

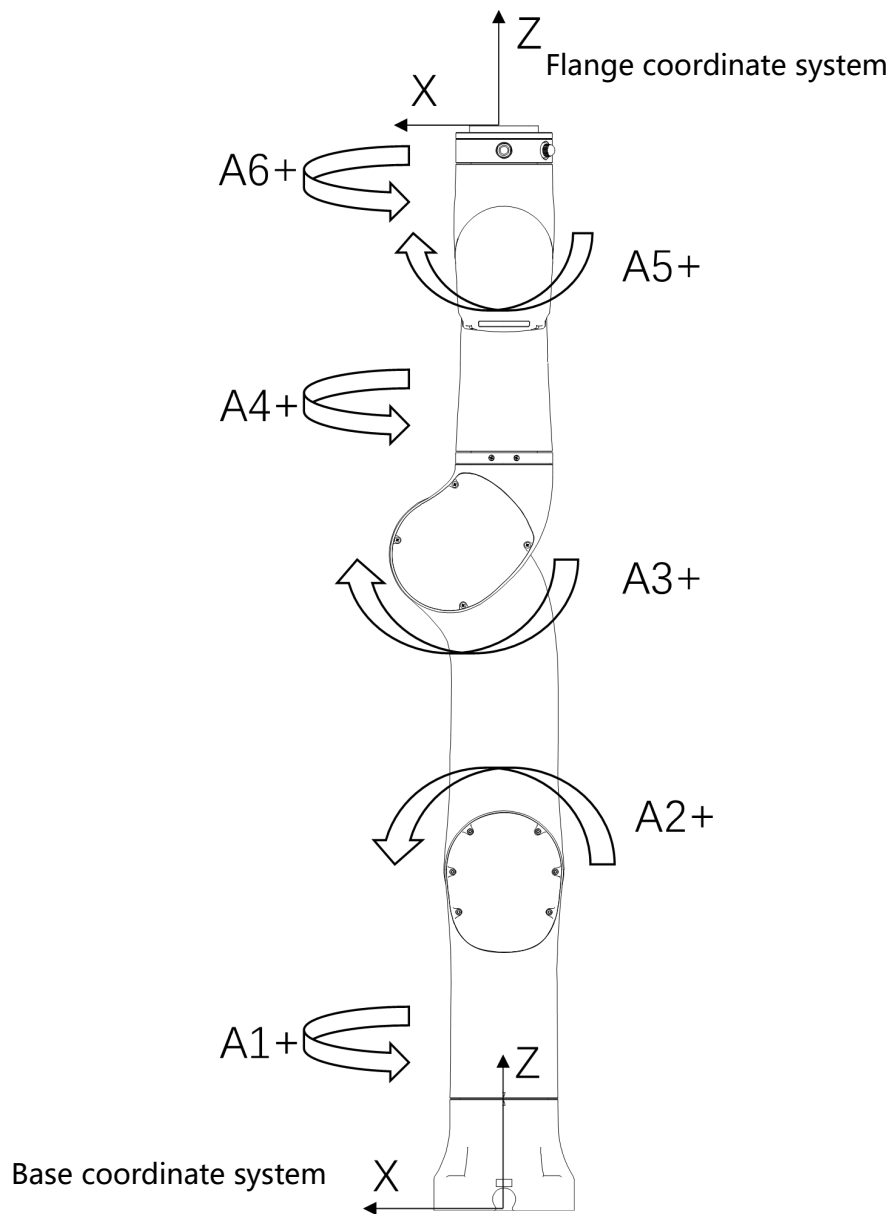


Figure 3-2 Definitions of robot rotation directions and coordinate systems

4 Technical Specifications

4.1 Introduction

This section describes the specifications of the xMate SR3-C flexible collaborative robot.

4.2 Model description

The meaning of the model code is shown in the figure 4-1.

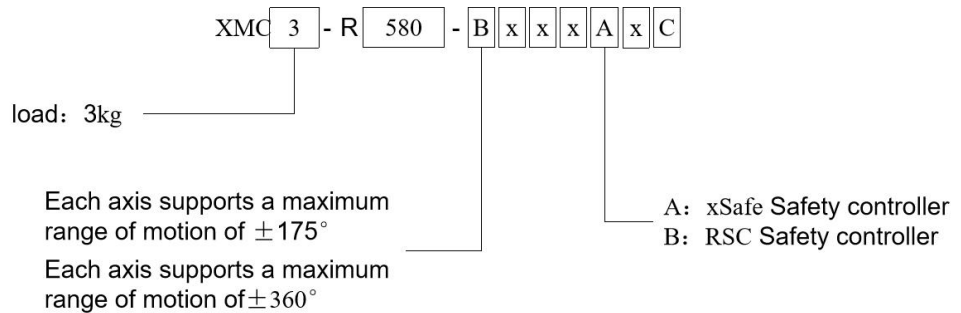


Figure 4-1. The model description of xMate SR3-C

4.3 Specifications

4.3.1 Data sheet

The following table applies to: XMS3-R580-BxxxAxC

Product name		xMate SR3-C
Number of axes		6
Maximum reach		705mm
Repeatability		$\pm 0.03\text{mm}$
Maximum payload		3 kg
Range of motion	Axis 1	$\pm 175^\circ$
	Axis 2	-155° to 140°
	Axis 3	-175° to 135°
	Axis 4	$\pm 175^\circ$
	Axis 5	$\pm 175^\circ$
	Axis 6	$\pm 175^\circ$
Maximum speed	Axis 1	$180^\circ/\text{s}$
	Axis 2	$180^\circ/\text{s}$
	Axis 3	$180^\circ/\text{s}$
	Axis 4	$180^\circ/\text{s}$
	Axis 5	$180^\circ/\text{s}$
	Axis 6	$180^\circ/\text{s}$
Operating temperature		0°C to $+50^\circ\text{C}$
Storage temperature		-10°C to $+55^\circ\text{C}$
Maximum humidity		0%~93%, non-condensing, non-frost
Protection level		IP54
Mounting method		At any angle

