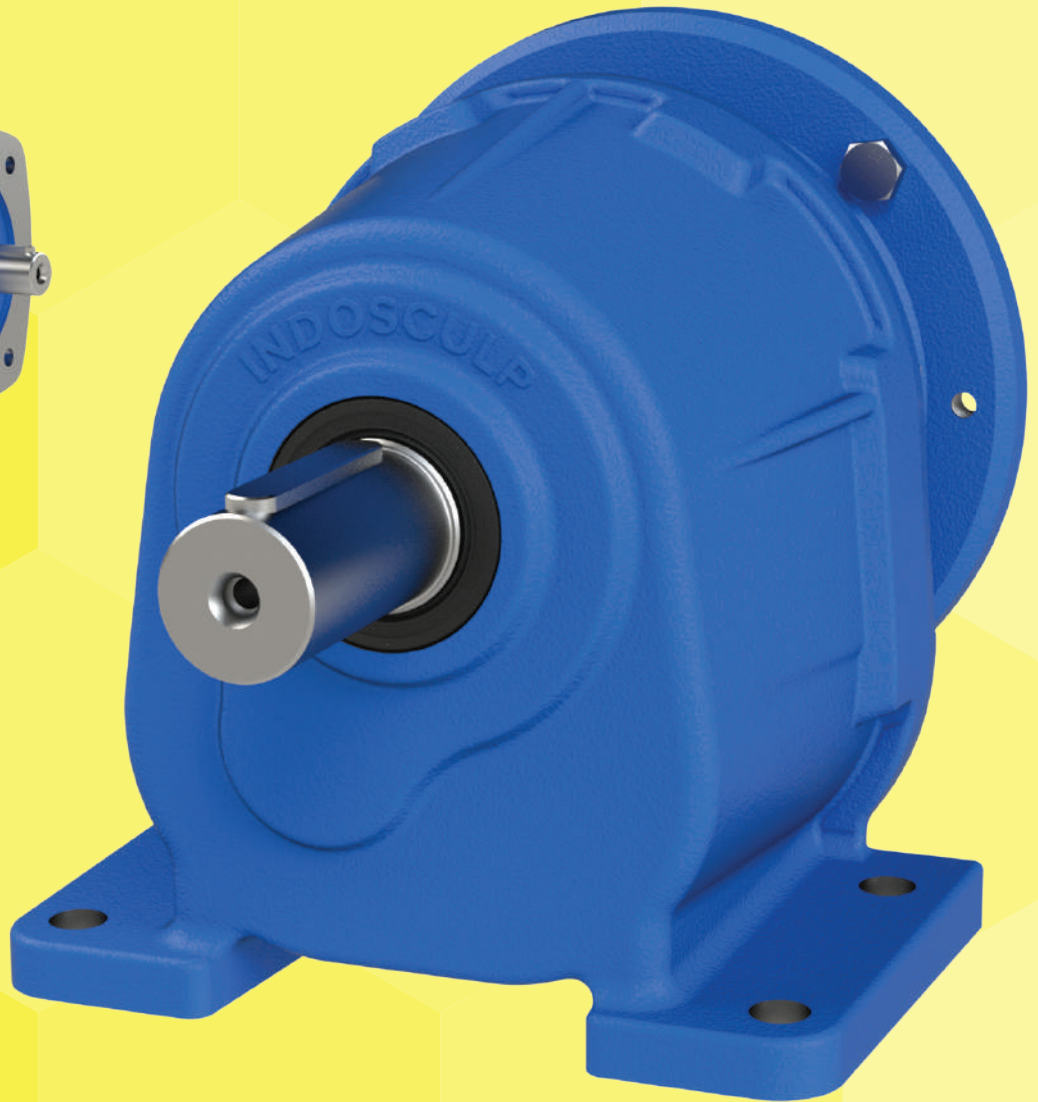




INDOSCULP



*Performance Assured
Ground Gears
Synthetic Oil*



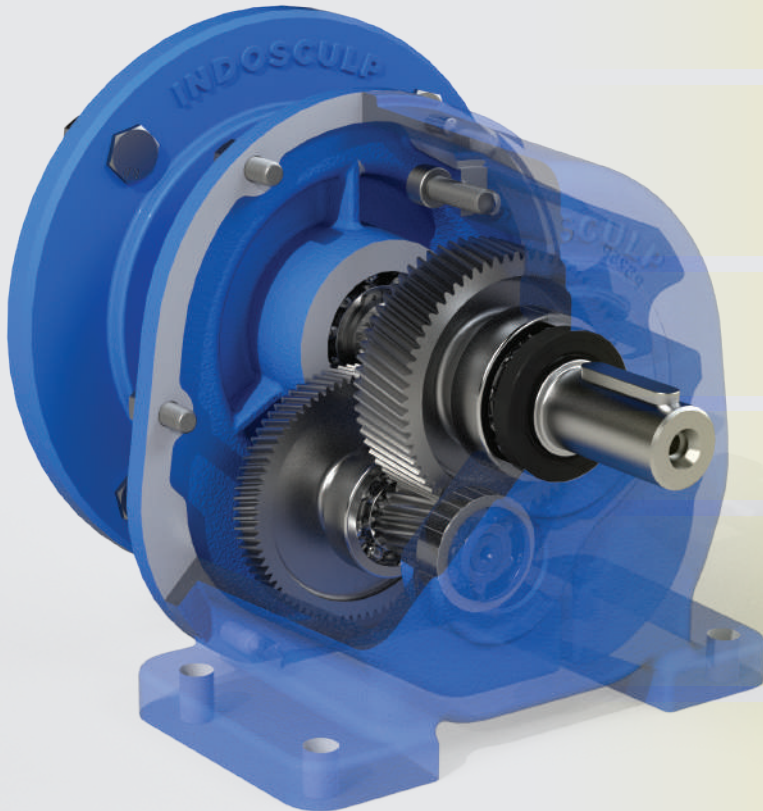
For **4 Pole / 1400 RPM**

PS SERIES

PRODUCT CATALOGUE

PS16 / PS20 / PS25 / PS30 / PS35 / PS45 / PS55 / PS60

Inline Helical Gearboxes & Gearmotors



Synthetic Lubricant **1**
Grade VG 320 - for longer life

Gears **2**
Forged Steel Grade 20MnCr5
Case Hardened 58-62 HRC
Gear Profile Grinding DIN 6 Accuracy
Exceptionally low Noise Level

Precision Bearings **3**
2RS Bearing at input shaft
for self lubrication & dust proofing

High Quality Nitrile (NBR) Double Lip Oil Seal **4**

Gearbox Housing **5**
Cast Iron Grade FG 260
High Toughness

Colour Indigo Blue **6**
Surface Treatment Zinc Phosphating
Pure Polyester Powder Coating

- > The gear units are designed in unibox housing to consume optimal installation space and can operate in harsh environments with minimum downtimes. Strict quality control measures are adopted at each stage of manufacturing and assembly of the gearbox
- > All units are suitable to fit with any standard IEC motor
- > Inspection Standards:

Surface hardness	UNE 7-257-72
Alignment of shaft to output flange	DIN 42955
Shaft seal tightness	Test at 1Kg/cm ²
Noise levels	Within the limits specified in VDI 2159

IN-HOUSE PRODUCTION FACILITIES

- > 40,000 Sq. Ft State of the Art Manufacturing Facility
- > Gear Cutting Machines: CNC Gear Hobbing Machine, CNC Shaving Machine, CNC Gear Grinding Machine, etc
- > Seal Quench Heat Treatment Plant
- > VMCs & HMCs
- > QA Facilities: CNC Gear Tester, CMM, Contracer, Leakage Testing Machine, UTM, Hardness Testers, Test Rig, etc



CNC Hobbing



CNC Gear Grinding



CNC Gear Profile Tester



Coordinate Measuring Machine

INDEX

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or scan the qr code below



1. UNITS OF MEASUREMENT

Symbol	Value applies to	Unit	Description
A_N	1, 2	[N]	
S_{f1}		-	Service Factor
f_T		-	Thermal Factor
f_{TP}		-	Temperature Factor
i		-	Gear Ratio
l		-	Cyclic Duration Factor
J_C		[Kgm ²]	Mass Moment of Inertia to be driven
J_M		[Kgm ²]	Motor Mass Moment of Inertia
J_R		[Kgm ²]	Mass Moment of Inertia for the Gear Unit
K		-	Mass Acceleration Factor
K_r		-	Transmission Element Factor
M	1, 2	[Nm]	Torque
M_c	1, 2	[Nm]	Calculated Torque
M_n	1, 2	[Nm]	Rated Torque
M_r	1, 2	[Nm]	Torque Demand
n	1, 2	[min ⁻¹]	Rotational Speed
P	1, 2	[kW]	Power
P_N	1, 2	[kW]	Rated Power
P_R	1, 2	[kW]	Power Demand
R_C	1, 2	[N]	Calculated Radial Force
R_N	1, 2	[N]	Permissible Overhung Load
S		-	Safety Factor
t_a		[°C]	Ambient Temperature
t_f		[min]	Work Time at Constant Load
t_r		[min]	Rest Time
η_d		-	Dynamic Efficiency
η_s		-	Static Efficiency

1 Value applies to i/p shaft

2 Value applies to o/p shaft

General Information

The following headings contain information on elements for selection and correct use of gearmotors.

2. TORQUE

[Nm]

Rated Torque

M_{n2} [Nm]

Torque transmissible through output shaft, under uniform loading and based on service factor $f_s=1$. Rating refers to specific n_1 input speeds.

Required Torque

M_{r2} [Nm]

Torque corresponding to application requirements. It must always be equal to or less than rated output torque M_{n2} for the gearbox under study.

Calculated Torque

M_{c2} [Nm]

Torque value to be used when selecting the gearbox, considering required torque M_{r2} and service factor Sf and is obtained through the equation given below.

$$M_{c2} = M_{r2} * Sf \leq M_{n2} \quad *(1)$$

3. POWER

[Kw]

Input Rated Power

P_{n1} [kW]

In the gearbox selection charts this is the power applicable to input shaft, based on input speed n_1 and corresponding to service factor $f_s=1$.

4. THERMAL CAPACITY (P_t)

[Kw]

P_t is the power that can be transmitted through the gear unit, under a continuous duty and an ambient temperature of 20 °C, without resulting into damage of the inner parts or degradation of the lubricant properties. Refer chart (A1) for specific kW ratings.

In case of intermittent duty, or an operating ambient temperature other than the rated 20 °C, the P_t value should be adjusted through the factor f_t , obtained from chart (A2) as per the following equation: $P_t' = P_t \times f_t$

Gear units featuring more than 2 reductions and/or a gear ratio larger than $i > 45$ do not normally require the thermal limit to be checked as in these cases the thermal rating usually exceeds the mechanical rating.

P_t [kW] 20 °C			*(A1)	
Model	Rotational Speed at i/p shaft			
	$n_1 = 1400 \text{ min}^{-1}$	$n_1 = 2800 \text{ min}^{-1}$		
PS 16	3.3	2.2		
PS 20	4.7	3.3		
PS 25	6.0	4.2		
PS 30	7.8	5.5		
PS 35	10.8	7.5		
PS 45	13.9	9.8		
PS 55	20.8	15.6		
PS 60	31.0	23.0		

f_t						*(A2)
t_a [°C]	Continuous duty	Intermittent duty				
		Degree of Intermittence				
		80%	60%	40%	20%	
40	0.80	1.1	1.3	1.5	1.6	
30	0.85	1.3	1.5	1.6	1.8	
20	1.00	1.5	1.6	1.8	2	
10	1.15	1.6	1.8	2	2.3	

Where Cyclic duration factor (I)% is the relationship of operating time under load t_f and total time ($t_f + t_r$) expressed as a percentage.

$$I = \frac{t_f}{t_f + t_r} * 100 \quad *(2)$$

The condition to verify the above is:

$$P_{r1} \leq P_t * f_t \quad *(3)$$

5. EFFICIENCY (η)

Obtained from the relationship of output power P_2 to input power P_1 according to the following equation:

$$\eta = \frac{P_2}{P_1} * 100 \quad [\%] \quad *(4)$$

η	2S	3S
	95%	93%

*(A3)

6. GEAR RATIO (i)

The value for the gear ratio is referred to with the letter (i) and calculated through the relationship of the input speed n_1 to the output speed n_2 :

$$i = \frac{n_1}{n_2} \quad *(5)$$

7. ANGULAR VELOCITY

Input Speed n_1 [min^{-1}]

Speed is related to the prime mover selected. Catalogue values refer to speed of either single or double speed motors that are common in the industry.

If the gearbox is driven by an external transmission it is recommended to operate it with a speed of 1400 min^{-1} or lower in order to optimise operating conditions and lifetime.

Higher input speeds are permitted, however in this case consider that torque rating M_{n2} is affected adversely.

Please consult a Indosculp representative.

Output Speed n_2 [min^{-1}]

The output speed n_2 is calculated from the relationship of input speed n_1 to the gear ratio i , as per the following:

$$n_2 = \frac{n_1}{i} \quad *(6)$$

8. OVERHUNG LOADS

External transmissions keyed onto input and/or output shaft generate loads that act radially onto same shaft. Resulting shaft loading must be compatible with both the bearing and the shaft capacity. Namely shaft loading (R_{c1} for input shaft, R_{c2} for output shaft), must be equal to or lower than admissible overhung load capacity for shaft under study (R_{n1} for input shaft, R_{n2} for output shaft). OHL capability listed in the rating chart section.

In the formulas given on the right, index (1) applies to parameters relating to input shaft, whereas index (2) refers to output shaft. The load generated by an external transmission can be calculated with close approximation through the following equations:

$$R_{c2} \text{ [N]} = \frac{2000 \times M_2 \text{ [Nm]} \times K_r}{d \text{ [mm]}} \quad *(7)$$

$$R_{c1} \text{ [N]} = \frac{2000 \times M_1 \text{ [Nm]} \times K_r}{d \text{ [mm]}}$$

where,

$M_{1/2}$ [Nm] = torque applied to shaft

d [mm] = pitch diameter of part

keyed on to shaft

$K_r = 1$ (Chain Transmission)

$K_r = 1.25$ (Gear Transmission)

$K_r = 1.25-2.0$ (Belt Transmission)

A comparison of shaft loading with catalogue OHL ratings should verify the following condition:

$$R_{c1} \leq R_{n1} \text{ [input shaft]}$$

or

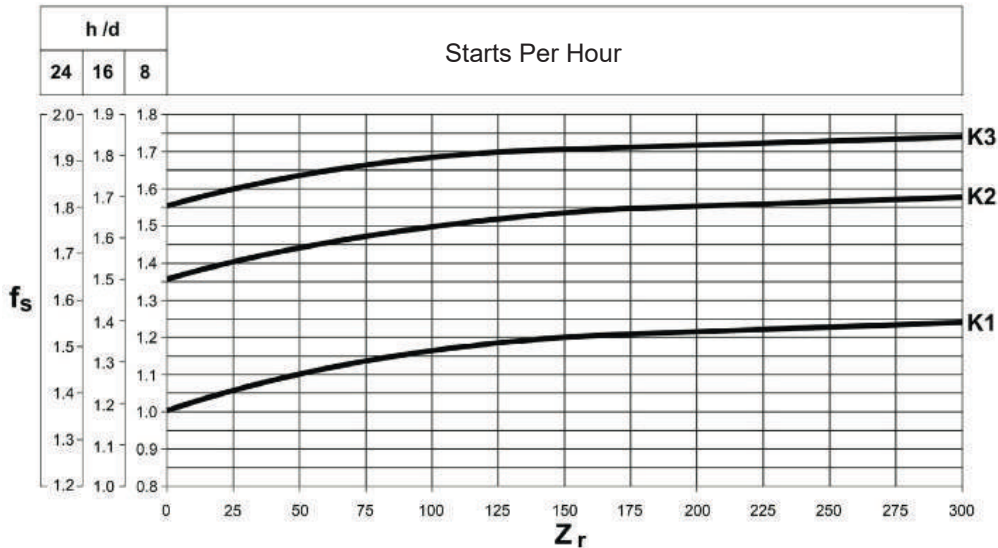
$$R_{c2} \leq R_{n2} \text{ [output shaft]}$$

9. SERVICE FACTOR (f_s)

This factor is numeric value describing reducer service duty. It takes into consideration, with unavoidable approximation, daily operating conditions, load variations and overloads connected with reducer application. In the below diagram, after selecting proper "daily working hours" column, the service factor is given by intersecting the number of starts per hour and one of the K1, K2 or K3 curves.

K curves are linked with the service nature (approximately: uniform, medium & heavy) through the acceleration factor of masses K , connected to the ratio between masses and motor inertia values.

Regardless of the value given for the service factor, we would like to remind that in some applications, which for example involve lifting parts, failure of the reducer may expose the operators to the risk of injuries. If in doubt, please contact our Technical Service.



Acceleration factor of masses, K

This parameter serves for selecting the right curve for the type of load. The value is given by the following ratio:

$$K = \frac{J_c}{J_m} \quad * (8)$$

where,

J_c = moment of inertia of driven masses referred to motor driving shaft.

J_m = moment of inertia of motor

$K \leq 0.25$ = curve **K1** Uniform load

$0.25 < K \leq 3$ = curve **K2** Moderate shock load

$3 < K \leq 10$ = curve **K3** Heavy shock load

$K > 10$ = please contact our Technical Service

10. LUBRICATION & MAINTAINENCE

Lubrication

The PS speed reducer sizes 16, 20, 25, 30 & 35 are factory filled with long-life synthetic lubricant. There is no need for periodical lubricant changes. Oil quantity allows any mounting position.

Operation of gear units is permitted at ambient temperatures between -20°C and $+40^{\circ}\text{C}$. However, for temperatures between -20°C and -10°C unit may only start up after it has been progressively and evenly pre-heated, or otherwise initially operated unloaded.

Load may then be connected to the output shaft when the gear unit has reached the temperature of -10°C , or higher.

Should you carry out, for any reason, the complete change of original lubricant, the following table (A) indicates quantity to be used.

Maintainence

The PS speed reducer sizes 45, 55, & 60 which are not factory filled with lubricant, the first oil change must take place after about 300 hours of operation, carefully flushing the gear unit using suitable detergents.

Do not mix mineral oils with synthetic oils.

Check oil levels regularly and change oil at the intervals shown in table (B).

(A) Oil Quantity						
Gearbox Model	B3 B5	B6 B51	B7 B53	B8 B52	V5 V1	V6 V3
PS 16	0.36	0.36	0.36	0.36	0.36	0.36
PS 20	0.40	0.40	0.40	0.40	0.40	0.40
PS 25	0.67	0.67	0.67	0.67	0.67	0.67
PS 30	1.1	1.1	1.1	1.1	1.1	1.1
PS 35	1.1	1.1	1.1	1.1	1.1	1.1
PS 45	2.4	2.2	2.2	1.8	2.7	3.6
PS 55	2.9	2.8	2.8	3.8	6.0	5.5
PS 60	5.5	6.0	6.0	6.5	9.0	8.0

(B) Oil Change Interval		
Oil Temperature [°C]	Mineral Oil [hrs]	Synthetic Oil [hrs]
< 65	8000	25000
65 - 80	4000	15000
80 - 95	2000	12500

11. THRUST LOADS (A_{n1} , A_{n2})

Permissible thrust loads on input [A_{n1}] and output [A_{n2}] shafts are obtained from the radial loading for the shaft under consideration [R_{n1}] and [R_{n2}] through the following equation:

$$\begin{array}{l} A_{n1} = R_{n1} \times 0.2 \\ A_{n2} = R_{n2} \times 0.2 \end{array} \quad * (9)$$

The thrust loads calculated through these formulas apply to thrust forces occurring simultaneously to time as rated radial loads.

In the only case that no overhung load acts on the shaft, the value of the admissible thrust load [A_n] amounts to 50% of the rated OHL [R_n] on same shaft.

Where thrust loads exceed permissible value or largely prevail over radial loads, contact Indosculp for an in-depth analysis of the application.

