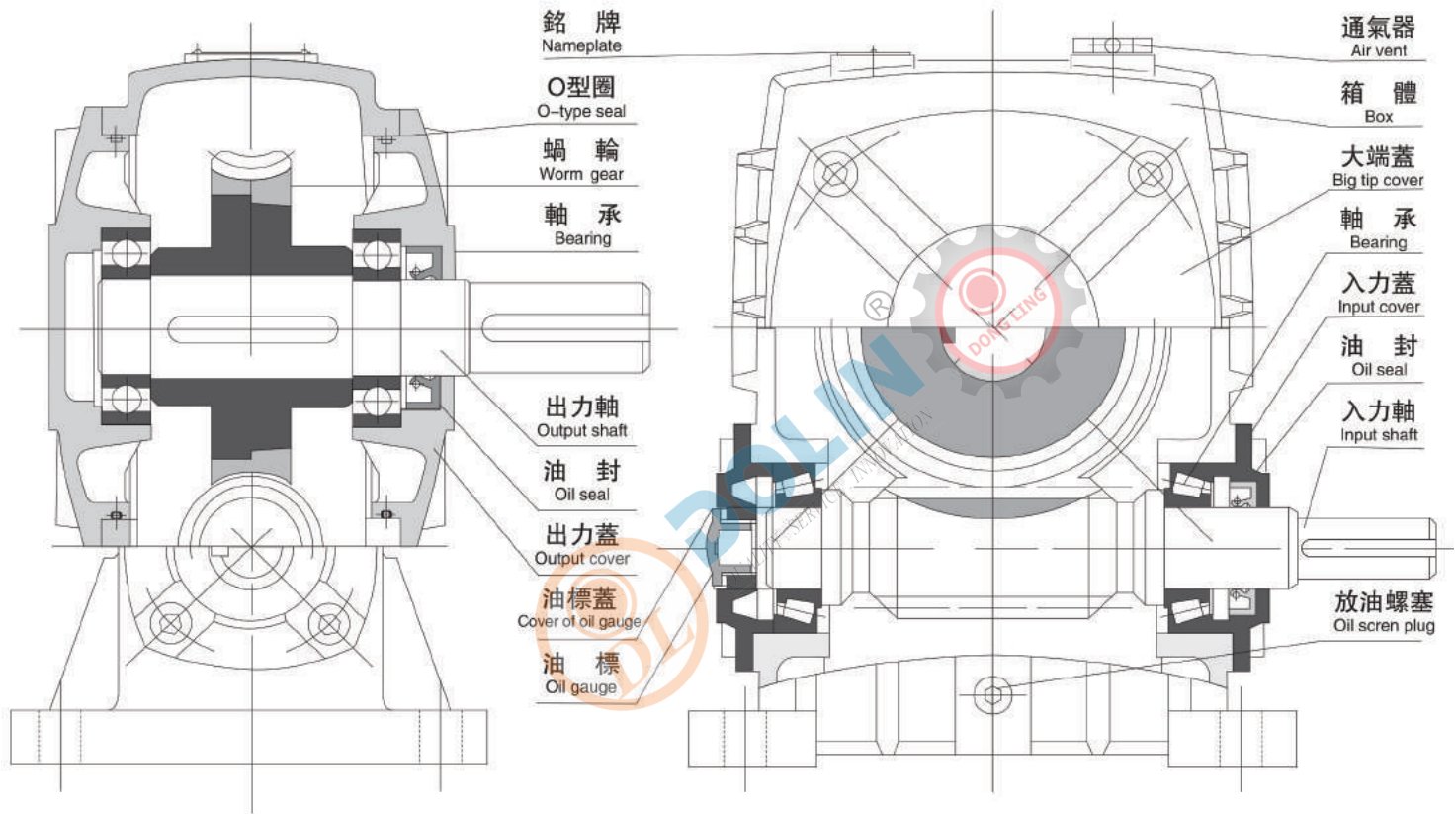
"CCC" certification





蜗轮减速机产品机构图

Product structural drawing of worm gear speed reducer



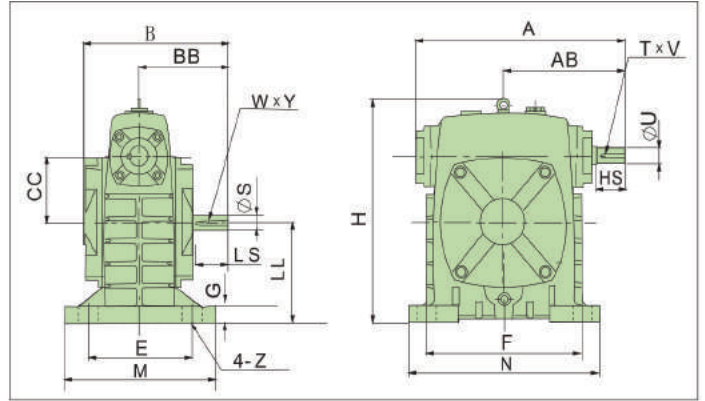
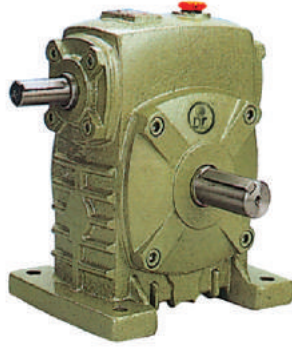
結構圖

Structural Drawing

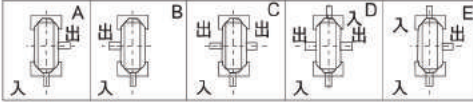
DL 減速機型號及表示方法 Size & Expressions of DL Speed Reducer

- DL—東菱代號
DOLIN Code
 - H—入力軸在上面
Upper input shaft
 - L—入力在下面
Lower input shaft
 - U—出力軸向下
Lower output shaft
 - V—出力軸向上
Upper output shaft
 - M—電動機連接式 (法蘭機種)
Type of motor upright(flange) joint
- | | | | | | |
|----------------------|------------|----------------------------------|-------------|-----------------------|-------------------|
| DL | LW | 70 | 1/30 | B | 1 |
| 公司代號
Company Name | 機型
Type | 型號中心距
Size & Central Distance | 速比
Ratio | 軸向
Shaft Direction | 馬力
Horse Power |

DL-HW

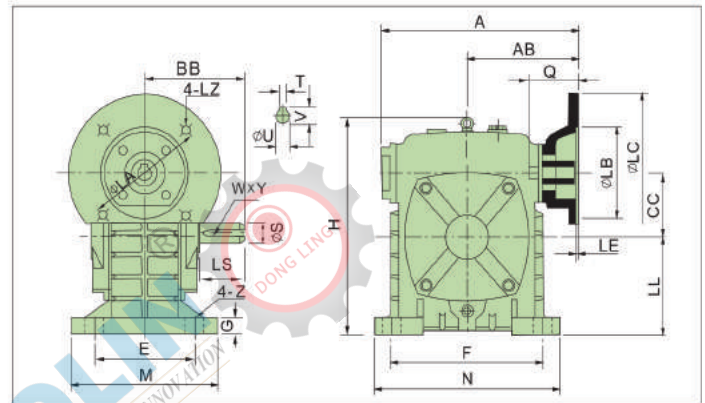


HW 軸指向表示
HW Shaft Direction

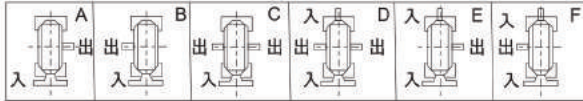


型號 Size	減速比 Ratio	尺寸 (Dimensions)													輸入軸 Input shaft			輸出軸 Output shaft			重量 Weight(kg)
		A	AB	B	BB	CC	H	LL	M	N	E	F	G	Z	HS	U	T x V	LS	S	W x Y	
40	1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60	143	87	114	74	40	141	60	90	100	70	80	13	10	25	12	4x2.5	28	14	5x3	4
50		175	107	150	97	50	180	80	120	140	95	110	15	12	30	12	4x2.5	40	17	5x3	7
60		198	122	168	112	60	207	90	130	150	105	120	20	12	40	15	5x3	50	22	6x3.5	10
70		231	140	194	131	70	238	105	150	190	115	150	20	15	40	18	6x3.5	60	28	8x4	15
80		261	160	214	142	80	273	120	170	220	135	180	20	15	50	22	6x3.5	65	32	10x5	20
100		322	190	254	169	100	334	150	190	270	155	220	25	15	50	25	8x4	75	38	10x5	35
120		381	229	282	190	120	423	180	230	320	180	260	30	18	65	30	8x4	85	45	14x5.5	60
135		433	260	317	210	135	482	215	250	350	200	290	30	18	75	35	10x5	95	55	16x6	80
155		504	302	382	252	155	541	235	275	390	220	320	35	21	85	40	12x5	110	60	18x7	110
175		545	325	402	262	175	600	260	310	430	250	350	40	21	85	45	14x5.5	110	65	18x7	150
200	587	350	467	305	200	677	290	360	480	290	390	40	24	95	50	14x5.5	125	70	20x7.5	215	
250	705	420	552	360	250	824	350	460	560	380	480	45	28	110	60	18x7	155	90	25x9	350	

DL-HMW

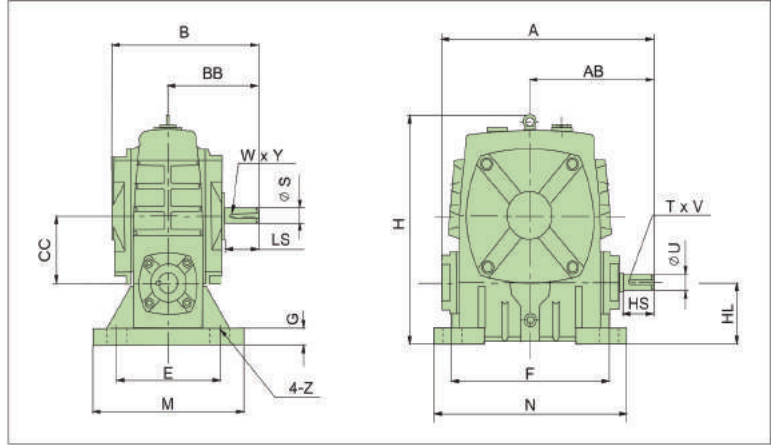
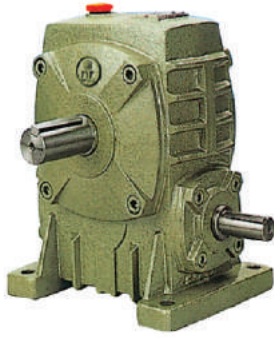


