


# KUKA | Xpert

Identification number: AR5758

货号	0000-179-791
材料状态	10 - 批准预生产
制造商	KUKA Roboter
产品图片	

# Maintenance information

## Gear oil

**⚠ CAUTION** The quantity of oil drained depends on the draining time and the oil temperature. The refilling quantity is the quantity of oil that was drained from the gear unit at the correct operating temperature and with the correct draining time. This oil quantity must be determined. Only this quantity of oil may be used when refilling.

If less than 70 % of the specified oil quantity flows out, flush the gear unit with the determined quantity of drained oil once, then pour in the amount of oil that was drained. If less than 50% of the specified oil quantity flows out (e.g. inclined installation), the flushing operation must be repeated twice. During the flushing procedure, move the axis at jog velocity throughout the entire axis range.

The oil quantities specified in the table correspond to the oil quantities in the gear unit at first filling.

Gear oil new filling quantity	
A1	3.30 l
A2	1.00 l
A3	1.00 l
A4	0.32 l
A5	0.16 l
A6	0.18 l
Gear oil refilling quantity	
A1	1.70 l
A2	0.90 l
A3	0.90 l
A4	0.31 l
A5	0.14 l
A6	0.14 l

# Toothed belt tension

Toothed belt tension motor	
A4	95 ± 2 Hz
A5	95 ± 2 Hz
A6	-
Toothed belt tension inline wrist	
A5	-
A6	-

# 技术数据

## 基本数据

	<b>KR 60 L16-2 KS</b>
轴数	6
可控制的轴数	6
工作空间体积	77 m <sup>3</sup>
位姿重复精度 (ISO 9283)	± 0.06 mm
重量	约 650 kg
额定负荷	16 kg
最大负载能力	-
最大运动范围	2952 mm
防护等级 (IEC 60529)	IP64
机器人腕部防护等级 (IEC 60529)	IP65
噪声等级	< 75 dB (A)
安装位置	地面
占地面积	972 mm x 826 mm
运动系统安装面布孔图	-
允许倾角	≤ 5 °
标准色	底座： 黑色 (RAL 9005); 活动部件： 库卡橙色 2567
控制系统	KR C4
变压器名称	KR C4: KR60L16KLB_4A C4 FLR ZH16_2

# 环境条件

湿度等级 (EN 60204)	-
环境条件分类 (EN 60721-3-3)	3K3
环境温度	
运行时	10 °C 至 55 °C (283 K 至 328 K)
仓储和运输时	-40 °C 至 60 °C (233 K 至 333 K)

# 轴数据

运动范围	
A1	±150 °
A2	-115 ° / 75 °
A3	-120 ° / 158 °
A4	±350 °
A5	±130 °
A6	±350 °
额定负载时的速度	
A1	103 °/s
A2	88 °/s
A3	81 °/s
A4	230 °/s
A5	165 °/s
A6	249 °/s

# 负载能力

额定负荷	16 kg
最大负载能力	-
法兰 <b>I<sub>x</sub></b> 额定质量转动惯量	0.36 kgm <sup>2</sup>
法兰 <b>I<sub>y</sub></b> 额定质量转动惯量	0.36 kgm <sup>2</sup>
法兰 <b>I<sub>z</sub></b> 额定质量转动惯量	0.36 kgm <sup>2</sup>
底座的额定附加负载	0 kg
底座的最大附加负载	-
转盘的额定附加负载	0 kg
旋转机构的最大附加负载	0 kg
大臂的额定附加负载	0 kg
大臂的最大附加负载	0 kg
小臂的额定附加负载	35 kg
小臂的最大附加负载	35 kg
负载重心额定距离	
<b>L<sub>xy</sub></b>	120 mm
<b>L<sub>z</sub></b>	150 mm

# 地基负载

纵向动力 <b>F(v)</b>	
<b>F(v 正常)</b>	-
<b>F(vmax)</b>	8900 N
横向动力 <b>F(h)</b>	
<b>F(h 正常)</b>	-
<b>F(hmax)</b>	8550 N
倾覆力矩 <b>M(k)</b>	
<b>M(k 正常)</b>	-
<b>M(kmax)</b>	10500 Nm
轴 2 转矩 <b>M(r)</b>	
<b>M(r 正常)</b>	-
<b>M(rmax)</b>	14800 Nm

垂直力  $F(v)$ 、水平力  $F(h)$ 、倾斜力矩  $M(k)$ 、轴 1 的转矩  $M(r)$

# Flange loads

## Flange loads

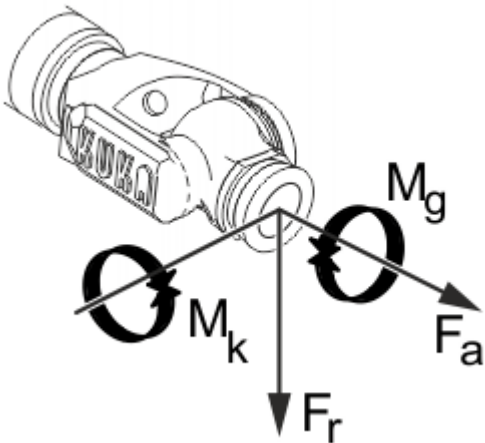
Due to the motion of the payload (e.g. tool) mounted on the robot, forces and torques act on the mounting flange. These forces and torques depend on the motion profile as well as the mass, load center of gravity and mass moment of inertia of the payload.

The specified values refer to nominal payloads at the nominal distance and do not include safety factors. It is imperative for the load data to be entered in the robot controller. The robot controller takes the payload into consideration during path planning. A reduced payload does not necessarily result in lower forces and torques.

The values are guide values determined by means of trial and simulation and refer to the most heavily loaded machine in the robot family. The actual forces and torques may differ due to internal and external influences on the mounting flange or a different point of application. It is therefore advisable to determine the exact forces and torques where necessary on site under the real conditions of the actual robot application.

The operating values may occur permanently in the normal motion profile. It is advisable to rate the tool for its fatigue strength.

The EMERGENCY STOP values may arise in the event of an Emergency Stop situation of the robot. As these should only occur very rarely during the service life of the robot, a static strength verification is usually sufficient.



Flange loads

Flange loads during operation	
<b>F(a)</b>	810 N
<b>F(r)</b>	741 N
<b>M(k)</b>	76 Nm



<b>M(g)</b>	61 Nm
<b>Flange loads in the case of EMERGENCY STOP</b>	
<b>F(a)</b>	859 N
<b>F(r)</b>	1306 N
<b>M(k)</b>	157 Nm
<b>M(g)</b>	117 Nm

Axial force  $F(a)$ , radial force  $F(r)$ , tilting torque  $M(k)$ , torque about mounting flange  $M(g)$

# 关税信息

统计货号	84795000
原产地	DE
制造商	KUKA ROBOTER
重量	650 kg

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- > **KR 60 L16-2 KS** 带有如下的标准组件 (4)
  - > **KR 60 L16-2 KS** 需要 (18)
  - > **KR 60 L16-2 KS** 带有如下的工具 (6)
  - > **KR 60 L16-2 KS** 有以下选项 (11)