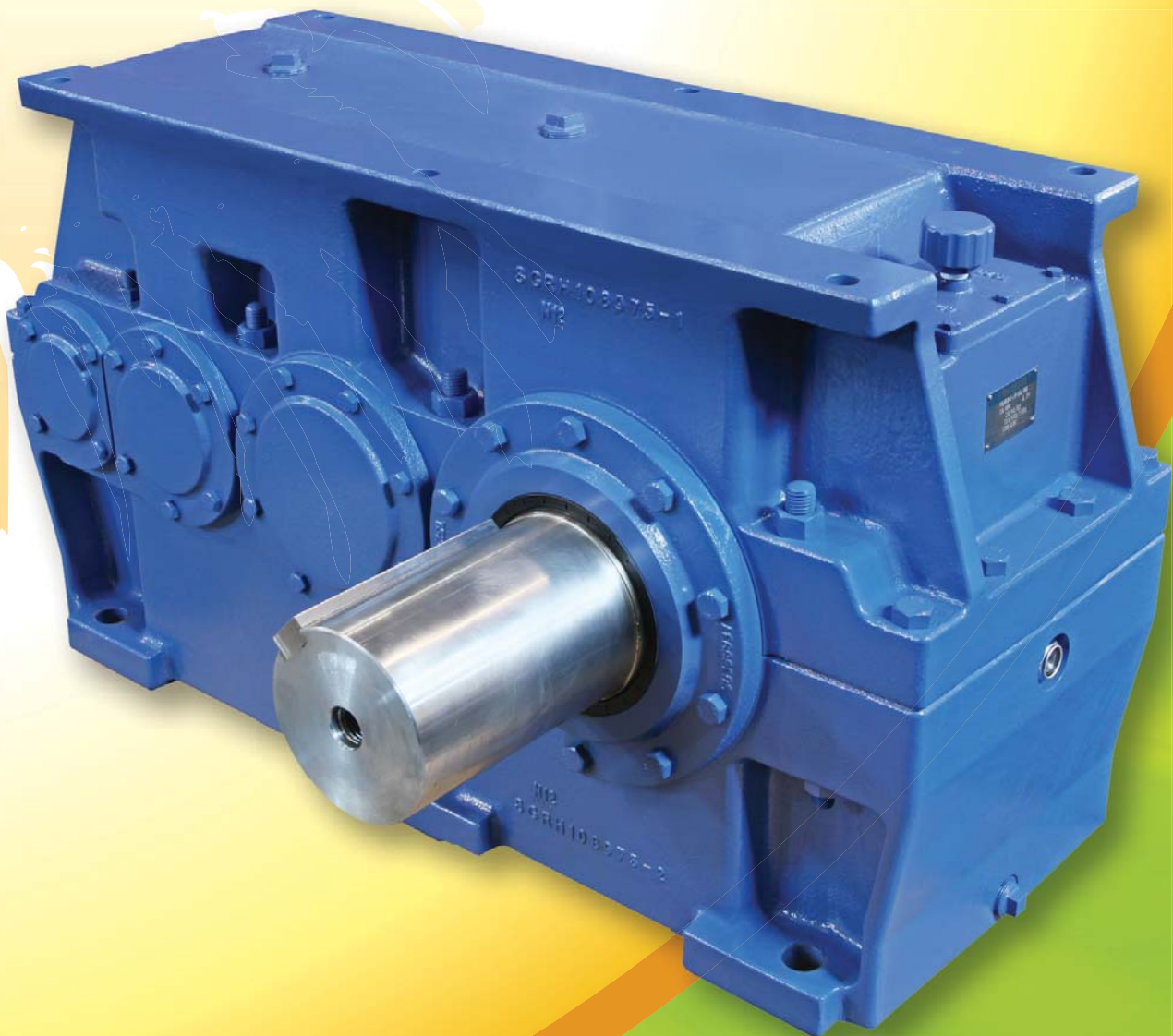


Sumitomo Drive Technologies

PARAMAX[®]

YHD Series
For Palm Oil Industry



Key products for palm oil mill



PARAMAX® YVA040



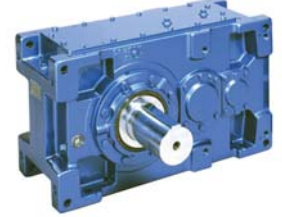
PARAMAX® YVD060



PARAMAX® YHD070



PARAMAX® YHD080P3



PARAMAX® 9000



CYCLO® 6000
SPEED REDUCER



CYCLO® 6000
GEARMOTOR



BEVEL BUDDYBOX®
SPEED REDUCER



BEVEL BUDDYBOX®
GEARMOTOR



HELICAL BUDDYBOX®



HELICAL BUDDYBOX®



CYCLO® IN-LINE VERTICAL



CYCLO® VERTICAL
GEARMOTOR

Key process in palm oil mill operation

The palm oil extraction mill and kernel processing place heavy demands on power transmission drives. Our products are suitable for all applications in the process.

STERILIZATION STATION

- Loading Ramp
- FFB Elevator
- Capstan
- Auto Feeder
- Thresher Drum
- Under Thresher Conveyor
- Fruit Elevator
- Top Cross Conveyor
- Fruit Distribution Conveyor
- Recycling Fruit Conveyor

NUT PROCESSING STATION

- Ripple Mill /Nut Cracker
- Shaking Grate
- Cracker Mixture Conveyor
- Air Lock Cracker Mixture Separator
- Cracker Mixture Conveyor
- Hydro Cyclone
- Wet Kernel Conveyor & Elevator
- Kernel Silo
- Kernel Winnowing Fan
- Air Lock Kernel Winnowing
- Sludge Conveyor

PRESSING STATION

- Digester
- Screw Press
- Cake Breaker Conveyor

EFB PROCESSING STATION

- Inclined Empty Bunch Conveyor
- EFB Shredder
- EFB Press
- EFB Fiber Conveyor

CLARIFICATION STATION

- Oil Clarifier Stirrer
- Solid Conveyor
- Fuel Distribution Conveyor

POWER GENERATION STATION

- Fuel Distribution Conveyor
- Fuel Conveyor & Elevator
- Oil Clarifier Stirrer
- Air-lock Dust Cyclone
- Air-lock Shell Cyclone

NUT PROCESSING STATION

- Nut Polishing Drum
- Wet Nut Elevator & Conveyor
- Dry Nut Elevator & Conveyor
- Air Lock Nut Winnowing System
- Grading Drum

Comprehensive Aftermarket Services

Our regional presence at major industrial cities in Asia-Pacific, (including Australia and India) is catered to your before-and-aftermarket services needs.



We offer the most comprehensive support system in the region for every aspect of the gear lifecycle, from installation to maintenance, diagnostics and repair.

Our Engineering Service Centers in the region offer a wide range of services including and not limited to:

- Factory certified repair centres located throughout Asia Pacific.
- 24 hours on-call service
- Field service and Expedited service
- Dedicated resources for customer support:
 - Service parts
 - Repair services
- Application upgrades, lube systems, sealing systems, etc.
- Technical support and maintenance recommendations
- Improved reliability of existing drives
 - Reduced down-time
 - Reduced Maintenance costs
 - Repair Hansen, Sumitomo and other brands
- Recommended service parts and parts management
 - Recommended maintenance intervals
- Custom "drop-in" replacements

Free Health Check!

We offer free health checks for all gearboxes and gearmotors at your Palm Oil Mill*

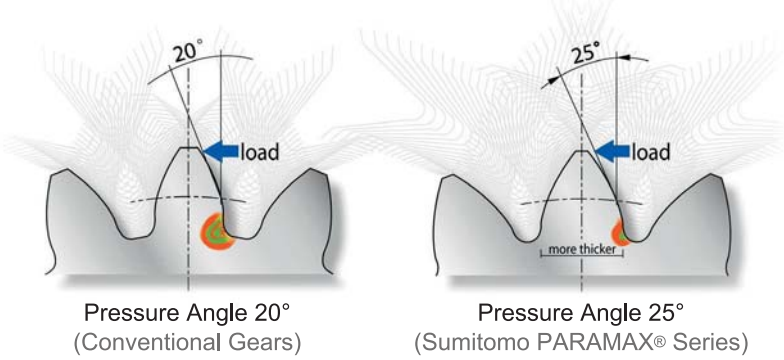
- Factory inspection
- Comprehensive reports
- Maintenance advices
- Consultation & technical presentation
- Training & seminars
- Speedy quotation & delivery

Talk to our representative now!