12. INSTALLATION

The following installation instructions must be followed:

- a) Make sure that the gearbox is correctly secured and mounted to avoid vibrations. If shocks or overload expected, install hydraulic couplings, clutches, torque limiters, etc.
- b) Before being paint coated, the machined surfaces and the outer surface of the oil seals must be protected to prevent paint drying out the rubber and jeopardising the sealing properties.
- c) Parts fitted on the gearbox output shaft must be machined to ISO H7 tolerance to prevent interference fits that could damage the gearbox itself. Further to mount or remove such parts, use suitable pullers or extraction devices using the tapped hole located at the top of the shaft extension.
- d) Mating surfaces must be cleaned and treated with suitable protective products before mounting to avoid oxidation and, as a result, seizure of parts.
- e) Prior to putting the gear unit into operation make sure that the equipment that incorporates the same complies with the current revision of the Machines directive.
- f) Before starting up the machine, make sure that oil level conforms to the mounting position specified for the gear unit.
- g) For outdoor installation provide adequate guards in order to protect the gearbox drive from rainfalls as well as direct sun radiation.

13. STORAGE

Observe the following instructions to ensure correct storage of the products:

- a) Do not store outdoors, in areas exposed to weather or with excessive humidity.
- b) Always place wooden boards or other material underneath the product to avoid direct contact with the floor.
- c) In case of long-term storage all machined surfaces such as flanges, shafts and couplings must be coated with a suitable rust inhibiting product (Mobilama 248 or equivalent rust preventive).
- d) Furthermore gear units must be placed with the oil fill plug in the highest position and filled up with oil. Before putting the units into operation the appropriate quantity, and type of oil must be restored.

14. CONDITIONS OF SUPPLY

Gear units are supplied as follows:

- a) Configured for installation in the mounting position specified when ordering.
- b) Tested to factory specifications.
- c) Mating machined surfaces unpainted.
- d) Nuts and bolts for mounting motors are provided.
- e) Shafts are protected with shaft covers.
- f) Supplied with lifting lug (wherever applicable).

15. DESIGNATION FOR GEARBOX

PS 30 2S P 14.01 080 B5 B3

Options

LO (PS 45, PS 55, PS 60)

PV (PS 16 ... PS 60)

Mounting Position

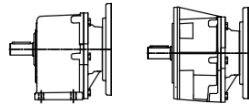
PS P **B3**(default), **B6, B7, B8, V5, V6**

PS F **B5**(default), **B51, B53, B52, V1, V3**

Motor Mounting

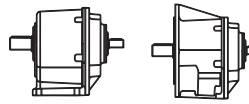
B5

Input Configuration (Motor Frame Size)



063, 071, 080, 090, 100

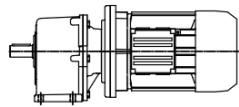
112, 132, 160, 180



HS

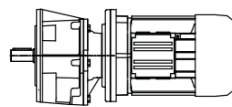
Ratio

Mounting Version



P

Foot Type



F

Flange Type

Reductions

2S = 2 Stage

3S = 3 Stage

Model

16, 20, 25, 30

35, 45, 55, 60

Series

16. GEARBOX OPTIONS

LO

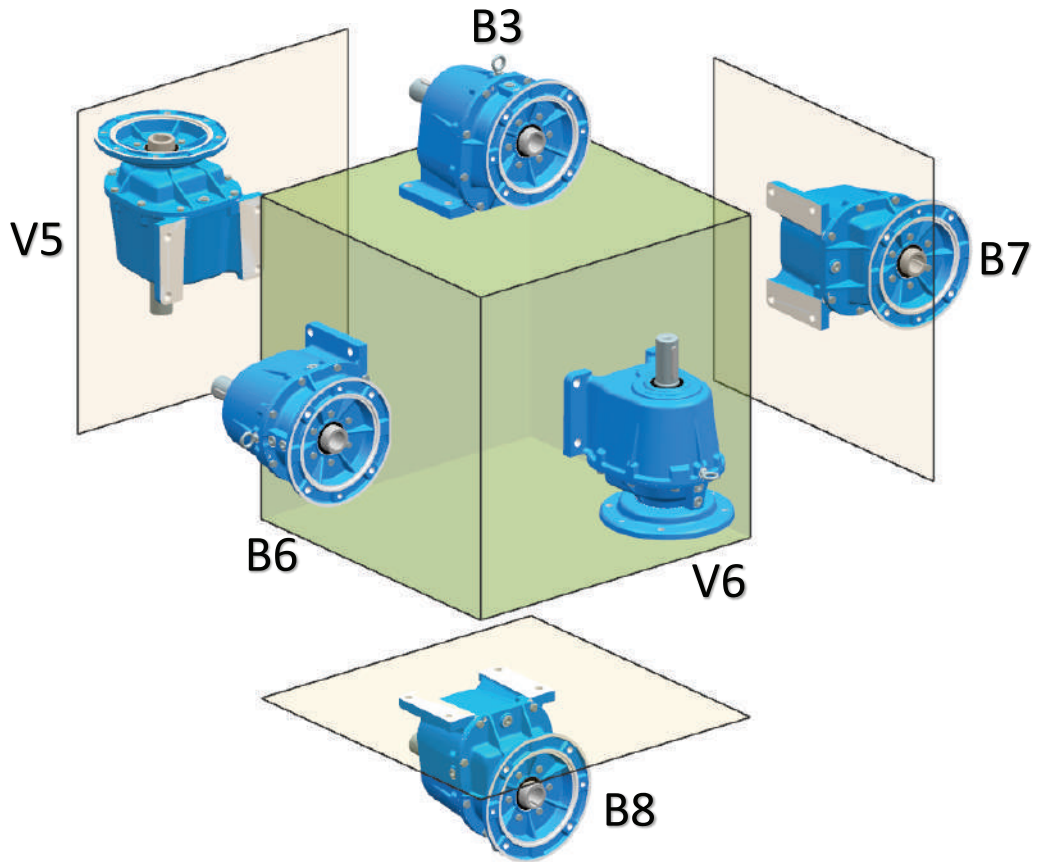
Gearboxes PS45, PS55, PS60 usually supplied without oil, can be supplied with synthetic oil currently used by INDOSculp and filled according to the mounting position specified.

PV

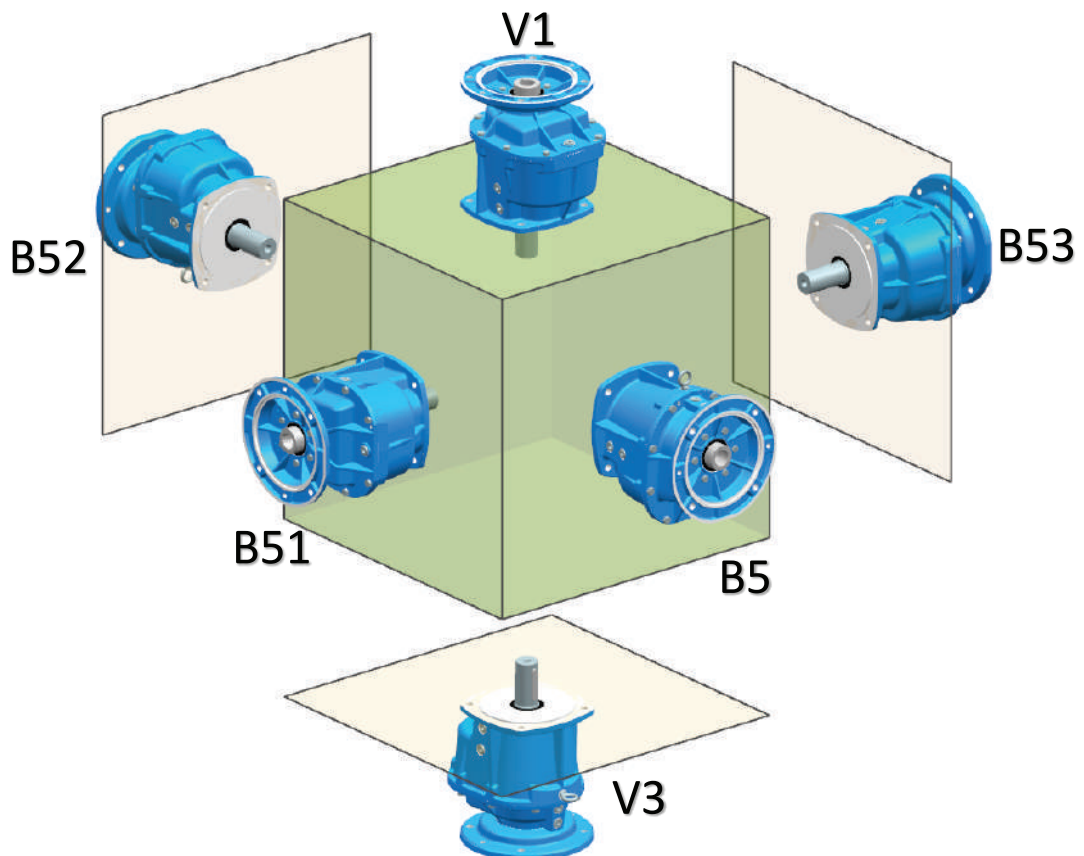
Both input & output shafts feature Viton® oil seals.

17. GEARBOX MOUNTING POSITION

P (Foot Type Gearbox)



F (Flange Type Gearbox)



18. SELECTION GUIDELINES FOR HELICAL GEARBOX

Data required for selection

- P_{n1} - Motor Power/Input Power/Transmitted Power [kW]
- n_1 - Input Speed [rpm]
- n_2 - Output Speed [rpm]
- i - Required Ratio
- Type of Driven Machine or nature of load on driven machine (Uniform, Moderate Shock, Heavy Shock Load, etc)
- Duration of service per day, hours
- Connection of output shaft (direct coupling, belt drive, chain/sprocket drive, gears, etc)
- Starting frequency (no. of starts per hour)
- Type of geared motor/ gear unit required
- Mounting Position

Steps for Selection

- 1) **Power Rating:** Refer Speed Reducer Rating charts
- 2) **Service Factor:** For selecting proper size of gear unit a suitable service factor is to be considered over motor power.

Steps to calculate Service Factor:

- i) Type of Load:
 - U – Uniform Load**
 - M – Moderate Shock Load**
 - H – Heavy Shock Load**
 - (Refer – Load Classification table)
- ii) Mechanical Service Factor (f_1):
Refer table to find f_1 as per the **Duration of Service (hours per day)**

Duration of Service (Hours per day)	Load classification of driven machine		
	Uniform Load (U)	Moderate Shock Load (M)	Heavy Shock Load (H)
0-3	0.80	1.00	1.50
3-10	1.00	1.25	1.75
10+	1.25	1.50	2.00

Overhang Member	K
Chain Sprocket	1.00
Spur/ Helical Gear	1.25
Vee Belt Pulley	1.5
Flat Belt Pulley	2

iii) Frequency Starts Factor (Sf_2)

Now considering Sf_1 and starts per hour, find your Sf_2 by referring the table.

Starts/hr	Mechanical Service Factor (Sf_1)					
	0.8	1	1.25	1.5	1.75	2
1	1.00	1.00	1.00	1.00	1.00	1.00
2-20	1.20	1.10	1.08	1.07	1.07	1.06
21-40	1.30	1.20	1.17	1.18	1.15	1.08
41-80	1.50	1.40	1.25	1.23	1.18	1.10
81-160	1.60	1.50	1.35	1.30	1.20	1.15
161-320	2.00	1.80	1.70	1.80	1.50	1.40

iv) Service Factor = $Sf_1 \times Sf_2$

3) **Overhung Load:** When a sprocket/gear, etc. is used at the output shaft for transmitting power, the suitability of gear unit to take resulting radial load (acting as overhung load) is to be decided.

This can be checked using the formula:

$$R = \frac{P_{n1} \times 9550 \times k}{n_2 \times D} \times 2000 \quad [N]$$

Where, P_{n1} = Motor Power/ Input Power [kW]

k = Load Factor [kg]

n_2 = Output Speed [rpm]

D = Pitch Diameter of overhung load member

The calculated overhung load is to be compared with the allowable overhung load values (Rn_2) given in Gearmotor selection chart & Speed Reducer Rating charts.

NOTE: The above calculated overhung load is taken as acting at the middle of output shaft extension. If the overhang load is acting at a distance other than middle of extension, refer the details to us. If the angle at which the overhung load acting is known, the same may also be informed.

The bearings of o/p shaft are capable of taking certain amount of externally applied axial thrust loads. If the o/p shaft is to take combined radial overhang load & axial thrust load, refer the full details to us.

19. LOAD CLASSIFICATION TABLE

Agitators		Conveyors	M	Small Waste Conveyor - Belt	U	Suction Roll	U
Pure Liquids	U	Cutter Head Drives	H	Small Waste Conveyor - Chain	M	Washers & Thickeners	M
Liquids and Solids	M	Jig Drives	H	Log Turning Device	H	Winders	U
Liquids - Variable Density	M	Maneuvering Winches	M	Sorting Table	M	Printing Presses	U
Semi - liquids Variable Density	M*	Pumps	M	Tipple Hoist Conveyor	M	Pullers	
Blower		Screen Drive	H	Tipple Hoist Drive	M	Barge Haul	M
Centrifugal	U	Stackers	M	Transfer Conveyor	H	Pumps	
Lobe	M	Utility Winches	M	Transfer Rolls	H	Centrifugal	H
Vane	U	Elevators		Tray Drive	M	Proportioning	M*
Brewing and Distilling		Bucket - Uniform Load	U	Trimmer Feed	M	Reciprocating	
Bottling Machinery	U	Bucket - Heavy Load	M	Waste Conveyor	M	Single Acting	
Brew Kettles - Continuous Duty	U	Bucket - Continuous	U	Machine Tools		3 or more Cylinders	M
Cookers - Continuous Duty	U	Centrifugal Discharge	U	Bending Roll	M	Double Acting	
Mach Tubs - Continuous Duty	U	Escalators	U	Notching Press - Belt Driven	*	2 or more Cylinders	*
Scale Hopper Frequent Starts	M	Freight	M	Plate Planer	H	Single Acting 1 or 2 Cylinders	*
Can Filling Machines	U	Gravity Discharge	U	Punch Press - Gear Driven	H	Double Acting	*
Cane Knives	M	Man Lifts	**	Tapping Machines	H	Single Cylinder	*
Car Dumpers	H	Passenger	**	Main Drives	M	Rotary - Gear Type	H
Car Pullers - Intermittent Duty	U	Service - Hand Lift	H	Auxiliary Drives	U	Rotary - Lobe, Vane	H
Clarifiers	U	Fans		Metal Mills		Rubber Industry	
Classifiers	M	Centrifugal	M	Draw Bench - Carriage	H	Mixer	H
Clay Working Machinery		Cooling Towers	**	Draw Bench - Main Drive	M	Rubber Calender	M
Brick Press	H	Induced Draft	M	Forming Machines	H	Rubber Mill (2 or more)	M*
Briquette Machine	H	Forced Draft	**	Pinch Dryer & Scrubber rolls		Sheeter	M*
Clay Working Machinery	M	Large (Mine, etc)	M*	Reversing	*	Tire Building Machines	**
Pug Mill	M	Large Industrial	M*	Slitters	M*	Tire & Tube Press Openers	**
Compressors		Large (Small Diameter)	U	Table Conveyors		Tubers & Strainers	M
Centrifugal		Feeders		Reversing	H	Sewage Disposal Equipment	
Lobe		Apron	M	Non Reversing	M	Bar Screens	H
Reciprocating		Belt	M	Wire Drawing & Flattening m/c	M	Chemical Feeders	H
Multi Cylinder	M*	Disc	U	Wire Welding Machine	M	Collectors, Circuline or Straight	H
Single Cylinder	H*	Reciprocating	H	Mills, Rotary Type		Dewatering Screens	M
Conveyors - Uniformly Loaded or Fed		Screw	M	Ball	H	Grit Collectors	H
Apron	M	Food Industry		Cement Kilns	**	Scum Breaks	M
Assembly	M	Beet Slicer	M	Dryers & Coolers	M	Slow or Rapid Mixers	M
Belt	M	Cereal Cooker	U	Kilns	M	Suldge Collectors	U
Bucket	M	Dough Mixer	M	Pebble	H	Thickeners	U
Chain	U	Meat Grinders	M	Rod	H	Vaccum Filters	M
Flight	U	Generators (Not Welding)	U	Tumbling Barrels	H	Screens	
Oven	U	Hammer Mills	H	Mixers		Air Washing	U
Conveyors - Heavy Duty Not Uniformly Loaded		Laundry Washers		Concrete Mixers, Continuous	M	Rotary - Stone or Gravel	M
Apron	M	Reversing	M	Concrete Mixers, Intermittent	U	Traveling Water Intake	U
Assembly	M	Laundry Tumblers	M	Constant Density	U	Slabpushers	M
Belt	M	Line Shafts		Variable Density	M	Steering Gear	M
Bucket	M	Heavy Shock Load	H	Oil Industry		Stockers	U
Chain	M	Moderate Shock Load	M	Chillers	M	Textile Industry	
Flight	M	Uniform Load	U	Oil Well Pumping	**	Batchers	M
Live Roll (Package)	M	Lumber Industry		Paraffin Filter Press	M	Calenders	M
Oven	M	Barker - Hydraulic/Mechanical	M	Rotary Kilns	M	Card Machines	M*
Reciprocating	H	Burner Conveyor	M	Paper Mills		Cloth Finishing Machines	
Screw	M	Chain Saw and Drag Saw	H	Agitators (Mixers)	M	(washers, pads, tenters, dryers, calenders, etc)	M
Shaker	H	Chain Transfer	H	Barker Auxiliaries, Hydraulic	M	Dry Cans	M
Cranes and Hoists		Craneway Transfer	H	Barker, Mechanical	M	Dryers	M
Main Hoists		De-barking Drum	H	Barking Drum	H	Dyeing Machinery	M
Heavy Duty	H	Edger Feed	M	Beater & Pulper	M	Knitting Machines (Looms, etc)	*
Medium Duty	M	Gang Feed	M	Bleacher U	U	Looms	M
Reversing	M	Green Chains	M	Calenders	M	Mangles	M
Skip Hoists	M	Live rolls	H	Calenders - Super	H	Nappers	M
Trolley Drive	M*	Log Deck	H	Converting machines, except cutters, platers	M	Pads	M
Bridge Drive	M*	Log Haul - Incline	H	Conveyors	U	Range Drives	*
Crushers		Log Haul - Well type	H	Couch	M	Slashers	M
Ore	H	Log turning device	H	Cutters, Platers	H	Soapers	M
Stone	H	Main Log Conveyor	H	Cylinders	M	Spinners	M
Dredges		Off Bearing Rolls	M	Dryers	M	Tenter Frames	M
Cable Reels	M	Planer Feed Chains	M	Felt Stretcher	M	Washers	M
		Planer Floor Chains	M	Felt Whipper	H	Winders (Other than Batchers)	M
		Planer Tilting Hoist	M	Jordans	H	Yarn Preparatory Machines	
		Re-saw Merry-go-round Conveyor	M	Log Haul	H	(Cards, Spinners, Slashers, etc)	M
		Roll Cases	H	Presses	U	Windlass	M*
		Slab Conveyor	H	Pulp Machines	M		
				Reel	M		
				Stock Chests	M		

U - Uniform Load

M - Moderate Load

H - Heavy Load

* In view of varying load conditions, it is suggested that these applications be carefully reviewed before a final selection is made

** Check Safety Codes and refer to Indosculp Customer Service

20. MOTOR AVAILABILITY

Motor - gearbox combinations resulting from the below chart are based purely on geometrical compatibility. When selecting a gearmotor, refer to procedure specified and observe particularly the condition $S \geq fs$.

