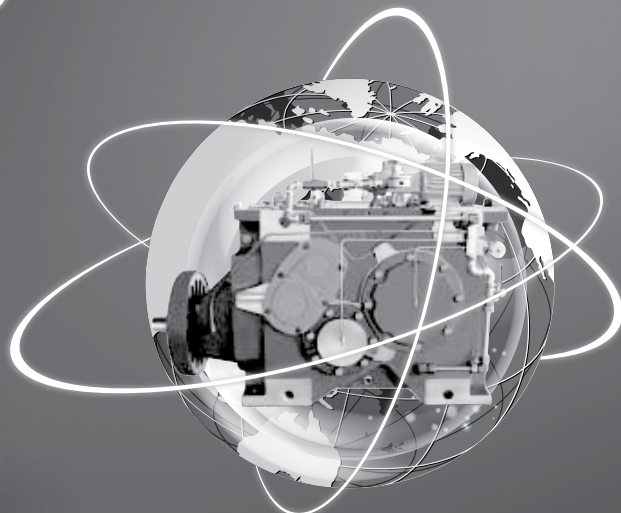
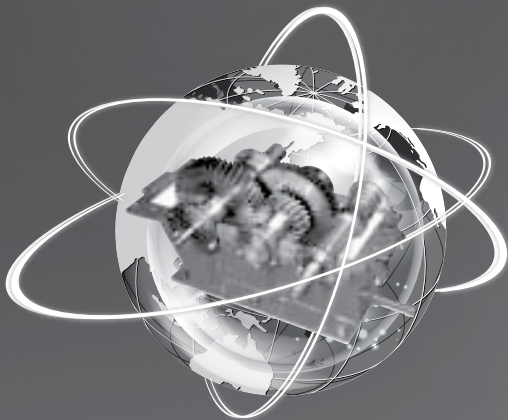


7

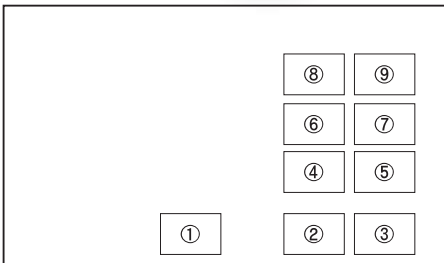
GEAR BOX



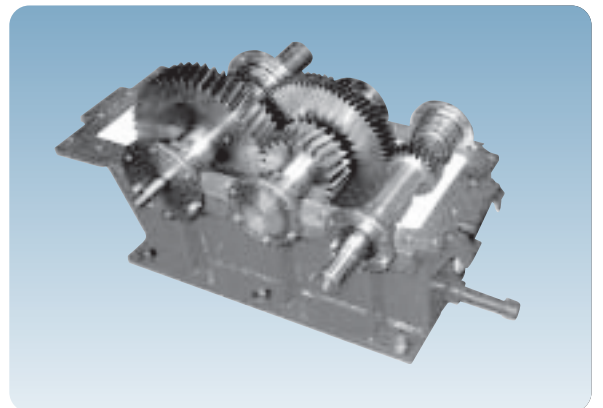
## 기어 박스 GEAR BOX

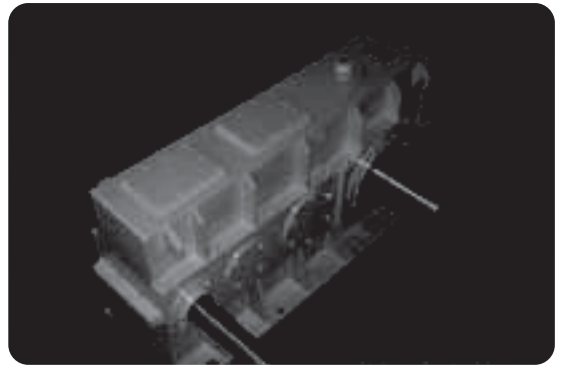
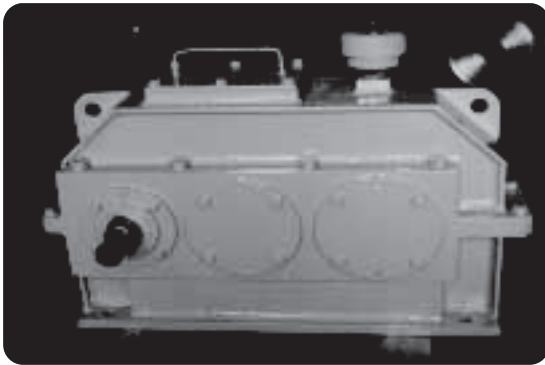
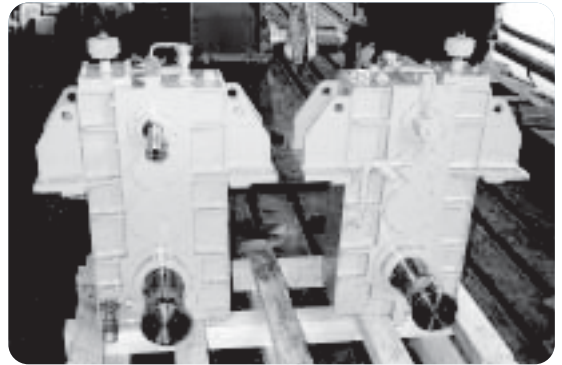
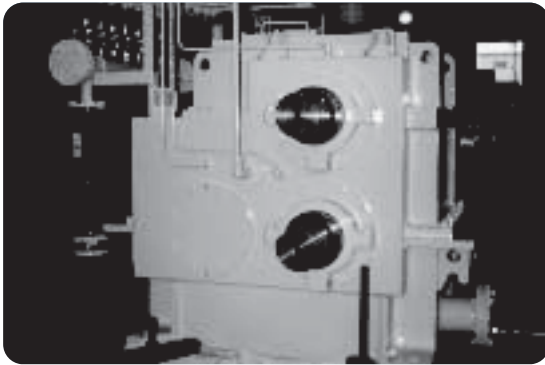
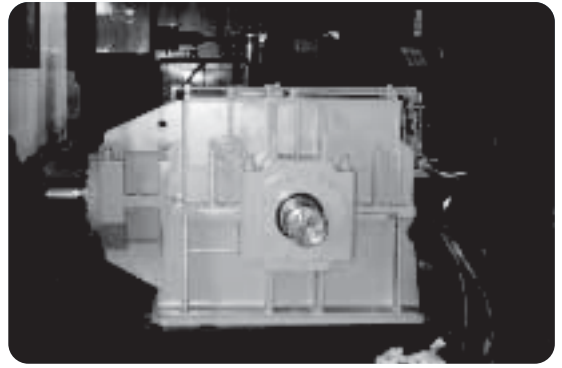
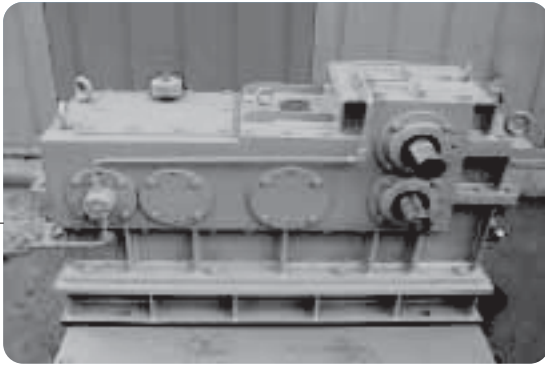
(주)삼양감속기는 산업 PLANT 분야에 자신있게 참여하여 설비에서 사후 관리까지 일관된 시스템을 지향하여 고객의 만족을 극대화 하겠습니다.

인류과학 역사상 동력전달의 최고효율인 기어전동기  
 (주)삼양감속기는 자체개발 및 신기술 개발을 통해 가장 강력한 동력전달을 요하는 기계화 및 성력화에 부응하고 있습니다.



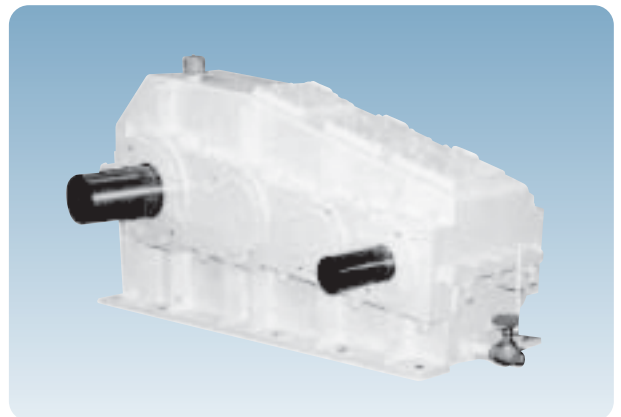
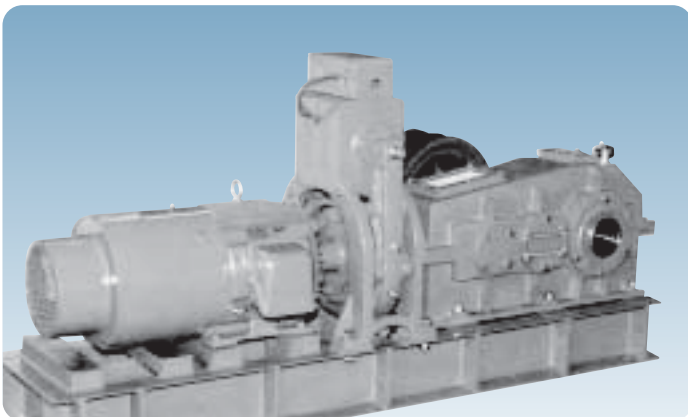
- |                             |                             |
|-----------------------------|-----------------------------|
| ① INSIDE OF REDUCER         | ⑥ PINION STAND-MILL LINE    |
| ② BEVEL AND HELICAL REDUCER | ⑦ TRAVERSING-CRANE          |
| ③ 3RD STAGE HELICAL REDUCER | ⑧ PINION STAND-SLITTER LINE |
| ④ 수평형 2단 감속기                | ⑨ 대형베벨감속기-MILL LINE         |
| ⑤ MAIN HOIST-CRANE          |                             |





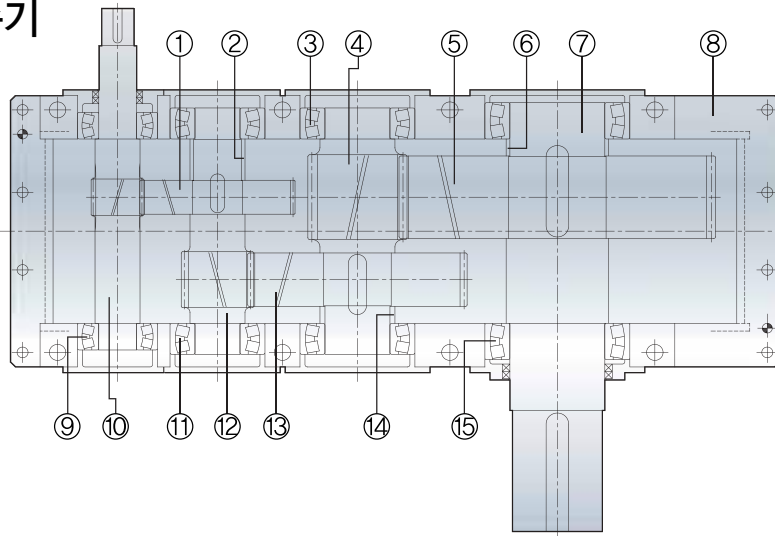
# Gear Box

GEAR BOX



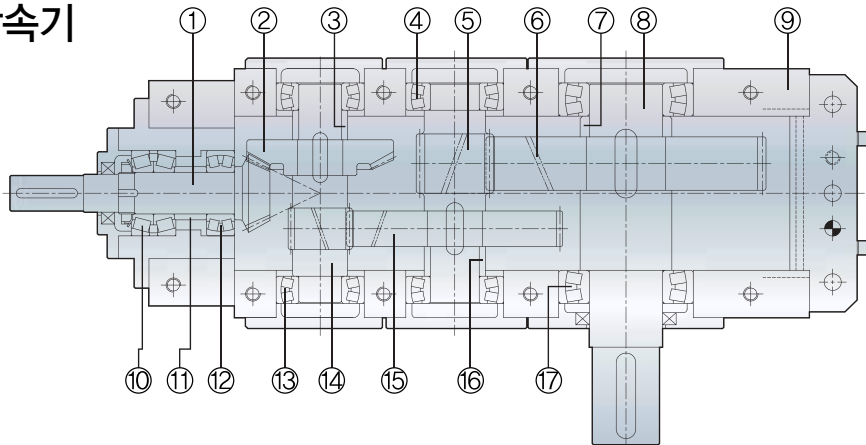
## 감속기 내부구조

### 평행축 감속기



품 번	품 명	품 번	품 명	품 번	품 명	품 번	품 명
1	1단기어	6	칼라	11	자동조심 베어링	16	
2	칼라	7	출력축	12	2단 피니언	17	
3	자동조심 베어링	8	케이스	13	2단 기어	18	
4	3단 피니언	9	자도조심 베어링	14	칼라	19	
5	3단 기어	10	1단 피니언	15	자동조심 베어링	20	

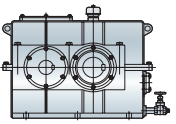
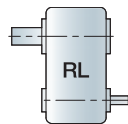
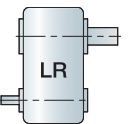
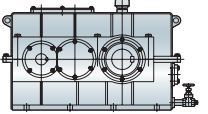
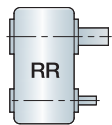
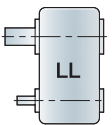
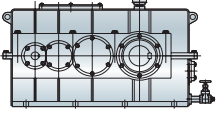
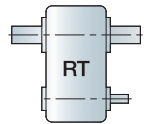
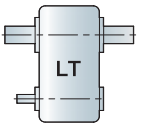
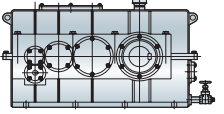
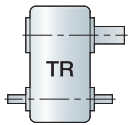
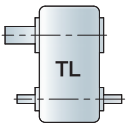
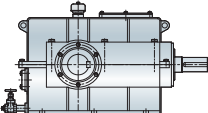
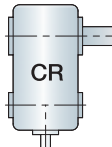
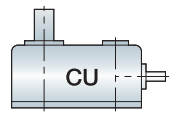
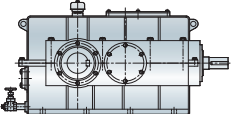
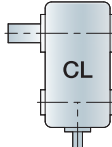
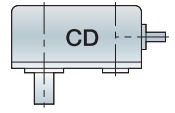
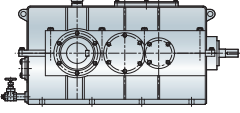
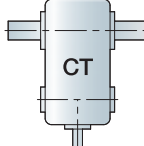
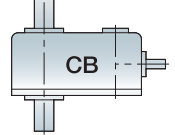
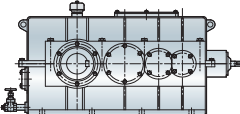
### 직교축 감속기



품 번	품 명	품 번	품 명	품 번	품 명	품 번	품 명
1	1단 베벨 피니언	6	3단 기어	11	칼라	16	칼라
2	1단 베벨 기어	7	칼라	12	자동조심 베어링	17	자동 조심 베어링
3	칼라	8	출력축	13	자동조심 베어링	18	
4	자동조심 베어링	9	케이스	14	2단 피니언	19	
5	3단 피니언	10	테이퍼 롤러 베어링	15	2단 기어	20	

