When form is a matter of function

**Beijer Electronics introduces the Intelligent Design concept:
HMI series EXTER**

EXTER is not just aesthetic-The operator terminal
is cleverly designed in every aspect. This makes
it superior in user-friendliness, ergonomics,
functionality and performance.

Beijer Electronics – your Industrial Intelligence provider

HMI Products is a business area of the Beijer Electronics group. It has over
20 years' experience within automation. HMI Products prides itself on its close,
long-term relationships with its distributors, OEMs and brand-label partners.

Our mission is to offer the world's most user-friendly and innovative operator
terminals. Furthermore we want to give our customers what we call Industrial
Intelligence – products that communicate and transform data into useable
information. Data that can be used for people and companies to make correct
decisions and ultimately increase their performance and profit.

Beijer Electronics AB is quoted on the Stockholm Stock Exchange. The head
office is in Malmö, Sweden with subsidiaries in Germany and the US. For our
distributors world-wide, please visit www.beijerelectronics.com

EXTER™
– Intelligent Design

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Intelligent Design

EXTER proves that design is about more than just aesthetics:

Beijer Electronics' development skills and innovative operator terminals are a result of more than 20 years accumulated experience in HMI.

Together with industrial designers, Beijer Electronics has created EXTER's mechanical layout, utilizing customer input and taking into account current and future HMI operating requirements. The industrial designers helped to perfect the functional and inviting design: EXTER's modern aluminum frame in silver and steel effect not only looks elegant, it also ensures robust construction and improves EMC resistance. In the same way, the attractive front also withstands harsh environments. Furthermore, the slim form and narrow depth of less than 60 mm for all models makes EXTER space efficient and easy to place in all sorts of applications.

Compressed lengthwise, the egg's oval shape distributes an applied weight evenly. An experiment found that an egg withstands the pressure of an average mass of 5.1468 kg.
Source: Physics Department, Mount Allison University, Canada

Pushing the boundaries of user-friendliness

EXTER is user-friendly in every detail:

EXTER's ergonomic key layout has a logical placement of operating keys, text strips and LEDs. The familiar layout of the operating keys and their intuitive symbols are inspired by modern PC keyboard design so they can be easily understood.

The high-resolution, deep-color TFT display gives a clear, detailed image and ensures optimal viewing and large viewing angles in all conditions.

EXTER is easily mounted with the brackets that pull the operator terminal tightly against the cabinet by applying pressure to the inside of the cabinet. This saves time as there is no need to drill any holes for fastening screws.

The configuration software Information Designer is a truly user-friendly tool: A large number of ready-made objects and functions make it quick and easy to create applications by pointing and placing on the screen. Information Designer illustrates what the application will look like in real life, and enables simulation of the project. This saves valuable time for the developer, as does the option of choosing between six menu languages.

The standard Windows fonts help create a user-friendly look for the operator, and the possibility to present the application in many different languages also provides ease-of-use.

The same software is used for programming all EXTER operator terminals as well as the CIMREX series and accessories. This provides the developer with flexibility: A project is easily scaled from one EXTER model to another, and CIMREX projects are simple to convert to EXTER products.

Feathers provide warmth, waterproofing, camouflage and aerodynamic form. In the fall, a bird adds extra feathers, and by fluffing its plumage, insulation increases up to 150% compared to insulation provided in summer.
Source: Encyclopædia Britannica and Natural History Magazine.

Clever features for efficient communication

Communication is made easy with EXTER:

Each operator terminal has a built-in web server with its own web address.

The HMI series has SMTP functionality, allowing the sending of alarms and attached text reports as e-mails. Data such as trend information and recipes can be sent from the terminals using the FTP functionality. The operator terminal is also equipped with USB ports and built-in Ethernet.

EXTER provides remote maintenance and management possibilities for both the operator terminal and the controller system. Security levels defined in the application can protect this openness. EXTER can also act as both server and client in an Ethernet network.

The dual driver functionality enables communication with, and data exchange between, two controller systems. Thanks to the wide selection of drivers, communication is possible independent of manufacturer or type of equipment. The drivers are simple to configure, and are always available for easy updates in the configuration software.

Each mature dandelion seed has a white parachute, easily catching the wind. The average distance a dandelion seed can travel by wind is 10 kilometres.
Source: Encyclopædia Britannica and University of Alberta, Canada

Powerful technology

EXTER employs state-of-the-art technology in both the hardware and software design:

The intelligence behind the HMI series is the new Intel® PXA270 processor, delivering cutting edge performance. This processor, with Intel XScale® technology, provides enough processing power and memory for all sorts of HMI applications, in all sorts of industries and businesses.