Gearbox Model	Stage	Ratio (<i>i</i>)	Motor Frame Size (IEC)								
			63	71	80	90	100	112	132	160	180
PS 16	2S	5.53 - 44.73									
PS 20	2S	5.49 - 15.48									
		18.01 - 49.52									
	3S	58.1 - 187.5									
PS 25	2S	5.02 - 49.04									
	3S	60.1 - 192.1									
PS 30	2S	5.11 - 36.82									
	3S	41.2 - 151.1									
PS 35	2S	5.11 - 36.82									
	3S	41.2 - 151.1									
PS 45	2S	4.42 - 27.45							⚠		
		31.1 - 62.7									
	3S	76.8 - 202.1									
PS 55	2S	4.55 - 25.84								⚠	
		29.8 - 77.5									
	3S	87 - 190.3									
PS 60	2S	4.34 - 25.47									⚠
		30.2 - 76.4									
	3S	88.1 - 187.5									

⚠ In this case, if the gearbox is in any horizontal mounting position, it is recommended that the motor is IM B35 type.

n₂ o/p rpm	M₂ Nm	Sf₁ Service Factor	i Ratio	Rn₂ N	IEC Model	Motor Frame Size	Pole
6.9	321	2.2	202.10	9500	PS 45 3S 071 B5	71S	4
7.7	287	2.5	180.70	9500	PS 45 3S 071 B5	71S	4
8.6	258	2.8	162.70	9500	PS 45 3S 071 B5	71S	4
9.1	244	1.3	151.10	5500	PS 30 3S 071 B5	71S	4
9.1	244	2.0	151.10	7200	PS 35 3S 071 B5	71S	4
9.5	233	3.1	147.20	9500	PS 45 3S 071 B5	71S	4
10.2	217	1.5	134.20	5500	PS 30 3S 071 B5	71S	4
10.2	217	2.2	134.20	7200	PS 35 3S 071 B5	71S	4
11.2	198	0.9	122.50	3140	PS 25 3S 071 B5	71S	4
11.4	195	1.6	120.90	5500	PS 30 3S 071 B5	71S	4
11.4	195	2.5	120.90	7200	PS 35 3S 071 B5	71S	4
12.6	176	1.0	109.10	3200	PS 25 3S 071 B5	71S	4
13.8	160	2.0	99.30	5500	PS 30 3S 071 B5	71S	4
13.8	160	3.0	99.30	7200	PS 35 3S 071 B5	71S	4
15.3	145	1.2	89.70	3120	PS 25 3S 071 B5	71S	4
16.7	133	2.4	82.20	5500	PS 30 3S 071 B5	71S	4
16.8	132	1.4	82.00	3070	PS 25 3S 071 B5	71S	4
18.8	118	2.7	73.30	5500	PS 30 3S 071 B5	71S	4
19.8	112	1.6	69.60	2980	PS 25 3S 071 B5	71S	4
20.9	106	3.0	65.80	5500	PS 30 3S 071 B5	71S	4
22.9	97	1.9	60.10	2960	PS 25 3S 071 B5	71S	4
24.1	92	1.0	58.10	2476	PS 20 3S 071 B5	71S	4
28.0	81	2.0	49.00	2830	PS 25 3S 071 B5	71S	4
28.3	80	1.0	49.52	2400	PS 20 2S 071 B5	71S	4
31.0	73	1.1	44.77	2290	PS 20 2S 071 B5	71S	4
34.0	66	2.4	40.29	2710	PS 25 3S 071 B5	71S	4
37.0	61	2.6	36.86	2650	PS 25 3S 071 B5	71S	4
38.0	60	1.3	37.31	2100	PS 20 2S 071 B5	71S	4
44.0	52	3.1	31.27	2540	PS 25 3S 071 B5	71S	4
44.0	51	1.6	31.71	1940	PS 20 2S 071 B5	71S	4
50.0	46	1.8	28.13	1880	PS 20 2S 071 B5	71S	4
51.0	45	1.0	27.14	700	PS 16 2S 071 B5	71S	4
55.0	41	1.9	25.43	1780	PS 20 2S 071 B5	71S	4
66.0	34	2.3	21.19	1620	PS 20 2S 071 B5	71S	4
66.0	35	1.3	20.96	720	PS 16 2S 071 B5	71S	4
73.0	31	1.3	18.89	710	PS 16 2S 071 B5	71S	4
78.0	29	2.7	18.01	1490	PS 20 2S 071 B5	71S	4
88.0	26	1.6	15.64	700	PS 16 2S 071 B5	71S	4
90.0	25	2.6	15.48	1540	PS 20 2S 071 B5	71S	4
100.0	23	2.9	14.00	1470	PS 20 2S 071 B5	71S	4
110.0	21	1.9	12.47	690	PS 16 2S 071 B5	71S	4
120.0	19	3.4	11.67	1340	PS 20 2S 071 B5	71S	4
122.0	19	2.2	11.24	670	PS 16 2S 071 B5	71S	4
148.0	15	2.0	9.31	650	PS 16 2S 071 B5	71S	4
185.0	12	2.5	7.41	620	PS 16 2S 071 B5	71S	4
206.0	11	2.7	6.68	610	PS 16 2S 071 B5	71S	4
249.0	9	3.3	5.53	580	PS 16 2S 071 B5	71S	4

n₂ o/p rpm	M₂ Nm	Sf₁ Service Factor	i Ratio	Rn₂ N	IEC Model	Motor Frame Size	Pole
6.9	474	1.5	202.10	9500	PS 45 3S 071 B5	71L	4
7.7	424	1.7	180.70	9500	PS 45 3S 071 B5	71L	4
8.6	382	1.9	162.70	9500	PS 45 3S 071 B5	71L	4
9.1	363	1.3	151.10	7200	PS 35 3S 071 B5	71L	4
9.5	346	2.1	147.20	9500	PS 45 3S 071 B5	71L	4
10.2	323	1.0	134.70	5500	PS 30 3S 071 B5	71L	4
10.2	323	1.5	134.70	7200	PS 35 3S 071 B5	71L	4
11.3	290	1.1	120.90	5500	PS 30 3S 071 B5	71L	4
11.3	290	1.7	120.90	7200	PS 35 3S 071 B5	71L	4
13.3	248	2.9	105.50	9500	PS 45 3S 071 B5	71L	4
13.8	238	1.3	99.30	5500	PS 30 3S 071 B5	71L	4
13.8	238	2.0	99.30	7200	PS 35 3S 071 B5	71L	4
14.8	221	3.3	94.30	9500	PS 45 3S 071 B5	71L	4
16.7	197	1.6	82.20	5500	PS 30 3S 071 B5	71L	4
16.7	197	2.4	82.20	7200	PS 35 3S 071 B5	71L	4
16.7	197	0.9	82.00	2610	PS 25 3S 071 B5	71L	4
18.7	176	1.8	73.30	5480	PS 30 3S 071 B5	71L	4
18.7	176	2.7	73.30	7200	PS 35 3S 071 B5	71L	4
19.7	167	1.1	69.60	2580	PS 25 3S 071 B5	71L	4
20.8	158	2.0	65.80	5340	PS 30 3S 071 B5	71L	4
20.8	158	3.0	65.80	7200	PS 35 3S 071 B5	71L	4
22.8	144	1.2	60.10	2630	PS 25 3S 071 B5	71L	4
25.4	130	2.5	54.00	5090	PS 30 3S 071 B5	71L	4
27.9	120	1.3	49.04	2560	PS 25 2S 071 B5	71L	4
29.6	111	2.9	46.20	4950	PS 30 3S 071 B5	71L	4
33.0	99	3.2	41.20	4800	PS 30 3S 071 B5	71L	4
34.0	99	1.6	40.29	2480	PS 25 2S 071 B5	71L	4
37.0	90	1.8	36.86	2440	PS 25 2S 071 B5	71L	4
44.0	77	2.1	31.27	2360	PS 25 2S 071 B5	71L	4
44.0	76	1.1	31.71	1940	PS 20 2S 071 B5	71L	4
50.0	67	1.2	28.13	1880	PS 20 2S 071 B5	71L	4
53.0	63	2.5	25.75	2310	PS 25 2S 071 B5	71L	4
55.0	61	1.3	25.43	1780	PS 20 2S 071 B5	71L	4
65.0	52	3.1	21.16	2200	PS 25 2S 071 B5	71L	4
66.0	51	1.6	21.19	1620	PS 20 2S 071 B5	71L	4
71.0	47	3.4	19.35	2150	PS 25 2S 071 B5	71L	4
78.0	43	1.9	18.01	1490	PS 20 2S 071 B5	71L	4
88.0	38	1.0	15.64	580	PS 16 2S 071 B5	71L	4
90.0	37	1.8	15.48	1540	PS 20 2S 071 B5	71L	4
100.0	34	1.9	14.00	1470	PS 20 2S 071 B5	71L	4
110.0	31	1.3	12.47	600	PS 16 2S 071 B5	71L	4
120.0	28	2.3	11.67	1340	PS 20 2S 071 B5	71L	4
122.0	28	1.5	11.24	590	PS 16 2S 071 B5	71L	4
141.0	24	2.7	9.92	1220	PS 20 2S 071 B5	71L	4
147.0	23	1.3	9.31	580	PS 16 2S 071 B5	71L	4
163.0	21	2.9	8.57	1210	PS 20 2S 071 B5	71L	4
181.0	19	3.2	7.75	1150	PS 20 2S 071 B5	71L	4
185.0	18	1.7	7.41	570	PS 16 2S 071 B5	71L	4
205.0	16	1.8	6.68	560	PS 16 2S 071 B5	71L	4
248.0	14	2.2	5.53	540	PS 16 2S 071 B5	71L	4

n₂ o/p rpm	M₂ Nm	Sf₁ Service Factor	i Ratio	Rn₂ N	IEC Model	Motor Frame Size	Pole
6.9	705	1.0	202.10	9500	PS 45 3S 080 B5	80S	4
7.4	664	1.8	190.30	15000	PS 55 3S 080 B5	80S	4
7.5	654	3.2	187.50	22000	PS 60 3S 080 B5	80S	4
7.7	630	1.1	180.70	9500	PS 45 3S 080 B5	80S	4
8.6	568	1.3	162.70	9500	PS 45 3S 080 B5	80S	4
9.3	524	2.3	150.20	15000	PS 55 3S 080 B5	80S	4
10.2	477	1.0	134.70	7200	PS 35 3S 080 B5	80S	4
10.4	470	2.6	134.80	15000	PS 55 3S 080 B5	80S	4
11.4	428	1.1	120.90	7200	PS 35 3S 080 B5	80S	4
11.4	428	2.8	122.70	15000	PS 55 3S 080 B5	80S	4
13.3	368	2.0	105.50	9500	PS 45 3S 080 B5	80S	4
13.9	352	0.9	99.30	5000	PS 30 3S 080 B5	80S	4
13.9	352	1.4	99.30	7200	PS 35 3S 080 B5	80S	4
14.4	338	3.5	96.90	15000	PS 55 3S 080 B5	80S	4
14.8	329	2.2	94.30	9500	PS 45 3S 080 B5	80S	4
16.8	291	1.1	82.20	5060	PS 30 3S 080 B5	80S	4
16.8	291	1.6	82.20	7200	PS 35 3S 080 B5	80S	4
18.2	268	2.7	76.80	9500	PS 45 3S 080 B5	80S	4
18.8	259	1.9	73.30	7200	PS 35 3S 080 B5	80S	4
21.0	233	1.4	65.80	4870	PS 30 3S 080 B5	80S	4
21.0	233	2.1	65.80	7200	PS 35 3S 080 B5	80S	4
22.3	219	3.3	62.70	9500	PS 45 3S 080 B5	80S	4
25.5	191	1.7	54.00	4680	PS 30 3S 080 B5	80S	4
25.5	191	2.5	54.00	7200	PS 35 3S 080 B5	80S	4
28.1	177	0.9	49.04	2150	PS 25 2S 080 B5	80S	4
29.8	164	2.0	46.20	4630	PS 30 3S 080 B5	80S	4
34.0	146	2.2	41.20	4510	PS 30 3S 080 B5	80S	4
34.0	146	3.3	41.20	7200	PS 35 3S 080 B5	80S	4
34.0	146	1.1	40.29	2130	PS 25 2S 080 B5	80S	4
37.0	133	1.2	36.86	2120	PS 25 2S 080 B5	80S	4
37.0	133	2.4	36.82	4400	PS 30 2S 080 B5	80S	4
44.0	113	1.4	31.27	2080	PS 25 2S 080 B5	80S	4
47.0	107	3.0	29.45	4160	PS 30 2S 080 B5	80S	4
54.0	93	1.7	25.75	2090	PS 25 2S 080 B5	80S	4
65.0	77	2.1	21.16	2020	PS 25 2S 080 B5	80S	4
66.0	76	1.1	21.19	1620	PS 20 2S 080 B5	80S	4
71.0	70	2.3	19.35	1980	PS 25 2S 080 B5	80S	4
84.0	59	2.7	16.42	1920	PS 25 2S 080 B5	80S	4
90.0	55	1.2	15.48	1540	PS 20 2S 080 B5	80S	4
99.0	51	2.6	14.01	1880	PS 25 2S 080 B5	80S	4
100.0	50	1.3	14.00	1470	PS 20 2S 080 B5	80S	4
120.0	42	3.1	11.51	1800	PS 25 2S 080 B5	80S	4
131.0	38	3.4	10.53	1760	PS 25 2S 080 B5	80S	4
141.0	35	1.8	9.92	1220	PS 20 2S 080 B5	80S	4
181.0	28	2.2	7.75	1150	PS 20 2S 080 B5	80S	4
217.0	23	2.6	6.46	1040	PS 20 2S 080 B5	80S	4
255.0	20	3.1	5.49	950	PS 20 2S 080 B5	80S	4

n_2 o/p rpm	M_2 Nm	Sf_1 Service Factor	i Ratio	Rn_2 N	IEC Model	Motor Frame Size	Pole
7.4	905	1.3	190.30	15000	PS 55 3S 080 B5	80L	4
7.5	892	2.4	187.50	22000	PS 60 3S 090 B5	80L	4
8.3	798	2.6	167.70	22000	PS 60 3S 090 B5	80L	4
8.3	801	1.5	168.40	15000	PS 55 3S 080 B5	80L	4
8.6	774	0.9	162.70	9500	PS 45 3S 080 B5	80L	4
9.3	718	2.9	151.00	22000	PS 60 3S 090 B5	80L	4
9.3	715	1.7	150.20	15000	PS 55 3S 080 B5	80L	4
9.5	700	1.0	147.20	9500	PS 45 3S 080 B5	80L	4
10.2	650	3.2	136.60	22000	PS 60 3S 090 B5	80L	4
10.2	652	3.5	88.10	22000	PS 60 3S 090 B5	80L	4
10.4	641	1.9	134.80	15000	PS 55 3S 080 B5	80L	4
11.4	584	2.1	122.70	15000	PS 55 3S 080 B5	80L	4
12.9	517	2.3	108.60	15000	PS 55 3S 080 B5	80L	4
13.3	502	1.4	105.50	9500	PS 45 3S 080 B5	80L	4
14.1	473	1.0	99.30	7200	PS 35 3S 080 B5	80L	4
14.4	461	2.6	96.90	15000	PS 55 3S 080 B5	80L	4
14.8	449	1.6	94.30	9500	PS 45 3S 080 B5	80L	4
16.1	414	2.9	87.00	15000	PS 55 3S 080 B5	80L	4
16.5	404	1.8	84.90	9500	PS 45 3S 080 B5	80L	4
17.0	391	1.2	82.20	7200	PS 35 3S 080 B5	80L	4
18.1	369	3.3	77.50	15000	PS 55 3S 080 B5	80L	4
18.2	365	2.0	76.80	9500	PS 45 3S 080 B5	80L	4
19.1	349	0.9	73.30	4400	PS 30 3S 080 B5	80L	4
19.1	349	1.4	73.30	7200	PS 35 3S 080 B5	80L	4
21.3	313	1.0	65.80	4360	PS 30 3S 080 B5	80L	4
21.3	313	1.5	65.80	7200	PS 35 3S 080 B5	80L	4
22.3	298	2.4	62.70	9500	PS 45 3S 080 B5	80L	4
25.0	267	2.7	56.10	9500	PS 45 3S 080 B5	80L	4
25.9	257	1.2	54.00	4240	PS 30 3S 080 B5	80L	4
25.9	257	1.9	54.00	7200	PS 35 3S 080 B5	80L	4
27.7	240	3.0	50.50	9500	PS 45 3S 080 B5	80L	4
30.0	220	1.5	46.20	4270	PS 30 3S 080 B5	80L	4
30.0	220	2.2	46.20	7200	PS 35 3S 080 B5	80L	4
34.0	196	1.6	41.20	4180	PS 30 3S 080 B5	80L	4
34.0	196	2.4	41.20	7200	PS 35 3S 080 B5	80L	4
38.0	179	1.8	36.82	4100	PS 30 2S 080 B5	80L	4
38.0	179	2.7	36.82	7200	PS 35 2S 080 B5	80L	4
43.0	159	2.0	32.80	4010	PS 30 2S 080 B5	80L	4
43.0	159	3.0	32.80	7200	PS 35 2S 080 B5	80L	4
45.0	152	1.1	31.27	1780	PS 25 2S 080 B5	80L	4
48.0	143	2.2	29.45	3920	PS 30 2S 080 B5	80L	4
48.0	143	3.4	29.45	7200	PS 35 2S 080 B5	80L	4
54.0	125	1.3	25.75	1850	PS 25 2S 080 B5	80L	4
58.0	118	2.7	24.19	3740	PS 30 2S 080 B5	80L	4
66.0	103	1.6	21.16	1820	PS 25 2S 080 B5	80L	4
72.0	94	1.7	19.35	1800	PS 25 2S 080 B5	80L	4
73.0	93	2.8	19.21	3600	PS 30 2S 080 B5	80L	4
82.0	83	3.1	17.11	3500	PS 30 2S 080 B5	80L	4
85.0	80	2.0	16.42	1750	PS 25 2S 080 B5	80L	4
91.0	75	3.5	15.37	3400	PS 30 2S 080 B5	80L	4
100.0	68	1.9	14.01	1750	PS 25 2S 080 B5	80L	4
100.0	68	1.0	14.00	1470	PS 20 2S 080 B5	80L	4
120.0	57	1.1	11.67	1340	PS 20 2S 080 B5	80L	4
122.0	56	2.3	11.51	1680	PS 25 2S 080 B5	80L	4
133.0	51	2.5	10.53	1650	PS 25 2S 080 B5	80L	4
141.0	48	1.3	9.92	1220	PS 20 2S 080 B5	80L	4
157.0	43	3.0	8.93	1590	PS 25 2S 080 B5	80L	4
178.0	38	3.1	7.88	1570	PS 25 2S 080 B5	80L	4
181.0	38	1.6	7.75	1150	PS 20 2S 080 B5	80L	4
217.0	31	1.9	6.46	1040	PS 20 2S 080 B5	80L	4
255.0	27	2.2	5.49	950	PS 20 2S 080 B5	80L	4

n₂ o/p rpm	M₂ Nm	Sf₁ Service Factor	i Ratio	Rn₂ N	IEC Model	Motor Frame Size	Pole
7.4	1328	0.9	190.30	15000	PS 55 3S 090 B5	90S	4
7.5	1309	1.6	187.50	22000	PS 60 3S 090 B5	90S	4
8.3	1170	1.8	167.70	22000	PS 60 3S 090 B5	90S	4
8.3	1175	1.0	168.40	15000	PS 55 3S 090 B5	90S	4
9.3	1053	2.0	151.00	22000	PS 60 3S 090 B5	90S	4
9.3	1048	1.1	150.20	15000	PS 55 3S 090 B5	90S	4
10.3	953	2.2	136.60	22000	PS 60 3S 090 B5	90S	4
10.4	941	1.3	134.80	15000	PS 55 3S 090 B5	90S	4
11.4	856	1.4	122.70	15000	PS 55 3S 090 B5	90S	4
11.6	844	2.5	121.00	22000	PS 60 3S 090 B5	90S	4
12.9	758	1.6	108.60	15000	PS 55 3S 090 B5	90S	4
12.9	755	2.8	108.20	22000	PS 60 3S 090 B5	90S	4
13.3	736	1.0	105.50	9500	PS 45 3S 090 B5	90S	4
14.4	680	3.1	97.40	22000	PS 60 3S 090 B5	90S	4
14.4	676	1.8	96.90	15000	PS 55 3S 090 B5	90S	4
14.8	658	1.1	94.30	9500	PS 45 3S 090 B5	90S	4
15.9	615	3.4	88.10	22000	PS 60 3S 090 B5	90S	4
16.1	607	2.0	87.00	15000	PS 55 3S 090 B5	90S	4
16.5	592	1.2	84.90	9500	PS 45 3S 090 B5	90S	4
18.1	541	2.2	77.50	15000	PS 55 3S 090 B5	90S	4
18.2	536	1.3	76.80	9500	PS 45 3S 090 B5	90S	4
19.1	511	0.9	73.30	7200	PS 35 3S 090 B5	90S	4
20.4	479	2.5	68.60	15000	PS 55 3S 090 B5	90S	4
21.3	459	1.0	65.80	7200	PS 35 3S 090 B5	90S	4
22.3	438	1.6	62.70	9500	PS 45 3S 090 B5	90S	4
22.9	427	2.8	61.20	15000	PS 55 3S 090 B5	90S	4
25.0	391	1.8	56.10	9500	PS 45 3S 090 B5	90S	4
25.5	383	3.1	54.90	15000	PS 55 3S 090 B5	90S	4
25.9	377	1.3	54.00	7200	PS 35 3S 090 B5	90S	4
27.7	352	2.0	50.50	9500	PS 45 3S 090 B5	90S	4
30.0	323	1.0	46.20	3670	PS 30 3S 090 B5	90S	4
30.0	323	1.5	46.20	7200	PS 35 3S 090 B5	90S	4
31.0	319	2.3	45.70	9500	PS 45 3S 090 B5	90S	4
33.0	298	2.4	42.70	9500	PS 45 3S 090 B5	90S	4
34.0	287	1.1	41.20	3640	PS 30 3S 090 B5	90S	4
34.0	287	1.7	41.20	7200	PS 35 3S 090 B5	90S	4
37.0	267	2.7	38.20	9500	PS 45 3S 090 B5	90S	4
38.0	262	1.2	36.82	3610	PS 30 2S 090 B5	90S	4
38.0	262	1.8	36.82	7200	PS 35 2S 090 B5	90S	4
41.0	240	3.0	34.40	9500	PS 45 3S 090 B5	90S	4
43.0	234	1.4	32.80	3560	PS 30 2S 090 B5	90S	4
43.0	234	2.1	32.80	7200	PS 35 2S 090 B5	90S	4
45.0	217	3.3	31.10	9400	PS 45 3S 090 B5	90S	4
48.0	210	1.5	29.45	3510	PS 30 2S 090 B5	90S	4
48.0	210	2.3	29.45	7200	PS 35 2S 090 B5	90S	4
58.0	172	1.9	24.19	3400	PS 30 2S 090 B5	90S	4
58.0	172	2.8	24.19	7200	PS 35 2S 090 B5	90S	4
66.0	151	1.1	21.16	1470	PS 25 2S 090 B5	90S	4
72.0	138	1.2	19.35	1480	PS 25 2S 090 B5	90S	4
73.0	137	1.9	19.21	3350	PS 30 2S 090 B5	90S	4
73.0	137	2.9	19.21	7200	PS 35 2S 090 B5	90S	4
82.0	122	2.1	17.11	3260	PS 30 2S 090 B5	90S	4
82.0	122	3.3	17.11	7200	PS 35 2S 090 B5	90S	4
85.0	117	1.4	16.42	1470	PS 25 2S 090 B5	90S	4
91.0	110	2.4	15.37	3190	PS 30 2S 090 B5	90S	4
111.0	90	2.9	12.62	3040	PS 30 2S 090 B5	90S	4
122.0	82	1.6	11.51	1500	PS 25 2S 090 B5	90S	4
123.0	81	3.2	11.43	3010	PS 30 2S 090 B5	90S	4
133.0	75	1.7	10.53	1480	PS 25 2S 090 B5	90S	4
157.0	64	2.0	8.93	1440	PS 25 2S 090 B5	90S	4

n_2 o/p rpm	M_2 Nm	Sf_1 Service Factor	i Ratio	Rn_2 N	IEC Model	Motor Frame Size	Pole
7.5	1772	1.2	187.50	22000	PS 60 3S 090 B5	90L	4
8.4	1585	1.3	167.70	22000	PS 60 3S 090 B5	90L	4
9.3	1426	1.5	151.00	22000	PS 60 3S 090 B5	90L	4
10.3	1290	1.6	136.60	22000	PS 60 3S 090 B5	90L	4
10.4	1283	0.9	134.80	15000	PS 55 3S 090 B5	90L	4
11.4	1168	1.0	122.70	15000	PS 55 3S 090 B5	90L	4
11.7	1143	1.8	121.00	22000	PS 60 3S 090 B5	90L	4
12.9	1033	1.2	108.60	15000	PS 55 3S 090 B5	90L	4
13.0	1022	2.1	108.20	22000	PS 60 3S 090 B5	90L	4
14.4	922	1.3	96.90	15000	PS 55 3S 090 B5	90L	4
14.5	920	2.3	97.40	22000	PS 60 3S 090 B5	90L	4
16.0	832	2.5	88.10	22000	PS 60 3S 090 B5	90L	4
16.1	828	1.4	87.00	15000	PS 55 3S 090 B5	90L	4
18.1	737	1.6	77.50	15000	PS 55 3S 090 B5	90L	4
18.2	731	1.0	76.80	9500	PS 45 3S 090 B5	90L	4
18.3	727	2.9	76.40	22000	PS 60 3S 090 B5	90L	4
20.4	653	1.8	68.60	15000	PS 55 3S 090 B5	90L	4
20.5	650	3.2	68.30	22000	PS 60 3S 090 B5	90L	4
22.3	597	1.2	62.70	9500	PS 45 3S 090 B5	90L	4
22.9	582	2.1	61.20	15000	PS 55 3S 090 B5	90L	4
25.0	534	1.3	56.10	9500	PS 45 3S 090 B5	90L	4
25.5	522	2.3	54.90	15000	PS 55 3S 090 B5	90L	4
26.1	511	0.9	54.00	7200	PS 35 3S 090 B5	90L	4
27.7	481	1.5	50.50	9500	PS 45 3S 090 B5	90L	4
30.0	437	1.1	46.20	7200	PS 35 3S 090 B5	90L	4
31.0	435	1.7	45.70	9500	PS 45 3S 090 B5	90L	4
33.0	406	1.8	42.70	9500	PS 45 3S 090 B5	90L	4
33.3	401	3.0	42.10	15000	PS 55 3S 090 B5	90L	4
34.0	389	1.2	41.20	7200	PS 35 3S 090 B5	90L	4
37.0	364	2.0	38.20	9500	PS 45 3S 090 B5	90L	4
37.6	354	3.4	37.20	15000	PS 55 3S 090 B5	90L	4
38.0	355	0.9	36.82	3060	PS 30 2S 090 B5	90L	4
38.0	355	1.4	36.82	7200	PS 35 2S 090 B5	90L	4
41.0	327	2.2	34.40	9500	PS 45 3S 090 B5	90L	4
43.0	317	1.0	32.80	3060	PS 30 2S 090 B5	90L	4
43.0	317	1.5	32.80	7200	PS 35 2S 090 B5	90L	4
45.0	296	2.4	31.10	9400	PS 45 3S 090 B5	90L	4
48.0	284	1.1	29.45	3050	PS 30 2S 090 B5	90L	4
48.0	284	1.7	29.45	7200	PS 35 2S 090 B5	90L	4
51.0	267	2.7	27.45	8400	PS 45 2S 090 B5	90L	4
57.0	239	3.0	24.55	8000	PS 45 2S 090 B5	90L	4
58.0	234	1.4	24.19	3000	PS 30 2S 090 B5	90L	4
58.0	234	2.1	24.19	7200	PS 35 2S 090 B5	90L	4
73.0	185	1.4	19.21	3050	PS 30 2S 090 B5	90L	4
73.0	185	2.2	19.21	7200	PS 35 2S 090 B5	90L	4
82.0	165	1.6	17.11	3000	PS 30 2S 090 B5	90L	4
82.0	165	2.4	17.11	7200	PS 35 2S 090 B5	90L	4
92.0	148	1.8	15.37	2940	PS 30 2S 090 B5	90L	4
92.0	148	2.7	15.37	7200	PS 35 2S 090 B5	90L	4
101.0	135	1.0	14.01	1270	PS 25 2S 090 B5	90L	4
112.0	122	2.1	12.62	2860	PS 30 2S 090 B5	90L	4
112.0	122	3.3	12.62	7200	PS 35 2S 090 B5	90L	4
122.0	111	1.2	11.51	1280	PS 25 2S 090 B5	90L	4
123.0	110	2.4	11.43	2830	PS 30 2S 090 B5	90L	4
134.0	102	1.3	10.53	1280	PS 25 2S 090 B5	90L	4
138.0	98	2.6	10.18	2760	PS 30 2S 090 B5	90L	4
154.0	88	2.9	9.14	2700	PS 30 2S 090 B5	90L	4
158.0	86	1.5	8.93	1270	PS 25 2S 090 B5	90L	4
179.0	76	1.6	7.88	1300	PS 25 2S 090 B5	90L	4
181.0	75	3.1	7.78	2620	PS 30 2S 090 B5	90L	4

n_2 o/p rpm	M_2 Nm	Sf_1 Service Factor	i Ratio	Rn_2 N	IEC Model	Motor Frame Size	Pole
8.4	2324	0.9	167.70	22000	PS 60 3S 100 B5	100L	4
9.3	2092	1.0	151.00	22000	PS 60 3S 100 B5	100L	4
10.3	1893	1.1	136.60	22000	PS 60 3S 100 B5	100L	4
11.7	1677	1.3	121.00	22000	PS 60 3S 100 B5	100L	4
13.0	1499	1.4	108.20	22000	PS 60 3S 100 B5	100L	4
14.4	1352	0.9	96.90	15000	PS 55 3S 100 B5	100L	4
14.5	1349	1.6	97.40	22000	PS 60 3S 100 B5	100L	4
16.0	1221	1.7	88.10	22000	PS 60 3S 100 B5	100L	4
16.1	1214	1.0	87.00	15000	PS 55 3S 100 B5	100L	4
18.1	1082	1.1	77.50	15000	PS 55 3S 100 B5	100L	4
18.5	1059	2.0	76.40	22000	PS 60 3S 100 B5	100L	4
20.4	957	1.3	68.60	15000	PS 55 3S 100 B5	100L	4
20.6	947	2.2	68.30	21500	PS 60 3S 100 B5	100L	4
22.9	854	1.4	61.20	15000	PS 55 3S 100 B5	100L	4
22.9	852	2.5	61.50	20900	PS 60 3S 100 B5	100L	4
25.0	783	0.9	56.10	9500	PS 45 3S 100 B5	100L	4
25.3	771	2.7	55.60	20400	PS 60 3S 100 B5	100L	4
25.5	766	1.6	54.90	15000	PS 55 3S 100 B5	100L	4
27.7	705	1.0	50.50	9500	PS 45 3S 100 B5	100L	4
31.0	638	1.1	45.70	9500	PS 45 3S 100 B5	100L	4
33.0	596	1.2	42.70	9500	PS 45 3S 100 B5	100L	4
33.3	588	2.0	42.10	15000	PS 55 3S 100 B5	100L	4
37.0	533	1.3	38.20	9500	PS 45 3S 100 B5	100L	4
37.6	519	2.3	37.20	15000	PS 55 3S 100 B5	100L	4
38.0	521	0.9	36.82	7200	PS 35 2S 100 B5	100L	4
41.0	480	1.5	34.40	9500	PS 45 3S 100 B5	100L	4
42.2	463	2.6	33.20	15000	PS 55 3S 100 B5	100L	4
43.0	464	1.0	32.80	7200	PS 35 2S 100 B5	100L	4
45.0	434	1.7	31.10	9400	PS 45 3S 100 B5	100L	4
47.0	416	2.9	29.80	15000	PS 55 3S 100 B5	100L	4
48.0	417	1.2	29.45	7200	PS 35 2S 100 B5	100L	4
51.0	391	1.8	27.45	8400	PS 45 2S 100 B5	100L	4
54.2	368	3.3	25.84	14400	PS 55 2S 100 B5	100L	4
57.0	350	2.1	24.55	8000	PS 45 2S 100 B5	100L	4
58.0	342	0.9	24.19	2320	PS 30 2S 100 B5	100L	4
58.0	342	1.4	24.19	7200	PS 35 2S 100 B5	100L	4
63.0	315	2.3	22.09	7500	PS 45 2S 100 B5	100L	4
70.0	285	2.5	19.99	7200	PS 45 2S 100 B5	100L	4
73.0	272	1.0	19.21	2540	PS 30 2S 100 B5	100L	4
73.0	272	1.5	19.21	7200	PS 35 2S 100 B5	100L	4
79.0	252	2.6	17.70	7300	PS 45 2S 100 B5	100L	4
82.0	242	1.1	17.11	2540	PS 30 2S 100 B5	100L	4
82.0	242	1.7	17.11	7200	PS 35 2S 100 B5	100L	4
88.0	226	2.9	15.83	6900	PS 45 2S 100 B5	100L	4
92.0	218	1.2	15.37	2520	PS 30 2S 100 B5	100L	4
92.0	218	1.8	15.37	7200	PS 35 2S 100 B5	100L	4
98.0	203	3.2	14.25	6500	PS 45 2S 100 B5	100L	4
112.0	179	1.5	12.62	2480	PS 30 2S 100 B5	100L	4
112.0	179	2.2	12.62	7200	PS 35 2S 100 B5	100L	4
123.0	162	1.6	11.43	2530	PS 30 2S 100 B5	100L	4
123.0	162	2.5	11.43	7200	PS 35 2S 100 B5	100L	4
138.0	144	1.8	10.18	2490	PS 30 2S 100 B5	100L	4
138.0	144	2.8	10.18	7110	PS 35 2S 100 B5	100L	4
154.0	129	2.0	9.14	2450	PS 30 2S 100 B5	100L	4
154.0	129	3.1	9.14	6920	PS 35 2S 100 B5	100L	4
181.0	110	2.1	7.78	2420	PS 30 2S 100 B5	100L	4
181.0	110	3.1	7.78	6690	PS 35 2S 100 B5	100L	4
188.0	106	2.2	7.51	2360	PS 30 2S 100 B5	100L	4
188.0	106	3.2	7.51	6590	PS 35 2S 100 B5	100L	4
203.0	98	2.3	6.93	2360	PS 30 2S 100 B5	100L	4

n_2 o/p rpm	M_2 Nm	Sf_1 Service Factor	i Ratio	Rn_2 N	IEC Model	Motor Frame Size	Pole
11.7	2286	0.9	121.00	22000	PS 60 3S 100 B5	100L	4
13.0	2045	1.0	108.20	21900	PS 60 3S 100 B5	100L	4
14.5	1840	1.1	97.40	21500	PS 60 3S 100 B5	100L	4
16.0	1665	1.3	88.10	21100	PS 60 3S 100 B5	100L	4
18.5	1444	1.5	76.40	21000	PS 60 3S 100 B5	100L	4
20.4	1306	0.9	68.60	15000	PS 55 3S 100 B5	100L	4
20.6	1291	1.6	68.30	20500	PS 60 3S 100 B5	100L	4
22.9	1165	1.0	61.20	15000	PS 55 3S 100 B5	100L	4
22.9	1162	1.8	61.50	20000	PS 60 3S 100 B5	100L	4
25.3	1051	2.0	55.60	19600	PS 60 3S 100 B5	100L	4
25.5	1045	1.1	54.90	15000	PS 55 3S 100 B5	100L	4
33.3	801	1.5	42.10	15000	PS 55 3S 100 B5	100L	4
34.0	784	2.7	41.50	18600	PS 60 3S 100 B5	100L	4
37.0	727	1.0	38.20	9500	PS 45 3S 100 B5	100L	4
37.6	708	1.7	37.20	15000	PS 55 3S 100 B5	100L	4
38.0	701	3.0	37.10	18100	PS 60 3S100 B5	100L	4
41.0	655	1.1	34.40	9500	PS 45 3S 100 B5	100L	4
42.0	631	3.3	33.40	17600	PS 60 3S100 B5	100L	4
42.2	632	1.9	33.20	15000	PS 55 3S 100 B5	100L	4
45.0	592	1.2	31.10	9400	PS 45 3S 100 B5	100L	4
47.0	567	2.1	29.80	15000	PS 55 3S 100 B5	100L	4
51.0	522	1.4	27.45	8400	PS 45 2S 100 B5	100L	4
54.2	502	2.4	25.84	14400	PS 55 2S 100 B5	100L	4
57.0	467	1.5	24.55	8000	PS 45 2S 100 B5	100L	4
58.0	467	1.0	24.19	7200	PS 35 2S 100 B5	100L	4
61.2	445	2.7	22.87	13600	PS 55 2S 100 B5	100L	4
63.0	420	1.7	22.09	7500	PS 45 2S 100 B5	100L	4
68.6	397	3.0	20.40	12800	PS 55 2S 100 B5	100L	4
70.0	380	1.9	19.99	7200	PS 45 2S 100 B5	100L	4
73.0	371	1.1	19.21	7200	PS 35 2S 100 B5	100L	4
76.5	356	3.4	18.31	12000	PS 55 2S 100 B5	100L	4
79.0	337	1.9	17.70	7300	PS 45 2S 100 B5	100L	4
82.0	330	1.2	17.11	7200	PS 35 2S 100 B5	100L	4
87.7	310	3.5	15.96	12200	PS 55 2S 100 B5	100L	4
88.0	301	2.2	15.83	6900	PS 45 2S 100 B5	100L	4
92.0	297	1.3	15.37	7200	PS 35 2S 100 B5	100L	4
98.0	271	2.4	14.25	6500	PS 45 2S 100 B5	100L	4
109.0	245	2.6	12.89	6200	PS 45 2S 100 B5	100L	4
112.0	244	1.1	12.62	2070	PS 30 2S 100 B5	100L	4
112.0	244	1.6	12.62	7030	PS 35 2S 100 B5	100L	4
123.0	221	1.2	11.43	2190	PS 30 2S 100 B5	100L	4
123.0	221	1.8	11.43	6990	PS 35 2S 100 B5	100L	4
125.0	213	3.1	11.18	6000	PS 45 2S 100 B5	100L	4
138.0	197	1.3	10.18	2180	PS 30 2S 100 B5	100L	4
138.0	197	2.0	10.18	6820	PS 35 2S 100 B5	100L	4
140.0	190	3.4	10.00	5600	PS 45 2S 100 B5	100L	4
154.0	176	1.5	9.14	2160	PS 30 2S 100 B5	100L	4
154.0	176	2.3	9.14	6670	PS 35 2S 100 B5	100L	4
181.0	150	1.5	7.78	2180	PS 30 2S 100 B5	100L	4
181.0	150	2.3	7.78	6470	PS 35 2S 100 B5	100L	4
188.0	145	1.6	7.51	2120	PS 30 2S 100 B5	100L	4
188.0	145	2.3	7.51	6370	PS 35 2S 100 B5	100L	4
203.0	134	1.7	6.93	2150	PS 30 2S 100 B5	100L	4
227.0	120	1.9	6.22	2110	PS 30 2S 100 B5	100L	4
227.0	120	2.8	6.22	6140	PS 35 2S 100 B5	100L	4
276.0	99	2.3	5.11	2040	PS 30 2S 100 B5	100L	4
276.0	99	3.4	5.11	5850	PS 35 2S 100 B5	100L	4

n₂ o/p rpm	M₂ Nm	Sf₁ Service Factor	i Ratio	Rn₂ N	IEC Model	Motor Frame Size	Pole
14.4	2286	0.9	97.40	20900	PS 60 3S 112 B5	112M	4
15.8	2252	1.0	88.10	19500	PS 60 3S 112 B5	112M	4
18.2	1953	1.1	76.40	19700	PS 60 3S 112 B5	112M	4
20.3	1746	1.2	68.30	19300	PS 60 3S 112 B5	112M	4
22.6	1572	1.3	61.50	18900	PS 60 3S 112 B5	112M	4
25.0	1422	1.5	55.60	18600	PS 60 3S 112 B5	112M	4
25.5	1289	0.9	54.90	15000	PS 55 3S 112 B5	112M	4
33.3	988	1.2	42.10	15000	PS 55 3S 112 B5	112M	4
34.0	1060	2.0	41.50	17900	PS 60 3S 112 B5	112M	4
37.0	948	2.2	37.10	17500	PS 60 3S 112 B5	112M	4
37.6	873	1.4	37.20	15000	PS 55 3S 112 B5	112M	4
41.0	807	0.9	34.40	9500	PS 45 3S 112 B5	112M	4
42.0	853	2.5	33.40	17100	PS 60 3S 112 B5	112M	4
42.2	779	1.5	33.20	15000	PS 55 3S 112 B5	112M	4
45.0	730	1.0	31.10	9400	PS 45 3S 112 B5	112M	4
46.0	772	2.7	30.20	16700	PS 60 3S 112 B5	112M	4
47.0	699	1.7	29.80	15000	PS 55 3S 112 B5	112M	4
51.0	658	1.1	27.45	8400	PS 45 2S 112 B5	112M	4
54.2	620	1.9	25.84	15000	PS 55 2S 112 B5	112M	4
57.0	589	1.2	24.55	8000	PS 45 2S 112 B5	112M	4
61.2	548	2.2	22.87	15000	PS 55 2S 112 B5	112M	4
63.0	530	1.4	22.09	7500	PS 45 2S 112 B5	112M	4
68.6	489	2.5	20.40	15000	PS 55 2S 112 B5	112M	4
70.0	479	1.5	19.99	7200	PS 45 2S 112 B5	112M	4
76.5	439	2.7	18.31	15000	PS 55 2S 112 B5	112M	4
79.0	424	1.5	17.70	7300	PS 45 2S 112 B5	112M	4
87.7	383	2.9	15.96	15000	PS 55 2S 112 B5	112M	4
88.0	380	1.7	15.83	6900	PS 45 2S 112 B5	112M	4
90.0	373	1.1	15.37	6750	PS 35 2S 112 B5	112M	4
98.0	342	1.9	14.25	6500	PS 45 2S 112 B5	112M	4
99.1	339	3.2	14.13	14900	PS 55 2S 112 B5	112M	4
109.0	309	2.1	12.89	6200	PS 45 2S 112 B5	112M	4
110.0	305	1.3	12.62	6160	PS 35 2S 112 B5	112M	4
122.5	274	1.5	11.43	6050	PS 35 2S 112 B5	112M	4
125.0	268	2.4	11.18	6000	PS 45 2S 112 B5	112M	4
137.5	244	1.6	10.18	5470	PS 35 2S 112 B5	112M	4
140.0	240	2.7	10.00	5600	PS 45 2S 112 B5	112M	4
153.2	219	1.8	9.14	5460	PS 35 2S 112 B5	112M	4
156.0	216	3.0	9.00	5300	PS 45 2S 112 B5	112M	4
172.0	195	3.3	8.14	5000	PS 45 2S 112 B5	112M	4
179.9	187	1.8	7.78	5480	PS 35 2S 112 B5	112M	4
186.4	180	1.9	7.51	5280	PS 35 2S 112 B5	112M	4
202.0	166	2.0	6.93	5200	PS 35 2S 112 B5	112M	4
225.1	149	2.3	6.22	4950	PS 35 2S 112 B5	112M	4
274.0	123	2.8	5.11	4500	PS 35 2S 112 B5	112M	4

n₂ o/p rpm	M₂ Nm	Sf₁ Service Factor	i Ratio	Rn₂ N	IEC Model	Motor Frame Size	Pole
35.0	1919	1.1	41.50	15300	PS 60 3S 132 B5	132M	4
39.0	1716	1.2	37.10	15100	PS 60 3S 132 B5	132M	4
43.0	1544	1.4	33.40	14900	PS 60 3S 132 B5	132M	4
48.0	1397	1.5	30.20	14600	PS 60 3S 132 B5	132M	4
54.2	1256	1.0	25.84	14100	PS 55 2S 132 B5	132M	4
57.0	1204	1.7	25.47	13600	PS 60 2S 132 B5	132M	4
61.2	1112	1.1	22.87	13900	PS 55 2S 132 B5	132M	4
63.0	1076	2.0	22.78	13400	PS 60 2S 132 B5	132M	4
68.6	991	1.2	20.40	13700	PS 55 2S 132 B5	132M	4
70.0	969	2.2	20.50	13200	PS 60 2S 132 B5	132M	4
76.5	890	1.3	18.31	13500	PS 55 2S 132 B5	132M	4
78.0	876	2.4	18.55	13000	PS 60 2S 132 B5	132M	4
87.7	776	1.4	15.96	13600	PS 55 2S 132 B5	132M	4
92.0	740	2.6	15.65	12800	PS 60 2S 132 B5	132M	4
98.0	693	0.9	14.25	6500	PS 45 2S 132 B5	132M	4
99.1	687	1.6	14.13	13300	PS 55 2S 132 B5	132M	4
103.0	662	2.9	14.00	12500	PS 60 2S 132 B5	132M	4
109.0	626	1.0	12.89	6200	PS 45 2S 132 B5	132M	4
111.1	612	1.8	12.60	13000	PS 55 2S 132 B5	132M	4
114.0	595	3.2	12.60	12300	PS 60 2S 132 B5	132M	4
122.8	554	3.4	11.40	7130	PS 60 2S 132 B5	132M	4
123.8	550	2.0	11.31	12800	PS 55 2S 132 B5	132M	4
125.0	543	1.2	11.18	6000	PS 45 2S 132 B5	132M	4
135.8	501	2.2	10.31	12700	PS 55 2S 132 B5	132M	4
140.0	486	1.3	10.00	5600	PS 45 2S 132 B5	132M	4
153.3	444	2.5	9.13	12400	PS 55 2S 132 B5	132M	4
156.0	437	1.5	9.00	5300	PS 45 2S 132 B5	132M	4
172.0	396	2.8	8.14	12100	PS 55 2S 132 B5	132M	4
172.0	396	1.6	8.14	5000	PS 45 2S 132 B5	132M	4
191.5	355	3.1	7.31	8200	PS 55 2S 132 B5	132M	4
218.1	312	2.6	6.42	11600	PS 55 2S 132 B5	132M	4
231.0	295	1.8	6.07	5050	PS 45 2S 132 B5	132M	4
246.5	276	2.9	5.68	11300	PS 55 2S 132 B5	132M	4
258.0	264	2.0	5.43	4800	PS 45 2S 132 B5	132M	4
276.1	246	3.2	5.07	11000	PS 55 2S 132 B5	132M	4
286.0	238	2.2	4.89	4500	PS 45 2S 132 B5	132M	4
317.0	215	2.4	4.42	4250	PS 45 2S 132 B5	132M	4

PS 35		530 Nm				
Gearbox Type	i Ratio	n ₁ = 1400 rpm				
		n ₂ rpm	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N
PS 35 2S	5.11	274	340	10.3	900	4500
PS 35 2S	6.22	225	340	8.4	1050	4950
PS 35 2S	6.93	202	340	7.6	1140	5200
PS 35 2S	7.51	186	340	7.0	1050	5280
PS 35 2S	7.78	180	340	6.7	1200	5480
PS 35 2S	9.14	153	400	6.7	1100	5460
PS 35 2S	10.18	138	400	6.1	1150	5470
PS 35 2S	11.43	122	400	5.4	1150	6050
PS 35 2S	12.62	111	400	4.9	1050	6160
PS 35 2S	15.37	91	400	4.0	1150	6750
PS 35 2S	17.11	82	400	3.6	1150	7070
PS 35 2S	19.21	73	400	3.2	1150	7200
PS 35 2S	24.19	58	480	3.1	1150	7200
PS 35 2S	29.45	48	480	2.5	1150	7200
PS 35 2S	32.80	43	480	2.3	1150	7200
PS 35 2S	36.82	38	480	2.0	1150	7200
PS 35 3S	41.20	34.0	480	1.8	830	7200
PS 35 3S	46.20	30.3	480	1.6	830	7200
PS 35 3S	54.00	25.9	480	1.4	830	7200
PS 35 3S	65.80	21.3	480	1.2	830	7200
PS 35 3S	73.30	19.0	480	1.0	830	7200
PS 35 3S	82.20	17.0	480	0.9	830	7200
PS 35 3S	99.30	14.1	480	0.8	830	7200
PS 35 3S	120.90	11.6	480	0.6	830	7200
PS 35 3S	134.70	10.4	480	0.6	830	7200
PS 35 3S	151.10	9.3	480	0.5	830	7200

PS 45		800 Nm				
Gearbox Type	i Ratio	n ₁ = 1400 rpm				
		n ₂ rpm	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N
PS 45 2S	4.42	317	520	18.1	1750	4250
PS 45 2S	4.89	286	520	16.4	1750	4500
PS 45 2S	5.43	258	520	14.8	1750	4800
PS 45 2S	6.07	231	520	13.2	1750	5050
PS 45 2S	8.14	172	650	12.3	1750	5000
PS 45 2S	9.00	156	650	11.1	1750	5300
PS 45 2S	10.00	140	650	10.0	1750	5600
PS 45 2S	11.18	125	650	9.0	1750	6000
PS 45 2S	12.89	109	650	7.8	1750	6200
PS 45 2S	14.25	98	650	7.0	1750	6500
PS 45 2S	15.83	88	650	6.3	1750	6900
PS 45 2S	17.70	79	650	5.7	1750	7300
PS 45 2S	19.99	70	720	5.6	1750	7200
PS 45 2S	22.09	63	720	5.0	1750	7500
PS 45 2S	24.55	57	720	4.5	1750	8000
PS 45 2S	27.45	51	720	4.0	1750	8400
PS 45 3S	31.1	45.0	720	3.7	1080	9400
PS 45 3S	34.4	41.0	720	3.3	1080	9500
PS 45 3S	38.2	37.0	720	3.0	1080	9500
PS 45 3S	42.7	33.0	720	2.7	1080	9500
PS 45 3S	45.7	31.0	720	2.5	1080	9500
PS 45 3S	50.5	27.7	720	2.3	1080	9500
PS 45 3S	56.1	25.0	720	2.0	1080	9500
PS 45 3S	62.7	22.3	720	1.8	1080	9500
PS 45 3S	76.8	18.2	720	1.5	1080	9500
PS 45 3S	84.9	16.5	720	1.3	1080	9500
PS 45 3S	94.3	14.8	720	1.2	1080	9500
PS 45 3S	105.5	13.3	720	1.1	1080	9500
PS 45 3S	147.2	9.5	720	0.77	1080	9500
PS 45 3S	162.7	8.6	720	0.70	1080	9500
PS 45 3S	180.7	7.7	720	0.63	1080	9500
PS 45 3S	202.1	6.9	720	0.56	1080	9500

PS 55		1350 Nm				
Gearbox Type	i Ratio	n ₁ = 1400 rpm				
		n ₂ rpm	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N
PS 55 2S	4.55	308	800	27.0	2500	7890
PS 55 2S	5.07	276	800	24.0	2500	8400
PS 55 2S	5.68	246	800	22.0	2500	8900
PS 55 2S	6.42	218	800	19.0	2500	9450
PS 55 2S	7.31	192	1100	23.0	1616	8200
PS 55 2S	8.14	172	1100	21.0	2500	8800
PS 55 2S	9.13	153	1100	18.6	2500	9400
PS 55 2S	10.31	136	1100	16.4	2500	10100
PS 55 2S	11.31	124	1100	15.0	2500	10100
PS 55 2S	12.60	111	1100	13.5	2500	10800
PS 55 2S	14.13	99	1100	12.0	2500	11500
PS 55 2S	15.96	88	1100	10.6	2500	12200
PS 55 2S	18.31	76	1200	10.1	2500	12000
PS 55 2S	20.40	69	1200	9.1	2500	12800
PS 55 2S	22.87	61	1200	8.1	2500	13600
PS 55 2S	25.84	54	1200	7.2	2500	14400
PS 55 3S	29.8	47	1200	6.4	1600	15000
PS 55 3S	33.2	42	1200	5.7	1600	15000
PS 55 3S	37.2	38	1200	5.1	1600	15000
PS 55 3S	42.1	33	1200	4.5	1600	15000
PS 55 3S	54.9	26	1200	3.5	1600	15000
PS 55 3S	61.2	22.9	1200	3.1	1600	15000
PS 55 3S	68.6	20.4	1200	2.8	1600	15000
PS 55 3S	77.5	18.1	1200	2.4	1600	15000
PS 55 3S	87.0	16.1	1200	2.2	1600	15000
PS 55 3S	96.9	14.4	1200	2.0	1600	15000
PS 55 3S	108.6	12.9	1200	1.7	1600	15000
PS 55 3S	122.7	11.4	1200	1.5	1600	15000
PS 55 3S	134.8	10.4	1200	1.40	1600	15000
PS 55 3S	150.2	9.3	1200	1.30	1600	15000
PS 55 3S	168.4	8.3	1200	1.10	1600	15000
PS 55 3S	190.3	7.4	1200	1.00	1600	15000

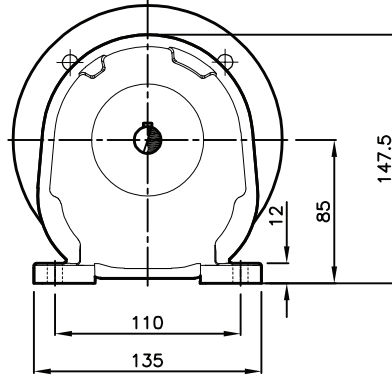
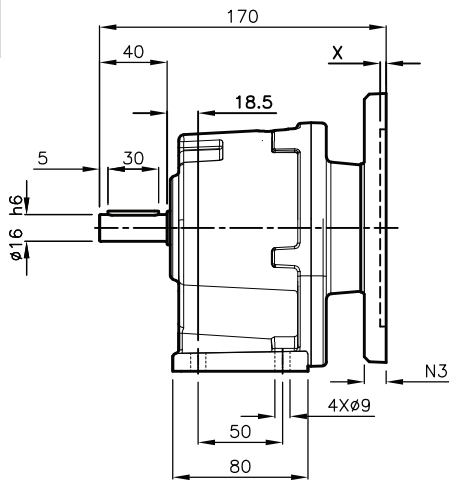
PS 60		2300 Nm				
Gearbox Type	i Ratio	n ₁ = 1400 rpm				
		n ₂ rpm	M _{n2} Nm	P _{n1} kW	R _{n1} N	R _{n2} N
PS 60 2S	4.34	323	1400	50.0	2230	5420
PS 60 2S	4.80	292	1400	45.0	2470	5850
PS 60 2S	5.33	263	1400	40.0	2690	6310
PS 60 2S	5.96	235	1400	36.0	2900	6790
PS 60 2S	7.37	190	1900	40.0	1940	4450
PS 60 2S	8.14	172	1900	36.0	2210	5830
PS 60 2S	9.05	155	1900	32.0	2450	6470
PS 60 2S	10.12	138	1900	29.0	2690	7050
PS 60 2S	11.40	123	1900	26.0	2240	7130
PS 60 2S	12.60	111	1900	23.0	2470	7710
PS 60 2S	14.00	100	1900	21.0	2690	8320
PS 60 2S	15.65	89	1900	18.7	2900	8960
PS 60 2S	18.55	75	2100	17.5	2120	8620
PS 60 2S	20.50	68	2100	15.8	2360	9180
PS 60 2S	22.78	61	2100	14.2	2590	9980
PS 60 2S	25.47	55	2100	12.7	2820	10700
PS 60 3S	30.2	46	2100	11.0	2210	12700
PS 60 3S	33.4	42	2100	9.9	2270	13500
PS 60 3S	37.1	38	2100	9.0	2330	14200
PS 60 3S	41.5	34	2100	8.0	2350	15100
PS 60 3S	55.6	25	2100	6.0	2350	16500
PS 60 3S	61.5	22.8	2100	5.4	2350	17400
PS 60 3S	68.3	20.5	2100	4.9	2350	18300
PS 60 3S	76.4	18.3	2100	4.3	2350	19300
PS 60 3S	88.1	15.9	2100	3.8	2350	19100
PS 60 3S	97.4	14.4	2100	3.4	2350	20900
PS 60 3S	108.2	12.9	2100	3.1	2350	21900
PS 60 3S	121.0	11.6	2100	2.7	2350	22000
PS 60 3S	136.6	10.2	2100	2.40	2350	22000
PS 60 3S	151.0	9.3	2100	2.20	2350	22000
PS 60 3S	167.7	8.3	2100	2.00	2350	22000
PS 60 3S	187.5	7.5	2100	1.80	1400	22000

23. GENERAL ARRANGEMENT DRAWINGS

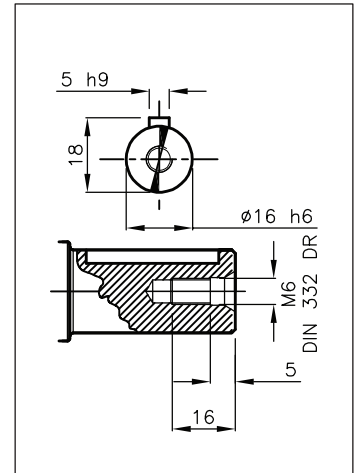
Dimensions

PS 16

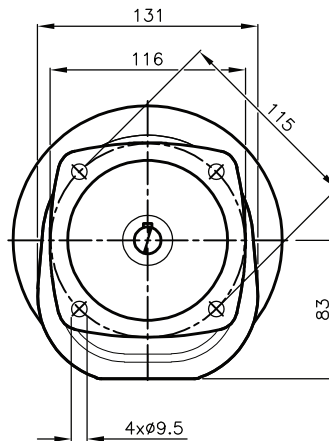
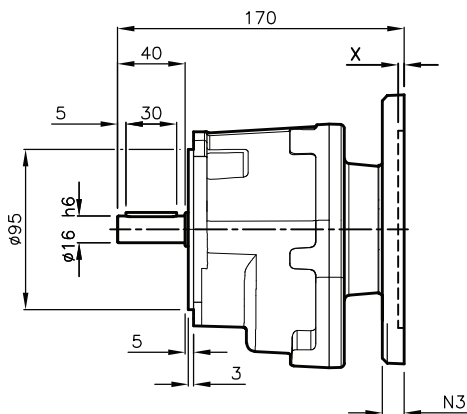
P 2S



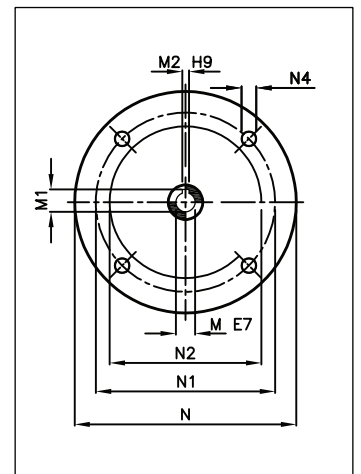
Output



F 2S



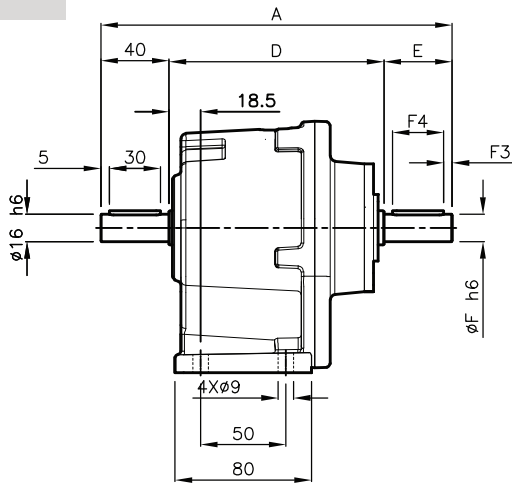
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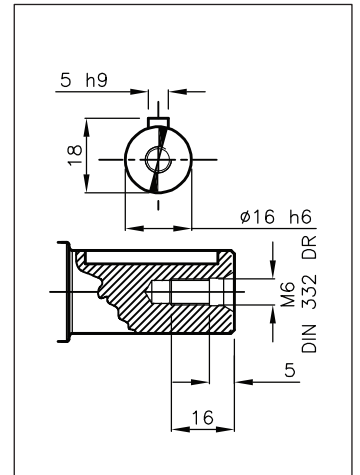
PS 16

	M	M1	M2	N	N1	N2	N3	N4	X	P	F	kg
PS 16 2S_063	11	12.8	4	140	115	95	-	M8x19	3.5	170	170	6.4
PS 16 2S_071	14	16.3	5	160	130	110	-	M8x16	5	170	170	6.4

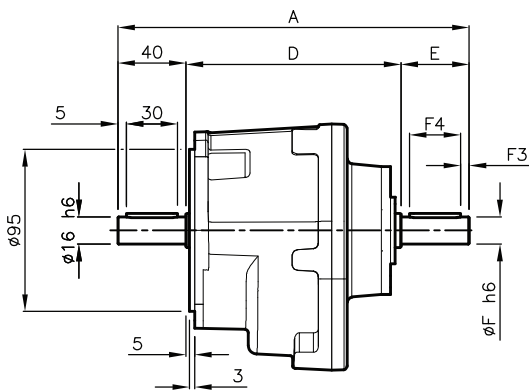
P 2S HS



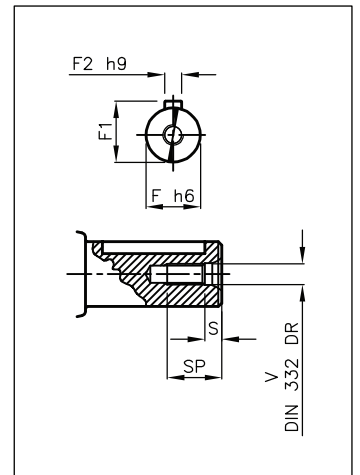
Output



F 2S HS



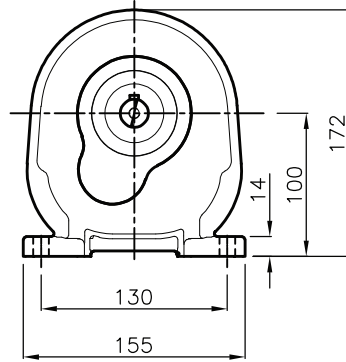
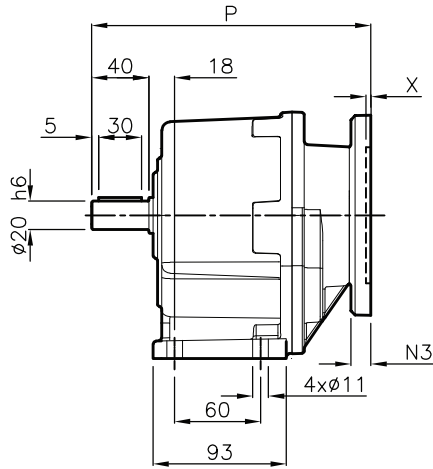
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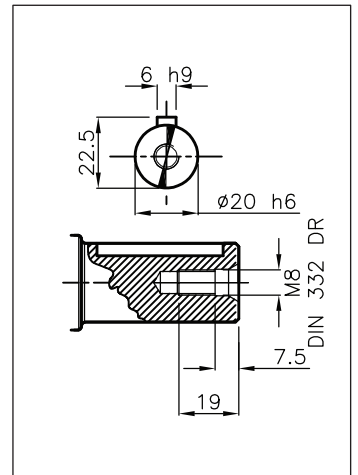
PS 16

	A	D	E	F	F1	F2	F3	F4	V	S	SP	KG
PS 16 P 2S_HS	206	126	40	16	18	5	5	30	M6	5	16	6.4
PS 16 F 2S_HS	206	126	40	16	18	5	5	30	M6	5	16	6.4

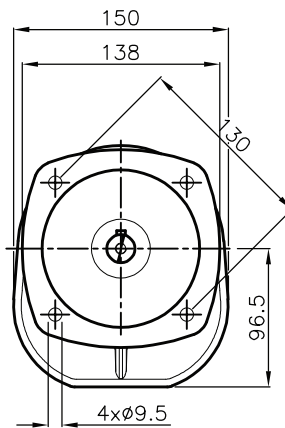
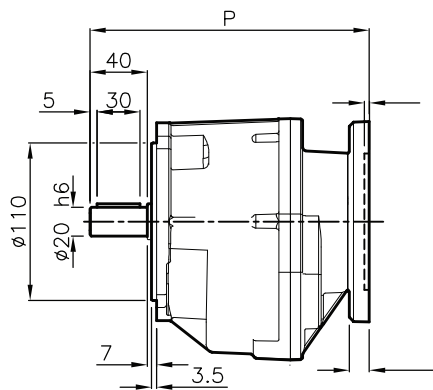
P 2S P 3S



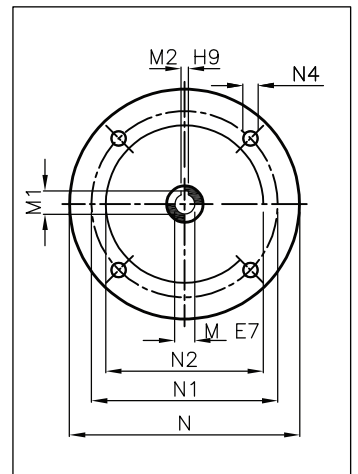
Output



F 2S F 3S



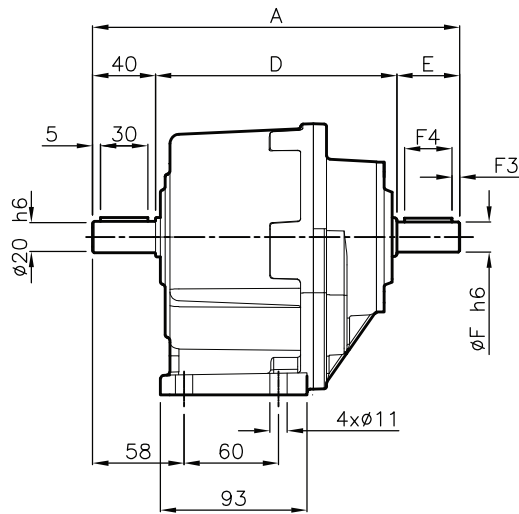
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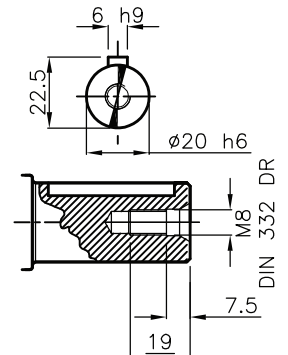
PS 20

	M	M1	M2	N	N1	N2	N3	N4	X	P	F	kg
PS 20 2S_063	11	12.8	4	140	115	95	-	M8x19	3.5	195	195	9.8
PS 20 2S_071	14	16.3	5	160	130	110	-	M8x16	5	195	195	9.8
PS 20 2S_080	19	21.8	6	200	165	130	-	M10x12	5	200	200	9.8
PS 20 2S_090	24	27.3	8	200	165	130	-	M10x12	5	200	200	9.8
PS 20 3S_063	11	12.8	4	140	115	95	-	M8x19	3.5	194	194	9.6
PS 20 3S_071	14	16.3	5	160	130	110	-	M8c16	3.5	194	194	9.6

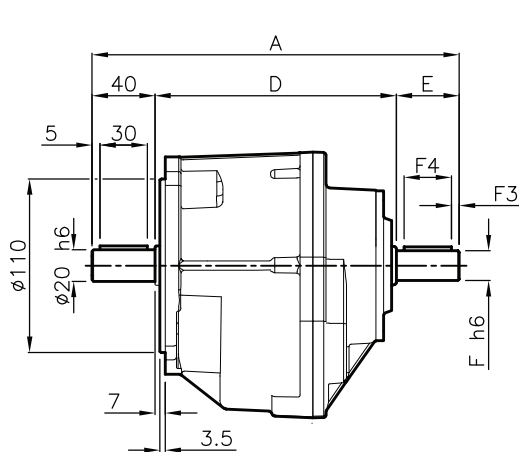
P 2S HS P 3S HS



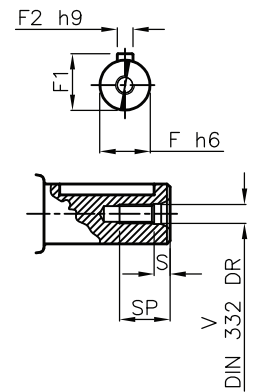
Output



F 2S HS F 3S HS



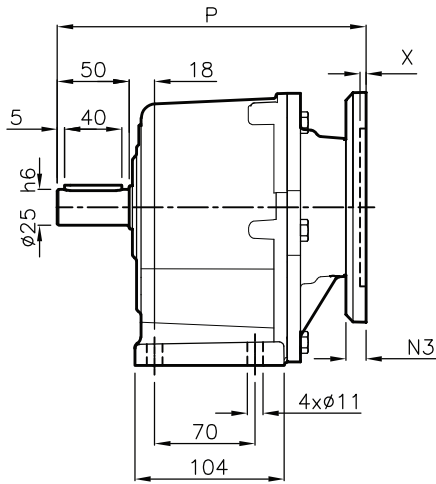
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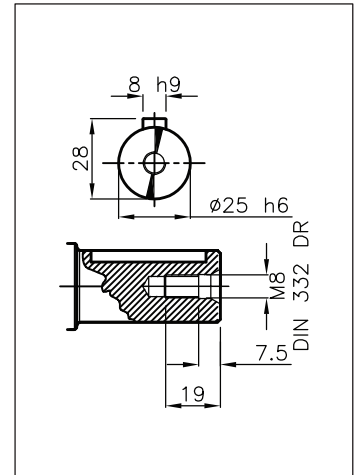
PS 20

	A	D	E	F	F1	F2	F3	F4	V	S	SP	KG
PS 20 P 2S_HS	233	153	40	19	21.5	6	5	30	M6	5	16	9.8
PS 20 F 2S_HS	233	153	40	19	21.5	6	5	30	M6	5	16	9.8
PS 20 P 3S_HS	230	153	40	16	18	5	5	30	M6	5	16	9.8
PS 20 F 3S_HS	230	153	40	16	18	5	5	30	M6	5	16	9.8

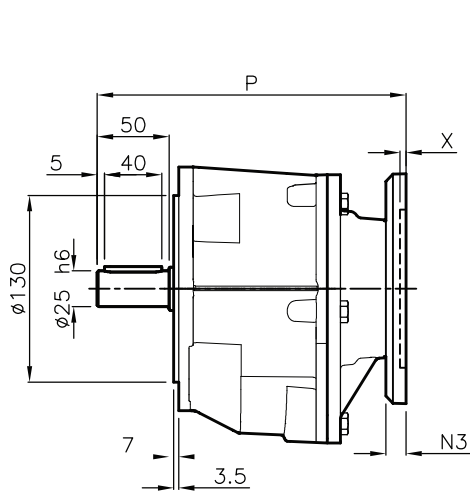
P 2S P 3S



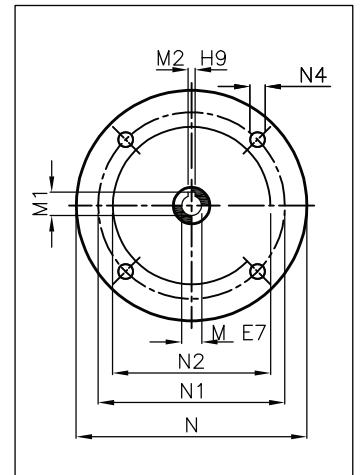
Output



F 2S F 3S



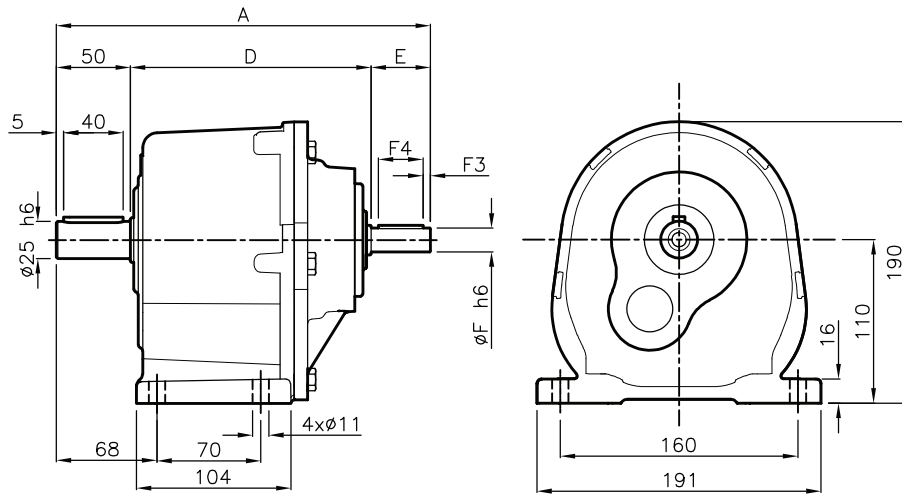
Input



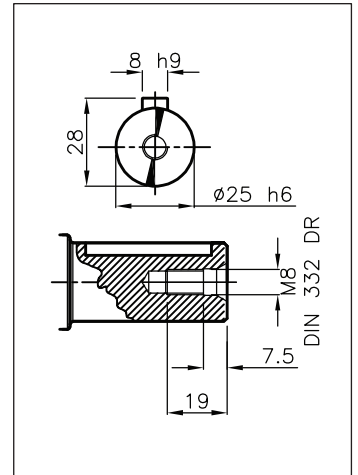
PS 25

	M	M1	M2	N	N1	N2	N3	N4	X	P	F	kg
PS 25 2S_071	14	16.3	5	160	130	110	-	M8x16	4	215	215	14
PS 25 2S_080	19	21.8	6	200	165	130	-	M10x12	5	220	220	14
PS 25 2S_090	24	27.3	8	200	165	130	-	M10x12	5	220	220	14
PS 25 3S_063	11	12.8	4	140	115	95	-	M8x19	3.5	214	214	13.5
PS 25 3S_071	14	16.3	5	160	130	110	-	M8x16	4	214	214	13.5

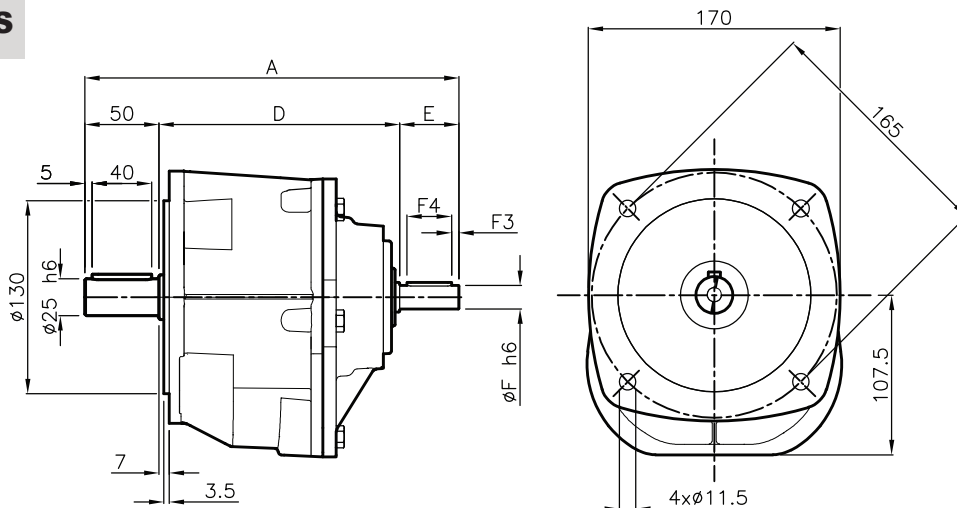
P 2S HS P 3S HS



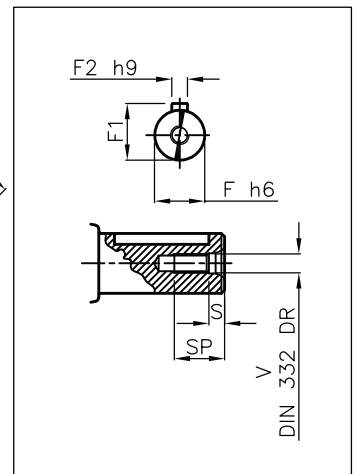
Output



F 2S HS F 3S HS



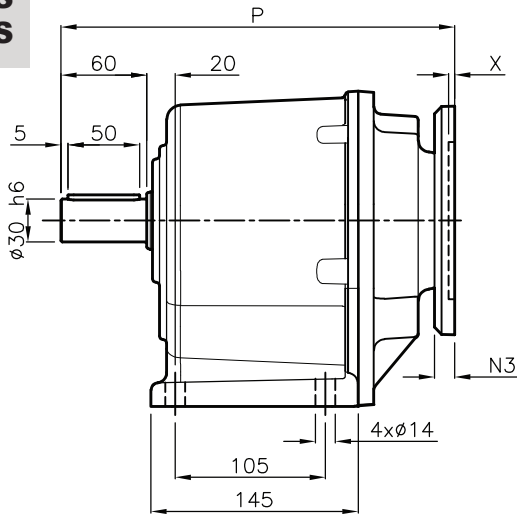
Input



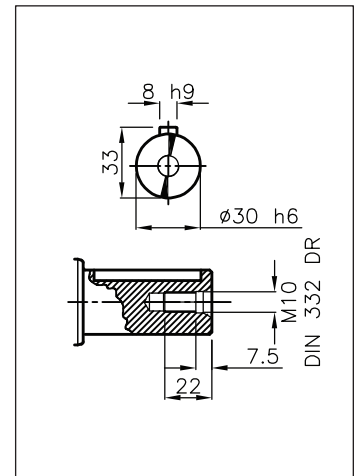
PS 25

	A	D	E	F	F1	F2	F3	F4	V	S	SP	KG
PS 25 P 2S_HS	252	162	40	19	21.5	6	5	30	M6	5	16	14
PS 25 F 2S_HS	252	162	40	19	21.5	6	5	30	M6	5	16	14
PS 25 P 3S_HS	250	160	40	16	18	5	5	30	M6	5	16	13.5
PS 25 F 3S_HS	250	160	40	16	18	5	5	30	M6	5	16	13.5

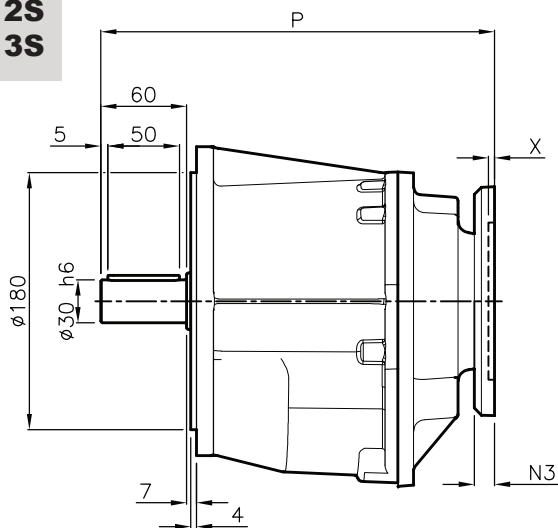
P 2S
P 3S



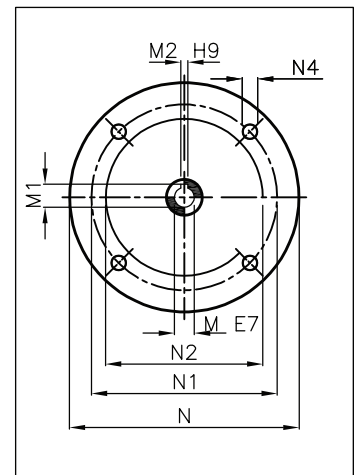
Output



F 2S
F 3S



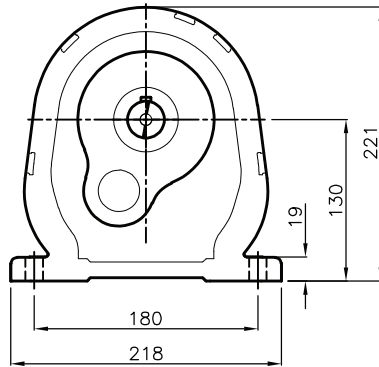
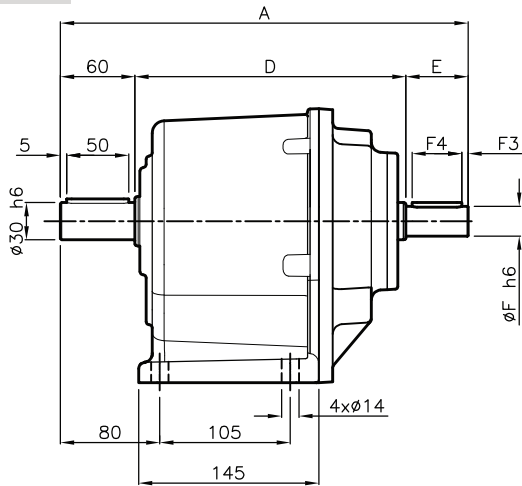
Input



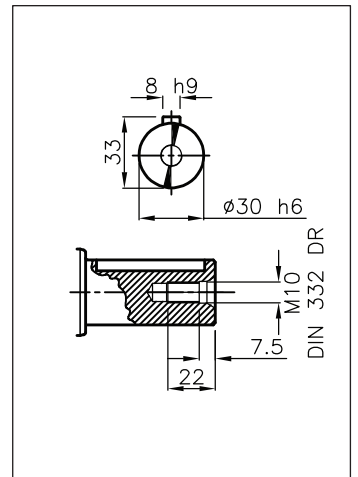
PS 30

	M	M1	M2	N	N1	N2	N3	N4	X	P	F	kg
PS 30 2S_071	14	16.3	5	160	130	110	-	M8x16	4	283	283	23
PS 30 2S_080	19	21.8	6	200	165	130	-	M10x12	5	283	283	23
PS 30 2S_090	24	27.3	8	200	165	130	-	M10x12	5	283	283	23
PS 30 2S_100	28	31.3	8	250	215	180	-	M12x16	5	283	283	23
PS 30 2S_112	28	31.3	8	250	215	180	-	M12x16	5	283	283	23
PS 30 3S_071	14	16.3	5	160	130	110	-	M8x19	4	275	275	22.5
PS 30 3S_080	19	21.8	5	200	165	130	-	M10x19	5	280	280	22.5
PS 30 3S_090	24	27.3	5	200	165	130	-	M10x19	5	280	280	22.5

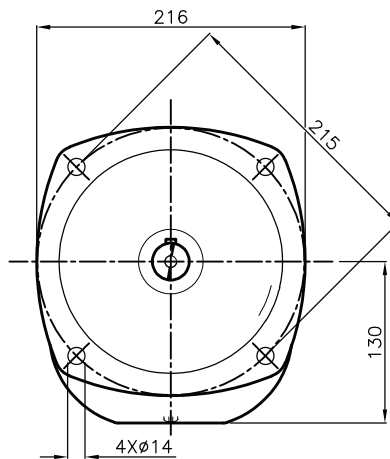
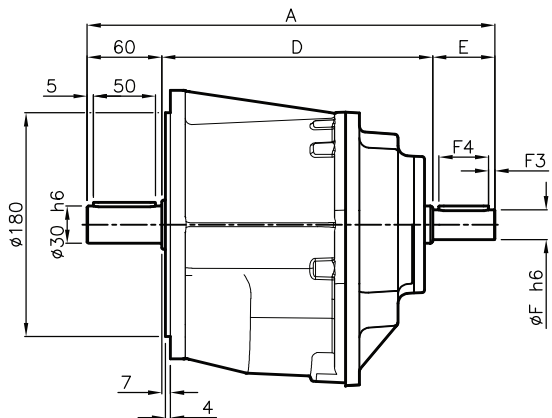
P 2S HS P 3S HS



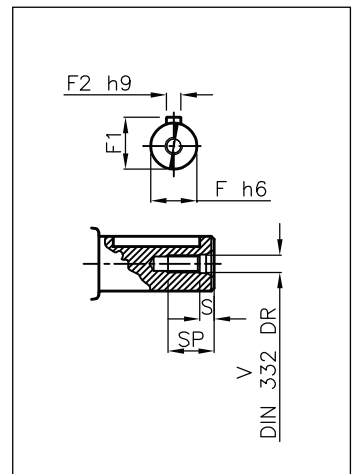
Output



F 2S HS F 3S HS



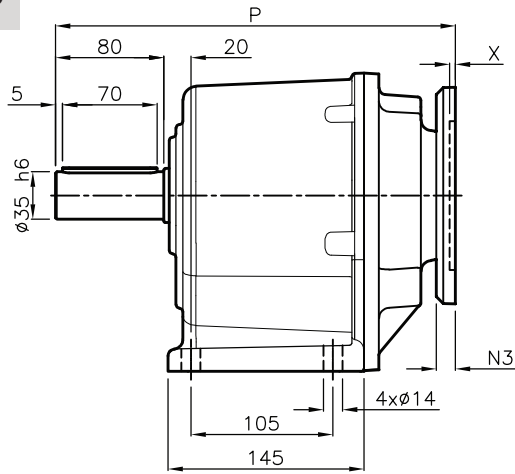
Input



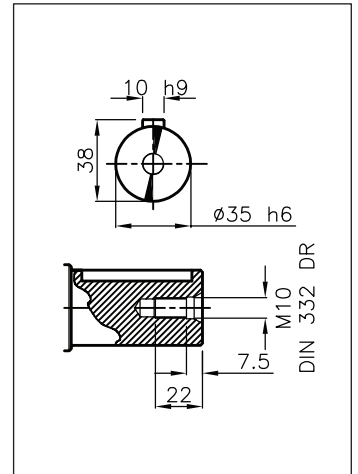
PS 30

	A	D	E	F	F1	F2	F3	F4	V	S	SP	KG
PS 30 P 2S_HS	329	219	50	24	27	8	5	40	M8	6	19	23
PS 30 F 2S_HS	329	219	50	24	27	8	5	40	M8	6	19	23
PS 30 P 3S_HS	313	213	40	19	21.5	6	5	30	M6	5	16	22.5
PS 30 F 3S_HS	313	213	40	19	21.5	6	5	30	M6	5	16	22.5

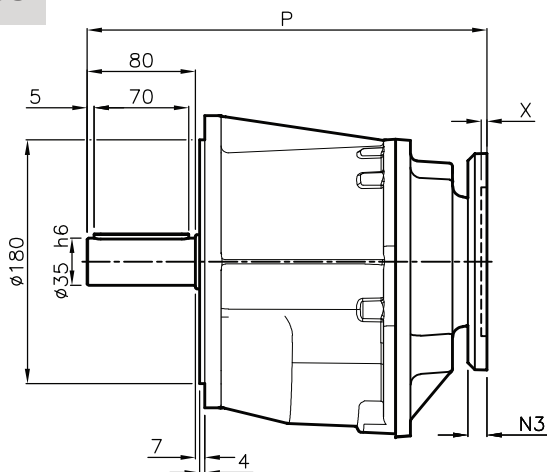
P 2S P 3S



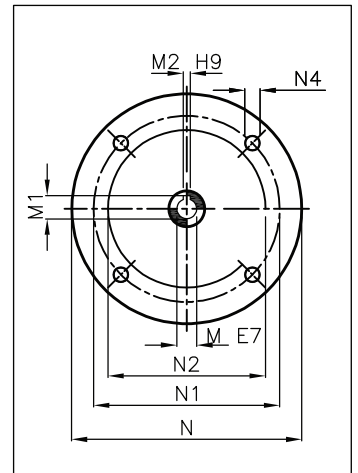
Output



F 2S F 3S



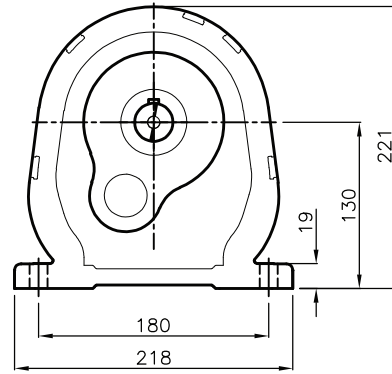
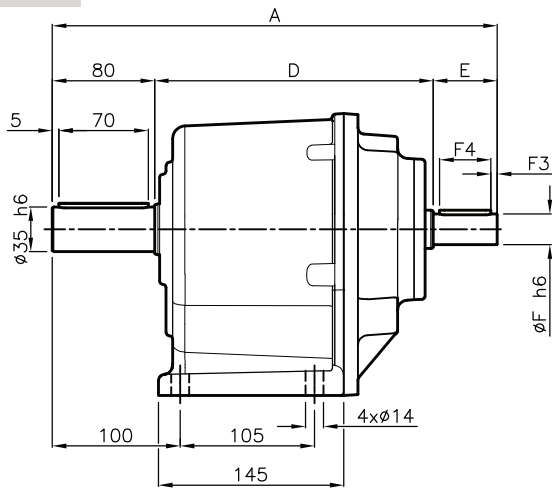
Input



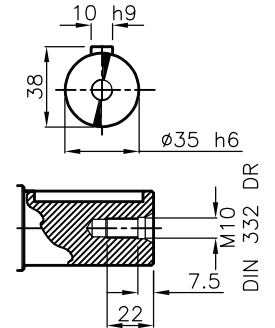
PS 35

	M	M1	M2	N	N1	N2	N3	N4	X	P	F	kg
PS 35 2S_071	14	16.3	5	160	130	110	-	M8x16	4	303	303	24
PS 35 2S_080	19	21.8	6	200	165	130	-	M10x12	5	303	303	24
PS 35 2S_090	24	27.3	8	200	165	130	-	M10x12	5	303	303	24
PS 35 2S_100	28	31.3	8	250	215	180	-	M12x16	5	303	303	24
PS 35 2S_112	28	31.3	8	250	215	180	-	M12x16	5	303	303	24
PS 35 3S_071	14	16.3	5	160	130	110	-	M8x19	4	295	295	23.5
PS 35 3S_080	19	21.8	5	200	165	130	-	M10x19	5	300	300	23.5
PS 35 3S_090	24	27.3	5	200	165	130	-	M10x19	5	300	300	23.5

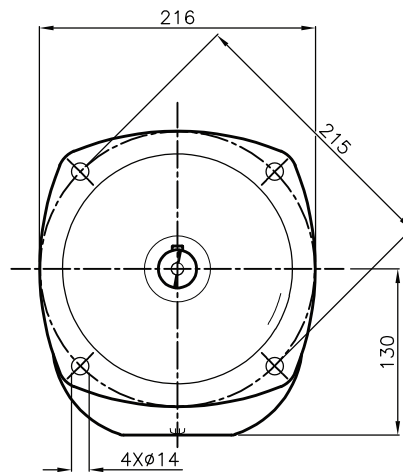
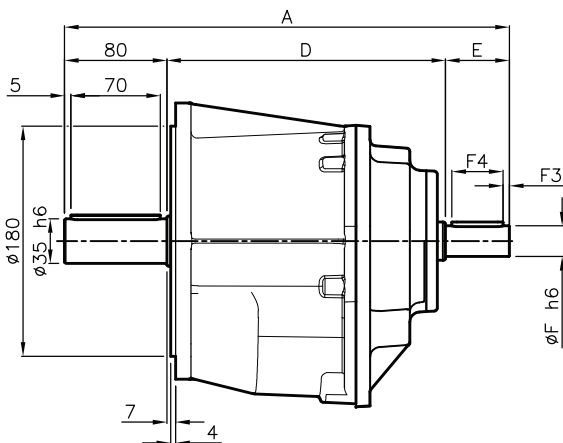
P 2S HS P 3S HS



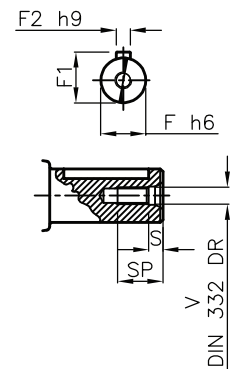
Output



F 2S HS F 3S HS



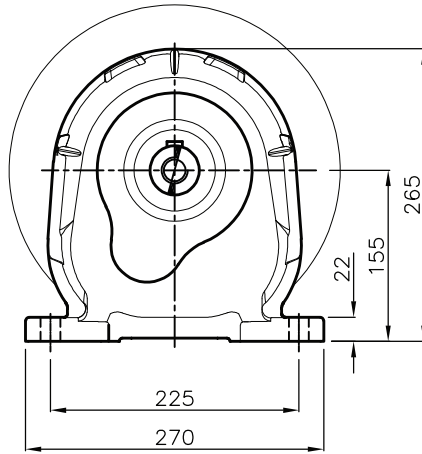
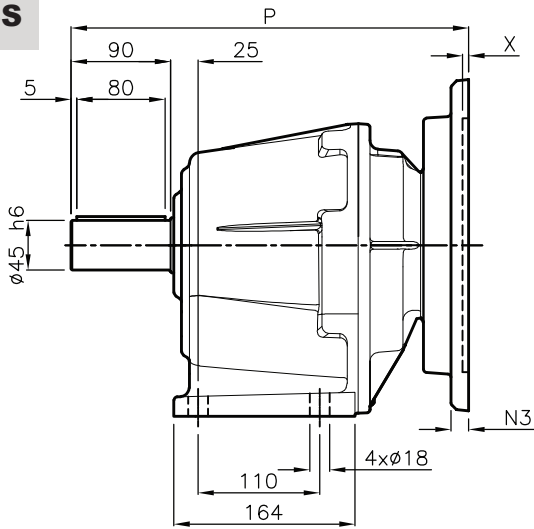
Input



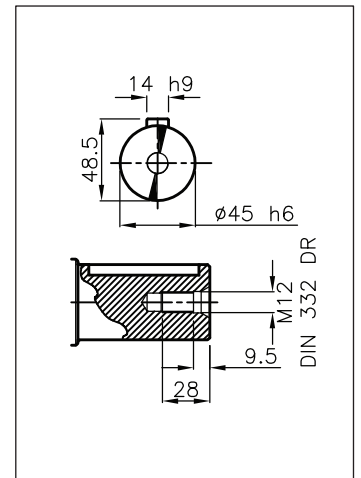
PS 35

	A	D	E	F	F1	F2	F3	F4	V	S	SP	KG
PS 35 P 2S_HS	349	219	50	24	27	8	5	40	M8	6	19	24
PS 35 F 2S_HS	349	219	50	24	27	8	5	40	M8	6	19	24
PS 35 P 3S_HS	333	213	40	19	21.5	6	5	30	M6	5	16	23.5
PS 35 F 3S_HS	333	213	40	19	21.5	6	5	30	M6	5	16	23.5

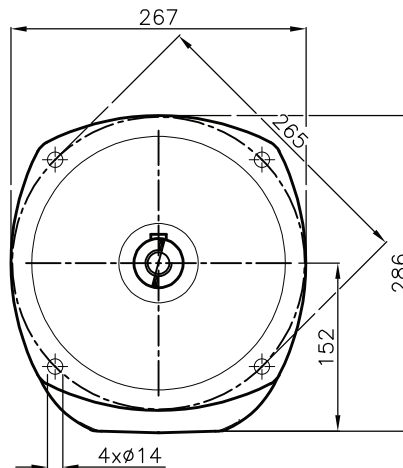
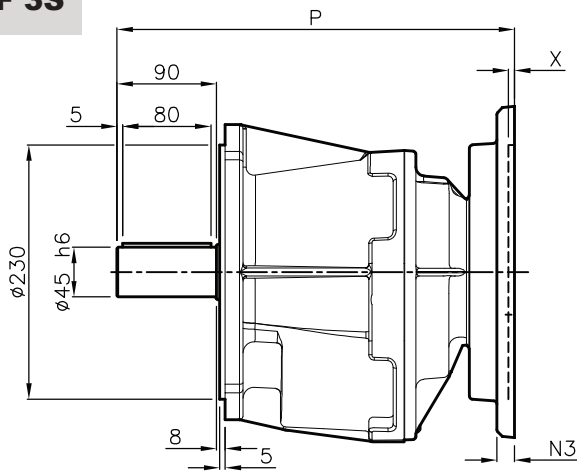
P 2S P 3S



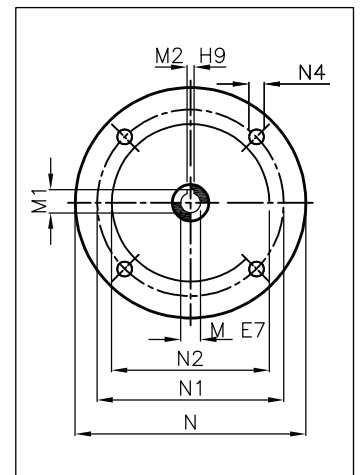
Output



F 2S F 3S



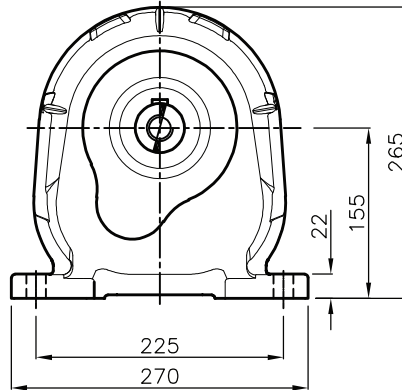
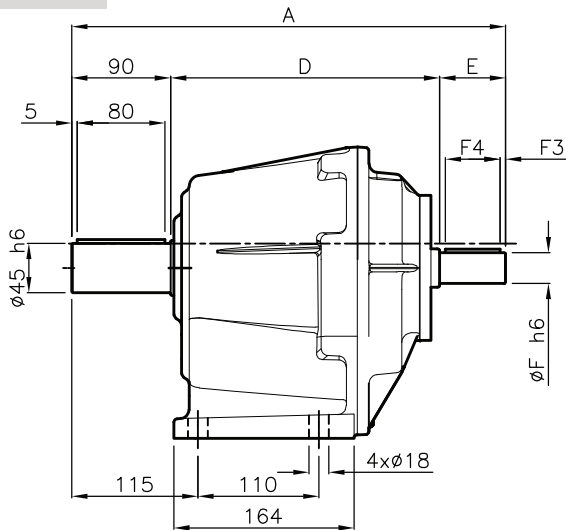
Input



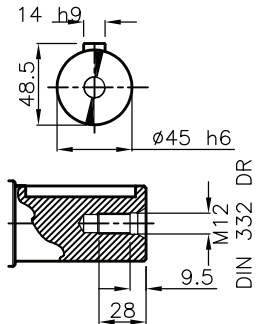
PS 45

	M	M1	M2	N	N1	N2	N3	N4	X	P	F	kg
PS 45 2S_090	24	27.3	8	200	165	130	-	M10x12	4	340	340	40
PS 45 2S_100	28	31.3	8	250	215	180	16	16	5	340	340	40
PS 45 2S_112	28	31.3	8	250	215	180	16	13	5	340	340	40
PS 45 2S_132	38	41.3	10	300	265	230	16	14	5	360	360	40
PS 45 3S_071	14	16.3	5	160	130	110	-	M8x16	4	350	350	35
PS 45 3S_080	19	21.8	6	200	165	130	-	M10x19	5	350	350	35
PS 45 3S_090	24	27.3	8	200	165	130	-	M10x19	5	350	350	35
PS 45 3S_100	28	31.3	8	250	215	180	-	M12x16	5	350	350	35
PS 45 3S_112	28	31.3	8	250	215	180	-	M12x16	5	350	350	35

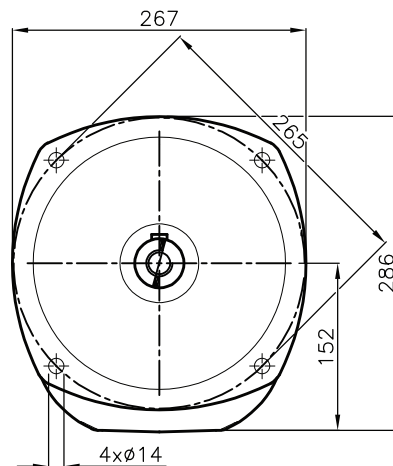
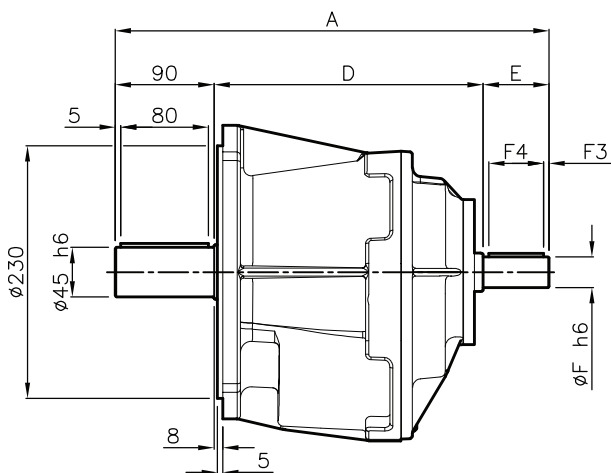
P 2S HS P 3S HS