# 호칭형식

■ SY — **3H** — **200** — **RL** — **50**

형식	형번	형번	축단 배치	감속비			
평행 축 감속기	1단 : 1H 	100	 	1단 : 1.25 ~ 6.3  2단 : 6.3 ~ 22.4  3단 : 22.4 ~ 100  4단 : 100 ~ 500			
		125					
		2단 : 2H 	140		 		
			160				
	3단 : 3H 		180		 		
			200				
		4단 : 4H 	225		 		
			250				
	직교 축 감속기		1단 : 1B 		280	 	
					320		
		2단 : 2B 			360		 
					400		
			3단 : 3B 		450	 	
					500		
		4단 : 4B 			560		
					630		
710							
800							

## 선정방법

### ■ 감속기 선정 순서 및 방법



### ■ 온도 보정 계수

주변 온도	온도계수 [KT]	감속기 냉각 방식	냉각계수 [CT]
20	1.00	고속 축에 2개의 팬을 부착하여 냉각	2.50
30	0.85	고속 축에 1개의 팬을 부착하여 냉각 (직교축 감속기)	2.00
40	0.70	고속 축 모터 반대 방향에 1개의 팬을 부착하여 냉각	1.65
50	0.55	고속 축 모터 방향에 1개의 팬을 부착하여 냉각	1.25

**■ 안전계수 [KA]**
**SF**

구동 기계	사용시간 (hr/day)		구동 기계	사용시간 (hr/day)	
	10hrs	24hrs		10hrs	24hrs
<b>AGITATORS / MIXERS</b>			<b>CRANE (cont)</b>		
Pure Liquids	1.00	1.25	Light Duty	1.50	1.50
Liquids and Solids	1.25	1.50	Medium Duty	1.75	1.75
Liquids Variable Density	1.25	1.50	Heavy Duty	2.00	2.00
<b>BLOWERS</b>			Slewing Motion		
Centrifugal	1.00	1.25	Light Duty	1.50	1.50
Lobe	1.25	1.50	Medium Duty	1.75	1.75
Vane	1.25	1.50	Heavy Duty	2.00	2.00
<b>BREWING AND DISTILLING</b>			Boom Hoisting		
Bottling Machinery	1.00	1.25	Light Duty	1.00	1.00
Brew Kettles-Continuous Duty	1.00	1.25	Medium Duty	1.25	1.25
Cookers-Continuous Duty	1.00	1.25	Heavy Duty	1.50	1.50
Mash Tubs-Continuous Duty	1.00	1.25	<b>CRUSHER</b>		
Scale Hopper-Frequent Starts	1.25	1.50	Stone or ore	1.75	2.00
<b>CAN FILLING MACHINES</b>	1.00	1.25	<b>DREDGES</b>		
<b>CAR DUMPERS</b>	1.75	2.00	Cable Reels	1.25	1.50
<b>CAR PULLERS</b>	1.25	1.50	Conveyors	1.25	1.50
<b>CEMENT INDUSTRY</b>			Cutter Head Drivers	2.00	2.00
Concrete Mixers	1.50	1.75	Pumps	2.00	2.00
Breakers	1.25	1.50	Screen Drivers	1.75	2.00
Rotary Kilns	2.00	2.00	Stackers	1.25	1.50
Tube Mills	2.00	2.00	Winches	1.25	1.50
Separators	1.75	1.75	<b>ELEVATORS</b>		
Roll Crushers	2.00	2.00	Bucket	1.25	1.50
<b>CLARIFIERS</b>	1.00	1.25	Centrifugal Discharge	1.00	1.25
<b>CLASSIFIERS</b>	1.25	1.50	Escalators	1.00	1.25
<b>CLAY WORKING MACHINERY</b>			Freight	1.25	1.50
Brick Press	1.75	2.00	Gravity Discharge	1.00	1.25
Briquette Machine	1.75	2.00	<b>EXTRUDERS</b>		
Pug Mill	1.25	1.50	General	1.50	1.50
<b>COMPACTORS</b>	2.00	2.00	Plastics		
<b>COMPRESSORS</b>			Variable Speed Drive	1.50	1.50
Centrifugal	1.00	1.25	Fixed Speed Drive	1.75	1.75
Lobe	1.25	1.50	Rubber		
Reciprocating, Multi-Cylinder	1.50	1.75	Continuous Screw Operation	1.75	1.75
Reciprocating, Single-Cylinder	1.75	2.00	Intermittent Screw Operation	1.75	1.75
<b>CONVEYORS</b>			<b>FANS</b>		
Apron	1.25	1.50	Centrifugal	1.00	1.25
Belt	1.25	1.50	Cooling Towers	2.00	2.00
Bucket	1.25	1.50	Forced Draft	1.25	1.25
Chain	1.25	1.50	Induced Draft	1.50	1.50
Flight	1.25	1.50	Industrial & Mine	1.50	1.50
Screw	1.25	1.50	<b>FEEDERS</b>		
Shaker	1.75	2.00	Apron	1.25	1.50
<b>CRANES</b>			Belt	1.25	1.50
Hoisting			Disc	1.00	1.25
Light Duty	1.25	1.25	Reciprocating	1.75	2.00
Medium Duty	1.50	1.50	Screw	1.25	1.50
Heavy Duty	1.75	1.75	<b>FOOD INDUSTRY</b>		
Traverse Motion & Travel Motion			Cereal Cooker	1.00	1.25
			Dough Mixer	1.25	1.50
			Meat Grinders	1.25	1.50
			Slicers	1.25	1.50
			<b>GENERATORS AND EXCITERS</b>	1.00	1.25

# SAMYANG GEAR BOX/Technical Data

## ■ 안전계수 [KA]

SF

구동 기계	사용시간 (hr/day)		구동 기계	사용시간 (hr/day)	
	10hrs	24hrs		10hrs	24hrs
<b>HAMMER MILLS</b>	1.75	2.00	<b>MILLS, ROTARY TYPE</b>		
<b>LAUNDRY</b>			Ball & Rod		
Tumblers	1.25	1.50	Spur Ring Gear	2.00	2.00
Washers	1.50	2.00	Helical Ring Gear	1.50	1.50
<b>LUMBER INDUSTRY</b>			Direct Connected	2.00	2.00
Barkers-Spindle Feed	1.25	1.50	Dryers & Coolers	1.50	1.50
Main Drive	1.75	1.75	<b>CONCRETE MIXERS</b>	1.25	1.50
Conveyors-Burner	1.25	1.50	<b>PAPER MACHINES</b>		
Main or Heavy Duty	1.50	1.50	Agitator (Mixer)	1.50	1.50
Main Log	1.75	2.00	Agitator for Pure Liquors	1.25	1.25
Re-saw, Merry-Go-Round	1.25	1.50	Barking Drums	2.00	2.00
Conveyors			Barkers-Mechanical	2.00	2.00
Slab	1.75	2.00	Beater	1.50	1.50
Transfer	1.25	1.50	Breaker Stack	1.25	1.25
Chains			Calender	1.75	1.75
Floor	1.50	1.50	Chipper	2.50	2.50
Green	1.50	1.75	Chip Feeder	1.50	1.50
Cut-Off Saws			Coating Rolls	1.50	1.50
Chain	1.50	1.75	Conveyors		
Drag	1.50	1.75	Chip, Bark, Chemical	1.50	1.50
Debarking Drums	1.75	2.00	Log(including Slab)	2.00	2.00
Feeds			Couch Rolls	1.50	1.50
Edger	1.25	1.5	Cutter	2.00	2.00
Gang	1.75	1.75	Cylinder Molds	1.50	1.50
Trimmer	1.25	1.50	Dryers		
Log Deck	1.75	1.75	Paper Machine	1.50	1.50
Log Hauls-Incline-Well Type	1.75	1.75	Conveyor Type	1.50	1.50
Log Turning Devices	1.75	1.75	Embosses	1.50	1.50
Planer Feed	1.25	1.50	Extruder	1.50	1.50
Planer Tilting Hoists	1.50	1.50	Fourdrinier Rolls (includes Lump breaker,dandy roll,wire turn..)	1.50	1.50
Rolls-Live-off brg.-Roll Cases	1.75	1.75	Jordan	1.50	1.50
Sorting Table	1.25	1.50	Kiln Drive	1.50	1.50
Tipple Hoist	1.25	1.50	Mt. Hope Roll	1.50	1.50
Transfers			Paper Rolls	1.50	1.50
Chain	1.50	1.75	Platter	1.50	1.50
Craneway	1.50	1.75	Presses-Felt & Suction	1.50	1.50
Tray Drives	1.25	1.50	Pulpers		
Veneer Lathe Drives	1.25	1.50	Bales of recycling paper	2.50	2.50
<b>METAL MILLS</b>			Others	2.00	2.00
Draw Bench Carriage & Main d.	1.25	1.50	<b>Pumps (Vacuum)</b>		
Runout Table			Centrifugal	1.75	1.75
Non-reversing			Waterring	1.75	1.75
Group Drives	1.50	1.50	Piston	2.00	2.00
Individual Drives	2.00	2.00	Reelers	1.50	1.50
Reversing	2.00	2.00	Screens		
Slab Pushers	1.50	1.50	Chip	1.50	1.50
Shears	2.00	2.00	Rotary	1.50	1.50
Wire Drawing	1.25	1.50	Vibrating	2.00	2.00
Wire Winding Machine	1.50	1.50	Size press	1.50	1.50
<b>METAL STRIP PROCESSING M.</b>			Super Calender	1.50	1.50
Bridles	1.25	1.50	Thickener (AC Motor)	1.50	1.50
Coilers & Uncoilers	1.00	1.25	(DC Motor)	1.25	1.25
Edge Trimmers	1.25	1.50	Washer (AC Motor)	1.50	1.50
Flatteners	1.25	1.50	(DC Motor)	1.25	1.25
Loopers (Accumulators)	1.00	1.25	Winders / Unwinders	1.50	1.50
Pinch Rolls	1.25	1.50	Yankee Dryers	1.50	1.50
Scrap Choppers	1.25	1.50	<b>PULLERS - BARGE HAUL</b>	1.25	1.50
Shears	2.00	2.00			
Slitters	1.25	1.50			

■ 안전계수 [KA]

SF

구동 기계	사용시간 (hr/day)		구동 기계	사용시간 (hr/day)	
	10hrs	24hrs		10hrs	24hrs
<b>PLASTICS INDUSTRY</b>			<b>SAND MULLER</b>	1,25	1,50
Primary Processing			<b>SEWAGE DISPOSAL EQUIPMENT</b>		
Intensive Internal Mixers			Bar Screens	1,25	1,25
Batch Mixers	1,75	1,75	Chemical Feeders	1,25	1,25
Continuous Mixers	1,50	1,50	Dewatering Screens	1,50	1,50
Batch Drop Mill-2 smooth rolls	1,25	1,25	Scum Breakers	1,50	1,50
Continuous Feed,Holding & Blend Mill	1,25	1,25	Slow or Rapid Mixers	1,50	1,50
Compounding Mill	1,25	1,25	Sludge Collectors	1,25	1,25
Calenders	1,50	1,50	Thickeners	1,50	1,50
Secondary Processing			Vacuum Filters	1,50	1,50
Blow Molders	1,50	1,50	<b>SCREENS</b>		
Coating	1,25	1,25	Air Washing	1,00	1,25
Film	1,25	1,25	Rotary - Stone or Gravel	1,25	1,50
Pipe	1,25	1,25	Traveling Water Intake	1,00	1,25
Pre-Plasticizers	1,50	1,50	<b>SUGAR INDUSTRY</b>		
Rods	1,25	1,25	Beet Slicer	2,00	2,00
Sheet	1,25	1,25	Cane Knives	1,50	1,50
Tubing	1,25	1,50	Crushers	1,50	1,50
<b>PUMPS</b>			Mills (low speed end)	1,75	1,75
Centrifugal	1,00	1,25	<b>TEXTILE INDUSTRY</b>		
Proportioning	1,25	1,50	Batchers	1,25	1,50
Reciprocating			Calenders	1,25	1,50
Single Acting, 3 or more Cyli.	1,25	1,50	Cards	1,25	1,50
Double Acting, 2 or more Cyli.	1,25	1,50	Dry Cans	1,25	1,50
Rotary			Dryers	1,25	1,50
Gear Type	1,00	1,25	Dyeing Machinery	1,25	1,50
Lobe	1,00	1,25	Looms	1,25	1,50
Vane	1,00	1,25	Mangles	1,25	1,50
<b>RUBBER INDUSTRY</b>			Nappers	1,25	1,50
Intensive Internal Mixers			Pads	1,25	1,50
Batch Mixers	1,75	1,75	Slashers	1,25	1,50
Continuous Mixers	1,50	1,50	Soapers	1,25	1,50
Mixing Mill - 2 smooth rolls	1,50	1,50	Spinners	1,25	1,50
Batch Drop Mill - 2 smooth rolls	1,50	1,50	Tenter Frames	1,25	1,50
Cracker Warmer - 2 rolls ; 1 corrugated roll	1,75	1,75	Washers	1,25	1,50
Cracker - 2 corrugated rolls	2,00	2,00	Winders	1,25	1,50
Holding, Feed & Blend Mill-2rolls	1,25	1,25			
Refiner - 2 rolls	1,50	1,50			
Calenders	1,50	1,50			

■ 사용시간과 하중에 따른 안전계수

원 동 력	사용시간	하중의 종류		
		균일하중	보통하중	충격하중
		U	M	H
전 동 기	10hrs / day	1,00	1,25	1,75
	24hrs / day	1,25	1,50	2,00
내 연 기 관 엔 진	10hrs / day	1,25	1,50	2,00
	24hrs / day	1,50	1,75	2,25

