

➤ **halumm** – An Integrated  
**汉尔姆装配式医院内装系统**  
Modular Interior Construction System for Hospitals



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## 公司简介

汉尔姆建筑科技有限公司源于德国，多年来致力于研发和应用装配式建筑整体解决方案，是国家级高新技术企业和省级企业研究院，拥有装配式钢结构建筑相关百余项专利技术，编制包括《装配式钢结构建筑技术标准》等八项国家标准及行业标准，并主编多项团体标准，是G20杭州峰会和厦门金砖会晤所有搭建场馆的总包单位。

汉尔姆医疗领域装配式整体内装解决方案可应用于病房、问诊室、手术室、ICU、走道、护士站等区域。通过一体化设计—部品部件工厂预制加工—集中物流—现场装配—运营维护,可以快速打造一个健康、舒适、安全、环保的医疗空间。

halumm Construction Technology Co., LTD., which originated in Germany, has been committed to the development and application of integrated, modular building construction solutions for many years. halumm is a national high-tech enterprise and provincial enterprise research institute, owns hundreds of patents related to prefabricated steel structures for buildings, has compiled eight national and industry standards including < Technical standard for assembled buildings with steel-structure>, and is also compiling many group standards as the chief editor. halumm has achieved many projects including all the prefabricated venues for G20 Hangzhou Summit and BRICK Xiamen Meeting as the general contractor.

halumm's integrated, modular field assembly solution for hospitals and the medical industries can be applied to wards, clinics, operating rooms, ICU, walkways, nursing stations and other hospital related areas. Through an integrated design, including the prefabrication and processing of modular parts in our factory – with centralized logistics - on-site assembly – ongoing operation and maintenance, we can help create a healthy, comfortable, safe and environment-friendly medical space. All in an efficient, cost effective and quick manner.



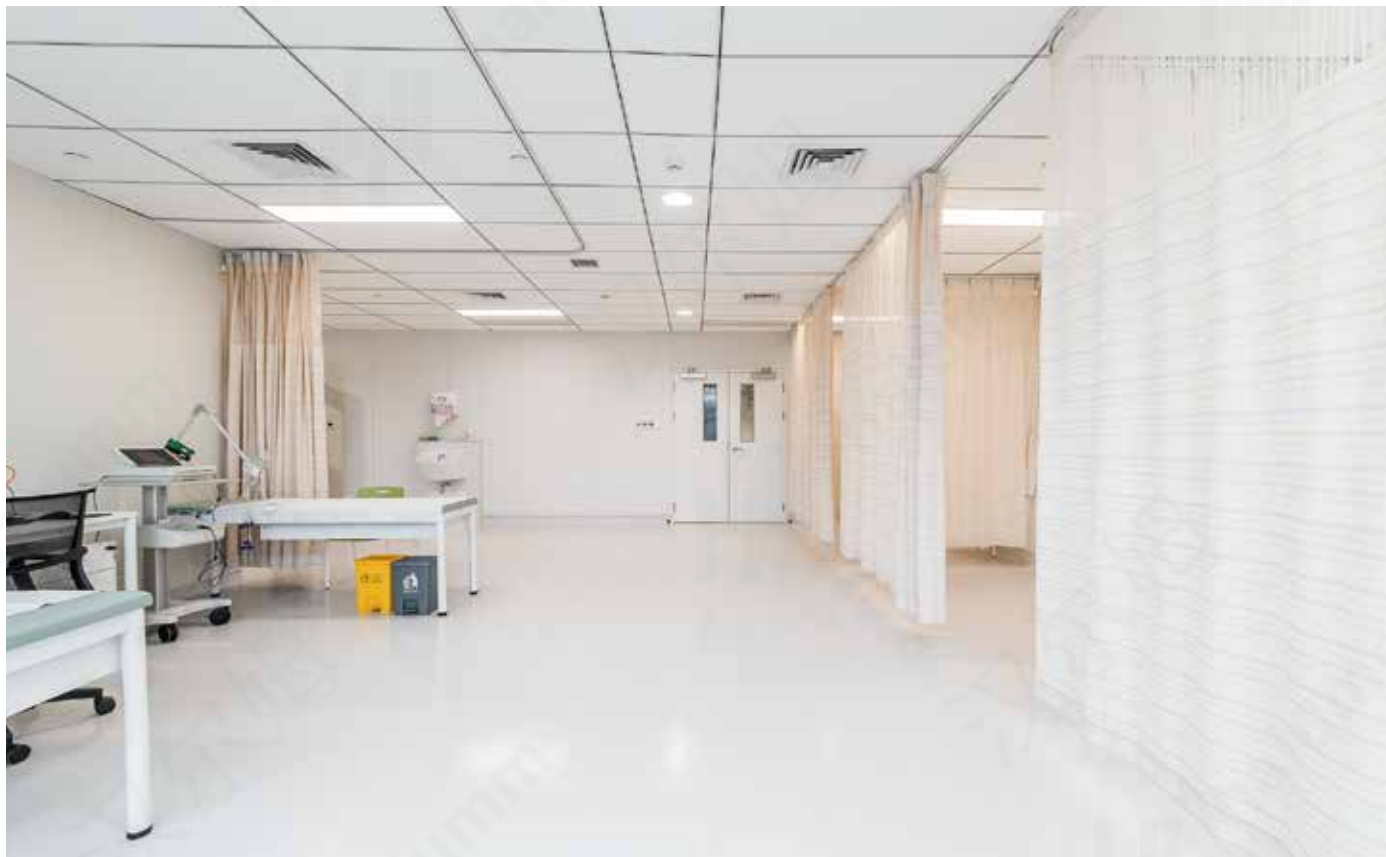


➤ 汉尔姆装配式医院内装系统欣赏  
Goals of our Integrated, Interior Construction System for Hospitals