HMW 軸指向表示
HMW Shaft Direction

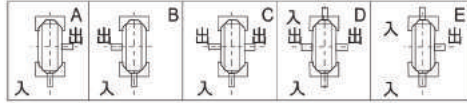


型號 Size	輸入功率 Input(KW)	減速比 Ratio	尺寸 (Dimensions)													電動機法蘭 Flange				輸入孔 Input bore			輸出軸 Output shaft			重量 Weight(kg)
			A	AB	BB	CC	H	LL	M	N	E	F	G	Z	LA	LB	LC	LE	LZ	Q	U	T x V	LS	S	W x Y	
50	0.18	1/10 1/15 1/20 1/25 1/30 1/40 1/50 1/60	151	83	97	50	176	80	120	140	95	110	15	12	115	95	140	4	M8	31	11	4 X 12.8	40	17	5 X 3	8
60	0.37		167	91	112	60	202	90	130	150	105	120	20	12	130	110	160	4	M8	33	14	5 X 16.3	50	22	6 X 3.5	11
70	0.37		200	109	131	70	238	105	150	190	115	150	20	15	130	110	160	4	M8	40	14	5 X 16.3	60	28	8 X 4	17
	0.75		202	111																						
80	0.75		225	125	142	80	273	120	170	220	135	180	20	15	165	130	200	4.5	M10	42	19	6 X 21.8	65	32	10 X 5	22
	1.5		52	24	8 X 27.3																					
100	1.5		280	148	169	100	334	150	190	270	155	220	25	15	165	130	200	4.5	M10	52	24	8 X 27.3	75	38	10 X 5	38
120	2.2		333	181	190	120	423	180	230	320	180	260	30	18	215	180	250	5	M12	63	28	8 X 31.3	85	45	14 X 5.5	64
135	3.7		375	202	210	135	482	215	250	350	200	290	30	18	215	180	250	5	M12	63	28	8 X 31.3	95	55	16 X 6	85
155	5.5		448	247	252	155	541	235	275	390	220	320	35	21	265	230	300	5	M12	83	38	10 X 41.3	110	60	18 X 7	118
175	5.5	481	262	262	175	600	260	310	430	250	350	40	21	265	230	300	5	M12	83	38	10 X 41.3	110	65	18 X 7	165	
	7.5																									
200	11.0	543	285	305	200	677	290	360	480	290	390	40	24	300	250	350	6	M16	114	42	12 X 45.3	125	70	20 X 7.5	236	
250	15.0	615	330	360	250	824	350	460	560	380	480	45	28	300	250	350	6	M16	114	42	12 X 45.3	155	90	25 X 9	396	

DL-LW



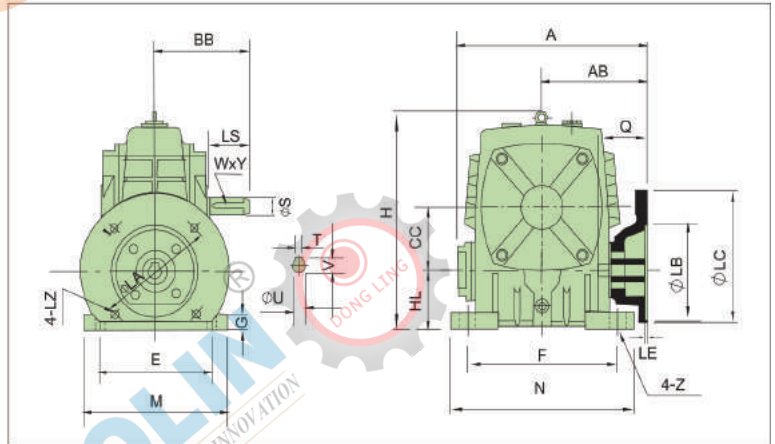
LW 軸指向表示
LW Shaft Direction



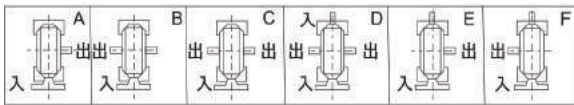
單位: mm

型號 Size	減速比 Ratio	A	AB	B	BB	CC	H	HL	M	N	E	F	G	Z	入力軸 Input shaft			出力軸 Output shaft			重量 Weight(kg)
															HS	U	T x V	LS	S	W x Y	
40	1/10	143	87	114	74	40	138	40	90	100	70	80	13	10	25	12	4x2.5	28	14	5x3	4
50		175	107	150	97	50	176	50	120	140	95	110	15	12	30	12	4x2.5	40	17	5x3	7
60	1/15	198	122	168	112	60	204	60	130	150	105	120	20	12	40	15	5x3	50	22	6x3.5	10
70		231	140	194	131	70	236	70	150	190	115	150	20	15	40	18	6x3.5	60	28	8x4	15
80	1/20	261	160	214	142	80	268	80	170	220	135	180	20	15	50	22	6x3.5	65	32	10x5	20
100		322	190	254	169	100	336	100	190	270	155	220	25	15	50	25	8x4	75	38	10x5	35
120	1/25	381	229	282	190	120	430	120	230	320	180	260	30	18	65	30	8x4	85	45	14x5.5	60
135		433	260	317	210	135	480	135	250	350	200	290	30	18	75	35	10x5	95	55	16x6	80
155	1/40	504	302	382	252	155	531	135	275	390	220	320	35	21	85	40	12x5	110	60	18x7	110
175		545	325	402	262	175	600	160	310	430	250	350	40	21	85	45	14x5.5	110	65	18x7	150
200	1/60	587	350	467	305	200	666	175	360	480	290	390	40	24	95	50	14x5.5	125	70	20x7.5	215
250		705	420	552	360	250	800	200	460	560	380	480	45	28	110	60	18x7	155	90	25x9	360

DL-LMW



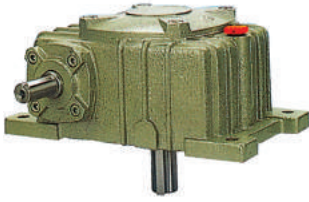
LMW 軸指向表示
LMW Shaft Direction



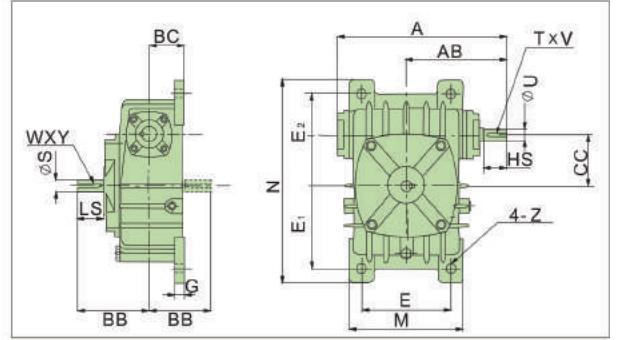
單位: mm

型號 Size	入功率 Input(KW)	減速比 Ratio	A	AB	BB	CC	H	HL	M	N	E	F	G	Z	電動機法蘭 Flange				入力孔 Input bore			出力軸 Output shaft			重量 Weight(kg)	
															LA	LB	LC	LE	LZ	Q	U	T x V	LS	S		W x Y
50	0.18	1/10	151	83	97	50	176	50	120	140	95	110	15	12	115	95	140	4	M8	31	11	4 X 12.8	40	17	5 X 3	8
60	0.37		167	91	112	60	204	60	130	150	105	120	20	12	130	110	160	4	M8	33	14	5 X 16.3	50	22	6 X 3.5	11
70	0.37	1/15	200	109	131	70	236	70	150	190	115	150	20	15	130	110	160	4	M8	40	14	5 X 16.3	60	28	8 X 4	17
	70		202	111																						
80	0.75	1/20	225	125	142	80	268	80	170	220	135	180	20	15	165	130	200	4.5	M10	48	19	6 X 21.8	65	32	10 X 5	22
100	1.5		280	148	169	100	336	100	190	270	155	220	25	15	165	130	200	4.5	M10	52	24	8 X 27.3	75	38	10 X 5	38
120	2.2	1/25	333	181	190	120	430	120	230	320	180	260	30	18	215	180	250	5	M12	63	28	8 X 31.3	85	45	14 X 5.5	64
135	3.7		375	202	210	135	480	135	250	350	200	290	30	18	215	180	250	5	M12	63	28	8 X 31.3	95	55	16 X 6	85
155	5.5	1/30	448	247	252	155	531	135	275	390	220	320	35	21	265	230	300	5	M12	83	38	10 X 41.3	110	60	18 X 7	118
175	7.5		481	262	262	175	600	160	310	430	250	350	40	21	265	230	300	5	M12	83	38	10 X 41.3	110	65	18 X 7	165
200	11.0	1/60	543	285	305	200	666	175	360	480	290	390	40	24	300	250	350	6	M16	114	42	12 X 45.3	125	70	20 X 7.5	236
250	15.0		615	330	360	250	800	200	460	560	380	480	45	28	300	250	350	6	M16	114	42	12 X 45.3	155	90	25 X 9	396

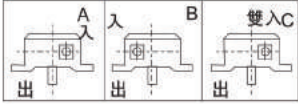
DL-UW



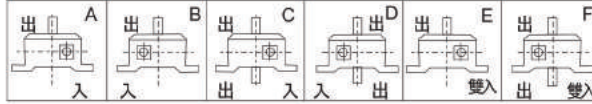
DL-VW



UW 軸指向表示
UW Shaft Direction



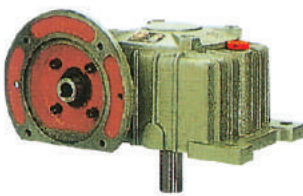
VW 軸指向表示
VW Shaft Direction



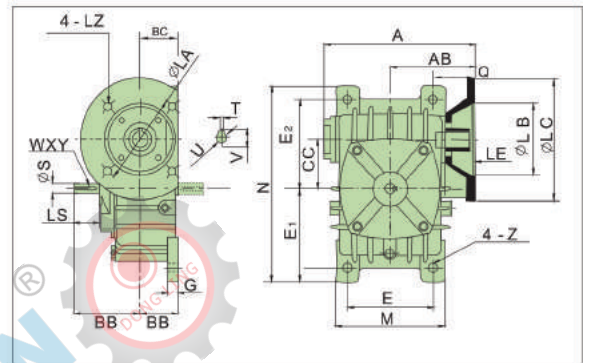
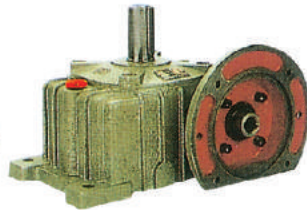
單位: mm