# SAMYANG GEAR BOX/Technical Data

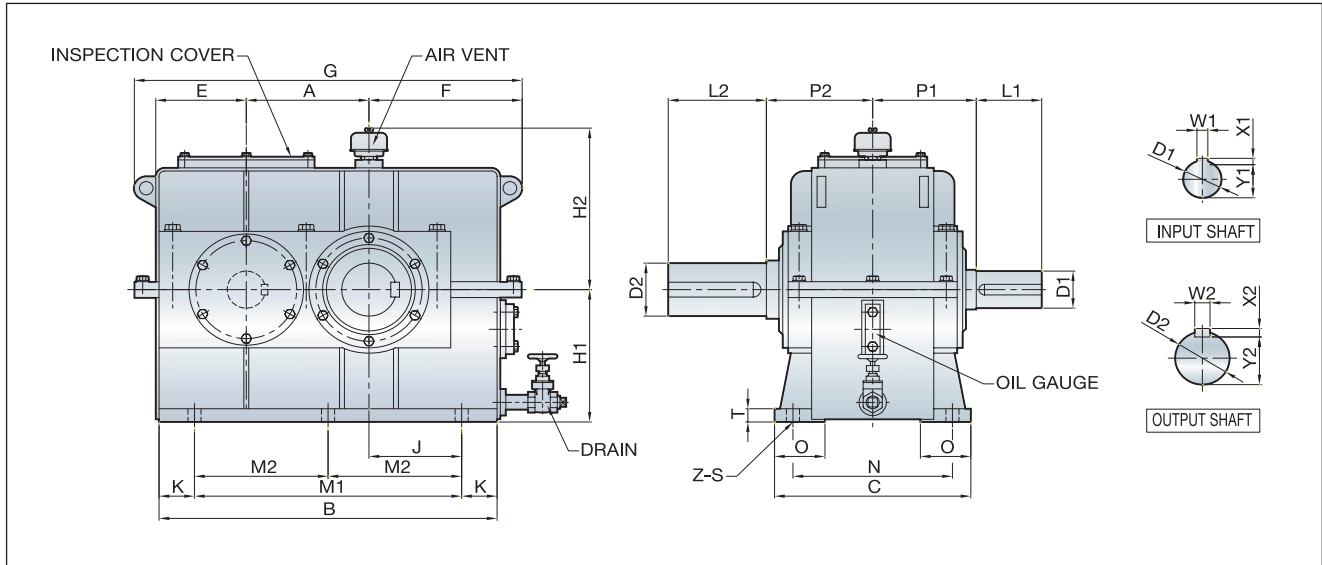
## 1단 평행축 기어박스 - 1H

### ■ 전달 능력표

감속비 In 減速比	회전수		형번												
	입력	출력	100	125	160	200	225	250	280	320	360	400	450	500	560
	入力	出力	전달 동력 P <sub>N</sub> (kW)												
1.25	1800	1440	115	210	430	770	1080	1450	2000	-	-	-	-	-	-
	1200	960	78	150	290	520	730	1000	1400	1800	2400	3500	-	-	-
	900	720	59	120	220	400	560	780	1050	1400	1850	2700	3900	5100	-
	720	576	52	105	190	340	480	680	950	1250	1600	2350	3400	4400	6000
1.4	1800	1286	110	210	400	700	980	1400	1900	-	-	-	-	-	-
	1200	857	73	145	270	470	660	970	1300	1700	2350	3450	5000	-	-
	900	643	57	115	210	360	510	750	1000	1350	1750	2550	3700	4800	-
	720	514	50	100	185	315	440	650	900	1200	1550	2250	3250	4200	5800
1.6	1800	1125	105	200	360	650	910	1300	1800	-	-	-	-	-	-
	1200	750	78	145	250	440	620	890	1250	1600	2300	3350	4800	-	-
	900	563	62	110	205	340	480	740	990	1300	1700	2450	3500	4600	-
	720	450	49	95	180	295	410	640	860	1150	1500	2150	3100	4000	5500
1.8	1800	1000	100	190	340	590	830	1200	1650	-	-	-	-	-	-
	1200	667	73	130	240	410	580	820	1200	1550	2000	3000	4400	-	-
	900	500	57	105	200	310	430	670	930	1250	1600	2300	3300	4300	-
	720	400	48	93	175	265	370	580	810	1100	1400	2000	2900	3800	5100
2	1800	900	88	170	320	560	780	1100	1550	-	-	-	-	-	-
	1200	600	63	120	220	400	560	770	1050	1400	1850	2850	4100	-	-
	900	450	48	100	180	300	420	640	850	1150	1450	2200	3200	4200	-
	720	360	42	85	155	255	360	550	730	1000	1300	1900	2800	3600	4750
2.24	1800	804	77	155	300	500	700	1050	1350	-	-	-	-	-	-
	1200	536	53	110	210	330	460	730	1000	1300	1750	2550	3700	-	-
	900	402	41	90	170	260	360	580	810	1050	1350	2000	3000	3800	-
	720	321	35	78	145	230	320	500	700	930	1200	1750	2650	3350	4300
2.5	1800	720	65	145	280	450	630	980	1250	-	-	-	-	-	-
	1200	480	45	105	190	310	430	690	900	1250	1650	2400	3400	-	-
	900	360	35	85	155	250	350	540	740	1000	1250	1900	2750	3600	-
	720	288	30	73	135	220	310	470	640	870	1100	1650	2400	3150	4000
2.8	1800	643	58	125	250	420	590	900	1150	-	-	-	-	-	-
	1200	429	41	88	175	290	410	620	820	1100	1450	2100	3200	-	-
	900	321	30	68	145	230	320	510	670	910	1150	1700	2550	3400	-
	720	257	26	59	125	200	280	440	580	790	1000	1500	2250	2950	3700
3.15	1800	571	52	105	230	400	560	820	1100	1450	1900	-	-	-	-
	1200	381	37	74	160	260	360	560	760	1020	1350	1900	2900	3700	4900
	900	286	29	56	125	210	295	450	640	840	1050	1500	2350	3000	4000
	720	229	25	49	110	180	250	390	550	720	920	1350	2050	2600	3500
3.55	1800	507	47	100	200	360	500	750	980	1350	1750	-	-	-	-
	1200	338	34	69	145	250	350	510	680	950	1250	1800	2700	3400	4800
	900	254	26	53	110	200	280	410	560	750	990	1450	2200	2750	3900
	720	203	23	46	95	170	240	350	490	650	860	1300	1900	2400	3400
4	1800	450	41	84	175	340	480	700	930	1250	1600	-	-	-	-
	1200	300	28	58	120	240	330	470	650	870	1150	1650	2400	3000	4700
	900	225	21	44	90	190	265	370	540	690	910	1300	1950	2450	3800
	720	180	19	38	79	160	225	320	470	600	790	1150	1700	2150	3300
4.5	1800	400	36	62	155	300	420	620	880	1200	1400	-	-	-	-
	1200	267	25	43	105	200	280	420	630	810	1050	1350	1950	2750	4300
	900	200	19	32	85	165	230	330	510	650	850	1050	1500	2150	3300
	720	160	17	28	72	140	195	285	440	560	730	910	1350	1850	2800
5	1800	360	30	55	140	245	340	530	740	1100	1300	1850	2700	-	-
	1200	240	21	38	95	160	225	370	520	770	930	1300	1900	2500	3500
	900	180	17	29	70	120	170	290	410	590	760	990	1450	1900	2800
	720	144	15	25	62	105	150	250	350	510	660	860	1300	1650	2500
5.6	1800	321	25	47	115	220	310	460	630	970	1150	1650	2250	-	-
	1200	214	18	33	79	155	215	310	450	650	850	1150	1500	2000	3000
	900	161	14	25	60	115	160	240	340	490	660	880	1150	1500	2300
	720	129	12	22	52	100	140	205	295	430	570	760	1000	1350	2000
6.3	1800	286	19	45	92	175	245	370	550	790	1000	1350	2000	-	-
	1200	190	13	32	65	120	170	250	400	530	770	950	1350	1650	2400
	900	143	10	24	50	97	135	190	300	400	550	710	1050	1250	1800
	720	114	9	21	43	84	120	165	260	340	480	620	900	1100	1600

\* 전달동력 계산  $P_N \geq P_2 \times K_A$  \*  $P_2$ : 필요 동력 \*  $K_A$ : 안전계수-7, 8, 9 page

## ■ 외형 치수



Unit : mm

형번	A	B	C	D1	L1	W1	X1	Y1	P1	D2	L2	W2	X2	Y2	P2
100	100	290	185	28	50	8	7	24	115	48	80	14	9	42,5	115
125	125	355	205	38	60	10	8	33	135	55	90	16	10	49	135
160	160	445	265	48	80	14	9	42,5	145	75	120	20	12	67,5	145
200	200	545	305	60	105	18	11	53	175	95	160	25	14	86	175
225	225	620	335	70	120	20	12	62,5	190	100	180	28	16	90	195
250	250	680	390	80	140	22	14	71	215	110	180	28	16	100	215
280	280	755	420	85	140	22	14	76	235	130	210	32	18	119	235
320	320	840	480	95	160	25	14	86	270	140	240	36	20	128	270
360	360	930	500	100	180	28	16	90	285	170	270	40	22	157	285
400	400	1040	600	110	180	28	16	100	320	180	310	45	25	165	320
450	450	1150	630	120	210	32	18	109	345	210	350	50	28	193	345
500	500	1290	690	130	210	32	18	119	380	240	400	56	32	220	380
560	560	1440	730	150	240	36	20	138	420	270	450	63	32	250	420

형번	E	F	G	H1	H2	J	K	M1	M2	N	O	T	Z-Ø S	OIL (L)	무게 (kg)
100	85	144,5	369	125	180	72,5	32,5	225	-	150	45	15	4-15	1,9	38
125	97,5	172	434	160	205	100	32,5	290	-	170	45	15	4-15	3,8	65
160	118	206,5	524	180	240	122	45	355	-	220	65	20	4-19	6,5	125
200	140	244,5	624	225	285	145	60	425	-	250	80	25	4-24	10	220
225	160	281	712	250	305	170	65	490	-	280	80	25	4-24	18	300
250	175	301	772	280	355	190	65	-	275	320	100	30	6-28	22	430
280	187,5	333,5	847	310	385	220	67,5	-	310	350	100	30	6-28	30	580
320	205	379	968	350	425	245	70	-	350	400	110	35	6-35	45	800
360	220	414	1058	400	465	270	80	-	385	420	110	35	6-35	65	1100
400	245	462	1174	450	525	300	95	-	425	500	130	40	6-42	90	1600
450	245	542	1324	500	575	355	100	-	475	530	140	40	6-42	110	2100
500	295	586	1472	560	625	390	105	-	540	570	160	40	6-48	150	2900
560	325	646	1622	630	685	435	120	-	600	610	170	45	6-48	230	3900

NOTE. 1. 축경 공차 :  $D \leq 80 = m6$ ,  $D > 80 = n6$  2. 키 공차 : KS B 1311 or JIS B 1301

## ■ 열용량 계산

형번	100	125	160	200	225	250	280	320	360	400	450	500	560
열용량 $P_T$ (kW)	29	44	68	110	130	165	215	285	330	430	530	660	790

\* 열용량 계산  $P_2 \leq P_T \times K_T \times C_T$  \*  $K_T$ : 온도계수 &  $C_T$ : 냉각계수 - 6 page \*  $P_2$ : 필요 동력

\* 열용량이 부족한 경우는 냉각 장치를 설치 하거나 형번이 큰 감속기를 선정해야 합니다.

## 2단 평행축 기어박스 - 2H

### ■ 전달 능력표

감속비 N 減速比	회전수		형번														
	입력	출력	140	160	180	200	225	250	280	320	360	400	450	500	560	630	710
	入力	出力	전달 동력 P <sub>N</sub> (kW)														
6.3	1800	286	86	125	185	250	365	490	680	900	1400	1900	2700	-	-	-	-
	1200	190	58	86	120	165	245	325	460	600	950	1250	1800	2850	4000	5500	7700
	900	143	42	65	92	125	185	255	345	460	720	970	1350	2100	3000	4100	5800
	720	114	37	56	80	110	160	225	300	390	620	840	1150	1850	2600	3500	5000
7.1	1800	254	77	115	165	225	325	440	610	810	1250	1700	2400	-	-	-	-
	1200	169	52	77	110	150	220	290	410	540	850	1150	1600	2550	3600	4900	6900
	900	127	38	58	82	115	165	230	310	410	640	870	1200	1900	2700	3700	5200
	720	101	33	50	71	100	145	200	265	350	550	750	1050	1650	2350	3200	4500
8	1800	225	73	105	150	200	295	390	560	770	1150	1500	2100	-	-	-	-
	1200	150	48	71	99	135	200	275	370	520	770	1000	1400	2300	3300	4300	6400
	900	113	36	54	75	100	150	210	280	380	580	790	1050	1750	2450	3300	4700
	720	90	31	47	65	89	130	180	245	330	510	690	930	1500	2150	2850	4100
9	1800	200	66	96	135	185	270	360	500	730	1000	1350	1900	-	-	-	-
	1200	133	44	64	91	125	180	240	340	480	680	920	1250	2050	2900	3800	5600
	900	100	33	48	69	93	140	185	260	370	540	730	990	1650	2250	3000	4400
	720	80	29	42	60	81	120	165	225	320	470	630	860	1400	1950	2600	3800
10	1800	180	57	86	115	170	240	320	440	640	900	1250	1750	-	-	-	-
	1200	120	38	57	77	115	160	215	290	430	600	850	1150	1850	2600	3500	5100
	900	90	28	43	58	88	120	170	230	320	460	660	900	1450	2000	2650	4000
	720	72	25	37	50	76	105	145	200	275	400	570	780	1300	1750	2350	3450
11.2	1800	161	52	76	105	155	215	285	410	580	820	1050	1500	-	-	-	-
	1200	107	34	51	73	105	145	190	275	400	560	750	1000	1700	2350	3100	4700
	900	80	26	38	54	79	110	145	210	300	430	560	790	1300	1800	2400	3600
	720	64	22	33	47	69	93	125	180	255	370	490	690	1150	1550	2100	3150
12.5	1800	144	45	67	90	120	190	255	360	510	730	990	1350	-	-	-	-
	1200	96	30	45	59	85	125	180	240	340	490	670	930	1500	2200	2850	4200
	900	72	22	34	46	64	95	140	180	250	370	500	700	1200	1650	2100	3200
	720	58	20	30	40	55	84	120	155	220	320	440	610	1050	1450	1850	2750
14	1800	129	41	55	81	115	170	225	310	440	650	880	1200	1950	-	-	-
	1200	86	27	37	54	80	115	160	215	300	440	590	810	1350	1900	2500	3700
	900	64	20	28	41	60	85	120	165	225	330	460	610	1000	1450	1900	2800
	720	51	18	24	35	52	74	105	145	195	285	400	530	900	1300	1650	2450
16	1800	113	34	52	73	105	150	205	280	400	570	780	1100	1750	-	-	-
	1200	75	22	35	48	73	100	145	190	260	380	540	750	1200	1700	2250	3300
	900	56	17	26	36	55	75	110	145	200	300	410	560	900	1300	1700	2450
	720	45	15	23	31	48	66	93	125	175	255	350	490	780	1150	1450	2150
18	1800	100	31	45	66	96	130	175	255	370	520	700	980	1650	-	-	-
	1200	67	21	31	44	65	88	115	170	250	350	470	660	1100	1400	2000	3000
	900	50	16	23	33	48	68	91	125	185	275	370	500	860	1050	1600	2350
	720	40	14	20	29	42	59	79	110	170	235	320	430	740	940	1350	2050
20	1800	90	27	43	62	86	120	160	230	320	470	640	890	1500	-	-	-
	1200	60	19	29	41	58	81	110	160	220	320	430	600	1000	1250	1800	2750
	900	45	14	21	31	44	64	86	120	170	250	340	460	780	950	1450	2150
	720	36	12	19	27	38	55	74	105	150	215	290	390	670	850	1250	1900
22.4	1800	80	24	38	55	77	105	140	205	285	420	570	800	1350	-	-	-
	1200	54	17	26	37	52	72	99	145	195	285	380	530	900	1100	1600	2450
	900	40	12	18	27	39	57	77	105	150	220	300	410	690	840	1300	1900
	720	32	10	16	24	33	48	65	92	130	190	255	340	590	750	1100	1650

\* 전달동력 계산  $P_N \geq P_2 \times K_A$  \*  $P_2$ : 필요 동력 \*  $K_A$ : 안전계수 - 7, 8, 9 page

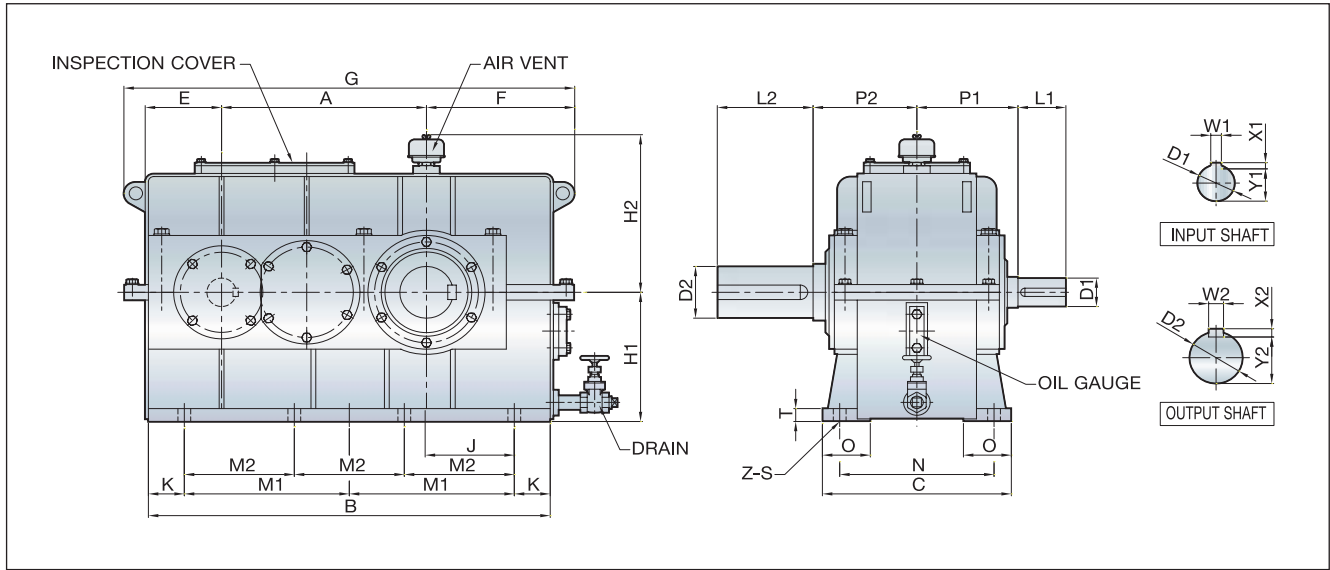
### ■ 열용량 계산

형번	140	160	180	200	225	250	280	320	360	400	450	500	560	630	710
열용량 P <sub>T</sub> (kW)	35	43	54	67	88	110	135	170	210	260	330	420	490	630	780

\* 열용량 계산  $P_2 \leq P_T \times K_r \times C_r$  \*  $K_r$ : 온도계수 &  $C_r$ : 냉각계수 - 6 page \*  $P_2$ : 필요 동력

\* 열용량이 부족한 경우는 냉각 장치를 설치 하거나 형번이 큰 감속기를 선정해야 합니다.