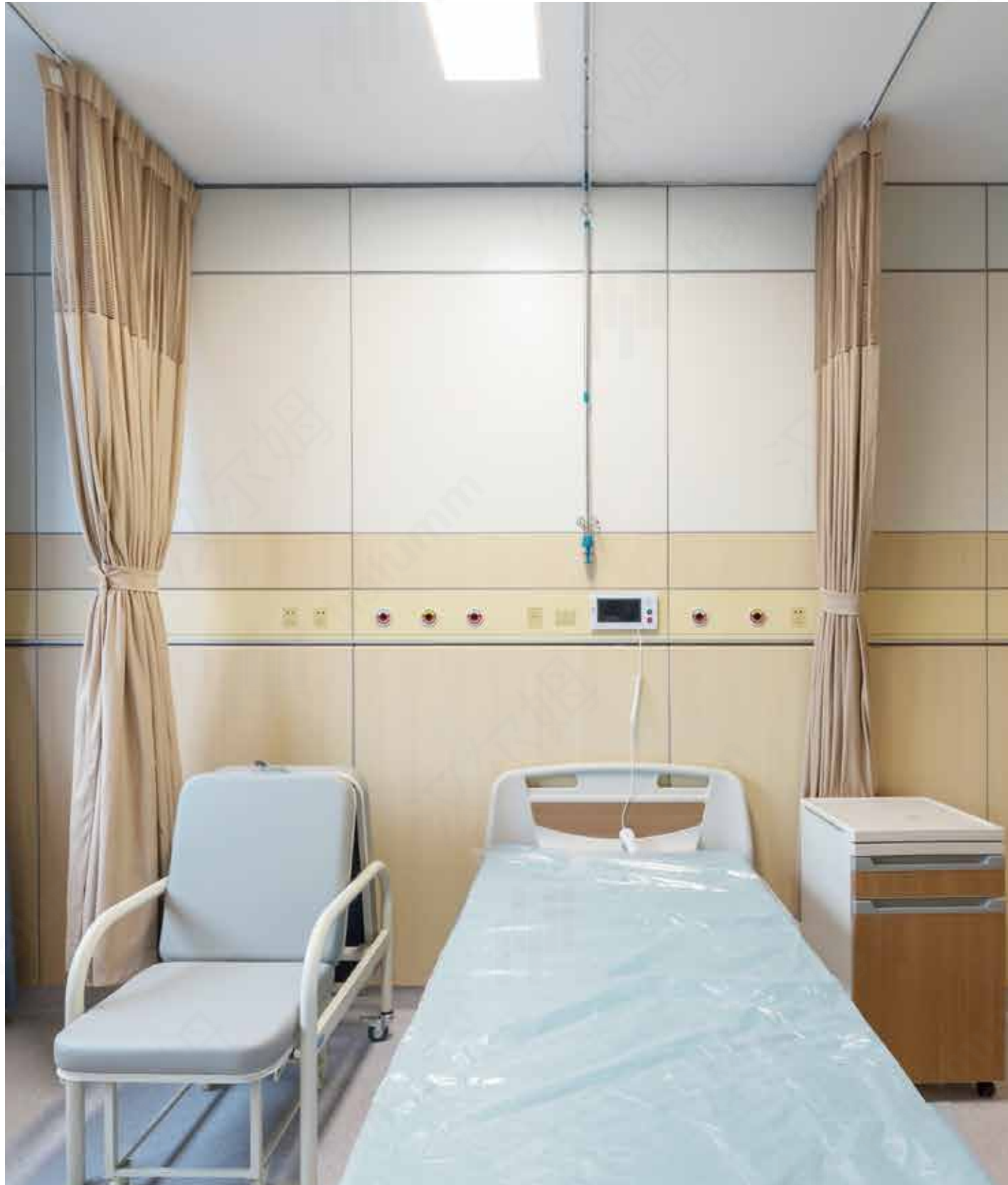


西安强森医疗  
Xi'an Johnson Medical





杭州市中医院丁桥分院  
Dingqiao Branch of Hangzhou Traditional Chinese Medicine Hospital



浙江省台州医院  
Taizhou Hospital of Zhejiang Province





医护人员  
Medical staff

我理想的医护工作环境是：  
An ideal work environment for medical staff:

能像高级写字楼那样有品质的室内装修  
让我们医生护士和病人都能体验到很舒适的环境  
空气问题、甲醛问题、排队困难等就诊问题都需要解决！

High end fit-out similar to a high grade office,allows doctors, nurses and patients to all experience a very comfortable environment.Avoids toxic air pollution and formaldehyde issues, and other toxic chemicals associated with traditional construction methods



病患  
Patients

我想象中的医院最起码是：  
An ideal hospital would comprise:

环保健康 的一个环境, 毕竟都生病了,怎么可以再遭受甲醛等装修污染呢?  
另外看病就医的路线能经常优化的话  
就让我们老百姓看病更方便了  
如果要入院, 我想要一间干净整洁、隔音好、舒适性高的房间!  
如果有智能化就更好了!

A green and healthy environment, preventing sick people from also having to suffer formaldehyde and other construction materials pollution.In addition, if the walkways to reach medical treatment rooms can be constantly optimized and easily modified, it will provide greater convenience for patients to see a doctor  
When being hospitalized, patients will appreciate a clean room with good soundproofing and comfort,All the more so if it was an Intelligent Room!



医院建设者  
Hospital builder

我要建造的医院必须是：  
The ideal hospital to build must offer:

从最开始的成本是可控的  
然后整个建造的 周期越短越好  
每个科室、房间的使用效率越高越好  
后期的运营维护要做到位  
改扩建的空间和时间必须有余量  
这样才是我想交付给大家的医院建筑作品！