型號 Size	減速比 Ratio	A	AB	BB	BC	CC	M	N	E	E ₁	E ₂	G	Z	HS	輸入軸 Input shaft U TxV	輸出軸 Output shaft LS S WxY	重量 Weight(kg)
40		143	87	74	45	40	94	184	70	74	86	10	10	25	12 4x2.5	28 14 5x3	5
50		175	107	97	50	50	116	220	90	93	102	15	12	30	12 4x2.5	40 17 5x3	6
60	1/10	198	122	112	55	60	126	260	100	105	120	20	12	40	15 5x3	50 22 6x3.5	10
70	1/15	231	140	131	65	70	156	295	120	120	135	20	15	40	18 6x3.5	60 28 8x4	15
80	1/20	261	160	142	70	80	175	320	140	130	150	20	15	50	22 6x3.5	65 32 10x5	20
100	1/25	322	190	169	90	100	224	375	190	155	180	26	15	50	25 8x4	75 38 10x5	35
120	1/30	381	229	190	100	120	266	450	220	185	215	30	18	65	30 8x4	85 45 14x5.5	50
135	1/40	433	260	210	110	135	306	495	260	210	235	30	18	75	35 10x5	95 55 16x6	75
155	1/50	504	302	252	140	155	350	590	290	245	295	35	21	85	40 12x5	110 60 18x7	115
175	1/60	545	325	262	150	175	394	640	320	267	323	40	21	85	45 14x5.5	110 65 18x7	140
200		587	350	305	175	200	440	710	370	290	360	40	24	95	50 14x5.5	125 70 20x7.5	200
250		705	420	360	200	250	510	860	440	350	440	45	28	110	60 18x7	155 90 25x9	340

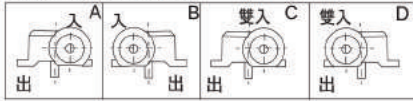
DL-UMW



DL-VMW



UMW 軸指向表示
UMW Shaft Direction



VMW 軸指向表示
VMW Shaft Direction

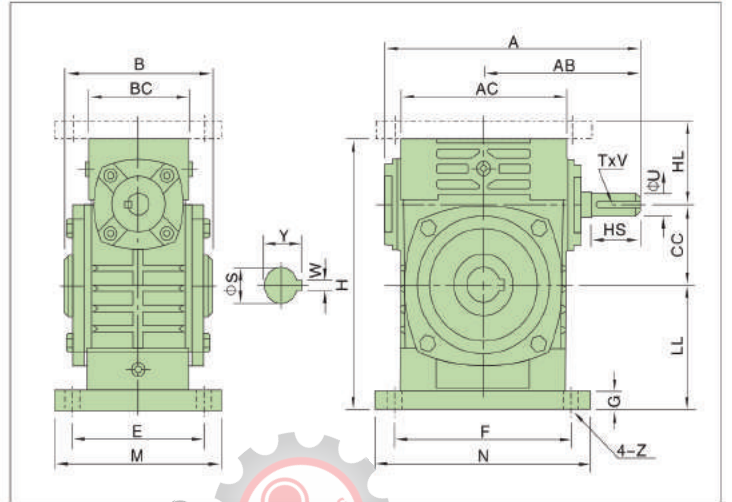
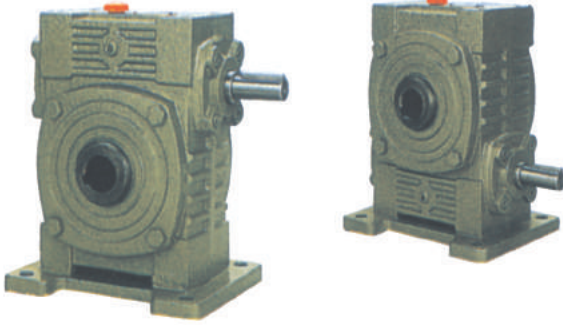


單位: mm

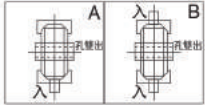
型號 Size	入功率 Input(KW)	減速比 Ratio	A	AB	BB	BC	CC	M	N	E	E ₁	E ₂	G	Z	電動機法蘭 Flange				入力孔 Input bore				出力軸 Output shaft			重量 Weight(kg)
															LA	LB	LC	LE	LZ	Q	U	TxV	LS	S	WxY	
50	0.18		151	83	97	50	50	116	220	90	93	102	15	12	115	95	140	4 M8	31 11	4 X 12.8	40 17	5 X 3	8			
60	0.37		167	91	112	55	60	126	260	100	105	120	20	12	130	110	160	4 M8	33 14	5 X 16.3	50 22	6 X 3.5	11			
70	0.37		200	109		131	65	70	156	295	120	120	135	20	130	110	160	M8	40 14	5 X 16.3						
	0.75		202	111											165	130	200	4 M10	42 19	6 X 21.8	60 28	8 X 4	17			
80	0.75	1/10																	48 19	6 X 21.8						
	1.5	1/15	225	125	142	70	80	175	320	140	130	150	20	15	165	130	200	4.5 M10	52 24	8 X 27.3	65 32	10 X 5	22			
100	1.5	1/20	280	148	169	90	100	224	375	190	155	180	26	15	165	130	200	4.5 M10	52 24	8 X 27.3	75 38	10 X 5	38			
120	2.2	1/25	333	181	190	100	120	266	450	220	185	215	30	18	215	180	250	5 M12	63 28	8 X 31.3	85 45	14 X 5.5	54			
135	3.7	1/30	375	202	210	110	135	306	495	260	210	235	30	18	215	180	250	5 M12	63 28	8 X 31.3	95 55	16 X 6	80			
155	5.5	1/40	448	247	252	140	155	350	590	290	245	295	35	21	265	230	300	5 M12	83 38	10 X 41.3	110 60	18 X 7	122			
175	5.5	1/50	481	262	262	150	175	394	640	320	267	323	40	21	265	230	300	5 M12	83 38	10 X 41.3	110 65	18 X 7	154			
	7.5																									
200	11.0	1/60	543	285	305	175	200	440	710	370	290	360	40	24	300	250	350	6 M16	114 42	12 X 45.3	125 70	20 X 7.5	220			
250	11.0		615	330	360	200	250	510	860	440	350	440	45	28	300	250	350	6 M16	114 42	12 X 45.3	155 90	25 X 9	374			

DL-HOW

DL-LOW



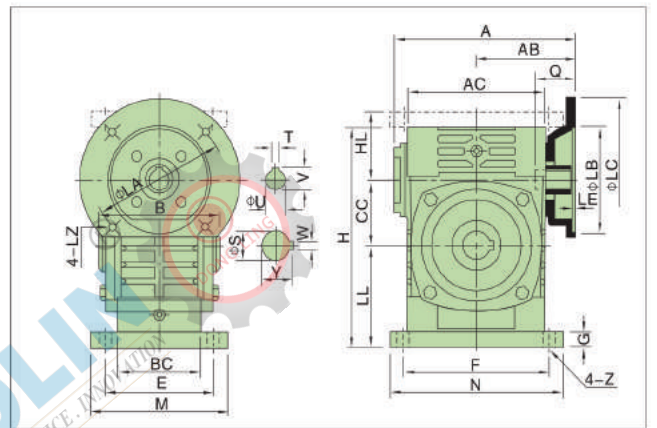
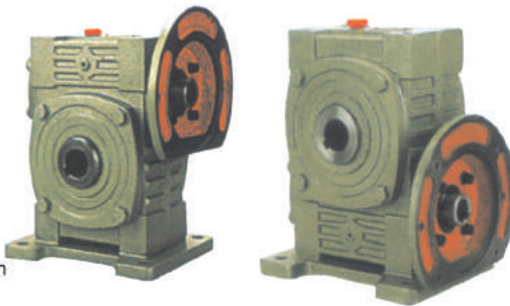
HOW/LOW 軸指向表示
HOW/LOW Shaft Direction



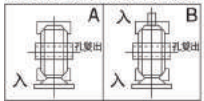
型號 Size	減速比 Ratio	單位: mm														入力軸 Input shaft		出力孔 Output bore		重量 Weight (kg)		
		A	AB	B	AC	BC	CC	HL	LL	H	M	N	E	F	G	Z	HS	U	TxV		S	WxY
40		149	89	90	95	61	40	45	60	135	100	130	80	110	10	10	25	12	4X2.5	16	5X18.3	4.5
50		175	107	110	111	68	50	50	80	165	120	140	95	110	15	12	30	12	4X2.5	20	6X22.8	7.5
60	1/10	198	122	120	127	76	60	60	93	195	130	150	105	120	18	12	40	15	5X3	25	8X28.3	11.5
70	1/15	213	140	132	152	86	70	73	108	233	150	190	115	150	18	15	40	18	6X3.5	30	8X33.3	15.5
80	1/20	261	160	150	169	102	80	83	123	268	170	220	135	180	18	15	50	22	6X3.5	35	10X38.3	24
100	1/25	322	190	174	216	117	100	100	150	330	190	270	155	220	20	15	50	25	8X4	40	12X43.3	39
120	1/30	381	229	180	256	124	120	120	180	395	230	320	180	260	25	18	65	30	8X4	45	14X48.8	57
135	1/40	433	260	214	296	147	135	135	215	455	250	350	200	290	30	18	75	35	10X5	60	18X64.4	85
155	1/50	504	302	256	345	185	155	135	235	493	280	380	220	320	32	21	85	40	12X5	70	20X74.9	110
175	1/60	545	325	282	374	192	175	160	260	558	310	410	250	350	37	21	85	45	14X5.5	80	22X85.4	152
200		587	350	324	412	230	200	175	290	620	355	445	290	390	45	24	95	50	14X5.5	85	22X90.4	216
250		705	420	400	500	285	250	200	350	750	460	560	380	480	50	28	110	60	18X7	110	28X116.4	350