## 외형 치수



Unit : mm

형번	A	B	C	D1	L1	W1	X1	Y1	P1	D2	L2	W2	X2	Y2	P2
140	240	475	225	32	60	10	8	27	135	65	105	18	11	58	140
160	272	540	265	38	60	10	8	33	140	75	120	20	12	67.5	145
180	305	600	275	42	70	12	8	37	150	85	140	22	14	76	155
200	340	665	305	48	80	14	9	42.5	170	95	160	25	14	86	175
225	385	755	335	55	90	16	10	49	190	100	180	28	16	90	195
250	430	830	390	60	105	18	11	53	210	110	180	28	16	100	215
280	480	920	420	65	105	18	11	58	230	130	210	32	18	119	245
320	545	1030	480	70	120	20	12	62.5	260	140	240	36	20	128	270
360	610	1150	540	80	140	22	14	71	300	170	270	40	22	157	305
400	680	1280	620	95	160	25	14	86	325	180	310	45	25	165	330
450	770	1450	670	110	180	28	16	100	360	210	350	50	28	193	365
500	860	1600	770	120	210	32	18	109	410	240	400	56	32	220	420
560	960	1760	830	140	240	36	20	128	460	270	450	63	32	250	470
630	1080	1980	940	150	260	36	20	138	500	300	500	70	36	278	520
710	1210	2220	1040	160	280	40	22	147	540	340	550	80	40	315	560

형번	E	F	G	H1	H2	J	K	M1	M2	N	O	T	Z-∅S	OIL (L)	무게 (kg)
140	85	189.5	554	160	230	112.5	37.5	200	-	190	60	15	6-15	5	95
160	103	204.5	619	180	240	120	45	225	-	220	65	20	6-19	8	140
180	110	224.5	679	200	260	135	50	250	-	230	65	20	6-19	10	175
200	117.5	247	744	225	285	155	52.5	280	-	250	80	25	6-24	13	240
225	137.5	278.5	847	250	305	165	67.5	310	-	280	80	25	6-24	19	330
250	145	301	922	280	355	190	65	350	-	320	100	30	6-28	26	470
280	155	331	1012	310	385	205	80	380	-	350	100	30	6-28	37	620
320	170	379	1158	350	425	220	95	420	-	400	110	35	6-35	55	900
360	190	414	1278	400	465	250	100	475	-	460	110	35	6-35	80	1300
400	215	452	1414	450	525	265	120	520	-	520	130	40	6-42	110	1850
450	240	527	1624	500	575	315	125	-	400	570	140	40	8-42	150	2500
500	260	571	1782	560	625	340	140	-	440	650	160	40	8-48	230	3500
560	265	626	1942	630	685	390	145	-	490	710	170	45	8-48	330	4700
630	295	699	2168	710	775	425	180	-	540	800	190	50	8-56	450	6800
710	335	784	2438	800	855	480	195	-	610	880	210	55	8-56	600	9500

NOTE. 1. 축경 공차 :  $D \leq 80 = m6$  ,  $D > 80 = n6$  2. 키 공차 : KS B 1311 or JIS B 1301

## 3단 평행축 기어박스 - 3H

### ■ 전달 능력표

감속비 IN 減速比	회전수		형번														
	입력 入力	출력 出力	160	180	200	225	250	280	320	360	400	450	500	560	630	710	800
	전달 동력 P <sub>N</sub> (kW)																
22.4	1800	80	40	58	77	110	150	205	300	450	590	880	1300	1800	2400	-	-
	1200	54	26	38	55	74	100	145	210	300	395	580	880	1200	1550	2350	3300
	900	40	20	29	42	57	78	110	155	240	310	450	680	970	1250	1850	2650
	720	32	17	25	36	50	68	93	135	210	265	390	590	840	1100	1600	2350
25	1800	72	35	52	68	98	130	175	270	410	530	780	1150	1650	2200	-	-
	1200	48	24	34	46	65	88	120	180	280	350	520	800	1150	1450	2200	3150
	900	36	17	26	34	50	66	93	140	220	270	400	600	860	1150	1650	2400
	720	29	15	22	30	43	57	81	120	190	235	340	520	740	1000	1450	2100
28	1800	64	31	47	62	88	120	160	245	360	470	690	1000	1400	1900	-	-
	1200	43	21	31	42	58	80	110	165	250	310	470	700	990	1250	1900	2800
	900	32	16	24	31	44	62	85	125	180	235	350	540	760	990	1450	2100
	720	26	14	20	27	38	53	73	110	155	205	300	470	660	860	1300	1850
31.5	1800	57	27	42	54	77	105	140	220	325	440	630	920	1300	1750	-	-
	1200	38	18	27	36	52	69	97	150	220	290	420	640	900	1150	1750	2500
	900	29	14	21	28	40	54	73	110	165	225	320	480	690	900	1300	1900
	720	23	12	18	24	34	47	63	95	145	195	275	420	600	780	1150	1650
35.5	1800	51	25	37	50	69	97	130	200	310	390	570	860	1200	1550	-	-
	1200	34	16	25	33	46	62	90	130	205	265	380	570	800	1050	1550	2250
	900	25	13	19	25	35	48	68	100	155	200	290	440	610	800	1200	1700
	720	20	11	16	22	30	42	59	87	135	170	250	380	530	700	1050	1450
40	1800	45	22	33	47	63	87	120	175	265	350	520	770	1050	1400	-	-
	1200	30	15	23	31	42	58	80	120	180	235	350	520	720	950	1400	2000
	900	23	11	16	23	32	45	62	90	135	175	265	390	550	720	1100	1500
	720	18	9.5	14	20	28	39	53	78	120	150	225	340	480	630	950	1300
45	1800	40	20	29	40	55	77	105	160	240	310	460	690	970	1250	-	-
	1200	27	13	19	27	36	52	71	105	165	210	310	460	650	850	1300	1800
	900	20	10	14	20	29	40	56	82	125	160	235	350	500	660	980	1350
	720	16	8.5	12	18	25	34	49	71	110	135	205	300	430	570	850	1200
50	1800	36	17	25	35	50	69	96	145	220	275	410	610	850	1150	1700	2450
	1200	24	12	18	24	33	47	66	96	150	190	270	410	570	770	1150	1650
	900	18	9	13	18	26	35	48	73	110	145	210	320	450	590	880	1250
	720	14.4	7.6	11	15	22	30	42	63	95	120	180	275	390	510	760	1100
56	1800	32	15	22	31	45	62	86	125	190	245	350	550	770	1000	1500	2150
	1200	21	10	15	21	30	42	58	86	130	165	235	370	530	680	1000	1450
	900	16	8	11	16	23	31	44	65	100	125	180	280	390	530	780	1050
	720	12.9	6.7	9.5	14	20	27	38	56	88	110	155	245	340	460	680	940
63	1800	29	12.5	19	26	38	52	72	115	165	220	320	480	690	890	1350	1900
	1200	19	8.5	12	18	26	35	49	77	115	150	215	330	470	600	880	1250
	900	14.3	6.5	9.5	13	20	25	36	58	86	115	165	250	360	470	690	990
	720	11.4	5.7	8.2	11	17	22	31	50	74	100	145	220	310	410	600	860
71	1800	25	11.5	17	24	34	44	63	100	150	200	275	440	610	810	1200	1700
	1200	17	8	11	16	24	30	43	67	100	130	190	300	420	550	810	1150
	900	12.7	6	8.5	12	18	23	32	51	77	105	145	225	310	420	610	870
	720	10.1	5	7.2	10	15	20	28	44	67	90	125	195	270	360	530	750
80	1800	23	10	15	21	31	40	57	90	130	175	255	385	540	710	1050	1500
	1200	15	7	10	14	21	26	38	60	90	115	170	260	370	490	710	1000
	900	11.3	5	7.5	11	16	21	30	46	69	91	125	200	280	370	550	770
	720	9	4.4	6.7	9.5	14	18	26	40	60	79	110	170	240	320	480	670
90	1800	20	9	13	19	28	36	52	82	120	160	230	350	500	660	970	1350
	1200	13.3	6	9	13	19	24	34	54	81	105	155	235	340	440	650	910
	900	10	4.5	7	10	15	19	26	42	63	80	115	180	250	330	490	690
	720	8	4	6.1	8.5	13	16	23	36	54	70	100	155	220	285	420	600
100	1800	18	8	11	17	26	33	48	72	110	145	210	310	450	590	870	1200
	1200	12	5.5	8	12	18	23	32	50	73	95	140	210	310	400	590	820
	900	9	4	6	9	14	18	24	37	57	72	105	160	225	300	440	620
	720	7.2	3.6	5	7.7	12	15	21	30	49	63	90	140	200	255	380	540

\* 전달동력 계산  $P_N \geq P_2 \times K_A$  \*  $P_2$ : 필요 동력 \*  $K_A$ : 안전계수 - 7, 8, 9 page

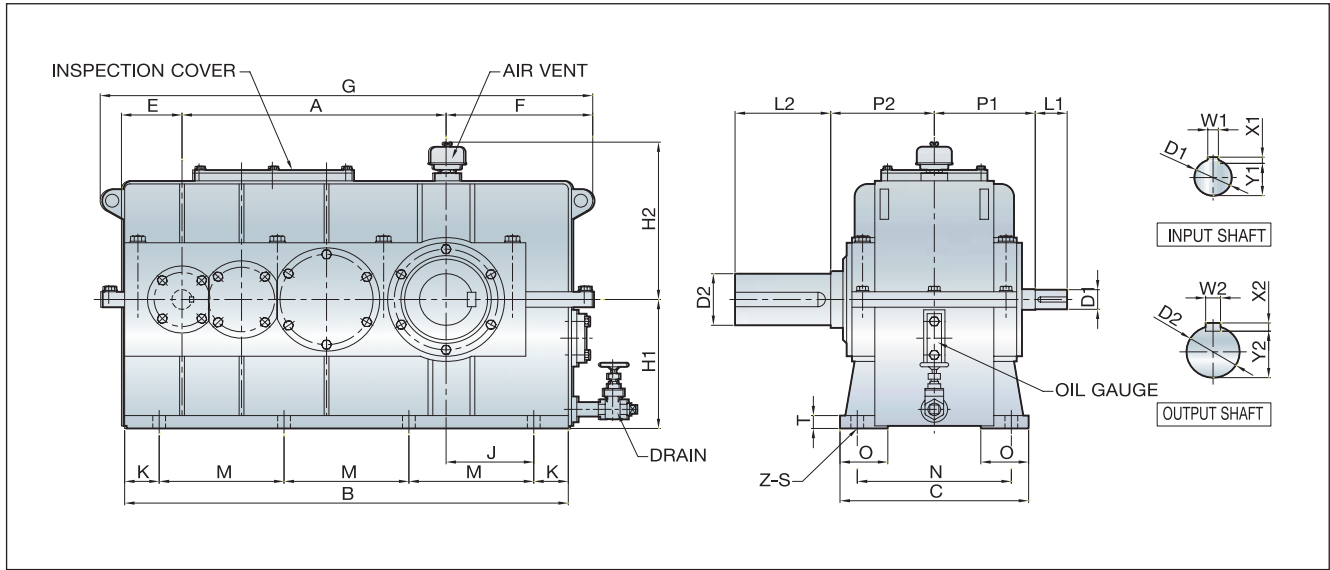
### ■ 열용량 계산

형번	160	180	200	225	250	280	320	360	400	450	500	560	630	710	800
열용량 P <sub>T</sub> (kW)	33	43	52	65	82	100	120	160	190	235	300	370	460	550	720

\* 열용량 계산  $P_2 \leq P_T \times K_r \times C_r$  \*  $K_r$ : 온도계수 &  $C_r$ : 냉각계수 - 6 page \*  $P_2$ : 필요 동력

\* 열용량이 부족한 경우는 냉각 장치를 설치 하거나 형번이 큰 감속기를 선정해야 합니다.