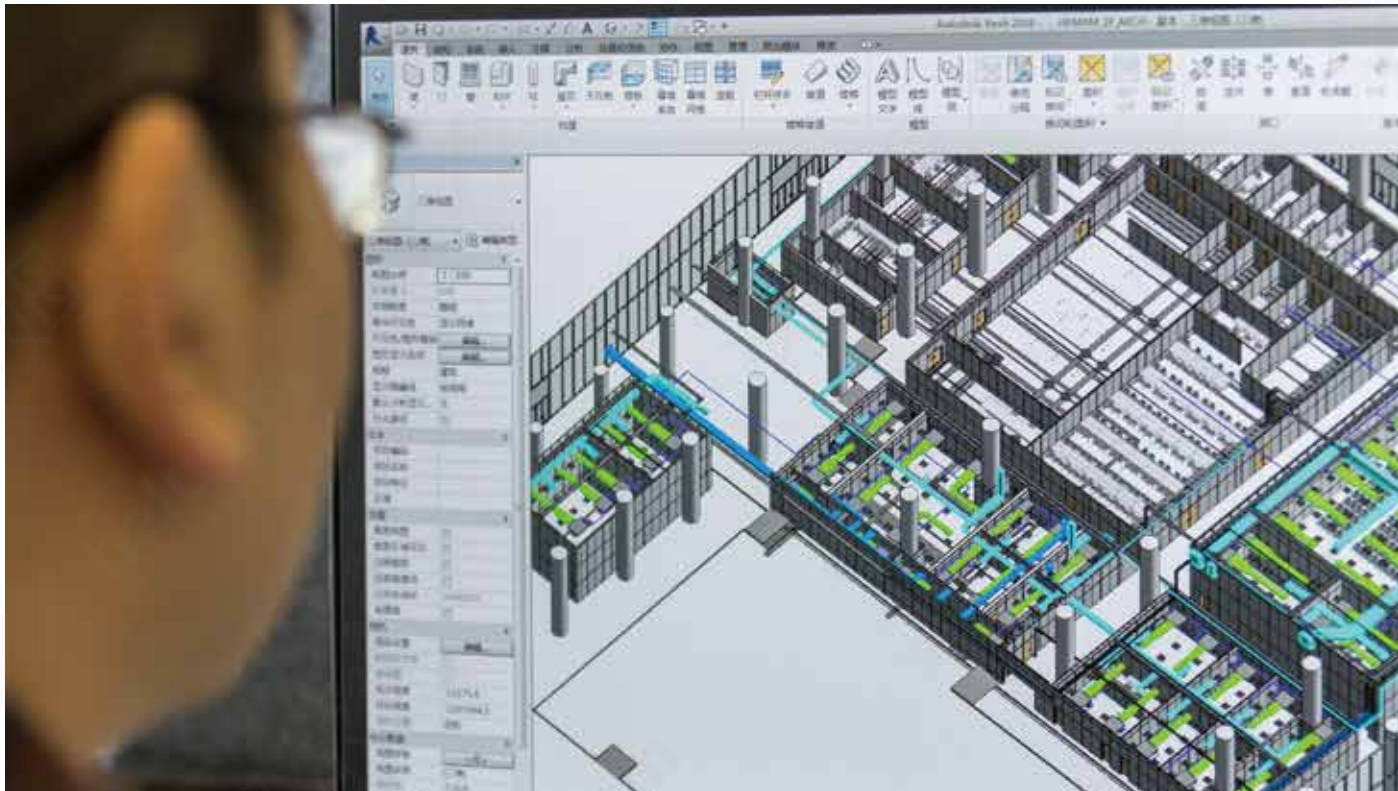
A fixed and controlled cost from the beginning.Shortened construction time, efficient spatial use of every room, efficient operation and low maintenance.Ability to continuously extend or modify areas, This is the hospital construction work we want to present to everyone!

# 汉 尔 姆 装 配 式 医 院 内 装 系 统 能 够 实 现 他 们 的 需 求

## halumm's Integrated INTERIOR CONSTRUCTION SYSTEM IN A HOSPITAL CAN MEET EVERYONE'S NEEDS







## ➤ 汉尔姆装配式医院内装系统概述

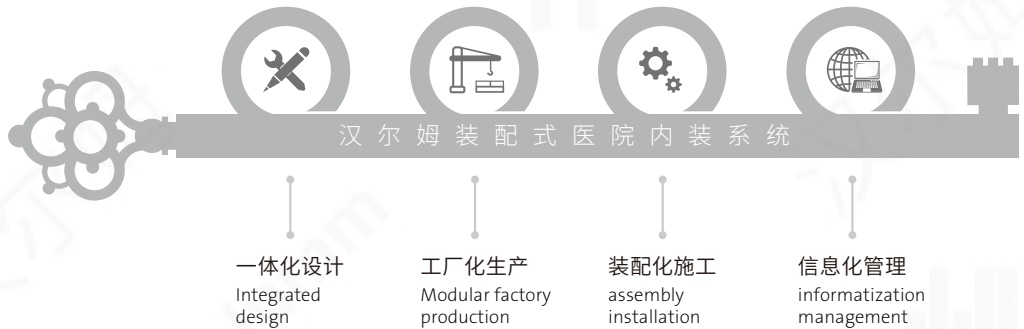
halumm - Overview of the Integrated, Interior Construction System for Hospitals

### 汉尔姆装配式医院内装系统是什么

Advantages of an Integrated, Interior Construction System for Hospitals

汉尔姆装配式医院内装系统就是用一体化设计来构图，标准化规模化制作部品部件，通过集中物流到现场进行装配化安装，并用BIM等信息化来管控整个过程，最终做到建筑全生命周期管理的EPC内装总包模式。

halumm's integrated, internal construction system uses a modular design, standardized and modularized components, via a central logistic delivery process to site for installation. We control the whole process with BIM informationalized, digital representation methods. Finally, you can realize sustainable development using effective EPC throughout the building life cycle.



### 汉尔姆装配式医院内装系统的优势

Advantages of our Integrated Construction System for Hospital Fitout



#### 一体化设计

- BIM指导
- 工业设计协同
- 建筑、结构、机电管线、内装、其它系统
- 标准化、模数协调
- 设计指导，变更少，综合成本可控

#### Integrated design

- BIM guidance
- Modular, factory made design collaboration
- Standardized and modularized coordination for construction, services such as mechanical, electrical and hydraulic
- Interior system installation of hydraulics and other piping structures
- Design guides with controllable costs and minimized variations



#### 工厂化生产

- 工业设计指导部品部件生产
- 工艺标准确保部品部件质量
- 精度达到0.1mm
- 标准化、模数化
- 部品部件生产周期可控

#### Modularised factory production

- Industrial design guide and production of all components in a factory to a consistently high quality and finish
- Process standard ensures component quality
- Accuracy up to 0.1mm
- Standardized, modularized
- Lead times for components production is predictable

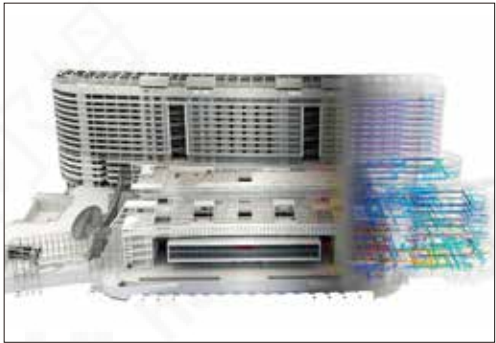


#### 装配化施工

- 装配率高
- 工程周期大幅缩短
- 质量安全可靠
- BIM应用程度高
- 变更少，成本工期可控

#### Assembly installation

- High rate assembly
- Shorter construction time
- Higher quality
- High BIM application BIM
- Less variations, controlled costs and on-time completion