*Services limited to Malaysia and Indonesia only

PARAMAX[®] YHD Series
For Palm Oil Industries

Features

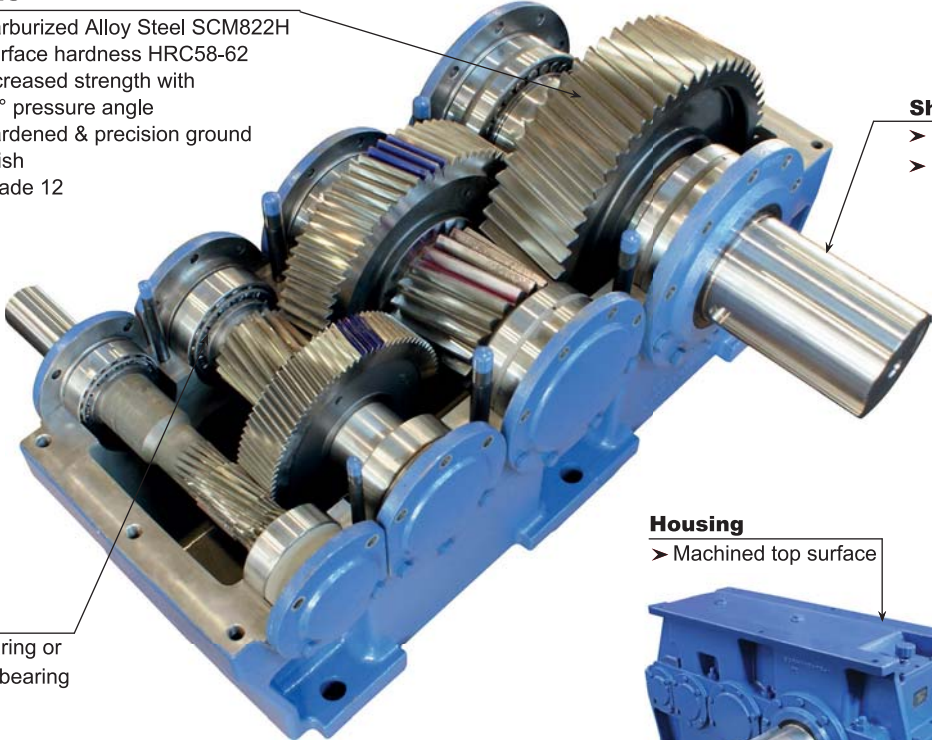


Gears

- Carburized Alloy Steel SCM822H
- Surface hardness HRC58-62
- Increased strength with 25° pressure angle
- Hardened & precision ground finish
- Grade 12

Shaft

- Heat treated alloy steel SCM440H
- Tempered & ground finish



Bearings

- Taper roller bearing or Spherical roller bearing

Housing

- Machined top surface

Installation

- Housing designed to facilitate easy installation and removal of fasteners

Oil gauge

- Bulls eye oil gauge

SUMITOMO PARAMAX[®] GEARBOXES FEATURES AND BENEFITS

Features	Benefits
AGMA 12, High Quality Gearing Accuracy	Increased Strength and Durability
Protuberance hobbing	Eliminates stress concentration
Tip relief and Crowning	Improves contact, reduces noise level.
Pressure angle: 25 degrees	Increases strength
Helix Angle: 14 degrees	Reduces noise level
Vacuum Carburising	Removes impurities, reduces residual stresses
Vacuum degassed alloy steel	Consistent quality, prevents stress concentration due to impurities
Reinforced Cast Iron Housing	For reduced weight and optimum strength
Dual Lip Oil Seals	Prevents oil leaks and water intrusion
Locally stocked	Quick delivery
Local service teams	Prompt service and monitoring

General Specifications

Application	Model	Ratio	Torque (Nm)	Allowable Radial Load on LSS (N)	Flippable Housing	Contents Page
Kernel Expeller Drive	YHD080P3-LR-55.066	55.066	74,000	140,000	-	5
	YHD070P3-RL-54.891	54.891	74,000	87,000	✓	6
Screw Press Drive (P15)	YHD060P3SP-RL-55.391	55.391	48,000	60,000	✓	7
	YHD060P3SP-RL-78.456	78.456	45,000	60,000	✓	7
Screw Press Drive (P20)	YHD080P3SP-RL-76.353	76.353	74,000	140,000	-	8
	YHD070P3SP-RL-77.373	77.373	70,000	87,000	✓	9
Digester Drive (3000L)	YVA040P3DG-RL-57.962	57.962	18,000	37,000	-	10
Digester Drive (6000L)	YVD060P3DG-RL-57.328	57.328	32,000	60,000	-	11
Empty Fruit Bunch Press Drive	YHD080P3-LR-55.066	55.066	74,000	140,000	-	12
	YHD070P3-RL-54.891	54.891	74,000	87,000	✓	13
Thresher Drive	PHA9045P3-RL-56	56.250	13200	49100	-	14

AMBIENT CONDITIONS	
Ambient Temperature	10deg C ~ 50deg C
Ambient Humidity	Under 85%
Elevation	Less than 1000m above sea level
Atmosphere	Well Ventilated location, free of corrosion and explosive gases, vapor

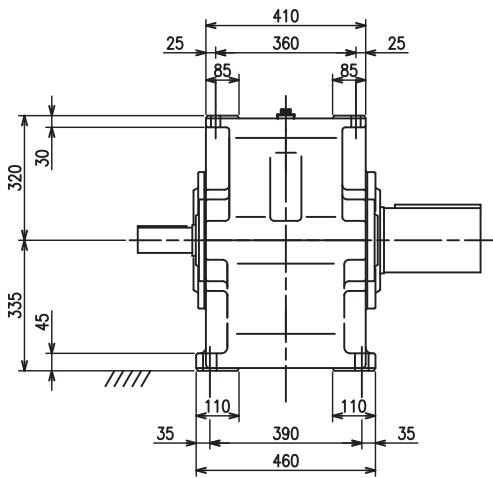
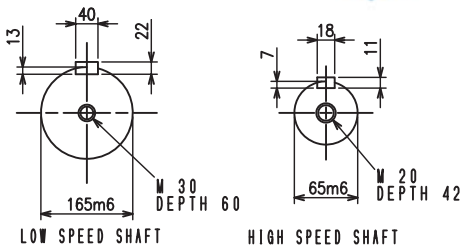
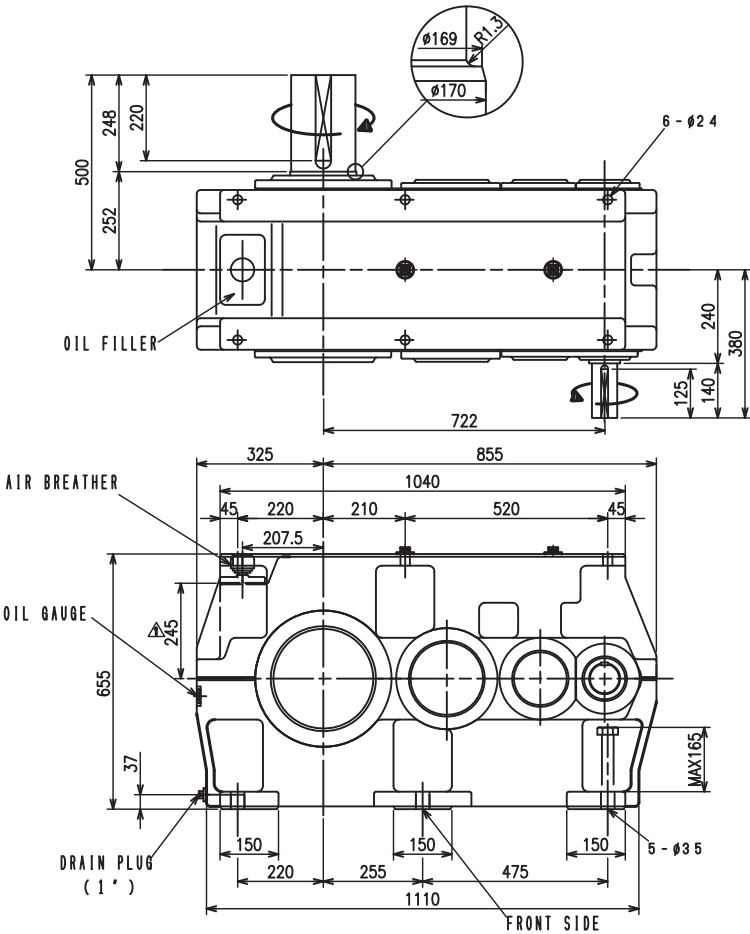
PAINT SPECIFICATIONS	
Surface Preparation	SIS Sa 2 1/2 (Inside & Outside)
Inside Paint	Modified Alkyd Resin Primer (20~40 μm)
Outside Paint	Primer: Modified Alkyd Resin Primer (40~80μm) Finish: Acrylic Alkyd Resin Paint (15~30 μm)
Paint Color	Donau Blue (Musell 6.5PB 3.6/8.2)

● Other paint specification is possible upon request.