## ■ 외형 치수



Unit : mm

형번	A	B	C	D1	L1	W1	X1	Y1	P1	D2	L2	W2	X2	Y2	P2
160	352	600	265	24	40	8	7	20	140	75	120	20	12	67.5	145
180	395	665	275	28	50	8	7	24	150	85	140	22	14	76	155
200	440	740	305	32	60	10	8	27	170	95	160	25	14	86	175
225	497	835	335	38	60	10	8	33	190	100	180	28	16	90	195
250	555	930	390	42	70	12	8	37	210	110	180	28	16	100	215
280	620	1025	420	48	80	14	9	42.5	230	130	210	32	18	119	245
320	705	1160	480	55	90	16	10	49	260	140	240	36	20	128	270
360	790	1280	540	60	105	18	11	53	300	170	270	40	22	157	305
400	880	1420	620	65	105	18	11	58	325	180	310	45	25	165	330
450	995	1610	670	70	120	20	12	62.5	360	210	350	50	28	193	365
500	1110	1790	770	80	140	22	14	71	410	240	400	56	32	220	420
560	1240	2010	830	95	160	25	14	86	460	270	450	63	32	250	470
630	1400	2260	940	110	180	28	16	100	500	300	500	70	36	278	520
710	1570	2540	1040	120	210	32	18	109	540	340	550	80	40	315	560
800	1760	2850	1180	140	240	36	20	128	610	390	650	90	45	362	620

형번	E	F	G	H1	H2	J	K	M	N	O	T	Z-øS	OIL (L)	무게 (kg)
160	83	204.5	679	180	240	120	45	170	220	65	20	8-19	10	155
180	85	224.5	744	200	260	137.5	47.5	190	230	65	20	8-19	14	200
200	95	244.5	819	225	285	150	55	210	250	80	25	8-24	18	270
225	108	276	927	250	305	165	65	235	280	80	25	8-24	25	370
250	120	301	1022	280	355	195	60	270	320	100	30	8-28	35	530
280	120	331	1117	310	385	200	85	285	350	100	30	8-28	48	700
320	140	379	1288	350	425	215	100	320	400	110	35	8-35	65	1050
360	140	414	1408	400	465	250	100	360	460	110	35	8-35	100	1450
400	155	452	1554	450	525	275	110	400	520	130	40	8-42	150	2050
450	175	527	1784	500	575	310	130	450	570	140	40	8-42	200	2800
500	200	571	1972	560	625	335	145	500	650	160	40	8-48	300	3950
560	235	626	2192	630	685	370	165	560	710	170	45	8-48	450	5300
630	255	699	2448	710	775	420	185	630	800	190	50	8-56	560	7700
710	295	784	2758	800	855	470	205	710	880	210	55	8-56	800	10800
800	335	867	3074	900	945	530	225	800	1000	230	60	8-66	1170	15500

NOTE. 1. 축경 공차 :  $D \leq 80 = m6$  ,  $D > 80 = n6$  2. 키 공차 : KS B 1311 or JIS B 1301

## 4단 평행축 기어박스 - 4H

### ■ 전달 능력표

감속비 N 減速比	회전수		형번													
	입력 入力	출력 出力	180	200	225	250	280	320	360	400	450	500	560	630	710	800
			전달 동력 P <sub>N</sub> (kW)													
112	1800	16	10	16	23	32	44	65	97	125	185	280	395	530	760	1090
	1200	10.7	6.7	11	15	22	30	44	65	86	125	185	260	350	520	740
	900	8	5.1	8.3	12	16	22	32	48	65	93	140	200	270	390	560
	720	6.4	4.4	7.1	10	14	19	28	42	56	81	125	175	235	340	490
125	1800	14.4	9.6	13	20	28	39	57	89	115	165	250	350	470	670	980
	1200	9.6	6.5	9	14	19	26	38	59	77	110	170	235	315	450	650
	900	7.2	5	6.6	10	14	20	29	45	58	82	125	180	235	340	480
	720	5.8	4.3	5.7	8.9	12	17	25	39	50	71	110	155	205	295	420
140	1800	12.9	9.2	12	18	25	35	50	79	100	150	225	320	420	600	880
	1200	8.6	6.2	8	12	17	23	34	53	67	100	150	215	280	410	580
	900	6.4	4.6	6	9	13	17	25	39	50	75	115	160	210	320	440
	720	5.1	4	5.2	7.9	11	15	22	34	44	65	100	135	180	265	380
160	1800	11.2	8.3	10	16	22	31	45	70	89	130	200	280	370	540	780
	1200	7.5	5.5	7	11	15	20	30	47	59	88	130	185	245	360	520
	900	5.6	4.2	5	8.4	11	15	23	35	45	66	100	140	185	270	390
	720	4.5	3.6	4.6	7.2	9.5	13	20	30	39	57	88	125	160	240	340
180	1800	10	7.3	9.2	14	21	27	41	63	77	115	175	245	330	480	690
	1200	6.7	4.8	6.2	9.6	14	19	27	42	52	77	115	165	220	320	460
	900	5	3.6	4.6	7.2	10	14	20	32	38	58	90	125	170	240	350
	720	4	3.1	4	6.2	9	12	18	28	33	50	78	110	145	210	300
200	1800	9	6.2	8.3	13	17	24	36	56	70	105	160	225	295	430	610
	1200	6	4.1	5.5	8.8	11	16	24	37	47	69	105	150	200	285	410
	900	4.5	3.1	4.2	6.6	8.8	12	18	28	35	53	80	115	150	220	310
	720	3.6	2.7	3.6	5.7	7.6	11	16	25	30	46	70	100	130	190	265
224	1800	8	5.3	7.4	11	15	22	32	50	63	91	140	200	265	390	560
	1200	5.4	3.5	5	7.7	10	15	22	33	42	60	96	135	175	265	370
	900	4	2.6	3.7	5.8	7.7	11	16	25	31	46	72	100	130	200	280
	720	3.2	2.3	3.2	5	6.7	10	14	22	27	40	63	90	115	170	245
250	1800	7.2	5	6.7	10	14	19	28	45	56	80	125	180	235	350	495
	1200	4.8	3.3	4.5	6.9	9.4	13	19	30	37	54	85	120	160	235	330
	900	3.6	2.4	3.4	5.3	7.2	10	14	22	28	41	64	90	120	175	245
	720	2.9	2.2	3	4.6	6.2	8.6	12	20	24	35	55	79	105	155	215
280	1800	6.4	4.3	5.8	9	12	17	25	41	50	72	110	160	215	310	440
	1200	4.3	2.9	3.9	6.2	8.3	11	17	27	34	48	74	105	140	200	290
	900	3.2	2.2	3	4.6	6.2	8.8	13	21	25	37	56	80	105	155	220
	720	2.6	1.9	2.6	4	5.3	7.6	11	18	22	32	49	70	91	135	190
315	1800	5.7	3.9	5.2	8.3	10	15	23	35	46	65	100	140	190	275	395
	1200	3.8	2.5	3.4	5.6	7.4	10	15	23	31	43	67	96	125	180	265
	900	2.9	2	2.6	4.2	5.5	7.7	11	18	23	33	52	73	97	135	200
	720	2.3	1.7	2.3	3.6	4.8	6.7	10	16	20	29	45	63	84	120	170
355	1800	5.1	3.2	4.4	7.2	9.4	13	20	32	41	57	91	125	170	245	350
	1200	3.4	2.1	3	5	6.6	9.4	13	21	27	38	60	85	115	165	235
	900	2.5	1.7	2.2	3.6	5	7.2	10	16	20	29	46	65	86	125	175
	720	2	1.4	1.9	3.1	4.3	6.2	9	14	18	25	40	56	74	110	155
400	1800	4.5	2.9	4	6.6	8.8	12	18	28	36	51	79	110	150	215	295
	1200	3	1.9	2.6	4.4	5.8	8.3	12	19	24	34	53	75	100	140	200
	900	2.3	1.4	2	3.3	4.4	6.2	9.1	15	18	26	41	57	75	110	150
	720	1.8	1.2	1.7	2.9	3.8	5.3	7.9	13	16	22	35	50	65	94	130
450	1800	4	2.5	3.5	5.5	7.7	11	15	24	32	44	71	100	135	190	275
	1200	2.7	1.7	2.3	3.9	5.2	7.3	10	16	21	29	48	68	91	125	185
	900	2	1.3	1.8	2.9	3.9	5.6	7.5	12	16	22	36	52	69	98	135
	720	1.6	1.1	1.5	2.5	3.3	4.9	6.5	10	14	19	31	45	60	85	120
500	1800	3.6	2.3	3.2	4.6	6.6	10	13	21	28	40	65	90	120	170	245
	1200	2.4	1.5	2.1	3.1	4.4	6.7	8.8	14	19	26	43	60	80	115	165
	900	1.8	1.2	1.7	2.3	3.3	5.1	6.6	10	14	20	33	46	60	87	125
	720	1.4	1	1.4	2	2.9	4.4	5.7	9	12	17	29	40	52	75	110

\* 전달동력 계산  $P_N \geq P_2 \times K_A$  \*  $P_2$ : 필요 동력 \*  $K_A$ : 안전계수 - 7, 8, 9 page

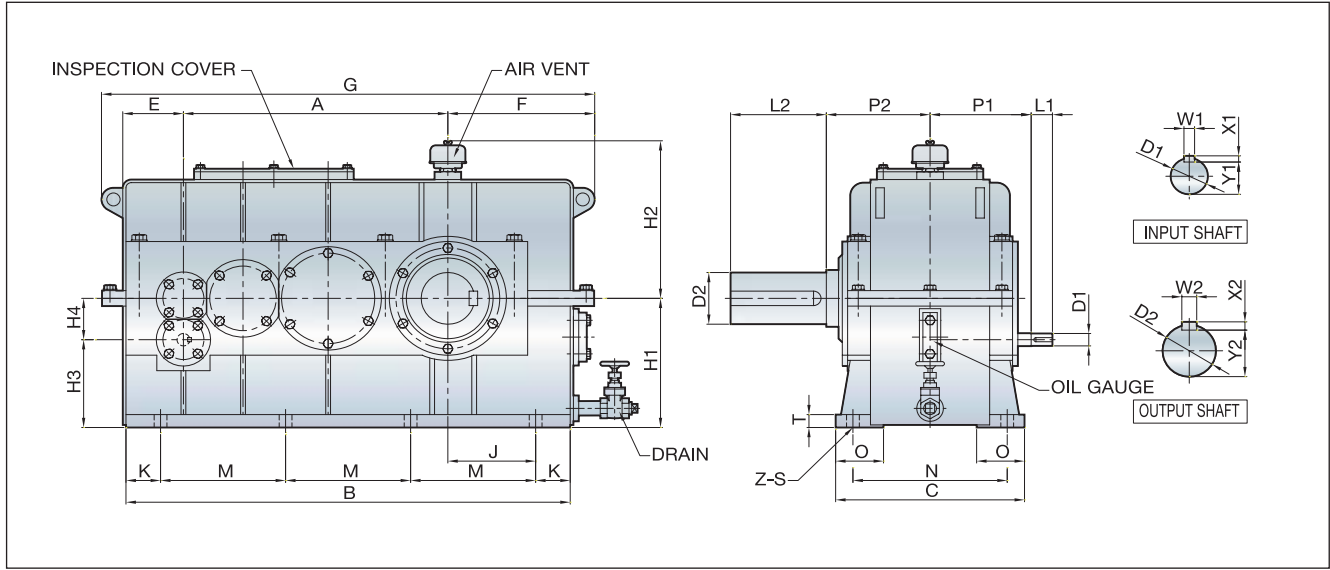
### ■ 열용량 계산

형번	180	200	225	250	280	320	360	400	450	500	560	630	710	800
열용량 P <sub>T</sub> (kW)	33	39	47	62	75	92	115	140	175	220	265	325	395	500

\* 열용량 계산  $P_2 \leq P_T \times K_r \times C_T$  \*  $K_r$ : 온도계수 &  $C_T$ : 냉각계수 - 6 page \*  $P_2$ : 필요 동력

\* 열용량이 부족한 경우는 냉각 장치를 설치 하거나 형번이 큰 감속기를 선정해야 합니다.

## ■ 외형 치수



Unit : mm

형번	A	B	C	D1	L1	W1	X1	Y1	P1	D2	L2	W2	X2	Y2	P2
180	395	665	275	18	35	6	6	14.5	150	85	140	22	14	76	155
200	440	740	305	22	40	6	6	18.5	170	95	160	25	14	86	175
225	497	835	335	24	40	8	7	20	190	100	180	28	16	90	195
250	555	930	390	28	50	8	7	24	210	110	180	28	16	100	215
280	620	1025	420	32	60	10	8	27	230	130	210	32	18	119	245
320	705	1160	480	38	60	10	8	33	260	140	240	36	20	128	270
360	790	1280	540	42	70	12	8	37	300	170	270	40	22	157	305
400	880	1420	620	48	80	14	9	42.5	325	180	310	45	25	165	330
450	995	1610	670	55	90	16	10	49	360	210	350	50	28	193	365
500	1110	1790	770	60	105	18	11	53	410	240	400	56	32	220	420
560	1240	2010	830	65	105	18	11	58	460	270	450	63	32	250	470
630	1400	2260	940	70	120	20	12	62.5	500	300	500	70	36	278	520
710	1570	2540	1040	80	140	22	14	71	540	340	550	80	40	315	560
800	1760	2850	1180	95	160	25	14	86	610	390	650	90	45	362	620

형번	E	F	G	H1	H2	H3	H4	J	K	M	N	O	T	Z-∅S	OIL (L)	무게 (kg)
180	85	224.5	744	200	260	137	63	137.5	47.5	190	230	65	20	8-19	14	200
200	95	244.5	819	225	285	155	70	150	55	210	250	80	25	8-24	18	270
225	108	276	927	250	305	170	80	165	65	235	280	80	25	8-24	25	370
250	120	301	1022	280	355	190	90	195	60	270	320	100	30	8-28	35	530
280	120	331	1117	310	385	210	100	200	85	285	350	100	30	8-28	48	700
320	140	379	1288	350	425	238	112	215	100	320	400	110	35	8-35	65	1050
360	140	414	1408	400	465	275	125	250	100	360	460	110	35	8-35	100	1450
400	155	452	1554	450	525	310	140	275	110	400	520	130	40	8-42	150	2050
450	175	527	1784	500	575	340	160	310	130	450	570	140	40	8-42	200	2800
500	200	571	1972	560	625	380	180	335	145	500	650	160	40	8-48	300	3950
560	235	626	2192	630	685	430	200	370	165	560	710	170	45	8-48	450	5300
630	255	699	2448	710	775	485	225	420	185	630	800	190	50	8-56	560	7700
710	295	784	2758	800	855	550	250	470	205	710	880	210	55	8-56	800	10800
800	335	867	3074	900	945	620	280	530	225	800	1000	230	60	8-66	1170	15500

NOTE. 1. 축경 공차 :  $D \leq 80 = m6$  ,  $D > 80 = n6$  2. 키 공차 : KS B 1311 or JIS B 1301

## 1단 직교축 기어박스 - 1B

### ■ 전달 능력표

감속비 I <sub>N</sub> 減速比	회전수		형번								
	입력	출력	125	160	200	225	250	280	320	360	400
	入力	出力	전달 동력 P <sub>N</sub> (kW)								
1	1800	1800	190	257	334	462	812	1059	1480	1922	2447
	1200	1200	135	182	237	328	576	751	1051	1365	1737
	900	900	107	145	189	262	460	600	839	1090	1387
	720	720	91	124	161	223	392	511	715	929	1182
1.25	1800	1440	143	190	251	344	452	565	1059	1377	1789
	1200	960	102	135	178	244	321	401	751	978	1270
	900	720	81	107	142	195	256	320	600	781	1014
	720	576	69	91	121	166	218	273	511	665	864
1.6	1800	1125	98	143	179	246	318	442	596	1069	1398
	1200	750	70	102	127	175	226	313	423	759	992
	900	563	55	81	102	139	180	250	338	606	793
	720	450	47	69	86	119	154	213	288	516	675
2	1800	900	66	96	128	179	226	308	411	627	812
	1200	600	47	68	91	127	160	219	292	445	576
	900	450	37	54	72	102	128	174	233	355	460
	720	360	32	46	62	86	109	149	198	303	392
2.5	1800	720	54	71	100	133	179	246	365	606	791
	1200	480	38	51	71	94	127	175	259	430	562
	900	360	30	40	57	75	102	139	207	344	449
	720	288	26	34	48	64	86	119	176	293	382
3.15	1800	571	39	56	79	102	133	195	257	442	606
	1200	381	27	40	56	73	94	138	182	313	430
	900	286	22	32	44	58	75	110	145	250	344
	720	229	18	27	38	49	64	94	124	213	293
4	1800	450	28	42	57	78	99	128	205	370	514
	1200	300	20	29	40	55	70	91	146	262	365
	900	225	16	23	32	44	56	72	116	209	291
	720	180	13	20	27	37	48	62	99	178	248

\* 전달동력 계산  $P_N \geq P_2 \times K_A$  \* P<sub>2</sub>: 필요 동력 \* K<sub>A</sub>: 안전계수 - 7, 8, 9 page

