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Instructions for DISAN-USMC X7 Prosthetic Knee Joint

迪萨-USMC膝关节X7产品说明书



Easy entry 简易入门

• Bench Alignment
静态对线

• Safety Warnings
安全警示

• Basics
基本设定

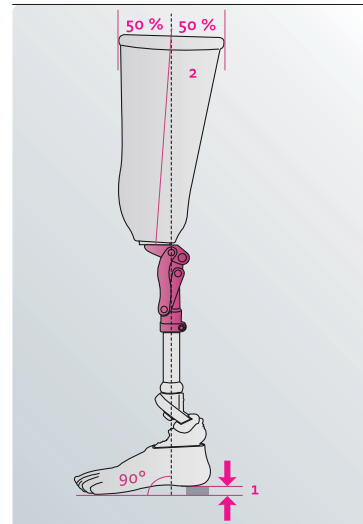
• Technical Parameters
技术参数

• Product Information
产品信息

• Adjustment
调试

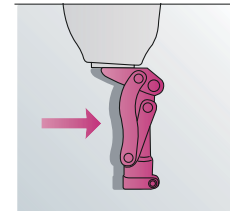
• User's Chart
用户数据

Bench Alignment 静态对线

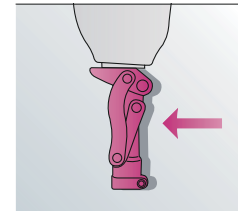


Alignment 对线

- 1 Individual heel height
个人跟高
- 2 Individual flexion setting
个人弯曲设定



Safe alignment
安全对线



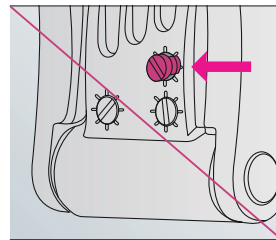
Dynamic alignment
动态对线

Safety Warning 安全警示

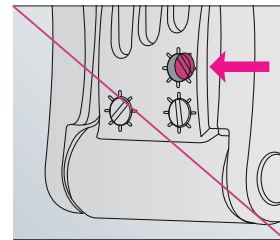
Caution! /注意!

Failure to comply with the rules on the next page can cause irreparable damage to the knee unit (e.g.oil leak-defective hydraulics!)

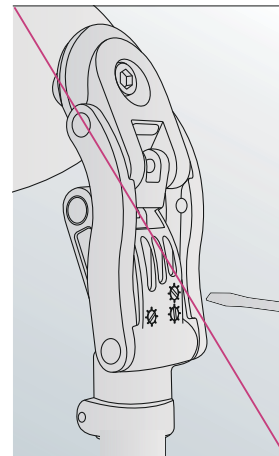
如果不按照下图的指示去做，可能对膝关节造成无法修补的损伤（例如：漏油，液压故障！）



Do not open more than 1.5 turns (12 notches) from the basic setting!
从基本设定起不要旋转超过1.5圈（12个刻度）！



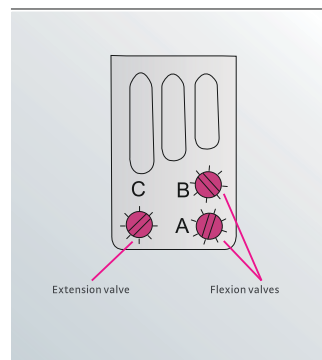
Do not move the knee joint with the valve closed!
阀门关闭时不要转动膝关节！



Do not adjust in flexion!
在弯曲状态时不要进行调整！

Basic 基本设定

Factory setting = Basic setting
出厂设定=基本设定



Valves open: 阀门打开

- A: 8 Teilstriche notches
- B: 8 Teilstriche notches
- C: 12 Teilstriche notches

Example 例如

$$8 (A) + 8 (B) = 16$$

$$16 > 12 (C)$$

Rule:

Sum of the notches

$$A + B > C$$

规则：

$$\text{刻度总数 } A+B > C$$

Note: the positions of the valve screws shown here may appear different as supplied by the factory (see above) for technical and constructional reasons.

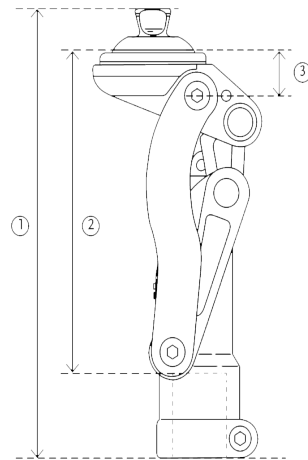
注释：因技术和装配上的原因，所显示的阀门螺母的位置和产品出厂实际位置可能不同。

Technical Parameters

技术参数

名称	X7
材料	航空铝
截至部位	膝上
总安装高度 ①	约197毫米
有效安装高度 ②	约147毫米
安装高度 ③	约32毫米
重量	约823g
净离地高度	约12毫米
近端连接	锥形连接件