TECHNICAL NOTES
1. Lubrication: Oil Bath: Please use correct Oil Viscosity 2. Temperature correction factor must be used when calculating thermal capacity of the gearbox 3. All Gear Ratings are based on ISO 6336-1996 . 4. Keys and Keyways are based on JIS B 1301-1996 Parallel key in fastening type (ISO R773-1969 Close Keys)

Kernel Expeller Drive

YHD080P3-LR-55.066



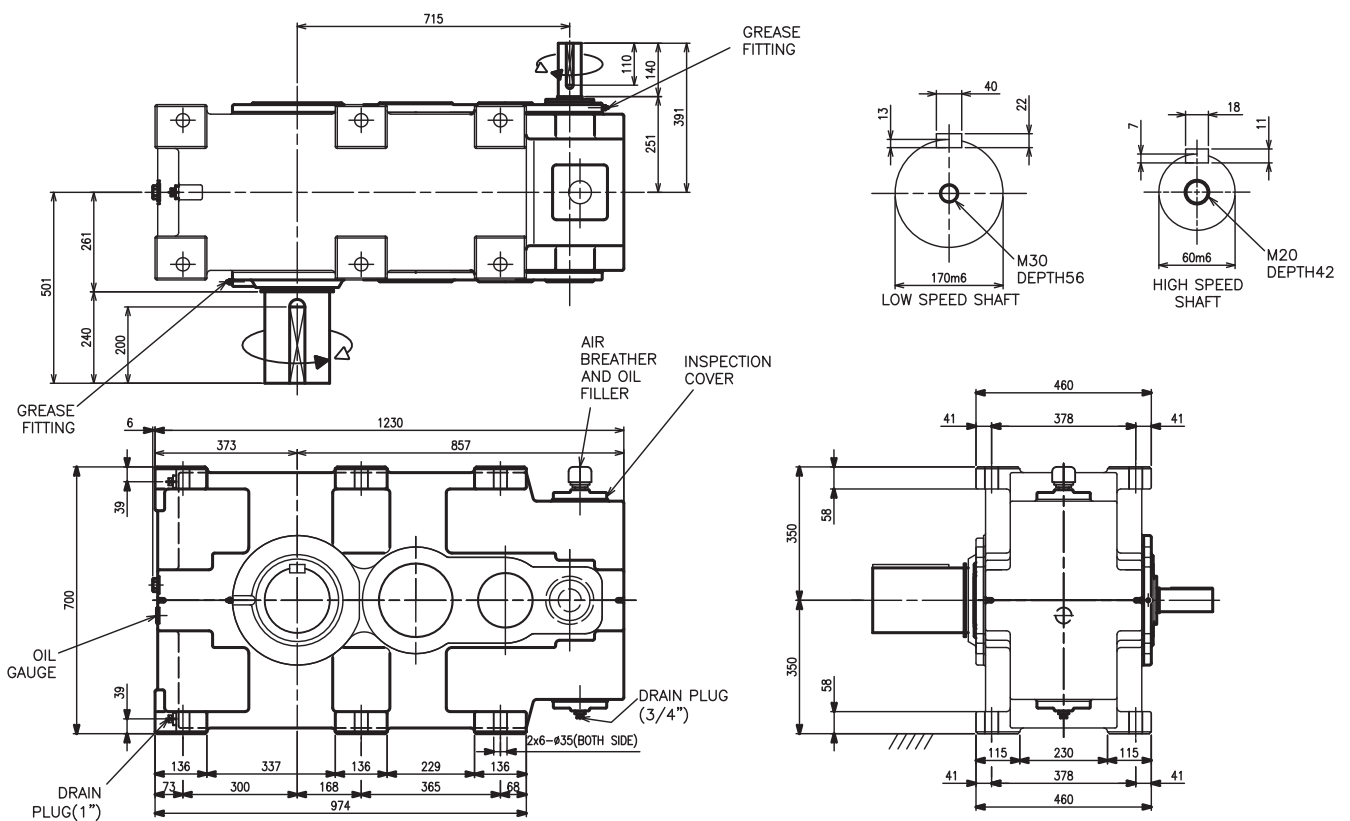
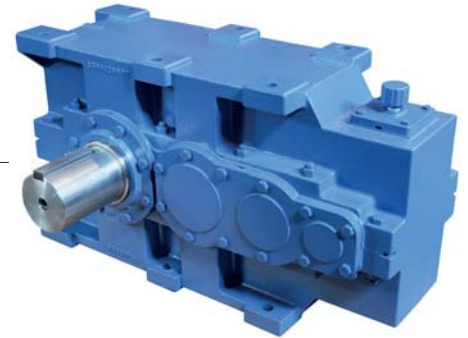
KERNEL EXPELLER DRIVE REDUCER SPECIFICATIONS

Model	Ratio	Torque Rating Nm	Input Speed rpm	Output Speed rpm	Power Rating kW	Output Shaft dia mm	Input Shaft Dia mm	Weight (Approx) kg	Oil Qty (Approx) l
YHD080P3-LR-55.066	55.066	74,000	1000	18.2	140	165	65	1000	80
			900	16.3	126				
			750	13.6	105				

Lubrication System Oil Bath
Lubricant ISO VG 220/320/460 AGMA 5EP/6EP/7EP

Kernel Expeller Drive

YHD070P3-RL-54.891



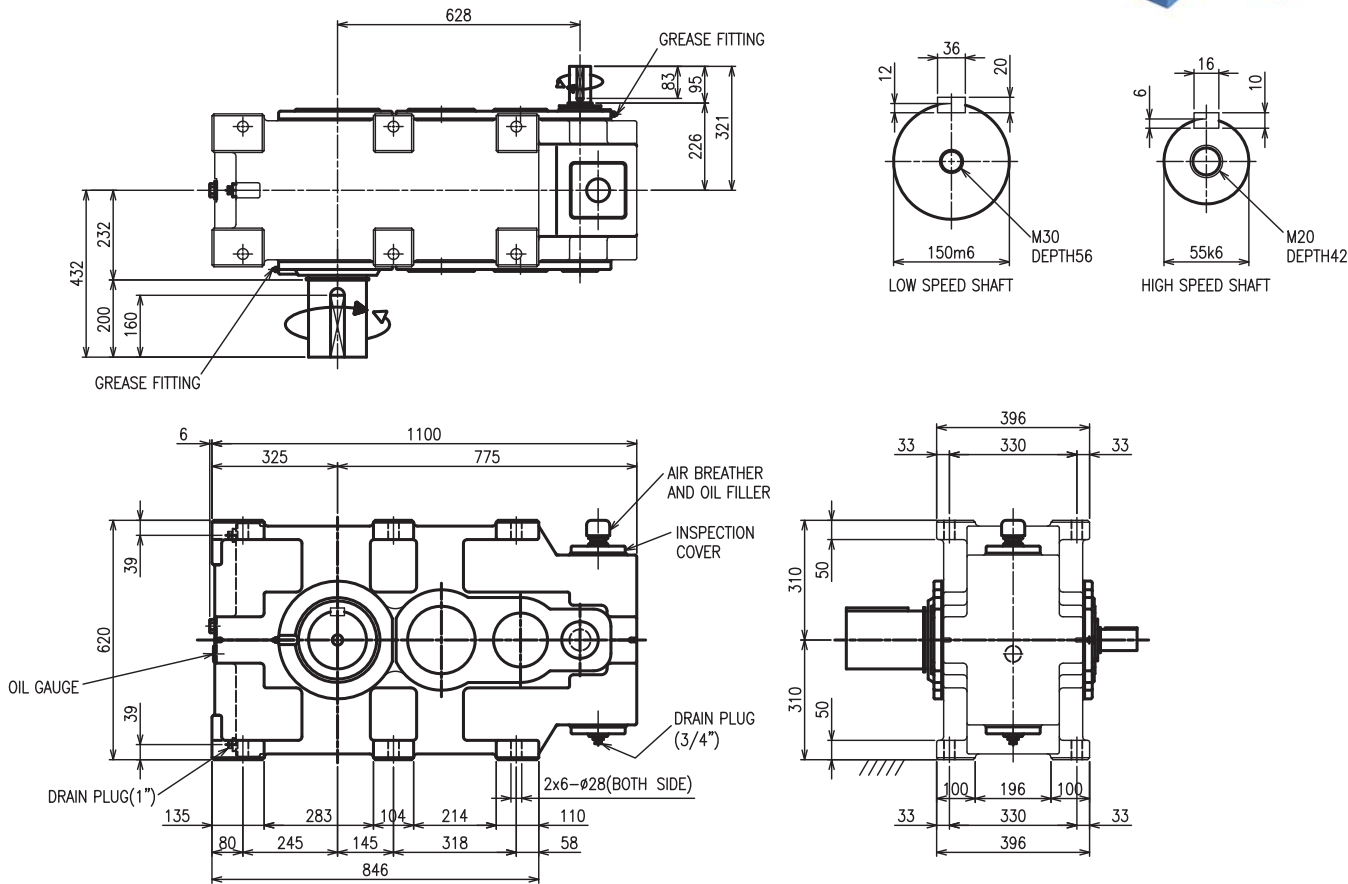
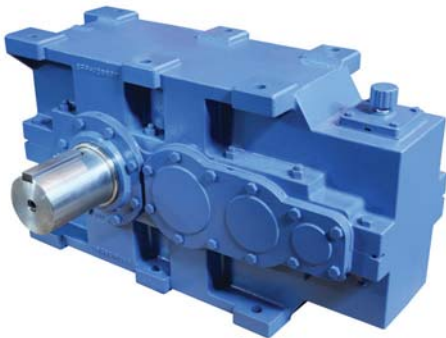
KERNEL EXPELLER DRIVE REDUCER SPECIFICATIONS