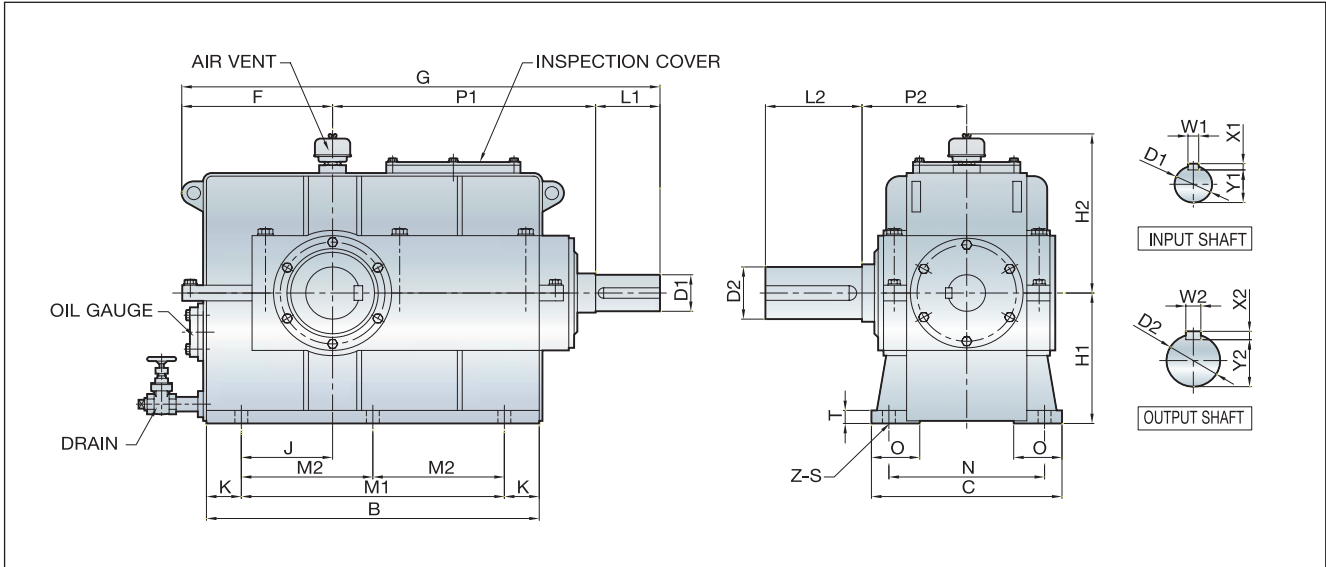
### ■ 열용량 계산

형번	125	160	200	225	250	280	320	360	400
열용량 P <sub>T</sub> (kW)	22	27	34	42	55	77	94	115	154

\* 열용량 계산  $P_2 \leq P_T \times K_r \times C_r$  \* K<sub>r</sub>: 온도계수 & C<sub>r</sub>: 냉각계수 - 6 page \* P<sub>2</sub>: 필요 동력

\* 열용량이 부족한 경우는 냉각 장치를 설치 하거나 형번이 큰 감속기를 선정해야 합니다.

## 외형 치수



Unit : mm

형번	B	C	D1	L1	W1	X1	Y1	P1	D2	L2	W2	X2	Y2	P2
125	355	205	38	60	10	8	33	295	55	90	16	10	49	135
160	445	265	48	80	14	9	42.5	355	75	120	20	12	67.5	145
200	545	305	60	105	18	11	53	440	95	160	25	14	86	175
225	620	335	70	120	20	12	62.5	490	100	180	28	16	90	195
250	680	390	80	140	22	14	71	555	110	180	28	16	100	215
280	755	420	85	140	22	14	76	590	130	210	32	18	119	235
320	840	480	95	160	25	14	86	670	140	240	36	20	128	270
360	930	500	100	180	28	16	90	740	170	270	40	22	157	285
400	1040	600	110	180	28	16	100	800	180	310	45	25	165	320

형번	F	G	H1	H2	J	K	M1	M2	N	O	T	Z-ø S	OIL (L)	무게(kg)
125	172	527	160	205	100	32.5	290	-	170	45	15	4-15	3.8	65
160	206.5	641.5	180	240	122	45	355	-	220	65	20	4-19	6.5	125
200	244.5	789.5	225	285	145	60	425	-	250	80	25	4-24	10	220
225	281	891	250	305	170	65	490	-	280	80	25	4-24	18	300
250	301	996	280	355	190	65	-	275	320	100	30	6-28	22	430
280	333.5	1063.5	310	385	220	67.5	-	310	350	100	30	6-28	30	580
320	379	1209	350	425	245	70	-	350	400	110	35	6-35	45	800
360	414	1334	400	465	270	80	-	385	420	110	35	6-35	65	1100
400	462	1442	450	525	300	95	-	425	500	130	40	6-42	90	1600

NOTE. 1. 축경 공차 :  $D \leq 80 = m6$  ,  $D > 80 = n6$  2. 키 공차 : KS B 1311 or JIS B 1301

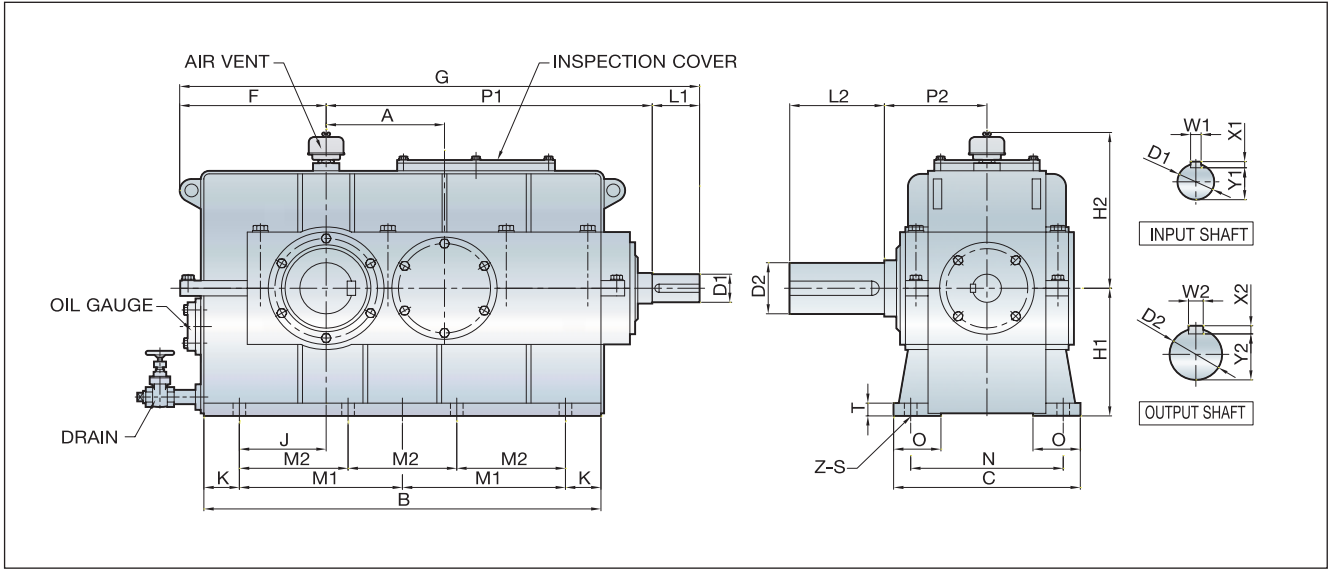
## 2단 직교축 기어박스 - 2B

### ■ 전달 능력표

감속비 In 減速比	회전수		형번										
	입력	출력	160	180	200	225	250	280	320	360	400	450	500
	入力	出力	전달 동력 P <sub>N</sub> (kW)										
4	1800	450	100	133	179	246	365	637	791	1120	1357	2303	3218
	1200	300	67	89	119	164	243	425	527	747	904	1535	2145
	900	225	50	66	89	123	182	318	395	560	678	1151	1609
	720	180	40	53	71	98	146	255	316	448	542	921	1287
4.5	1800	400	100	133	179	246	365	637	791	1120	1357	2303	3218
	1200	267	67	89	119	164	243	425	527	747	904	1535	2145
	900	200	50	66	89	123	182	318	395	560	678	1151	1609
	720	160	40	53	71	98	146	255	316	448	542	921	1287
5	1800	360	100	133	179	246	365	637	791	1120	1357	2303	3218
	1200	240	67	89	119	164	243	425	527	747	904	1535	2145
	900	180	50	66	89	123	182	318	395	560	678	1151	1609
	720	144	40	53	71	98	146	255	316	448	542	921	1287
5.6	1800	321	100	133	179	246	365	637	791	1120	1357	2303	3218
	1200	214	67	89	119	164	243	425	527	747	904	1535	2145
	900	161	50	66	89	123	182	318	395	560	678	1151	1609
	720	129	40	53	71	98	146	255	316	448	542	921	1287
6.3	1800	286	100	133	179	246	365	637	791	1120	1357	2303	3218
	1200	190	67	89	119	164	243	425	527	747	904	1535	2145
	900	143	50	66	89	123	182	318	395	560	678	1151	1609
	720	114	40	53	71	98	146	255	316	448	542	921	1287
7.1	1800	254	100	133	179	246	365	637	791	1120	1357	2303	3218
	1200	169	67	89	119	164	243	425	527	747	904	1535	2145
	900	127	50	66	89	123	182	318	395	560	678	1151	1609
	720	101	40	53	71	98	146	255	316	448	542	921	1287
8	1800	225	100	133	179	246	365	565	781	1120	1357	2303	3218
	1200	150	67	89	119	164	243	377	520	747	904	1535	2145
	900	113	50	66	89	123	182	282	390	560	678	1151	1609
	720	90	40	53	71	98	146	226	312	448	542	921	1287
9	1800	200	93	133	179	246	354	493	699	1048	1357	2056	2879
	1200	133	62	89	119	164	236	329	466	699	904	1371	1919
	900	100	46	66	89	123	177	246	349	524	678	1028	1439
	720	80	37	53	71	98	141	197	279	419	542	822	1151
10	1800	180	83	113	159	231	323	452	637	946	1316	1850	2591
	1200	120	55	75	106	154	215	301	425	630	877	1233	1727
	900	90	41	56	79	115	161	226	318	473	658	925	1295
	720	72	33	45	63	92	129	180	255	378	526	740	1036
11.2	1800	161	74	103	133	205	257	401	565	843	1182	1655	2303
	1200	107	49	69	89	137	171	267	377	562	788	1103	1535
	900	80	37	51	66	102	128	200	282	421	591	827	1151
	720	64	29	41	53	82	102	160	226	337	473	662	921
12.5	1800	144	66	93	133	185	257	354	503	750	1059	1480	2077
	1200	96	44	62	89	123	171	236	335	500	706	987	1384
	900	72	33	46	66	92	128	177	251	375	529	740	1038
	720	58	26	37	53	74	102	141	201	300	423	592	830
14	1800	129	59	83	113	159	231	323	452	678	935	1316	1850
	1200	86	39	55	75	106	154	215	301	452	623	877	1233
	900	64	29	41	56	79	115	161	226	339	467	658	925
	720	51	23	33	45	63	92	129	180	271	374	526	740
16	1800	113	52	71	102	128	200	282	390	596	822	1161	1614
	1200	75	34	47	68	85	133	188	260	397	548	774	1076
	900	56	26	35	51	64	100	141	195	298	411	580	807
	720	45	20	28	41	51	80	113	156	238	329	464	645
18	1800	100	46	65	90	123	179	246	349	514	730	1028	1429
	1200	67	30	43	60	82	119	164	233	342	486	685	952
	900	50	23	32	45	61	89	123	174	257	365	514	714
	720	40	18	26	36	49	71	98	139	205	292	411	571

\* 전달동력 계산  $P_N \geq P_2 \times K_A$  \*  $P_2$ : 필요 동력 \*  $K_A$ : 안전계수-7, 8, 9 page

## ■ 외형 치수



Unit : mm

형번	A	B	C	D1	L1	W1	X1	Y1	P1	D2	L2	W2	X2	Y2	P2
160	160	540	265	38	60	10	8	33	450	75	120	20	12	67.5	145
180	180	600	275	42	70	12	8	37	495	85	140	22	14	76	155
200	200	665	305	48	80	14	9	42.5	550	95	160	25	14	86	175
225	225	755	335	55	90	16	10	49	620	100	180	28	16	90	195
250	250	830	390	60	105	18	11	53	685	110	180	28	16	100	215
280	280	920	420	65	105	18	11	58	750	130	210	32	18	119	245
320	320	1030	480	70	120	20	12	62.5	840	140	240	36	20	128	270
360	360	1150	540	80	140	22	14	71	950	170	270	40	22	157	305
400	400	1280	620	95	160	25	14	86	1050	180	310	45	25	165	330
450	450	1450	670	110	180	28	16	100	1190	210	350	50	28	193	365
500	500	1600	770	120	210	32	18	109	1320	240	400	56	32	220	420

형번	F	G	H1	H2	J	K	M1	M2	N	O	T	Z-Ø S	OIL (L)	무게(kg)
160	204.5	714.5	180	240	120	45	225	-	220	65	20	6-19	8	140
180	224.5	789.5	200	260	135	50	250	-	230	65	20	6-19	10	175
200	247	877	225	285	155	52.5	280	-	250	80	25	6-24	13	240
225	278.5	988.5	250	305	165	67.5	310	-	280	80	25	6-24	19	330
250	301	1091	280	355	190	65	350	-	320	100	30	6-28	26	470
280	331	1186	310	385	205	80	380	-	350	100	30	6-28	37	620
320	379	1339	350	425	220	95	420	-	400	110	35	6-35	55	900
360	414	1504	400	465	250	100	475	-	460	110	35	6-35	80	1300
400	452	1662	450	525	265	120	520	-	520	130	40	6-42	110	1850
450	527	1897	500	575	315	125	-	400	570	140	40	8-42	150	2500
500	571	2101	560	625	340	140	-	440	650	160	40	8-48	230	3500

NOTE. 1. 축경 공차 : D ≤ 80 = m6 , D > 80 = n6 2. 키 공차 : KS B 1311 or JIS B 1301

## ■ 열용량 계산

형번	160	180	200	225	250	280	320	360	400	450	500
열용량 Pr (kW)	38	53	65	78	98	124	154	197	235	291	364

\* 열용량 계산  $P_2 \leq P_T \times K_T \times C_T$  \*  $K_T$  : 온도계수 &  $C_T$  : 냉각계수 - 6 page \*  $P_2$  : 필요 동력

\* 열용량이 부족한 경우는 냉각 장치를 설치 하거나 형번이 큰 감속기를 선정해야 합니다.