DL-HOM

DL-LOM



HOM/LOM 軸指向表示
HOM/LOM Shaft Direction



型號 Size	入功率 Input(KW)	減速比 Ratio	單位: mm														電動機法蘭 Flange		入力孔 Input bore		出力孔 Output bore		重量 Weight (kg)					
			A	AB	B	AC	BC	CC	HL	LL	H	M	N	E	F	G	Z	LA	LB	LC	LE	LZ		Q	U	TxV	S	WxY
40	0.09		135	75	90	95	61	40	45	60	135	100	130	80	110	10	10	115	95	140	4	M8	31	11	4X12.8	16	5X18.3	5
50	0.18		151	83	110	111	68	50	50	80	165	120	140	95	110	15	12	115	95	140	4	M8	31	11	4X12.8	20	6X22.8	8
60	0.37		167	91	120	127	76	60	60	93	195	130	150	105	120	18	12	130	110	160	4	M8	33	14	5X16.3	25	8X28.3	12.5
70	0.37	1/10	200	109																		M8	40	14	5X16.3			
	0.75	1/15	202	111	132	152	86	70	73	108	233	150	190	115	150	18	15	165	130	200	4	M10	42	19	6X21.8	30	8X33.3	17
80	0.75	1/20	225	125	150	169	102	80	83	123	268	170	220	135	180	18	15	165	130	200	4.5	M10	48	19	6X21.8			
	1.5																						52	24	8X27.3	35	10X38.3	26
100	1.5	1/25	280	148	174	216	117	100	100	150	330	190	270	155	220	20	15	165	130	200	4.5	M10	52	24	8X27.3	40	12X43.3	41.5
120	2.2	1/30	333	181	180	256	124	120	120	180	395	230	320	180	260	25	18	215	180	250	5	M12	63	28	8X31.3	45	14X48.8	60
135	3.7	1/40	375	202	214	296	147	135	135	215	455	250	350	200	290	30	18	215	180	250	5	M12	63	28	8X31.3	60	18X64.4	90
155	5.5	1/50	448	247	256	345	185	155	155	235	493	280	380	220	320	32	21	265	230	300	5	M12	83	38	10X41.3	70	20X74.9	118
175	5.5	1/60	481	262	282	374	192	175	160	260	558	310	410	250	350	37	21	265	230	300	5	M12	83	38	10X41.3	80	22X85.4	167
	7.5																											
200	11.0		543	285	324	412	230	200	175	290	620	355	450	290	390	45	24	300	250	350	6	M16	114	42	12X45.3	85	22X90.4	237
250	11.0		615	330	400	500	285	250	200	350	750	460	560	380	480	50	28	300	250	350	6	M16	114	42	12X45.3	110	28X116.4	395

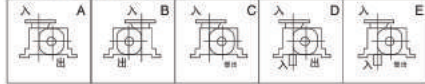
DL-TMW



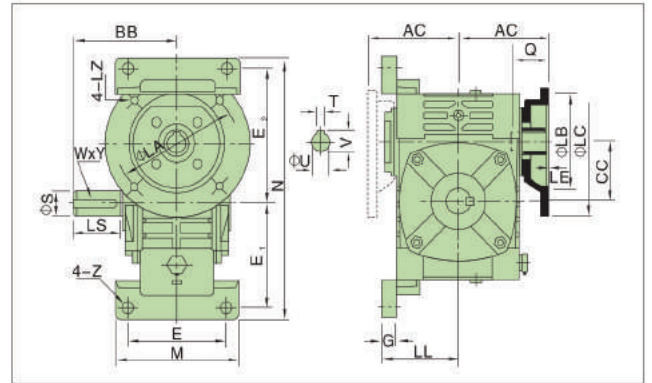
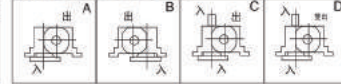
DL-TMV



TMW 軸指向表示
TMW Shaft Direction



TMV 軸指向表示
TMV Shaft Direction



單位: mm

型號 Size	入功率 Input(KW)	減速比 Ratio	AC	BB	CC	LL	M	N	E	E ₁	E ₂	G	Z	電動機法蘭 Flange				入力孔 Input bore			出力軸 Output shaft			重量 Weight (kg)	
														LA	LB	LC	LE	LZ	Q	U	TxV	LS	S		WxY
40	0.09	1/10	75	79	40	63	90	187	70	72	97	12	10	115	95	140	4	M8	31	11	4X12.8	28	14	5X3	5.4
50	0.18		83	97	50	70	120	226	95	90	110	14	12	115	95	140	4	M8	31	11	4X12.8	40	17	5X3	8.5
60	0.37	1/15	91	112	60	80	130	257	105	102	129	15	12	130	110	160	4	M8	33	14	5X16.3	50	22	6X3.5	12
70	0.75		109	131	70	95	150	305	115	120	155	20	15	130	110	160	4	M8	40	14	5X16.3	60	28	8X4	17
80	1.5	1/25	125	142	80	105	170	350	135	140	180	20	15	165	130	200	4.5	M10	48	19	6X21.8	65	32	10X5	26
100	1.5	1/30	148	169	100	135	190	410	155	165	215	22	15	165	130	200	4.5	M10	52	24	8X27.3	75	38	10X5	40.5
120	2.2	1/40	181	190	120	160	230	494	180	195	255	25	18	215	180	250	5	M12	63	28	8X31.3	85	45	14X5.5	59
135	3.7	1/50	202	210	135	185	250	559	200	230	285	30	18	215	180	250	5	M12	63	28	8X31.3	95	55	16X6	89
155	5.5	1/60	247	252	155	220	275	605	220	250	305	35	21	265	230	300	5	M12	83	38	10X41.3	110	60	18X7	138
175	5.5	7.5	262	262	175	240	310	675	250	273	348	40	21	265	230	300	5	M12	83	38	10X41.3	110	65	18X7	172
200	11.0		285	305	200	280	360	749	290	305	390	40	24	300	250	350	6	M16	114	42	12X45.3	125	70	20X7.5	246
250	11.0	15.0	330	360	250	315	460	920	380	375	475	45	28	300	250	350	6	M16	114	42	12X45.3	155	90	25X9	400

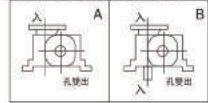
DL-TOM



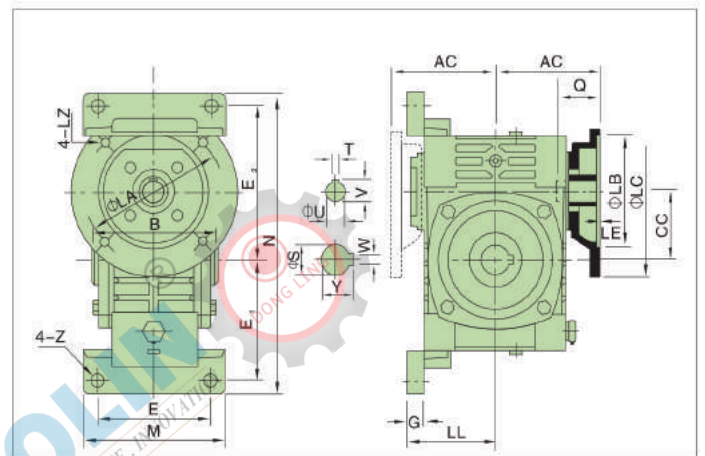
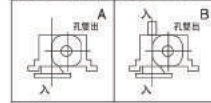
DL-TOV



TOM 軸指向表示
TOM Shaft Direction



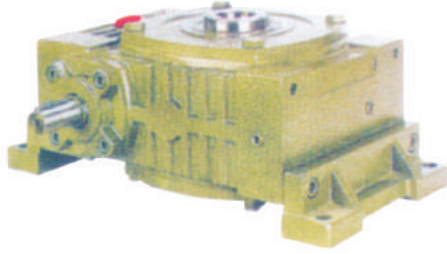
TOV 軸指向表示
TOV Shaft Direction



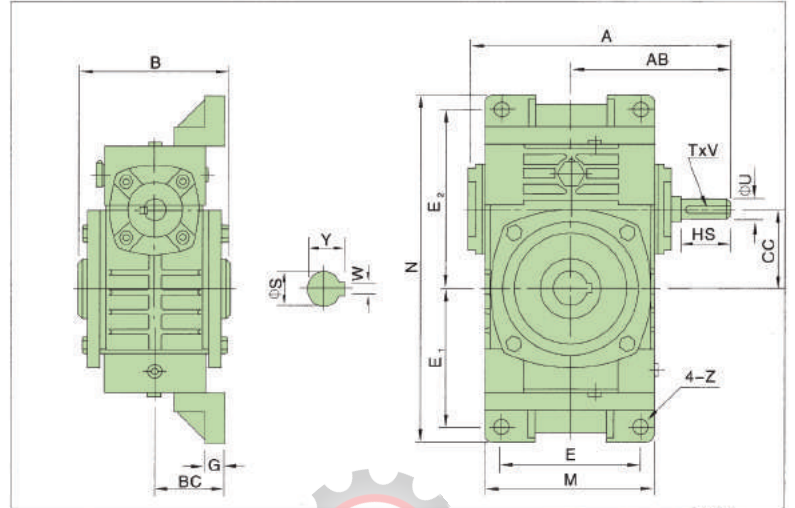
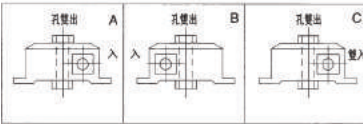
單位: mm