Model	Ratio	Torque Rating <i>Nm</i>	Input Speed <i>rpm</i>	Output Speed <i>rpm</i>	Power Rating <i>kW</i>	Output Shaft dia <i>mm</i>	Input Shaft Dia <i>mm</i>	Weight (Approx) <i>kg</i>	Oil Qty (Approx) <i>l</i>
YHD070P3-RL-54.891	54.891	74,000	1000	18.2	140	170	60	1080	85
			900	16.4	126				
			750	13.7	105				

Lubrication System	Oil Bath
Lubricant	ISO VG460 AGMA 7EP

Screw Press Drive P15

YHD060P3SP-RL-55.391/78.456



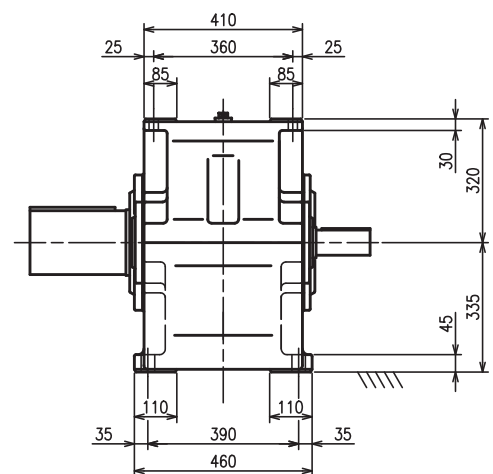
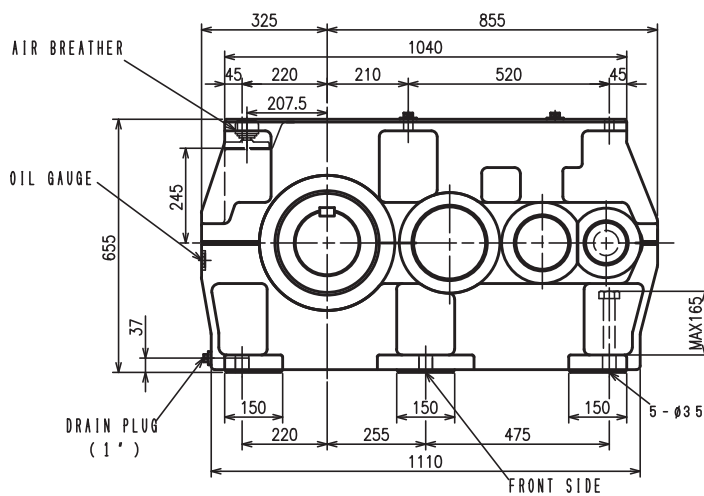
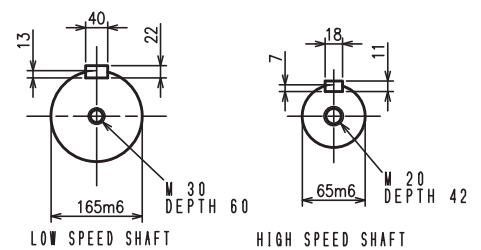
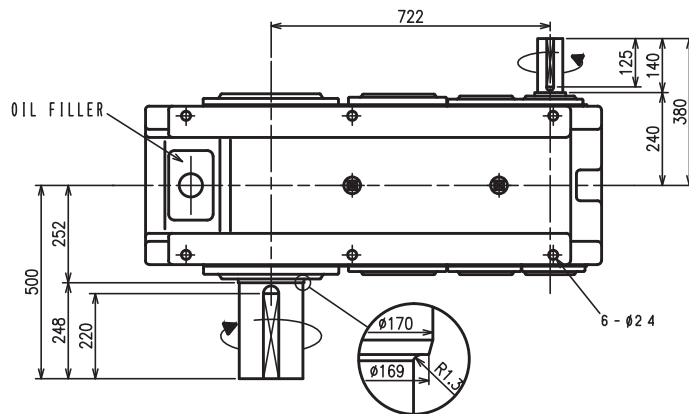
SCREW PRESS DRIVE P15 (15t/hour) REDUCER SPECIFICATIONS

Model	Ratio	Torque Rating Nm	Input Speed rpm	Output Speed rpm	Power Rating kW	Output Shaft dia mm	Input Shaft Dia mm	Weight (Approx) kg	Oil Qty (Approx) l
YHD060P3SP-RL-55.391	55.391	48,000	1000	18.1	90	150	55	730	60
			750	13.5	68				
YHD060P3SP-RL-78.456	78.456	45,000	1000	12.7	60	150	55	730	60
			750	9.6	45				

Lubrication System Oil Bath
Lubricant ISO VG460 AGMA 7EP

Screw Press Drive P20

YHD080P3SP-RL-76.353



SCREW PRESS DRIVE P20 (20t/hour) REDUCER SPECIFICATIONS

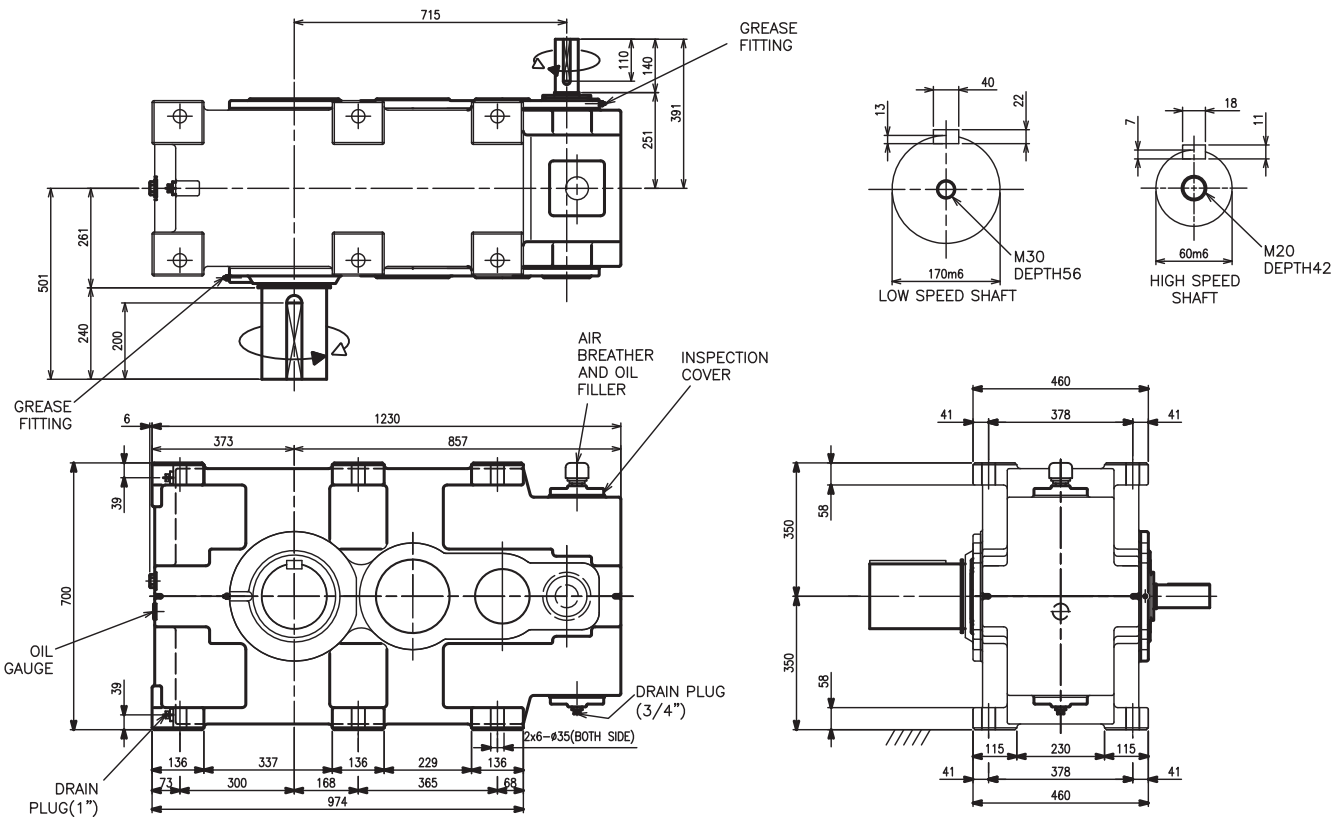
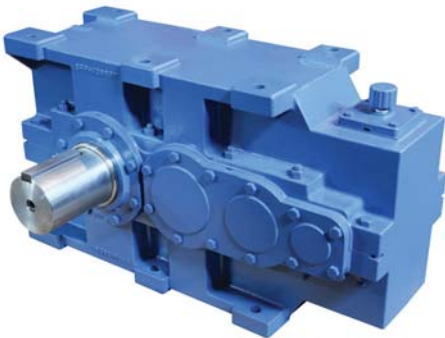
Model	Ratio	Torque Rating Nm	Input Speed rpm	Output Speed rpm	Power Rating kW	Output Shaft dia mm	Input Shaft Dia mm	Weight (Approx) kg	Oil Qty (Approx) l
YHD080P3SP-RL-76.353	76.353	74,000	1000	13.1	100	165	65	1,000	80
			750	9.8	75				