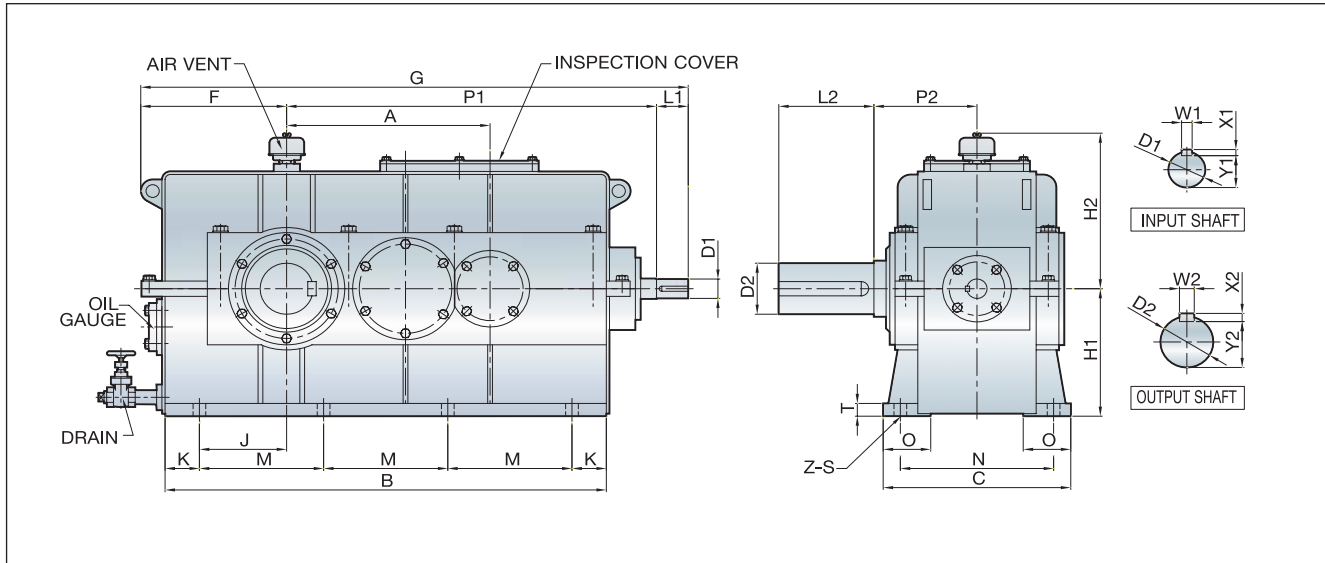
## 3단 직교축 기어박스 - 3B

### ■ 전달 능력표

감속비 iN 減速比	회전수		형번														
	입력	출력	160	180	200	225	250	280	320	360	400	450	500	560	630	710	800
	入力	出力	전달 동력 P <sub>N</sub> (kW)														
18	1800	100	39	56	72	101	133	180	251	380	606	802	1069	1398	2365	3300	
	1200	67	26	37	48	67	89	120	167	253	404	534	712	932	1576	2200	
	900	50	19.5	28	36	50	66	90	125	190	303	401	534	699	1182	1650	3033
	720	40.7	15.6	22	28	40	53	72	100	152	242	320	427	559	946	1320	2097
20	1800	90	39	56	72	101	133	180	251	380	606	802	1069	1398	2365	3300	
	1200	60	26	37	48	67	89	120	167	253	404	534	712	932	1576	2200	
	900	45	19.5	28	36	50	66	90	125	190	303	401	534	699	1182	1650	2930
	720	36	15.6	22	28	40	53	72	100	152	242	320	427	559	946	1320	2056
22.4	1800	80	39	56	72	101	133	180	251	380	606	802	1069	1398	2365	3300	3496
	1200	54	26	37	48	67	89	120	167	253	404	534	712	932	1576	2200	2330
	900	45	19.5	28	36	50	66	90	125	190	303	401	534	699	1182	1650	1748
	720	36	15.6	22	28	40	53	72	100	152	242	320	427	559	946	1320	1398
25	1800	72	35.9	50	71	101	133	180	251	380	606	802	1069	1398	2365	3290	3393
	1200	48	23.9	33	47	67	89	120	167	253	404	534	712	932	1576	2193	2262
	900	36	17.9	25	35	50	66	90	125	190	303	401	534	699	1182	1645	1696
	720	29	14.3	20	28	40	53	72	100	152	242	320	427	559	946	1316	1357
28	1800	64	31.8	46	70	90	123	180	251	380	544	760	1069	1398	2138	2971	3084
	1200	43	21.2	30	46	60	82	120	167	253	363	507	712	932	1425	1981	2056
	900	32	15.9	23	35	45	61	90	125	190	272	380	534	699	1069	1485	1542
	720	26	12.7	18.5	28	36	49	72	100	152	217	304	427	559	855	1188	1233
31.5	1800	57	28.7	41	57	80	113	159	226	339	483	678	946	1347	1902	2642	2776
	1200	38	19	27	38	53	75	106	150	226	322	452	630	898	1268	1761	1850
	900	29	14.3	20	28	40	56	79	113	169	241	339	473	673	951	1321	1388
	720	23	11.5	16.4	23	32	45	63	90	135	193	271	378	538	760	1057	1110
35.5	1800	51	24.6	36	49	70	99	138	195	293	421	596	843	1172	1665	2313	2467
	1200	34	16.4	24	33	46	66	92	130	195	281	397	562	781	1110	1542	1645
	900	25	12.3	18	24	35	49	69	97	146	210	298	421	586	832	1156	1233
	720	20	9.8	14.3	19	28	39	55	78	117	168	238	337	468	666	925	987
40	1800	45	22.6	31.8	45	64	89	123	180	257	380	534	750	1069	1501	2087	2262
	1200	30	15.8	21	30	43	59	82	120	171	253	356	500	712	1000	1391	1508
	900	23	11.3	16	22	32	44	61	90	128	190	267	375	534	750	1043	1131
	720	18	9	12.7	18	26	35	49	72	102	152	213	300	427	600	834	904
45	1800	40	19.5	27.7	39	55	78	107	154	231	334	473	658	925	1305	1820	2159
	1200	27	13	18.5	26	37	52	72	102	154	222	315	438	616	870	1213	1439
	900	20	9.7	13.8	19.5	27	39	54	77	115	167	236	329	462	652	910	1079
	720	16	7.8	11	15.6	22	31	43	61	92	133	189	263	370	522	728	863
50	1800	36	18	25	36	49	70	99	138	210	303	421	596	843	1182	1655	2107
	1200	24	12	16.7	24	33	46	66	92	140	202	281	397	562	788	1103	1405
	900	18	9	12.5	18	24	35	49	69	105	151	210	298	421	591	827	1053
	720	14.4	7	10	14.3	19	28	40	55	84	121	168	238	337	473	662	843
56	1800	32	16	23	31	45	64	89	123	190	272	380	544	750	1069	1491	2035
	1200	21	10.6	15.4	21	30	43	59	82	126	181	253	363	500	712	994	1357
	900	16	8	11.5	16	22	32	44	61	95	136	190	272	375	534	745	1017
	720	12.9	6.3	9.2	12.7	18	26	35	49	76	108	152	217	300	427	596	814
63	1800	29	13.8	20.5	28	39	56	80	113	169	241	339	473	678	946	1326	1593
	1200	19	9.2	13.7	19	26	37	53	75	113	161	226	315	452	630	884	1062
	900	14.3	6.9	10	14.3	19.5	28	40	56	84	120	169	236	339	473	663	796
	720	11.4	5.5	8	11.5	15.6	22	32	45	67	96	135	189	271	378	530	637
71	1800	25	11.3	18	24	36	49	70	98	149	210	293	421	596	822	1151	1233
	1200	17	7.5	12	16.4	24	33	46	65	99	140	195	281	397	548	767	822
	900	12.7	5.6	9	12.3	18	24.6	35	49	74	105	146	210	298	411	575	616
	720	10.1	4.5	7	9.8	14.3	19.7	28	39	59	84	117	168	238	329	460	493
80	1800	23	11.3	16	22.6	30.8	45	61	88	133	185	262	375	534	740	1038	1131
	1200	15	7.5	10.6	15	20.5	30	41	58	89	123	174	250	356	493	692	754
	900	11.3	5.6	8	11.3	15.4	22.6	30	44	66	92	131	187	267	370	519	565
	720	9	4.5	6.3	9	12.3	18	24	35	53	74	104	150	213	296	415	452
90	1800	20	10	13.8	19.5	27.7	39	55	78	118	164	236	334	473	658	915	
	1200	13.3	6.6	9.2	13	18.5	26	37	52	78	109	157	222	315	438	610	
	900	10	5	7	9.7	13.8	19.5	27	39	59	82	118	167	236	329	457	
	720	8	4	5.5	7.8	11	15.6	22	31	47	65	94	133	189	263	366	

\* 전달동력 계산  $P_N \geq P_2 \times K_A$  \*  $P_2$ : 필요 동력 \*  $K_A$ : 안전계수-7, 8, 9 page

## ■ 외형 치수



Unit : mm

형번	A	B	C	D1	L1	W1	X1	Y1	P1	D2	L2	W2	X2	Y2	P2
160	272	600	265	24	40	8	7	20	520	75	120	20	12	67.5	145
180	305	665	275	28	50	8	7	24	560	85	140	22	14	76	155
200	340	740	305	32	60	10	8	27	630	95	160	25	14	86	175
225	385	835	335	38	60	10	8	33	700	100	180	28	16	90	195
250	430	930	390	42	70	12	8	37	780	110	180	28	16	100	215
280	480	1025	420	48	80	14	9	42.5	845	130	210	32	18	119	245
320	545	1160	480	55	90	16	10	49	970	140	240	36	20	128	270
360	610	1280	540	60	105	18	11	53	1070	170	270	40	22	157	305
400	680	1420	620	65	105	18	11	58	1180	180	310	45	25	165	330
450	770	1610	670	70	120	20	12	62.5	1340	210	350	50	28	193	365
500	860	1790	770	80	140	22	14	71	1500	240	400	56	32	220	420
560	960	2010	830	95	160	25	14	86	1680	270	450	63	32	250	470
630	1080	2260	940	110	180	28	16	100	1880	300	500	70	36	278	520
710	1210	2540	1040	120	210	32	18	109	2110	340	550	80	40	315	560
800	1360	2850	1180	140	240	36	20	128	2350	390	650	90	45	362	620

형번	F	G	H1	H2	J	K	M	N	O	T	Z-ø S	OIL (L)	무게 (kg)
160	204.5	764.5	180	240	120	45	170	220	65	20	8-19	10	155
180	224.5	834.5	200	260	137.5	47.5	190	230	65	20	8-19	14	200
200	244.5	934.5	225	285	150	55	210	250	80	25	8-24	18	270
225	276	1036	250	305	165	65	235	280	80	25	8-24	25	370
250	301	1151	280	355	195	60	270	320	100	30	8-28	35	530
280	331	1256	310	385	200	85	285	350	100	30	8-28	48	700
320	379	1439	350	425	215	100	320	400	110	35	8-35	65	1050
360	414	1589	400	465	250	100	360	460	110	35	8-35	100	1450
400	452	1737	450	525	275	110	400	520	130	40	8-42	150	2050
450	527	1987	500	575	310	130	450	570	140	40	8-42	200	2800
500	571	2211	560	625	335	145	500	650	160	40	8-48	300	3950
560	626	2466	630	685	370	165	560	710	170	45	8-48	450	5300
630	699	2759	710	775	420	185	630	800	190	50	8-56	560	7700
710	784	3104	800	855	470	205	710	880	210	55	8-56	800	10800
800	867	3457	900	945	530	225	800	1000	230	60	8-66	1170	15500

NOTE. 1. 축 경 공차 : D ≤ 80 = m6 , D > 80 = n6 2. 키 공차 : KS B 1311 or JIS B 1301

## ■ 열용량 계산

형 번	160	180	200	225	250	280	320	360	400	450	500	560	630	710	800
열용량 Pt (kW)	27	34	43	53	73	94	119	141	158	179	244	304	364	437	515

\* 열용량 계산  $P_2 \leq P_T \times K_T \times C_T$  \*  $K_T$  : 온도계수 &  $C_T$  : 냉각계수 - 6 page \*  $P_2$  : 필요 동력

\* 열용량이 부족한 경우는 냉각 장치를 설치 하거나 형번이 큰 감속기를 선정해야 합니다.