#### 信息化管理

- 建筑全生命周期管理
- 部品部件具有“身份证”
- 专属建筑数据库系统
- 专属项目管理ERP系统
- 专属部品部件生产MES系统

#### Informatization management

- Building life cycle management
- Components have ID for future tracking and replacement
- Proprietary building database system
- Exclusive project management ERP system
- Exclusive parts production MES system





■ 医疗空间规划 Medical space planning

部品部件标准化，内装与结构分离，医院空间格局可灵活多变，拆改方便，适应医院空间结构的变化

Standardized parts and components, separation between interior design and structure, flexible and changeable spatial patterns, convenient and easy disassembly and change management, respond to the ongoing changes of a hospital's spatial requirements

■ 吊顶系统 Ceiling system

采用集成吊顶、与墙体无缝对接，施工简单，免打孔，无噪音，装配化程度高

With an integrated metal ceiling, seamless connection with the walls, simple construction, no drilling, no noise and simple assembly and removal

■ 墙体系统 Wall system

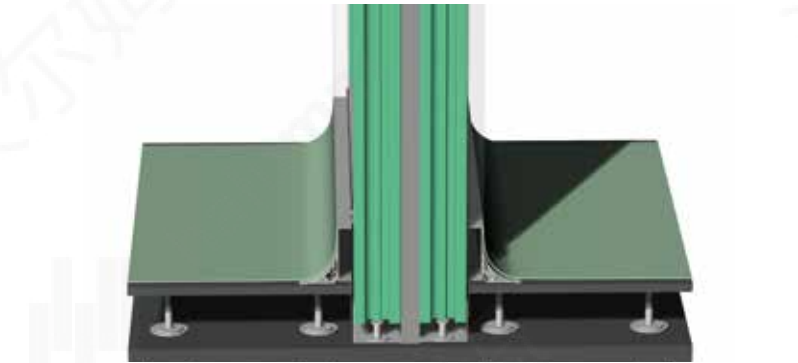
内装墙体结构全部由钢制龙骨组件构成，面板采用镀锌钢板制成，取代传统砖墙分户墙，施工高效环保无甲醛，时间缩短一半，一次施工同时具备墙体结构和表面装饰

Built-in wall components consisted of steel panel components; panels are made of powder coated, galvanized steel plate, instead of traditional brick or plasterboard walls. halumm offers an efficient, modular construction process with a green formaldehyde-free environment. It helps reduce by half the construction time, and in just one assembly one obtains the wall structure and pre-determined finishes at the same time

■ 机电管线系统 Wall Flexibility

通过BIM前期设计规划，管线可内置于墙体内部，不破坏结构，易维护

Through the preliminary design planning of BIM, the hydraulic and other piping systems can be placed inside the wall without damaging the structure and ongoing, low cost maintenance



■ 地面系统 Flooring system

一次性铺装完成，大幅减重，现场无污染，牢固耐久平整度高，装配式效率大大提高，pvc地胶板与墙体无缝连接，防止积灰

A modular, flexible flooring system offers a greatly reduced weight, with no pollution, a strong, durable, high degree of flatness, and assembly efficiency results in a shorter installation time. A PVC rubber floor and the walls are connected seamlessly to prevent accumulatio of dust and is easy to clean

■ 运营维护 Ongoing maintenance

部品装配化、备用件标准化，维修率明显降低。安装、拆卸、更换易完成，运维成本低

Using a parts assembly, modular and standardization of spare parts results in the cost of ongoing maintenance to reduce significantly

■ 环保性能 Environmental performance

部品部件原材使用国家标准的环保材料，在工厂提前进行环保处理，成品进入现场，只需组装，生态环保无污染

The raw materials of some parts are made of environment-friendly materials according to the national standard. They are treated in advance by the factory for environmental protection,sent to site and assembled with finished products, which is eco-friendly and pollution-free

## 汉尔姆装配式内装系统VS传统内装

Advantages of the halumm system

区别项 Comparative Items	传统医院内装 Traditional hospital decoration	汉尔姆装配式医院内装系统 halumm assembly type hospital installation system
施工周期 Construction period reduced	15天/间 15 days/room	2-4天/间 2-4 days/room
施工方式 Simpler method of construction	现场切割、刷漆、打胶等湿做法,涉及十几种工序工种 Removes more than 10 steps of traditional construction including on site cutting, painting and gluing etc. As well as wet work	一体化设计，厂化生产，施工现场装配式组装 Integrated design, factory production, on-site assembly of components all reduce installation time
预算控制 Construction budget control	后期费用变更复杂,预算不易控 Complex budget is difficult to control at later stage	预算可控，根据设计图纸生产所有部品部件 All components and parts are produced according to design drawings and thus consistently high quality
成本运营 Ongoing operating cost	后期运营成本高、改扩建项目复杂、费用不可控 High operating costs,complex reconstruction and expansion projects,and uncontrollable costs at later stage	模块化产品可拆卸，快速改扩建，费用可控 Demountable panel products permit rapid expansion and reconstruction, at a controllable cost
室内环境 Healthier interior environment	容易产生装修垃圾、粉尘、甲醛等污染 It is easy to produce sanitary fittings for items such as rubbish bins and medical waste, avoiding acetaldehyde and other pollutants	无装修垃圾、0甲醛释放、施工完成即可入住 Zero formaldehyde release after completion of the construction without any need for painting or sealants
使用情况 Ease of service	空间杂乱、各设备独立实现舒适环境的成本较高 Avoid space clutter, using independent modules. It will cost more to create a comfortable environment via conventional means	设备内置于墙体；舒适、健康、安全、智能的医疗环境 Fittings are easily fixed to the walls and assist to create a healthy, clean hospital environment and an intelligent approach to the fitout
安全性能 Safety performance	防火、隔音、抗污抗菌成本高 Avoids the conventional high cost of fire resistance, sound absorption and anti-bacterial construction	120分钟A级防火、54db高效隔音、医用专业抗菌防污材料 Provides 120 minute A level fire proof, 54db sound absorption with the use of antibacterial and antifouling materials
状态 Status	难以适应未来医养要求、逐渐淘汰 Ongoing changes to fix medical fixtures and equipment will no longer be an issue	符合未来医养环境要求的解决方案 meet the requirements of the further medical and pension solution requirements



