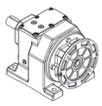
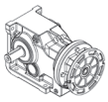
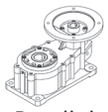
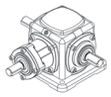
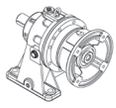
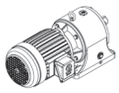
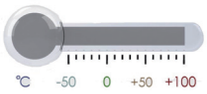
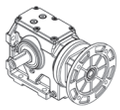
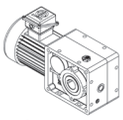
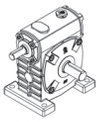
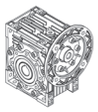
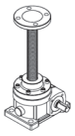
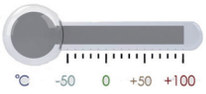
油品使用說明
Instruction for Engine Oil/Lubricant of Reducers

Type							
齒輪減速機 Gear reducer	 R series helical gear reducer	 K series helical gear reducer	 F series helical gear reducer	 Parallel shaft gear reducer	 Miter bevel gear reducer	 planetary gear reducer	 Gear reducer

油品適用環境溫度 	DIN (ISO)	ISO, NLGI	Mobil	Shell	bp	KLÜBER LUBRICATION	TEXACO	Castrol		FUCHS	TOTAL
								Tribol	Optimol		
-15℃ ~+40℃	CLP(CC)	VG220	Mobilgear 660 XP220	Shell Omala S2 G 220	BP Energol GR-XP 220	Kluberoil GEM 1-220 N	Meropa 220	Tribol 1100/220	Optigear BM 220	Renolin CLP 220	Carter EP 220
-20℃ ~+80℃	CLP PG	VG220	Mobil Glygoyle 220	Shell Omala S4 WE 220	BP Enersyn SG-XP 220	Klubersynth GH 6-220	Synlube CLP220	Tribol 800/220	Optiflex A 200	Renolin PG220	Carter SY 220
-20℃ ~+60℃	CLP HC	VG220	Mobil SHC630	Shell Omala S4 GX 220	-	Klubersynth GEM 4-220 N	Pinnacle EP 220	Tribol 1510/220	Optigear Synthetic X 220	Renolin Unisyn CLP 220	Carter SH 220
-40℃ ~+40℃	CLP HC	VG150	Mobil SHC629	Shell Omala S4 GX 150	-	Klubersynth GEM 4-150N	Pinnacle EP 150	-	Optigear Synthetic X 150	Renolin Unisyn CLP 150	Carter SH 150
-20℃ ~+25℃	CLP(CC)	VG150	Mobilgear 660 XP150	Shell Omala S2 G 150	BP Energol GR-XP 150	Kluberoil GEM 1-150N	Meropa 150	Tribol 1100/150	Optigear BM100	Renolin CLP 150	Carter EP 150
-40℃ ~+20℃	CLP HC	VG68	Mobil SHC626	Shell Omala S4 GX 68	-	-	-	-	-	Renolin Unisyn CLP 68	-
-20℃ ~+0℃	CLP HC	VG32	Mobil SHC624	-	-	Kulber summit HySyn FG-32	cetus PAO 46	-	Optilieb HY 32	Renolin Unisyn OL 32	Decnis SH 32

Type					
蝸輪減速機 Worm gear reducer	S series helical gear reducer	Shaft mounted gear reducer	Worm gear reducer	Aluminum alloy worm gear reducer	Worm gear linear actuator(Screw jack)