型號 Size	入功率 Input(KW)	減速比 Ratio	AC	B	CC	LL	M	N	E	E ₁	E ₂	G	Z	電動機法蘭 Flange				入力孔 Input bore			出力孔 Output bore			重量 Weight (kg)
														LA	LB	LC	LE	LZ	Q	U	TxV	S	WxY	
40	0.09	1/10	75	90	40	63	90	187	70	72	97	12	10	115	95	140	4	M8	31	11	4X12.8	16	5x18.3	5.4
50	0.18		83	110	50	70	120	226	95	90	110	14	12	115	95	140	4	M8	31	11	4X12.8	20	6x22.8	8.5
60	0.37	1/15	91	120	60	80	130	257	105	102	129	15	12	130	110	160	4	M8	33	14	5X16.3	25	8x28.3	12
70	0.75		109	132	70	95	150	305	115	120	155	20	15	130	110	160	4	M8	40	14	5X16.3	30	8x33.3	17
80	1.5	1/20	125	150	80	105	170	350	135	140	180	20	15	165	130	200	4.5	M10	48	19	6X21.8	35	10x38.3	26
100	1.5	1/30	148	174	100	135	190	410	155	165	215	22	15	165	130	200	4.5	M10	52	24	8X27.3	40	12x43.3	40.5
120	2.2	1/40	181	180	120	160	230	494	180	195	255	25	18	215	180	250	5	M12	63	28	8X31.3	45	14x48.8	59
135	3.7	1/50	202	214	135	185	250	559	200	230	285	30	18	215	180	250	5	M12	63	28	8X31.3	60	18x64.4	89
155	5.5	1/60	247	256	155	220	275	605	220	250	305	35	21	265	230	300	5	M12	83	38	10X41.3	70	20x74.9	138
175	5.5	7.5	262	282	175	240	310	675	250	273	348	40	21	265	230	300	5	M12	83	38	10X41.3	80	22x85.4	172
200	11.0		285	324	200	280	360	749	290	305	390	40	24	300	250	350	6	M16	114	42	12X45.3	85	22x90.4	246
250	11.0	15.0	330	400	250	315	460	920	380	375	475	45	28	300	250	350	6	M16	114	42	12X45.3	110	28x116.4	400

DL-EOW



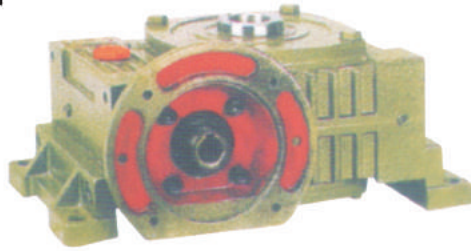
EOW 軸指向表示
EOW Shaft Direction



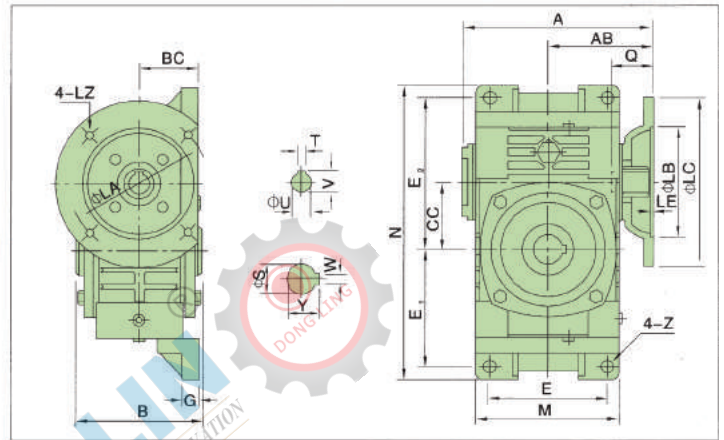
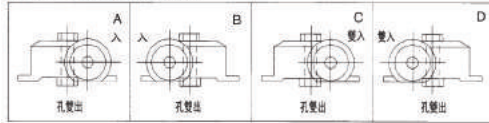
單位: mm

型號 Size	減速比 Ratio	A	AB	B	BB	CC	M	N	E	E ₁	E ₂	G	Z	入力軸 Input shaft			出力孔 Output bore		重量 Weight (kg)
														HS	U	T x V	S	W x Y	
40	1/10	149	89	90	45	40	95	187	70	72	97	12	10	25	12	4x2.5	16	5x18.3	5
50		175	107	110	50	50	111	226	90	90	110	14	12	30	12	4x2.5	20	6x22.8	8
60		198	122	120	55	60	127	257	100	102	129	15	12	40	15	5x3	25	8x28.3	11
70	1/15	231	140	132	65	70	152	305	120	120	155	20	15	40	18	6x3.5	30	8x33.3	15.5
80	1/20	261	160	150	70	80	174	350	140	140	180	20	15	50	22	6x3.5	35	10x38.3	24
100	1/25	322	190	174	90	100	224	410	190	165	215	22	15	50	25	8x4	40	12x43.3	38
120	1/30	381	229	180	100	120	264	494	220	195	255	25	18	65	30	8x4	45	14x48.8	56
135	1/40	433	260	214	110	135	304	559	260	230	285	30	18	75	35	10x5	60	18x64.4	84
155	1/50	504	302	256	140	155	345	605	290	250	305	35	21	85	40	12x5	70	20x74.9	129
175	1/60	545	325	282	150	175	374	675	320	273	348	40	21	85	45	14x5.5	80	22x85.4	157
200		587	350	324	175	200	424	749	370	305	390	40	24	95	50	14x5.5	85	22x90.4	224
250		705	420	400	200	250	510	920	440	375	475	45	28	110	60	18x7	110	28x116.4	374

DL-EOM



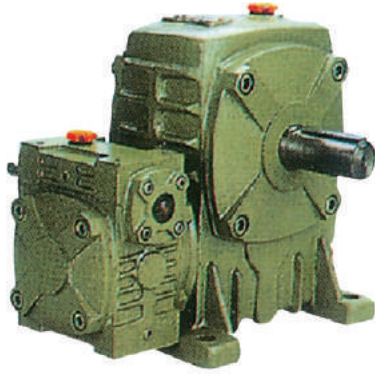
EOM 軸指向表示
EOM Shaft Direction



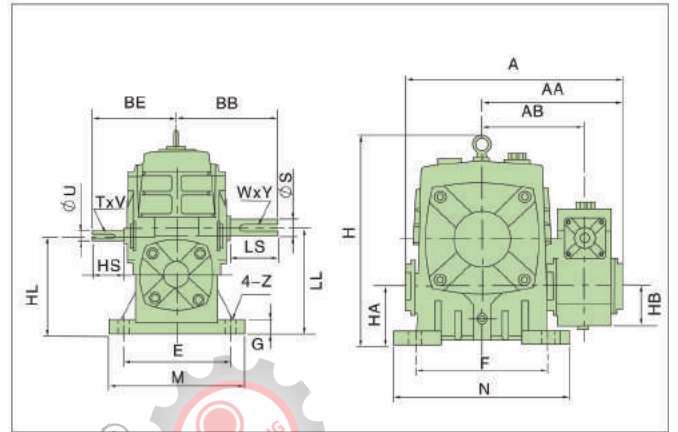
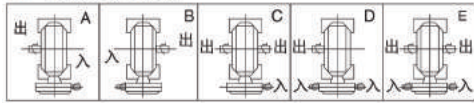
單位: mm

型號 Size	輸入功率 Input (KW)	減速比 Ratio	A	AB	B	BC	CC	M	N	E	E ₁	E ₂	G	Z	電動機法蘭 Flange				入力孔 Input bore		出力孔 Output bore		重量 Weight (kg)																										
															LA	LB	LC	LE	LZ	Q	U	T x V		S	W x Y																								
40	0.09	1/10	135	75	90	45	40	90	187	70	72	97	12	10	115	95	140	4	M8	31	11	4X12.8	16	5x18.3	5.4																								
50	0.18		151	83	110	50	50	120	226	95	90	110	14	12	115	95	140	4	M8	31	11	4X12.8	20	6x22.8	8.5																								
60	0.37		167	91	120	60	60	130	257	105	102	129	15	12	130	110	160	4	M8	33	14	5X16.3	25	8x28.3	12																								
70	0.37	1/15	200	109	132	65	70	150	305	115	120	155	20	15	130	110	160	4	M8	40	14	5X16.3	30	8x33.3	17																								
70	0.75		202	111																						200	109	111	132	65	70	150	305	115	120	155	20	15	130	110	160	4	M10	42	19	6X21.8	30	8x33.3	17
80	0.75		225	125																						150	70	80	170	350	135	140	180	20	15	165	130	200	4.5	M10	48	19	6X21.8	35	10x38.3	26			
100	1.5	1/25	280	148	174	90	100	190	410	155	165	215	22	15	165	130	200	4.5	M10	52	24	8X27.3	40	12x43.3	40.5																								
120	2.2		333	181	180	100	120	230	494	180	195	255	25	18	215	180	250	5	M12	63	28	8X31.3	45	14x48.8	59																								
135	3.7		375	202	214	110	135	250	559	200	230	285	30	18	215	180	250	5	M12	63	28	8X31.3	60	18x64.4	89																								
155	5.5	1/50	448	247	256	140	155	275	605	220	250	305	35	21	265	230	300	5	M12	83	38	10X41.3	70	20x74.9	138																								
175	5.5		481	262	282	150	175	310	675	250	273	348	40	21	265	230	300	5	M12	83	38	10X41.3	80	22x85.4	172																								
200	11.0		543	285	324	175	200	360	749	290	305	390	40	24	300	250	350	6	M16	114	42	12X45.3	85	22x90.4	246																								
250	15.0	1/60	615	330	400	200	250	460	920	380	375	475	45	28	300	250	350	6	M16	114	42	12X45.3	110	28x116.4	410																								

DL-LH



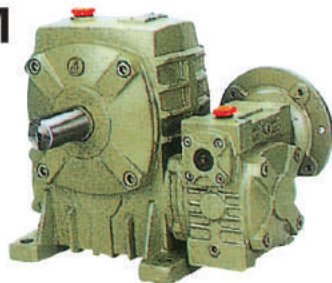
LH 軸指向表示
LH Shaft Direction



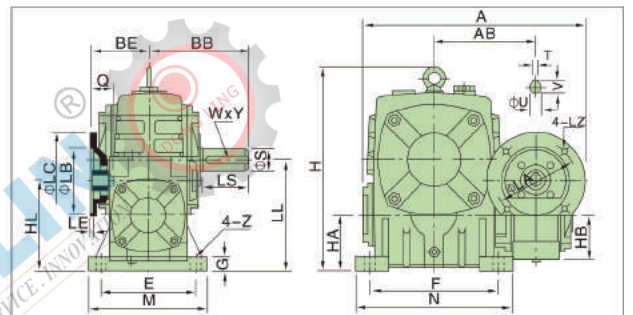
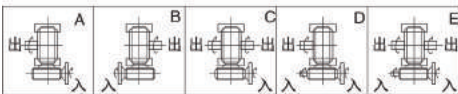
單位: mm