Weight	13.8 kg
Noise level	≤70 dB(A)

The following table applies to: XMS3-R580-WxxxBxC

Product name		xMate SR3-C
Number of axes		6
Maximum reach		705mm
Repeatability		±0.03mm
Maximum payload		3 kg
Range of motion	Axis 1	±360°
	Axis 2	-155° to 140°
	Axis 3	- 175° to 135°
	Axis 4	±360°
	Axis 5	±360°
	Axis 6	±360°
Maximum speed	Axis 1	180°/s
	Axis 2	180°/s
	Axis 3	180°/s
	Axis 4	180°/s
	Axis 5	180°/s
	Axis 6	180°/s
Operating temperature		0°C to +50°C
Storage temperature		-10°C to +55°C
Maximum humidity		0%~93%, non-condensing, non-frost
Protection level		IP54
Mounting method		At any angle
Weight		13.8 kg
Noise level		≤70 dB(A)

4.3.2 Teach Pendant specifications

Product name		xPad2
Screen size		10.1 inches
Resolution		1920*1200
Dimensions		290×170×80 mm ³
Weight		840 g (excluding cable)
Minimum cable bending radius		77 mm
Protection level		IP54
External interface		USB 3.0
Environment	Operating temperature	0°C to +45°C
	Storage temperature	-25°C to +55°C
	Maximum humidity for operation/storage	≤ 90%, non-condensing, non-frost

xPad2 is an optional accessory for xMate SR3-C.

4.3.3 LightCab specifications

Product name		LightCab
Size		228.5 mm × 180 mm × 88 mm
Weight		2.4kg
Input Voltage		48VDC±10%
Protection level		IP20
Environment	Operating temperature	0°C~+45°C
	Storage temperature	-10°C~+55°C
	Maximum humidity for operation/storage	≤90%, non-condensing, non-frost

4.4 Working space

The working space of xMate SR3-C which mean the space skimmed by the wrist reference point (the intersection of the 4-axis and the 5-axis axis) is shown in the figure below:

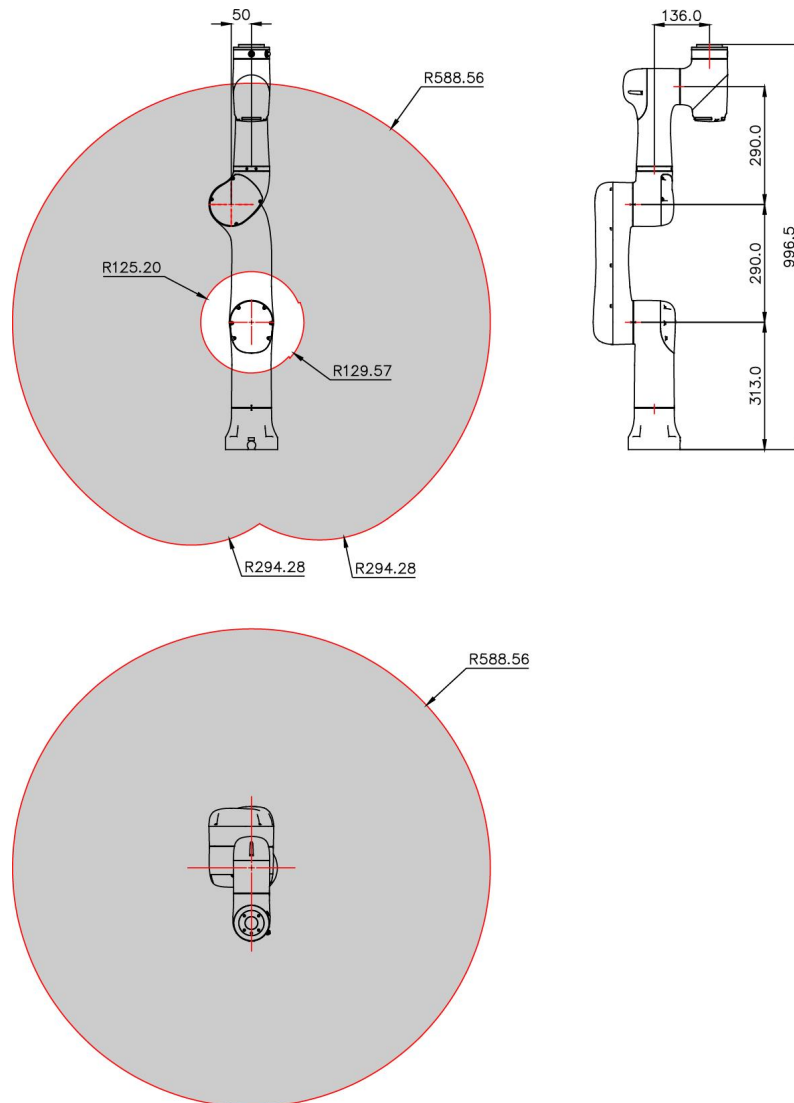


Figure 4-2 Working space of xMate SR3-C

4.5 Allowable load



Warning

It is very important to always define the correct actual load data and calibrate the payload of the robot. Incorrectly defined load data may result in robot overload. If incorrect load data and/or loads other than those specified in the load diagram are used, the following components may be damaged due to overload:

- Motor
- Reducer
- Mechanical structure