油品適用環境溫度 	DIN (ISO)	ISO, NLGI	Mobil	Shell	bp	KLÜBER LUBRICATION	TEXACO	Castrol Tribol	Castrol Optimol	FUCHS	TOTAL
0℃ ~+40℃	CLP(CC)	VG680	Mobilgear 660 XP 680	Shell Omala S2 G 680	BP Energol GR-XP 680	Kluberoil GEM 1-680 N	Meropa 680	Tribol 1100/680	Optigear BM 680	Renolin SEW 680	Carter EP 680
-20℃ ~+80℃	CLP PG	VG680	Mobil Glygoyle 680	Shell Omala S4 WE 680	BP Enersyn SG-XP 680	Klubersynth GH 6-680	Synlube CLD 680	Tribol 800/680	Optiflex A 680	Renolin PG 680	-
-20℃ ~+60℃	CLP HC	VG460	Mobil SHC 634	Shell Omala S4 GX 460	-	Klubersynth GEM 4-460N	Pinnacle EP 460	-	Optigear Synthetic X460	Renolin Unisyn CLP 460	Carter SH460
-40℃ ~+30℃	CLP HC	VG150	Mobil SHC 629	Shell Omala S4 GX 150	-	Klubersynth GEM 4-150N	-	Pinnacle EP 150	Optigear Synthetic X 150	Renolin Unisyn CLP 150	Carter SH 150
-20℃ ~+10℃	CLP(CC)	VG150	Mobilgear 600 XP 150	Shell Omala S2 G 150	BP Energol GR-XP 150	Klubersynth GEM 1-150 N	Meropa 150	Tribol 1100/150	Optigear BM 150	Renolin CLP 150	Carter EP 150
-20℃ ~+40℃	CLP PG	VG220	Mobil Glygoyle 220	ShelL Omala S4 WE 220	BP Enersyn SG-XP 220	Klubersynth GH 6-220	Synlube CLP 220	Tribol 800/220	Optiflex A 220	Renolin PG 220	Carter SY 220
-40℃ ~+20℃	CLP HC	VG 68	Mobil SHC626	Shell Omala S4 GX 68	-	-	-	-	-	Renolin Unisyn CLP 68	-
-40℃ ~+0℃	CLP HC	VG32	Mobil SHC 624	-	-	Kluber-Summit HySyn FG-32	Cetus PAO 46	-	Alphasyn T32	Renolin Unisyn OL 32	Dacnis SH 32

減速機負載特徵表
Charge Characteristic Chart

<A> 均勻負載 Uniform bad　<B> 中等沖擊負載 Moderate shock load　<C> 強烈沖擊負載 Heavy shock load

風機類 Air blowers	負載類別	起重機類 Hoist	負載類別
風機（軸向與徑向）Air blower(axial or radial)	A	轉臂式起重傳動齒輪裝置 Bracket swing gear assembly	B
冷卻塔風扇 Fan of cooling tower	B	卷揚機齒輪傳動裝置 Hoisst gear assembly	A
引風機 Induced draught fan	B	吊桿起落齒輪傳動裝置 Derrick gear assembly	B
螺旋活塞式風機 Rotary piston type fan	B	轉向齒輪傳動裝置 Stering gear assembly	B
蝸輪式風機 Turbo-fan	A	行走齒輪傳動裝置 Moving gear assembly	C
建築機械類 Construction machinery	**負載類別**	**塑料機器類 Plastic equipments**	**負載類別**
混泥土攪拌機 Concrete mixer	B	壓光機 Glazing press	B
卷揚機 Hoist	B	擠壓機 Ejecting press	B
路面建築機器 Road building machinery	B	螺旋壓出機 Spiral extruding machine	B
鑽孔機 Boring mill	B	混合機 Mixing machine	B
化工機械類 Chemical machinery	**負載類別**	**石料 & 陶土料加工機械類 Stone porcelain clay processing equipments**	**負載類別**
攪拌機（液體）Mixer(liquid)	A	球磨機 Ball crusher	B
攪拌機（半液體）Mixer(half liquid)	B	擠壓料碎機 Ejecting press and breaker	C
離心機（重型）Centrifuge(heavy)	B	破碎機 Breaker	C
離心機（輕型）Centrifuge(light)	A	壓碎機 Brick press	C
冷卻混筒 Cooling rolling drum	B	錘料碎機 Beating crusher	C
乾燥滾筒 Dry rolling drum	B	轉爐 Converter	C
攪拌機 Mixer	B	筒型磨機 Cylinder mill	C
壓縮機類 Compressor	**負載類別**	**洗衣類 Washing machine**	**負載類別**
活塞式壓縮機 Piston type compressor	C	滾筒 Rolling drum	B
渦輪式壓縮機 Turbo-compressor	B	洗衣機 Washing machine	B
水處理設備類 Water treatment equipments	**負載類別**	**水處理設備類 Water treatment equipments**	**負載類別**
鼓風機 Air blast	B	螺桿泵 Screw pump	B