型號 Size	減速比 Ratio	A	AA	AB	BB	BE	HL	LL	H	HA	HB	M	N	E	F	G	Z	入力軸 Input shaft			出力軸 Output shaft			重量 Weight(kg)
																		HS	U	TxV	LS	S	WxY	
40-70	1/200	262	171	126	131	89	110	140	236	70	50	150	190	115	150	20	15	25	12	4X2.5	60	28	8X4	20
50-80		297	197	144	142	107	130	160	268	80	65	170	220	135	180	20	15	30	12	4X2.5	65	32	10X5	27
60-100	1/300	363	231	175	169	122	160	200	336	100	75	190	270	155	220	25	15	40	15	5X3	75	38	10X5	44
70-120	1/400	408	256	193	190	140	190	240	430	120	90	230	320	180	260	30	18	40	18	6X3.5	85	45	14X5.5	73
80-135	1/500	471	298	226	210	160	215	270	480	135	105	250	350	200	290	30	18	50	22	6X3.5	95	55	16X6	101
100-155	1/600	555	354	269	252	190	235	290	531	135	130	275	390	220	320	35	21	50	25	8X4	110	60	18X7	144
120-175	1/800	598	379	287	262	229	280	335	600	160	155	310	430	250	350	40	21	65	30	8X4	110	65	18X7	201
135-200	1/900	662	425	318	305	260	310	375	666	175	185	360	480	290	390	40	24	75	35	10X5	125	70	20X7.5	293
155-250		795	510	380	360	302	355	450	800	200	203	460	560	380	480	45	28	85	40	12X5	155	90	25X9	462

DL-LHM



LHM 軸指向表示
LHM Shaft Direction

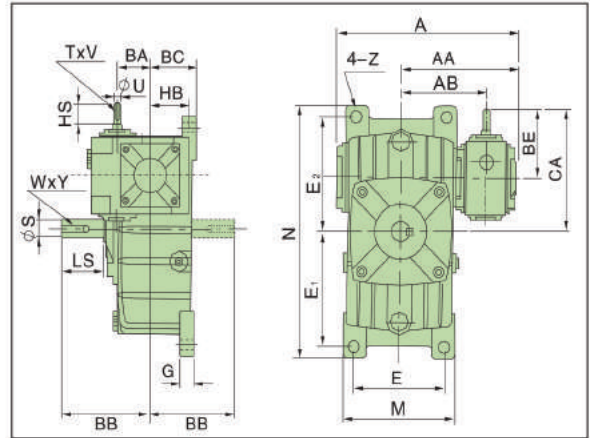
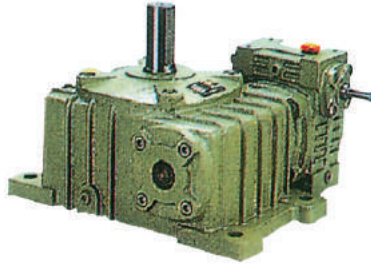
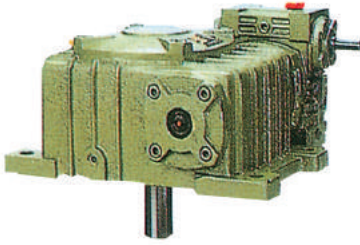


單位: mm

型號 Size	入功率 Input(kW)	減速比 Ratio	A	AB	BB	BE	HL	LL	H	HA	HB	M	N	E	F	G	Z	電動機法蘭 Flange			入力孔 Input bore			出力軸 Output shaft			重量 Weight(kg)		
																		LA	LB	LC	LE	LZ	Q	U	TxV	LS		S	WxY
40-70	0.09	1/200	287	126	131	75	110	140	236	70	50	150	190	115	150	20	15	115	95	140	4	M8	31	11	4X12.8	60	28	8X4	19
50-80	0.18		314	144	142	83	130	160	268	80	65	170	220	135	180	20	15	115	95	140	4	M8	31	11	4X12.8	65	32	10X5	27
60-100	0.37	1/300	387	175	169	91	160	200	336	100	75	190	270	155	220	25	15	130	110	160	4	M8	33	14	5X16.3	75	38	10X5	45
70-120	0.37		425	193	190	109	160	240	430	120	90	230	320	180	260	30	18	130	110	160	4	M8	40	14	5X16.3	85	45	14X5.5	75
80-135	0.75	1/400	445	226	210	111	160	240	430	120	90	230	320	180	260	30	18	165	130	200	4	M10	42	19	6X21.8	85	45	14X5.5	75
	48																						19	6X21.8					
80-135	1.5	1/600	499	226	210	125	215	270	480	135	105	250	350	200	290	30	18	165	130	200	4.5	M10	52	24	8X27.3	95	55	16X6	103
100-155	1.5	1/800	570	269	252	148	235	290	531	135	130	275	390	220	320	35	21	165	130	200	4.5	M10	52	24	8X27.3	110	60	18X7	147
120-175	2.2																						63	28	8X31.3				
135-200	3.7	1/900	680	318	305	202	310	375	666	175	185	360	480	290	390	40	24	215	180	250	5	M12	63	28	8X31.3	125	70	20X7.5	298
155-250	5.5																						83	38	10X41.3				

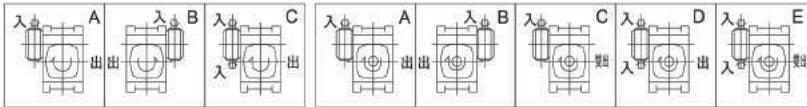
DL-UH

DL-VH



UH 軸指向表示
 UH Shaft Direction

VH 軸指向表示
 VH Shaft Direction

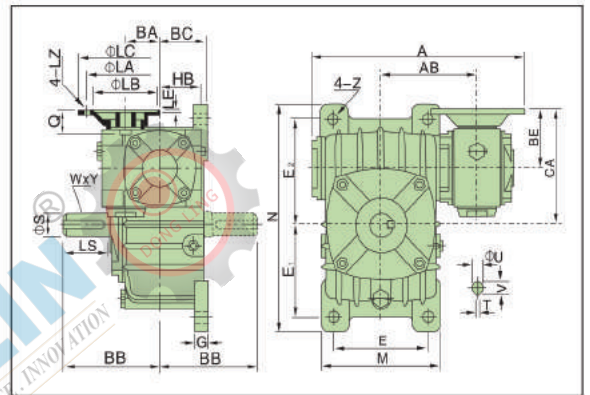
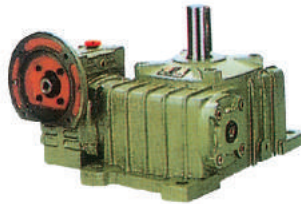
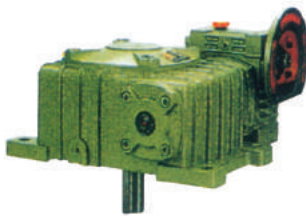


單位: mm

型號 Size	減速比 Ratio	A	AA	AB	BA	BB	BC	BE	HB	CA	M	N	E	E ₁	E ₂	G	Z	輸入軸 Input shaft	出力軸 Output shaft	重量 Weight (kg)				
																		HS	U	TxV	LS	S	WxY	
40-70	1/200	262	171	126	40	131	65	89	50	159	156	295	120	120	135	20	15	25	12	4X2.5	60	28	8X4	19
50-80		297	197	144	50	142	70	107	65	187	175	320	140	130	150	20	15	30	12	4X2.5	65	32	10X5	27
60-100	1/300	363	231	175	60	169	90	122	75	222	224	375	190	155	180	26	15	40	15	5X3	75	38	10X5	44
70-120	1/400	408	256	193	70	190	100	140	90	260	266	450	220	185	215	30	18	40	18	6X3.5	85	45	14X5.5	63
80-135	1/500	471	298	226	80	210	110	160	105	295	306	495	260	210	235	30	18	50	22	6X3.5	95	55	16X6	96
100-155	1/600	555	354	269	100	252	140	190	130	345	350	590	290	245	295	35	21	50	25	8X4	110	60	18X7	149
120-175	1/800	598	379	287	120	262	150	229	155	404	394	640	320	267	323	40	21	65	30	8X4	110	65	18X7	191
135-200	1/900	662	425	318	135	305	175	260	185	460	440	710	370	290	360	40	24	75	35	10X5	125	70	20X7.5	278
155-250		795	510	380	155	360	200	302	203	552	510	860	440	350	440	45	28	85	40	12X5	155	90	25X9	442

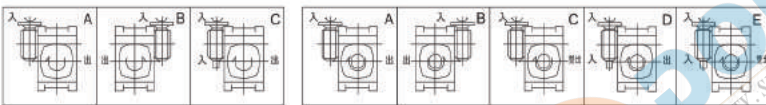
DL-UHM

DL-VHM



UHM 軸指向表示
 UHM Shaft Direction

VHM 軸指向表示
 VHM Shaft Direction



單位: mm

型號 Size	輸入功率 Input(KW)	減速比 Ratio	A	AB	BA	BB	BC	BE	HB	CA	M	N	E	E ₁	E ₂	G	Z	電動機法蘭 Flange	入力孔 Input bore	出力軸 Output shaft	重量 Weight (kg)								
																		LA	LB	LC	LE	LZ	Q	U	TxV	LS	S	WxY	
40-70	0.09	1/200	287	126	40	131	65	75	50	145	156	295	120	120	135	20	15	115	95	140	4	M8	31	11	4X12.8	60	28	8X4	19
50-80	0.18		314	144	50	142	70	83	65	163	175	320	140	130	150	20	15	115	95	140	4	M8	31	11	4X12.8	65	32	10X5	27
60-100	0.37	1/300	387	175	60	169	90	91	75	191	224	375	190	155	180	26	15	130	110	160	4	M8	33	14	5X16.3	75	38	10X5	45
70-120	0.37		425	193	70	190	100	109	90	229	266	450	220	185	215	30	18	130	110	160	4	M8	40	14	5X16.3	85	45	14X5.5	65
	0.75	1/400	445				111		231									165	130	200	4	M10	42	19	6X21.8				
80-135	0.75	1/500	499	226	80	210	110	125	105	260	306	495	260	210	235	30	18	165	130	200	4.5	M10	48	19	6X21.8	95	55	16X6	98
	1.5		524																150	180	250	5	M12	63	28	8X27.3			
100-155	1.5	1/800	570	269	100	252	140	148	130	303	350	590	290	245	295	35	21	165	130	200	4.5	M10	52	24	8X27.3	110	60	18X7	152
120-175	2.2		631	287	120	262	150	181	155	356	394	640	320	267	323	40	21	215	180	250	5	M12	63	28	8X31.3	110	65	18X7	194
135-200	3.7	1/900	680	318	135	305	175	202	185	402	440	710	370	290	360	40	24	215	180	250	5	M12	63	28	8X31.3	125	70	20X7.5	283
155-250	5.5		815	380	155	360	200	247	203	497	510	860	440	350	440	45	28	265	230	300	5	M12	83	38	10X41.3	155	90	25X9	450