功能性墙体  
Functional wall

成品吊柜  
Ready-made cabinets

智能化操控  
Intelligent operation



## 汉尔姆装配式内装系统的应用

Application of the hospital's integrated and flexible construction system



扶手钢制龙骨超强连接  
Integrated steel handrails



钢制挂墙  
Steel panels  
used in construction

## 公共空间 (门诊大厅、护士站、走道)

- 装配式挂墙系统
- 集成吊顶系统
- 定制柜台系统
- 整合导向标识系统

汉尔姆装配式医院内装系统以“工业设计+精密制造”为依托，提供包括一体化设计、工厂化生产、装配化安装、信息化运维等服务的内装整体解决方案，结合声学、防火、隔音、智能应用等功能性设计，具有无污染零甲醛、拆装便捷高效、可重复使用等优点。

汉尔姆装配式门诊大厅、护士站均可结合暗柜的设计扩大储物空间同时还保持了墙面整体美观效果，可存放推车等工具，方便快捷。装配式钢制墙体系统在当前市场上较为罕见，该装配式墙体突破了传统意义上墙的空间分割的定义，可以称之为是一套完整的内墙钢结构装配式系统，完美融入到汉尔姆装配式内装系统的公共空间之中。

Used in many areas including public spaces  
(outpatient waiting areas, nurse stations, corridors)

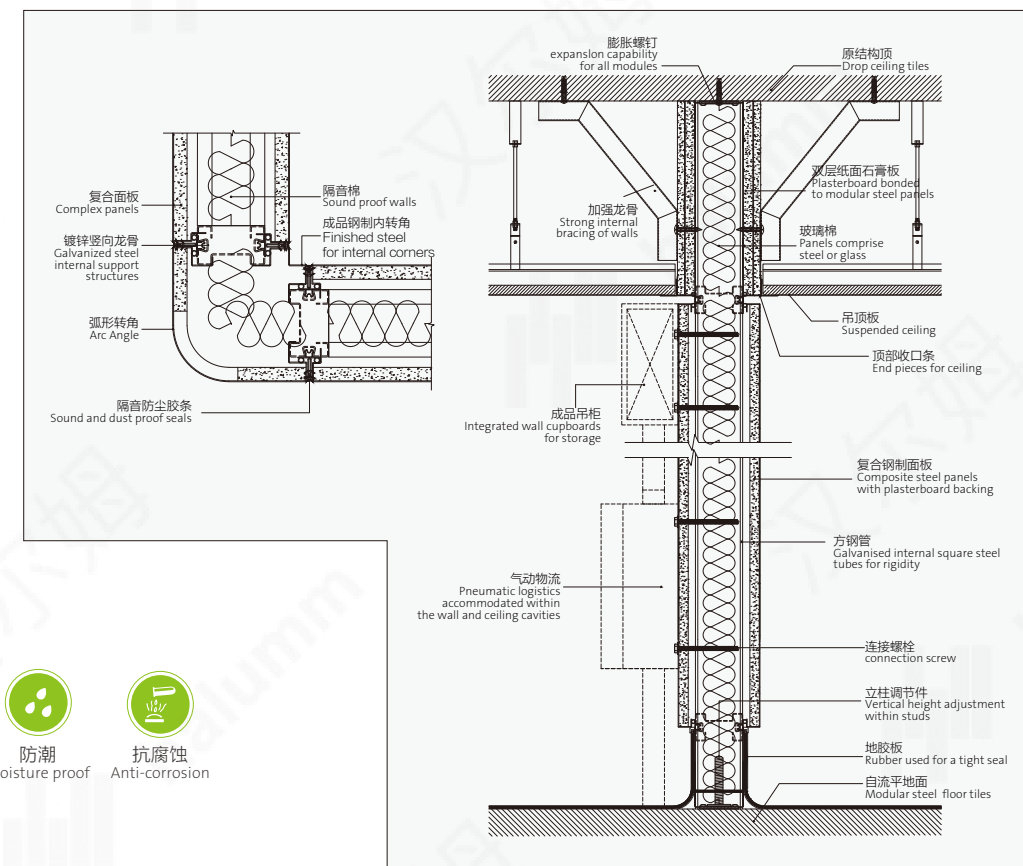
- Assembly of the wall cladding system
- Metal ceiling system
- Customized cabinet system
- Integrated identification system

halumm's Integrated, Interior Construction System for Hospitals, is based on "Industrial Design and Precision Manufacturing", providing a total solution for interior construction including integrated design, modular, precise, factory made manufacturing, prefabricated modular installation, informational operation and low cost, ongoing maintenance. Combined with various functional design criteria like good acoustics, fire resistance, sound insulation and intelligent applications, the system has the advantages of being pollution-free, zero formaldehyde, easy installation and reusability.

halumm's system in outpatient wards and nurse station applications can be combined with the design of concealed cabinets to expand storage space while maintaining the overall aesthetic effect of the wall, including storage of carts, equipment etc. This is a convenient and the fastest prefabricated steel wall system in the hospital market and being new, it is relatively rare. The prefabricated wall breaks through the traditional concept of pre-fabricated partition construction and can be used as a complete set of interior wall structures, assembled on site.



扶手节点  
Handrail detail



公共空间内装节点  
Public space interior fit-out section

- 抗菌  
Anti-bacterial
- 环保  
Eco-friendly
- 耐火  
Fire proof
- 防潮  
Moisture proof
- 抗腐蚀  
Anti-corrosion
- 易清洁  
Easy to clean
- 储藏  
Store