EXTER utilizes the Windows® CE.NET operating system. The CE.NET version 4.2 is a stable and reliable platform, which has proven its resilience in many industrial products. In addition, the powerful Intel® PXA270 processor with its Intel XScale® technology is perfectly suited for running Windows® CE.NET.

The Intel® Persistent Storage Manager keeps data safe when closing the operator terminal, and ensures that system files and data are not corrupted in case of power failure or interruptions.

The EXTER series has IP65 front cover protection degree, and complies with CE (EMC), UL and DNV standards.

The thread of spider silk is one-tenth of the thickness of a human hair, yet the spider web can trap a bee flying at 32 km/hour without breaking.
Source: University of British Columbia, Canada

EXTER's well thought-out form and function give higher performance. Intelligent Design means the HMI series is superior in aesthetics, user-friendliness, ergonomics, functionality and performance. The EXTER operator terminals from Beijer Electronics set a new standard for human machine interfaces, combining clever and modern design with the latest technologies.

EXTER™ T70
6.5" TFT 640 x 480 pxl

EXTER™ T100
10.4" TFT 800 x 600 pxl

EXTER™ T150
15.1" TFT 1024 x 768 pxl

EXTER™ K70
6.5" TFT 640 x 480 pxl

EXTER™ K100
10.4" TFT 800 x 600 pxl

Space efficient   Easy configuration

EXTER™ series overview

The EXTER series consists of five different models: The new HMI range offers three touch versions and two sizes of keypad-operated models. Please find more information about the models below.

	Touch operator terminals			Keypad operator terminals	
	EXTER™ T70 6.5" TFT 640 x 480 pxl	**EXTER™ T100** 10.4" TFT 800 x 600 pxl	**EXTER™ T150** 15.1" TFT 1024 x 768 pxl	**EXTER™ K70** 6.5" TFT 640 x 480 pxl	**EXTER™ K100** 10.4" TFT 800 x 600 pxl
Hardware specifications					
Display type	Graphic 64K color TFT-LCD, resistive touch				
Display backlight	CCFL backlight with dimming and burn-out detection				
Function keys				16 (8 with integrated text strips)	22 (10 with intergrated text strips)
LEDs				16 (8 integrated with key and text strip)	20 (10 integrated with key and text strip)
Communication ports	Ethernet 10/100 Mbit/sec RJ45 connector USB Host USB Device RS485/RS422 25-pin D-sub contact (RS485 available through RS422 with software setting) RS232C 9-pin D-sub contact				
Processor	416 MHz RISC CPU (Intel XScale)				
Memory, flash	32MB (Intel StrataFlash)				
Memory, RAM	64MB				
Memory, expansion	CompactFlash slot available for adding optional cards for expansion of memory, data back-up, data storage and transfer of data and projects				
Buzzer	Yes				
Real-time clock	Yes				
Supply voltage	+24 V DC (20 - 30 V)				
Power consumption	Max 2 A				
Ambient temperature	0 - 50 °C				
Relative humidity	5 - 85 % non condensing				
Frame and casing material	Powder-coated aluminum				
Cut-out dimensions (mm)	189 x 138	265 x 206	356 x 279	246 x 139	344 x 210
Mounting depth (mm)	55	58	60	56	58
Approvals and enclosure classes Preliminary Information					
EMC directive 89/336/EEC article 4	EN61000-6-2 immunity EN61000-6-4 emission				
UL, cUL	UL 1604 Class I, Div. 2 UL 508 UL 50				
DNV	Yes				
Waterproof front	IP65				
Back cover protection degree	IP 20				
Functionality specification					
Network abilities	E-mails (STMP Auth. client) Web server Remote operation via Internet Access to controller system via Internet Transfer of files (FTP server)				
Dual Drivers with data exchange	Yes				
Passthrough / Transparent Mode	Yes (dependent on driver)				
No Protocol Mode	Yes				
Multiple Languages	Yes, with up to 10 languages in one project				
Standard Windows fonts (Unicode)	Yes				
Data Logger	Yes				
Internal Variables	Yes				
Historic Trends	Yes				
Recipe Management	Yes				
Alarm Management	Yes, with up to 16 groups				
Time Channels	Yes				
IO Time Groups	Yes				
Security Passwords	Yes, up to 8 levels				
Message Libraries	Yes				
Macros	Yes				
Dynamic Objects	Yes				
Report Printouts	Yes				
Easy Configuration with Information Designer	Yes				