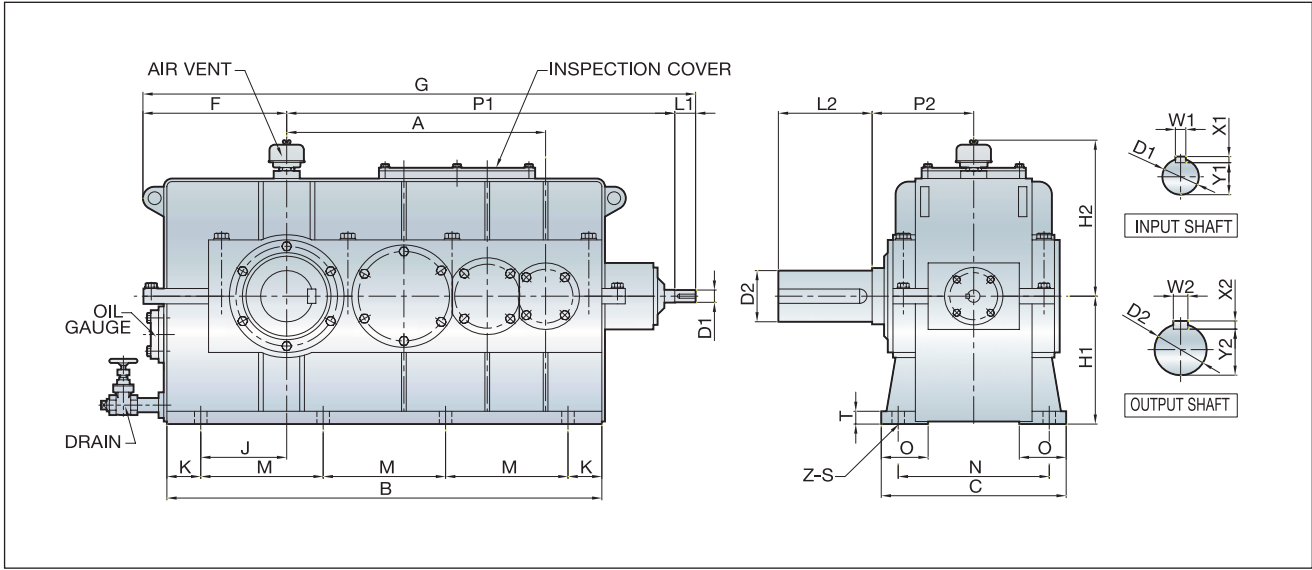
## 4단 직교축 기어박스 - 4B

### ■ 전달 능력표

감속비 In 減速比	회전수		형번													
	입력	출력	180	200	225	250	280	320	360	400	450	500	560	630	710	800
	入力	出力	전달 동력 P <sub>N</sub> (kW)													
100	1800	18	12.8	18.5	25.2	37	50.3	73	108	154	215	308	442	616	832	1131
	1200	12	8.5	12.3	16.8	24.6	33.5	48.6	72	102	143	205	294	411	555	754
	900	9	6.4	9.2	12.6	18.5	25.1	36.5	54	77	107	154	221	308	416	565
	720	7.2	5.1	7.4	10	14.8	20.1	29.2	43	61	86	123	176	246	333	452
112	1800	16	11.3	16.4	23.1	32.9	46.2	65.8	98	133	195	272	380	544	740	1017
	1200	10.7	7.5	10.9	15.4	21.9	30.8	43.8	65	89	130	181	253	363	493	678
	900	8	5.6	8.2	11.5	16.4	23.1	32.9	49	66	97	136	190	272	370	508
	720	6.4	4.5	6.5	9.2	13.1	18.5	26.3	39	53	78	108	152	217	296	407
125	1800	14.4	10.2	14.9	20.5	29.3	41.1	57.5	87	123	169	246	344	493	658	915
	1200	9.6	6.8	9.9	13.7	19.5	27.4	38.3	58	82	113	164	229	329	438	610
	900	7.2	5.1	7.4	10.2	14.6	20.5	28.7	43	61	84	123	172	246	329	457
	720	5.8	4.1	5.9	8.2	11.7	16.4	23	34	49	67	98	137	197	263	366
140	1800	12.9	9.3	12.3	18.5	26.2	37	52.4	78	107	154	221	308	431	586	822
	1200	8.6	6.2	8.2	12.3	17.4	24.6	34.9	52	72	102	147	205	287	390	548
	900	6.4	4.6	6.1	9.2	13.1	18.5	26.2	39	54	77	110	154	215	293	411
	720	5.1	3.7	4.9	7.4	10.4	14.8	20.9	31	43	61	88	123	172	234	329
160	1800	11.2	8.2	11.3	15.9	23.1	31.8	46.2	68	97	133	190	272	380	514	730
	1200	7.5	5.4	7.5	10.6	15.4	21.2	30.8	45	65	89	126	181	253	342	486
	900	5.6	4.1	5.6	7.9	11.5	15.9	23.1	34	48	66	95	136	190	257	365
	720	4.5	3.2	4.5	6.3	9.2	12.7	18.5	27.5	39	53	76	108	152	205	292
180	1800	10	7	10.2	13.8	20.5	28.7	40.1	60	85	118	169	241	339	452	647
	1200	6.7	4.7	6.8	9.2	13.7	19.1	26.7	40	56	78	113	161	226	301	431
	900	5	3.5	5.1	6.9	10.2	14.3	20	30	42	59	84	120	169	226	323
	720	4	2.8	4.1	5.5	8.2	11.5	16	24.2	34	47	67	96	135	180	259
200	1800	9	6.3	9.2	12.3	18.5	26.2	37	54	76	107	154	215	303	411	575
	1200	6	4.2	6.1	8.2	12.3	17.4	24.6	36	50	71	102	143	202	274	383
	900	4.5	3.1	4.6	6.1	9.2	13.1	18.5	27.2	38	53	77	107	151	205	287
	720	3.6	2.5	3.7	4.9	7.4	10.4	14.8	21.7	30	43	61	86	121	164	230
224	1800	8	5.8	8.2	11.3	16.4	23.1	32.9	49	68	97	133	190	272	370	524
	1200	5.4	3.9	5.4	7.5	10.9	15.4	21.9	32	46	65	89	126	181	246	349
	900	4	2.9	4.1	5.6	8.2	11.5	16.4	24.6	34	48	66	95	136	185	262
	720	3.2	2.3	3.2	4.5	6.5	9.2	13.1	29.7	27.5	39	53	76	108	148	209
250	1800	7.2	5	7.3	10.2	14.9	20.5	28.7	44	61	87	123	169	241	329	462
	1200	4.8	3.3	4.8	6.8	9.9	13.7	19.1	29.4	41	58	82	113	161	219	308
	900	3.6	2.5	3.6	5.1	7.4	10.2	14.3	22.1	30	43	61	84	120	164	231
	720	2.9	2	2.9	4.1	5.9	8.2	11.5	17.6	24.6	34	49	67	96	131	185
280	1800	6.4	4.7	6.6	9.3	13.3	18.5	26.2	39	56	78	107	154	221	298	411
	1200	4.3	3.1	4.4	6.2	8.9	12.3	17.4	26	37	52	72	102	147	198	274
	900	3.2	2.3	3.3	4.6	6.6	9.2	13.1	19.5	28.2	39	54	77	110	149	205
	720	2.6	1.8	2.6	3.7	5.3	7.4	10.4	15.6	22.6	31	43	61	88	119	164
315	1800	5.7	4.2	5.8	8.3	11.3	16.4	23.1	35	49	70	98	133	195	262	370
	1200	3.8	2.8	3.9	5.5	7.5	10.9	15.4	23.3	33	46	65	89	130	174	246
	900	2.9	2.1	2.9	4.1	5.6	8.2	11.5	17.4	24.6	35	49	66	97	131	185
	720	2.3	1.6	2.3	3.3	4.5	6.5	9.2	13.9	19.7	28	39	53	78	104	148
355	1800	5.1	3.7	5	7.3	10.2	14.9	20.5	30	44	61	86	123	169	231	329
	1200	3.4	2.4	3.3	4.8	6.8	9.9	13.7	20.5	29	41	57	82	113	154	219
	900	2.5	1.8	2.5	3.6	5.1	7.4	10.2	15.4	22.1	30	43	61	84	115	164
	720	2	1.4	2	2.9	4.1	5.9	8.2	12.3	17.6	24.6	34	49	67	92	131
400	1800	4.5	3.3	4.6	6.5	9.2	12.3	18.5	28.2	39	54	78	107	154	210	277
	1200	3	2.2	3	4.3	6.1	8.2	12.3	18.8	26	36	52	71	102	140	185
	900	2.3	1.6	2.3	3.2	4.6	6.1	9.2	14.1	19.5	27.2	39	53	77	105	138
	720	1.8	1.3	1.8	2.6	3.7	4.9	7.4	11.3	15.6	21.7	31	43	61	84	111
450	1800	4	2.7	4.1	5.7	8	11.3	15.9	24.1	33	48	67	96	133	180	257
	1200	2.7	1.8	2.7	3.8	5.3	7.5	10.6	16.1	22.6	32	45	64	89	120	171
	900	2	1.3	2	2.8	4	5.6	7.9	12	16.9	24.1	33	48	66	90	128
	720	1.6	1.1	1.6	2.3	3.2	4.5	6.3	9.6	13.5	19.3	27	38	53	72	102
500	1800	3.6	2.5	3.6	5.3	7.3	10.2	14.9	22.1	30	44	61	86	123	164	231
	1200	2.4	1.7	2.4	3.5	4.8	6.8	9.9	14.7	20.5	29	41	57	82	109	154
	900	1.8	1.2	1.8	2.6	3.6	5.1	7.4	11	15.4	22.1	30	43	61	82	115
	720	1.4	1	1.4	2.1	2.9	4.1	5.9	8.8	12.3	17.6	24.6	34	49	65	92

\* 전달동력 계산  $P_N \geq P_2 \times K_A$  \*  $P_2$ : 필요 동력 \*  $K_A$ : 안전계수 - 7, 8, 9 page

## ■ 외형 치수



Unit : mm

형번	A	B	C	D1	L1	W1	X1	Y1	P1	D2	L2	W2	X2	Y2	P2
180	395	665	275	18	35	6	6	14.5	590	85	140	22	14	76	155
200	440	740	305	22	40	6	6	18.5	660	95	160	25	14	86	175
225	497	835	335	24	40	8	7	20	745	100	180	28	16	90	195
250	555	930	390	28	50	8	7	24	810	110	180	28	16	100	215
280	620	1025	420	32	60	10	8	27	910	130	210	32	18	119	245
320	705	1160	480	38	60	10	8	33	1020	140	240	36	20	128	270
360	790	1280	540	42	70	12	8	37	1140	170	270	40	22	157	305
400	880	1420	620	48	80	14	9	42.5	1245	180	310	45	25	165	330
450	995	1610	670	55	90	16	10	49	1420	210	350	50	28	193	365
500	1110	1790	770	60	105	18	11	53	1570	240	400	56	32	220	420
560	1240	2010	830	65	105	18	11	58	1740	270	450	63	32	250	470
630	1400	2260	940	70	120	20	12	62.5	1970	300	500	70	36	278	520
710	1570	2540	1040	80	140	22	14	71	2210	340	550	80	40	315	560
800	1760	2850	1180	95	160	25	14	86	2480	390	650	90	45	362	620

형번	F	G	H1	H2	J	K	M	N	O	T	Z-ø S	OIL (L)	무게(kg)
180	224.5	849.5	200	260	137.5	47.5	190	230	65	20	8-19	14	200
200	244.5	944.5	225	285	150	55	210	250	80	25	8-24	18	270
225	276	1061	250	305	165	65	235	280	80	25	8-24	25	370
250	301	1161	280	355	195	60	270	320	100	30	8-28	35	530
280	331	1301	310	385	200	85	285	350	100	30	8-28	48	700
320	379	1459	350	425	215	100	320	400	110	35	8-35	65	1050
360	414	1624	400	465	250	100	360	460	110	35	8-35	100	1450
400	452	1777	450	525	275	110	400	520	130	40	8-42	150	2050
450	527	2037	500	575	310	130	450	570	140	40	8-42	200	2800
500	571	2246	560	625	335	145	500	650	160	40	8-48	300	3950
560	626	2471	630	685	370	165	560	710	170	45	8-48	450	5300
630	699	2789	710	775	420	185	630	800	190	50	8-56	560	7700
710	784	3134	800	855	470	205	710	880	210	55	8-56	800	10800
800	867	3507	900	945	530	225	800	1000	230	60	8-66	1170	15500

NOTE. 1. 축경 공차 :  $D \leq 80 = m6$ ,  $D > 80 = n6$  2. 키 공차 : KS B 1311 or JIS B 1301

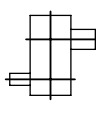
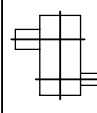
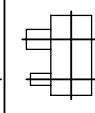
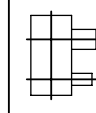
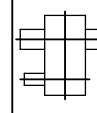
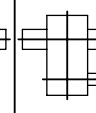
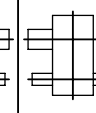
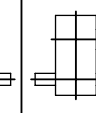
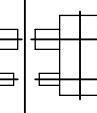
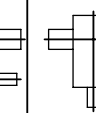
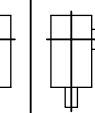
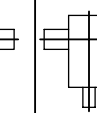
## ■ 열용량 계산

형번	180	200	225	250	280	320	360	400	450	500	560	600	630	710	800
열용량 Pt (kW)	29	31	40	50	62	79	102	124	158	188	222	252	274	325	428

\* 열용량 계산  $P_2 \leq P_T \times K_T \times C_T$  \*  $K_T$ : 온도계수 &  $C_T$ : 냉각계수 - 6 page \*  $P_2$ : 필요 동력

\* 열용량이 부족한 경우는 냉각 장치를 설치 하거나 형번이 큰 감속기를 선정해야 합니다.

# 산업용 감속기/GEAR BOX

견적의뢰서				영 업 부	작성	검토	승인	연 구 소	작성	검토	승인												
고객	회사명				영업담당자				JOB NO.														
	담당자				연락처				작성일														
	연락처				제품납기				제품수량														
	E-mail				견적요청일				접수자확인														
감속기 용도					외형결정	<input type="checkbox"/> 고객제시	<input type="checkbox"/> Maker Standard	<input type="checkbox"/>	타Maker제품대체														
<input type="checkbox"/>	Conveyor	<input type="checkbox"/>	Pulper	<input type="checkbox"/>	O.H.Crane	<input type="checkbox"/>	기타Crane	<input type="checkbox"/>	Extruder	<input type="checkbox"/>	Rolling Mill												
감속기 설치장소		<input type="checkbox"/>	협소한 실내		<input type="checkbox"/>	넓은 실내		<input type="checkbox"/>	실외 기타장소														
감속기 설치방향		<input type="checkbox"/>	입출력 수평부착형			<input type="checkbox"/>	입출력 수직부착형		<input type="checkbox"/>	입출력 경사부착형 기타													
설치장소 주위온도		여름		겨울		운할및 냉각장치유무			<input type="checkbox"/>	불필요	<input type="checkbox"/>	필요											
일일가동시간		<input type="checkbox"/>	간헐적		<input type="checkbox"/>	연속		<input type="checkbox"/>	기타		입출력축 회전방향	<input type="checkbox"/>	일방향	<input type="checkbox"/>	양방향								
검사사항		<input type="checkbox"/>	Maker 표준성적서			<input type="checkbox"/>	고객성능시험입회			<input type="checkbox"/>	제3공인기관												
예비품		<input type="checkbox"/>	없음			<input type="checkbox"/>	있음																
운반조건		<input type="checkbox"/>	상차도			<input type="checkbox"/>	하차도			<input type="checkbox"/>	기타												
원동기사양		<input type="checkbox"/>	전기모터		<input type="checkbox"/>	유압모터		<input type="checkbox"/>	엔진		<input type="checkbox"/>	기타											
동력					<input type="checkbox"/>	KW	<input type="checkbox"/>	HP	TORQUE		<input type="checkbox"/>	Kg,m	<input type="checkbox"/>	Kg,mm									
원동기속도					rpm		감속기입력축속도					rpm											
감속비					감속기출력축속도					rpm													
기어안전계수		<input type="checkbox"/>	고객제시			<input type="checkbox"/>	Maker Standard																
입력축 연결		<input type="checkbox"/>	커플링		<input type="checkbox"/>	기어		<input type="checkbox"/>	폴리		<input type="checkbox"/>	스프로켓		<input type="checkbox"/>	디스크브레이크 기타								
출력축 연결		<input type="checkbox"/>	커플링		<input type="checkbox"/>	기어		<input type="checkbox"/>	폴리		<input type="checkbox"/>	스프로켓		<input type="checkbox"/>	디스크브레이크 기타								
출력축 형태		<input type="checkbox"/>	중실축		<input type="checkbox"/>	중공축+내경키이형		<input type="checkbox"/>	중공축+Shrink Disk		<input type="checkbox"/>	기타											
특수부착물																							
고객협의사항																							
감속기입출력배열		<input type="checkbox"/> 일반-하기그림					<input type="checkbox"/> 특수형-별지에 첨부																
<input type="checkbox"/>	LR	<input type="checkbox"/>	RL	<input type="checkbox"/>	LL	<input type="checkbox"/>	RR	<input type="checkbox"/>	LT	<input type="checkbox"/>	RT	<input type="checkbox"/>	TL	<input type="checkbox"/>	TR	<input type="checkbox"/>	TT	<input type="checkbox"/>	CL	<input type="checkbox"/>	CR	<input type="checkbox"/>	CT
																							

# INSEPTION FOR REDUCER DECISION

영 구 소	작성	검토	승인	연 구 소	작성	검토	승인

Company Name :

Contact Person :

Contact Number :

1	REQUIRED DELIVERY	_____ DAYS
2	Q'TY	_____ PCS
3	PRODUCT MANUFACTURING CONDITIC	<input type="checkbox"/> REPLACEMENT <input type="checkbox"/> NEW
4	WHERE TO USE	_____
5	INSTALL CIRCUMSTANCE	<input type="checkbox"/> Narrow Indoor <input type="checkbox"/> Wide Indoor <input type="checkbox"/> Outdoor <input type="checkbox"/> Etc
6	CIRCUMSTANCE TEMPERATURE	_____ Degree
7	OPERATION TIME PER DAY	<input type="checkbox"/> Continuously <input type="checkbox"/> Discontinuous
8	MOTOR SPEC	<input type="checkbox"/> Motor <input type="checkbox"/> Engine <input type="checkbox"/> Hydraulic Motor <input type="checkbox"/> Etc
9	INPUT POWER	(    ) KW   (    ) HP   (    ) Torque   (    ) Kg.m
10	RPM (motor input rpm)	_____ RPM
11	RATIO	_____
12	SERVICE FACTOR	_____ %
13	INPUT CONNECTION METHOD	<input type="checkbox"/> Coupling <input type="checkbox"/> Gear <input type="checkbox"/> Pully <input type="checkbox"/> Sprocket <input type="checkbox"/> Diskbreak <input type="checkbox"/> Etc
14	OUTPUT CONNECTION METHOD	<input type="checkbox"/> Coupling <input type="checkbox"/> Gear <input type="checkbox"/> Pully <input type="checkbox"/> Sprocket <input type="checkbox"/> Diskbreak <input type="checkbox"/> Etc
15	REFERNCE MODEL CODE OF OTHER	as below _____
16	INPUT/OUTPUT ALIGNMENT SHAPE	LR _____ TYPE

PLEASE DRAW FOR OTHER TYPE

<input type="checkbox"/> LR	<input type="checkbox"/> RL	<input type="checkbox"/> LL	<input type="checkbox"/> RR	<input type="checkbox"/> LT	<input type="checkbox"/> RT	<input type="checkbox"/> TL	<input type="checkbox"/> TR	<input type="checkbox"/> TT	<input type="checkbox"/> CL	<input type="checkbox"/> CR	<input type="checkbox"/> CT

# GEAR

# BOX