傳送運輸機類 Transmission freighter	負載類別	挖泥機類 Land dredger	負載類別
平板傳送機 Pan conveyer	B	鼓式傳送機 Drum-type coveyer	C
平衡秤升降器 Balance lifter	B	鼓式轉動機 Drum-type rotation wheel	C
槽式傳送機 Trough conveyer	B	挖泥頭 Dredger head	C
帶式傳送機（大件）Ribbon conveyer(large piece)	C	機動絞車 Power crab	B
帶式傳送機（碎料）Ribbon conveyer(small piece)	B	泵 Pump	B
鼓式麵粉傳送機 Drum-type flour conveyer	A	泵轉動齒輪傳動裝置 Pump turning gear assembly	B
鏈式傳送機 Chain conveyer	B	行走齒輪傳動裝置（履帶）Moving gear assembly(apron wheel)	C
環式傳送機 Ring type conveyer	B	行走齒輪傳動裝置（鐵軌）Moving gear assembly (track)	B
貨物升降機 Lifter	B	**泵類 PUMPS**	**負載類別**
卷揚機 Hoist	B	離心泵（稀液體）Centrifugal pump (thin liquid)	A
連桿式傳送機 Crank-connecting conveyer	B	離心泵（半液體）Centrifugal pump(half liquid)	B
載入升降機 Lifter	B	活塞泵 Displacement pump	C
螺旋式傳送機 Worm conveyer	B	柱塞泵 Plunger pump	C
鋼帶式傳送機 Steel-band conveyer	B	壓力泵 Force pump	C
鏈式槽型傳送機 Chain reed-type conveyer	B		
絞車運輸機 Crab freighter	B		
製紙機類 Papering machine	**負載類別**	**食品工業機械類 Foodstuff processing machinery**	**負載類別**
壓光機 Glazing press	C	灌注及裝箱機器 Placer or box filler	A
多層紙板機 Multilayer paper board machine	C	甘蔗壓榨機 Cane crusher	A
乾燥滾筒 Drying cylinder	C	甘蔗切斷機 Cane cutter	B
上光滾筒 Glazing cylinder	C	甘蔗粉碎機 Cane crasher	C
攪漿機 Masher	C	攪拌機 Mixer	B
攪漿擦碎機 Mashing and breaking machine	C	醬狀物吊筒 Paste bucket	B
吸水滾 Suction roll	C	包裝機 Packager	A
潮紙滾壓機 Wet oaoer roller machine	C	糖和甜菜切斷機 Beet slicer	B
吸水滾壓機 Water absorbing roller machine	C	糖和甜菜清洗機 Beet washing machine	B
威羅機 Welon machine	C		

橡膠機械類 Rubber equipment	負載類別	紡織機械類 Textile machinery	負載類別
壓光機 Glazing press	B	送料機 Feeding machine	B
擠壓機 Ejecting press	C	織布機 Loom machine	B
混合攪拌機 Mixing stir machine	B	印染機 Dyeing machine	B
捏合機 Kneading machine	B	精制筒 Purified drum	B
滾壓機 Roller machine	C	威羅機 Welon machine	B
金屬滾軋機類 Metal roller machine	**負載類別**	**金屬加工機床類 Metal processing machine tools**	**負載類別**
鋼環剪斷機 Steel cutter	C	動力軸 Power shaft	A
鏈式輸送機 Chain conveyer	B	鍛造機 Drop hammer	C
冷軋機 Cold mill	C	鍛錘 Machine tool and necessary	C
連鑄成套運送機 Continuous casting equipments	B	機床與附助裝置 Machine tool and necessary	A
冷床 Cold bed	B	機床與主要傳動裝置 Machine tool and main driving equipment	B
剪料機頭 Cropper	C	金屬刨床 Metal facing machine	C
交叉轉彎輸送機 Cross steering transmitter	B	板材矯直機床 Plate-leveling machine tool	C
除鏽機 Deruster	C	沖床 Backing-out punch	C
重型和中型板軋機 Heavy and medium steel mill	C	沖壓機床 Press machine tool	C
棒材切軋機 Bar mill	C	剪床 Cutting machine	B
棒材轉運機類 Bar transmission equipments	B	薄板彎曲機床 Sheet bending machine tool	B
棒材堆料機 Bar pusher	B	**發動及轉換器類 Motor and conversion equipments**	**負載類別**
推床 Push bed	B	頻率轉換器 Frequency converter	C
剪板機 Shears	C	發動機 Motor	C
板材擺升降台 Lumber elevator platform	B	焊接發動機 Welding motor	C
軋輥調整裝置 Roll adjusting equipments	B	**石油工業機械類 Petroleum processing machinery**	**負載類別**
輥式矯直機 Roller lvevling machine	B	輸油管油泵 Pump of oil pipe line	B
軋鋼機輥道（重型）Mill rolling way (heavy)	C	轉子鑽井設備 Rotary drilling equipment	C
軋鋼機輥道（輕型）Mill rolling way (light)	B	**木料加工機床 Wood processing machine tool**	**負載類別**
薄板軋機 Sheet rolling mill	C	剝皮機 Barker	C
修整剪切機 Trimming shears	B	刨床 Facing machine	B
焊管機 Pipe welder	C	鋸床 Saw bench	C
焊管機（帶材與線材）Soldering machine(belt material and wire rod)	B	木材加工機床 Wood processing machine tool	A
線材拉拔機 Wire drawbench	B		

NOTE:

NOTE: