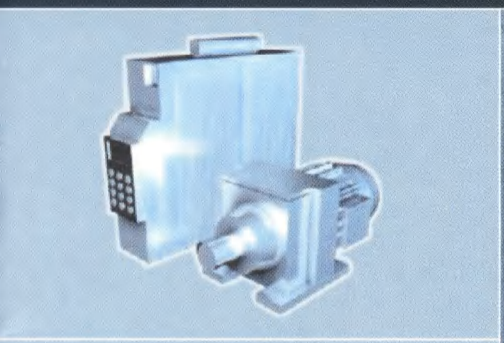
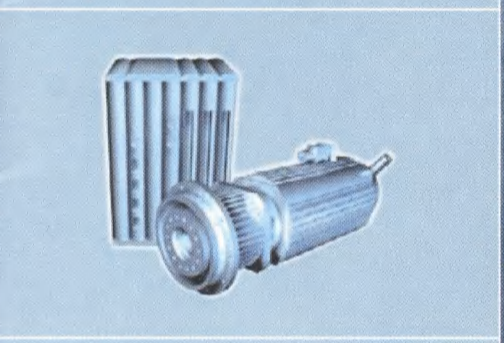
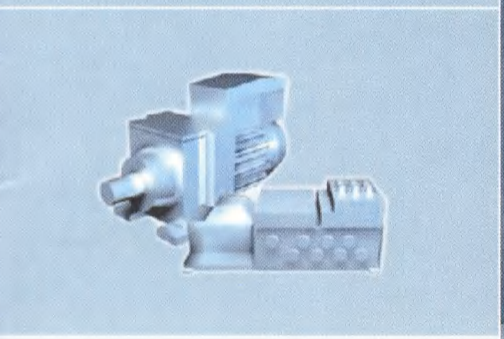
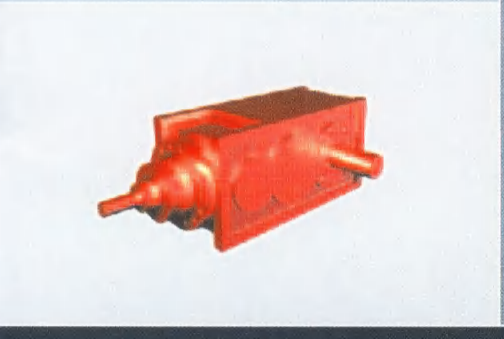
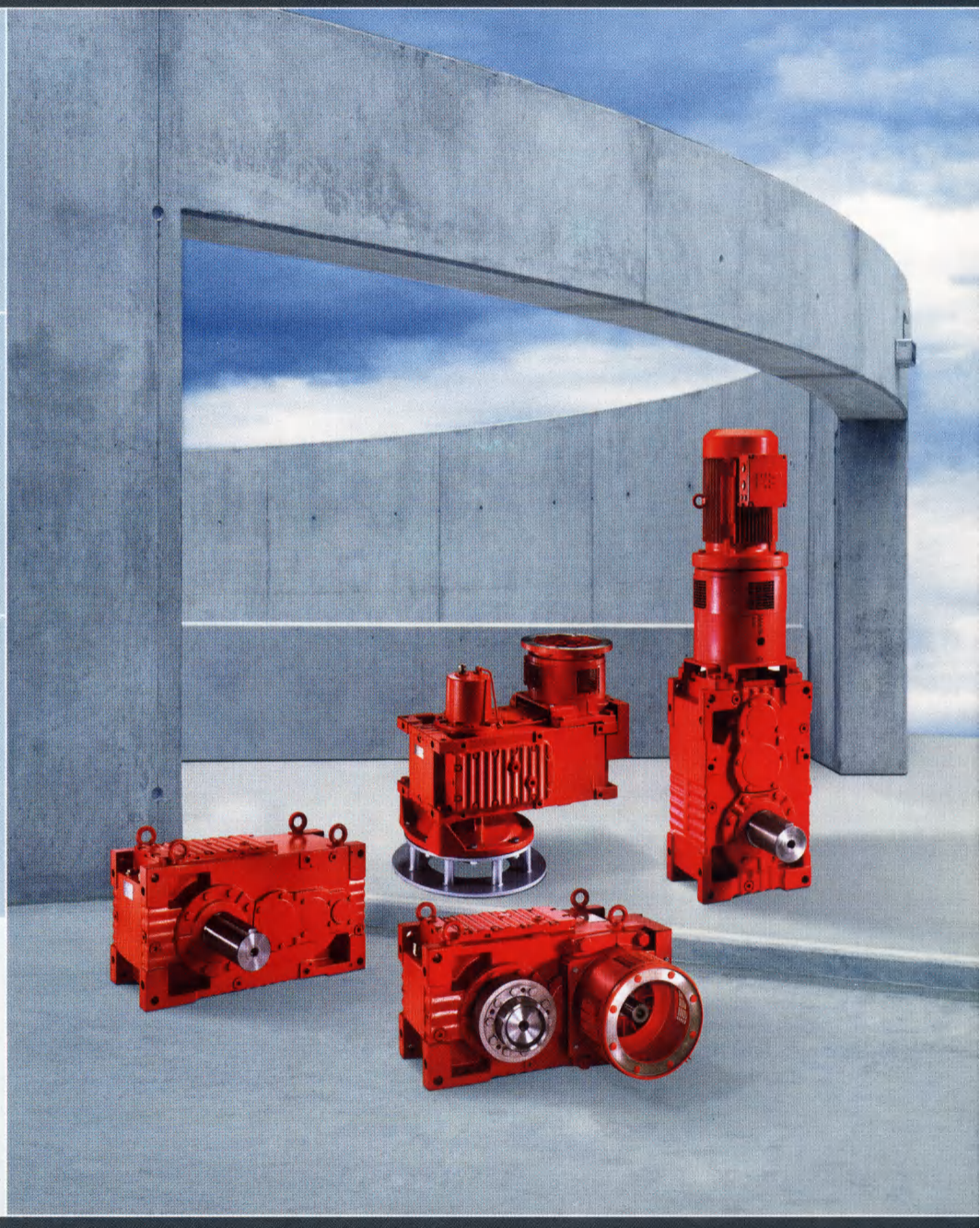
RIBANG
GEARBOX











RIB-EURODRIVE COMPACT HELICAL AND BEVEL-HELICAL GEAR UNITS

RIB - MC系列大型工业用紧凑型斜齿轮和锥齿轮－斜齿轮减速器

版本 08/2004

样 本

为 您 服 务 的 **RIB-EURODRIVE**

企业简介:

浙江日邦机械有限公司是专业从事研发、生产、销售各种齿轮减速机减速器、无级变速机、摆线针轮减速机、蜗轮蜗杆减速机、T型转角齿轮箱、丝杆升降机等系列传动产品，广泛应用于各种包装机械、橡胶塑料机械、印染设备、造纸设备、木工木业机械、建筑建材机械、冶金矿山设备、纺织设备 、环保设备、化工制药设备、搅拌机、混合机、起重机输送机、流水线、水利风力发电设备等传动机械领域，欢迎广大机械设备减速机配套厂家来厂来电咨询订购。

RIBANG
GEAR BOX

SECTION 1/第一章

INFORMATION
资料

Product definition and general information
产品说明和一般资料

SECTION 2/第二章

TECHNICAL DATA
技术数据

Selection tables arranged by type
按型号编排的选择表

Power Ratings P_{N1}	Exact Ratios i_{ex}
额定功率 P_{N1}	精确传动比 i_{ex}
Thermal Ratings P_T	Allowed Rotational Speed n_1
热功率 P_T	许用转速 n_1
Nominal Torque M_{N2}	Continuors allowed external loads F_R
额定转矩 M_{N2}	许用的持续外载荷 F_R

SECTION 3 /第三章

DIMENSIONS
尺寸

Gear Unit Dimensions
减速器尺寸

SECTION 4 /第四章

MODULES
组件

Dimensions and performance figures of
Modular Accessories
模块附件的尺寸和特性图

C
COMPACT series

OPTIMIZED FOR MEDIUM TORQUE RANGE

Competitive Edge

In step with the increasing demands for greater performance and reliability, new **RIB**-EURODRIVE Compact series delivers high power ratings in compact product design. Optimised and modulated product design, advanced produciton technology as well as well planned material solutions are giving the possibility to extract more torque per unit cost from a gear unit designed. **RIB**-EURODRIVE Compact series is designed especially for applications of medium torque range area, making sure the gear unit supplied is right for the job, no second best solution.

C means compact and the series is based on this principle both in product design, in economic efficiency as well as in functional efficiency. Serial production and decentraliaed assembly enable short delivery time and competitive position against competitors. Modulated product structure enables component and design features to be pulled together with ease. These two characters combined with our order based assembly lead to versatile solutions, which can be customized to meet the requirements of your application. The important principle of modulation has also been applied to our new series. Accessories listed in catalogue enable the customer to buy a compelete package-basic gear unit together with auxiliary equipment needed.

Reliability

Reliability springs from excellence in design and manufacturing and is built from a combination of **RIB**-EURODRIVE experience and co-operation. **RIB**-EURODRIVE Compact series incorporates true medium torque range design combined with long bearing design lifetime, optimal seal arrangements and gear unit design. The standard program incorporates horizontal, vertical and erect mounting possibilities for reliable application selection. **RIB**-EURODRIVE's advanced manufacturing program, strict quality standards and rigorous testing competence ensure optimal in-performance life and **RIB**-EURODRIVE Compact series reliability.

User Friendliness

RIB-EURODRIVE Compact like all other **RIB**-EURODRIVE series incorporates design features and extensive product support, which provides the user friendliness demanded by our customers. **RIB**-EURODRIVE's principal of comprehensive supply means product, compatible accessory alternatives and complete documentation providing a full package delivery available to the customer. Easiness of attachment, installation and basic maintenance provides high value added to the customer. Modern industrial design, optimal gear unit sizes and integrated accessories are bringing ablout economic use of space enabling the replacement of competitive gear unit.

中型传动的最佳选择

竞争优势

RIB-EURODRIVE 新的紧凑型产品功率高、结构紧凑，与不断增长的高性能和可靠性的要求同步。产品的优化与模块组合设计、先进的生产工艺以及详尽规划的材料使所设计的减速器单位成本的功率更大。紧凑型产品是专门为中型转矩范围而设计的，确保减速器能很好地完成任务。

C 的意思就是紧凑。这个系统以经济性和功能性两原则为产品设计基础。集中制造和分散组装使供货时间短，是竞争的优越条件。模块结构使元件可与设计特点很容易结合在一起。这两个特点与按订单组装方式相结合，能够提供许多解决方法，满足您的使用要求。模块组合的主要原则也用于我们新的系列之中。列于样本中的附件使用户能购买到齐全的附属装置——基本减速器和所需的辅助设备彼此配套。

可靠性

可靠性既源于出色的设计和制造，也源于 **RIB**-EURODRIVE 的经验与合作单位的结合。紧凑型产品体现了适中的转矩范围与长的轴承寿命，最佳的密封布置和减速器结构相结合。标准方案包括水平、垂直和竖立安装的可能性，以满足可靠性要求的应用选择。**RIB**－EURODRIVE 先进的生产流程，严格的质量标准及精确的检测，确保紧凑型产品有最佳的使用寿命和可靠性。

用户的理想合作伙伴

紧凑型系列产品和 **RIB**-EURODRIVE 其它产品一样，将设计特点与广泛的产品支持溶为一体，为用户提供优良服务。**RIB**－EURODRIVE 全面提供产品、合适的辅助设备和用户用的随机资料。连接、组装和维护容易对用户极为有利。现代的工业设计、优化的减速器尺寸和完整的附件使所需的空间很小，能够代替竞争者的减速器。

General

The selection of the gear unit is a demanding task. The customer supplies the following data: drive specification, duty cycle and operation conditions. To ensure that the gear unit functions according to the specification, please take **RIB** - EURODRIVE's instructions into consideration eg. selection, storage, mounting, lubrication, operation and maintenance of the gear unit. The system of connected rotating parts must be compatible, free from critical speed as well as torsional and other type vibrations within the specified speed range.

Included in normal delivery:

One lip seal on HSS
End key on HSS
Oil filling and drain plug
Oil dipstick
Breather if needed
Lifting possibility

One lip seal on LSS
End key on LSS(solid shaft)
End plate circlip and shrink disk cover (hollow shaft with shrink disk)
End plate circlip and shaft end cover (hollow shaft with keyway)

Excluded in normal delivery:

End plate bolts and shrink disk (hollow shaft with shrink disk)
End plate bolts and parallel key (hollow shaft with keyway)
Gear unit foundation bolts

Gear units will be delivered without oil

Abbreviations used

LSS = Low Speed Shaft
HSS = High Speed Shaft

Definition of icons used in dimensional drawings

Visual inspection opening
目视观察孔


Oil filler
加油口


Breather
通气装置


Oil drainage
放油装置

概述

减速器选型是必需要做的一项工作。用户应提供下列数据:传动技术要求,负载循环周期和运行条件。

为确保减速器的功能符合技术要求,应根据**RIB**的说明考虑减速器的选型、贮藏、安装、润滑、运行和维护。

连接转动部件的系统必须是相容的,在规定的速度范围内不受临界速度以及扭转和其它形式振动的影响。

正常供货时包括:

HSS 的唇型密封
HSS 上的端键
加油和放油塞
油尺
通气装置(如果需要)
吊耳

LSS 上的唇型密封
LSS 上的端键(实心轴)
端板、挡圈和收缩盘盖(带收缩盘的空心轴)
端板、挡圈和轴端盖(带键槽的空心轴)

正常供货时不包括:

端板螺栓和收缩盘 (带收缩盘和空心轴)
端板螺栓和平行键(带键槽的空心轴)
减速器地脚螺栓

减速器交货时无油

所用缩写

LSS = 低速轴
HSS = 高速轴

尺寸图中所用的插图说明


Oil dipstick
油尺


Oil glass
油观察窗

Standards used in dimensional drawings

Keys and keyways: ISO/R773 - 1969
Nominal ratios: ISO/3 - 73
Screw strength grade of Foot Mounting Face fixing: 6. 8

尺寸图中所用的标准

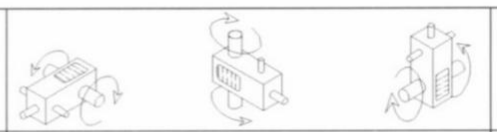
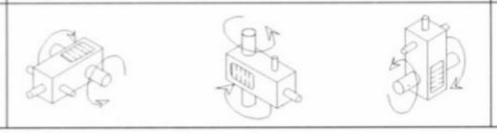
键和键槽:ISO/R773 - 1969
公称传动比:ISO/3 - 73
底脚安装面的螺钉强度等级:6. 8

Direction of rotation for output shaft

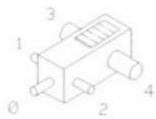
Freewheeling direction when backstop is applied.

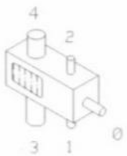
输出轴的旋转方向

用逆止器时单向转动方向。

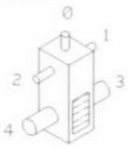
Clockwise		顺时针
Counter - Clockwise		逆时针

Shaft positions

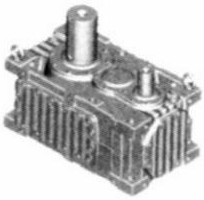
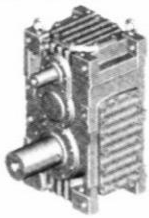
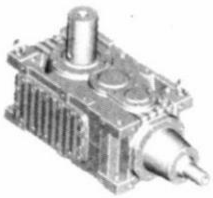


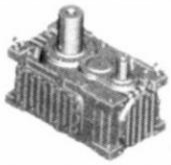
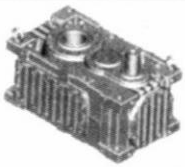


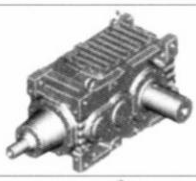
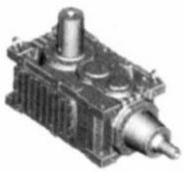
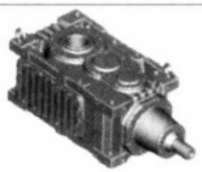
轴的位置

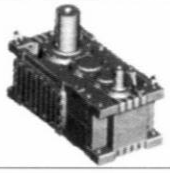


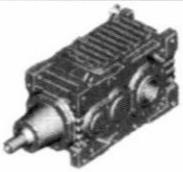
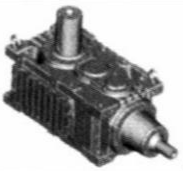
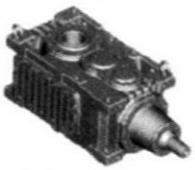
MC 2 PL S F 05

Series 系列	Number of stages 级数	Gear Unit design 减速器结构	LSS type LSS 型式	Attachment 附件	Size 规格
C COMPACT series	2 – 3	Helical Gear Unit (Parallel Shafts) 斜齿轮减速器(平行轴) **PL** Horizontal mounting 水平安装  **PV** Vertical mounting 垂直安装  **PE** Upright mounting 竖立安装 	**S** Solid Shaft 实心轴 	**F** Foot 底脚	02 – 03 – 04 – 05 – 06 – 07 – 08 – 09
		Bevel Helical Gear Unit (Right – Angle Shafts) 锥齿轮 – 斜齿轮减速器(直角轴) **RL** Horizontal mounting 水平安装  **RV** Vertical mounting 垂直安装  **RE** Upright mounting 竖立安装 	**H** Hollow Shaft 空心轴 	**T** Torque Arm 力矩支臂	

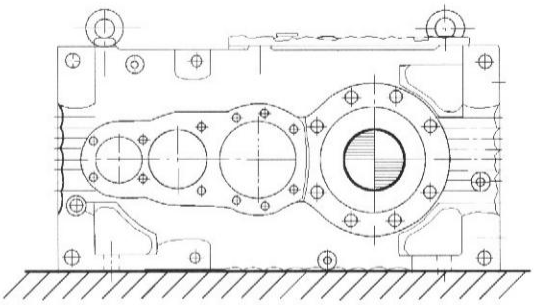
Number of stages 级数			2
Helical Gear Units 斜齿轮减速器	Horizontal LSS 水平 LSS	Solid LSS 实心 LSS	 MC2PLS Technical Data 技术数据 Page/页 2.1- Dimensions 尺寸 3.1-
		Hollow LSS 空心 LSS	 MC2PLH Technical Data 技术数据 Page/页 2.1- Dimensions 尺寸 3.1-
	Vertical LSS 垂直 LSS	Solid LSS 实心 LSS	 MC2PVS Technical Data 技术数据 Page/页 2.1- Dimensions 尺寸 3.9-
		Hollow LSS 空心 LSS	 MC2PVH Technical Data 技术数据 Page/页 2.1- Dimensions 尺寸 3.9-
Ratio range i_N 传动比范围 i_N			7.1...20

Bevel Helical Gear Units 锥齿轮－斜齿轮减速器	Horizontal LSS 水平 LSS	Solid LSS 实心 LSS	 MC2RLS Technical Data 技术数据 Page/页 2.5- Dimensions 尺寸 3.5-
		Hollow LSS 空心 LSS	 MC2RLH Technical Data 技术数据 Page/页 2.5- Dimensions 尺寸 3.5-
	Vertical LSS 垂直 LSS	Solid LSS 实心 LSS	 MC2RVS Technical Data 技术数据 Page/页 2.5- Dimensions 尺寸 3.13-
		Hollow LSS 空心 LSS	 MC2RVH Technical Data 技术数据 Page/页 2.5- Dimensions 尺寸 3.13-
Ratio range i_N 传动比范围 i_N			7.1...12,5

2	3	
 **MC2PES** Technical Data 技术数据 Page/页 2.1- Dimensions 尺寸 3.17- **MC2PEH** Technical Data 技术数据 Page/页 2.1- Dimensions 尺寸 3.17-	 **MC3PLS** Technical Data 技术数据 Page/页 2.1- Dimensions 尺寸 3.3-  **MC3PLH** Technical Data 技术数据 Page/页 2.1- Dimensions 尺寸 3.3-	 **MC3PES** Technical Data 技术数据 Page/页 2.1- Dimensions 尺寸 3.19- **MC3PEH** Technical Data 技术数据 Page/页 2.1- Dimensions 尺寸 3.19-
	 **MC3PVS** Technical Data 技术数据 Page/页 2.1- Dimensions 尺寸 3.11-  **MC3PVH** Technical Data 技术数据 Page/页 2.1- Dimensions 尺寸 3.11-	
7.1...20	**22,5...112**	

 **MC2RES** Technical Data 技术数据 Page/页 2.5- Dimensions 尺寸 3.21- **MC2REH** Technical Data 技术数据 Page/页 2.5- Dimensions 尺寸 3.21-	 **MC3RLS** Technical Data 技术数据 Page/页 2.5- Dimensions 尺寸 3.7-  **MC3RLH** Technical Data 技术数据 Page/页 2.5- Dimensions 尺寸 3.7-	 **MC3RES** Technical Data 技术数据 Page/页 2.5- Dimensions 尺寸 3.23- **MC3REH** Technical Data 技术数据 Page/页 2.5- Dimensions 尺寸 3.23-
	 **MC3RVS** Technical Data 技术数据 Page/页 2.5- Dimensions 尺寸 3.15-  **MC3RVH** Technical Data 技术数据 Page/页 2.5- Dimensions 尺寸 3.15-	
7.1...12,5	**14...112**	

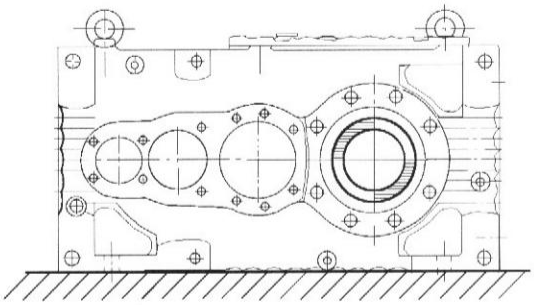
Horizontal LSS 水平 LSS



MC. . LSF

Solid LSS/实心 LSS (S)

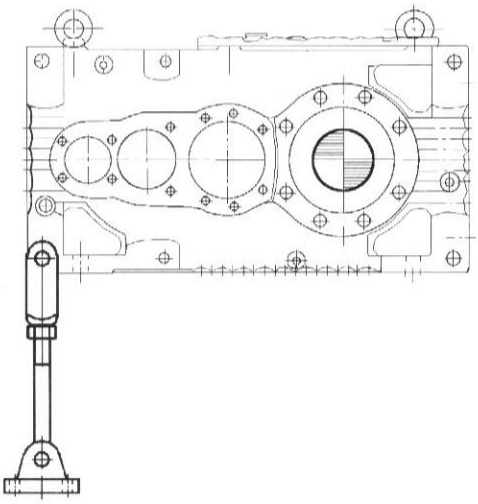
Foot Mounting /底脚安装 (F)



MC. . LHF

Hollow LSS /空心 LSS (H)

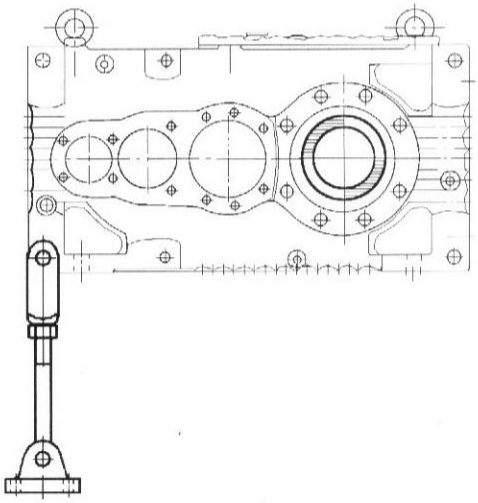
Foot Mounting /底脚安装 (F)



MC. . LST

Solid LSS /实心 LSS (S)

Torque Arm /力矩支臂 (T)

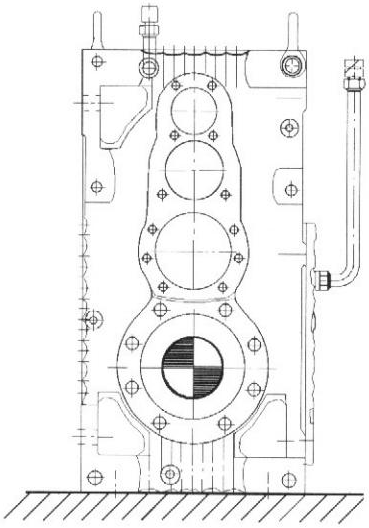


MC. . LHT

Hollow LSS /空心 LSS (H)

Torque Arm /力矩支臂 (T)

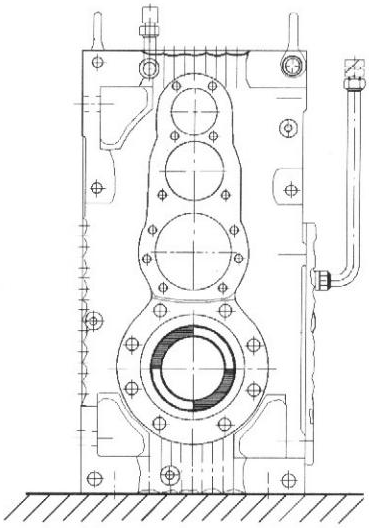
Upright mounting 竖立安装



MC. . ESF

Solid LSS /实心 LSS (S)

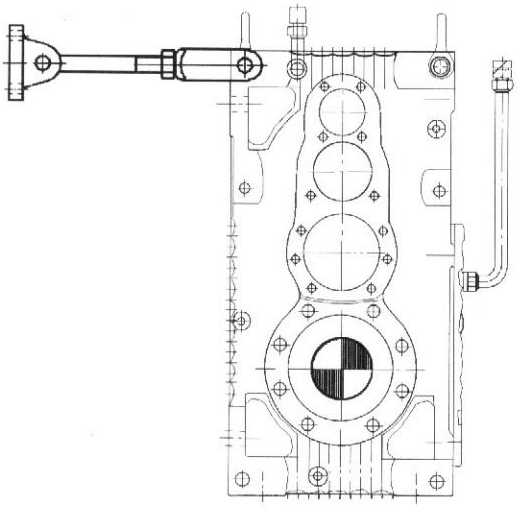
Foot Mounting /安装底脚 (F)



MC. . EHF

Hollow LSS /空心 LSS (H)

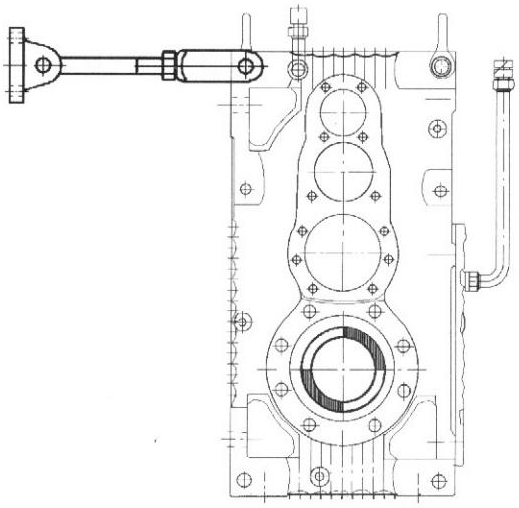
Foot Mounting /安装底脚 (F)



MC. . EST

Solid LSS /实心 LSS (S)

Torque Arm /力矩支臂 (T)



MC. . EHT

Hollow LSS /空心 LSS (H)

Torque Arm /力矩支臂 (T)

1. GEAR UNIT SELECTION

1.1 Ratio

Calculate ratio $i = n_1/n_2$ and choose the nearest nominal ratio i_N shown in rating tables. The exact ratios i_{ex} are found in tables (section 2). Choose the gear unit type in conformity with the ratio i_N.

n_1 = HSS rotation speed (HSS = High speed shaft)
n_2 = LSS rotation speed (LSS = Low speed shaft)

$$(1) \qquad i_{ex} = \frac{n_1}{n_2}$$

1.2 Running Power P_{k1}, P_{k2} and Running Torque M_{K2}

η = Efficiency

double stage	$\eta = 0.97$
triple stage	$\eta = 0.955$

$$(2) \qquad P_{K1} = \frac{P_{K2}}{\eta} \qquad (3) \qquad P_{K1} = \frac{M_{K2} \times n2}{9550 \times \eta}$$

P_{K1}, P_{K2}[kW], M_{K2}[Nm]

1.3 Gear Unit selection by means of F_s

The service factor F_s is determined by the load characteristic of the driving and driven machine. F_s is given in table 1.3.1. Select the size of the Gear Unit from the rating table so that the nominal power rating P_{N1} meets the requirements relative to ratio i_N and input speed n_1(HSS):

$$(4) \qquad P_{K1} \times Fs \leq P_{N1}$$

1.4 Maximum Power P_{Klmax} and maximum Torque M_{K2max}

$$(5) \qquad P_{k1max} \leq \frac{2 \times P_{N1}}{F_F} \qquad (6) \qquad M_{K2max} \leq \frac{2 \times M_{N2}}{F_F}$$

P_{N1} [kW]
M_{N2} [Nm]

Factor F_F is given in table 1.4.1

The Gear Unit can be momentarily overloaded. Single load peak should not exceed 10 seconds period.

1.5 External Loads on Shaft Ends

Check the connections of input (HSS) and output (LSS) shafts and the possible radial and axial loads on shaft ends.

1.6 Reversing Drive

Power ratings P_{N1} and torque ratings M_{N2} given in tables are calculated for constant load direction. When rotation direction changes with full load once per minute, 70% of P_{N1} and M_{N2} can be utilized

1.7 Thermal Rating

The thermal rating P_T is the actual power rating the gear unit can transmit continuously without exceeding the calculated oil temperature +90℃.

$$(7) \qquad P_T = P_{TH} \times f_1 \times f_2 \times f_3 \times f_4$$

f_1 = factor for altitude, see table 1.7.1
f_2 = 1,07 for torque arm mounted gear units and f_2 = 1,0 for others.
f_3 = factor for mounting position, see table 1.7.2
f_4 = 1,10 with pressure lubrication and f_4 = 1,0 with bath and splash lubrications.

Determine the thermal rating P_T of the gear unit in the actual ambient temperature. If $P_{K1} > P_T$, check if external pressure lubrication and cooling unit can be used.

$$(8) \qquad P_{K1} \leq P_T$$

1. 减速器选择

1.1 传动比

计算传动比 $i = n_1/n_2$，选择功率表中相近的公称传动比 i_N。精确传动比列于表中(第 2 章)。选择与传动比 i_N 一致的减速器型号。

n_1 = HSS 转速 (HSS = 高速轴)
n_2 = LSS 转速 (LSS = 低速轴)

$$(1) \qquad i_{ex} = \frac{n_1}{n_2}$$

1.2 运行功率 P_{k1}, P_{k2} 和运行转矩 M_{k2}

η = 效率

二级	$\eta = 0.97$
三级	$\eta = 0.955$

$$(2) \qquad P_{K1} = \frac{P_{K2}}{\eta} \qquad (3) \qquad P_{K1} = \frac{M_{K2} \times n2}{9550 \times \eta}$$

P_{K1}, P_{K2}[kW], M_{K2}[Nm]

1.3 用 Fs 选择减速器

使用系数 Fs 由原动机和从动机的载荷特性来确定。Fs 列于表 1.3.1 中.

从功率表选择减速器的尺寸，使公称功率 P_{N1} 满足传动比 i_N 和输入速度 n_1(HSS)的要求：

$$(4) \qquad P_{K1} \times Fs \leq P_{N1}$$

1.4 最大功率 P_{k1max} 和最大转矩 M_{k2max}

$$(5) \qquad P_{k1max} \leq \frac{2 \times P_{N1}}{F_F} \qquad (6) \qquad M_{K2max} \leq \frac{2 \times M_{N2}}{F_F}$$

P_{N1} [kW]
M_{N2} [Nm]

系数 F_F 在表 1.4.1 中给出。

减速器可以瞬时超载，单项负载峰值不应超过 10 秒。

1.5 轴端外载荷

校核输入(HSS)和输出(LSS)轴的连接及在轴端的可能的径向和轴向载荷。

1.6 逆向传动

列于表中的额定功率 P_{N1} 和额定转矩 M_{N2} 是恒定负载方向的计算值。满载时，转动方向每分钟改变一次能利用 70% 的 P_{N1} 和 M_{N2}。

1.7 热功率

热功率 P_T 是实际功率，减速器连续传动时不超过计算油温 +90℃。

$$(7) \qquad P_T = P_{TH} \times f_1 \times f_2 \times f_3 \times f_4$$

f_1 = 海拔系数，见表 1.7.1
f_2 = 1,07 安装力矩臂的减速器；f_2 = 1,0 其它减速器。
f_3 = 安装位置系数，见表 1.7.2
f_4 = 1,10 压力润滑；f_4 = 1,0 用浸油和飞溅润滑。

在实际环境温度下确定减速器的热功率 P_T。如果 $P_{K1} > P_T$，要用外部压力润滑和冷却装置。

$$(8) \qquad P_{K1} \leq P_T$$

Table/表 1.7.1 Factor for altitude f_1/海拔系数 f_1

	Altitude (meters above sea) up to/ 海拔高				
	0	1000	2000	3000	4000
f_1	1.0	0.95	0.91	0.87	0.83

f_1 intermediate values have to be interpolated.

Table/表 1.7.2 Factor for mounting f_3/安装系数 f_3

		Mounting position/安装位置		
		L	V	E
f_3	Without fan/无风扇	1.0	0.9	0.9
	With Fan/带风扇	1.0	0.95	0.95

f_1 中间值内插。

1.8 Lubrication Method

Check from the rating table the lubrication method of the selected gear unit.

Splash lubrication = Oil level is low, gear teeth and bearings are lubricated by oil splashes.

Bath lubrication = Oil level is so high that gear teeth and bearings are submerged in oil.

1.8 润滑方法

从功率表来检查所选减速器的润滑方法。

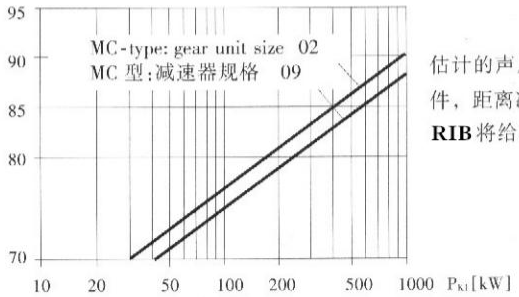
飞溅润滑 = 油位低，轮齿和轴随用内溅油润滑。

浸油润滑 = 油位高，轮齿和轴承浸入油中。

1.9 Noise Level

Estimated sound pressure level $L_P(A)$ applies only in free - field conditons at one (1) meter distance from the gear unit surface. Guaranteed $L_P(A)$ values are given by **RIB** when requested.

1.9 噪声水平



估计的声压水平 $L_P(A)$ 仅适用于开敞条件，距离减速器表面 1 米处。如果需要，**RIB** 将给出 $L_P(A)$ 保证值。

1.10 Final selection

RIB responsible for selecting the right gear unit. The buyer is responsible for giving the correct load cases and technical requirements.

Complete instructions for selecting the gear unit are in Instruction A.

1.10 最后的选择

RIB 对减速器选择的正确性负责，用户对所给的载荷情况和技术要求负责。

减速器选择的完整的说明见说明书 A。

Table/表 1.3.1 Service factor Fs/使用系数 Fs

Driving Machine (Prime Mover)/ 驱动机(原动机)	Load classification of driven maschine / 从动机负载等级	Servicehours per day/每天使用小时		
		< 3	3..10	> 10
Electric Motor, Steam or Gas Turbine Water Turbine, Hydraulic Motor/ 电动机，蒸汽机或汽油机，水轮机，液压马达	Group /类别 U	1.00	1.00	1.25
	Group /类别 M	1.15	1.25	1.50
	Group /类别 C	1.35	1.50	1.75
	Group /类别 H	1.55	1.75	2.00
Multicylinder Combustion Engine / 多汽缸内燃机	Group /类别 U	1.15	1.25	1.50
	Group /类别 M	1.35	1.50	1.75
	Group /类别 C	1.55	1.75	2.00
	Group /类别 H	1.80	2.00	2.25

These service factors are given as a general guide only. for exceptional working conditions, such as extreme shock loads, frequent starts on full load, reversing drive, rapid acceleration or deceleration, function near to critical speed, braking, high external loads on shaft ends and exceptional ambient conditions, reference to **RIB** is recommended.

这些使用系数只是根据一般情况给出的。对特殊工作条件，例如，激烈的冲击载荷，满载时频繁起动、逆向传动、快速加速或减速、接近临界速度运行、制动、在轴端有大的外载荷和异常的环境条件等，请向**RIB**咨询将得到满意的答复。

table /表 1.4.1 Maximum load occurrancy factor F_F/最大载荷出现系数 F_F

maximum load occurrancy /hour 最大载荷出现次数/h	1..5	6..20	21..40	41..80	81..160	> 160
F_F	1.00	1.20	1.30	1.50	1.75	2.00

2. Examples of selection/选择实列

	EXAMPLE /例 1	EXAMPLE /例 2
Driven Machine /从动机	**Belt Conveyor / (Uniformly loaded)**	Mixer(Variable density)
Load Class /载荷等级(表 3)	带式输送机(均匀载荷)	搅拌机(可变浓度)
Rotation Speed n_2 /转速 n_2	Group U/类别 U	Group /类别 M
P_{K2} or/或 M_{K2}	$38min^{-1}$	$65\ min^{-1}$
Load Peaks /载荷峰值(P_{K2max} 或 M_{K2max})	32kW	10 000 Nm
Duration of Service /使用持续时间	50kW	14 000 Nm
Starting Frequency /起动频率	16 h/d, 5700 h/a	24 h/d, 8600 h/a
	1 start per hour/每小时起动一次	seldom /很少
Driving Machine /原动机	AC Motor /交流电动机	AC motor /交流电动机
Nominal Power Rating /rot. speed 额定功率/转速	$37\ kW/1500\ min^{-1}$	$75kW/1500min^{-1}$
Gear unit type /减速器型式	Hollow shaft /空心轴	Solid Shaft /实心轴
Mounting Position/ 安装位置	Right angle, horizontal/ 直角,水平	parallel, vertical / 平行,垂直
Ambient conditions /环境条件		
Temperature /温度	0. . . +30℃	+35℃
Other conditions/其它条件	Very dusty /多灰尘	Moist /潮湿
Selection of gear unit/减速器选择		
$n_1/n_2 = i$	1500/38 = 39,5: 1	1500/65 = 23,1:1
Nearest nominal ratio i_N/ 最近公称传动比 i_N	40: 1	22,5:1
Gear Unit type (efficiency)/ 减速器型号(效率)	MC3RLHT(η = 0. 955)	MC3PVSF (η = 0. 955)
Required F_s(table 1)/要求的 F_s(表 1)	1. 25	1. 5
$P_{K1} = \frac{P_{K2}}{\eta} = \frac{M_{K2} \times n_2}{9550 \times \eta}$	32kW/0, 955 = 33, 5kW	(10 000 × 65)/(9550 × 0, 955 = 71, 3kW
$P_{K1} \times Fs < P_{N1}$	33, 5kW × 1. 25 = 41, 9kW <47, 3kW	71, 3kW × 1. 5 = 107kW <113kW
Selected gear unit /所选的减速器	MC3RLHT03	MC3PVSF05
Selection Check and Application Requirements/选择检查和应用要求		
Gear Unit exact ratio / 减速器精确传动比 i_{ex}	39,66	22,575
Checking of P_{K2max} and M_{K2max} P_{K2max} 和 M_{K2max} 检查	50kW ≤ (2 × 47, 3)/1. 00 = 94, 6kW	14kNm ≤ (2 × 15, 5)/1. 00 = 31kNm
Thermal rating P_T/热功率 P_T	P_T = 33 × 1, 0 × 1, 07 × 1, 0 × 1, 0 = 35. 3kW (by ambient temperature +30℃ / 用环境温度 +30℃)	P_T = 60. 5 × 1, 0 × 1, 0 × 0, 9 × 1, 0 = 54. 4kW (by ambient temperature +35℃ / 用环境温度 +35℃)
Cooling devices /冷却装置	Fan is not needed/ 不需要风扇	Fan is needed/ 要求风扇
Max allowed rotat. speed and Lubrication method / 最大允许转速和润滑方法	n_{1max} = 3000 rpm, enough for splash lubrication/ 飞溅润滑足够	n_{1max} = 2256 rpm, enough for bath lubrication/ 浸油润滑足够
Requirements of very dusty or moist conditions and requirements of mounting position/ 多灰尘或潮湿条件的要求和安装位置要求	Double lip seal with grease nippple on LSS and HSS 在 LSS 和 HSS 上带注油脂咀的双唇密封	One lip seal and V-ring on HSS Double lip seal with grease nippple on LSS HSS 上单唇密封和 V 型圈 LSS 上带注油脂咀的双唇密封
	Use of synthetic PAO oil, See Instruction B/ 用合成油 PAO,见说明书 B	——
Requirements of cold ambient temperature (cold start etc.)/ 冷环境温度的要求(冷起动等)		
Possible accessories/ 可能的附件	Motor flange (with cooling fan), coupling on HSS, torque arm, shrink disk, key on LSS, HSS 上电动机法兰(带冷却风扇),联轴器, LSS 上力矩臂、收缩盘,键。	Motor flange with cooling fan, coupling on HSS, coupling on LSS, mounting flange, expansion tank(essential accessory)/ HSS 上电动机法兰带冷却风扇,联轴器, LSS 上联轴器,安装法兰,膨胀箱(主要附件)

Table 3.

load Classification of the Driven Machine

Group U = uniform load
Group C = considerable shocks
Group M = moderate shocks
Group H = heavy shocks

Application	Group	Application	Group	Application	Group
Agitators and Mixers		**Machine tools**	*	Line Shafts	M
Concrete	M	**Metal mills**		Presses(Bark, Felt, Size, Suction)	C
Liquids (constant density)and Solids	U	Draw Bench Carriage and main drive	M	Pulpers	C
Liquids (variable density)	M	Flattening Machines	*	Reels	C
Blowers and Fans	M	Slitters	H	Rolls(pick up, wire Drive, wire suction)	C
Compressors		Table Conveyors, non-reversing		Washers	M
Centrifugal	U	-group drives	C	Yankee Cylinders (Dryers)	*
Lobe	M	-individual drives	H	**Plastics and Rubber Industry**	
Reciprocating, multi – cylinder	M	Table Conveyors,, reversing	*	Calenders and Grinders	H
Reciprocating, single – cylinder, screw	C	Wire Drawing Machines	C	Extruders (Plastics)	M
Conveyors (uniformly loaded or fed)		Winders	C	Extruders (Rubber)	C
Apron, Flight, Screw	U	**Mills and Drums (rotary type)**		Mixing Mills	*
Belt, Bucket, Chain	U	Ball (mills)	C	Refiners	H
Conveyors (heavy duty not uniformly fed)		Ball(heavy)and Rod(mills)	H	Rubber Mills, 2 on line	H
Apron, Flight, Screw	M	Cement Kilns	C	Rubber Mills, 3 on line	C
Belt, Bucket, Chain	M	Coal Mills	H	Sheeters	H
Live Roll	*	Dryers and Coolers	M	Tubers	*
Shaker, reciprocating	H	Rotary Kilns	C	Warming Mills	C
Cranes and Hoists	*	**Mining Industry**		**Pumps (light)**	
Elevators		Cutter head drives	C	Centrifugal	M
Bucket, heavy load	M	Crushers	H	Reciprocating(multi – cylinder)	M
Bucket, uniform load	U	Screens and Shakers	H	Reciprocating (single – cylinder)	C
Escalators	M	**Oil Industry**	*	Rotary (gear type, lobe, vane)	U
Freight	M	**Paper and Pulp Industry**	*	Screw Pumps	M
Man Lifts	*	Agitators (Chest and Two Shaft)	M	**Sewage Disposal Equipment**	
Food Industry		Debarking Drums and Barkers	H	Aerators	C
Beet Slicer	M	Beaters and Chippers	H	Collectors	M
Crushers and mills	C	Calenders (antifriction bearings)	C	Mixers	M
Drying Drums	M	Cutter	H	Thickeners	M
Sugar cane Crushers	M	Dryer Cylinders(antifriction bearings)	C	Vacuum filters	M
Generators	U	Filters (pressure and vacuum)	M	**Windmills**	*
Lumber industry	*	Jordans	C		

Note: * refer to **RIB**

The values given in Table 3 are based on experience and are valid for applications in general. In the case of a special application or where the loading is not clear, it is recommended that the loads be measured. For applications not included in Table 3, Please refer to **RIB**

表 3：

从动机载荷分类

U 类：均匀载荷
C 类：相当大的冲击载荷
M 类：中等冲击载荷
H 类：强冲击载荷

应用	载荷类别	应用	载荷类别	应用	载荷类别
搅拌机和混料机		**木材工业**	*	低速磨浆机	C
混凝土	M	**机床**	*	划线轴	M
液体(等浓度)和固体	U	**金属加工**		压榨机(树皮,油毡,胶料,真空抽吸)	C
液体(变浓度)	M	拉拔机	M	碎浆机	C
鼓风机和风扇	M	平整机	*	卷纸机	C
压缩机		剪切机	H	辊(吸移,同传动,抄网真空抽吸)	C
离心式	U	**辊道 单向**		洗浆机	M
罗茨式	M	集中驱动	C	杨克式回网(缸)	*
往复式,多汽缸	M	单独驱动	H	**塑料和橡胶工业**	
往复式,单汽缸,螺杆式	C	**辊道 双向**	*	压延和(破碎机)	H
输送机,均匀负载或进料		拉拔机	C	挤出机(塑料)	M
平板式,链板式,螺旋式	U	绕线机	C	挤出机(橡胶)	C
皮带式,料斗式,链条式	U	**碾磨机和滚筒(旋转式)**		混炼机	*
输送机筥负载、进料不均匀		球磨机 (碾磨机)	C	精炼机	H
平板式 链板式,螺旋式	M	球磨机(重型)和棒磨机(碾磨机)	H	橡胶磨 2 联	H
皮带式,料斗式,链条式	M	水泥窑	C	橡胶磨 3 联	C
传动辊式	*	煤碾机	H	压片机	H
摆动式往复	H	干燥机和冷却机	M	制管机	*
起重机和升降机	*	旋转窑	C	热炼机	C
起升机		**采矿工业**		**泵(轻型)**	
斗式重负载	M	铣头驱动	C	离心泵	M
斗式均匀负载	U	破碎机	H	往复泵(多缸)	M
升降机		筛和振动筛	H	往复泵(单缸)	C
自动扶梯	M	**石油工业**	*	旋转泵(凸轮,齿轮叶片)	U
货梯	M	**造纸和纸浆工业**	*	螺旋泵	M
客梯	*	搅拌机(贮浆池和两轴)	M	**污水处理设备**	
食品工业		剥皮鼓和剥皮机	H	通风机	C
甜菜切片机	M	打浆机和削片机	H	除尘器	M
轧碎机和碾磨机	C	压光机(滚动轴承)	C	混合器	M
烘干滚筒	M	切纸机	H	沉降器	M
甘蔗粉碎机	M	烘缸(滚动轴承)	C	真空吸泵过滤器	M
发电机	U	过滤机(压力和真空)	M	**风力发电机**	*

注：*向**RIB**查询

列于表 3 中的值为经验值，一般应用情况是正确的。对特殊应用或负载不清楚的情况建议实测。

表 3 中不包括的应用情况请向**RIB**咨询。

MC2P

Size 规格	n_1 min^{-1}	Nominal Mechanical Power Ratings P_{N1} in kW 额定机械功率 P_{N1}(kW) — Nominal Ratio i_N 公称传动比 i_N									
		7.1	8	9	10	11.2	12.5	14	16	18	20
02	1800	190	171	157	149	137	125	110	91,9	82,4	67,3
	1500	167	151	132	131	115	110	91,7	77,1	69,1	56,4
	1200	143	127	106	111	91,8	89,1	73,5	62,1	55,7	45,4
	1000	126	106	88,8	93,3	76,6	74,4	61,3	52	46,7	38
03	1800	236	220	199	192	176	155	149	130	118	95,2
	1500	208	193	176	169	155	130	131	109	98,7	79,9
	1200	178	165	150	144	133	105	106	87,8	79,5	64,4
	1000	157	146	125	127	112	87,6	88,4	73,5	66,6	54
04	1800	307	284	264	245	227	207	192	175	167	143
	1500	270	250	232	216	200	182	169	151	141	120
	1200	231	214	198	185	171	155	144	121	113	96,2
	1000	203	188	175	162	150	129	122	101	94,5	80,6
05	1800	428	396	368	345	319	289	270	248	226	187
	1500	377	349	324	304	281	243	237	207	189	157
	1200	322	298	277	260	240	196	195	167	152	126
	1000	284	262	242	229	207	164	163	140	127	106
06	1800	514	507	469	395	395	338	338	315	291	237
	1500	452	446	413	348	348	298	298	273	243	198
	1200	387	382	353	298	298	255	254	219	196	160
	1000	341	336	311	262	259	224	212	184	164	134
07	1800	657	629	580	512	500	427	427	389	354	320
	1500	578	554	510	451	441	376	376	343	312	270
	1200	495	474	436	386	377	321	321	293	267	217
	1000	436	417	384	339	332	283	281	256	225	182
08	1800	828	828	765	650	650	541	541	509	473	426
	1500	729	729	673	572	572	476	476	448	417	357
	1200	623	623	576	489	489	407	407	383	346	288
	1000	549	549	507	431	431	358	358	321	289	242
09	1800	1066	1066	1042	846	846	719	719	719	659	601
	1500	938	938	917	745	745	633	633	633	580	504
	1200	802	802	784	637	637	541	541	541	489	405
	1000	706	706	690	561	561	477	477	455	410	339

MC3P

Size	n_1 min^{-1}	22.5	25	28	31.5	35.5	40	45	50	56	63	71	80	90	100	112
02	1800	74,1	61	50,9	49,1	41	43,3	35,6	29,7	28,5	24	22,5	19,1	15,5	16,1	13,1
	1500	62,1	51,1	42,6	41,2	34,4	36,3	29,7	24,9	23,7	20,1	18,8	16	13	13,5	11
	1200	50	41,2	34,4	33	27,7	29,3	23,8	20,1	19	16,2	15,1	12,9	10,5	10,9	8,84
	1000	42	34,5	28,8	27,6	23,2	24,5	19,8	16,9	15,9	13,6	12,6	10,8	8,78	9,17	7,42
03	1800	99	88,2	73	69,9	57,8	58,6	51,1	42,3	40,5	33,5	32,6	27	21,8	21,7	17,5
	1500	82,5	73,9	61,2	58,6	48,5	48,8	42,9	35,5	33,8	28,1	27,1	22,7	18,3	18,2	14,7
	1200	66	59,6	49,3	47	39,1	39,1	34,6	28,6	27	22,7	21,7	18,3	14,8	14,7	11,8
	1000	55	50	41,4	39,1	32,8	32,6	29	24	22,5	19	18,1	15,3	12,4	12,4	9,99
04	1800	118	118	101	94,2	79,2	70,3	70	58,4	55,3	45,8	44,3	36,5	31	30,1	26
	1500	98	98	84,3	79	66,1	58,6	58,6	48,7	46,3	38,2	37,2	30,4	26	25,1	21,8
	1200	78,4	78,4	67,6	63,6	52,9	46,9	46,9	39	37,4	30,6	30	24,4	21	20	17,6
	1000	65,3	65,3	56,4	53,4	44,2	39,1	39,1	32,6	31,3	25,5	25,1	20,3	17,6	16,7	14,8
05	1800	135	135	135	121	109	89,8	82,1	81,9	72,8	64,6	57,8	51,1	42,2	38,8	34,8
	1500	113	113	113	101	91,2	75,3	68,4	68,4	60,7	54,2	48,1	42,9	35,4	32,4	29,2
	1200	90,3	90,3	90,3	80,5	73,5	60,7	54,7	54,7	48,6	43,7	38,5	34,6	28,5	25,9	23,5
	1000	75,2	75,2	75,2	67,1	61,6	50,9	45,6	45,6	40,5	36,6	32,1	29	23,9	21,6	19,8
06	1800	161	161	161	146	142	115	96,1	96,1	87,2	83	69,8	66,2	54,5	53,2	45,3
	1500	134	134	134	122	119	97	80,1	80,1	72,7	69,6	58,1	55,5	45,7	44,3	38
	1200	107	107	107	97,6	95,9	78,4	64,1	64,1	58,1	56,1	46,5	44,8	36,8	35,4	30,6
	1000	89,3	89,3	89,3	81,3	80,4	65,9	53,4	53,4	48,4	47	38,8	37,6	30,9	29,5	25,7
07	1800	219	219	219	197	197	160	131	131	117	116	95,5	94,5	76,3	63,5	59,7
	1500	183	183	183	164	164	134	109	109	97,6	97,3	79,6	79,2	64	53	50,1
	1200	146	146	146	131	131	108	87,2	87,2	78,1	78,1	63,7	63,7	51,6	42,4	40,4
	1000	122	122	122	110	110	90,8	72,7	72,7	65,1	65,1	53,1	53,1	43,2	35,3	34
08	1800	323	323	323	280	260	216	197	187	170	148	138	120	100	92,8	81,7
	1500	284	284	275	246	218	181	165	157	142	124	115	101	84,2	77,4	68,5
	1200	227	227	221	199	175	146	133	126	114	100	92,4	81,1	67,8	61,9	55,2
	1000	189	189	185	166	147	123	110	106	95,3	83,9	77,3	68	56,9	51,6	46,4
09	1800	410	410	410	360	360	296	276	254	233	207	187	167	138	135	112
	1500	361	361	361	317	301	248	230	213	195	174	156	140	115	112	93,6
	1200	309	309	297	271	243	200	184	171	156	140	125	113	91,8	89,7	74,9
	1000	259	259	249	229	203	167	153	144	130	118	104	94,7	76,5	74,8	62,4

Power ratings: The ratings are nominal, service factor Fs = 1.0.
Selection of gear unit: see page 1.11 –
Lubrication: Splash lubrication is used in horizontal solutions.
Bath lubrication is used in vertical and upright solutions.
Cooling : Additional cooling is required, when the mechanical power rating P_{K1} is higher than the thermal rating P_T

功率:功率为额定值,使用系数 Fs = 1.0。减速器选择见 1.11 页
润滑:水平安装用飞溅润滑。垂直安装和竖立安装用浸油润滑。
冷却:如果实际传递的机械功率 P_{K1} 大于热功率需要用人工冷却。

Manufacturer reserves the right to alteration

制造商保留修改的权利

Exact Ratios I_{ex} 精确传动比 I_{ex}

Nominal Ratio i_N 公称传动比 i_N

MC2P

Size 规格	7.1	8	9	10	11.2	12.5	14	16	18	20
02	7,070	8,176	9,175	9,829	11,366	12,314	14,240	15,981	17,880	20,238
03	7,291	8,226	9,280	9,952	11,227	12,697	14,324	16,160	17,913	20,401
04	7,124	8,014	8,958	9,945	11,186	12,723	14,312	15,998	17,115	19,250
05	7,104	7,996	8,871	9,783	11,012	12,522	14,095	15,636	17,236	19,400
06	6,817	7,889	8,853	9,822	11,366	12,036	13,927	15,630	17,588	19,908
07	6,860	7,725	8,677	9,647	10,863	12,194	13,731	15,424	17,664	20,249
08	7,005	7,888	8,958	9,798	11,033	12,488	14,063	15,969	17,763	19,895
09	6,911	7,992	8,969	9,534	11,025	11,767	13,607	15,271	17,012	19,256

MC3P

Size 规格	22.5	25	28	31.5	35.5	40	45	50	56	63	71	80	90	100	112
02	22,303	25,791	28,945	32,314	36,265	38,887	44,968	50,467	56,341	63,231	71,200	79,907	90,446	95,359	107,937
03	22,650	25,552	28,828	32,599	36,778	39,810	44,909	50,667	57,295	64,640	71,618	80,800	92,022	101,822	115,963
04	23,204	26,101	29,176	33,394	37,329	40,276	45,304	50,642	57,962	64,792	72,860	81,444	91,602	97,558	109,725
05	22,575	25,412	28,191	32,528	36,084	40,615	43,547	48,308	55,740	61,835	71,064	78,833	88,733	96,362	108,464
06	22,801	26,385	29,611	32,330	36,284	41,069	45,957	51,576	56,313	63,199	71,100	79,795	90,319	96,735	109,493
07	22,380	25,202	28,310	31,856	35,783	41,020	43,887	49,298	55,473	62,312	68,655	77,119	88,405	99,479	114,036
08	21,695	24,431	27,742	31,139	35,360	39,603	43,631	49,545	55,612	63,150	69,091	78,456	89,891	97,274	108,947
09	21,634	25,017	28,076	30,877	34,652	39,223	44,098	49,491	54,427	61,082	68,034	76,353	86,423	93,938	106,328

MC2P

Nominal Output Torque M_{N2} in kNm 额定输出转矩 M_{N2}(kNm)

Calculated with n_1 = 1000 1/min n_1 = 1000 1/min 的计算值

Nominal Ratio i_N 公称传动比 i_N

Size 规格	7.1	8	9	10	11.2	12.5	14	16	18	20
02	8,23	8,02	7,55	8,49	8,07	8,49	8,09	7,71	7,74	7,13
03	10,6	11,1	10,8	11,7	11,6	10,3	11,7	11	11	10,2
04	13,4	14	14,5	15	15,6	15,2	16,2	15	15	14,4
05	18,7	19,4	19,9	20,7	21,1	19	21,3	20,3	20,3	19
06	21,5	24,5	25,5	23,8	27,3	25	27,3	26,6	26,7	24,8
07	27,7	29,8	30,9	30,3	33,4	31,9	35,7	36,6	36,8	34,2
08	35,6	40,1	42	39,1	44	41,5	46,7	47,4	47,6	44,5
09	45,2	52,3	57,4	49,5	57,3	51,9	60,1	64,3	64,6	60,5

MC3P

Size 规格	22.5	25	28	31.5	35.5	40	45	50	56	63	71	80	90	100	112
02	8,54	8,1	7,61	8,13	7,68	8,7	8,13	7,76	8,15	7,84	8,16	7,91	7,25	7,97	7,31
03	11,4	11,6	10,9	11,6	11	11,8	11,9	11,1	11,8	11,2	11,8	11,3	10,4	11,5	10,6
04	13,8	15,6	15	16,3	15	14,4	16,1	15	16,6	15,1	16,7	15,1	14,7	14,9	14,8
05	15,5	17,4	19,3	19,9	20,3	18,8	18,1	20,1	20,6	20,7	20,8	20,8	19,7	19	19,6
06	18,6	21,5	24,1	24	26,6	24,7	22,4	25,1	24,9	27,1	25,1	27,3	25,4	26,1	25,7
07	24,9	28	31,5	31,8	35,8	34	29,1	32,7	32,9	37	33,2	37,3	34,9	32	35,3
08	37,4	42,1	46,9	47,2	47,4	44,4	44	47,8	48,3	48,3	48,7	48,7	45,6	45,8	46,1
09	51,1	59,1	63,7	64,4	64,3	59,9	61,6	64,9	64,6	65,5	64,7	66	60,3	64,1	60,5

Maximum torque M_{K2max} is 2 x M_{N2}/最大转矩 M_{K2max} 为 2 x M_{N2}

Allowed Rotational Speed n_{1max} in r/min 许用转速 n_{1max} (r/min)

With splash lubrication 用飞溅润滑

Nominal Ratio i_N 公称传动比 i_N

MC2PL

Size 规格	7.1	8	9	10	11.2	12.5	14	16	18	20
02	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
03	2778	2778	2778	2778	2778	2778	2778	2778	2778	2778
04	2546	2546	2546	2546	2546	2546	2546	2546	2546	2546
05	2350	2350	2350	2350	2350	2350	2350	2350	2350	2350
06	2037	2037	2037	2037	2037	2037	2037	2037	2037	2037
07	1910	1910	1910	1910	1910	1910	1910	1910	1910	1910
08	1797	1797	1797	1797	1797	1797	1797	1797	1797	1797
09	1697	1697	1697	1697	1697	1697	1697	1697	1697	1697

MC3PL

Size 规格	22.5	25	28	31.5	35.5	40	45	50	56	63	71	80	90	100	112
02	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
03	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
04	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
05	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
06	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
07	2778	2778	2778	2778	2778	2778	2961	2961	2961	2961	3000	3000	3000	3000	3000
08	2546	2546	2546	2546	2546	2546	2703	2703	2703	2703	3000	3000	3000	3000	3000
09	2350	2350	2350	2350	2350	2350	2480	2480	2480	2480	2976	2976	2976	3000	3000

Size 规格	Allowed Rotational Speed n_{1max} in r / min With splash lubrication															许用转速n_{1max}(r / min) 用浸油润滑
	Nominal Ratio i_N															公称传动比 i_N
MC2PV, MC2PE	7.1	8	9	10	11.2	12.5	14	16	18	20						
02	1585	1585	1585	2018	2018	2408	2408	2408	2637	2637						
03	1463	1463	1463	1836	1836	2221	2221	2221	2414	2414						
04	1315	1315	1315	1674	1674	2027	2027	2027	2140	2140						
05	1216	1216	1216	1534	1534	1860	1860	1860	2012	2012						
06	1098	1098	1098	1433	1433	1679	1679	1679	1847	1847						
07	1025	1025	1025	1313	1313	1575	1575	1575	1758	1758						
08	936	936	936	1195	1195	1445	1445	1445	1575	1575						
09	851	851	851	1075	1075	1266	1266	1266	1381	1381						
MC3PV, MC3PE	22.5	25	28	31.5	35.5	40	45	50	56	63	71	80	90	100	112	
02	2838	2838	2838	2838	2838	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	
03	2553	2553	2553	2553	2553	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	
04	2448	2448	2448	2448	2448	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	
05	2256	2256	2256	2256	2256	2256	3000	3000	3000	3000	3000	3000	3000	3000	3000	
06	2114	2114	2114	2114	2114	2114	3000	3000	3000	3000	3000	3000	3000	3000	3000	
07	1950	1950	1950	1950	1950	1950	2961	2961	2961	2961	3000	3000	3000	3000	3000	
08	1753	1753	1753	1753	1753	1753	2703	2703	2703	2703	3000	3000	3000	3000	3000	
09	1621	1621	1621	1621	1621	1621	2480	2480	2480	2480	2976	2976	2976	3000	3000	

Size 规格	Fan pcs 风扇数	Thermal Ratings P_{TH} in kW Calculated with n_1=1500 1/min															热功率P_{TH} (kW) n_1=1500 1/min的计算值
		Nominal Ratio i_N/ Ambient Air Temperature															公称传动比 i_N/环境温度
		MC2P i_N=7.1...14				i_N=16...20				**MC3P** i_N=22.5...63				i_N=71...112			
		20℃	30℃	40℃	50℃	20℃	30℃	40℃	50℃	20℃	30℃	40℃	50℃	20℃	30℃	40℃	50℃
02	-	49	37	25	12	43	31	19	7	48	39	30	20	44	34	25	16
	1	104	84	65	45	91	71	52	32	90	75	61	46	80	65	50	35
	2	131	108	85	62	115	92	68	45	-	-	-	-	-	-	-	-
03	-	61	46	31	15	54	39	24	8	60	48	37	25	54	43	31	19
	1	129	105	81	56	113	89	64	40	112	93	75	56	99	81	62	44
	2	163	134	106	77	142	114	85	56	-	-	-	-	-	-	-	-
04	-	77	58	39	19	68	49	30	11	74	60	45	31	67	53	38	24
	1	163	132	102	71	143	112	81	51	139	116	93	70	123	100	77	54
	2	206	170	133	97	180	144	107	71	-	-	-	-	-	-	-	-
05	-	88	66	44	22	77	56	34	12	86	69	52	36	78	61	44	28
	1	186	151	116	81	162	128	93	58	160	134	107	81	142	116	89	63
	2	235	193	152	110	205	163	122	81	-	-	-	-	-	-	-	-
06	-	106	80	53	27	94	68	41	15	102	82	63	43	93	73	53	33
	1	226	183	141	99	198	155	113	70	191	159	128	96	170	138	106	75
	2	285	235	185	134	249	199	149	98	-	-	-	-	-	-	-	-
07	-	131	98	66	33	116	83	50	18	125	101	77	53	114	89	65	41
	1	277	225	173	121	243	191	138	86	234	196	157	118	208	169	131	92
	2	351	289	227	165	306	244	182	120	-	-	-	-	-	-	-	-
08	-	162	122	82	41	144	103	63	22	155	125	95	65	141	111	81	51
	1	345	280	215	150	302	237	172	107	290	242	194	146	258	210	162	114
	2	436	359	282	205	380	304	227	150	-	-	-	-	-	-	-	-
09	-	188	142	95	48	167	120	73	26	184	148	113	77	167	131	95	60
	1	400	325	249	174	350	275	200	124	344	287	230	173	305	248	191	135
	2	505	416	327	238	441	352	263	174	-	-	-	-	-	-	-	-

Dimensions/尺寸
MC2PL..3.1-
MC3PL..3.3-

Dimensions/尺寸
MC2PV..3.9-
MC3PV..3.11-

Dimensions/尺寸
MC2PE..3.17-
MC3PE..3.19-

Size 规格	n_1 min^{-1}	Nominal Mechanical Power Ratings P_{N1} in kW 额定机械功率 P_{N1}(kW)												
		MC2R Nominal Ratio i_N						MC3R 公称传动比 i_N						
		7.1	8	9	10	11.2	12.5	14	16	18	20	22.5	25	28
02	1800	144	133	124	107	99,2	93	77,4	77,4	76,3	68,2	66,8	55,7	53,8
	1500	127	117	109	94,1	87,3	81,9	68,1	68,1	64	60	56	46,7	45,1
	1200	108	100	93,6	78,2	74,7	70,1	56,7	56,7	51,5	51,4	45,1	37,6	36,3
	1000	95,5	88,1	82,4	65,5	65,2	61,7	47,4	47,4	43,2	45,2	37,8	31,5	30,3
03	1800	177	166	155	128	123	115	102	102	102	96,7	96,7	80,2	76,4
	1500	156	146	136	107	108	101	85,5	85,5	85,5	85,1	81,2	67,2	63,7
	1200	134	125	117	86	87	86,6	68,7	68,7	68,7	68,7	65,4	54,1	51
	1000	118	110	103	71,9	72,8	73,8	57,4	57,4	57,4	57,4	54,8	45,4	42,6
04	1800	227	212	199	168	158	149	117	117	117	117	117	114	106
	1500	199	187	175	148	139	131	103	103	103	103	103	94,9	88,6
	1200	171	160	150	125	119	112	88,2	88,2	88,2	83,7	83,7	76	71,4
	1000	150	141	132	107	103	98,3	75,5	75,5	75,5	69,7	69,7	63,4	59,9
05	1800	321	301	283	237	223	211	162	162	162	150	150	150	136
	1500	282	265	249	209	197	186	136	136	136	125	125	125	116
	1200	241	226	213	169	168	159	109	109	109	99,8	99,8	99,8	92,6
	1000	212	199	188	142	143	140	90,8	90,8	90,8	83,2	83,2	83,2	77,2
06	1800	425	393	367	306	284	267	202	202	202	184	184	184	173
	1500	374	346	323	269	250	235	168	168	168	153	153	153	144
	1200	320	296	276	229	214	201	135	135	135	123	123	123	115
	1000	282	260	243	198	187	177	112	112	112	102	102	102	95,9
07	1800	515	483	451	375	353	331	269	269	269	232	232	232	202
	1500	454	425	397	331	311	292	224	224	224	204	204	204	178
	1200	388	364	340	280	266	249	179	179	179	165	165	165	152
	1000	342	320	299	242	231	220	149	149	149	137	137	137	128
08	1800	684	640	595	506	476	444	340	340	340	294	294	294	255
	1500	602	564	523	446	419	391	300	300	300	259	259	259	225
	1200	515	482	448	381	359	334	256	256	256	221	221	221	192
	1000	453	424	394	330	314	294	223	223	223	195	195	195	169
09	1800	953	879	822	706	654	613	412	412	412	379	379	379	336
	1500	839	774	723	621	576	540	363	363	363	334	334	334	296
	1200	718	662	619	531	492	462	310	310	310	286	286	286	253
	1000	632	583	544	463	433	407	273	273	273	251	251	251	223

MC3R		31.5	35.5	40	45	50	56	63	71	80	90	100	112
02	1800	44,8	36,4	32,8	33	31,7	26,6	21,6	22,6	19,2	15,6	12,3	12,3
	1500	37,6	30,5	27,5	27,7	26,5	22,3	18,1	18,9	16,1	13,1	10,3	10,3
	1200	30,3	24,6	22,1	22,3	21,2	18	14,6	15,1	13	10,5	8,38	8,37
	1000	25,4	20,6	18,5	18,7	17,7	15,1	12,2	12,6	10,9	8,82	7,07	7,05
03	1800	63,5	60,4	56,7	47,8	38,6	37,7	30,4	30,2	27,7	22,4	18,2	18,2
	1500	53,2	50,6	47,3	40,1	32,4	31,6	25,5	25,2	23,3	18,8	15,3	15,3
	1200	42,9	40,8	37,9	32,3	26,1	25,5	20,6	20,2	18,8	15,1	12,3	12,3
	1000	36	34,2	31,6	27,1	21,9	21,4	17,2	16,9	15,7	12,7	10,3	10,4
04	1800	89,2	75,2	76,4	66,8	55,8	49,6	44,5	38,3	36,9	32,7	18,5	18,7
	1500	74,4	62,9	64	55,8	46,8	41,5	37,3	31,9	30,8	27,4	15,5	15,7
	1200	59,6	50,6	51,5	44,7	37,7	33,4	30,1	25,6	24,7	22,1	12,6	12,7
	1000	49,7	42,4	43,1	37,3	31,6	28	25,2	21,3	20,5	18,6	10,6	10,7
05	1800	121	107	98,7	91,2	75,3	70,3	59,3	44,4	44,4	42,9	27,9	28,3
	1500	101	88,9	82,3	76,4	63,1	58,8	49,7	37	37	36	23,5	23,8
	1200	81,8	71,1	65,8	61,6	50,9	47,3	40,1	29,6	29,6	29	19	19,3
	1000	68,5	59,3	54,8	51,7	42,6	39,6	33,6	24,6	24,6	24,3	16	16,2
06	1800	159	132	123	119	97	86,2	77,2	62,9	62,9	56	46,4	45,7
	1500	133	110	103	99,7	81,5	72,1	64,9	52,4	52,4	47,1	39	38,4
	1200	107	87,8	82,1	80,4	65,9	58	52,5	41,9	41,9	38	31,5	30,9
	1000	89,9	73,2	68,5	67,4	55,4	48,6	44	35	35	31,9	26,4	26
07	1800	202	172	157	157	135	114	108	71,2	71,2	71,2	60,2	60,2
	1500	178	143	133	133	113	95,1	90,3	59,4	59,4	59,4	50,2	50,2
	1200	150	115	107	107	91,3	76,4	72,8	47,5	47,5	47,5	40,2	40,2
	1000	126	95,5	88,8	88,8	76,5	63,9	61	39,6	39,6	39,6	33,5	33,5
08	1800	255	223	195	195	173	160	137	104	104	98,6	67,7	68,6
	1500	225	196	172	172	145	138	115	86,7	86,7	82,8	56,9	57,6
	1200	187	159	147	140	117	111	93	69,3	69,3	66,7	46	46,5
	1000	157	133	129	118	98,4	93,2	77,9	57,8	57,8	55,9	38,6	39,1
09	1800	336	288	256	256	243	207	190	149	149	137	73,1	74,1
	1500	296	253	226	226	203	177	159	124	124	115	61,4	62,2
	1200	253	212	193	193	164	142	128	99,3	99,3	91,9	49,6	50,3
	1000	223	177	170	167	137	119	107	82,8	82,8	76,6	41,7	42,2

Power ratings: The ratings are nominal, service factor Fs = 1.0.
Selection of gear unit: see page 1.11 –
Lubrication: Splash lubrication is used in horizontal solutions.
Bath lubrication is used in vertical and upright solutions.
Cooling : Additional cooling is required, when the mechanical power rating P_{K1} is higher than the thermal rating P_T

功率:功率为额定值,使用系数 Fs = 1.0。减速器选择见 1.11 页
润滑:水平安装用飞溅润滑。垂直安装和竖立安装用浸油润滑。
冷却:如果实际传递的机械功率 P_{K1} 大于热功率需要用人工冷却。

Manufacturer reserves the right to alteration

制造商保留修改的权利

Exact Ratios I_{ex} 精确传动比 I_{ex}

Size 规格	MC2R Nominal Ratio i_N 7.1	8	9	10	11.2	12.5	MC3R 公称传动比 i_N 14	16	18	20	22.5	25	28
02	6,961	8,050	9,034	9,605	11,107	12,465	14,611	16,896	18,962	20,312	23,489	26,361	29,430
03	7,124	8,036	9,067	10,000	11,281	12,727	15,069	16,999	19,179	20,568	23,203	26,178	29,602
04	7,293	8,203	9,170	10,147	11,414	12,759	14,757	16,600	18,555	20,600	23,171	25,901	29,646
05	7,096	7,987	8,861	9,873	11,114	12,329	14,681	16,526	18,333	20,217	22,758	25,246	29,130
06	6,739	7,798	8,752	9,638	11,152	12,516	14,089	16,303	18,297	20,299	23,489	26,361	28,782
07	6,835	7,697	8,646	9,736	10,963	12,315	14,177	15,965	17,933	19,937	22,450	25,218	28,377
08	6,946	7,821	8,882	9,736	10,963	12,449	14,477	16,302	18,512	20,249	22,802	25,892	29,063
09	6,852	7,924	8,893	9,605	11,107	12,465	14,282	16,516	18,536	19,703	22,784	25,570	28,121

MC3R	31.5	35.5	40	45	50	56	63	71	80	90	100	112
02	33,028	37,384	40,296	45,224	50,488	56,661	64,135	70,968	79,647	90,152	97,346	110,185
03	33,397	35,077	39,666	44,751	50,966	57,295	65,252	69,861	78,817	89,764	97,527	111,072
04	33,139	34,627	39,632	44,302	49,827	55,993	62,976	68,901	77,019	86,625	93,184	104,806
05	32,315	33,829	39,033	43,301	48,739	55,438	62,400	69,916	77,560	87,300	93,838	105,622
06	32,302	35,533	38,796	43,540	49,283	55,306	62,600	68,956	77,388	87,595	95,757	108,387
07	31,876	33,791	38,024	42,712	48,963	53,983	61,883	70,765	79,490	91,123	96,173	110,247
08	33,002	34,901	39,175	44,485	49,823	56,617	63,411	70,393	79,934	89,526	96,711	108,316
09	31,559	34,467	37,904	42,539	48,150	54,720	61,937	68,215	76,556	86,653	94,514	106,979

Nominal Output Torque M_{N2} in kNW 额定输出转矩 M_{N2}(kW)

Calculated with n_1 = 1000 1/min n_1 = 1000 1/min 的计算值

Size 规格	MC2R Nominal Ratio i_N 7.1	8	9	10	11.2	12.5	MC3R 公称传动比 i_N 14	16	18	20	22.5	25	28
02	6,16	6,57	6,89	5,82	6,71	7,12	6,32	7,3	7,47	8,37	81	7,58	8,12
03	7,76	8,2	8,63	6,66	7,61	8,7	7,9	8,91	10	10,8	11,6	10,8	11,5
04	10,1	10,7	11,2	10,1	10,9	11,6	10,2	11,4	12,8	13,1	14,7	15	16,2
05	14	14,7	15,4	13	14,8	16	12,2	13,7	15,2	15,3	17,3	19,2	20,5
06	17,6	18,8	19,7	17,7	19,3	20,5	14,4	16,7	18,7	18,9	21,9	24,5	25,2
07	21,6	22,8	23,9	21,9	23,5	25	19,3	21,8	24,4	25	28,1	31,6	33,1
08	29,2	30,7	32,4	29,7	31,9	33,9	29,5	33,2	37,7	36	40,5	46	44,8
09	40,1	42,8	44,9	41,2	44,6	46,9	35,6	41,2	46,2	45,2	52,2	58,6	57,1

MC3R	31.5	35.5	40	45	50	56	63	71	80	90	100	112
02	7,66	7,03	6,8	7,7	8,14	7,81	7,16	8,16	7,91	7,26	6,27	7,09
03	11	10,9	11,4	11,1	10,2	11,2	10,3	10,7	11,3	10,4	9,19	10,5
04	15	13,4	15,6	15,1	14,4	14,3	14,5	13,4	14,4	14,7	8,97	10,2
05	20,2	18,3	19,5	20,4	19	20	19,1	15,7	17,4	19,4	13,7	15,6
06	26,5	23,7	24,2	26,8	24,9	24,5	25,1	22	24,7	25,4	23,1	25,7
07	36,6	29,4	30,8	34,6	34,2	31,5	34,4	25,5	28,7	32,9	29,4	33,6
08	47,3	42,2	46,2	47,7	44,7	48,1	45,1	37,1	42,1	45,7	34,1	38,6
09	64	55,8	58,7	64,7	60,2	59,4	60,3	51,5	57,8	60,5	35,9	41,2

Maximum torque M_{K2max} is 2 x M_{N2}/最大转矩 M_{K2max} 为 2 x M_{N2}

Allowed Rotational Speed $n1_{max}$ in r/min 许用转速 $n1_{max}$ (r/min)

With splash lubrication 用飞溅润滑

Size 规格	MC2RL Nominal Ratio i_N 7.1	8	9	10	11.2	12.5	MC3RL 公称传动比 i_N 14	16	18	20	22.5	25	28
02	2680	2680	2680	2680	2680	2680	3000	3000	3000	3000	3000	3000	3000
03	2474	2474	2474	2474	2474	2474	3000	3000	3000	3000	3000	3000	3000
04	2297	2297	2297	2297	2297	2297	3000	3000	3000	3000	3000	3000	3000
05	2144	2144	2144	2144	2144	2144	2924	2924	2924	2924	2924	2924	2924
06	2010	2010	2010	2010	2010	2010	2680	2680	2680	2680	2680	2680	2680
07	1859	1859	1859	1892	1892	1892	2474	2474	2474	2474	2474	2474	2474
08	1693	1693	1693	1693	1693	1693	2297	2297	2297	2297	2297	2297	2297
09	1547	1547	1547	1584	1584	1584	2144	2144	2144	2144	2144	2144	2144

MC3RL	31.5	35.5	40	45	50	56	63	71	80	90	100	112
02	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
03	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
04	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
05	2924	2924	2924	2924	2924	3000	3000	3000	3000	3000	3000	3000
06	2680	2680	2680	2680	2680	3000	3000	3000	3000	3000	3000	3000
07	2474	2474	2474	2474	2474	2967	2967	3000	3000	3000	3000	3000
08	2297	2297	2297	2297	2297	2715	2715	3000	3000	3000	3000	3000
09	2144	2144	2144	2144	2144	2467	2467	2907	2907	2907	3000	3000

Size 规格	Allowed Rotational Speed n_{1max} in r / min With bath lubrication 许用转速n_{1max}(r / min) 用浸油润滑												
MC2RV, MC2RE	Nominal Ratio i_N 公称传动比 i_N						MC3RV, MC3RE						
	7.1	8	9	10	11.2	12.5	14	16	18	20	22.5	25	28
02	1568	1568	1568	2131	2131	2131	2652	2652	2652	2652	2652	2652	2652
03	1451	1451	1451	2033	2033	2033	2463	2463	2463	2463	2463	2463	2463
04	1319	1319	1319	1814	1814	1814	2366	2366	2366	2366	2366	2366	2366
05	1189	1189	1189	1631	1631	1631	2100	2100	2100	2100	2100	2100	2100
06	1047	1047	1047	1480	1480	1480	1873	1873	1873	1873	1873	1873	1873
07	929	929	929	1298	1298	1298	1785	1785	1785	1785	1785	1785	1785
08	872	872	872	1221	1221	1221	1599	1599	1599	1599	1599	1599	1599
09	773	773	773	1084	1084	1084	1447	1447	1447	1447	1447	1447	1447

MC3RV, MC3RE	31.5	35.5	40	45	50	56	63	71	80	90	100	112
02	2652	2652	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
03	2463	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
04	2366	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
05	2100	2799	2799	2799	2799	3000	3000	3000	3000	3000	3000	3000
06	1873	2491	2491	2491	2491	3000	3000	3000	3000	3000	3000	3000
07	1785	2395	2395	2395	2395	2967	2967	3000	3000	3000	3000	3000
08	1599	2141	2141	2141	2141	2715	2715	3000	3000	3000	3000	3000
09	1447	1924	1924	1924	1924	2467	2467	2907	2907	2907	3000	3000

Size 规格	Fan pcs 风扇数	Thermal Ratings P_{TH} in kW Calculated with n_1=1500 1/min 热功率P_{TH}(kW) n_1=1500 1/min的计算值											
		Nominal Ratio i_N/ Ambient Air Temperature 公称传动比 i_N/环境温度											
		MC2R i_N=7.1...12.5				MC3R i_N=14...63				i_N=71...112			
		20℃	30℃	40℃	50℃	20℃	30℃	40℃	50℃	20℃	30℃	40℃	50℃
02	-	34	23	14	*)	37	27	18	9	36	26	17	8
	1	76	55	33	11	75	61	46	32	69	55	40	26
03	-	42	29	18	7	44	33	22	10	43	32	21	9
	1	92	66	40	14	91	73	56	38	84	66	48	31
04	-	52	35	22	9	55	41	27	13	53	39	25	11
	1	114	82	49	17	112	91	69	47	103	82	60	38
05	-	57	40	27	11	62	46	30	14	60	44	29	13
	1	129	92	56	19	127	102	78	53	116	92	67	43
06	-	66	48	32	14	74	55	36	17	72	53	34	15
	1	154	111	67	23	152	123	93	64	139	110	81	52
07	-	80	57	38	17	90	67	44	21	87	64	42	19
	1	187	134	81	28	184	149	113	78	169	134	98	63
08	-	95	67	42	21	110	82	54	26	107	79	51	23
	1	231	165	100	34	227	183	139	96	208	165	121	77
09	-	109	76	49	23	127	95	62	30	124	91	59	26
	1	266	190	115	39	261	211	161	110	240	190	139	89

*)Cooling needed/需要冷却

Dimensions/尺寸
MC2RL..3.5-
MC3RL..3.7-

Dimensions/尺寸
MC2RV..3.13-
MC3RV..3.15-

Dimensions/尺寸
MC2RE..3.21-
MC3RE..3.23-

Continuous allowed External Loads F_R 许用的持续外载荷 F_R

SOLID SHAFT (LSS)

1. Determining the allowed radial force F_R

$$F_R = \frac{F_{RN}}{F_S} \cdot K_Y$$

F_R = the allowed actual radial force,

F_{RN} = the allowed nominal radial force in the middle of the shaft end, calculated with service factor F_S = 1.0

F_S = service factor (see Gear Unit selection , page 1.11)

K_Y = the effect of the radial force location.

2. Radial external forces for Solid (LSS)

External radial forces can be to any direction. F_{RN} in the table shows the allowed radial force to the most unfavorable direction on the LSS End.

Table 1: Allowed nominal radial forces F_{RN} when axial force F_A = 0 kN
表 1:轴向力 F_A = 0 kN 时,许用额定径向力 F_{RN}

Gear unit size 减速器规格	F_{RN} in the middle of the LSS end [kN] 低速轴端中点的 F_{RN}[kN]			
	LSS speed /低速轴速度 n_2 [1/min]			
	≤17	≤30	≤60	≤90
02	34	29	27	24
03	46	39	33	32
04	53	45	39	38
05	62	54	47	45
06	68	59	51	43
07	79	68	60	56
08	100	85	75	72
09	120	115	91	86

High speed shaft (HSS) end

Gear units are dimensioned to take radial forces in the middle of the HSS end . No axial forces F_A are permitted

V-belt pulley pitch diameter must be greater than 6 times the shaft end diameter.

实心轴 (LSS)

1. 许用径向力 F_R 的确定

F_R = 实际许用径向力

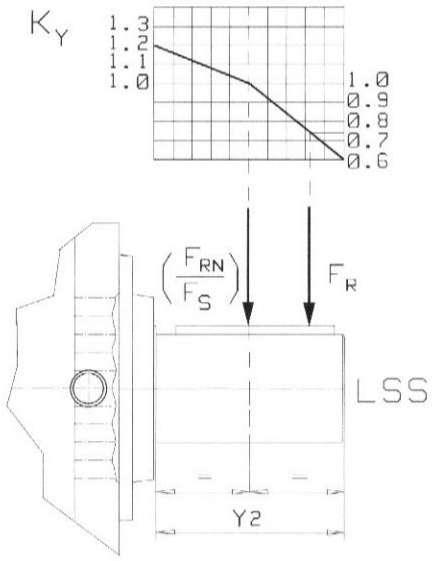
F_{RN} = 轴端中点许用额定径向力,使用系数 F_S = 1.0 计算值

F_S = 使用系数(见减速器选择,1.11 页)

K_Y = 径向力位置的影响系数

2. 实心轴(LSS)的径向外力

径向外力可以为任意方向。表中所示的 F_{RN} 是低速轴端最不利方向的许用径向力。



Picture 1: The effect of the radial force location
图 1: 径向力位置的影响

高速轴(HSS)端

假定径向力作用在高速轴的中点,无轴向力 F_A 来确定减速器尺寸。

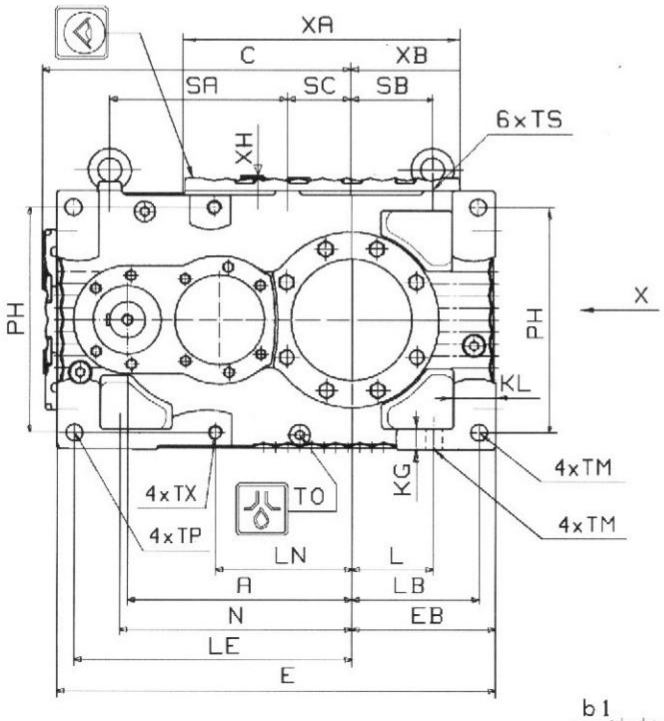
V 型带轮节圆直径必须大于轴端直径的 6 倍。

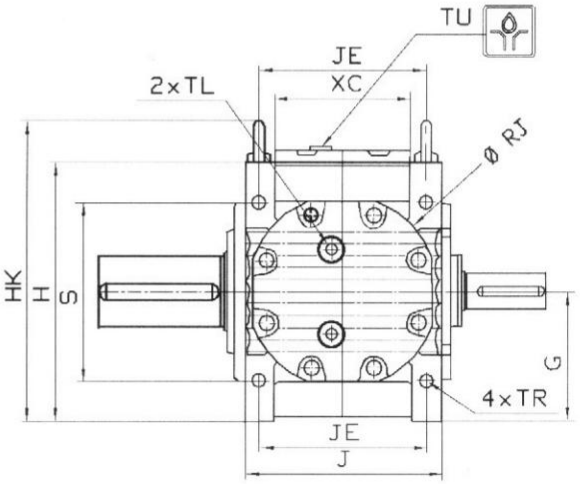
Gear Unit Dimensions

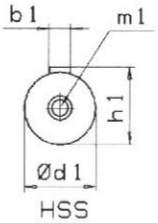
减速器尺寸

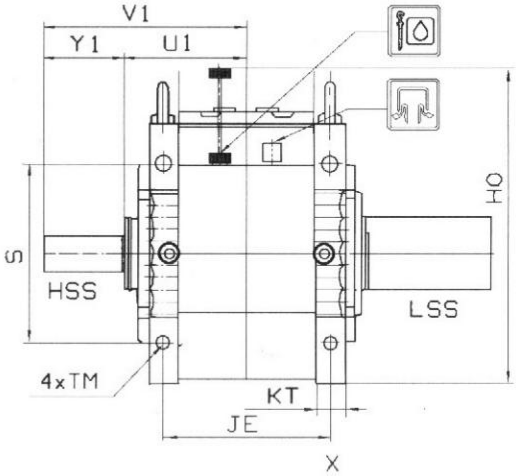
2-stage Helical Gear Unit
Horizontal mounting

2 级斜齿轮减速器
水平安装









Technical Data Page 2. 1-
技术数据 2. 1 页
See LSS types, next Page
LSS 型号见下页

Illustrations show examples only and are not strictly binding.
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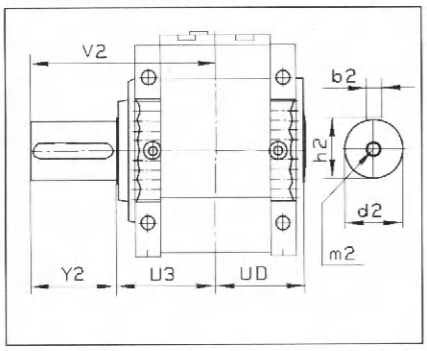
插图仅仅作为例子，不是严格的装配关系。
重量和油量仅是指导值。

Gear Unit Dimensions 减速器尺寸

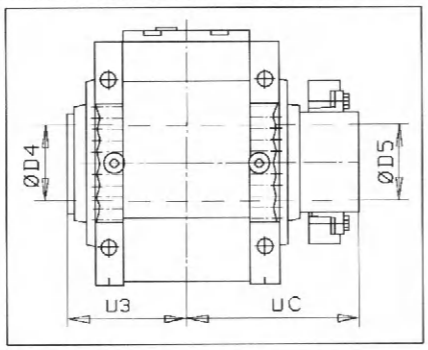
size 规格	Housing Dimensions in mm 箱体尺寸(mm) A	C	E	EB h11	G h11	H	HK	HO	J h11	JE	KG	KL	KT	L	LB	LE	LN	N	PH	ØRJ	S	SA	SB	SC
02	280	400	574	195	160	320	382	380	260	212	28	68	45	98	170	354	175	282	270	240	206	206	114	96
03	310	432	618	207	180	360	422	445	274	228	28	68	45	110	182	389	207	314	310	239	246	246	122	84
04	340	471	677	229	200	400	462	510	314	260	30	71	50	122	201	420	233	341	344	276	260	256	147	114
05	374	514	731	240	215	430	500	565	329	279	34	71	50	136	212	463	228	387	374	320	296	296	136	106
06	409	565	812	270	235	470	540	605	356	292	40	88	64	141	235	507	256	413	400	322	308	308	141	132
07	445	616	885	295	265	530	620	695	380	316	40	91	64	150	260	555	285	445	454	346	350	350	150	112
08	490	685	981	322	300	600	690	760	431	353	52	103	78	174	280	617	318.5	511	516	366	406	406	174	115
09	540	742	1049	335	335	670	779	870	451	373	52	103	78	187	293	672	373.5	566	586	392	476	476	187	100

size 规格	Housing Dimensions in mm 箱体尺寸(mm) TU	TM	TO	TP H9	TR=TX	TS	XA	XB	XC	XH	HSS Dimensions in mm HSS 尺寸(mm) U1	Y1	V1	Ød1	b1	h1	m1	Weight 重量 kg	Oil Capacity 油量 l
02	R1	24	R3/4	24	M20x35	M16x32	355	135	182	18	170	120	290	48k6	14h9	51.5	M16	201	9
03	R1	24	R3/4	24	M20x35	M16x32	384	147	196	18	177	120	297	50k6	14h9	53.5	M16	256	12
04	R1	28	R3/4	28	M24x42	M16x32	430	168	211	22	197	130	327	55m6	16h9	59	M20	353	16
05	R1	28	R3/4	28	M24x42	M20x35	460	182	226	22	205	135	340	60m6	18h9	64	M20	455	28
06	R1	33	R1	33	M30x53	M20x35	525	195	248	22	218	140	358	70m6	20h9	74.5	M20	560	36
07	R1	33	R1	33	M30x53	M24x42	561	219	262	22	230	140	370	75m6	20h9	79.5	M20	726	46
08	R1	39	R1	39	M30x53	M24x42	597	234	289	22	256	160	416	80m6	22h9	85	M20	969	58
09	R1	39	R1	39	M30x53	M30x53	652	247	309	22	266	160	426	85m6	22h9	90	M20	1208	75

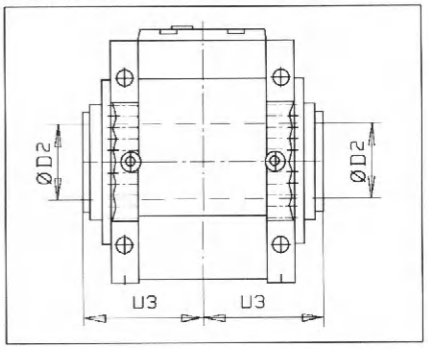
LSS types LSS 型号



Solid Shaft
实心轴



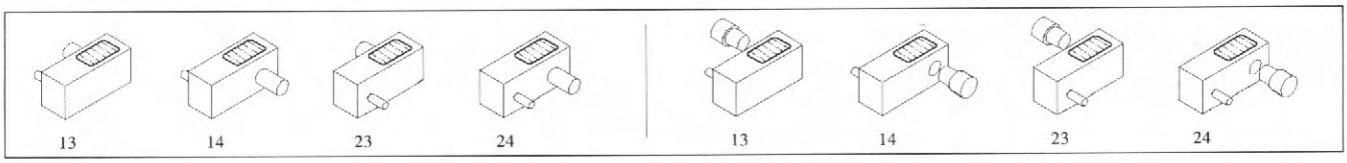
Hollow Shaft, Shrink Disk, page 4.3-
空心轴,收缩盘,4.3 页



Hollow Shaft, Key Connection, page 4.4-
空心轴,键连接,4.4 页

size 规格	LSS Dimensions in mm LSS 尺寸(mm) d2	b2	h2	m2	Y2	V2	U3	UC	UD	ØD2	ØD4	ØD5
02	80m6	22h9	85	M20	140	304	164	257	156	80js7/H8	86js6/H7	85h6/H7
03	100m6	28h9	106	M24	170	341	171	274	163	95js7/H8	101js6/H7	100h6/H7
04	105m6	28h9	111	M24	210	403	193	302	187	105js7/H8	111js6/H7	110h6/H7
05	120m6	32h9	127	M24	210	411	201	311	193	115js7/H8	121js6/H7	120h6/H7
06	130m6	32h9	137	M24	220	434	214	331	210	125js7/H8	131js6/H7	130h6/H7
07	140m6	36h9	148	M24	250	478	228	354	224	135js7/H8	141js6/H7	140h6/H7
08	160m6	40h9	169	M24	250	504	254	397	246	150js7/H8	151js6/H7	150h6/H7
09	170m6	40h9	179	M24	310	574	264	407	262	165js7/H8	166js6/H7	165h6/H7

Shaft Positions 轴的位置



Manufacturer reserves the right to alteration

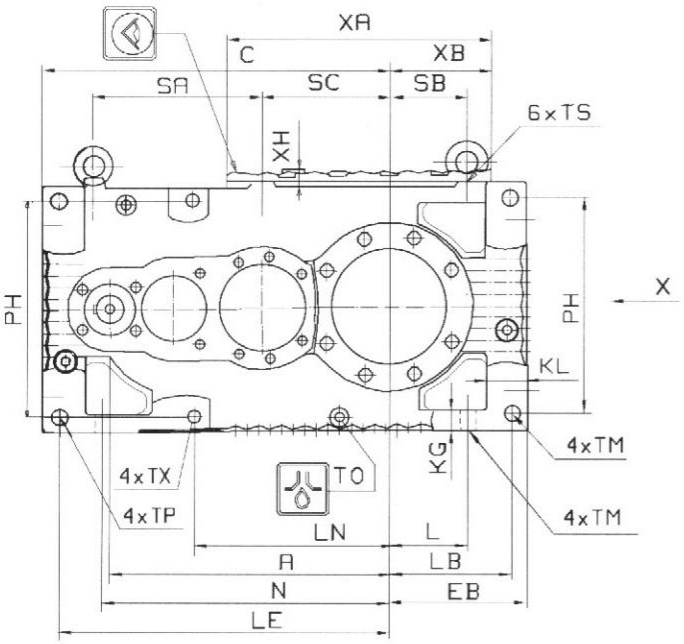
制造商保留修改的权利

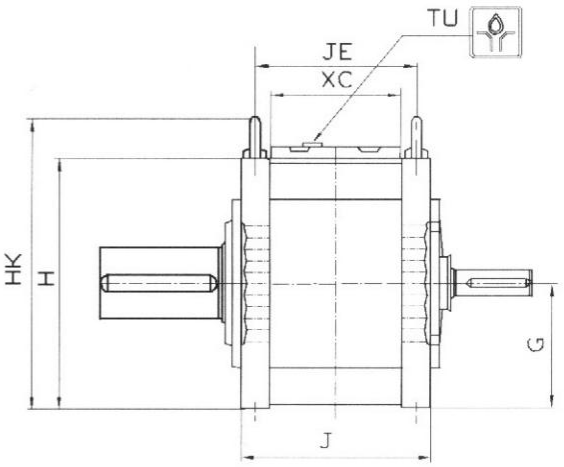
Gear Unit Dimensions

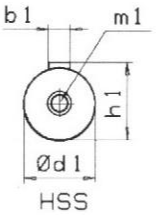
减速器尺寸

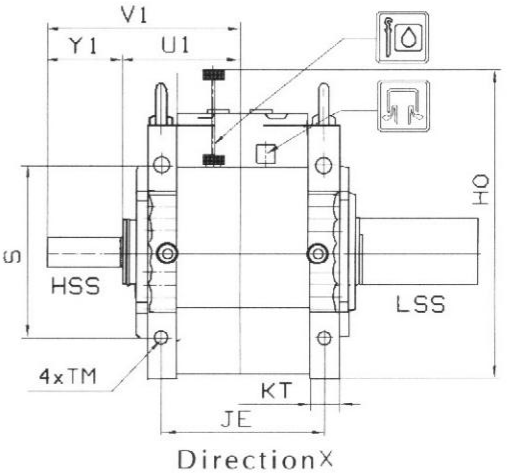
3-stage Helical Gear Unit
Horizontal mounting

3 级斜齿轮减速器
水平安装









Technical Data Page 2. 1-
技术数据 2. 1 页
See LSS types, next Page
LSS 型号见下页

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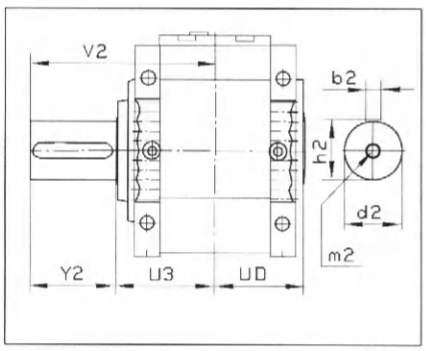
插图仅仅作为例子，不是严格的装配关系。
重量和油量仅是指导值。

Gear Unit Dimensions 减速器尺寸

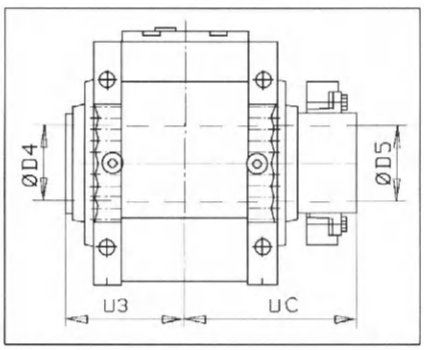
size 规格	A	C	EB h11	G h11	H	HK	HO	J h11	JE	KG	KL	KT	L	LB	LE	LN	N	PH	S	SA	SB	SC
	Housing Dimensions in mm 箱体尺寸(mm)																					
02	368	467	195	160	320	382	380	260	212	28	68	45	98	170	442	263	369	270	206	206	114	175
03	408	513	207	180	360	422	445	274	228	28	68	45	110	182	488	306	416	310	246	246	122	181
04	444	556	229	200	400	462	510	314	260	30	71	50	122	201	524	337	449	344	260	256	147	218
05	486	605	240	215	430	500	565	329	279	34	71	50	136	212	575	340	499	374	296	296	136	218
06	529	665	270	235	470	540	605	356	292	40	88	64	141	235	627	376	533	400	308	308	141	252
07	575	720	295	265	530	620	695	380	316	40	91	64	150	260	685	415	575	454	350	350	150	242
08	630	803	322	300	600	690	760	431	353	52	103	78	174	280	757	458,5	651	516	406	406	174	255
09	694	872	335	335	670	779	870	451	373	52	103	78	187	293	826	527,5	720	586	476	476	187	254

size 规格	TU	TM	TO	TP H9	TX	TS	XA	XB	XC	XH	U1	Y1	V1	Ød1	b1	h1	m1	Weight 重量 kg	Oil Capacity 油量 l
	Housing Dimensions in mm 箱体尺寸(mm)										HSS Dimensions in mm HSS 尺寸(mm)								
02	R1	24	R3/4	24	M20x35	M16x32	355	135	182	18	170	120	290	32k6	10h9	35	M12	222	13
03	R1	24	R3/4	24	M20x35	M16x32	384	147	196	18	177	120	297	38k6	10h9	41	M12	292	17
04	R1	28	R3/4	28	M24x42	M16x32	430	168	211	22	197	130	327	38k6	10h9	41	M12	396	24
05	R1	28	R3/4	28	M24x42	M20x35	460	182	226	22	205	135	340	48k6	14h9	51,5	M16	517	34
06	R1	33	R1	33	M30x53	M20x35	525	195	248	22	218	140	358	48k6	14h9	51,5	M16	614	45
07	R1	33	R1	33	M30x53	M24x42	561	219	262	22	230	140	370	50k6	14h9	53,5	M16	797	53
08	R1	39	R1	39	M30x53	M24x42	597	234	289	22	256	160	416	55m6	16h9	59	M20	1085	68
09	R1	39	R1	39	M30x53	M30x53	652	247	309	22	266	160	426	60m6	18h9	64	M20	1297	85

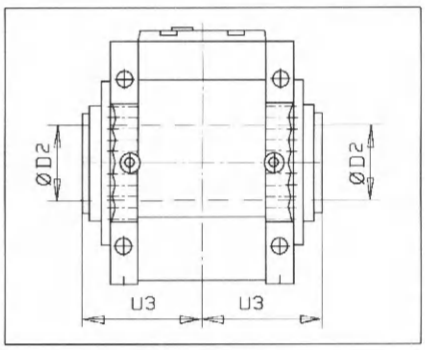
LSS types LSS 型号



Solid Shaft
实心轴



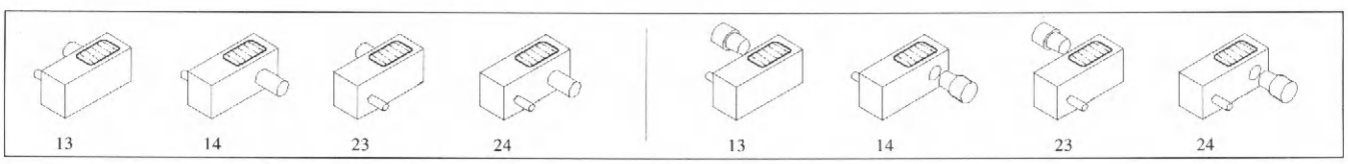
Hollow Shaft, Shrink Disk, page 4.3-
空心轴,收缩盘,4.3 页



Hollow Shaft, Key Connection, page 4.4-
空心轴,键连接,4.4 页

size 规格	d2	b2	h2	m2	Y2	V2	U3	UC	UD	ØD2	ØD4	ØD5
	LSS Dimensions in mm LSS 尺寸(mm)											
02	80m6	22h9	85	M20	140	304	164	257	156	80js7/H8	86js6/H7	85h6/H7
03	100m6	28h9	106	M24	170	341	171	274	163	95js7/H8	101js6/H7	100h6/H7
04	105m6	28h9	111	M24	210	403	193	302	187	105js7/H8	111js6/H7	110h6/H7
05	120m6	32h9	127	M24	210	411	201	311	193	115js7/H8	121js6/H7	120h6/H7
06	130m6	32h9	137	M24	220	434	214	331	210	125js7/H8	131js6/H7	130h6/H7
07	140m6	36h9	148	M24	250	478	228	354	224	135js7/H8	141js6/H7	140h6/H7
08	160m6	40h9	169	M24	250	504	254	397	246	150js7/H8	151js6/H7	150h6/H7
09	170m6	40h9	179	M24	310	574	264	407	262	165js7/H8	166js6/H7	165h6/H7

Shaft Positions 轴的位置



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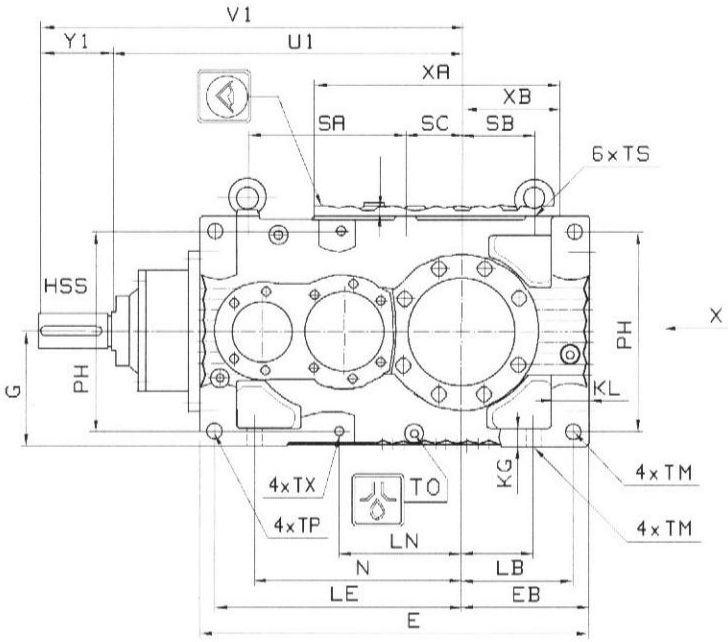
制造商保留修改的权利

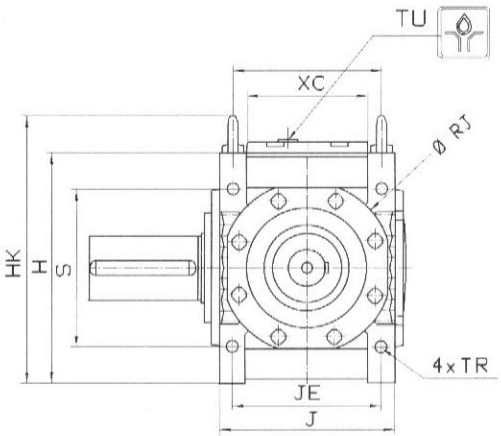
Gear Unit Dimensions

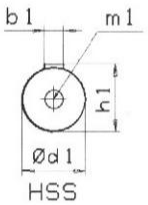
减速器尺寸

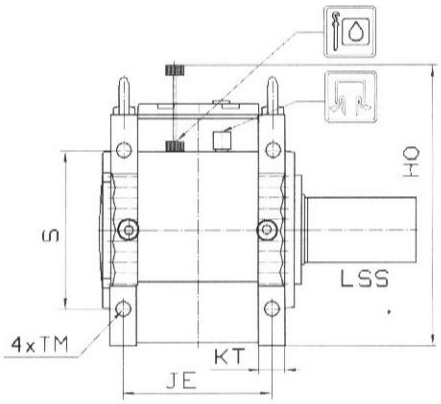
2-stage Bevel Helical Gear Unit
Horziontal mounting

2 级锥齿轮—斜齿轮减速器
水平安装









Direction X

Technical Data Page 2. 5-
技术数据,2. 5 页
See LSS types, next Page
LSS 型号见下页

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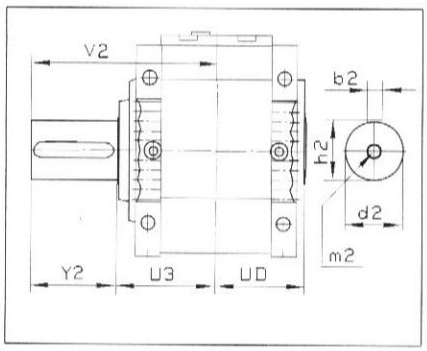
插图仅仅作为例子,不是严格的装配关系。
重量和油量仅是指导值。

Gear Unit Dimensions 减速器尺寸

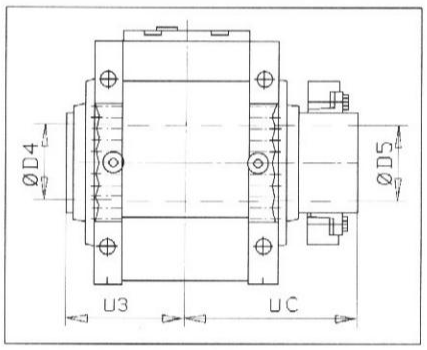
size 规格	Housing Dimensions in mm 箱体尺寸(mm)																					
	E	EB h11	G h11	H	HK	HO	J h11	JE	KG	KL	KT	L	LB	LE	LN	N	PH	ØRJ	S	SA	SB	SC
02	574	195	160	320	382	395	260	212	28	68	45	98	170	354	175	282	270	240	206	206	114	96
03	618	207	180	360	422	460	274	228	28	68	45	110	182	389	207	314	310	240	246	246	122	84
04	677	229	200	400	462	520	314	260	30	71	50	122	201	420	233	341	344	276	260	253	147	114
05	731	240	215	430	500	575	329	279	34	71	50	136	212	463	228	387	374	320	296	296	136	106
06	812	270	235	470	540	615	356	292	40	88	64	141	235	507	256	413	400	322	308	308	141	132
07	885	295	265	530	620	705	380	316	40	91	64	150	260	555	285	445	454	346	350	350	150	112
08	981	322	300	600	690	775	431	353	52	103	78	174	280	617	318.5	511	516	385	406	406	174	115
09	1049	335	335	670	779	885	451	373	52	103	78	187	293	672	373.5	566	586	392	476	476	187	100

size 规格	Housing Dimensions in mm 箱体尺寸(mm)										HSS Dimensions in mm HSS 尺寸(mm)							Weight 重量	Oil Capacity 油量
	TU	TM	TO	TP H9	TR=TX	TS	XA	XB	XC	XH	U1	Y1	V1	Ød1	b1	h1	m1	kg	l
02	R1	24	R3/4	24	M20x35	M16x32	355	135	182	18	509	130	639	50k6	14h9	53.5	M16	221	10
03	R1	24	R3/4	24	M20x35	M16x32	384	147	196	18	549	135	684	55m6	16h9	59	M20	280	14
04	R1	28	R3/4	28	M24x42	M16x32	430	168	211	22	600	135	735	60m6	18h9	64	M20	381	19
05	R1	28	R3/4	28	M24x42	M20x35	460	182	226	22	655	138	793	65m6	18h9	69	M20	505	22
06	R1	33	R1	33	M30x53	M20x35	525	195	248	22	698	140	838	70m6	20h9	74.5	M20	615	26
07	R1	33	R1	33	M30x53	M24x42	561	219	262	22	752	160	912	75m6	20h9	79.5	M20	793	32
08	R1	39	R1	39	M30x53	M24x42	597	234	289	22	822	160	982	85m6	22h9	90	M20	1055	58
09	R1	39	R1	39	M30x53	M30x53	652	247	309	22	921	195	1116	90m6	22h9	95	M24	1330	84

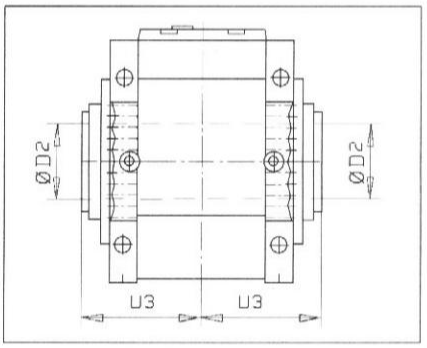
LSS types LSS 型号



Solid Shaft
实心轴



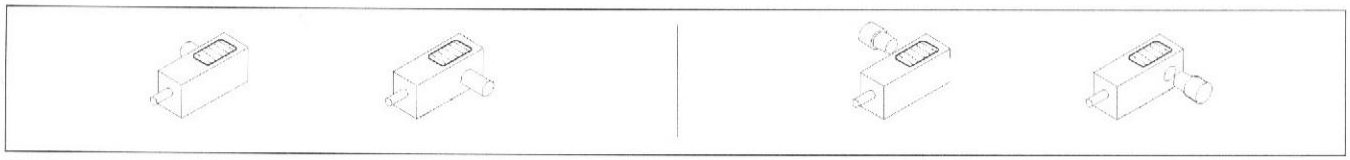
Hollow Shaft, Shrink Disk, page 4.3-
空心轴,收缩盘,4.3 页



Hollow Shaft, Key Connection, page 4.4-
空心轴,键连接,4.4 页

size 规格	LSS Dimensions in mm LSS 尺寸(mm)											
	d2	b2	h2	m2	Y2	V2	U3	UC	UD	ØD2	ØD4	ØD5
02	80m6	22h9	85	M20	140	304	164	257	156	80js7/H8	86js6/H7	85h6/H7
03	100m6	28h9	106	M24	170	341	171	274	163	95js7/H8	101js6/H7	100h6/H7
04	105m6	28h9	111	M24	210	403	193	302	187	105js7/H8	111js6/H7	110h6/H7
05	120m6	32h9	127	M24	210	411	201	311	193	115js7/H8	121js6/H7	120h6/H7
06	130m6	32h9	137	M24	220	434	214	331	210	125js7/H8	131js6/H7	130h6/H7
07	140m6	36h9	148	M24	250	478	228	354	224	135js7/H8	141js6/H7	140h6/H7
08	160m6	40h9	169	M24	250	504	254	397	246	150js7/H8	151js6/H7	150h6/H7
09	170m6	40h9	179	M24	310	574	264	407	262	165js7/H8	166js6/H7	165h6/H7

Shaft Positions 轴的位置



Manufacturer reserves the right to alteration

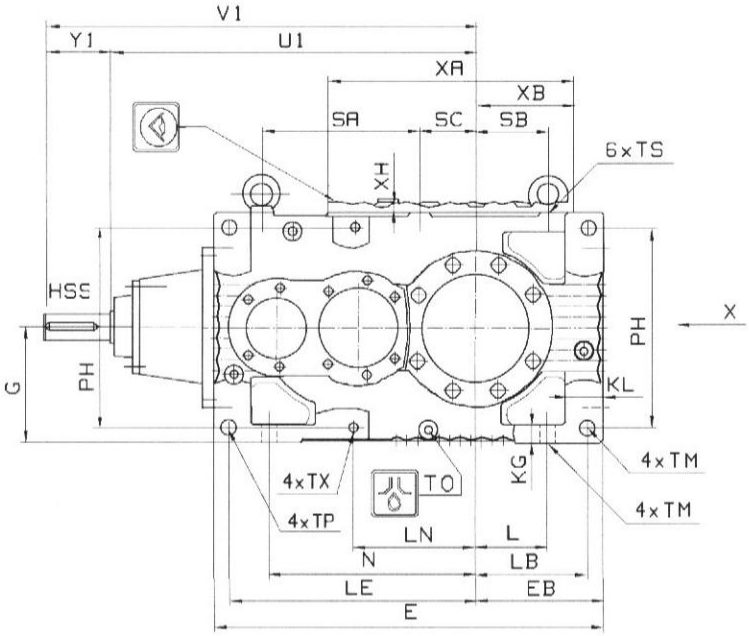
制造商保留修改的权利

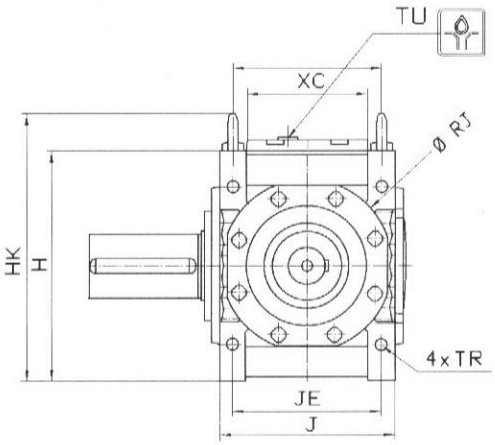
Gear Unit Dimensions

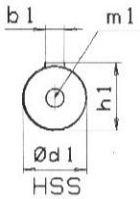
减速器尺寸

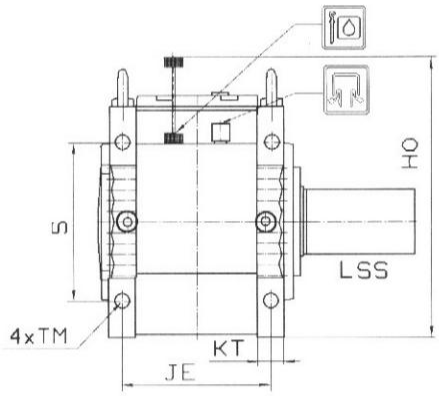
3-stage Bevel Helical Gear Unit
Horizontal mounting

3 级锥齿轮—斜齿轮减速器
水平安装









Direction X

Technical Data Page 2. 5-
技术数据 2. 5 页
See LSS types, next Page
LSS 型号见下页

Illustrations show examples only and are not strictly binding.
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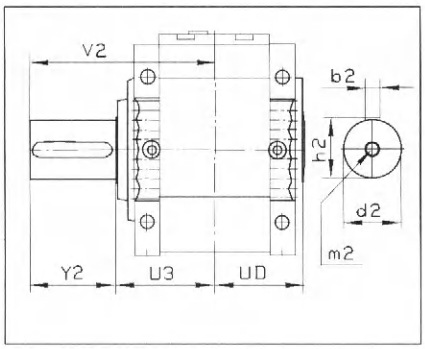
插图仅仅作为例子，不是严格的装配关系。
重量和油量仅是指导值。

Gear Unit Dimensions 减速器尺寸

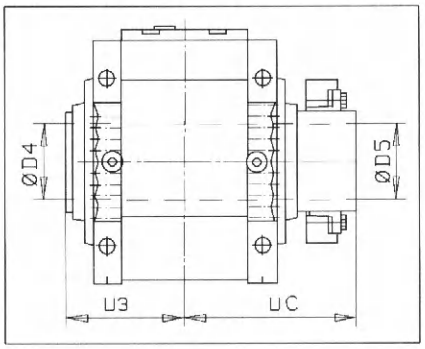
size 规格	Housing Dimensions in mm 箱体尺寸(mm) E	EB h11	G h11	H	HK	HO	J h11	JE	KG	KL	KT	L	LB	LE	LN	N	PH	ØRJ	S	SA	SB	SC	TL =TU	TM	TO
02	574	195	160	320	382	380	260	212	28	68	45	98	170	354	175	282	270	240	206	206	114	96	R1	24	R3/4
03	618	207	180	360	422	445	274	228	28	68	45	110	182	389	207	314	310	240	246	246	122	84	R1	24	R3/4
04	677	229	200	400	462	510	314	260	30	71	50	122	201	420	233	341	344	276	260	256	147	117	R1	28	R3/4
05	731	240	215	430	500	565	329	279	34	71	50	136	212	463	228	387	374	320	296	296	136	106	R1	28	R3/4
06	812	270	235	470	540	605	356	292	40	88	64	141	235	507	256	413	400	322	308	308	141	132	R1	33	R1
07	885	295	265	530	620	695	380	316	40	91	64	150	260	555	285	445	454	346	350	350	150	112	R1	33	R1
08	981	322	300	600	690	760	431	353	52	103	78	174	280	617	318	511	516	385	406	406	174	115	R1	39	R1
09	1049	335	335	670	779	870	451	373	52	103	78	187	293	672	373	566	586	392	476	476	187	100	R1	39	R1

size 规格	Housing Dimensions in mm 箱体尺寸(mm) TP H9	TR =TX	TS	XA	XB	XC	XH	U1	Y1	V1	HSS Dimensions in mm HSS 尺寸(mm) i =14-63 Ød1	b1	h1	m1	i =71-90 Ød1	b1	h1	m1	i =100-112 Ød1	b1	h1	m1	Weight 重量 kg	Oil Capacity 油量 l
02	24	M20x35	M16x32	355	135	182	18	533	100	633	35k6	10h9	38	M12	30k6	8h9	33	M10	25k6	8h9	28	M10	219	11
03	24	M20x35	M16x32	384	147	196	18	584	112	696	40k6	12h9	43	M16	30k6	8h9	33	M10	25k6	8h9	28	M10	279	14
04	28	M24x42	M16x32	430	168	211	22	642	120	762	42k6	12h9	45	M16	35k6	10h9	38	M12	25k6	8h9	28	M10	382	20
05	28	M24x42	M20x35	460	182	226	22	693	125	818	50k6	14h9	53,5	M16	40k6	12h9	43	M16	30k6	8h9	33	M10	493	30
06	33	M30x53	M20x35	525	195	248	22	758	130	888	50k6	14h9	53,5	M16	45k6	14h9	48,5	M16	35k6	10h9	38	M12	601	40
07	33	M30x53	M24x42	561	219	262	22	814	135	949	60m6	18h9	64	M20	45k6	14h9	48,5	M16	40k6	12h9	43	M16	779	50
08	39	M30x53	M24x42	597	234	289	22	890	135	1025	60m6	18h9	64	M20	55m6	16h9	59	M20	40k6	12h9	43	M16	1037	65
09	39	M30x53	M30x53	652	247	309	22	969	140	1109	70m6	20h9	74,5	M20	60m6	18h9	64	M20	45k6	14h9	48,5	M16	1299	80

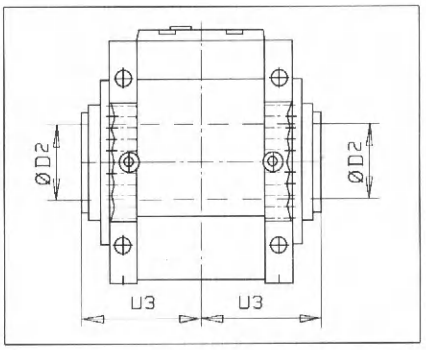
LSS types LSS 型号



Solid Shaft
实心轴



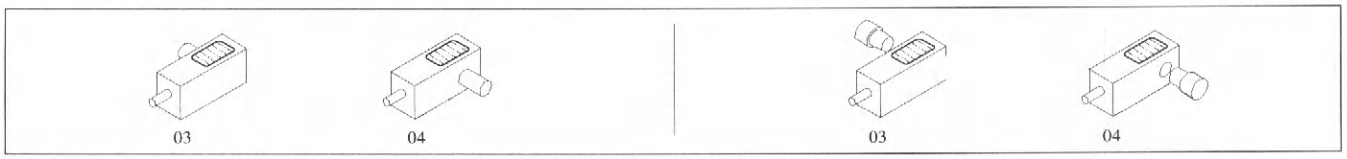
Hollow Shaft, Shrink Disk, page 4. 3-
空心轴,收缩盘,4. 3 页



Hollow Shaft, Key Connection, page 4. 4-
空心轴,键连接,4. 4 页

size 规格	LSS Dimensions in mm LSS 尺寸(mm) d2	b2	h2	m2	Y2	V2	U3	UC	UD	ØD2	ØD4	ØD5
02	80m6	22h9	85	M20	140	304	164	257	156	80js7/H8	86js6/H7	85h6/H7
03	100m6	28h9	106	M24	170	341	171	274	163	95js7/H8	101js6/H7	100h6/H7
04	105m6	28h9	111	M24	210	403	193	302	187	105js7/H8	111js6/H7	110h6/H7
05	120m6	32h9	127	M24	210	411	201	311	193	115js7/H8	121js6/H7	120h6/H7
06	130m6	32h9	137	M24	220	434	214	331	210	125js7/H8	131js6/H7	130h6/H7
07	140m6	36h9	148	M24	250	478	228	354	224	135js7/H8	141js6/H7	140h6/H7
08	160m6	40h9	169	M24	250	504	254	397	246	150js7/H8	151js6/H7	150h6/H7
09	170m6	40h9	179	M24	310	574	264	407	262	165js7/H8	166js6/H7	165h6/H7

Shaft Positions 轴的位置



Manufacturer reserves the right to alteration

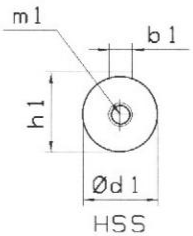
制造商保留修改的权利

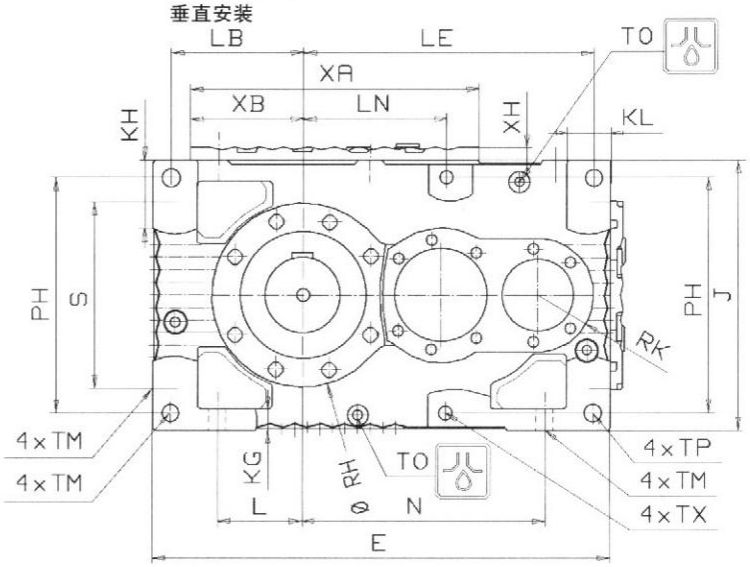
Gear Unit Dimensions

减速器尺寸

2-stage Helical Gear Unit
Vertical mounting

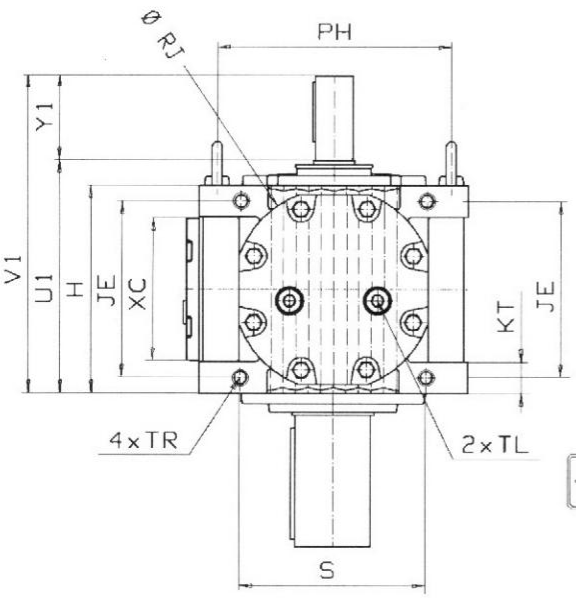
2 级斜齿轮减速器
垂直安装

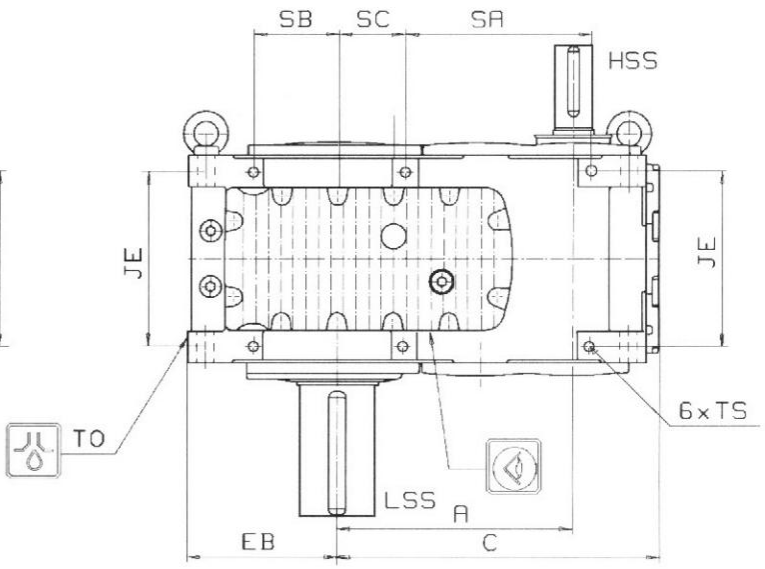




Technical Data Page 2. 1-
技术数据 2. 1 页

See LSS types, next Page
LSS 型号见下页





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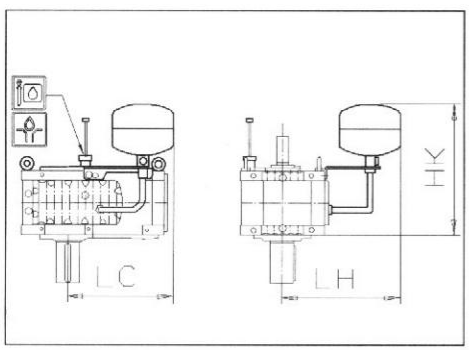
插图仅仅作为例子，不是严格的装配关系。
重量和油量仅是指导值。

ESSENTIAL ACCESSORY
Alternatives for vertical mounting

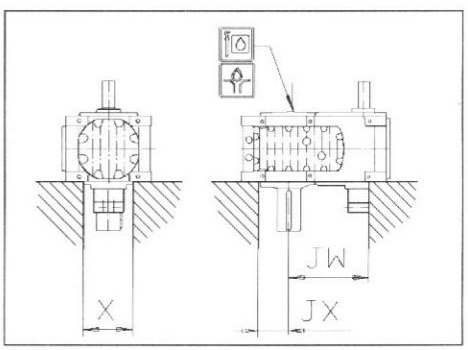
主要附件
可供垂直安装选用



Expansiontank 膨胀箱

Accessory Dimensions in mm
附件尺寸(mm)

size 规格	HK	LC	LH	X	JX	JW
02	620	460	600	-	-	-
03	640	490	620	-	-	-
04	680	530	620	250	162	380
05	690	560	630	250	169	420
06	710	600	650	250	182	454
07	740	620	680	250	204	499
08	790	690	640	316	219	556
09	810	740	670	386	232	611



Shaft End Pump 轴端泵

Manufacturer reserves the right to alteration

制造商保留修改的权利

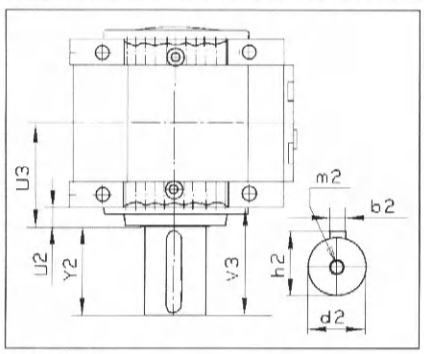
Gear Unit Dimensions 减速器尺寸

size 规格	A	EB h11	C	E	Hh11	J	JE	KG	KH	KL	KT	L	LB	LE	LN	N	PH	RH	ØRJ	RK	S	SA	SB	SC
	Housing Dimensions in mm 箱体尺寸(mm)																							
02	280	195	340	574	260	320	212	28	90	68	45	98	170	354	175	282	270	107	240	73	206	206	114	96
03	310	207	432	618	274	360	228	28	100	68	45	110	182	389	207	314	310	127	239	78	246	246	122	84
04	340	229	471	677	314	400	260	30	118	71	50	122	201	420	233	341	344	136	276	83	260	256	147	114
05	374	240	514	731	329	430	279	34	118	71	50	136	212	463	228	387	374	146	320	90	296	296	136	106
06	409	270	565	812	356	470	292	40	131	88	64	141	235	507	256	413	400	156	322	97	308	308	141	132
07	445	295	616	885	380	530	316	40	152	91	64	150	260	555	285	445	454	173	346	102	350	350	150	112
08	490	322	685	981	431	600	353	52	153	103	78	174	280	617	318,5	511	516	178	366	107	406	406	174	115
09	540	335	742	1049	451	670	373	52	153	103	78	187	293	672	373,5	566	586	196	392	112	476	476	187	100

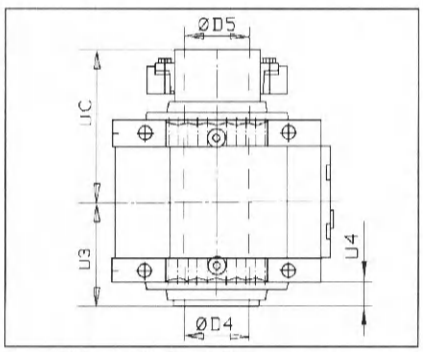
size 规格	TL	TM	TO	TP H9	TR =TX	TS	XA	XB	XC	XH	U1	Y1	V1	Ød1	b1	h1	m1	Weight 重量 kg	Oil Capacity 油量 l
	Housing Dimensions in mm 箱体尺寸(mm)										HSS Dimensions in mm HSS 尺寸(mm)								
02	R1	24	R3/4	24	M20x35	M16x32	355	135	182	18	300	120	420	48k6	14h9	51,5	M16	201	25
03	R1	24	R3/4	24	M20x35	M16x32	384	147	196	18	314	120	434	50k6	14h9	53,5	M16	256	30
04	R1	28	R3/4	28	M24x42	M16x32	430	168	211	22	354	130	484	55m6	16h9	59	M20	353	40
05	R1	28	R3/4	28	M24x42	M20x35	460	182	226	22	370	135	505	60m6	18h9	64	M20	455	58
06	R1	33	R1	33	M30x53	M20x35	525	195	248	22	396	140	436	70m6	20h9	74,5	M20	560	70
07	R1	33	R1	33	M30x53	M24x42	561	219	262	22	420	140	560	75m6	20h9	79,5	M20	726	95
08	R1	39	R1	39	M30x53	M24x42	597	234	289	22	472	160	632	80m6	22h9	85	M20	969	110
09	R1	39	R1	39	M30x53	M30x53	652	247	309	22	492	160	652	85m6	22h9	90	M20	1208	130

Oil capacity with expansion tank
膨胀箱油量

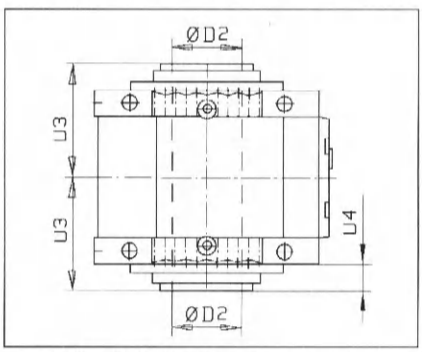
LSS types LSS 型号



Solid Shaft
实心轴



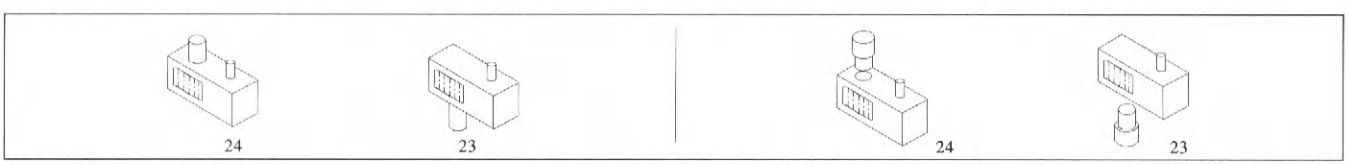
Hollow Shaft, Shrink Disk, page 4.3-
空心轴,收缩盘,4.3 页



Hollow Shaft, Key Connection, page 4.4-
空心轴,键连接,4.4 页

size 规格	d2	b2	h2	m2	Y2	V3	U2	U3	U4	UC	UD	ØD2	ØD4	ØD5
	LSS Dimensions in mm LSS 尺寸(mm)													
02	80m6	22h9	85	M20	140	174	34	164	34	257	156	80js7/H8	86js6/H7	85h6/H7
03	100m6	28h9	106	M24	170	204	34	171	34	274	163	95js7/H8	101js6/H7	100h6/H7
04	105m6	28h9	111	M24	210	246	36	193	36	302	187	105js7/H8	111js6/H7	110h6/H7
05	120m6	32h9	127	M24	210	246	36	201	36	311	193	115js7/H8	121js6/H7	120h6/H7
06	130m6	32h9	137	M24	220	256	36	214	36	331	210	125js7/H8	131js6/H7	130h6/H7
07	140m6	36h9	148	M24	250	288	38	228	38	354	224	135js7/H8	141js6/H7	140h6/H7
08	160m6	40h9	169	M24	250	288	38	254	38	397	246	150js7/H8	151js6/H7	150h6/H7
09	170m6	40h9	179	M24	310	348	38	264	38	407	262	165js7/H8	166js6/H7	165h6/H7

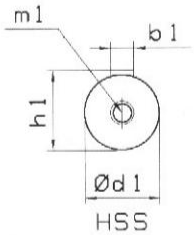
Shaft Positions 轴的位置



Gear Unit Dimensions 减速器尺寸

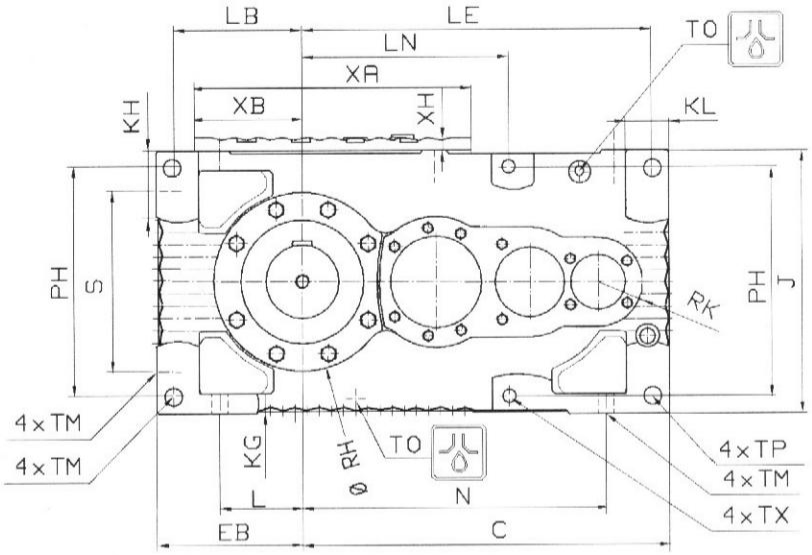
3-stage Helical Gear Unit
Vertical mounting

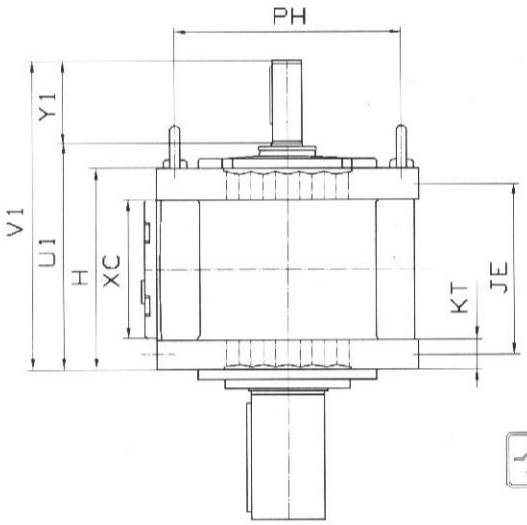
3 级斜齿轮减速器
垂直安装

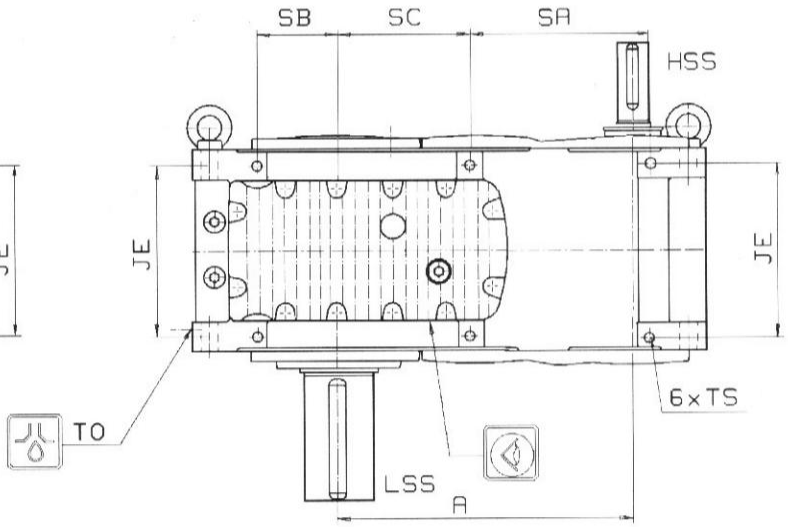


Technical Data Page 2. 1-
技术数据 2. 1 页

See LSS types, next Page
LSS 型号见下页



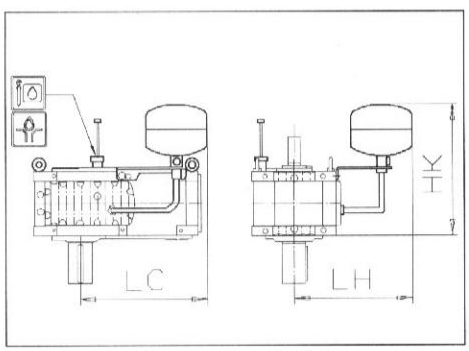




Illustrations show examples only and are not strictly binding.
The weights and oil quantities are guide values only.

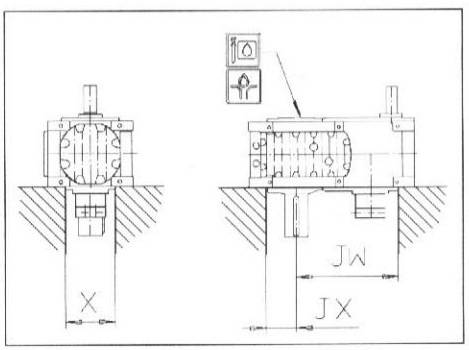
插图仅仅作为例子，不是严格的装配关系。
重量和油量仅是指导值。

ESSENTIAL ACCESSORY 主要附件
Alternatives for vertical mounting 可供垂直安装选用



Expansiontank 膨胀箱

size 规格	Accessory Dimensions in mm 附件尺寸(mm)					
	HK	LC	LH	X	JX	JW
02	620	540	600	-	-	-
03	640	580	620	-	-	-
04	680	640	620	250	162	488
05	690	680	630	250	169	532
06	710	720	650	250	182	574
07	740	750	680	250	204	629
08	790	830	640	316	219	696
09	810	900	670	386	232	765



Shaft End Pump 轴端泵

Manufacturer reserves the right to alteration

制造商保留修改的权利

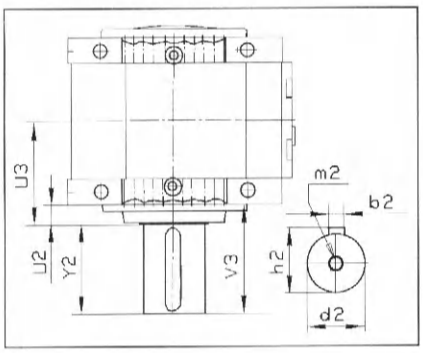
Gear Unit Dimensions 减速器尺寸

size 规格	Housing Dimensions in mm 箱体尺寸(mm)																					
	A	EB h11	C	Hh11	J	JE	KG	KH	KL	KT	L	LB	LE	LN	N	PH	RH	RK	S	SA	SB	SC
02	368	195	467	260	320	212	28	90	68	45	98	170	442	263	369	270	107	73	206	206	114	175
03	408	207	513	274	360	228	28	100	68	45	110	182	488	306	416	310	127	78	246	246	122	181
04	444	229	556	314	400	260	30	118	71	50	122	201	524	337	449	344	136	83	260	256	147	218
05	486	240	603	329	430	279	34	118	71	50	136	212	575	340	499	374	146	90	296	296	136	218
06	529	270	665	356	470	292	40	131	88	64	141	235	627	376	533	400	156	97	308	308	141	252
07	575	295	720	380	530	316	40	152	91	64	150	260	685	415	575	454	173	102	350	350	150	242
08	630	322	803	431	600	353	52	153	103	78	174	280	757	458,5	651	516	178	107	406	406	174	255
09	694	335	872	451	670	373	52	153	103	78	187	293	826	527,5	720	586	196	112	476	476	187	254

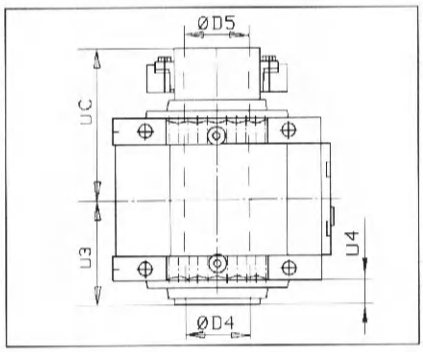
size 规格	Housing Dimensions in mm 箱体尺寸(mm)									HSS Dimensions in mm HSS 尺寸(mm)							Weight 重量	Oil Capacity 油量
	TM	TO	TP H9	TX	TS	XA	XB	XC	XH	U1	Y1	V1	Ød1	b1	h1	m1	kg	l
02	24	R3/4	24	M20x35	M16x32	355	135	182	18	300	120	420	32k6	10h9	35	M12	222	36
03	24	R3/4	24	M20x35	M16x32	384	147	196	18	314	120	434	38k6	10h9	41	M12	292	42
04	28	R3/4	28	M24x42	M16x32	430	168	211	22	354	130	484	38k6	10h9	41	M12	396	55
05	28	R3/4	28	M24x42	M20x35	460	182	226	22	370	135	505	48k6	14h9	51,5	M16	517	70
06	33	R1	33	M30x53	M20x35	525	195	248	22	396	140	536	48k6	14h9	51,5	M16	614	90
07	33	R1	33	M30x53	M24x42	561	219	262	22	420	140	560	50k6	14h9	53,5	M16	797	130
08	39	R1	39	M30x53	M24x42	597	234	289	22	472	160	632	55m6	16h9	59	M20	1085	135
09	39	R1	39	M30x53	M30x53	652	247	309	22	492	160	652	60m6	18h9	64	M20	1297	160

Oil capacity with expansion tank
膨胀箱油量

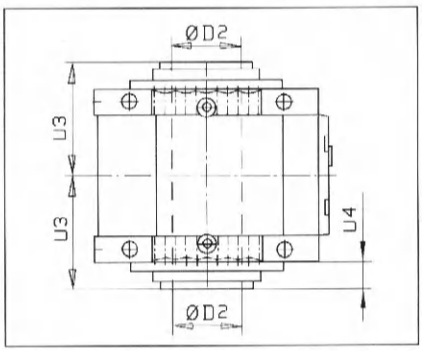
LSS types LSS 型号



Solid Shaft
实心轴



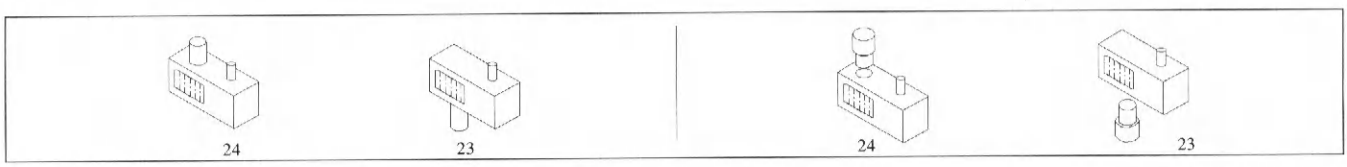
Hollow Shaft, Shrink Disk, page 4. 3-
空心轴,收缩盘,4. 3 页



Hollow Shaft, Key Connection, page 4. 4-
空心轴,键连接,4. 4 页

size 规格	LSS Dimensions in mm LSS 尺寸(mm)													
	d2	b2	h2	m2	Y2	V3	U2	U3	U4	UC	UD	ØD2	ØD4	ØD5
02	80m6	22h9	85	M20	140	174	34	164	34	257	156	80js7/H8	86js6/H7	85h6/H7
03	100m6	28h9	106	M24	170	204	34	171	34	274	163	95js7/H8	101js6/H7	100h6/H7
04	105m6	28h9	111	M24	210	246	36	193	36	302	187	105js7/H8	111js6/H7	110h6/H7
05	120m6	32h9	127	M24	210	246	36	201	36	311	193	115js7/H8	121js6/H7	120h6/H7
06	130m6	32h9	137	M24	220	256	36	214	36	331	210	125js7/H8	131js6/H7	130h6/H7
07	140m6	36h9	148	M24	250	288	38	228	38	354	224	135js7/H8	141js6/H7	140h6/H7
08	160m6	40h9	169	M24	250	288	38	254	38	397	246	150js7/H8	151js6/H7	150h6/H7
09	170m6	40h9	179	M24	310	348	38	264	38	407	262	165js7/H8	166js6/H7	165h6/H7

Shaft Positions 轴的位置



Manufacturer reserves the right to alteration

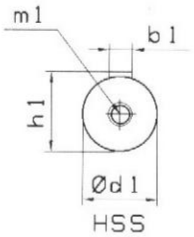
制造商保留修改的权利

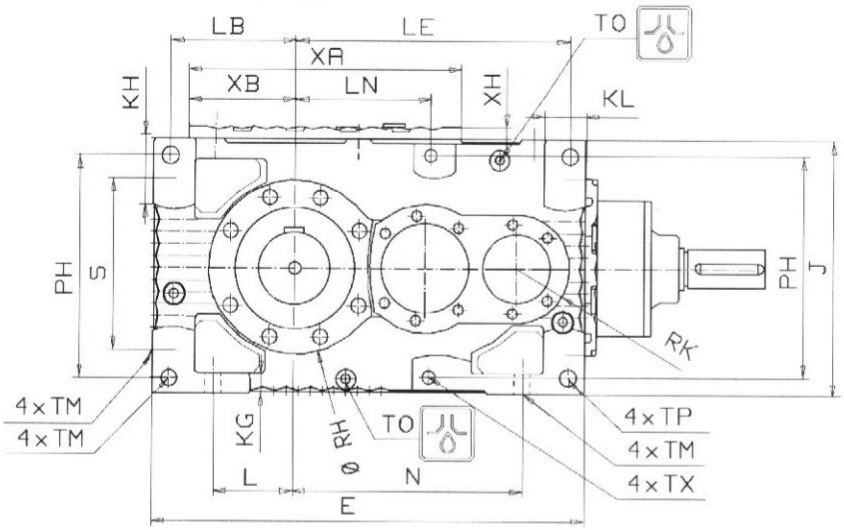
Gear Unit Dimensions

减速器尺寸

2-stage Bevel Helical Gear Unit
Vertical mounting

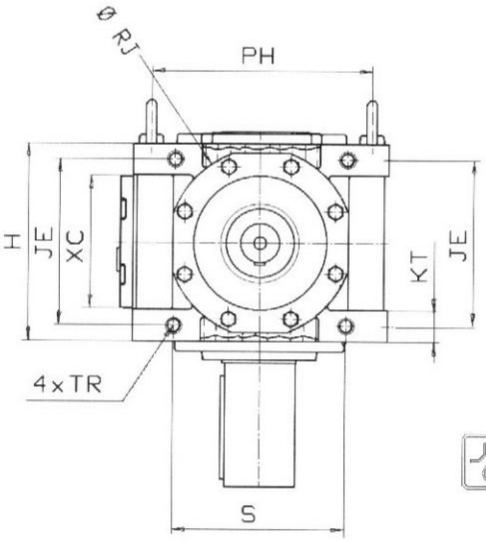
2 级锥齿轮斜齿轮减速器
垂直安装

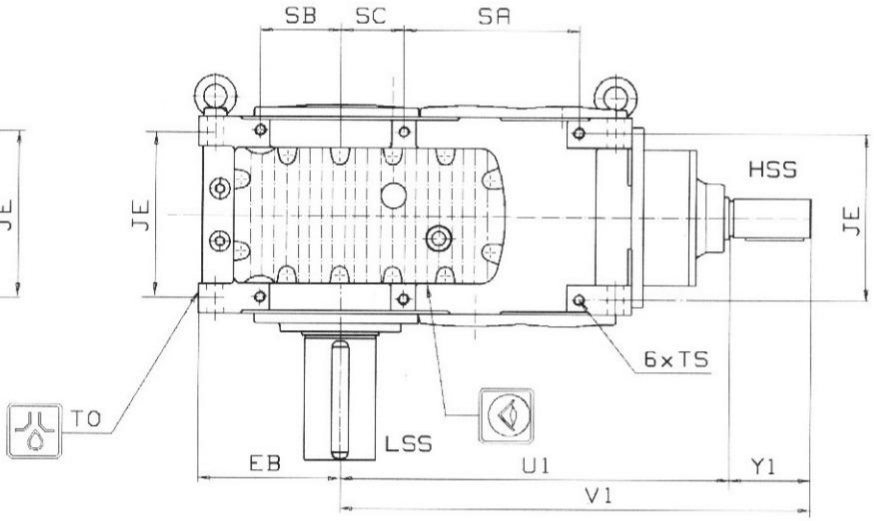




Technical Data Page 2. 1-
技术数据 2. 1 页

See LSS types, next Page
LSS 型号见下页



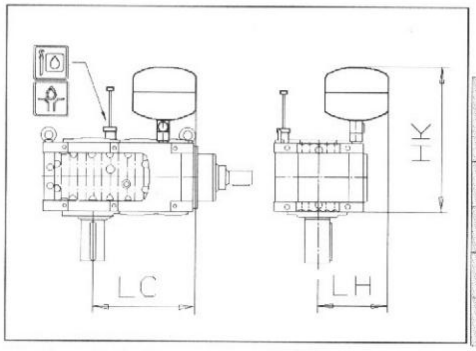


Illustrations show examples only and are not strictly binding.
The weights and oil quantities are guide values only.

插图仅仅作为例子，不是严格的装配关系。
重量和油量仅是指导值。

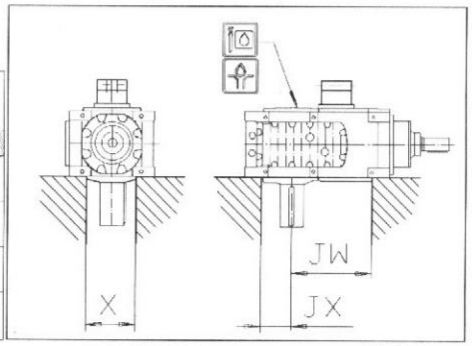
ESSENTIAL ACCESSORY
Alternatives for vertical mounting

主要附件
可供垂直安装选用



Expansiontank 膨胀箱

size 规格	Accessory Dimensions in mm 附件尺寸(mm)					
	HK	LC	LH	X	JX	JW
02	710	430	310	-	-	-
03	730	440	330	-	-	-
04	770	480	350	250	162	380
05	780	510	370	250	169	420
06	810	540	380	250	182	454
07	830	580	410	250	204	499
08	880	620	450	316	219	556
09	900	670	480	386	232	611



Shaft End Pump 轴端泵

Manufacturer reserves the right to alteration

制造商保留修改的权利

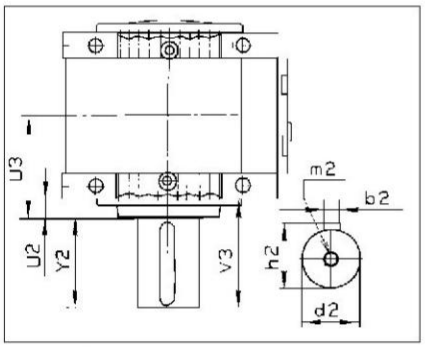
Gear Unit Dimensions 减速器尺寸

Size 规格	Housing Dimensions in mm 箱体尺寸(mm)																					
	EB h11	E	Hh11	J	JE	KG	KH	KL	KT	L	LB	LE	LN	N	PH	RH	ΦRJ	RK	S	SA	SB	SC
02	195	574	260	320	212	28	90	68	45	98	170	354	175	282	270	107	240	73	206	206	114	96
03	207	618	274	360	228	28	100	68	45	110	182	389	207	314	310	127	240	78	246	246	122	84
04	229	677	314	400	260	30	118	71	50	122	201	420	233	341	344	136	276	83	260	256	147	114
05	240	731	329	430	279	34	118	71	50	136	212	463	228	387	374	146	320	90	296	296	136	106
06	270	812	356	470	292	40	131	88	64	141	235	507	256	413	400	156	322	97	308	308	141	132
07	295	885	380	530	316	40	152	91	64	150	260	555	285	445	454	173	346	102	350	350	150	112
08	322	981	431	600	353	52	153	103	78	174	280	617	318,5	511	516	178	385	107	406	406	174	115
09	335	1049	451	670	373	52	153	103	78	187	293	672	373,5	566	586	196	392	112	476	476	187	100

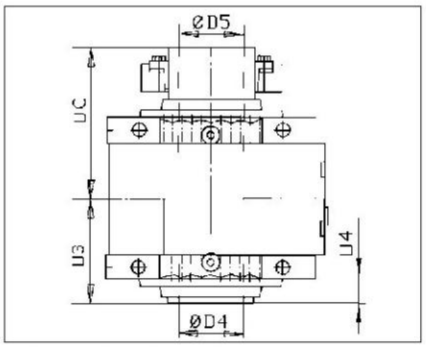
Size 规格	Housing Dimensions in mm 箱体尺寸(mm)									HSS Dimensions in mm HSS 尺寸(mm)							Weight 重量	Oil Capacity 油量
	TM	TO	TP H9	TR=TX	TS	XA	XB	XC	XH	U1	Y1	V1	Φd1	b1	h1	m1	kg	1
02	24	R3/4	24	M20×35	M16×32	355	135	182	18	509	130	639	50k6	14h9	53,5	M16	221	21
03	24	R3/4	24	M20×35	M16×32	384	147	196	18	549	135	684	55m6	16h9	59	M20	280	38
04	28	R3/4	28	M24×42	M16×32	430	168	211	22	600	135	735	60m6	18h9	64	M20	381	50
05	28	R3/4	28	M24×42	M20×35	460	182	226	22	655	138	793	65m6	18h9	69	M20	505	65
06	33	R1	33	M30×53	M20×35	525	195	248	22	698	140	838	70m6	20h9	74,5	M20	615	84
07	33	R1	33	M30×53	M24×42	561	219	262	22	752	160	912	75m6	20h9	79,5	M20	793	120
08	39	R1	39	M30×53	M24×42	597	234	289	22	822	160	982	85m6	22h9	90	M20	1055	120
09	39	R1	39	M30×53	M30×53	652	247	309	22	921	195	1116	90m6	25h9	95	M24	1330	145

Oil capacity with expansion tank
膨胀箱油量

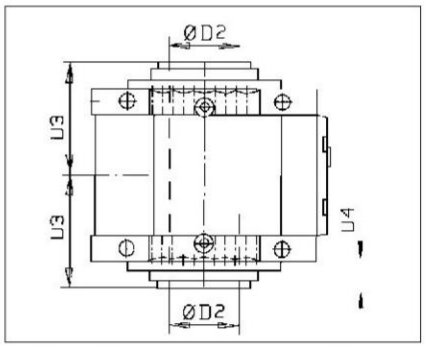
LSS types LSS 型号



Solid Shaft
实心轴



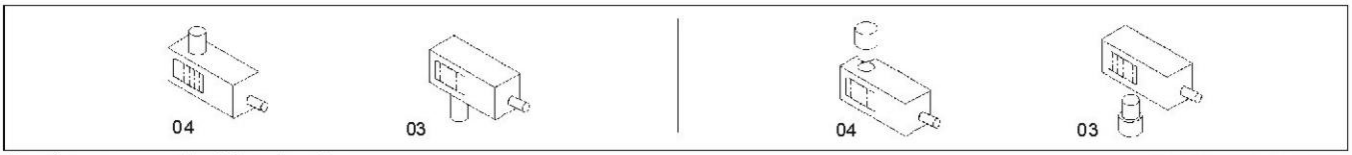
Hollow Shaft,Shrink Disk,page 4.3–
空心轴，收缩盘，4.3页



Hollow Shaft,Key Connection,page 4.4–
空心轴，键连接，4.4页

Size 规格	LSS Dimensions in mm LSS 尺寸 (mm)													
	d2	b2	h2	m2	Y2	V3	U2	U3	U4	UC	UD	ΦD2	ΦD4	ΦD5
02	80m6	22h9	85	M20	140	174	34	164	34	257	156	80js7/H8	86js6/H7	85h6/H7
03	100m6	28h9	106	M24	170	204	34	171	34	274	163	95js7/H8	101js6/H7	100h6/H7
04	105m6	28h9	111	M24	210	246	36	193	36	302	187	105js7/H8	111js6/H7	110h6/H7
05	120m6	32h9	127	M24	210	246	36	201	36	311	193	115js7/H8	121js6/H7	120h6/H7
06	130m6	32h9	137	M24	220	256	36	214	36	331	210	125js7/H8	131js6/H7	130h6/H7
07	140m6	36h9	148	M24	250	288	38	228	38	354	224	135js7/H8	141js6/H7	140h6/H7
08	160m6	40h9	169	M24	250	288	38	254	38	397	246	150js7/H8	151js6/H7	150h6/H7
09	170m6	40h9	179	M24	310	348	38	264	38	407	262	165js7/H8	166js6/H7	165h6/H7

Shaft Positions 轴的位置



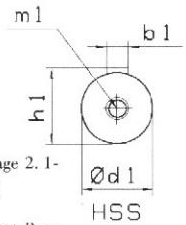
Manufacturer reserves the right to alteration

制造商保留修改的权利

Gear Unit Dimensions 减速器尺寸

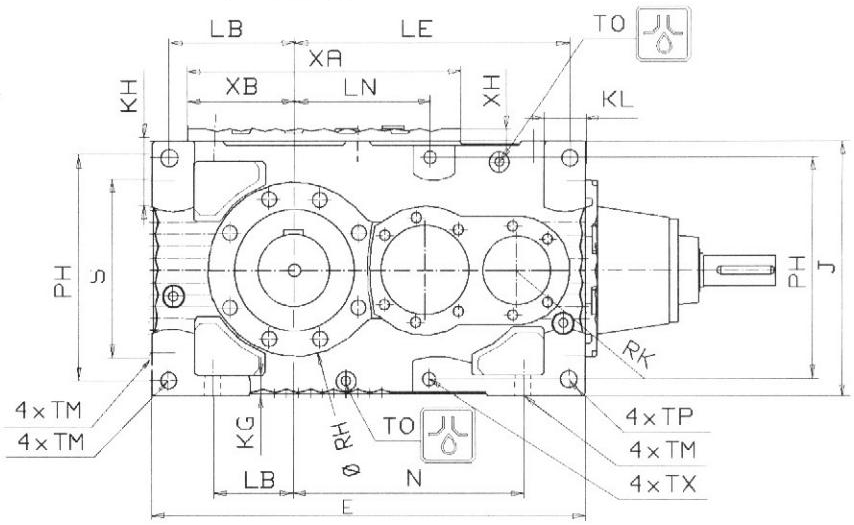
2-stage Bevel Helical Gear Unit
Vertical mounting

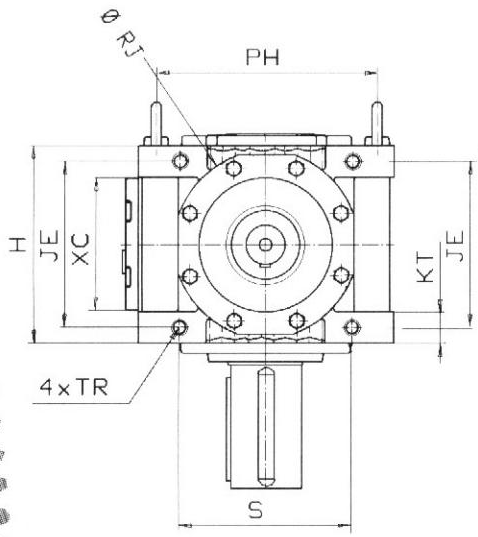
3 级锥齿轮斜齿轮减速器
垂直安装

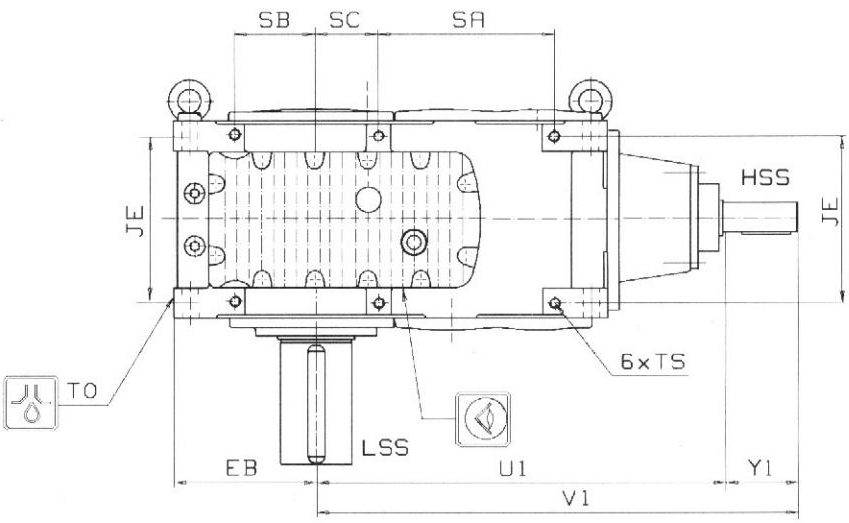


Technical Data Page 2. 1-
技术数据 2. 1 页

See LSS types, next Page
LSS 型号见下页



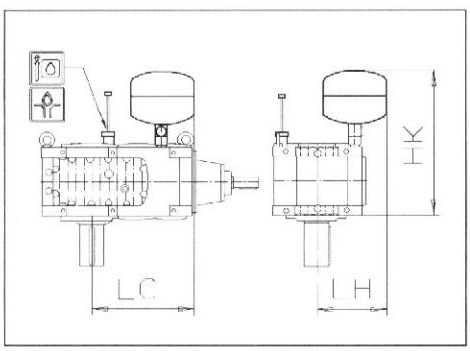




Illustrations show examples only and are not strictly binding.
The weights and oil quantities are guide values only.

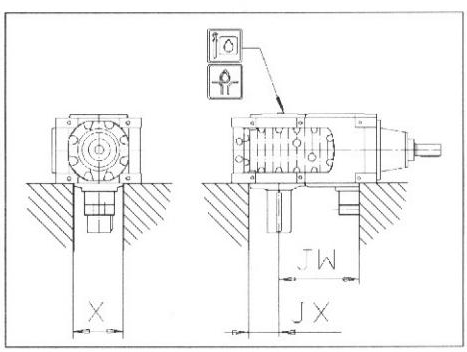
插图仅仅作为例子，不是严格的装配关系。
重量和油量仅是指导值。

ESSENTIAL ACCESSORY 主要附件
Alternatives for vertical mounting 可供垂直安装选用



Expansiontank 膨胀箱

size 规格	Accessory Dimensions in mm 附件尺寸(mm) HK	LC	LH	X	JX	JW
02	710	430	310	-	-	-
03	730	440	330	-	-	-
04	770	480	350	250	162	380
05	780	510	370	250	169	420
06	810	540	380	250	182	454
07	830	580	410	250	204	499
08	880	620	450	316	219	556
09	900	670	480	386	232	611



Shaft End Pump 轴端泵

Manufacturer reserves the right to alteration

制造商保留修改的权利

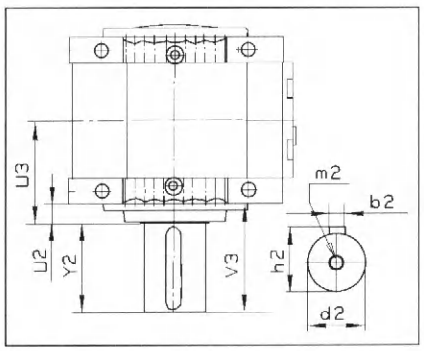
Gear Unit Dimensions 减速器尺寸

size 规格	Housing Dimensions in mm 箱体尺寸(mm)																						
	EB h11	E	Hh11	J	JE	KG	KH	KL	KT	L	LB	LE	LN	N	PH	RH	ØRJ	RK	S	SA	SB	SC	TM	TO
02	195	574	260	320	212	28	90	68	45	98	170	354	175	282	270	107	240	73	206	206	114	96	24	R3/4
03	207	618	274	360	228	28	100	68	45	110	182	389	207	314	310	127	240	78	246	246	122	84	24	R3/4
04	229	677	314	400	260	30	118	71	50	122	201	420	233	341	344	136	276	83	260	256	147	114	28	R3/4
05	240	731	329	430	279	34	118	71	50	136	212	463	228	387	374	146	320	90	296	296	136	106	28	R3/4
06	270	812	356	470	292	40	131	88	64	141	235	507	256	413	400	156	322	97	308	308	141	132	33	R1
07	295	885	380	530	316	40	152	91	64	150	260	555	285	445	454	173	346	102	350	350	150	112	33	R1
08	322	981	431	600	353	52	153	103	78	174	280	617	318,5	511	516	178	385	107	406	406	174	115	39	R1
09	335	1049	451	670	373	52	153	103	78	187	293	672	373,5	566	586	196	392	112	476	476	187	100	39	R1

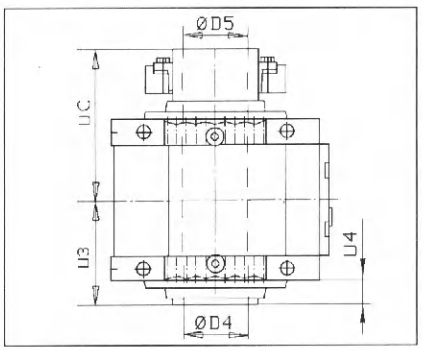
size 规格	Housing Dimensions in mm 箱体尺寸(mm)							HSS Dimensions in mm HSS 尺寸(mm)																Weight 重量	Oil Capacity 油量
											i=14-63				i=71-90				i=100-112						
	TP H9	TR=TX	TS	XA	XB	XC	XH	U1	Y1	V1	Ød1	b1	h1	m1	Ød1	b1	h1	m1	Ød1	b1	h1	m1	kg	l
02	24	M20x35	M16x32	355	135	182	18	533	100	633	35k6	10h9	38	M12	30k6	8h9	33	M10	25k6	8h9	28	M10	219	30
03	24	M20x35	M16x32	384	147	196	18	584	112	696	40k6	12h9	43	M16	30k6	8h9	33	M10	25k6	8h9	28	M10	279	38
04	28	M24x42	M16x32	430	168	211	22	642	120	762	42k6	12h9	45	M16	35k6	10h9	38	M12	25k6	8h9	28	M10	382	50
05	28	M24x42	M20x35	460	182	226	22	693	125	818	50k6	14h9	53,5	M16	40k6	12h9	43	M16	30k6	8h9	33	M10	493	65
06	33	M30x53	M20x35	525	195	248	22	758	130	888	50k6	14h9	53,5	M16	45k6	14h9	48,5	M16	35k6	10h9	38	M12	601	84
07	33	M30x53	M24x42	561	219	262	22	814	135	949	60m6	18h9	64	M20	45k6	14h9	48,5	M16	40k6	12h9	43	M16	779	120
08	39	M30x53	M24x42	597	234	289	22	890	135	1025	60m6	18h9	64	M20	55m6	16h9	59	M20	40k6	12h9	43	M16	1037	120
09	39	M30x53	M30x53	652	247	309	22	969	140	1109	70m6	20h9	74,5	M20	60m6	18h9	64	M20	45k6	14h9	48,5	M16	1299	145

Oil capacity with expansion tank
膨胀箱油量

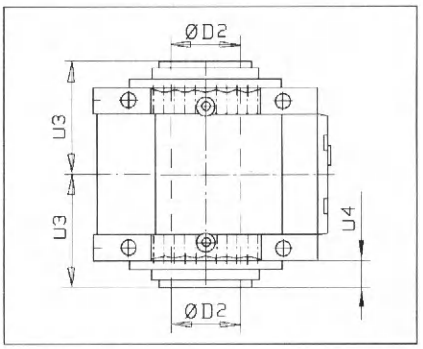
LSS types LSS 型号



Solid Shaft
实心轴



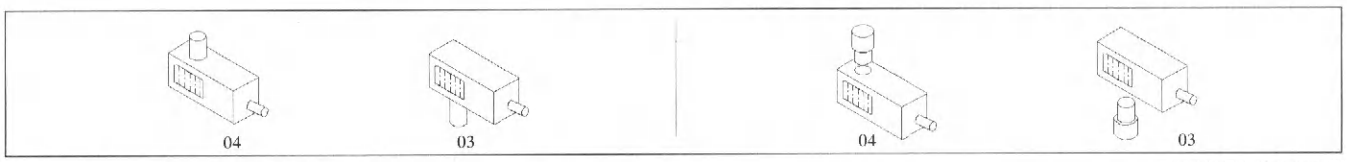
Hollow Shaft, Shrink Disk, page 4. 3-
空心轴,收缩盘,4. 3 页



Hollow Shaft, Key Connection, page 4. 4-
空心轴,键连接,4. 4 页

size 规格	LSS Dimensions in mm LSS 尺寸(mm)													
	d2	b2	h2	m2	Y2	V3	U2	U3	U4	UC	UD	ØD2	ØD4	ØD5
02	80m6	22h9	85	M20	140	174	34	164	34	257	156	80js7/H8	86js6/H7	85h6/H7
03	100m6	28h9	106	M24	170	204	34	171	34	274	163	95js7/H8	101js6/H7	100h6/H7
04	105m6	28h9	111	M24	210	246	36	193	36	302	187	105js7/H8	111js6/H7	110h6/H7
05	120m6	32h9	127	M24	210	246	36	201	36	311	193	115js7/H8	121js6/H7	120h6/H7
06	130m6	32h9	137	M24	220	256	36	214	36	331	210	125js7/H8	131js6/H7	130h6/H7
07	140m6	36h9	148	M24	250	288	38	228	38	354	224	135js7/H8	141js6/H7	140h6/H7
08	160m6	40h9	169	M24	250	288	38	254	38	397	246	150js7/H8	151js6/H7	150h6/H7
09	170m6	40h9	179	M24	310	348	38	264	38	407	262	165js7/H8	166js6/H7	165h6/H7

Shaft Positions 轴的位置



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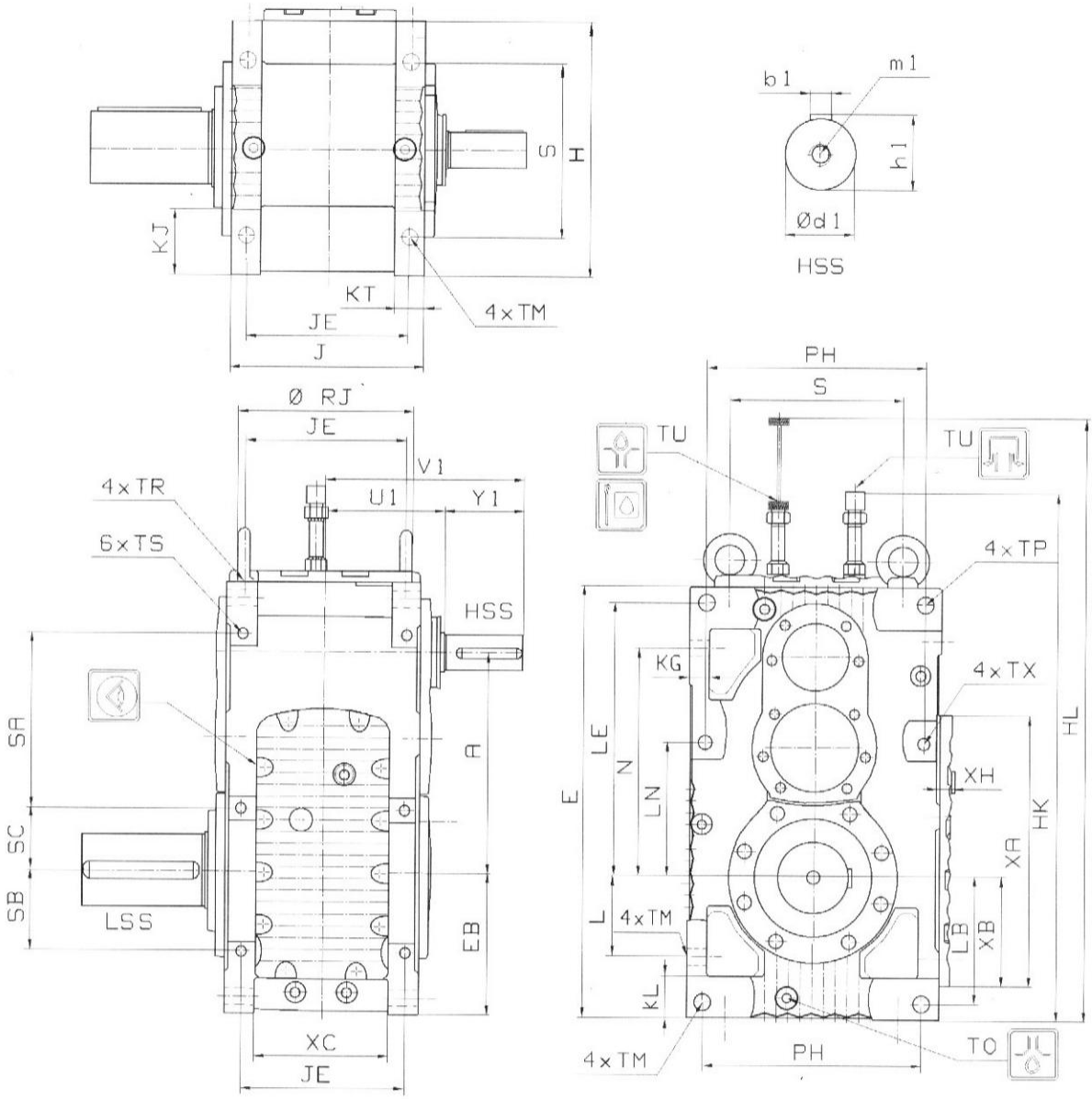
Gear Unit Dimensions

减速器尺寸

2-stage Helical Gear Unit
Upright mounting

2 级斜齿轮减速器
竖立安装



Technical Data Page 2.1-
技术数据 2.1 页

See LSS types, next Page
LSS 型号见下页

Illustrations show examples only and are not strictly binding.
The weights and oil quantities are guide values only.

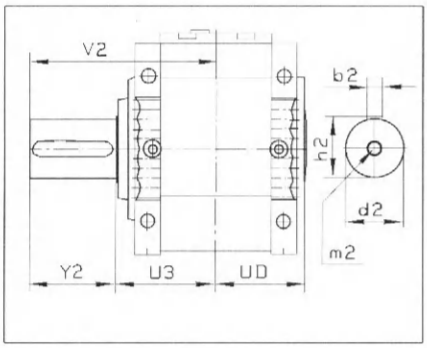
插图仅仅作为例子，不是严格的装配关系。
重量和油量仅是指导值。

Gear Unit Dimensions 减速器尺寸

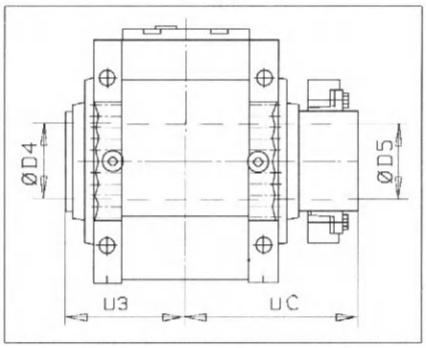
size 规格	A	EB h11	E	H	HK	HL	J h11	JE	KG	KJ	KL	KT	L	LB	LE	LN	N	PH	S	SA	SB	SC
	Housing Dimensions in mm 箱体尺寸(mm)																					
02	280	195	574	320	740	880	260	212	28	90	68	45	98	170	354	175	282	270	206	206	114	96
03	310	207	618	360	790	965	274	228	28	100	68	45	110	182	389	207	314	310	246	246	122	84
04	340	229	677	400	850	1035	314	260	30	118	71	50	122	201	420	233	341	344	260	256	147	117
05	374	240	731	430	900	1100	329	279	34	118	71	50	136	212	463	228	387	374	296	296	136	106
06	409	270	812	470	980	1220	356	292	40	131	88	64	141	235	507	256	413	400	308	308	141	132
07	445	295	885	530	1055	1335	380	316	40	152	91	64	150	260	555	285	445	454	350	350	150	112
08	490	322	981	600	1150	1460	431	353	52	153	103	78	174	280	617	318.5	511	516	406	406	174	115
09	540	335	1049	670	1220	1540	451	373	52	153	103	78	187	293	672	373.5	566	586	476	476	187	100

M20 size 规格	TU	TM	TO	TP H9	TR=TX	TS	XA	XB	XC	XH	U1	Y1	V1	Ød1	b1	h1	m1	Weight 重量 kg	Oil Capacity 油量 l
	Housing Dimensions in mm 箱体尺寸(mm)										HSS Dimensions in mm HSS 尺寸(mm)								
02	R3/4	24	R3/4	24	M20x35	M16x32	355	135	182	18	170	120	290	48k6	14h9	51.5	M16	201	20
03	R3/4	24	R3/4	24	M20x35	M16x32	384	147	196	18	177	120	297	50k6	14h9	53.5	M16	256	25
04	R3/4	28	R3/4	28	M24x42	M16x32	430	168	211	22	197	130	327	55m6	16h9	59	M20	353	35
05	R3/4	28	R3/4	28	M24x42	M20x35	460	182	226	22	205	135	340	60m6	18h9	64	M20	455	50
06	R3/4	33	R1	33	M30x53	M20x35	525	195	248	22	218	140	358	70m6	20h9	74.5	M20	560	65
07	R3/4	33	R1	33	M30x53	M24x42	561	219	262	22	230	140	370	75m6	20h9	79.5	M20	726	85
08	R3/4	39	R1	39	M30x53	M24x42	597	234	289	22	256	160	416	80m6	22h9	85	M20	969	100
09	R3/4	39	R1	39	M30x53	M30x53	652	247	309	22	266	160	426	85m6	22h9	90	M20	1208	130

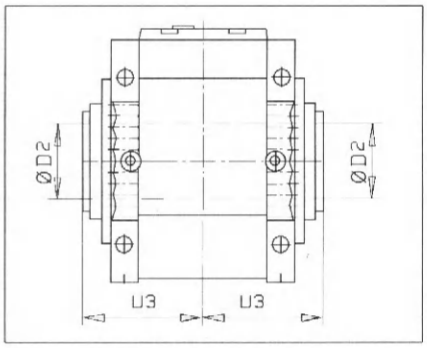
LSS types LSS 型号



Solid Shaft
实心轴



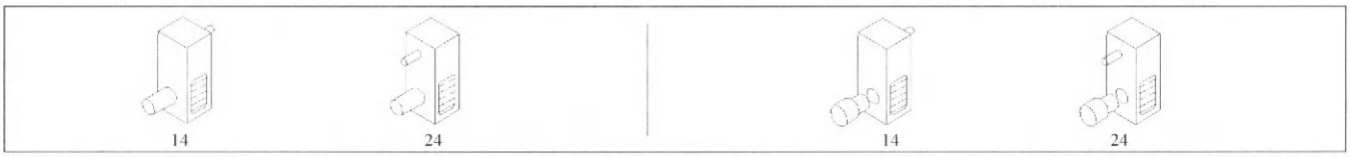
Hollow Shaft, Shrink Disk, page 4.3-
空心轴,收缩盘,4.3 页



Hollow Shaft, Key Connection, page 4.7-
空心轴,键连接,4.7 页

size 规格	d2	b2	h2	m2	Y2	V2	U3	UC	UD	ØD2	ØD4	ØD5
	LSS Dimensions in mm LSS尺寸 (mm)											
02	80m6	22h9	85	M20	140	304	164	257	156	80js7/H8	86js6/H7	85h6/H7
03	100m6	28h9	106	M24	170	341	171	274	163	95js7/H8	101js6/H7	100h6/H7
04	105m6	28h9	111	M24	210	403	193	302	187	105js7/H8	111js6/H7	110h6/H7
05	120m6	32h9	127	M24	210	411	201	311	193	115js7/H8	121js6/H7	120h6/H7
06	130m6	32h9	137	M24	220	434	214	331	210	125js7/H8	131js6/H7	130h6/H7
07	140m6	36h9	148	M24	250	478	228	354	224	135js7/H8	141js6/H7	140h6/H7
08	160m6	40h9	169	M24	250	504	254	397	246	150js7/H8	151js6/H7	150h6/H7
09	170m6	40h9	179	M24	310	574	264	407	262	165js7/H8	166js6/H7	165h6/H7

Shaft Positions 轴的位置



Manufacturer reserves the right to alteration

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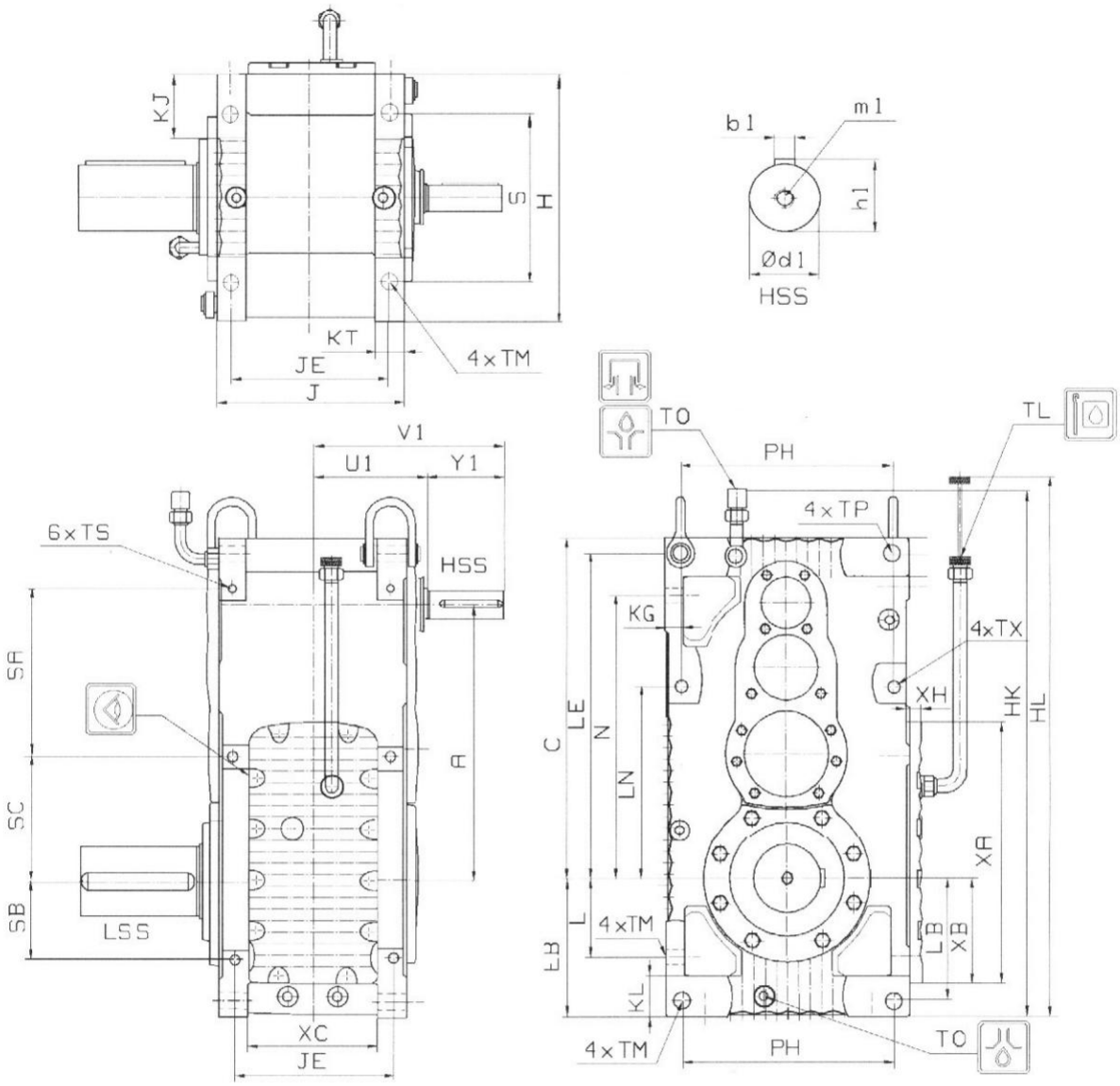
Gear Unit Dimensions

减速器尺寸

3-stage Helical Gear Unit
Upright mounting

3 级斜齿轮减速器
竖立安装



Technical Data Page 2. 1-
技术数据 2. 1 页

See LSS types, next Page
LSS 型号见下页

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The weights and oil quantities are guide values only.

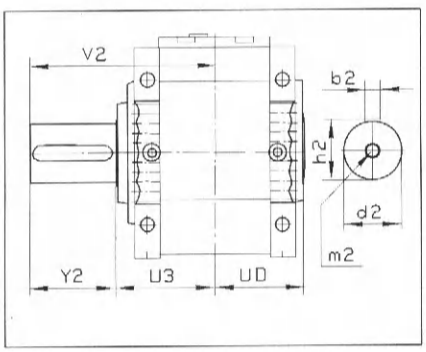
插图仅仅作为例子，不是严格的装配关系。
重量和油量仅是指导值。

Gear Unit Dimensions 减速器尺寸

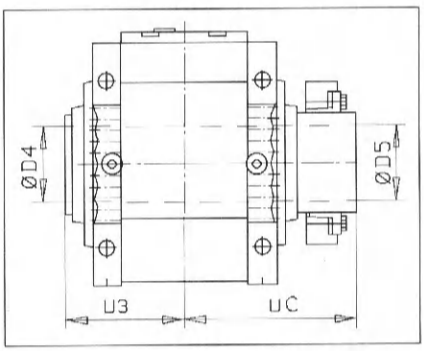
size 规格	Housing Dimensions in mm 箱体尺寸(mm) A	EB h11	C	H	HK	HL	J h11	JE	KG	KJ	KL	KT	L	LB	LE	LN	N	PH	S	SA	SB	SC
02	368	195	467	320	674	715	260	212	28	90	68	45	98	170	442	263	369	270	206	206	114	175
03	408	207	513	360	718	765	274	228	28	100	68	45	110	182	488	306	416	310	246	246	122	181
04	444	229	556	400	777	810	314	260	30	118	71	50	122	201	524	337	449	344	260	256	147	218
05	486	240	605	430	831	890	329	279	34	118	71	50	136	212	575	340	499	374	296	296	136	218
06	529	270	665	470	912	945	356	292	40	131	88	64	141	235	627	376	533	400	308	308	141	252
07	575	295	720	530	985	1015	380	316	40	152	91	64	150	260	685	415	575	454	350	350	150	242
08	630	322	803	600	1081	1090	431	353	52	153	103	78	174	280	757	458,5	651	516	406	406	174	255
09	694	335	872	670	1149	1165	451	373	52	153	103	78	187	293	826	527,5	720	586	476	476	187	254

M20 size 规格	Housing Dimensions in mm 箱体尺寸(mm) TL	TM	TO	TP H9	TX	TS	XA	XB	XC	XH	HSS Dimensions in mm HSS 尺寸(mm) U1	Y1	V1	Ød1	b1	h1	m1	Weight 重量 kg	Oil Capacity 油量 l
02	R3/4	24	R3/4	24	M20x35	M16x32	355	135	182	18	170	120	290	32k6	10h9	35	M12	222	27
03	R3/4	24	R3/4	24	M20x35	M16x32	384	147	196	18	177	120	297	38k6	10h9	41	M12	292	32
04	R3/4	28	R3/4	28	M24x42	M16x32	430	168	211	22	197	130	327	38k6	10h9	41	M12	396	43
05	R3/4	28	R3/4	28	M24x42	M20x35	460	182	226	22	205	135	340	48k6	14h9	51,5	M16	517	60
06	R3/4	33	R1	33	M30x53	M20x35	525	195	248	22	218	140	358	48k6	14h9	51,5	M16	614	76
07	R3/4	33	R1	33	M30x53	M24x42	561	219	262	22	230	140	370	50k6	14h9	53,5	M16	797	105
08	R3/4	39	R1	39	M30x53	M24x42	597	234	289	22	256	160	416	55m6	16h9	59	M20	1085	125
09	R3/4	39	R1	39	M30x53	M30x53	652	247	309	22	266	160	426	60m6	18h9	64	M20	1297	150

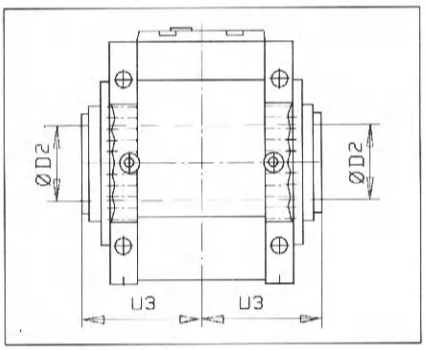
LSS types LSS 型号



Solid Shaft
实心轴



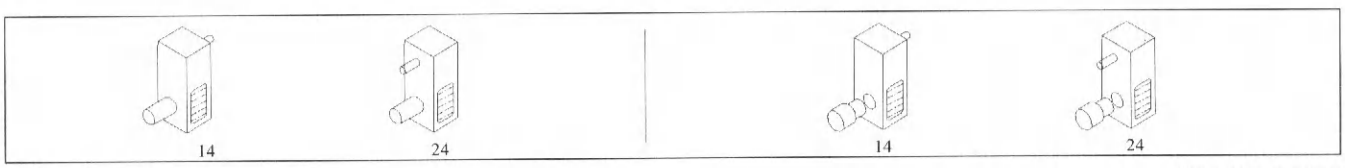
Hollow Shaft, Shrink Disk, page 4. 3-
空心轴,收缩盘,4. 3 页



Hollow Shaft, Key Connection, page 4. 4-
空心轴,键连接,4. 4 页

size 规格	LSS Dimensions in mm LSS 尺寸(mm) d2	b2	h2	m2	Y2	V2	U3	UC	UD	ØD2	ØD4	ØD5
02	80m6	22h9	85	M20	140	304	164	257	156	80js7/H8	86js6/H7	85h6/H7
03	100m6	28h9	106	M24	170	341	171	274	163	95js7/H8	101js6/H7	100h6/H7
04	105m6	28h9	111	M24	210	403	193	302	187	105js7/H8	111js6/H7	110h6/H7
05	120m6	32h9	127	M24	210	411	201	311	193	115js7/H8	121js6/H7	120h6/H7
06	130m6	32h9	137	M24	220	434	214	331	210	125js7/H8	131js6/H7	130h6/H7
07	140m6	36h9	148	M24	250	478	228	354	224	135js7/H8	141js6/H7	140h6/H7
08	160m6	40h9	169	M24	250	504	254	397	246	150js7/H8	151js6/H7	150h6/H7
09	170m6	40h9	179	M24	310	574	264	407	262	165js7/H8	166js6/H7	165h6/H7

Shaft Positions 轴的位置



Manufacturer reserves the right to alteration

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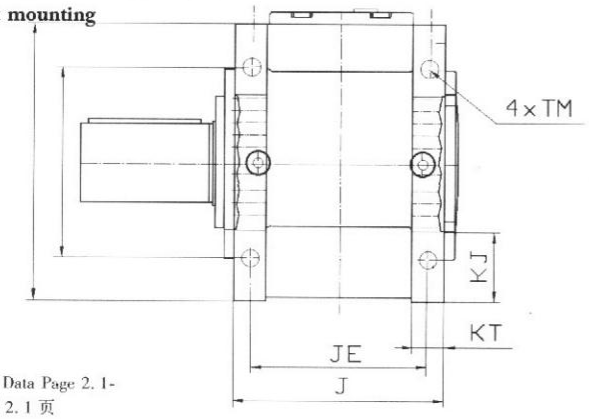
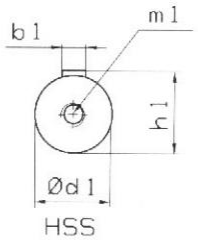
Gear Unit Dimensions

减速器尺寸

2-stage Bevel Helical Gear Unit
Upright mounting

2 级锥齿轮斜齿轮减速器
竖立安装





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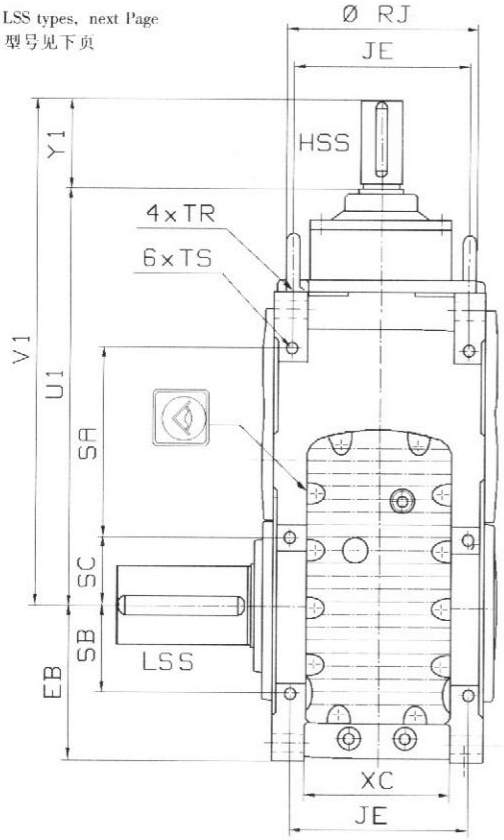
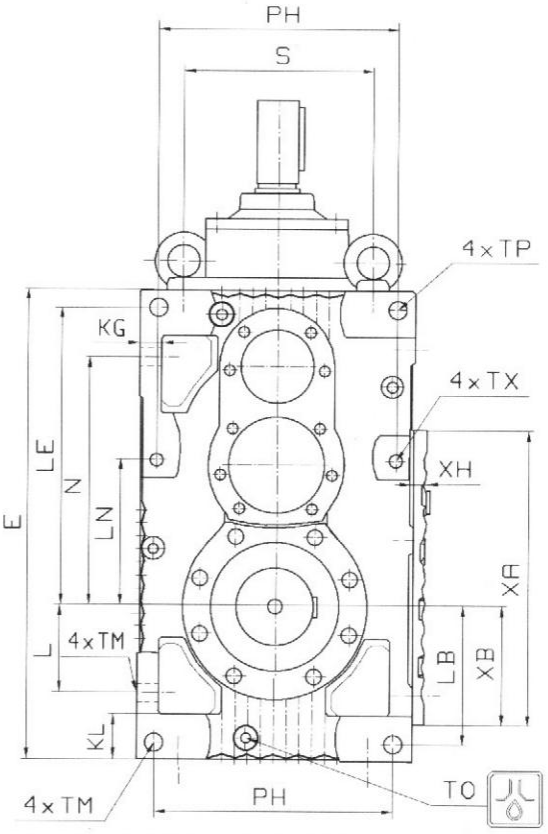
Technical Data Page 2. 1-
技术数据 2. 1 页

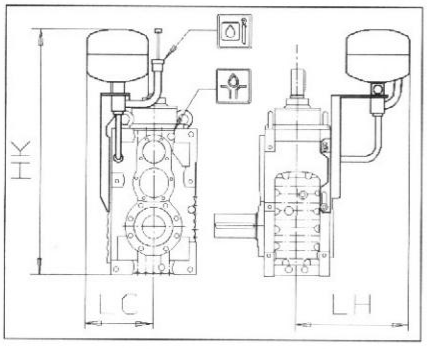
See LSS types, next Page
LSS 型号见下页





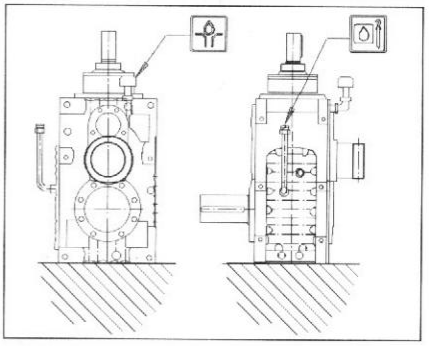
ESSENTIAL ACCESSORY
Alternatives for upright mounting

主要附件
可供竖立安装选用



Expansiontank 膨胀箱

size 规格	Accessory Dimensions in mm 附件尺寸(mm) HK	LC	LH
02	1050	310	540
03	1120	330	550
04	1190	350	580
05	1250	360	590
06	1350	380	580
07	1450	410	590
08	1550	450	590
09	1620	480	600



Shaft End Pump 轴端泵

Manufacturer reserves the right to alteration

制造商保留修改的权利

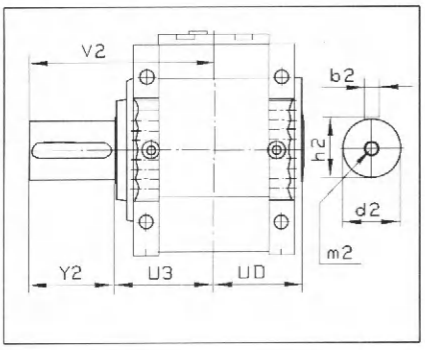
Gear Unit Dimensions 减速器尺寸

size 规格	Housing Dimensions in mm 箱体尺寸(mm)																		
	EB h11	E	H	J h11	JE	KG	KJ	KL	KT	L	LB	LE	LN	N	PH	S	SA	SB	SC
02	195	574	320	260	212	28	90	68	45	98	170	354	175	282	270	206	206	114	96
03	207	618	360	274	228	28	100	68	45	110	182	389	207	314	310	246	246	122	84
04	229	677	400	314	260	30	118	71	50	122	201	420	233	341	344	260	256	147	114
05	240	731	430	329	279	34	118	71	50	136	212	463	228	387	374	296	296	136	106
06	270	812	470	356	292	40	131	88	64	141	235	507	256	413	400	308	308	141	132
07	295	885	530	380	316	40	152	91	64	150	260	555	285	445	454	350	350	150	112
08	322	981	600	431	353	52	153	103	78	174	280	617	318,5	511	516	406	406	174	115
09	335	1049	670	451	373	52	153	103	78	187	293	672	373,5	566	586	476	476	187	100

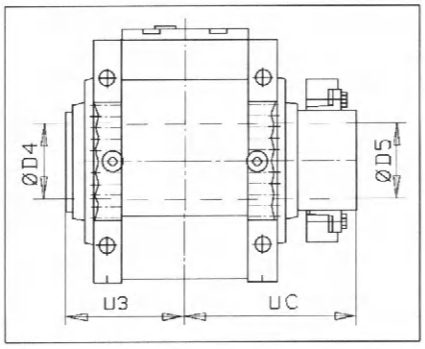
size 规格	Housing Dimensions in mm 箱体尺寸(mm)									HSS Dimensions in mm HSS 尺寸(mm)							Weight 重量	Oil Capacity 油量
	TM	TO	TP H9	TR=TX	TS	XA	XB	XC	XH	U1	Y1	V1	Ød1	b1	h1	m1	kg	l
02	24	R3/4	24	M20x35	M16x32	355	135	182	18	509	130	639	50k6	14h9	53,5	M16	221	30
03	24	R3/4	24	M20x35	M16x32	384	147	196	18	549	135	684	55m6	16h9	59	M20	280	36
04	28	R3/4	28	M24x42	M16x32	430	168	211	22	600	135	735	60m6	18h9	64	M20	381	46
05	28	R3/4	28	M24x42	M20x35	460	182	226	22	655	138	793	65m6	18h9	69	M20	505	65
06	33	R1	33	M30x53	M20x35	525	195	248	22	698	140	838	70m6	20h9	74,5	M20	615	80
07	33	R1	33	M30x53	M24x42	561	219	262	22	752	160	912	75m6	20h9	79,5	M20	793	115
08	39	R1	39	M30x53	M24x42	597	234	289	22	822	160	982	85m6	22h9	90	M20	1055	110
09	39	R1	39	M30x53	M30x53	652	247	309	22	921	195	1116	90m6	25h9	95	M24	1330	135

Oil capacity with expansion tank
膨胀箱油量

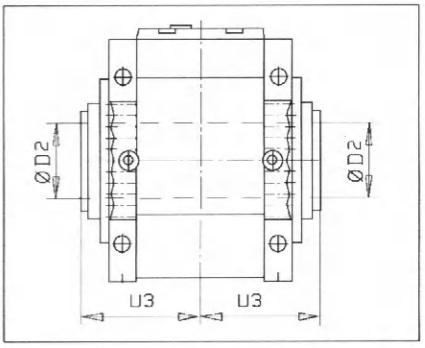
LSS types LSS 型号



Solid Shaft
实心轴



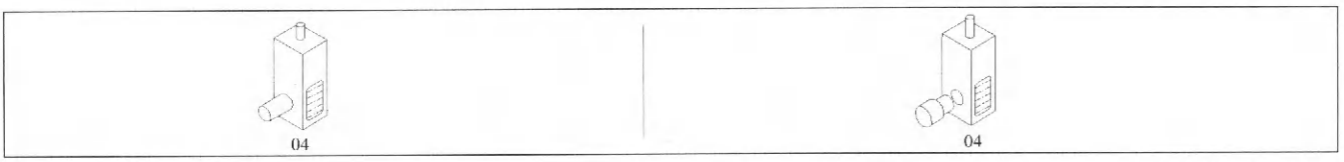
Hollow Shaft, Shrink Disk, page 4.3-
空心轴,收缩盘,4.3 页



Hollow Shaft, Key Connection, page 4.4-
空心轴,键连接,4.4 页

size 规格	LSS Dimensions in mm LSS 尺寸(mm)											
	d2	b2	h2	m2	Y2	V2	U3	UC	UD	ØD2	ØD4	ØD5
02	80m6	22h9	85	M20	140	304	164	257	156	80js7/H8	86js6/H7	85h6/H7
03	100m6	28h9	106	M24	170	341	171	274	163	95js7/H8	101js6/H7	100h6/H7
04	105m6	28h9	111	M24	210	403	193	302	187	105js7/H8	111js6/H7	110h6/H7
05	120m6	32h9	127	M24	210	411	201	311	193	115js7/H8	121js6/H7	120h6/H7
06	130m6	32h9	137	M24	220	434	214	331	210	125js7/H8	131js6/H7	130h6/H7
07	140m6	36h9	148	M24	250	478	228	354	224	135js7/H8	141js6/H7	140h6/H7
08	160m6	40h9	169	M24	250	504	254	397	246	150js7/H8	151js6/H7	150h6/H7
09	170m6	40h9	179	M24	310	574	264	407	262	165js7/H8	166js6/H7	165h6/H7

Shaft Positions 轴的位置



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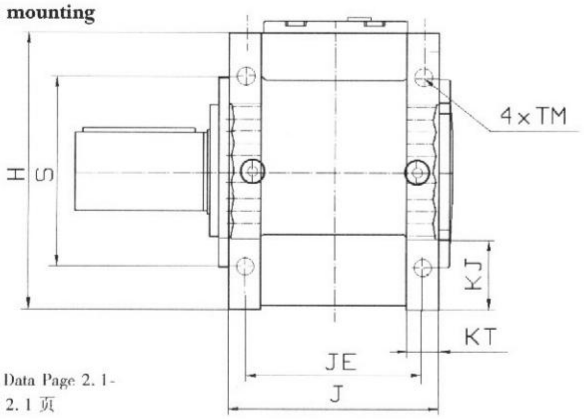
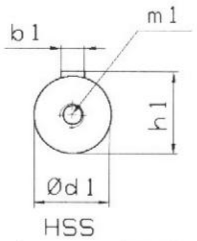
Gear Unit Dimensions

减速器尺寸

3-stage Bevel Helical Gear Unit
Upright mounting

3 级锥齿轮斜齿轮减速器
竖立安装

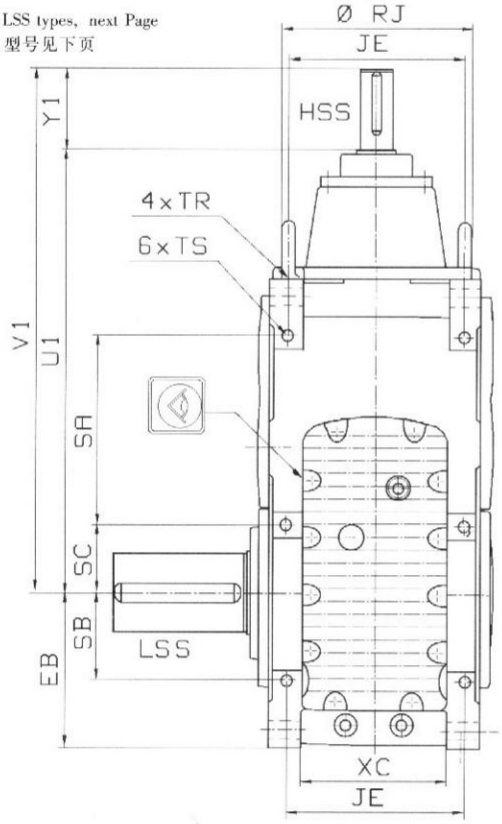


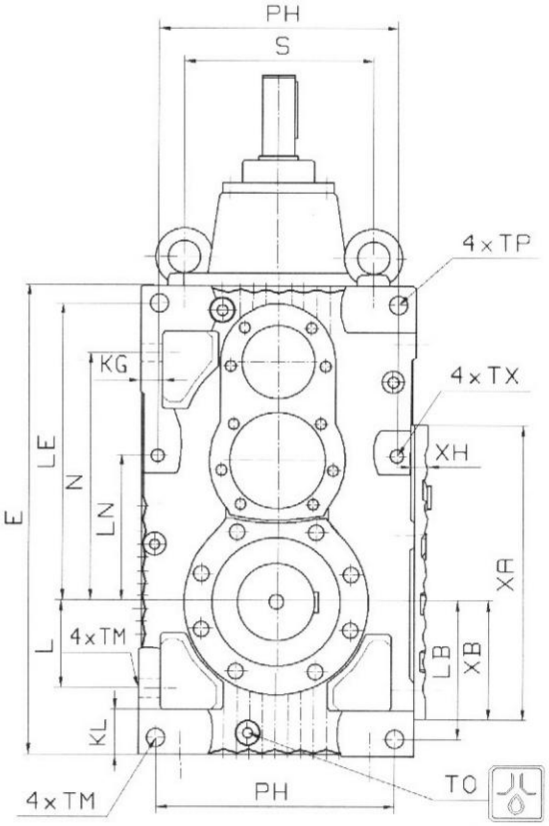


Illustrations show examples only and are not strictly binding.
The weights and oil quantities are guide values only.
插图仅仅作为例子，不是严格的装配关系。
重量和油量仅是指导值。

Technical Data Page 2. 1-
技术数据 2. 1 页

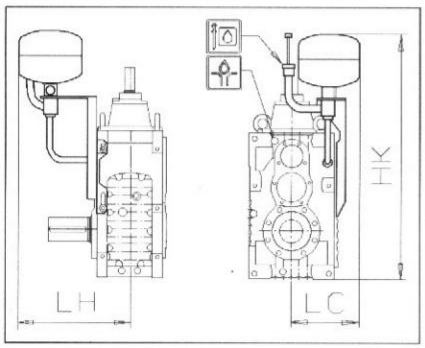
See LSS types, next Page
LSS 型号见下页





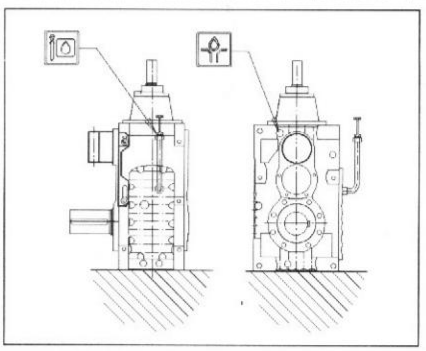
ESSENTIAL ACCESSORY
Alternatives for upright mounting

主要附件
可供竖立安装选用



Expansiontank 膨胀箱

size 规格	Accessory Dimensions in mm 附件尺寸(mm) HK	LC	LH
02	1050	310	540
03	1120	330	550
04	1190	350	580
05	1250	360	590
06	1350	380	580
07	1450	410	590
08	1550	450	590
09	1620	480	600



Shaft End Pump 轴端泵

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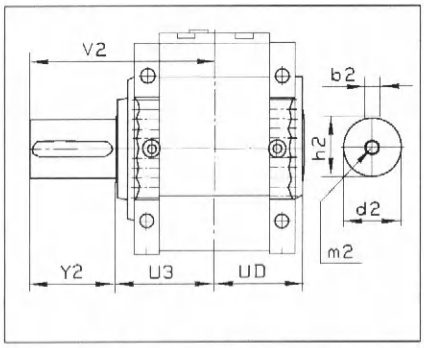
Gear Unit Dimensions 减速器尺寸

size 规格	Housing Dimensions in mm 箱体尺寸(mm)																				
	EB h11	E	H	Jh11	JE	KG	KJ	KL	KT	L	LB	LE	LN	N	PH	S	SA	SB	SC	TM	TO
02	195	574	320	260	212	28	90	68	45	98	170	354	175	282	270	206	206	114	96	24	R3/4
03	207	618	360	274	228	28	100	68	45	110	182	389	207	314	310	246	246	122	84	24	R3/4
04	229	677	400	314	260	30	118	71	50	122	201	420	233	341	344	260	256	147	114	28	R3/4
05	240	731	430	329	279	34	118	71	50	136	212	463	228	387	374	296	296	136	106	28	R3/4
06	270	812	470	356	292	40	131	88	64	141	235	507	256	413	400	308	308	141	132	33	R1
07	295	885	530	380	316	40	152	91	64	150	260	555	285	445	454	350	350	150	112	33	R1
08	322	981	600	431	353	52	153	103	78	174	280	617	318	511	516	406	406	174	115	39	R1
09	335	1049	670	451	373	52	153	103	78	187	293	672	373	566	586	476	476	187	100	39	R1

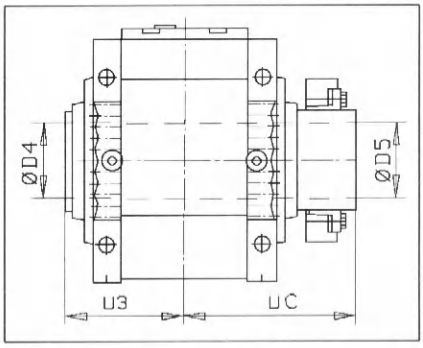
size 规格	Housing Dimensions in mm 箱体尺寸(mm)							HSS Dimensions in mm HSS 尺寸(mm)															Weight 重量	Oil Capacity 油量
											i=14-63				i=71-90				i=100-112					
	TP H9	TR=TX	TS	XA	XB	XC	XH	U1	Y1	V1	Ød1	b1	h1	m1	Ød1	b1	h1	m1	Ød1	b1	h1	m1	kg	l
02	24	M20x35	M16x32	355	135	182	18	533	100	633	35k6	10h9	38	M12	30k6	8h9	33	M10	25k6	8h9	28	M10	219	30
03	24	M20x35	M16x32	384	147	196	18	584	112	696	40k6	12h9	43	M16	30k6	8h9	33	M10	25k6	8h9	28	M10	279	36
04	28	M24x42	M16x32	430	168	211	22	642	120	762	42k6	12h9	45	M16	35k6	10h9	38	M12	25k6	8h9	28	M10	382	46
05	28	M24x42	M20x35	460	182	226	22	693	125	818	50k6	14h9	53,5	M16	40k6	12h9	43	M16	30k6	8h9	33	M10	493	65
06	33	M30x53	M20x35	525	195	248	22	758	130	888	50k6	14h9	53,5	M16	45k6	14h9	48,5	M16	35k6	10h9	38	M12	601	80
07	33	M30x53	M24x42	561	219	262	22	814	135	949	60m6	18h9	64	M20	45k6	14h9	48,5	M16	40k6	12h9	43	M16	779	115
08	39	M30x53	M24x42	597	234	289	22	890	135	1025	60m6	18h9	64	M20	55m6	16h9	59	M20	40k6	12h9	43	M16	1037	110
09	39	M30x53	M30x53	652	247	309	22	969	140	1109	70m6	20h9	74,5	M20	60m6	18h9	64	M20	45k6	14h9	48,5	M16	1299	135

Oil capacity with expansion tank
膨胀箱油量

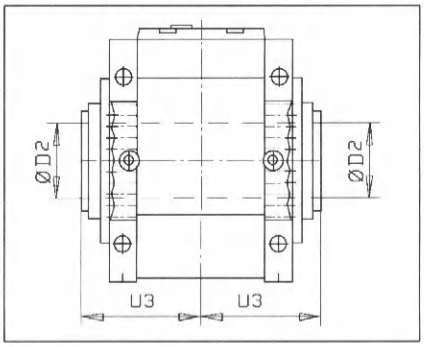
LSS types LSS 型号



Solid Shaft
实心轴



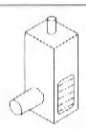
Hollow Shaft, Shrink Disk, page 4.3-
空心轴,收缩盘,4.3 页



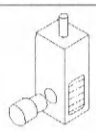
Hollow Shaft, Key Connection, page 4.4-
空心轴,键连接,4.4 页

size 规格	LSS Dimensions in mm LSS 尺寸(mm)											
	d2	b2	h2	m2	Y2	V2	U3	UC	UD	ØD2	ØD4	ØD5
02	80m6	22h9	85	M20	140	304	164	257	156	80js7/H8	86js6/H7	85h6/H7
03	100m6	28h9	106	M24	170	341	171	274	163	95js7/H8	101js6/H7	100h6/H7
04	105m6	28h9	111	M24	210	403	193	302	187	105js7/H8	111js6/H7	110h6/H7
05	120m6	32h9	127	M24	210	411	201	311	193	115js7/H8	121js6/H7	120h6/H7
06	130m6	32h9	137	M24	220	434	214	331	210	125js7/H8	131js6/H7	130h6/H7
07	140m6	36h9	148	M24	250	178	228	354	224	135js7/H8	141js6/H7	140h6/H7
08	160m6	40h9	169	M24	250	504	254	397	246	150js7/H8	151js6/H7	150h6/H7
09	170m6	40h9	179	M24	310	574	264	407	262	165js7/H8	166js6/H7	165h6/H7

Shaft Positions 轴的位置



04



04

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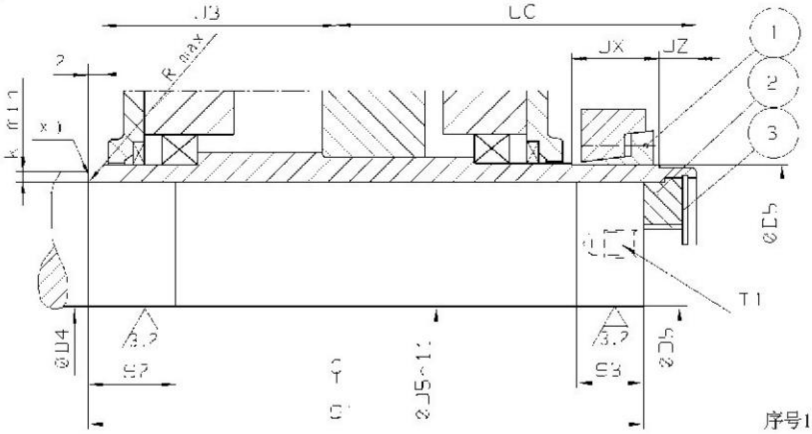
Shrink Disk 收缩盘

Hollow Shaft Bore and Driven Shaft End for Hollow Shaft Gear Units

空心轴减速器的空心轴孔和从动机轴端。

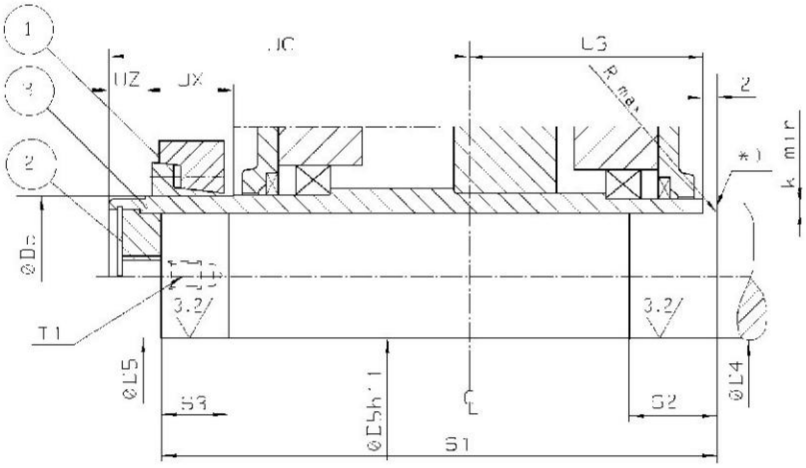
For all mounting positions. Left and right handed hollow shafts are symmetrical regarding to center line.

对所有安装位置，空心轴的左面和右面相对中心线是对称的。



Item 1: Shrink Disk
Item 2: End Plate
Item 3: Circlip
*) Shaft shoulder (not necessary)

序号1：收缩盘
序号2：端板
序号3：挡圈
*)轴肩（不需要）



For minor external axial and / or radial forces only.

If noticeable external axial and / or radial forces exist, please contact nearest **RIB** office

仅对较小的轴向和/或径向外力。

如果有非常明显的外部轴向力和/或径向外力存在，请与最近的**RIB**办事处联系。

FOR ALL GEAR UNIT TYPES

对所有型号的减速器

Gear Unit size 减速器规格	Dimensions in mm 尺寸[mm]												
	Φ DS	Φ D4	Φ D5	S1	S2	S3	k min	r max	U3	UC	UZ	UX	T1
02	110	86js6/H7	85h6/H7	386	45	53	6	3	164	257	40	54	M24 × 45
03	125	101js6/H7	100h6/H7	407	52	58	6	3	171	274	47	55	M24 × 45
04	140	111js6/H7	110h6/H7	457	57	64	6	3	193	302	47	63	M24 × 45
05	150	121js6/H7	120h6/H7	473	62	68	6	3	201	311	44	67	M24 × 45
06	165	131js6/H7	130h6/H7	507	67	72	6	4	214	331	44	72	M24 × 45
07	175	141js6/H7	140h6/H7	534	72	72	7	4	228	354	53	72	M30 × 60
08	185	151js6/H7	150h6/H7	602	77	88	7	5	254	397	54	88	M30 × 60
09	200	166js6/H7	165g6/H7	622	85	87	7	5	264	407	54	90	M30 × 60

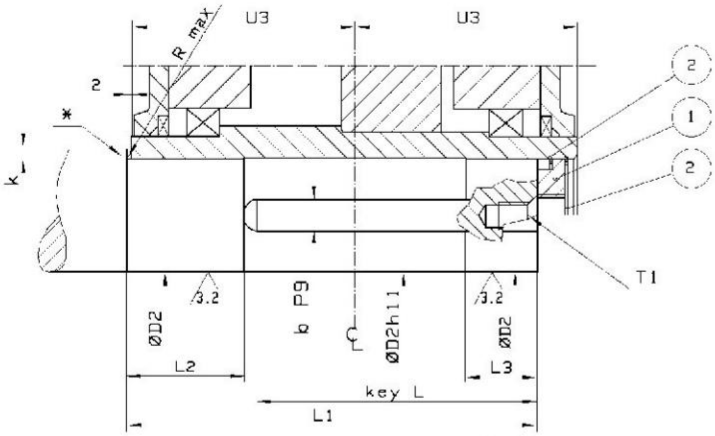
Key Connection 键连接

Hollow Shaft Bore and Driven Shaft End for Hollow Shaft Gear Units

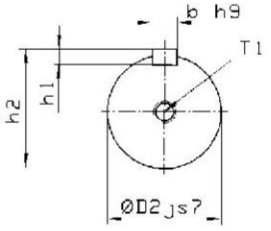
For all mounting positions. Hollow shaft bore is symmetrical regarding to center line.

空心轴减速器的空心轴孔和从动轴端。

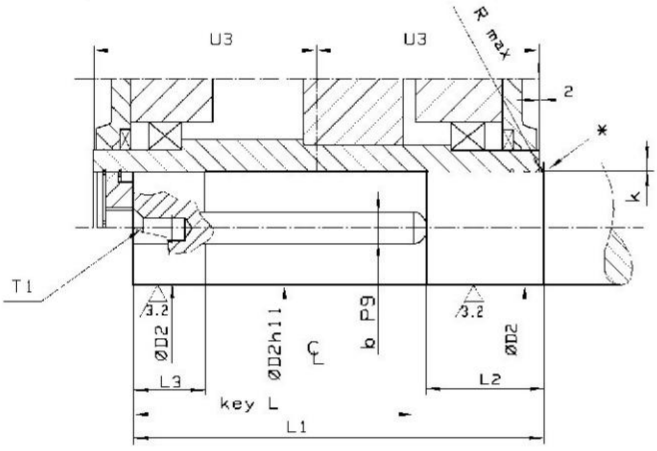
对所有安装位置，空心轴孔相对中心线是对称的。



Item 1: End Plate
Item 2: Circlip
*) Shaft shoulder required for through going shaft and with noticeable external axial forces only.



Shaft End
轴端



序号1：端板
序号2：挡圈
*)仅贯通轴和有显著轴向外力要求轴肩。

For minor external axial and / or radial forces only.
If noticeable external axial and / or radial forces exist, please contact nearest **RIB** office.

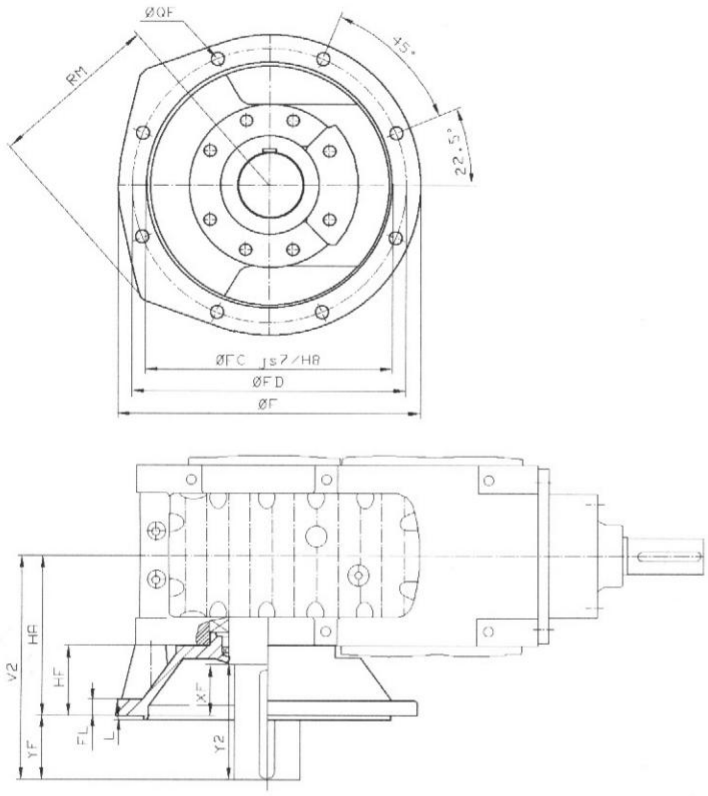
仅对较小的轴向和/或径向外力。
如果有非常明显的外部轴向力和/或径向外力存在，请与最近的**RIB**办事处联系。

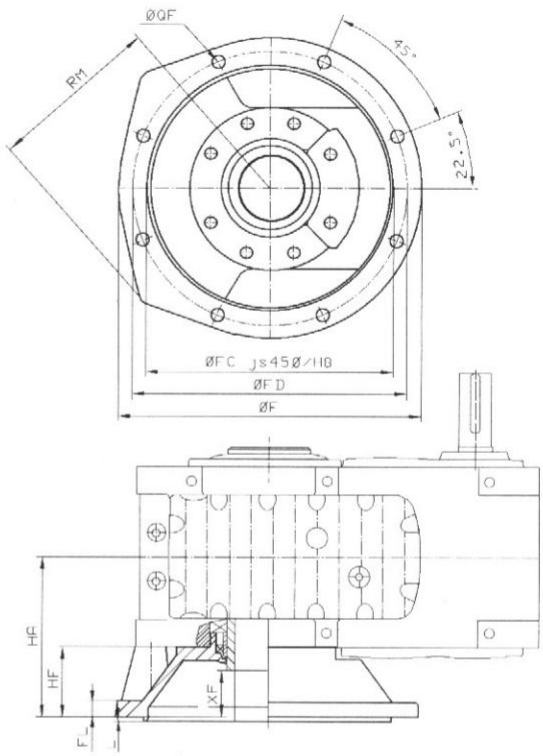
FOR ALL GEAR UNIT TYPES

对所有型号的减速器

Gear Unit size 减速器规格	Dimensions in mm 尺寸[mm]											
	Φ D2	**L1**	**L2**	**L3**	**Key L 键L**	**U3**	**T1**	**b**	**h1**	**h2**	**k min**	**r max**
02	80js7/H8	290	82	40	196	164	M24 × 45	22	14	85	5	3
03	95js7/H8	303	91	48	199	171	M24 × 45	25	14	100	5	3
04	105js7/H8	346	96	52	236	193	M24 × 45	28	16	111	5	3
05	115js7/H8	361	101	57	244	201	M24 × 45	32	18	122	5	3
06	125js7/H8	388	107	63	265	214	M24 × 45	32	18	132	6	4
07	135js7/H8	409	118	67	273	228	M30 × 60	36	20	143	6	4
08	150js7/H8	460	126	75	316	254	M30 × 60	66	20	158	7	5
09	165js7/H8	480	133	82	327	264	M30 × 60	40	22	174	7	5

Mounting Flange 安装法兰





Hollow shaft with key or with shrink disk:
Shaft dimensions see Sections Shrink Disk and Key Connection.
Solid shaft: Shaft dimensions see Gear Unit Dimension Drawing pages.

带键或收缩盘的空心轴：
轴的尺寸见收缩盘和键连接一节。
实心轴：轴的尺寸见减速器尺寸图页。

Vertical LSS / 垂直 LSS

Gear unit size 减速器规格	ØF	ØFD	ØC js/H8	ØQF	L	FL	YF	Y2	XF	HF	V2	HA	RM
02	440	400	350	18	5	22	74	140	66	100	304	230	237
03	500	450	400	18	5	25	88	170	81	115	340	252	260
04	500	450	400	18	6	25	126	210	84	120	403	277	293
05	550	500	450	22	6	30	112	210	99	135	412	300	311
06	600	550	500	22	7	30	113	220	107	143	434	321	337
07	660	600	550	22	7	30	148	250	102	140	478	330	378
08	730	680	620	27	7	35	139	250	112	150	505	366	421
09	750	680	620	27	7	35	184	310	127	165	575	391	452

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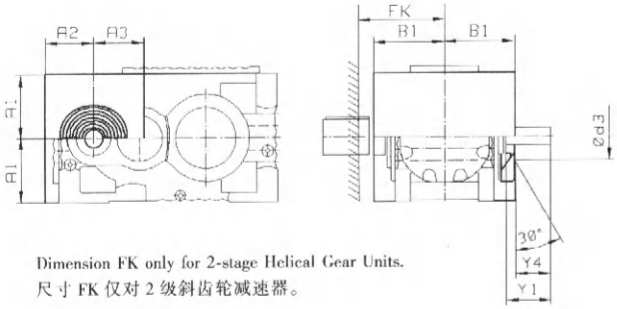
Fan 风扇

Gear unit types/ 减速器型号 MC. . PL, MC. . PE

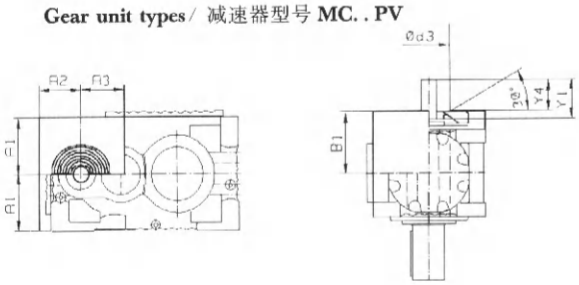


Dimension FK only for 2-stage Helical Gear Units.
尺寸 FK 仅对 2 级斜齿轮减速器。

MC2PL / MC2PE, MC3PL / MC3PE

Size 规格	A1	A2	A3	B1	FK	Y4	Y1	Air Inlet/ 空气入口 Ød3	Angle/ 角度
02	158	160	140	210	233	90	120	131	30°
03	178	180	140	215	255	90	120	131	30°
04	198	195	165	235	275	100	130	156	30°
05	213	205	170	245	295	105	135	156	30°
06	232	225	205	260	308	110	140	198	30°
07	263	250	230	270	330	110	140	226	30°
08	298	275	230	295	355	130	160	226	30°
09	335	280	230	305	365	130	160	226	30°

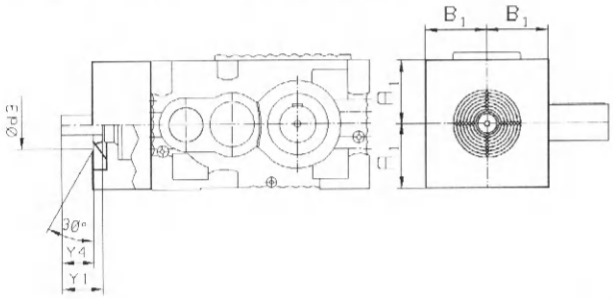
Gear unit types/ 减速器型号 MC. . PV



MC2PV, MC3PV

Size 规格	A1	A2	A3	B1	Y4	Y1	Air Inlet/ 空气入口 Ød3	Angle/ 角度
02	158	160	140	210	90	120	131	30°
03	178	180	140	215	90	120	131	30°
04	198	195	165	235	100	130	156	30°
05	213	205	170	245	105	135	156	30°
06	232	225	205	260	110	140	198	30°
07	263	250	230	270	110	140	226	30°
08	298	275	230	295	130	160	226	30°
09	335	280	230	305	130	160	226	30°

Gear unit types/ 减速器型号 MC. . RL, MC. . RE



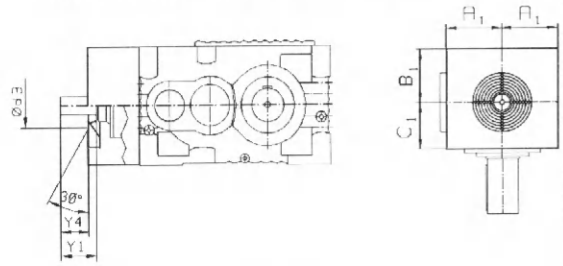
MC2RL / MC2RE

Size 规格	A1	B1	Y4	Y1	Air Inlet/ 空气入口 Ød3	Angle/ 角度
02	158	160	100	130	109	30°
03	178	165	105	135	131	30°
04	198	185	105	135	131	30°
05	213	195	108	138	156	30°
06	232	220	110	140	156	30°
07	262	230	130	160	156	30°
08	297	255	130	160	198	30°
09	332	265	165	195	226	30°

MC3RL / MC3RE

Size 规格	A1	B1	Y4	Y1	Air Inlet/ 空气入口 Ød3	Angle/ 角度
02	158	160	70	100	109	30°
03	178	165	82	112	131	30°
04	198	185	90	120	131	30°
05	213	195	95	125	156	30°
06	232	220	100	130	156	30°
07	262	230	105	135	156	30°
08	297	255	105	135	198	30°
09	332	265	110	140	226	30°

Gear unit types/ 减速器型号 MC. . RV



MC2RV

Size 规格	A1	B1	C1	Y4	Y1	Air Inlet/ 空气入口 Ød3	Angle/ 角度
02	180	160	125	100	130	109	30°
03	200	165	133	105	135	131	30°
04	220	185	152	105	135	131	30°
05	235	195	159	108	138	156	30°
06	260	220	172	110	140	156	30°
07	290	230	184	130	160	156	30°
08	325	255	210	130	160	198	30°
09	360	265	219	165	195	226	30°

MC3RV

Size 规格	A1	B1	C1	Y4	Y1	Air Inlet/ 空气入口 Ød3	Angle/ 角度
02	180	160	125	70	100	109	30°
03	200	165	133	82	112	131	30°
04	220	185	152	90	120	131	30°
05	235	195	159	95	125	156	30°
06	260	220	172	100	130	156	30°
07	290	230	184	105	135	156	30°
08	325	255	210	105	135	198	30°
09	360	265	219	110	140	226	30°

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Water/Oil Cooler 水/油冷却器

1. Shaft End Pump for Gear Units

Shaft End Pump is used when
- upper bearings are pressure lubricated
- Oil filter is used
- Oil heat exchanger is necessary

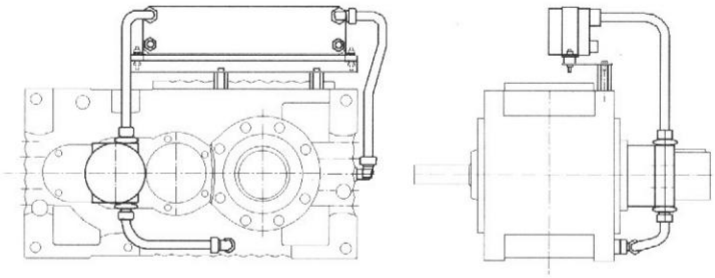
Space for oil pump and oil pipes; See Dimensional Drawings.

1. 减速器轴端泵

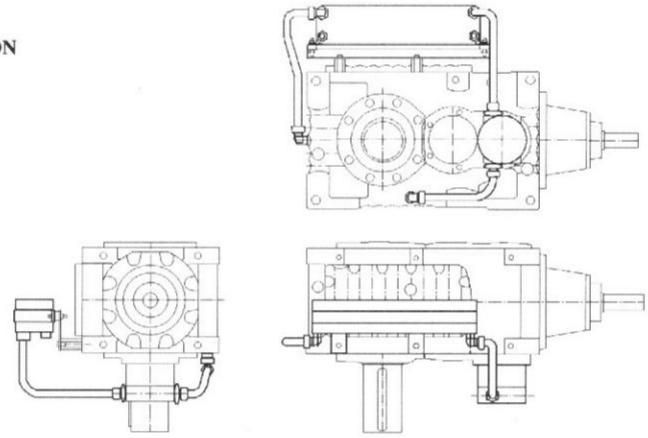
下列情况用轴端泵
- 上面轴承用压力润滑
- 用油过滤器
- 需用油散热器

油泵和油管空间;见尺寸图。

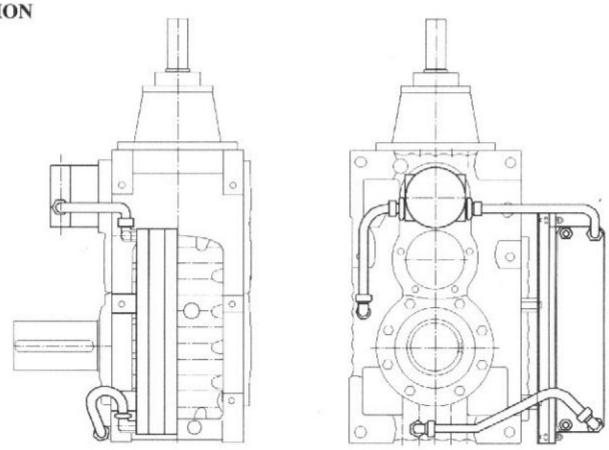
HORIZONTAL GEAR UNIT POSITION
水平减速器位置



VERTICAL GEAR UNIT POSITION
垂直减速器位置



UPRIGHT GEAR UNIT POSITION
竖立减速器位置



2. Oil coolers for COMPACT gear units

Correct size of oil cooler, please contact SEW office nearest you.

For other oil cooling units and oil circulation accessories, please see Section Lubrication unit.

2. COMPACT 减速器的油冷却器

油冷却器的正确尺寸请与最近的 SEW 办事处联系。

对其它的油冷却装置和油循环设备请见润滑装置一节。

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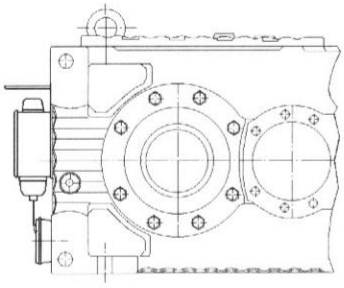
Oil Heating System 油加热系统

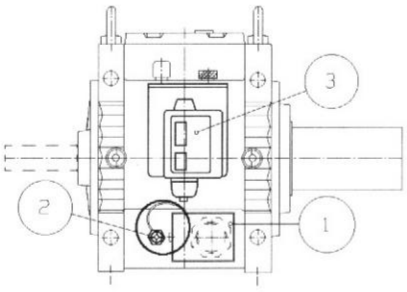
Oil heating system is used to ensure the function of the lubrication in cold condition start ups.

为保证冷却条件下起动时的润滑功能，使用油加热系统。

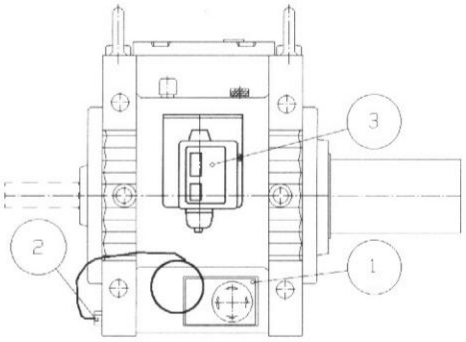
HORIZONTAL LSS **水平 LSS**



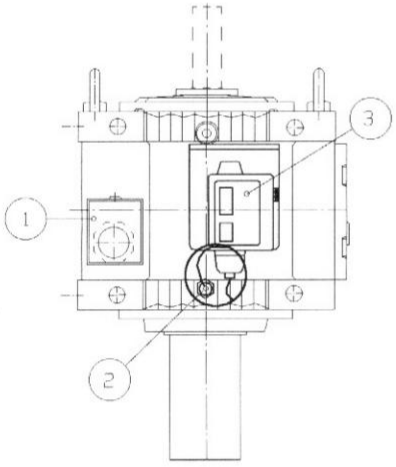
Sizes 04-06
规格 04-06

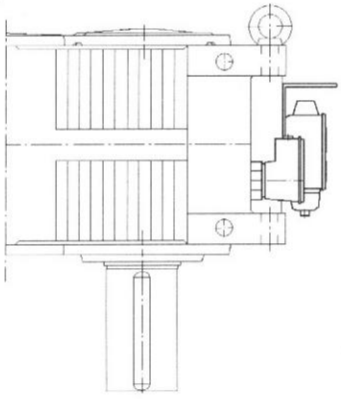


Sizes 07-08
规格 07-08



VERTICAL LSS **垂直 LSS**





Components:
1. Oil heater
2. Sensor
3. Thermostat

组件：
1. 油加热器
2. 传感器
3. 恒温器

Gear unit size 减速器规格	Power [W] 功率 [W]	Voltage [V] 电压 [V]
04	600	400/230
05	600	400/230
06	600	400/230

Gear unit size 减速器规格	Power [W] 功率 [W]	Voltage [V] 电压 [V]
07	1200	400/230
08	1200	400/230
09	1200	400/230

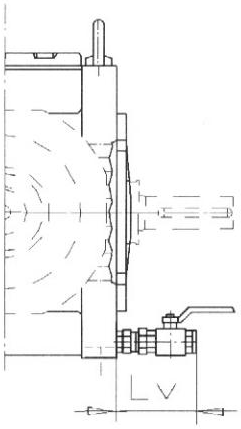
Oil heating system for upright mounting powition on request. Please contact nearest **RIB** office.

要求竖立安装位置的油加热系统请与最近的**RIB**办事处联系。

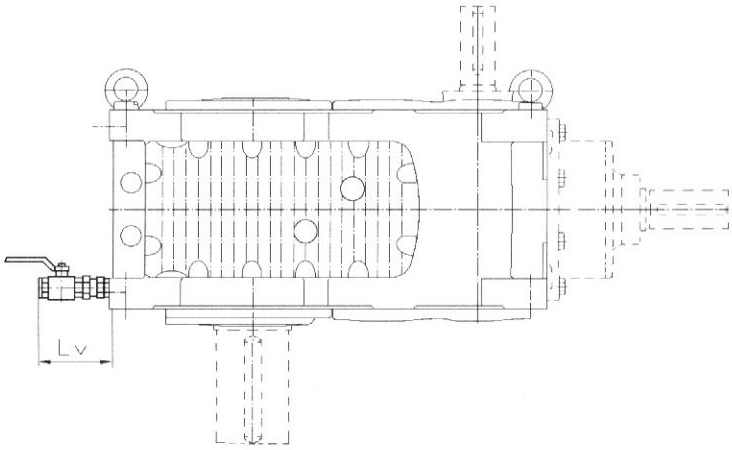
Oil Drain Valves 泄油阀

Size of the oil drain valve depends on the size of gear unit. Oil drain valve can be furnished with an extension tube. Standard lengths (Lp) are in table. Other lengths are also possible.

泄油阀的尺寸取决于减速器的规格。泄油阀可以备伸长管，标准长度（Lp）列于表中，也可以用其它长度。



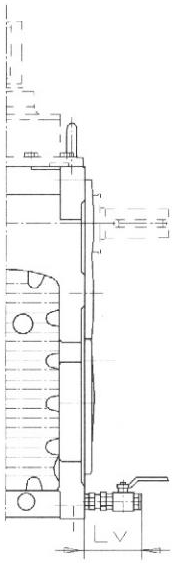
HORIZONTAL MOUNTING
水平安装



VERTICAL MOUNTING
垂直安装

Oil drain valve lengths / 泄油阀长度

Gear Unit Size 减速器规格	Size 尺寸	Length Lv 长度 Lv
02	R ¾ ″	115
03	R ¾ ″	115
04	R ¾ ″	115
05	R ¾ ″	115
06	R1 ″	140
07	R1 ″	140
08	R1 ″	140
09	R1 ″	140



UPRIGHT MOUNTING
竖立安装

Optional Seal Arrangements 可选密封装置

Seal arrangement selection does not effect on outer shaft end dimensions.

Horizontal shaft, both high speed shaft (HSS) and low speed shaft (LSS)

Seal arrangement alternatives on each shaft:

* Single lip seal with dust protection cover (basic solution for helical and bevel helical gear unit)
  - clean environment
* Double lip seal with regreaseable dust protection cover
  - dusty environment with abrasive particles
* Single lip seal with radial grease labyrinth
  - dusty environment with abrasive partictes

密封装置的选择不影响外部的轴端尺寸。

水平轴，高速轴（HSS）和低速轴（LSS）

各轴上可供选择的密封装置：

* 单唇密封（斜齿减速器的基本方案）
  带防尘盖的单唇密封（斜齿轮和锥齿轮—斜齿轮减速器的基本方案）
  - 清洁环境
* 带防尘盖的双唇密封
  - 带磨蚀粒子的灰尘环境
* 带径向油脂迷宫的单唇密封
  - 带磨蚀粒子的灰尘环境

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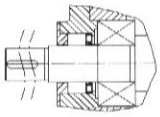
Optional Seal Arrangements 可选密封装置

HIGH SPEED SHAFT **高速轴**

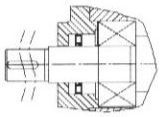
Horizontal shaft end **水平轴端**

Basic solution:
Single lip seal (for helical gear uits only)



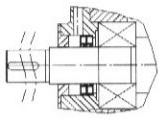
基本方案：
单唇密封(仅对斜齿轮减速器)

Basic solution:
Single lip seal with dust protection cover
(for bevel helical gear uits only)



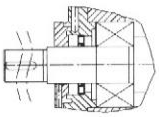
基本方案：
带防尘盖的单唇密封
(仅对锥齿轮—斜齿轮减速器)

Double lip seal with regreaseable dust protection cover



带油脂防尘盖的双唇密封

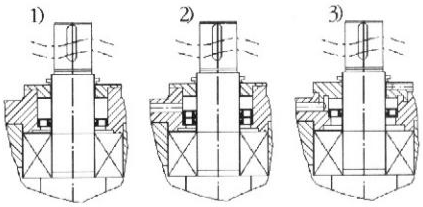
Single lip seal with radial grease labyrinth



带径向油脂密宫的单唇密封

Vertical shaft end, upwards **垂直轴向上**

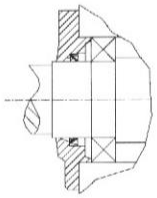
1) Single lip seal with dust protection cover
2) Double lip seal with regreaseable dust protection cover
3) Single lip seal with radial grease labyrinth



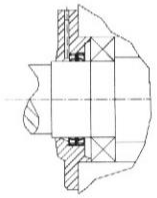
1) 带防尘盖的单唇密封
2) 带油脂防尘盖的双唇密封
3) 带径向油脂密宫的单唇密封

LOW SPEED SHAFT/低速轴

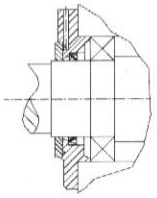
Solid shaft /实心轴



Basic solution for horizontal LSS:
Single lip seal with dust protection cover.
(Basic solution for vertical LSS downwards:
Double lip seal with dust protection cover.)
水平 LSS 的基本方案：
带防尘盖的单唇密封。
(LSS 垂直向上的基本方案：带防尘盖的双唇密封)

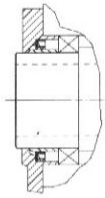


Double lip seal with
regreaseable dust protection cover.
带油脂防尘盖的双唇密封。

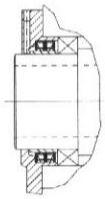


Single lip seal radial with grease labyrinth
带径向油脂密宫的单唇密封。

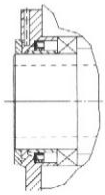
Hollow shaft /空心轴



Wear sleeve included
包括耐磨套管



Wear sleeve included
包括耐磨套管



Wear sleeve included
包括耐磨套管

Manufacturer reserves the right to alteration

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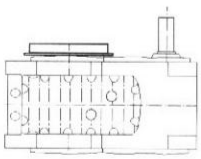
Coupling Guard 联轴器保护装置

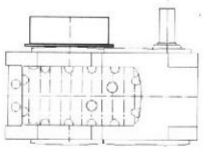
Coupling guards for input shaft couplings can be used with or without cooling fans.

有或无冷却风扇均能用输入轴联轴器保护装置。

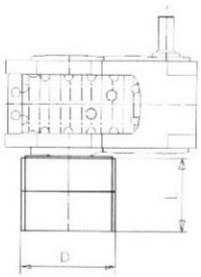
Hollow shaft end covers
空心轴端盖



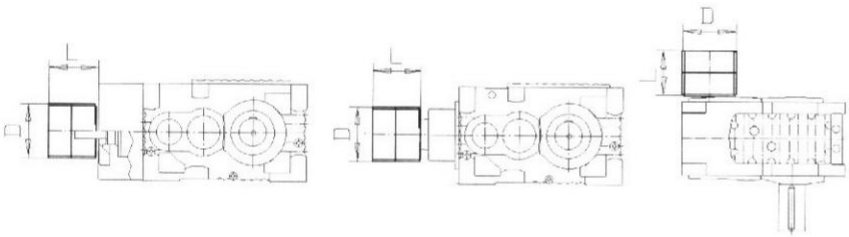
Shrink disk covers
收缩盘盖



Coupling guards for outupt shaft couplings
输出轴联轴器的保护装置



Size 规格	Max Coupling diameter 联轴器的最大直径	Length [L] 长度 [L]	Diameter [D] 直径 [D]
1	150	138 – 190	216
2	150	190 – 294	216
3	240	190 – 294	306
4	240	297 – 483	306
5	370	297 – 483	436
6	480	483 – 830	546
7	580	483 – 830	646

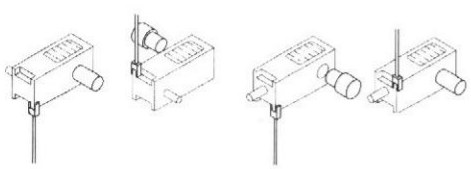


Torque arm 力矩支臂

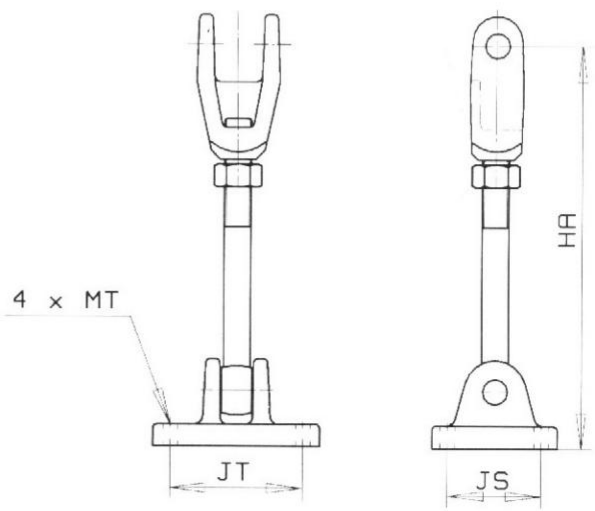
When ordering the torque arm, dimension HA must be advised. It can be freely chosen between HA_{min}-HA_{max}. If HA is to be longer than HA_{max} the torque reaction arm will be of special design.

订购力矩支臂时必须告知 HA 尺寸。可以在 HA_{min}-HA_{max} 之间任意选择。如果 HA 比 HA_{max} 长，力矩反作用支臂要专门设计。

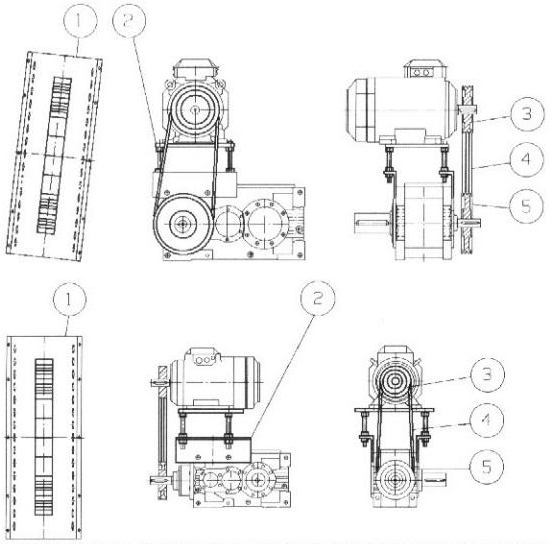
Gear unit size 减速器规格	HA	JT	JS	MT
02 – 03	360…410	148	100	Ø18
04 – 05	405…455	148	100	Ø18
06 – 07	417…467	148	100	Ø18
08 – 09	432…482	188	130	Ø22



Torque arm must be on driven machine side.
力矩支臂必须在从动机边。



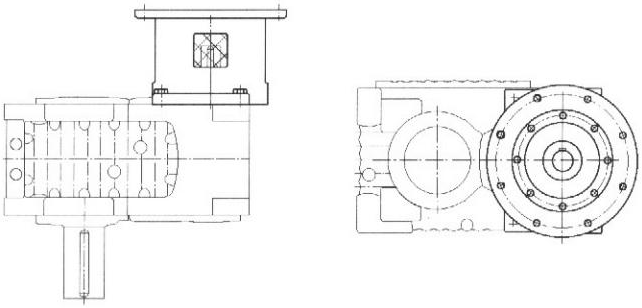
Belt Drive 带传动



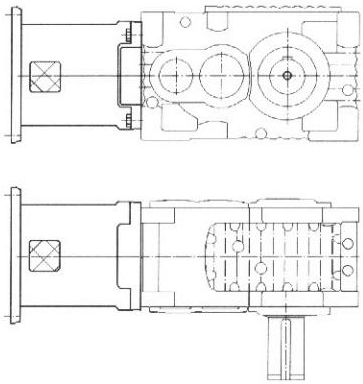
Component /组件
1. Belt guard/胶带保护装置
2. Motor bracktet/电动机支架
3. Pulley (dp)/带轮
4. V-belts/V 型带
5. Pulley (Dp)/带轮

Motor Flange 电动机法兰

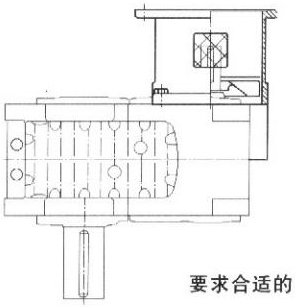
HELICAL GEAR UNITS
斜齿轮减速器



BEVEL HELICAL GEAR UNITS
锥齿轮－斜齿轮减速器



Motor flange can also be equiped together with cooling fan.
电动机法兰也可以和冷却风扇一起配置。



Suitalbe motor flange on request. Please contact nearest RIB office.

要求合适的电动机法兰请与最近的RIB办事处联系。

Manufacturer reserves the right to alteration

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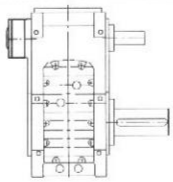
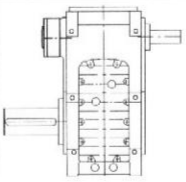
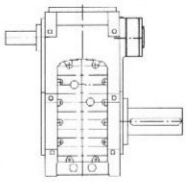
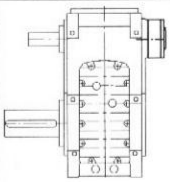
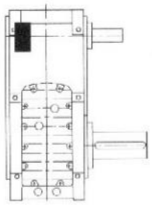
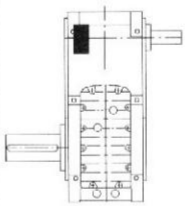
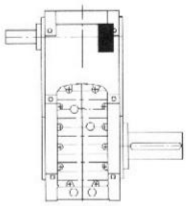
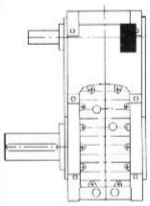
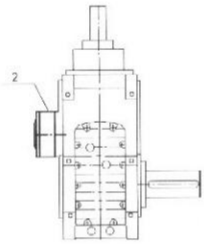
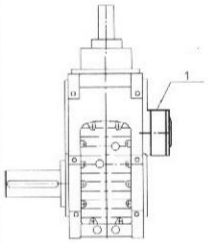
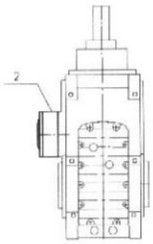
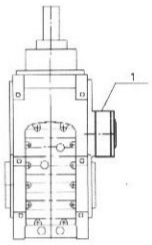
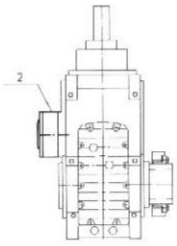
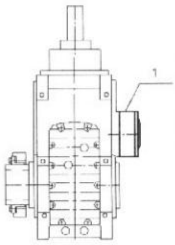
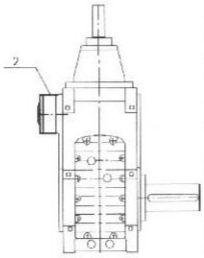
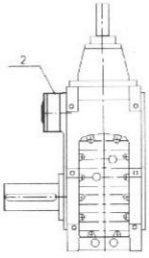
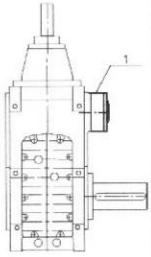
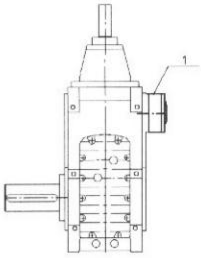
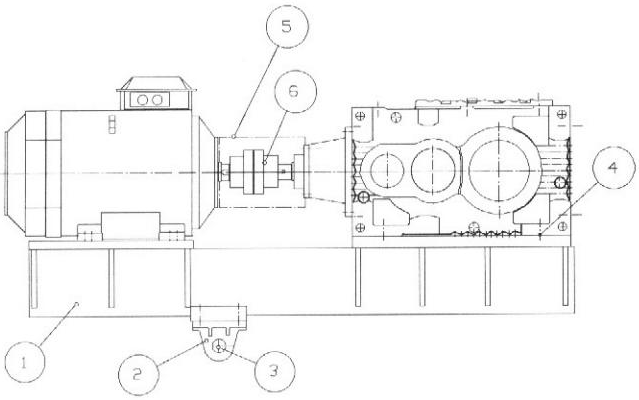
Back Stop 逆止器

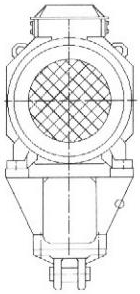
SHAFT POSITIONS 轴的位置	13	14	23	24
MC2P Solid shaft/实心轴 Hollow shaft with keyway/带键槽的空心轴 Hollow shaft with shrink disk/带收缩盘的空心轴				
MC3P Solid shaft/实心轴 Hollow shaft with keyway/带键槽的空心轴 Hollow shaft with shrink disk/带收缩盘的空心轴				
SHAFT POSITIONS 轴的位置	03	04	03	04
MC2R Solid shaft/实心轴				
MC2R Hollow shaft with keyway/带键槽的空心轴				
MC2R Hollow shaft with shrink disk/带收缩盘的空心轴				
MC3R Solid shaft/实心轴 Hollow shaft with keyway/带键槽的空心轴 Hollow shaft with shrink disk/带收缩盘的空心轴				

Swing Base for motor 电动机摆动底座

Swing Base for conveyor drives will be manufactured according to order.

根据订货单设计和制造输送机传动的摆动底座。





1. Swing Base beam
2. Torque Arm mounting bracket
3. Torque Arm pin
4. Fastening screws
5. Coupling Guard
6. Coupling

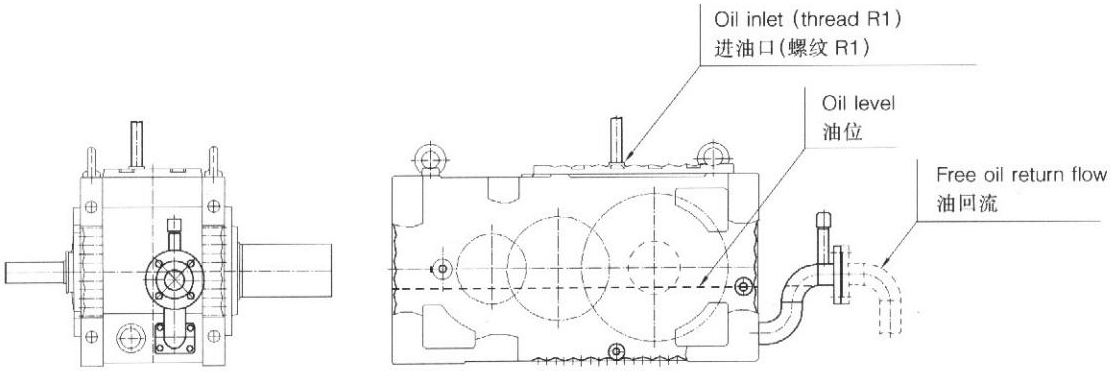
1. 摆动底座
2. 力矩支臂安装座
3. 力矩支臂销钉
4. 紧固螺钉
5. 联轴器保护装置
6. 联轴器

Central Lubrication System connections 集中润滑系统连接

Equipment to connect the gear unit to the centralized oil filtering and cooling system.

连接减速器与集中滤油和冷却系统的装置。

SPLASH LUBRICATION
飞溅润滑



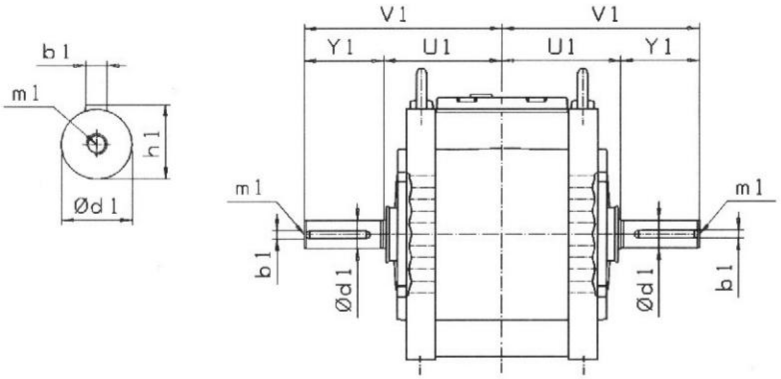
The diameter and height of the oil outlet pipe vary according to the gear unit size, lubrication method, oil viscosity and oil amount. **RIB** can deliver a visual or electrical flow meter to ensure the right oil flow into the gear unit.
Dimensions of the attachment flange depend on the pipe diameter and are according to the standard DIN 2642.

油管出口直径和长度随减速器尺寸、润滑方法、油的粘度和油量而变化。

RIB可以提供目视或电子流量计，保证油流入减速器正确。连接法兰的尺寸与管子直径有关，根据标准 DIN 2642。

Through Going Shaft 贯通轴

INPUTSHAFTS 贯通输入轴



Two stage helical gear units/两级平行轴

size 规格	Ratio area 速比范围	Ød1	h1	b1	m1	V1	Y1	U1
02	7,1–11,2	48k6	51,5	14h9	M16	290	120	170
	12,5–20	40k6	43	12h9	M16	290	120	170
03	7,1–11,2	50k6	53,5	14h9	M16	297	120	177
	12,5–20	42k6	45	12h9	M16	297	120	177
04	7,1–11,2	55m6	59	16h9	M20	327	130	197
	12,5–20	50k6	53,5	14h9	M16	327	130	197
05	7,1–11,2	60m6	64	18h9	M20	340	135	205
	12,5–20	50k6	53,5	14h9	M16	340	135	205
06	7,1–11,2	70m6	74,5	20h9	M20	358	140	218
	12,5–20	55m6	59	16h9	M20	358	140	218
07	7,1–11,2	75m6	79,5	20h9	M20	370	140	230
	12,5–20	60m6	64	18h9	M20	370	140	230
08	7,1–11,2	80m6	85	22h9	M20	416	160	256
	12,5–20	65m6	69	18h9	M20	416	160	256
09	7,1–11,2	85m6	90	22h9	M20	426	160	266
	12,5–20	75m6	79,5	20h9	M20	416	160	256

Three stage helical gear units/三级平行轴

size 规格	Ratio area 速比范围	Ød1	h1	b1	m1	V1	Y1	U1
02	22,5–35,5	32k6	35	10h9	M12	290	120	170
	40–63	30k6	33	8h9	M10	290	120	170
	71–112	25k6	28	8h9	M10	290	120	170
03	22,5–35,5	38k6	41	10h9	M12	297	120	177
	40–63	35k6	38	10h9	M12	297	120	177
	71–112	28k6	31	8h9	M10	297	120	177
04	22,5–35,5	38k6	41	10h9	M12	327	130	197
	40–63	35k6	38	10h9	M12	327	130	197
	71–112	30k6	33	8h9	M10	327	130	197
05	22,5–40	48k6	51,5	14h9	M16	340	135	205
	45–63	40k6	43	12h9	M16	340	135	205
	71–112	32k6	38	10h9	M12	340	135	205
06	22,5–40	48k6	51,5	14h9	M16	358	140	218
	45–63	40k6	43	12h9	M16	358	140	218
	71–112	35k6	38	10h9	M12	358	140	218
07	22,5–40	50k6	53,5	14h9	M16	370	140	230
	45–63	45k6	48,5	14h9	M16	370	140	230
	71–112	38k6	41	10h9	M12	370	140	230
08	22,5–40	55m6	59	16h9	M20	416	160	256
	45–63	50k6	53,5	14h9	M16	416	160	256
	71–112	42k6	45	12h9	M16	416	160	256
09	22,5–40	60m6	64	18h9	M20	426	160	266
	45–63	55m6	59	16h9	M20	426	160	266
	71–112	45k6	48,5	14h9	M16	416	160	256

In case of external radial forces on input shaft, please contact **RIB**.

当高速轴有外载径向力时，请向**RIB**咨询。

Solid output shaft

Dimensions are the same as for standard solid shafts.

实心输出轴

尺寸同标准的实心轴尺寸。

lubrication Unit 润滑装置

1.Selecting oil flow and cooling rating

- $P_L = \left(P_{KI} - \frac{P_T}{2}\right)(1-\eta)$ [kW]
- $Q_R = 2.3 \times P_L$ [dm³/min]
- $Q_P \geq Q_R$

Single reduction	η=0.985
Double reduction	η=0.97
Triple reduction	η=0.955
Quadruple reduction	η=0.94
Quintuple reduction	η=0.93

P_L =power loss to be cooled [kW]
P_{KI}=gear unit running load [kW]
P_T =gear unit thermal rating(from catalogue) [kW]
η =efficiency
Q_R =oilflow needed for cooling the gear unit [dm³/min]
Q_P =Oil pump output [dm³/min]

1.1.Choosing the size of the Oil Cooler:

- $P_C \geq F_L \times P_L$

FL=1.1...1.2
clean... dirty cooting media

P_C=Cooling Rating(see table 1,2and 3) [kW]
F_L=safety factor for cooling capacity

1.2.Water flow needed for Water /Oil Coolers:

- $Q_W \leq 2 \times P_L$, Plate Cooler, type P
- $Q_W = 1.5...3 \times P_L$, Pipe Cooler,types B,BS or R
  clean...dirty water

Q_W=water flow [dm³/min]

2. Specifying the Lubrication Unit Modules

MHP12/P820/FF25V/IW../S

- (Special construction)
- (Additional instruments)
- Standard instruments (See section 3)
- Filter Module:$\beta_{25} \geq 75$
- V=Visual indicator
- E=Electrical indicator
- Cooler Module P,B,BS,R or A
- Pump Module

See selection tables 1,2 and 3.
Information to be given in an order:
-type of the unit (code above)
-motor main voltage and frequency
-instrument voltage (and frequency)
-ambient temperature range
-water temperature range (for water coolers)
-mounting position and location of the unit(Picture 1)
-installation height H (Picture 1)and hose length L_4(picture 1)must be advised to SEW when the lubrication unit is installed separate from the gear unit.

It is recommended to place the Lubrication Unit at the low speed shaft end of the gear unit (mounting position W)

The maximum length of the standard suction hose is 1000mm. The maximum length of the pressure hose is 1500mm. If hoses of greater length are required, the hose size must be increased and it is recommended to use steel piping between the Gear Unit and the Lubrication Unit (refer to SEW for further information).
-Order example:MHP12/P820/FF25V/IW,at LSS end of the gear unit.

1.油的流量和冷却功率选择

- $P_L = \left(P_{KI} - \frac{P_T}{2}\right)(1-\eta)$ [kW]
- $Q_R = 2.3 \times P_L$ [dm³/min]
- $Q_P \geq Q_R$

单级减速	η=0.985
两级减速	η=0.97
三级减速	η=0.955
四级减速	η=0.94
五级减速	η=0.93

P_L =冷却功率损失 [kW]
P_{KI}=减速器运行负载[kW]
P_T =减速器热功率(来自产品样本)[kW]
η =效率
Q_R =减速器冷却所需的油的流量 [dm³/min]
Q_P =油泵输出功率 [dm³/min]

1.1.油冷却器的尺寸选择：

- $P_C \geq F_L \times P_L$

FL=1.1...1.2
清洁的..脏的冷却介质

P_C=冷却功率(见表 1,2,3) [kW]
F_L=冷却容量的安全系数

1.2 水/油冷却器所需水的流量：

- $Q_W \leq 2 \times P_L$,板式冷却器,型号 P
- $Q_W = 1.5...3 \times P_L$,管式冷却器,型号 B,BS 或 R
  清洁...脏水

Q_W=水流量 [dm³/min]

2. 润滑装置模块的说明

MHP12/P820/FF25V/IW../S

- (专用结构)
- (附加仪表)
- 标准仪表(见第 3 章)
- 过滤器模块:$\beta_{25} \geq 75$
- V=目视指示器
- E=电子指示器
- 冷却器模块 P,B,BS,R 或 A
- 泵模块

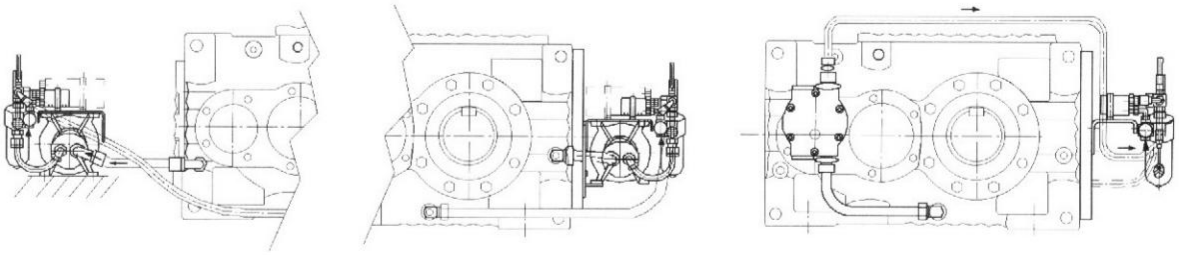
见选择表 1,2,和 3,
所给资料如下：
-装置的型号(上述代码)
-电动机电源的电压和频率
-仪表的电压(和频率)
-环境温度范围
-水的温度范围(对水冷却器)
-安装位置和装置的配置(图 1)
-当润滑装置与减速器分别安装时,安装高度 H(图 1)和软管长度 L_4(图 1)必须通知 SEW.

建议把润滑装置安置在减速器的低速轴端(安装位置 W)。

标准的吸水软管最大长度 1000mm.压力软管的最大长度 1500mm.如果要求更长的软管,必须增加软管尺寸和建议在减速器和润滑装置间用钢管(更进一步的资料向 SEW 咨询)。

例如:MHP12/P820/FF25V/IW,在减速器的 LSS 端。

Lubrication Unit 润滑装置

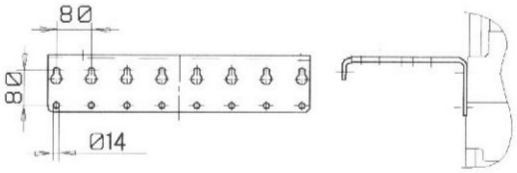


F=Floor
F=地板

W=wall
W=墙

Picture 1. Mounting Positions. Position W recommended.

图 1:安装位置,建议位置 W



Mounting on the wall

安装在墙上

Picture 2. Mounting plate for wall mounting

图 2.墙上的安装板

3.Technical data of components

Protection class for all electrical components is at minimum IP54.All electrical instruments can be connected according to NC(Normally closed)principle.

3.1.Component modules

1.Pump,type MHP,Gear Wheel Pump+Motor,nominal pressure 1Mpa (10bar/145psi). Optionally:

- -type HP,Shaft End Pump ,one rotation direction
- -type RHP,Shaft End Pump, two rotation direction

2.Fiber-glass Filter, type FF, standard degree of filtration 25μm abs; β_{25}=75 (ISO 4572)

A1.Standard visual Filter Contamination Indicator code V.

A2.OptionallyElectrical Contamination Indicator (24VDC or 230VAC).Code E.

3.Cooler type P,Plate Cooler, material AISI 316/Cu.Not for seawater (table 1).

Optionally:

- -type BS,Pipe Cooler , material Cu/Ni,for sea water (see table 2)
- -type B,Pipe Cooler , material Cu/Ni,not for seawater (table2)
- -type R,Pipe Cooler , material AISI 316,not for seawater (table 2)
- -type A,Air oil Cooler(table 3)

3.2Instrument module

3.2.1Standard instruments

Use code IW for Lubrication Unit with Water Cooler and code IA for Lubrication Unit with Air Cooler:

4.Cooling Power Regulator

- -for Water Coolers, Thermostatic Water Valve, minimum water pressure required 200 kPa (2 bar/29 psi).
- -for Air Coolers, Thermostatic Switch (controls the cooling fan of the Air Cooler)

5.Thermometer,scale 0...100℃(+32...+212°F)

6.Pressure gauge, scale 0...10 bar(0...145 psi).

7.Pressure relief valve. Adjusted at our works.

8.Pressure switch (24VDC or 230 VAC)

3.2.2 Additional Imstruments

A3.Temperature Monitors (2pcs;70℃and 80℃,24VDC or 230VAC).Additional code 2T.

A4.Flow Indicator;visual (FV),electrical (FE)

A5.Connection Box (CB).

For special instruments please contact SEW.

3.元件的技术数据

所有电子元件的防护等级为 IP54。所有电子设备可以根据 NC(常闭)原则连接。

3.1 元件模块

1.泵,型号 MHP,齿轮泵+电动机,公称压力 1Mpa(10bar/145psi)可任选的:

- -型号 HP,轴端泵,单转动方向
- -型号 RHP,轴端泵,两个转动方向

2.玻璃纤维过滤器,型号 FF,标准过滤度 25μm;β_{25}=75(ISO 4572)

A1.标准目测过滤器污垢指示器代码 V

A2.可选择的电子污垢指示器(24VDC 或 230VAC)。代码 E。

3.冷却器型号 P,板式冷却器,材料 AISI 316/ Cu,海水不用(表 1),可选择:

- -型号 BS,管式冷却器,材料 Cu/Ni,对海水(见表 2)
- -型号 B,管式冷却器,材料,cu/Ni,不对海水(见表 2)
- -型号 R,管式冷却器,材料 AIAS 316,不对海水(表 2)
- -型号 A,油气冷却器(表 3)

3.2 仪表模块

3.21 标准仪表

对带水冷却器的润滑装置用代码 IW,对带空气冷却器的润滑装置用代码 IA.

4.冷却功率调节器

-对水冷却,恒温水阀门,要求最小水压 200Kpa(2 bar /29psi)

-对空气冷却,恒温开关(控制空气冷却器的冷却风扇)。

5.温度计, 刻度 0...100℃(+32...+212°F)

6.压力表,刻度 0...10bar (0....145psi)

7.压力安全阀,在工作时调节。

8.压力开关(24VDC 或 230VAC)

3.2.2 附加仪表

A3 温度监视器(2pcs;70℃和 80℃,24VDC 或 230VAC)。附加代码 2T

A4 流量指示器,目测(FV),电子(FE)

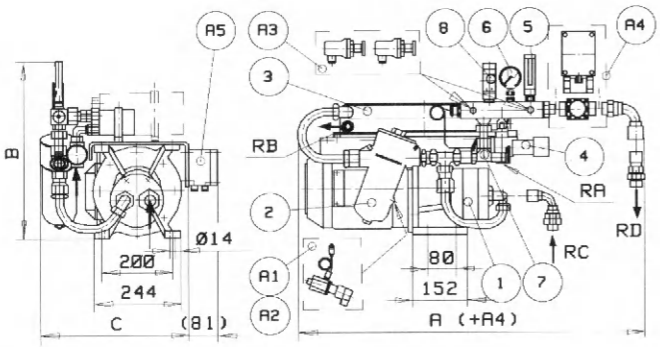
A5 接线箱(CB)

特殊仪表请与 SEW 联系。

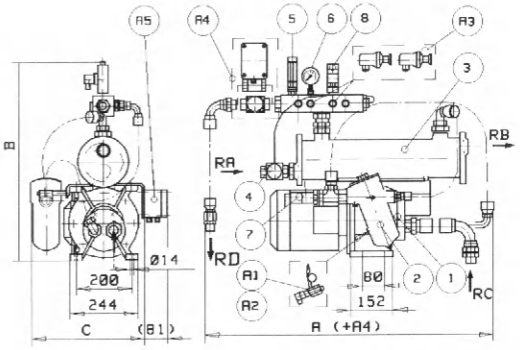
Lubrication Unit 润滑装置

4.Technical data for pressure Lubricaton Unit with Water /Oil Cooler module

4.带水油冷却器的压力润滑装置技术数据

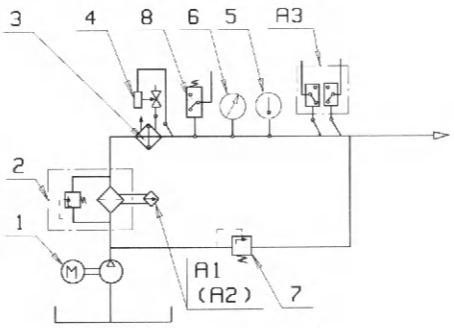


Picture 3. Type MHP with Plate Cooler type P(table 1)
图 3.带 P 型板式冷却器的型号 MHP(表 1)



Picture 4.type MHP with Pipe Cooler type B, BS and R (table 2)
图 4.带 B,BS 和 R 型管式冷却器的型号 MHP(表 2)

Standard equipment
1. Pump
2. Filter
3.Cooler
4.Cooling Power Regulator:
5.Thermometer
7.Pressure Relief Valve
A1.Visual Filter Contamination Indicator.
Accessories
A2.Electrical Filter Contamination Indicator
A3.Temperature Monitors.



标准设备
1.泵
2.过滤器
3.冷却器
4.冷却功率调节器
5.温度计
6.压力表
7.压力安全阀
A1.目视过滤器污染指示器
附件
A2.电过滤器污染指示器
A3.温度监视器

Picture 5. Flow diagram for Water /Oil Cooler

图 5.水油冷却器流动图

Table 1. Lubrication Unit with Plate Cooler type P. Not for sea water.
表 1.带 P 型板式冷却器的润滑装置，不对海水。

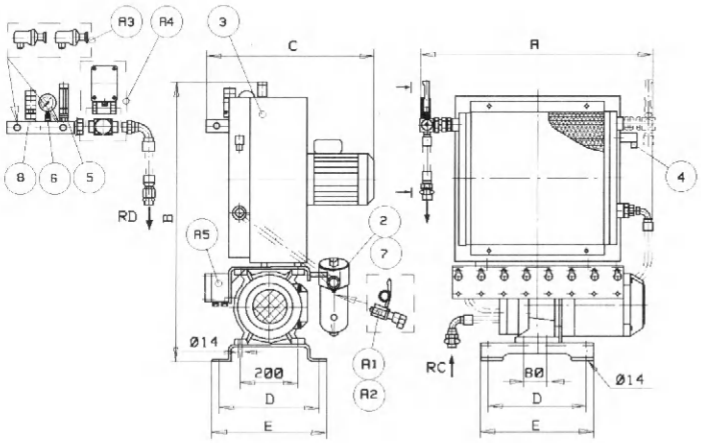
Cooling Rating 冷却功率 Pc [kw]	Pump Output 泵输出 Qp [dm³/min]	Water Temperature range 水温范围 Tw [℃]	Water Supply 供水 Qw [dm³/min]	Pump Module 泵模板	Cooler Module 冷却模块 P	Motor Rating 电动机功率 1500r/min IEC	[kW]	weight 重量 [kg]	Dimensions 尺寸 A [mm]	B [mm]	C [mm]	Connections 连接 Water 水 RA female 凹形	RB female 凹形	Oil 油 RC male 凸形	RD male 凸形
0,75	2,5	5..25	..1	MH-2	P8-10	19FF165	0,75	29	630	500	423	R3/8	R1/2	R3/4	R3/4
		25..40	1..2	MH-2	P8-10			29							
2,5	7,5	5..25	3..7	MH-5	P8-20	19FF165	0,75	30	630	500	423	R3/8	R1/2	R3/4	R3/4
		25..40	2..11	MH-5	P8-20			30							
3,4	11	5..25	4..10	MHP7	P8-20	19FF165	0,75	30	630	500	423	R3/8	R1/2	R1	R3/4
		25..40	2..10	MHP7	P8-30			32							
5,3	18	5..25	8..16	MHP12	P8-30	24FF165	1,1	42	630	500	423	R3/8	R1/2	R1	R3/4
		25..40	6..9	MHP12	P8-40			43							
8,5	18	5..25	4..16	MHP12	P15-40	24FF165	1,1	45	790	500	423	R3/8	R1/2	R1	R3/4
		25..40	4..16	MHP12	P15-50			47							
10,5	28	5..25	6..12	MHP18	P15-40	24FF165	1,5	48	787	500	423	R3/8	R1/2	R1	R3/4
		25..40	5..24	MHP18	P15-50			49							
45	28	5..25	5..24	MHP18	P25-40	24FF165	1,5	55	889	540	423	R3/4	R1	R1	R3/4
		25..40	7..24	MHP18	P25-60			62							
19	44	5..25	6..22	MHP29	P25-40	28FF215	3	68	889	600	452	R3/4	R1	R1¼	R1¼
		25..40	9..38	MHP29	P25-60			75							
24	44	5..25	9..38	MHP29	P25-60	28FF215	3	68	889	600	452	R3/4	R1	R1¼	R1¼
		25..40	10..38	MHP29	P25-100			88							
25	65	5..25	8..16	MHP47	P25-60	28FF215	4	71	889	600	452	R3/4	R1	R1¼	R1¼
		25..40	12..57	MHP47	P25-60			71							
29	65	5..25	10..23	MHP47	P25-70	28FF215	4	72	889	600	452	R3/4	R1	R1¼	R1¼
		25..40	12..57	MHP47	P25-110			93							

Lubrication Unit 润滑装置

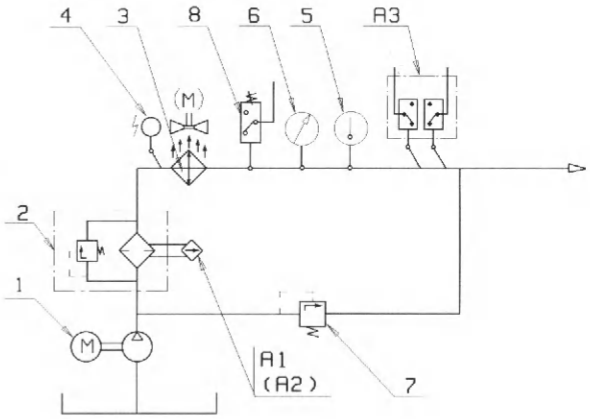
Table 2. Lubrication Unit with Pipe Cooler, types B,BS and R (for sea water ,choose type BS)
表 2.带 B、BS 和 R 型 管式冷却器的润滑装置(对海水选 BS 型)

Cooling Rating 冷却功率 Pc [kw]	Pump Output 泵输出 Qp [dm³/min]	Pump Module 泵模块	Water Supply 供水 Qw [dm³/min]	Cooler Module 冷却模块 B,BS,R	Motor 电动机 1500r/min IEC	Power 功率 [kW]	weight 重量 [kg]	Dimensions 尺寸 [mm]	[mm]	[mm]	Connections 连接 Water/水 RA female 凹型	RB female 凹型	Oil/油 RC male 凸型	RD male 凸型
0,75	2,5	MHI2	1..2	2	19FF165	0,75	50	700	645	390	R1/2	R3/4	R3/4	R3/4
2,5	7,5	MHI5	4..8	2	19FF165	0,75	50	700	645	390	R1/2	R3/4	R3/4	R3/4
3,4	11	MHP7	5..10	2	19FF165	0,75	52	730	635	390	R1/2	R3/4	R1	R3/4
5,3	18	MHP12	8..16	2	19FF165	1,1	56	740	635	390	R1/2	R3/4	R1	R3/4
8,5	18	MHP12	13..26	3	19FF165	1,1	61	750	695	390	R1	R1¼	R1	R3/4
10,5	28	MHP18	16..32	3	19FF165	1,5	64	760	695	390	R1	R1¼	R1	R3/4
45	28	MHP18	23..45	4	19FF165	1,5	67	840	695	390	R1	R1¼	R1	R3/4
19	44	MHP29	29..57	4	28FF215	3	84	860	755	430	R1	R1¼	R1¼	R1¼
24	44	MHP29	32..63	5	28FF215	3	87	1010	755	430	R1	R1¼	R1¼	R1¼
25	65	MHP47	38..75	4	28FF215	4	93	860	755	430	R1	R1¼	R1¼	R1¼
29	65	MHP47	44..87	5	28FF215	4	96	1010	755	430	R1	R1¼	R1¼	R1¼

5.Technical data for Lubrication Unit with Air/Oil Cooler 5.带空气/油冷却器的润滑装置技术数据



Picture 6. Type MHP with Air /Oil Cooler type A(table 3)
图 6.带 A 型空气/油冷却器的型号 MHP(表 3)



Picture 7.Flow diagram for Air /Oil Cooler.
图 7.空气/油冷却器流动图

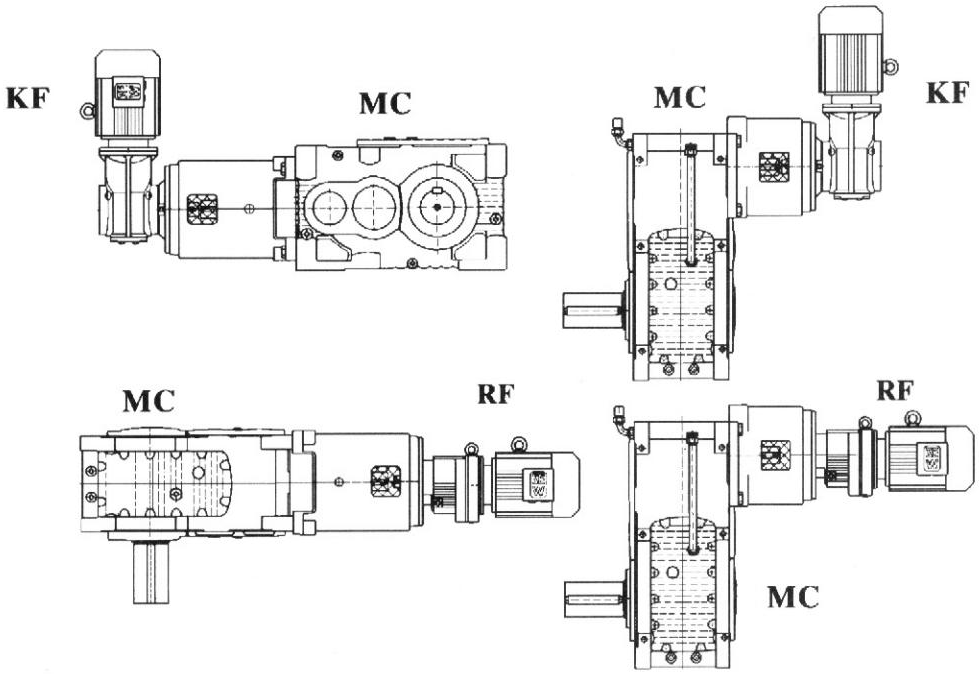
Table 3. Lubrication Unit with Air /Oil Cooler,type A. Picture 6($T_{air,max}$=35℃)
表 3.带 A 型空气/油冷却器的润滑装置,图 6($T_{air,max}$=35℃)

Cooling Rating 冷却功率 Pc [kw]	Pump Output 泵输出 Qp [dm³/min]	Pump Module 泵模块	Cooler Module 冷却模块	Pump motor Power 泵电机功率 1500r/min [kW]	Fan motor 风扇电机 Power 功率 rpm	[kW]	Noise level (lm) 噪声水平 [dB(A)]	weight 重量 [kg]	Dimensions 尺寸 A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Connections 连接 Oil/油 RC male 凸型	RD male 凸型
0,75	2,5	MHI2	A042	0,75	3000	0,25	70	40	500	730	530	1)	1)	R3/4	R3/4
2,5	7,5	MHI5	A042	0,75	3000	0,25	70	40	500	730	530	1)	1)	R3/4	R3/4
3,4	11	MHP7	A042	0,75	3000	0,25	70	40	500	730	530	1)	1)	R1	R3/4
5,3	18	MHP12	A074	1,1	1500	0,25	64	60	600	800	540	1)	1)	R1	R3/4
8,5	18	MHP12	A114	1,1	1500	0,25	71	60	670	870	570	350	400	R1	R3/4
10,5	28	MHP18	A164	1,5	1500	0,37	74	70	730	930	590	350	400	R1	R3/4
45	28	MHP18	A234	1,5	1500	0,75	79	80	850	1020	660	350	400	R1	R3/4
19	44	MHP29	A336	3	1000	0,55	72	100	960	1090	680	350	400	R1¼	R1¼
24	44	MHP29	A334	3	1500	2,2	84	110	960	1090	750	350	400	R1¼	R1¼
25	65	MHP47	A334	4	1500	2,2	84	110	960	1090	750	350	400	R1¼	R1¼
29	65	MHP47	A444	4	1500	2,2	84	130	960	1130	770	350	400	R1¼	R1¼

SEW reserves the right to optimize the Cooling Unit for each application
SEW 保留根据应用情况选用冷却装置的权力。

1)Separate foot not encluded
1)不含单独底脚

Gear Unit Combinations 模块组合



Gear motor types KF and RF can be combined with any MC gear units. Combined ratio area from 125 up to 11 200.
More information available on request.

Gear motor KF 和 RF 能与 compact 任何减速器联接在一起，联接后的传动比范围 i=125~11200。
根据需要，可提供更多的信息。