Lubrication System
Lubricant

Oil Bath
ISO VG 220/320/460 AGMA 5EP/6EP/7EP

Screw Press Drive P20

YHD070P3SP-RL-77.373



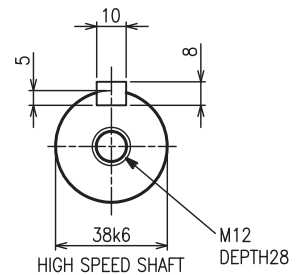
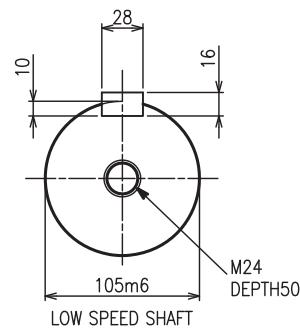
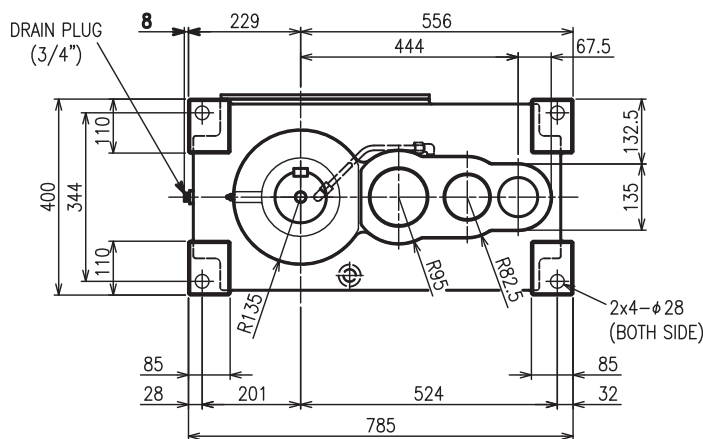
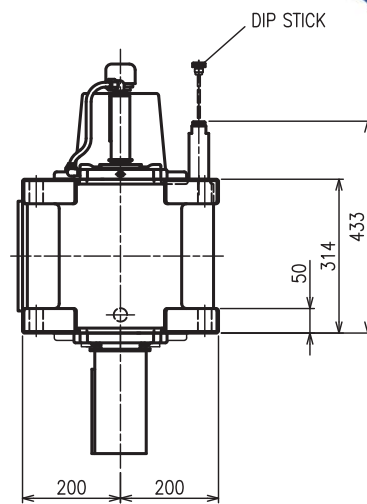
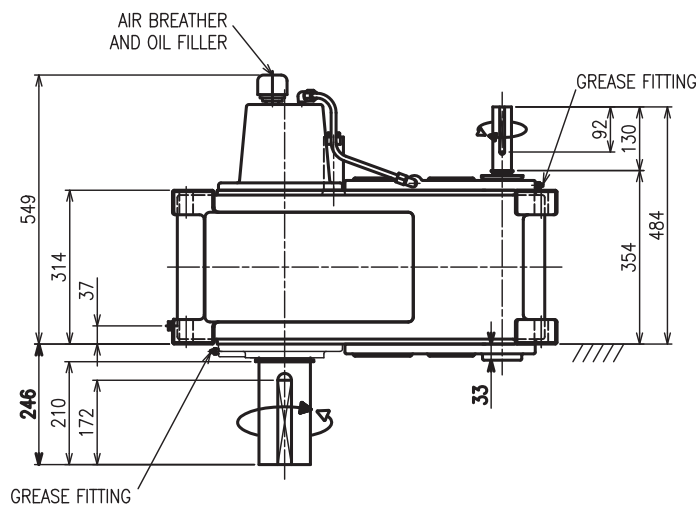
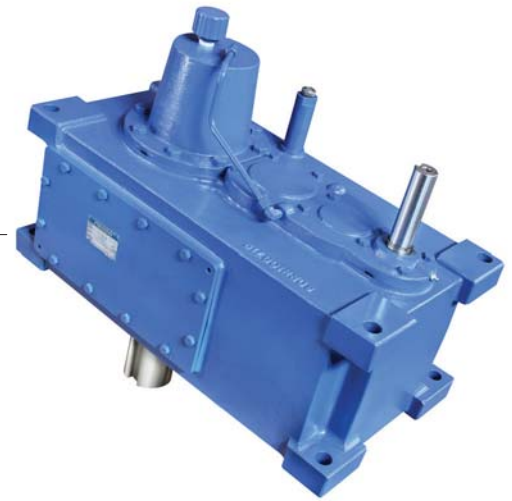
SCREW PRESS DRIVE P20 (20t/hour) REDUCER SPECIFICATIONS

Model	Ratio	Torque Rating Nm	Input Speed rpm	Output Speed rpm	Power Rating kW	Output Shaft dia mm	Input Shaft Dia mm	Weight (Approx) kg	Oil Qty (Approx) l
YHD070P3SP-RL-77.373	77.373	70,000	1000	12.9	95	170	60	1,080	85
			750	9.7	71				