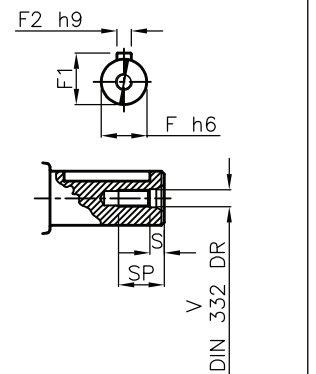
Output



F 2S HS F 3S HS



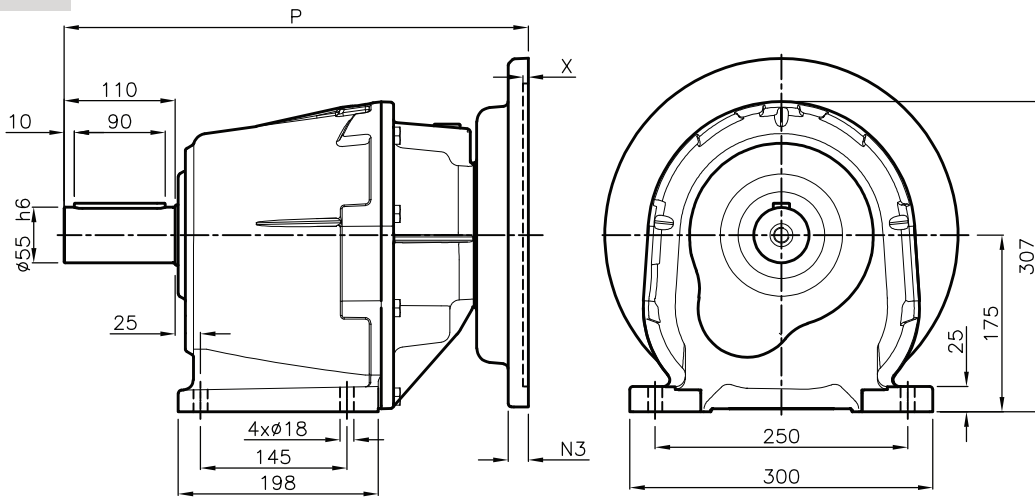
Input



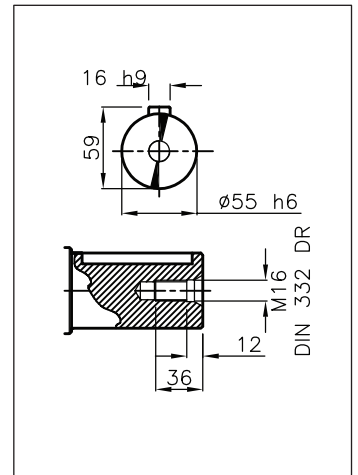
PS 45

	A	D	E	F	F1	F2	F3	F4	V	S	SP	KG
PS 45 P 2S_HS	395	245	60	28	31	8	5	50	M10	7.5	22	40
PS 45 F 2S_HS	395	245	60	28	31	8	5	50	M10	7.5	22	40
PS 45 P 3S_HS	395	255	50	24	27	8	5	40	M8	6	19	35
PS 45 F 3S_HS	395	255	50	24	27	8	5	40	M8	6	19	35

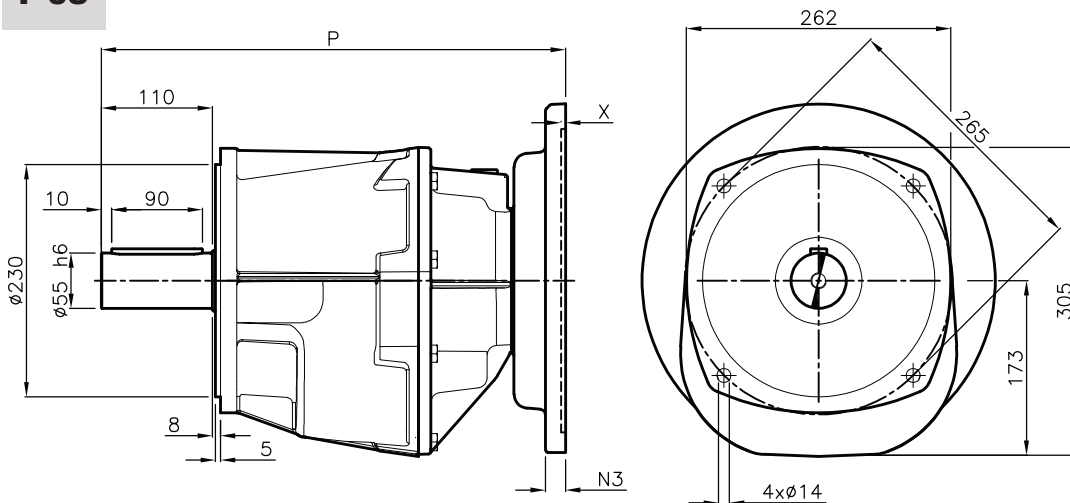
P 2S P 3S



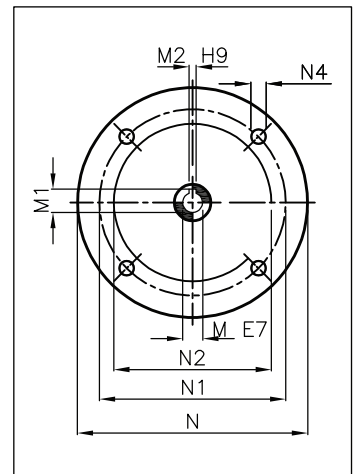
Output



F 2S F 3S



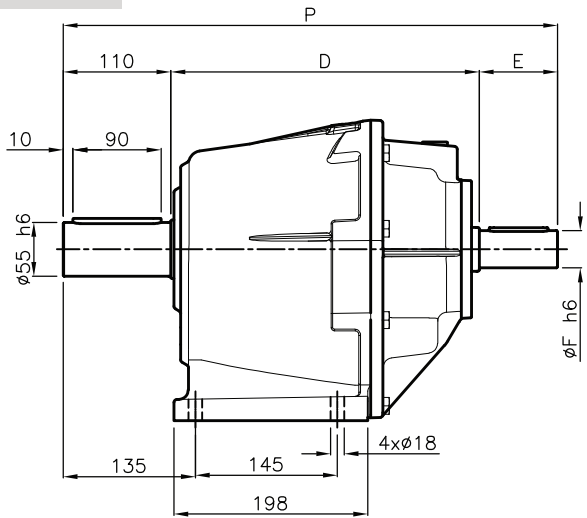
Input



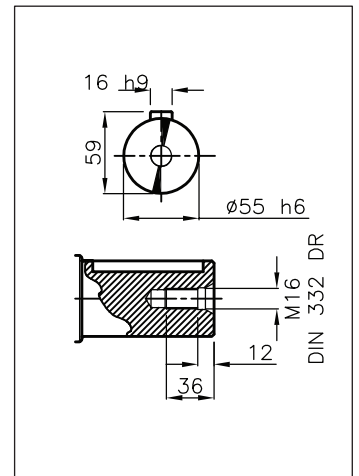
PS 55

	M	M1	M2	N	N1	N2	N3	N4	X	P	F	kg
PS 55 2S_100	28	31.3	8	250	215	180	16	13	5	430	430	61
PS 55 2S_112	28	31.3	8	250	215	180	16	13	5	430	430	61
PS 55 2S_132	38	41.3	10	300	265	230	16	14	5	430	430	61
PS 55 2S_160	42	45.3	12	350	300	250	20	18	6	460	460	61
PS 55 3S_080	19	21.8	6	200	165	130	-	M10x19	4	422	422	56
PS 55 3S_090	24	27.3	8	200	165	130	-	M10x19	4	422	422	56
PS 55 3S_100	28	31.3	8	250	215	180	-	M12x16	5	422	422	56
PS 55 3S_112	28	31.3	8	250	215	180	-	M12x16	5	442	442	56
PS 55 3S_132	38	41.3	10	300	265	230	16	14	5	442	442	56

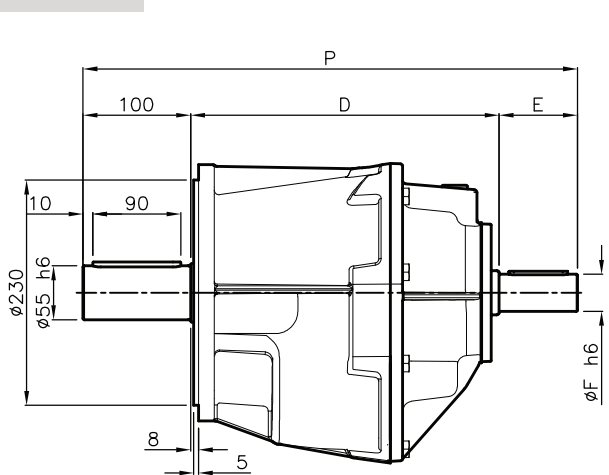
P 2S HS P 3S HS



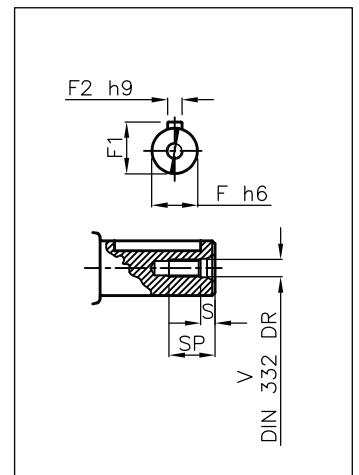
Output



F 2S HS F 3S HS



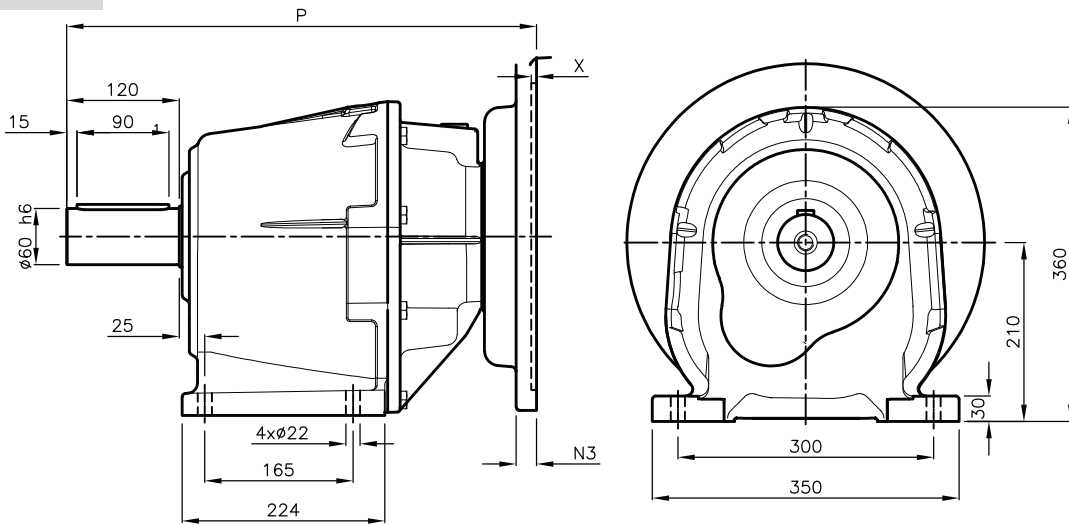
Input



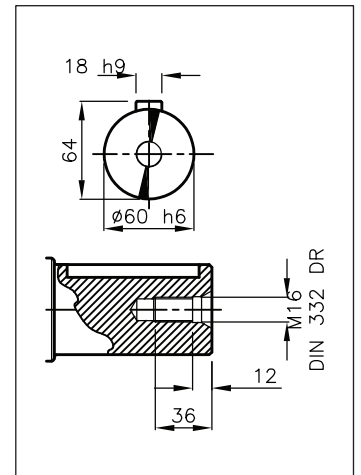
PS 55

	A	D	E	F	F1	F2	F3	F4	V	S	SP	KG
PS 55 P 2S_HS	505	315	80	38	41	10	10	60	M12	9.5	28	61
PS 55 F 2S_HS	505	315	80	38	41	10	10	60	M12	9.5	28	61
PS 55 P 3S_HS	476	305	60	28	31	8	5	50	M10	7.5	22	56
PS 55 F 3S_HS	476	305	60	28	31	8	5	50	M10	7.5	22	56

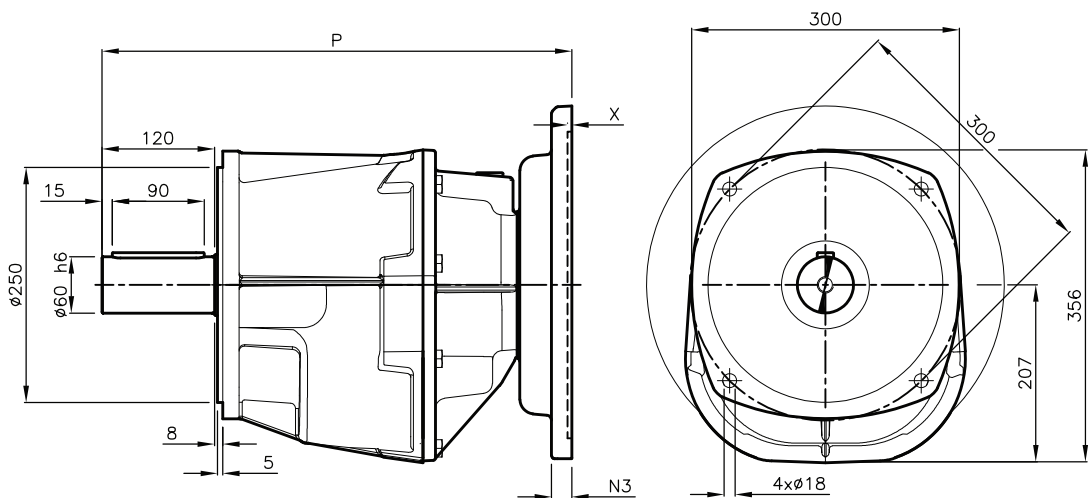
P 2S P 3S



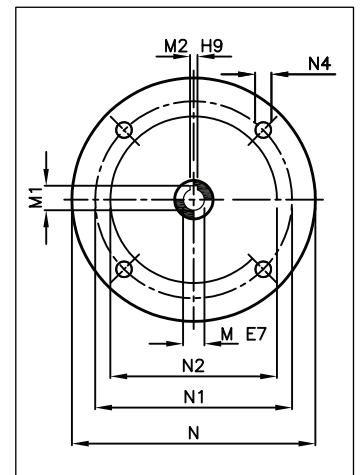
Output



F 2S F 3S



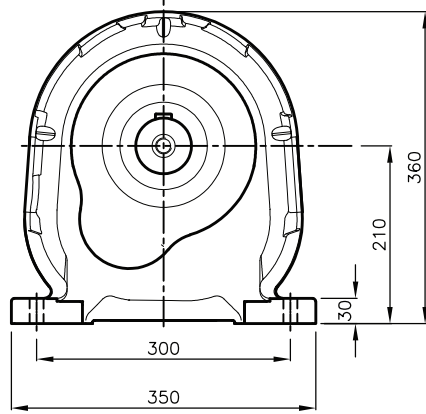
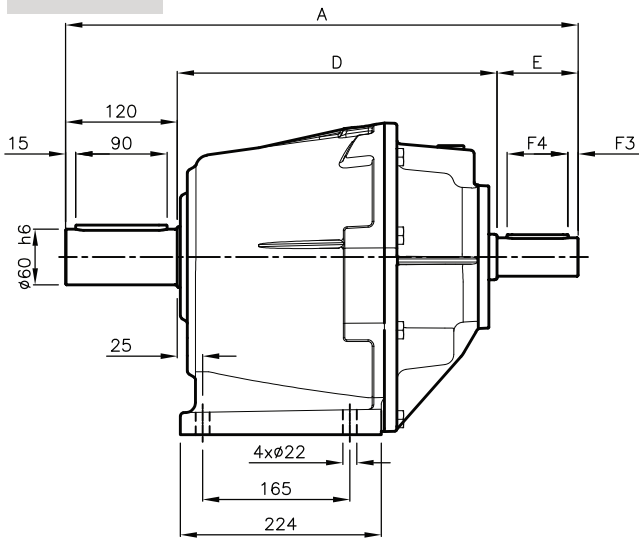
Input



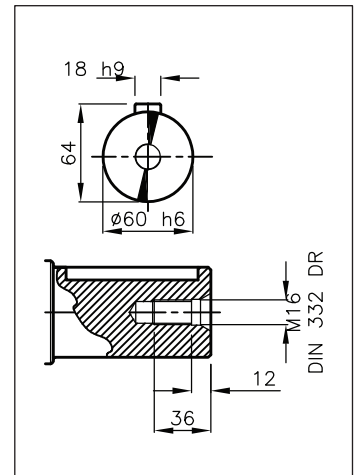
PS 60

	M	M1	M2	N	N1	N2	N3	N4	X	P	F	kg
PS 60 2S_132	38	41.3	10	300	265	230	16	14	5	470	470	91
PS 60 2S_160	42	45.3	12	350	300	250	20.5	18	6	495	495	91
PS 60 2S_180	48	51.8	14	350	300	250	20.5	18	6	495	495	91
PS 60 3S_080	19	21.8	6	200	165	130	-	M10x19	4	457	457	86
PS 60 3S_090	24	27.3	8	200	165	130	-	M10x19	4	457	457	86
PS 60 3S_100	28	31.3	8	250	215	180	-	M12x16	5	457	457	86
PS 60 3S_112	28	31.3	8	250	215	180	-	M12x16	5	457	457	86
PS 60 3S_132	38	41.3	10	300	265	230	16	14	5	477	477	86

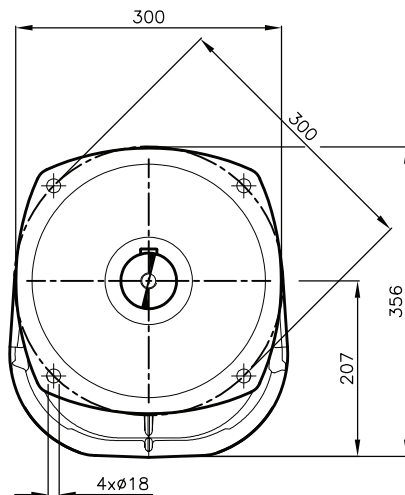
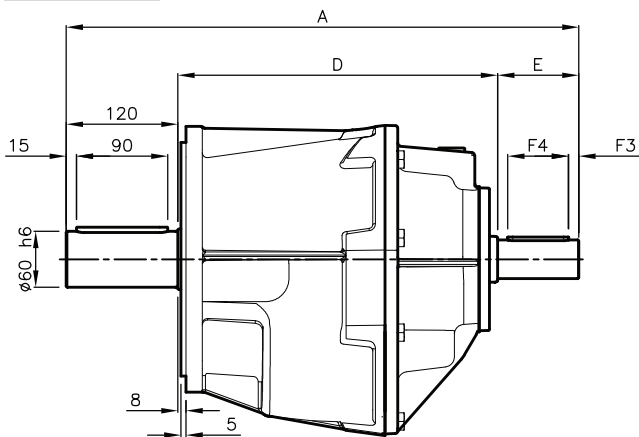
P 2S HS P 3S HS



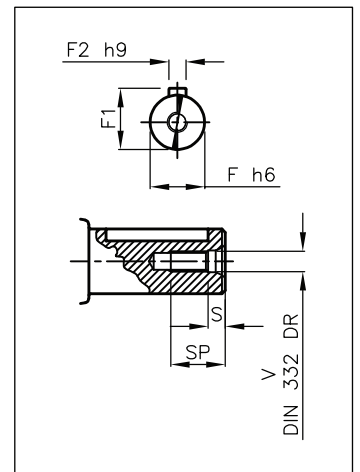
Output



F 2S HS F 3S HS



Input



PS 60

	A	D	E	F	F1	F2	F3	F4	V	S	SP	KG
PS 60 P 2S_HS	575	345	110	42	45	12	10	90	M12	9.5	28	91
PS 60 F 2S_HS	575	345	110	42	45	12	10	90	M12	9.5	28	91
PS 60 P 3S_HS	535	335	80	38	41	10	10	60	M12	9.5	28	86
PS 30 F 3S_HS	535	335	80	38	41	10	10	60	M12	9.5	28	86



24. ABOUT US

Established in 1984, Indosculp is a **IATF 16949** certified company. Based in Ahmednagar, we have 40,000 Sq. Ft State of the Art Manufacturing Facility. Indosculp specializes in the production of In-line Helical gearboxes for industrial, quarry and mining applications.

The PS Series gear units are designed in unibox housing to consume optimal installation space and can operate in harsh environments with minimum downtimes. Strict quality control measures are adopted at each stage of manufacturing and assembly of the gearbox.

Excellence is our number one priority.

We use the latest technologies to optimize our daily production. Indosculp is fully committed to a more sustainable workplace and supports various local initiatives.

All Indosculp employees pay utmost attention to smallest details, to ensure that our customers receive products with unrivalled quality.

NOTES

APPLICATIONS



Oven, Dryer, Fryer



Mixer, Kneader, Crushers



Bagging Machines & Conveyors



Palletizing Machines



Wrapping Machines



Drag Conveyor



Feeding Systems, Washing & Sorting Systems



Overhead Cranes, Gantry Cranes