入力軸功率及出力軸力矩表

Input and output

單段入力不帶法蘭型

Single Model Input Without Flange

入力軸轉速 Speed of input shaft:1500r/min

Power and moment 減速比 Ratio 型號 Size	入力軸功率 Input(KW)								出力軸力矩 Output(N.m)							
	1/10	1/15	1/20	1/25	1/30	1/40	1/50	1/60	1/10	1/15	1/20	1/25	1/30	1/40	1/50	1/60
40	0.40	0.33	0.26	0.24	0.22	0.16	0.14	0.12	19	23	20	25	25	20	22	20
50	0.65	0.52	0.40	0.37	0.34	0.27	0.24	0.20	31	36	32	38	39	36	37	35
60	1.00	0.82	0.65	0.59	0.54	0.45	0.40	0.32	50	58	56	68	62	71	75	59
70	1.60	1.35	1.10	0.96	0.82	0.67	0.61	0.52	83	98	101	112	99	104	113	97
80	2.20	1.78	1.36	1.28	1.20	0.90	0.80	0.75	113	133	120	149	151	140	145	146
100	3.60	3.10	2.60	2.35	2.10	1.68	1.30	1.00	193	237	258	284	277	291	257	229
120	5.20	4.35	3.50	3.25	3.00	2.20	1.90	1.05	262	336	361	404	413	392	399	355
135	9.75	7.85	6.00	5.50	5.00	3.69	2.89	2.30	540	622	619	696	707	667	626	562
155	12.80	9.90	7.00	6.53	6.00	4.40	3.61	3.00	709	785	722	842	848	784	770	791
175	17.30	13.60	10.00	9.13	8.30	6.18	4.85	4.07	958	1091	1044	1221	1189	1133	1127	1078
200	22.60	18.20	13.86	12.75	11.67	8.78	6.71	5.58	1280	1477	1482	1643	1782	1654	1516	1449
250	33.20	27.40	21.60	20.00	18.43	14.00	10.43	8.62	1881	2266	2310	2579	2745	2674	2357	2371

入力軸功率及出力軸力矩表

Input and output

單段入力帶法蘭型

Single Model Input Flange

入力軸轉速 Speed of input shaft:1500r/min

Power and moment 減速比 Ratio 型號 Size	入力軸功率 Input(KW)								出力軸力矩 Output(N.m)							
	1/10	1/15	1/20	1/25	1/30	1/40	1/50	1/60	1/10	1/15	1/20	1/25	1/30	1/40	1/50	1/60
40	0.09								6	8	9	13	14	15	19	20
50	0.18								9	12	14	19	20	24	28	34
60	0.37								19	26	34	42	42	58	67	73
70	0.75				0.37				39	54	70	87	95	58	68	70
80	1.5				0.75				37	112	142	174	189	117	136	146
100	1.5				1.5				80	115	149	181	198	260	307	344
120	2.2				2.2				151	232	310	372	413	392	480	521
135	3.7				3.7				219	321	413	509	565	542	649	690
155	5.5				5.5				305	411	525	709	760	713	853	1039
175	7.5				5.5				415	602	783	1002	1074	1008	1278	1450
200	11				11				623	892	1176	1417	1680	1413	1695	1948
250	15				11				850	1246	1604	1933	2234	2101	2486	3025

入力軸功率及出力軸力矩表

Input and output

雙段入力不帶法蘭型

Double Model Input Without Flange

入力軸轉速 Speed of input shaft:1500r/min

型號 Size	功率及力矩 Power and moment	LH.VH.UH.LOH.EH.VOH.EOH						
		減速比 Ratio						
		1/200	1/300	1/400	1/500	1/600	1/800	1/900
40-70	入力軸功率 (Kw)	0.48	0.34	0.28	0.25	0.23	0.20	0.17
	出力軸力矩 (N.m)	250	250	250	250	250	250	250
50-80	入力軸功率 (Kw)	0.65	0.51	0.42	0.38	0.31	0.29	0.25
	出力軸力矩 (N.m)	350	350	350	350	350	350	350
60-100	入力軸功率 (Kw)	0.95	0.67	0.52	0.44	0.40	0.35	0.33
	出力軸力矩 (N.m)	500	500	500	500	500	500	500
70-120	入力軸功率 (Kw)	1.64	1.18	0.91	0.84	0.71	0.58	0.54
	出力軸力矩 (N.m)	840	840	840	840	840	840	840
80-135	入力軸功率 (Kw)	2.50	1.75	1.39	1.19	1.08	0.98	0.85
	出力軸力矩 (N.m)	1400	1400	1400	1400	1400	1400	1400
100-155	入力軸功率 (Kw)	3.69	2.92	2.41	2.07	1.89	1.69	1.50
	出力軸力矩 (N.m)	2100	2100	2100	2100	2100	2100	2100
120-175	入力軸功率 (Kw)	5.09	3.91	3.27	3.72	2.53	2.50	2.05
	出力軸力矩 (N.m)	3050	3050	3050	3050	3050	3050	3050
135-200	入力軸功率 (Kw)	7.22	5.41	4.46	3.83	3.46	2.91	2.71
	出力軸力矩 (N.m)	3950	3950	3950	3950	3950	3950	3950
155-250	入力軸功率 (Kw)	11.71	8.14	6.00	5.14	4.67	4.07	3.67
	出力軸力矩 (N.m)	6050	6050	6050	6050	6050	6050	6050

雙段入力帶法蘭型

Double Model Input Flange

入力軸轉速 Speed of input shaft:1500r/min

型號 Size	功率及力矩 Power and moment	LHM.VHM.UHM.LOHM.EHM.EHOM.VOHM						
		減速比 Ratio						
		1/200	1/300	1/400	1/500	1/600	1/800	1/900
40-70	入力軸功率 (Kw)	0.12	0.12	0.12	0.12	0.12	0.12	0.12
	出力軸力矩 (N.m)	63	88	107	120	130	150	177
50-80	入力軸功率 (Kw)	0.18	0.18	0.18	0.18	0.18	0.18	0.18
	出力軸力矩 (N.m)	97	124	150	166	203	217	252
60-100	入力軸功率 (Kw)	0.37	0.37	0.37	0.37	0.37	0.37	0.37
	出力軸力矩 (N.m)	195	276	356	420	463	529	561
70-120	入力軸功率 (Kw)	0.75	0.75	0.75	0.75	0.75	0.75	0.75
	出力軸力矩 (N.m)	384	534	692	750	887	536	887
80-135	入力軸功率 (Kw)	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	出力軸力矩 (N.m)	616	880	1108	1294	1426	1071	1426
100-155	入力軸功率 (Kw)	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	出力軸力矩 (N.m)	854	1079	1307	1522	1667	1864	2100
120-175	入力軸功率 (Kw)	3	3	3	3	3	2.2	3
	出力軸力矩 (N.m)	1789	2340	2798	3050	3050	2685	3050
135-200	入力軸功率 (Kw)	4	4	4	4	4	3	4
	出力軸力矩 (N.m)	2188	2920	3543	3950	3950	3950	3950
155-250	入力軸功率 (Kw)	5.5	5.5	5.5	5.5	5.5	5.5	5.5
	出力軸力矩 (N.m)	2841	4087	5546	6050	6050	6050	6050

選型步驟

序號	內容	計算公式	計算示例
1	定減速比	根據入力軸及出力軸的轉速確定速比 1. 帶輪轉速 N_3 $N_3 = \text{起吊速度} V / (\text{滾輪直徑} D \times \pi)$ 2. 計算總速比 i $i = \text{入力軸轉速} N_1 / \text{皮帶輪轉速} N_3$ 3. 計算減速機速比 i_1 $i_1 = \text{總速比} i / \text{皮帶輪傳動速比} i_2$	1. $N_3 = 12 / (0.4 \times 3.142)$ $= 9.6 \text{ r/min}$ 2. $i = 1440 / 9.6$ $= 150$ 3. 設定 $i_2 = 5$, 則 $i_1 = 150 / 5$ $= 30$
2	計算輸出力矩	計算減速機輸出力矩 T $T = \text{物體重量} W \times 10 \times \text{滾輪半徑} (D/2) / (\text{皮帶輪傳動速比} i_2 \times \text{皮帶輪傳動效率} \eta_1)$	$T = 600 \times 10 \times (0.4/2) / (0.92 \times 5)$ $= 260.9 \text{ N.m}$
3	修正輸出力矩	根據使用條件, 8小時運轉、中等衝擊, 工況數 $K=1.25$ 計算修正輸出力矩 T_1 $T_1 = \text{輸出力矩} T \times K$	$T_1 = 260.9 \times 1.25$ $= 326 \text{ N.m}$
4	計算輸入功率	換算功率 P $P = \text{修正輸出力矩} T_1 \times \text{出力軸轉速} N_2 / (9549 \times \text{減速機傳動效率} \eta^2)$	$P = 326 \times (1440/30) / (9549 \times 0.71)$ $= 2.3 \text{ kw}$
5	選型號規格	根據產品樣本, 選定型號120. 速比1/30. 入力軸功率3kw. 出力軸力矩403N.m	