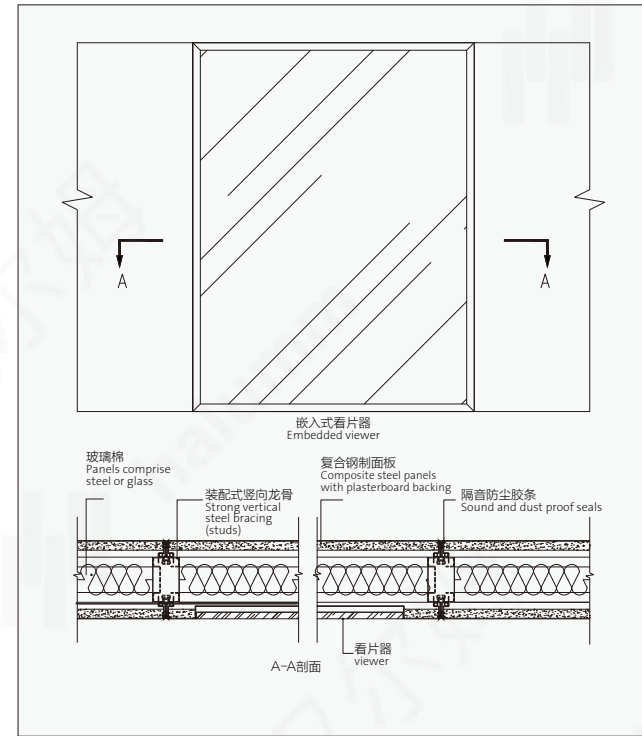


## 诊疗空间 (问诊室)

- 装配式诊室内装系统
- 集成吊顶系统
- 挂墙家具系统

汉尔姆装配式医院内装系统以“工业设计+精密制造”为依托, 提供包括一体化设计、工厂化生产、装配化安装、信息化运维等服务的内装整体解决方案, 结合声学、防火、隔音、智能应用等功能性设计, 具有无污染零甲醛、拆装便捷高效、可重复使用等优点。

汉尔姆装配式诊疗空间整合看片器、叫号器、吸音墙面、墙面灯光系统等设备, 这样不仅节省了室内空间, 保证了诊室的功能性, 而且保持了诊疗空间的功能性和美观性。



看片器节点  
Film viewing section within the wall

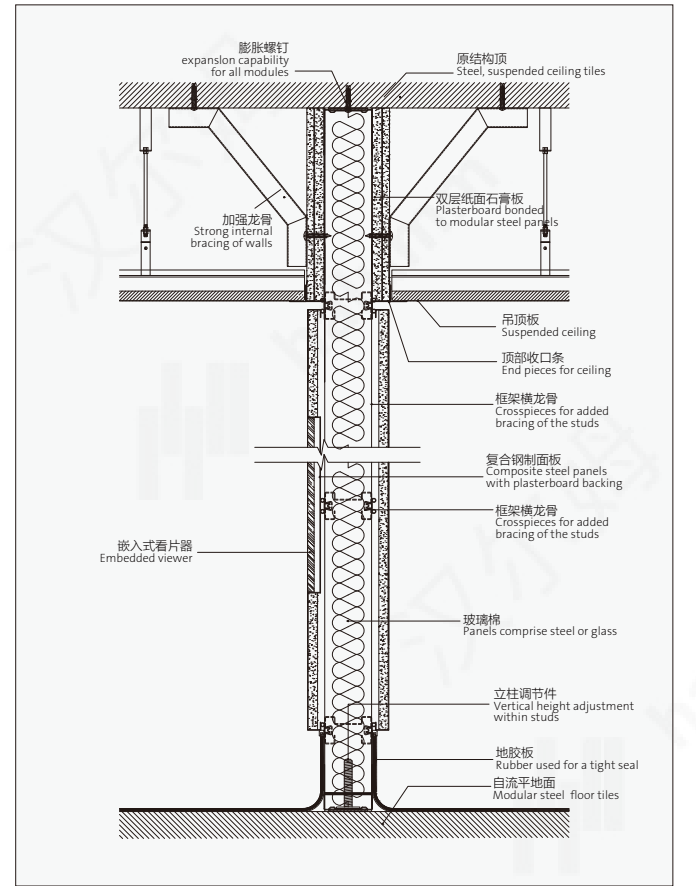
- 隔音 Sound insulation
- 抗菌 Anti-bacteria
- 环保 Eco-friendly
- 防潮 Moisture proof
- 耐火 Fire proof
- 抗腐蚀 Anti-corrosion

## Consulting room areas (patient inquiry & consulting rooms)

- Modular construction system's application in consulting rooms
- Metal ceiling system
- Wall hanging furniture system

halumm's Integrated, Interior Construction System for Hospitals, is based on "Industrial Design and Precision Manufacturing", providing a total solution for interior construction including integrated design, modular, precise, factory made manufacturing, prefabricated modular installation, informational operation and low cost, ongoing maintenance. Combined with various functional design criteria like good acoustics, fire resistance, sound insulation and intelligent applications, the system has the advantages of being pollution-free, zero formaldehyde, easy installation and reusability.

halumm's system can be used for consulting room space with an integrated film viewer, sound absorbing walls and in-wall lighting systems and other required equipment, not only to save interior space, but to ensure the clinics function efficiently, as well as keeping the space functional and aesthetically pleasing.



诊疗空间内装节点  
A clinic's space interior decoration section

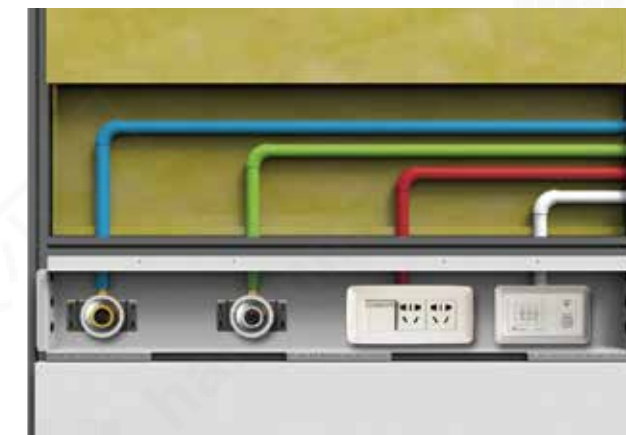


## 护理空间（病房）

- 装配式病房内装系统
- 集成吊顶系统
- 设备带整合系统
- 定制储物柜系统
- 一体化卫生间系统

汉尔姆装配式医院内装系统以“工业设计+精密制造”为依托，提供包括一体化设计、工厂化生产、装配化安装、信息化运维等服务的内装整体解决方案，结合声学、防火、隔音、智能应用等功能性设计，具有无污染零甲醛、拆装便捷高效、可重复使用等优点。

汉尔姆装配式病房系统现场采用装配化施工方式进行建造，取代传统砌砖刮腻子装修，可使工期缩短一半以上，同时高达54db的超强隔音与120分钟耐火等级，为病人带来完工即可入住的舒适安全就医环境。



设备带节点  
Equipment details section

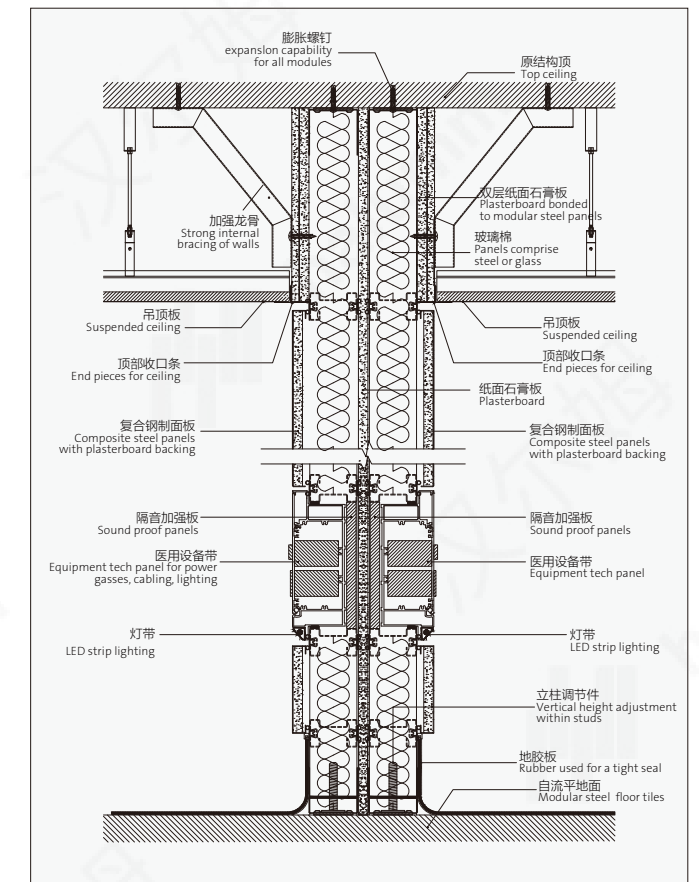


## Nursing stations (hospital wards)

- Prefabricated ICU and Operating Room interior construction system
- Modular metal ceiling system
- Integrated equipment tech panel
- Customized cabinet system integrated into partitions
- Integrated toilet system

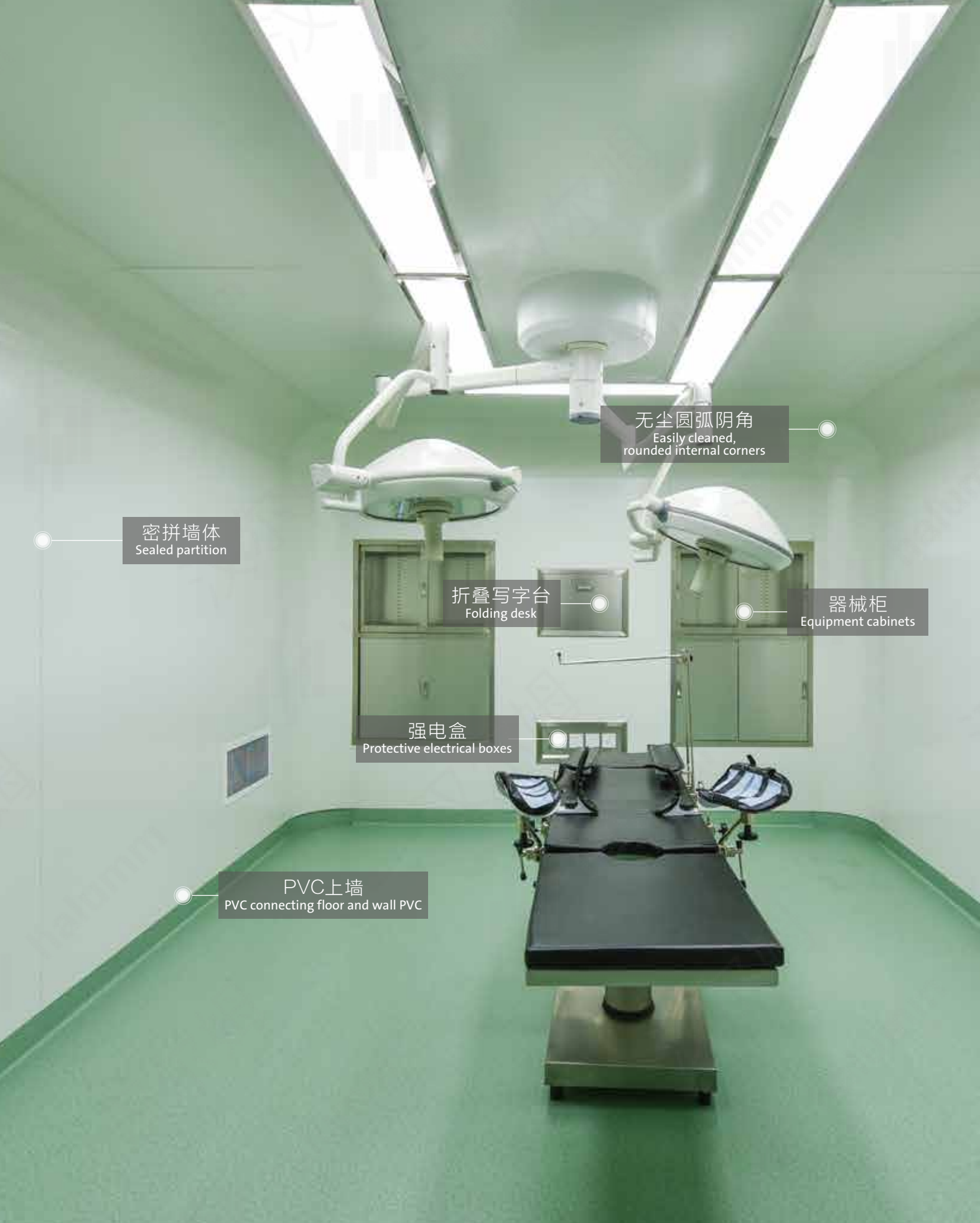
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halumm's Prefabricated Ward System adopts prefabricated construction, in place of traditional construction, which shortens time to construct by more than half. Meanwhile, it can provide 54dB sound insulation and 120 minutes fire-resistance. Patients will be admitted into a comfortable and safe hospital environmental upon completion.