Lubrication System Oil Bath
Lubricant ISO VG460 AGMA 7EP

Digester Drive 3000L

YVA040P3DG-RL-57.962



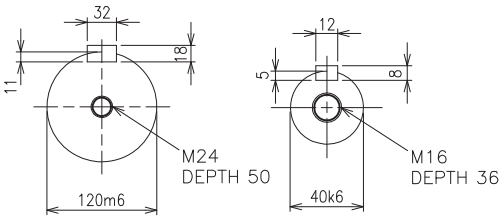
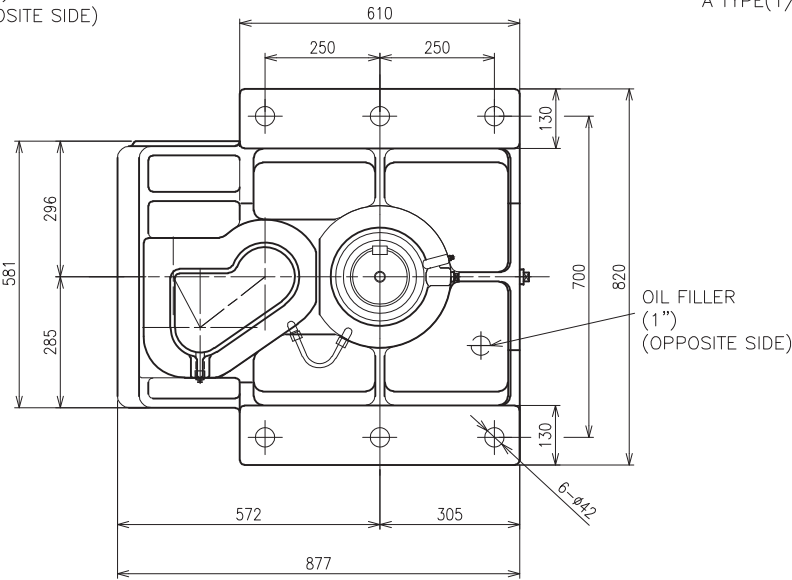
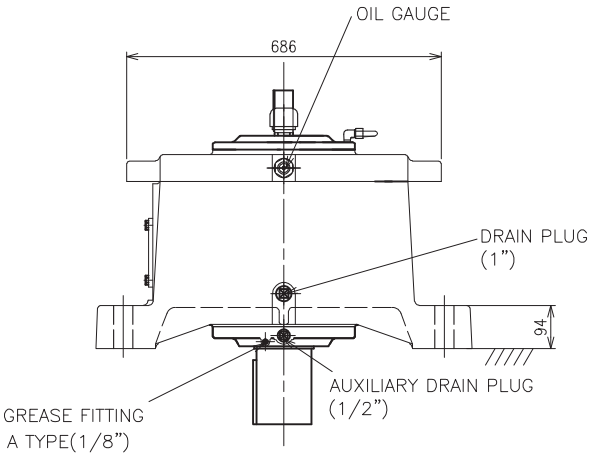
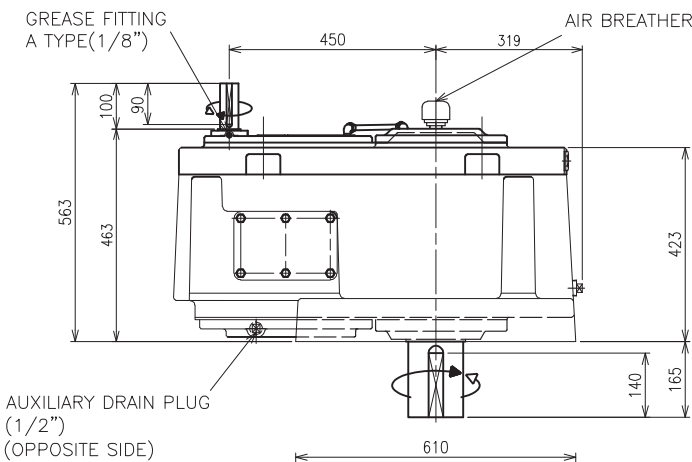
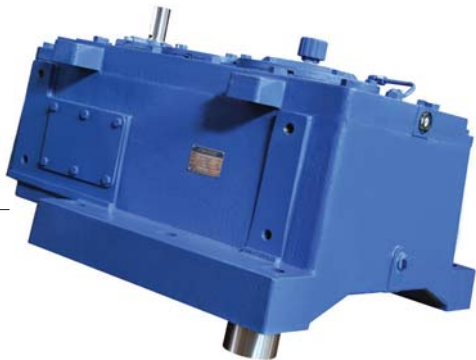
DIGESTER DRIVE 3000L REDUCER SPECIFICATIONS

Model	Ratio	Torque Rating Nm	Input Speed rpm	Output Speed rpm	Power Rating kW	Output Shaft dia mm	Input Shaft Dia mm	Weight (Approx) kg	Oil Qty (Approx) l
YVA040P3DG-RL-57.962	57.962	18,000	1500	25.9	49	105	38	380	50

Lubrication System	Oil Bath
Lubricant	ISO VG460 AGMA 7EP

Digester Drive 6000L

YVD060P3DG-RL-57.328



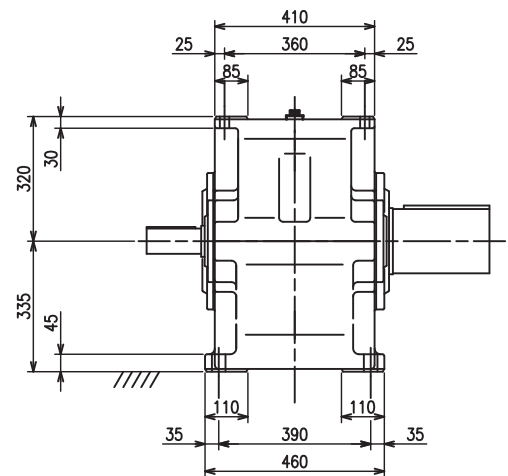
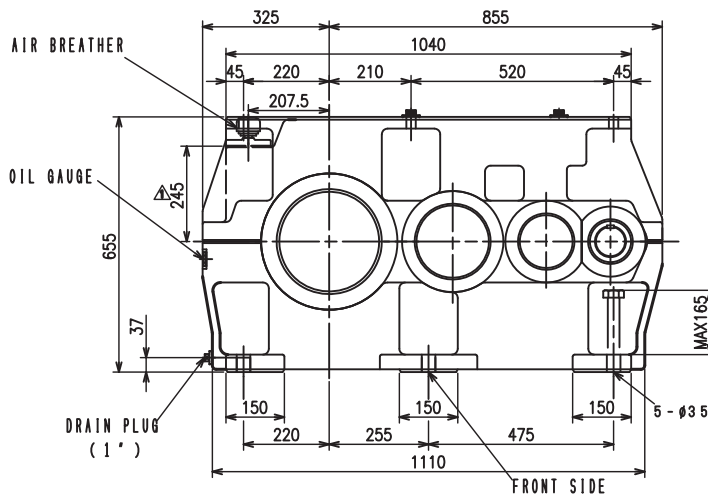
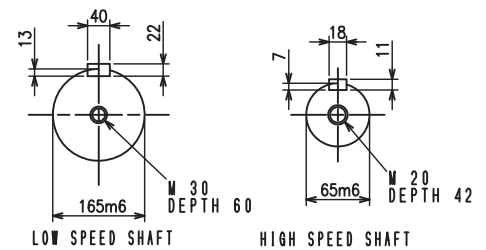
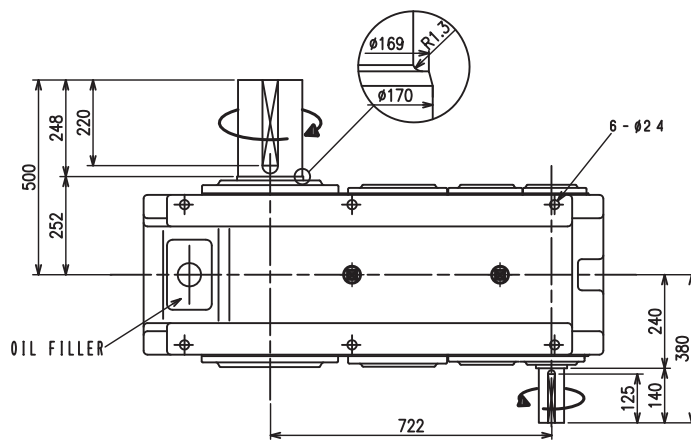
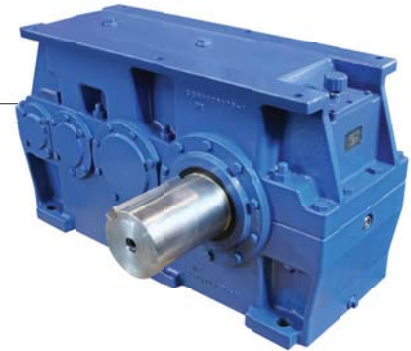
DIGESTER DRIVE 6000L REDUCER SPECIFICATIONS

Model	Ratio	Torque Rating Nm	Input Speed rpm	Output Speed rpm	Power Rating kW	Output Shaft dia mm	Input Shaft Dia mm	Weight (Approx) kg	Oil Qty (Approx) l
YVD060P3DG-RL-57.328	57.328	32,000	1500	26.2	88	120	40	830	100