Selection steps

Number	Contents	Formula	Example
1	Calculate ratio	Calculate the ratio according to input and output shaft revolving speed 1. get belt pulley revolving speed N_3 $N_3 = \text{speed of suspended object } V / (\text{roll pulley diameter } D \times \pi)$ 2. Calculate general ratio i $i = \text{Input revolving speed } N_1 / \text{belt pulley revolving speed } N_3$ 3. Calculate reducer ratio i_1 $i_1 = \text{general ratio } i / \text{belt pulley ratio } i_2$	1. $N_3 = 12 / (0.4 \times 3.142)$ $= 9.6 \text{ r/min}$ 2. $i = 1440 / 9.6$ $= 150$ 3. assume $i_2 = 5$, then $i_1 = 150 / 5$ $= 30$
2	Calculate Output torque	Calculate reducer output torque T $T = \text{weight of suspended object } W \times 10 \times \text{roll pulley radius} (D/2) / (\text{belt pulley ratio } i_2 \times \text{belt pulley transmission efficiency } \eta_1)$	$T = 600 \times 10 \times (0.4/2) / (0.92 \times 5)$ $= 260.9 \text{ N.m}$
3	Revise Output torque	According to using condition: operation 8 hours a day, medium shock, running condition factor $K=1.25$ calculate revised torque T_1 $T_1 = \text{output torque } T \times k$	$T_1 = 260.9 \times 1.25$ $= 326 \text{ N.m}$
4	Calculate Input power	Calculate input shaft power P $P = \text{revised output torque } T_1 \times \text{output revolving speed } N_2 / (9549 \times \text{reducer transmission efficiency } \eta_2)$	$P = 326 \times (1440/30) / (9549 \times 0.71)$ $= 2.3 \text{ kw}$
5	Select model	According to product manual, the selection is, Model 120, ratio 1/30, rating input power 3kw, Output torque 403N.m	

減速機一般故障原因及改善方法

SOLUTIONS AND REASONS FOR THE GENRAL FAULTS OF REDUCTION GEARS

故障情形 FAULT DESCRIPTION	故障原因 REASONS	解決方法 SOLUTIONS
減速機過熱 Overheation	超負荷運轉 油封過度摩擦 出力軸與傳動裝置連接不當 衝擊荷重大 Overload. Over friction of oil seal. Lmproper connection between driving shaft and the transmission device. Large impact loadin.	調整至適當負荷 在油封處滴潤滑油 調整至適當位置 更換較大型號減速機 Adjust to proper loading. Drop lubricant at oil seal. Adjust to proper postion. Use larger reduction gears.
減速機噪音 Noise	超負荷運轉 軸承損傷或間隙過大 潤滑油不足或劣化 出力軸與傳動裝置連接不當 螺栓鬆脫 傳動裝置固定不良 Overload. Bearing damaged or too large clearance. Lubricant oil shortage or deterioration. Lmproper installation between driving shaft and the transmissin device. Bolt loose. Lmproper installation of transmission device.	調整至適當負荷 更換軸承依指示加入適量潤滑油 調整至適當位置 旋緊螺栓 傳動裝置固定 Adjust to proper loading. Replace bearing. Fill in adequate lubricant oil as indication. Adjust to proper position. Tighten bolt. Fix transmissin device properly.
漏油 Oilleakage	油封損傷 油量過多 螺絲鬆脫 外殼破裂 Oil seal damaged Too much oil. Screw loose. Outside shell fractured.	更換油封 依指示加入適量潤滑油 旋緊螺絲 更換外殼 replace oil seal. Fill in adequate lubricant oil as indication. Tighten screw. Replace outer shell.
出力軸不轉 Driving shaft cannot rotate	超負荷運轉 軸承損傷 異物嵌入 齒輪磨損 馬達損壞 配線錯誤 衝擊荷重過大 Overload. Bearing damaged. Lnvasion by foreign objects. Gear wornout. Motor out of order. Lncorrect wiring. Large impact loading.	調整至適當負荷 更換軸承 取出異物 更換齒輪 修復馬達 依指示配線 更換較大型號減速機 Adjust to proper loading. Replace bearing. Take out foreign objects. Replace gear. Repair motor. Wiring as indication. Use larger reduction gear.

以上所列為一般故障原因,如有其它故障情形時,請與本司聯絡,我們將會提供最正確之服務。

The above items are general fault descriptions.In case of other kinds of fanlts,pesase contact with us to Obain most correct services.

潤滑油的選擇使用

Choice of Lubricant


蝸輪減速機使用前應注入N220 ~ N320 (環境溫度-30°C~40°C) 或N320~N460 (環境溫度40°C~65°C) 潤滑油至油標中心點之上，並取掉通氣器上之小錐塞。首次使用100小時後，洗淨內部換上新油，以後每2500小時換油一次。

Before operating worm gear speed reducer, add N220~N320(Ambient temperature 30°C~40°C), N320~N460(Ambient temperature 40°C~65°C) lubrication oil upto the center line of the oil gauge. In the meanwhile, remove the small screw of the air-vent. After having worked for 100 hours for the first time, must clear the inside and change the lubrication oil in it, here after once every 2500 hours.

減速機在使用時，可按下表選用潤滑油。

Lubricants for a reducer used in foreign countries can be chosen from the table below.

Worm shaft speed(r/min)		Lubricant	Operating position Worm shaft, upper Worm shaft vertical	Operating position Worm shaft, lower Output shaft vertical
Over	up to			
1000	3000	Synthetic oils	PG460	PG220
	1000			PG460
2000	3000	Mineral oils	ISO VG460	ISO VG200
	750			2000
250				750
	250			250

周圍溫度 Ambient Temp	負荷 Load	ISO VG	GB314182		Mobil	AGMA	中國石油
-30°C ~ 15°C	普通 Commonly	VG100	N100	Shell Omala 100	Gear 627	5	Hd100
	重 Weight	VG150	N150	Shell Omala 150	Gear 629	7	HD150
-15°C ~ 5°C	普通 Commonly	VG150	N150	Shell Omala 150	Gear 629	7	HD150
	重 Weight	VG220	N220	Shell Omala 220	Gear 630	7EP	Hd220
5°C ~ 25°C	普通 Commonly	VG220	N220	Shell Omala 220	Gear 630	7EP	Hd220
	重 Weight	VG320	N320	Shell Omala 320	Gear 632	6	Hd320
25°C ~ 40°C	普通 Commonly	VG320	N320	Shell Omala 320	Gear 632	6	Hd320
	重 Weight	Vg460	N460	Shell Omala 460	Gear 634	8	Hd460
40°C ~ 65°C	普通 Commonly	Vg460	N460	Shell Omala 460	Gear 634	8	Hd460
	重 Weight	Vg680	N680	Shell Omala 680	Gear 636	8EP	Hd680

After the first 100 hours of operation:
Drain unit and flush with high oil. Refill.

Every 2500 hours of operation:
Drain; flush and refill.

蜗輪減速機的安裝及使用

USAGE AND INSTALLATION OF WORM REDUCER

1. 使用前檢查

- 檢查機種、型號、馬力、軸方向、減速比、回轉方向及入力軸回轉數是否符合，避免超載使用。
- 注意檢查注油情況，先確定是否有油，並保持油量在油位計一半以上。
- 安裝於通風良好，氣溫0℃~40℃的環境內。
- 使用前請先拔掉加油蓋上的插銷。

1.CHECK BEFORE OPERATING

- Check if the model,model No.,horse power,shaft direction, reduction ratio,revolution direction and Input/output shaft revolutions are in accordance with the standard , Prevent overload.
- Check carefully the Oil level to make sure that the Oil Volume is sufficient and maintains above the middle of oil gauge.
- The environment for installation shall be dry and well ven-tilated,with ambient temperature at 0℃ to 40℃.
- Please pull the pin out of the Oil lid before use.

2. 連接方式

- 用聯軸器連結入力或出力軸時,須確實固定亦使兩軸平行對正,鎖緊底座。
- 入力軸為中空式時,加入適當滑脂,以免孔徑過度磨損及發出異音,軸上可塗上防鏽塗料,避免生鏽。
- 與出力軸連接之鏈輪、皮帶輪須配合H7公差使用,可避免發出異聲與軸面受損。

2.CONNECTING METHOD

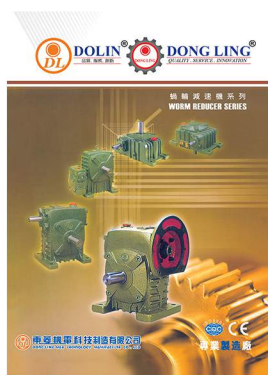
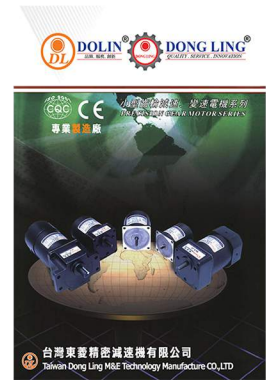
- The coupler shall be firmly connected the input and output shafts and two shafts shall be paralleled. The base seat shall be anchored with proper bolts.
- Proper amount of grease can be applied to the Input hole of the additional motor board to ensure the hole against over-wearing and making abnormal noise. The application of anti-rust paint can keep the shaft from rusting.
- The chain pulley and belt pulley used to connect the outputshaft shall be properly chosen and used in accordance with H7 tolerance in order to keep out of abnormal noise and harm to the shaft surface.

3. 潤滑油

- 蜗輪減速機運轉前應注入潤滑油至油標中心點之上。
- 初次使用100小時後,洗淨內部,換上新油,以後每2500小時換油一次。
- 潤滑油不足可能導致蜗輪快速磨損和效率降低,過多可能導致漏油。潤滑油至油標中心點之上即可。

3.LUBRICANT OIL

- Before operate worm gear speed reducer,add N680 lubricationoil onto the center lin of oil guage.
- After using first 100 hours,the interior of the reducing gear should be cleaned up and refill new oil. And then, after every 2500 hours of usagereplaces new oil again.
- Insufficient lubricant oil may lead to the rapid wears of worm gear and low efficiency. Excessive lubricant oil may leadto oil leaage. Please fill in adeguate lubricant oil to abovehalf of the gauge.



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