护理空间内装节点  
Nursing spaces interior details





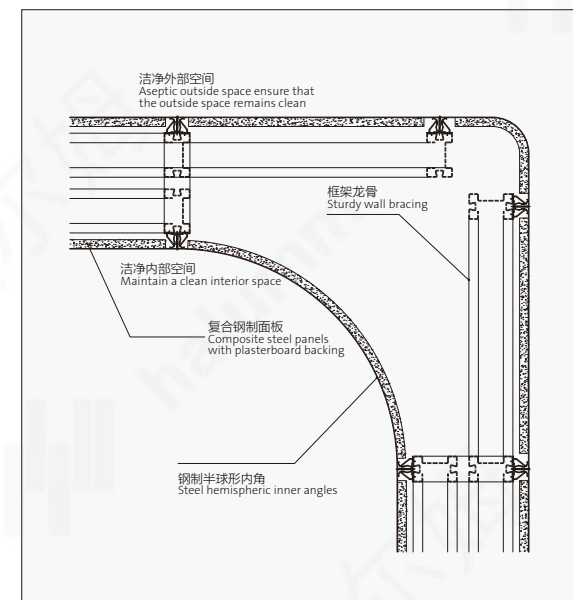
## 洁净空间 (ICU、手术室)

- 装配式ICU手术室内装系统
- 整合洁净装备系统
- 集成吊顶系统
- 密拼圆弧阴角系统

汉尔姆装配式医院内装系统以“工业设计+精密制造”为依托，提供包括一体化设计、工厂化生产、装配化安装、信息化运维等服务的内装整体解决方案，结合声学、防火、隔音、智能应用等功能性设计，具有无污染零甲醛、拆装便捷高效、可重复使用等优点。

汉尔姆装配式手术室系统整合内装系统、机电管线系统、智能系统等，实现手术室最优布置，便捷高效。

汉尔姆装配式ICU重症监护室系统采用抗菌钢板与全景观察窗密拼设计，无尘、抗菌、抗污，便于清洁。



圆弧阴角节点  
Curved internal corners

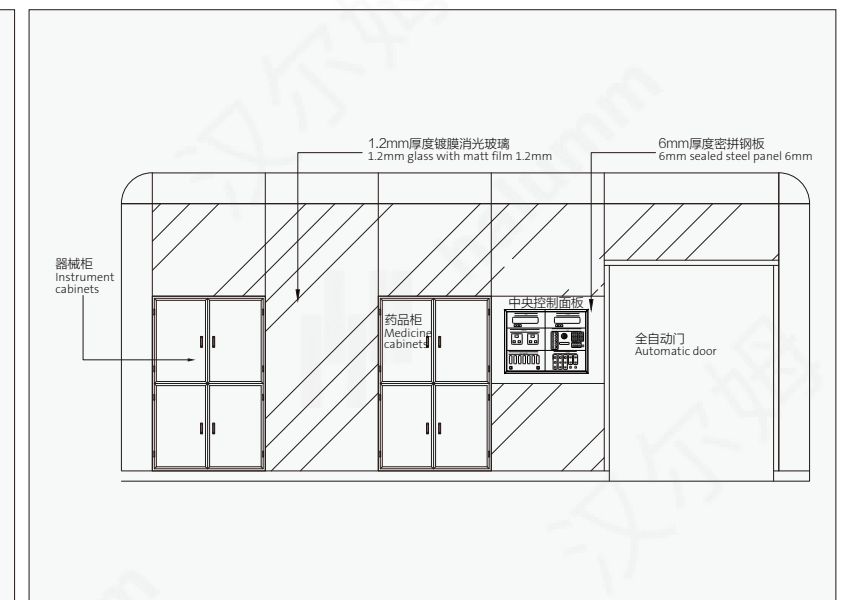
## Aseptic Spaces (ICU, Operating Room)

- Prefabricated ICU and Operating Room interior fitout system
- Integrated aseptic equipment system
- Metal ceiling system
- Easily cleaned using rounded internal corners

halumm's Integrated, Interior Construction System for Hospitals, is based on "Industrial Design and Precision Manufacturing", providing a total solution for interior construction including integrated design, modular, precise, factory made manufacturing, prefabricated modular installation, informational operation and low cost, ongoing maintenance. Combined with various functional design criteria like good acoustics, fire resistance, sound insulation and intelligent applications, the system has the advantages of being pollution-free, zero formaldehyde, easy installation and reusability.

halumm Prefabricated Operating Room System integrates with internal construction system, mechatronics and piping system and intelligent system which when combined, realize an optimized layout, that is convenient and efficient.

halumm Prefabricated ICU System is dust-free, anti-sepsis, anti-pollution and easy to clean by using antibacterial steel panels and sealed panoramic view windows.



洁净空间内装节点  
Aseptic interior space



## 公司资质

- 建筑装修装饰工程专业承包 一级
- 装饰设计乙级
- 专业承包企业钢结构工程 三级
- 施工总承包企业建筑工程 三级
- ISO9000认证、ISO14000认证

## Company qualification

- Grade A qualification for the design engineering, construction and interna fit-out
- Grade B qualification of interior design
- Steel structure engineering for professional contracting to enterprises
- Grade 3 qualification of construction, general contracting for enterprise construction projects
- ISO9000 quality certification and ISO14000 certification

## 公司荣誉

- 中国循环经济协会认定全国行业影响力第一
- 独有装配式钢结构建筑体系
- 编写8项国家及行业标准
- 拥有百余项专利技术
- 获得第二十届中国专利奖
- 国家级高新技术企业
- 获得 LEED 金级认证
- 杭州G20峰会场馆总承包商
- 厦门金砖五国峰会场馆总承包商
- 主编《医疗建筑集成化装配式内装修技术标准》
- 获得WIPO《中国专利奖》
- 参编《装配式钢结构建筑技术标准》

## Honors

- Recognized as the corporate influence industry first by the China Association of Circular Economy
- Unique fabricated steel structure building system
- Compile 8 national and industry standards
- Registered over 100 patents
- The 20th China Patent Award
- National high-tech enterprises
- LEED Gold certification
- Main contractor of G20 Hangzhou media center
- Main contractor of Bricks Xiamen media center
- Editor in chief “*Technical standard for integrated and prefabricated interior decoration of medical buildings*”
- Winning “*The wipo-sipo award for chinese outstanding patented invention & industrial design*”
- Participated “*Technical standard for assembled buildings with steel-structure*”

# 引领建筑装饰时代的变革

为人类提供舒适、健康、安全、环保的生活环境

Leading the innovation of the architectural decoration era  
to provide a comfortable, healthy, safe and eco-friendly living environment for human beings.