Lubrication System	Oil Bath
Lubricant	ISO VG460 AGMA 7EP

Empty Fruit Bunch Press Drive

YHD080P3-LR-55.066



EMPTY FRUIT BUNCH PRESS REDUCER SPECIFICATIONS

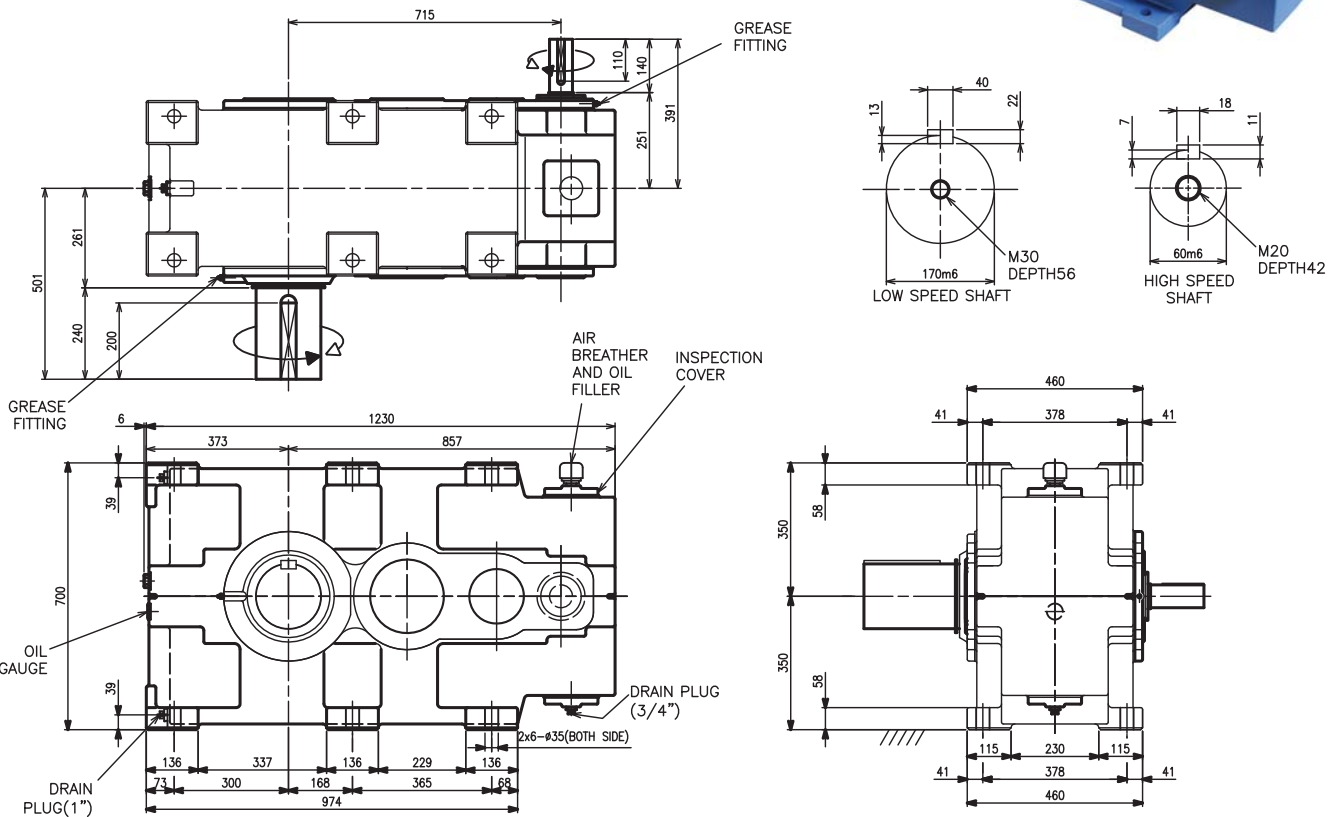
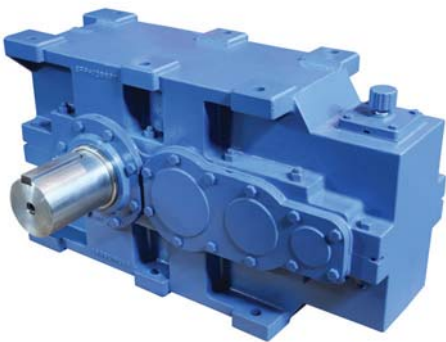
Model	Ratio	Torque Rating Nm	Input Speed rpm	Output Speed rpm	Power Rating kW	Output Shaft dia mm	Input Shaft Dia mm	Weight (Approx) kg	Oil Qty (Approx) l
YHD080P3-LR-55.066	55.066	74,000	1000	18.2	140	165	65	1,000	80
			750	13.6	105				

Lubrication System
Lubricant

Oil Bath
ISO VG 220/320/460 AGMA 5EP/6EP/7EP

Empty Fruit Bunch Press Drive

YHD070P3-RL-54.891



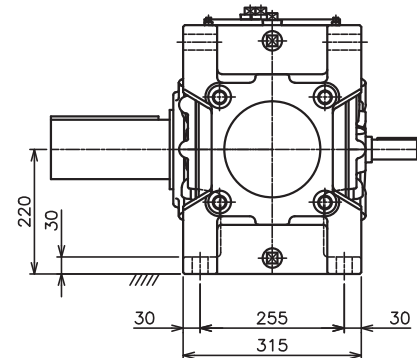
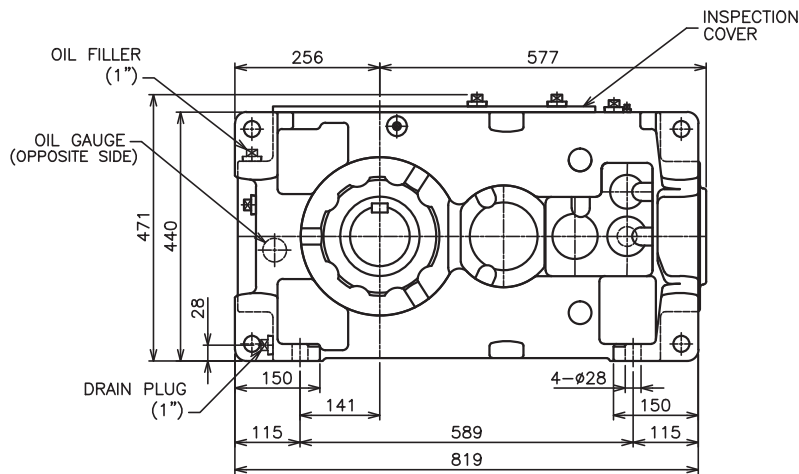
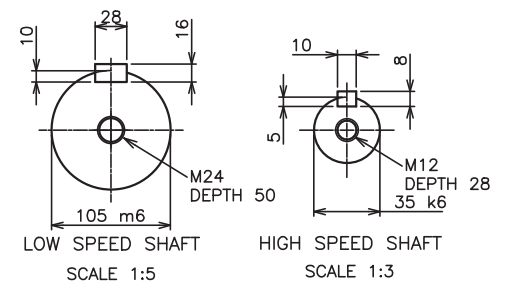
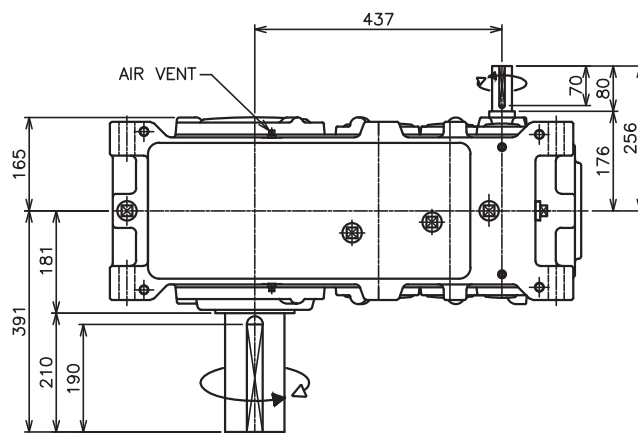
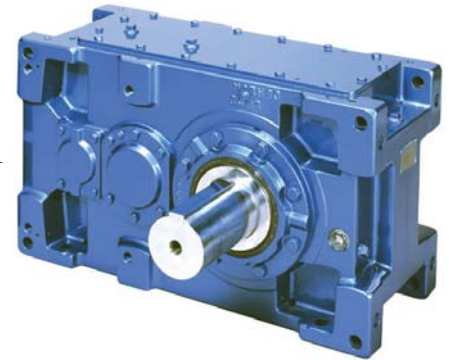
KERNEL EXPELLER DRIVE REDUCER SPECIFICATIONS

Model	Ratio	Torque Rating Nm	Input Speed rpm	Output Speed rpm	Power Rating kW	Output Shaft dia mm	Input Shaft Dia mm	Weight (Approx) kg	Oil Qty (Approx) l
YHD070P3-RL-54.891	54.891	74,000	1000	18.2	140	170	60	1080	85
			900	16.4	126				
			750	13.7	105				

Lubrication System	Oil Bath
Lubricant	ISO VG460 AGMA 7EP

Thresher Drive

PHA9045P3-RL-56



THRESHER DRIVE REDUCER SPECIFICATIONS

Model	Ratio	Torque Rating Nm	Input Speed rpm	Output Speed rpm	Power Rating kW	Output Shaft dia mm	Input Shaft Dia mm	Weight (Approx) kg	Oil Qty (Approx) l
PHA9045P3-RL-56	56.250	13200	1500	27	36	105	35	375	21
			1000	18	24.5				

Lubrication System	Oil Bath
Lubricant	ISO VG220/320/460

Asia Pacific Network

SINGAPORE

(Asia Pacific Headquarter)
Sumitomo (SHI) Cyclo Drive Asia Pacific Pte Ltd
15 Kwong Min Road, Singapore 628718
Tel: +65 6591 7800 | Fax: +65 6863 4238
Email: inquiry@sumitomodrive.com.sg