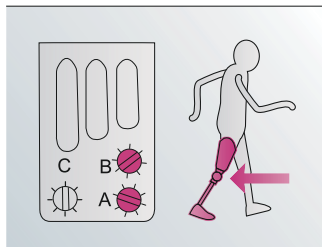
名称	X7
远端连接	30毫米长的一体化管
迈步期	液压
站立期	闭合几何体/站立期弯曲
轴	多轴
弯曲范围	0° - 150°



NAME	X7
Material	Aerometal
Amputation site	Over the knee
Total height ①	About 197mm
Effective height ②	About 147mm
Installation height ③	About 32mm
Weight	About 823g
ground clearance	About 12mm
attended mode	Tapered connector
The remote connection	30mm tube
During walking	Hydraumatic
During standing	Closed geometry & bending
Axle	Multiple axle
Scope of bending	0° - 150°

Valve screws

阀门螺母

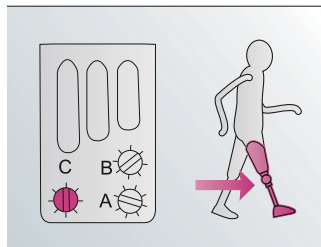


Valve A = Flexion > 60° degrees

Valve B = Flexion < 60° degrees

阀门A= 弯曲>60度

阀门B= 弯曲<60度



Valve C = Extension

阀门C= 伸展

Individual fine adjustment:

个人微调

1-2 notches only →

check result + record in user's chart

只调整1- 2个刻度

查看结果+记录在用户数据表上

Adjusting the hydraulic 液压调整

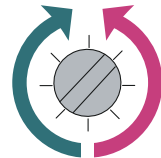
Close valve =

increase damping

Turn clockwise and reduce
the number of notches

关闭阀门=增加阻尼力

顺时针转动降低刻度



Open valve =

reduce damping

Turn counterclockwise and increase
the number of notches

开启阀门=降低阻尼力

逆时针转动增加刻度

Step 1-Flexion A 步骤1- 弯曲A

Excessive heel rise
跟部提升过多

快速行走（弯曲角度 $>60^\circ$ ） High walking speed (flexion angle $>60^\circ$)



Close valve A
关闭阀门A



Rule:
Sum of the notches
 $A + B > C$
规则：
刻度数 $A + B > C$

Individual fine adjustment: 1-2 notches only → check result+record in user's chart

个人微调：只调整1- 2个刻度，查看结果+记录在用户数据表上。

Step 2-Flexion B 步骤2- 弯曲B

Too much flexion
过多弯曲

中速行走（弯曲角度 $<60^\circ$ ） Normal walking speed (flexion angle $<60^\circ$)



Close valve B
关闭阀门B



Rule:
Sum of the notches
 $A + B > C$
规则：
刻度数 $A + B > C$

Individual fine adjustment: 1-2 notches only → check result+record in user's chart.

Positive secondary effect: The rate of extension can be limited increased by closing the flexion valves!

个人微调：只调整1- 2个刻度，查看结果+记录在用户数据表上。

二次效应：可通过逐步关闭弯曲阀门来有限的增加伸展率!

Too little flexion

很小弯曲

中速行走 (弯曲角度 < 60度) Normal walking speed (flexion angle < 60°)



Open valve B
打开阀门B



Rule:
Sum of the notches
 $A + B > C$
规则：
刻度数 $A + B > C$

Individual fine adjustment: 1-2 notches only → check result+record in user's chart

个人微调：只调整1- 2个刻度，查看结果+记录在用户数据表上

Step 3-Flexion C 步骤3- 伸展C

strong terminal impact

较强的终端冲击



Close Valve C
关闭阀门C



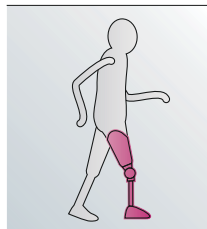
Rule:
Sum of the notches
 $A + B > C$
规则：
刻度数 $A + B > C$

Individual fine adjustment: 1-2 notches only → check result+record in user's chart

个人微调：只调整1- 2个刻度，查看结果+记录在用户数据表上

Extension too slow

较小的伸展



Open valve C
打开阀门C



Rule:
Sum of the notches
 $A + B > C$
规则：
刻度数 $A + B > C$

Individual fine adjustment: 1-2 notches only → check result+record in user's chart.
Positive secondary effect: The rate of extension can be limited increased by closing the flexion valves!

个人微调：只调整1- 2个刻度，查看结果+记录在用户数据表上

二次效应：可通过逐步关闭弯曲阀门来有限的增加伸展率

User's Chart 用户数据表

Patient name 病人姓名 _____

	Valve open (notches) 有效刻度				
	A	+	B	>	C
Basic Setting 基本设置	8	+	8	>	12
Adjustment 调整		+		>	
		+		>	
		+		>	
		+		>	
		+		>	
Final setting 最终设置		+		>	

Date 日期 _____

Technician/CP 技师 _____