AUSTRALIA

Sumitomo (SHI) Hansen Australia Pty Ltd
Sydney
181 Power St, Glendenning, NSW 2761
Tel: +61 2 9208 3000 | Fax: +61 2 9208 3050
Email: sales@sumitomohansen.com.au

Brisbane
Unit 11, 20 Archerfield Road, Darra QLD 4076
Tel: +61 7 3853 3800 | Fax: +61 7 3375 1000

Central Coast
Nexus Smart Hub, 4 Amy Close
North Wyong, NSW 2259
Tel: +61 1300 877 977 | Fax: +61 2 9208 3050

Melbourne
Unit 2, 88 Henderson Road, Rowville VIC 3178
Tel: +61 3 9765 4300 | Fax: +61 3 9765 4390

Perth
Unit 1/23 Mordaunt Circuit, Canning Vale WA 6155
Tel: +61 8 9456 1766 | Fax: +61 8 9456 0944

INDIA

Sumi - Cyclo Drive India Private Limited
Pune (India Headquarters)
Survey No. 130, Hissa No. 02, Jeevan Nagar,
Off Mumbai-Bangalore By Pass
Tathawade, Pune - 411033
Tel: +91 -20 -6674 2900 | Fax: +91 -20 -6674 2901
Email: sales@smin.sumitomodrive.com

Ahmedabad
F -601, Titanium City Centre, nr. Sachin Tower
10 Ft Road, Satellite, Ahmedabad -380015, Gujarat
Tel: +91 93 7468 8779 | Fax: +91 -20 -6674 2901

Bangalore
105, Prestige Centre Point,
Cunningham Road, Bangalore - 560052
Tel: +91-80-6547 5758 | Fax: +91-20-6674 2901

Chennai
No 76 (Old No C-55) First Main Road,
Anna Nagar East, Chennai - 600102
Tel: +91 93818 58660 | Fax: +91 20 6674 2901

Delhi
532, Somdutt II, Bhikaji Cama Place
New Delhi, DL 110066, Haryana 122016
Tel: +91 93 1293 9373 | Fax: +91 20 6674 2901

Kolkata
Om Tower, Room No.612,6th Floor,
32, J.L. Nehru Road, (Chowringhee Road),
Kolkata - 700071
Tel: +91 33 6536 6497 | Fax: +91 33 3022 5614

Mumbai
401, Nirma Plaza, Makwana Road,
Marol Naka, Andheri (East), Mumbai - 400059
Tel: +91-22-2856 3687 | Fax: +91-22-2856 3688

INDONESIA

PT. SM-Cyclo Indonesia
Wisma GKBI Suite 1606
Jl. Jend Sudirman No. 28 Bendungan Hilir,
Tanah Abang, Jakarta Pusat 10210
Tel: + 62-21 2961 2100 | Fax: + 62-21 2961 2211
Email: inquiry@sumitomodrive.com.sg

Factory & Warehouse
Jalan Sungkai Blok F 25 No. 09 K, Delta Silicon 5,
Lippo Cikarang, Bekasi 17530, Indonesia
Tel: +62- 21 2961 2100 | Fax: +62- 21 2961 2211

Medan
Tel: +628111975973

Surabaya
Tel: +628119503110

MALAYSIA

SM-Cyclo (Malaysia) Sdn Bhd
Kuala Lumpur (Head Office)
No.7C, Jalan Anggerik Mokara 31/56,
Kota Kemuning, Seksyen 31, 40460 Shah Alam,
Selangor Darul Ehsan, Malaysia
Tel: +60 3 5121 0455 | Fax: +60 3 5121 0578
Email: smmasupport@smma.shi.co.jp

Johor Bahru
24-02, Jalan Ros Merah 2/17,
Taman Johor Jaya, 81100 Johor Bahru
HP: +60 19-238 6101

Penang
No. 2945, First Floor, Jalan Prai,
Taman Inderawasih, 13600 Prai, Penang
HP: +60 19-650 2909
HP: +60 19-470 3737

Sabah
Ground Floor, Lot 156, MDLD 7122,
Sri Perdana Phase 3,
Jalan Silam, 91100 Lahad Datu, Sabah
HP: +60 19-380 2909

Sarawak (Kuching Station)
HP: +60 19-335 0455

PHILIPPINES

Sumitomo (SHI) Cyclo Drive Asia Pacific Pte Ltd
Philippines Branch Office
B2B Granville Industrial Complex,
Carmona, Cavite 4116, Philippines
Tel: +63 2-584 4921/46-430 3591/46-438 20579 - 81
Fax: +63 2 584 4922
Email: enquiry@smph.sumitomodrive.com

THAILAND

SM-Cyclo (Thailand) Co., Ltd.
Bangkok (Sales Office)
1 Empire Tower Unit 2103-4
21st Floor South Sathorn Road,
Yannawa, Sathorn, Bangkok 10120
Tel: +66 2670 0998 | Fax: +66 2670 0999
Email: thsales@smcyclo.co.th

Chonburi (Head Office)
(Assembly and Service Centre)
700/542 Moo 6, Amatanakom Industrial Estate
Tambol Donhauroh, Muang District,
Chonburi, 20000
Tel: +66 38 454 230 | Fax: +66 38 454 235

VIETNAM

SM-Cyclo (Vietnam) Co., Ltd.
Factory 2B, Lot K1-2-5, Road No. 2-3-5A,
Le Minh Xuan Industrial Park,
Binh Chanh Dist.HCMC, Vietnam.
Tel: +84 8 3766 3709 | Fax: +84 8 3766 3710
Email: inquiry@sumitomodrive.com.sg

Hanoi Representative Office

Room 603, NOZA Building
243 Cau Giay Street,
Cau Giay District, Hanoi City
Tel: +84 4 3767 2716 | Fax: +84 4 3767 2770

Distributors in Asia Pacific Region

INDONESIA

PT. Himalaya Everest Jaya
Jl. Daan Mogot KM 10, No 151 Pesing Poglar,
Keduang Kali, Angke Cengkareng
Jakarta Barat 11710
Tel: +62 21 544 8965/56 | Fax: +62 21 619 1925

MALAYSIA

Bintulu:
Himalaya Power Transmission Sdn Bhd
Ground Floor, Sublot 4, Lot 1175, Block 32,
Bintulu-Miri Road, Kemena Land District,
97000 Bintulu, Sarawak
Tel: +60 86 311930 | Fax: +60 86 311039
Email: hptbtustore@gmail.com

Sandakan:
Himalaya Power Transmission Sdn Bhd
Ground Floor, Block B, Lot 8, Mile 7 1/2
Labuk Road, PPM 582 Elopora, 90000
Sandakan, Sabah
Tel: +60 89 672700 | Fax: +60 89 675711
Email: hptshim@live.com

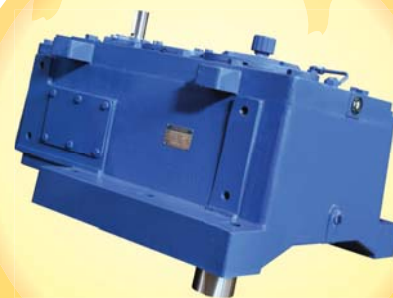
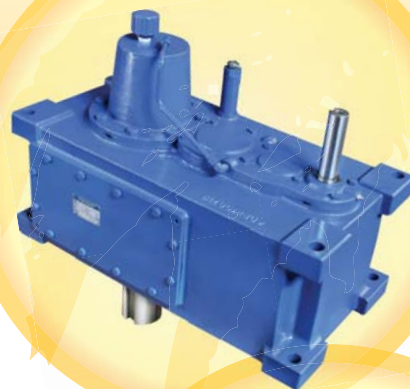
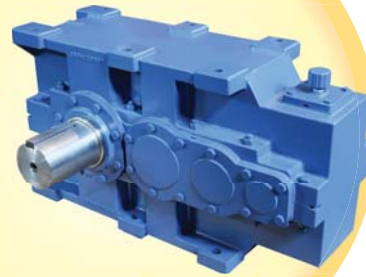
Kuantan:
CKR Industrial Equipment Sdn Bhd
No 17, Jalan IM 3/5,
Mohkota Industrial Park,
Bandar Indera Mahkota,
25200 Kuantan, Pahang
Tel: +60 95 736035/7035
Fax: +60 95 738035
Email: kuantan@ckrindustrial.com

NEW ZEALAND

BAY ENGINEERS SUPPLIES LTD
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Hamilton: +64 7 846 0928
Wellington: +64 4 560 3976
Mount Maunganui: +64 7 572 9480
www.maudkirk.co.nz

SRI LANKA

Drivematic Services (Pvt) Limited
100/9, Nawala Road, Narahenpita,
Colombo 5
Tel: +94-11-2369811/5338889
Fax: +94-11-2369111
Email: drivemat@sltnet.lk



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