

GLASSCAPE®

The Touchscreen Platform for your Control Systems





GLASSCAPE®

INDUSTRY-PROVEN

RAFI has been a leader in human-machine communication for over a century. From initial idea to finished product, we support our customers with high-quality components and operating panels. For us, quality and reliability are always in focus. That's why we manufacture the touch sensors for our touchscreens entirely in-house in Germany. **GLASSCAPE** by RAFI sets benchmarks in capacitive touch technologies.

GLASSCAPE is characterized by long-term availability and reliability of supply. We offer an impressive portfolio of robust and flexible solutions: **TOUCHKEYS, TOUCHPADS, FLEXSCAPE, METALSCAPE and TWIN TOUCH** make **RAFI** your ideal partner for innovative touch systems.



YOUR IDEA. OUR TECHNOLOGY.

GLASSCAPE combines display and control in an intuitive way. Haptic, visual and acoustic feedback ensure reliable operation, even under adverse conditions. The sealed glass surface prevents any penetration of dirt, liquids and other foreign matter. **GLASSCAPE** is fully equipped for industrial use.

GLASSCAPE comes into its own wherever humans communicate with machines. We support you at every step, from the idea to the finished product, and manage the entire process for you – from development through to production and final approval.

You can depend on **RAFI**.

INTUITIVE OPERATION



TEMPERATURE-RESISTANT



EXTENSIVE STANDARD
SOFTWARE



HIGH MEDIA RESISTANCE





HIGH DEGREE OF IN-HOUSE PRODUCTION

- Glass sensors, components and operating elements made by RAFI
- Supply reliability through direct availability
- Long-term availability of components
- Development, production, assembly, software, testing, packaging, logistics and aftersales – all from one source



DESIGN OPTIONS

- Customer-specific designs
- Customized system integration
- Integration of RAFI components (control components, emergency stop devices) possible
- Screen sizes up to 24"
- Surfaces can be sanded, etched, cut out, bent, polished, matted or inscribed
- Illumination and disappearance effects for the operating elements



INDUSTRY-READY

- ESD and EMC-resistant
- Able to withstand liquids
- Meets strict hygiene standards thanks to gapless potting
- Extended temperature range from -40°C to +85°C
- Easy cleaning during ongoing operation
- Multi-touch
- Automatic palm recognition



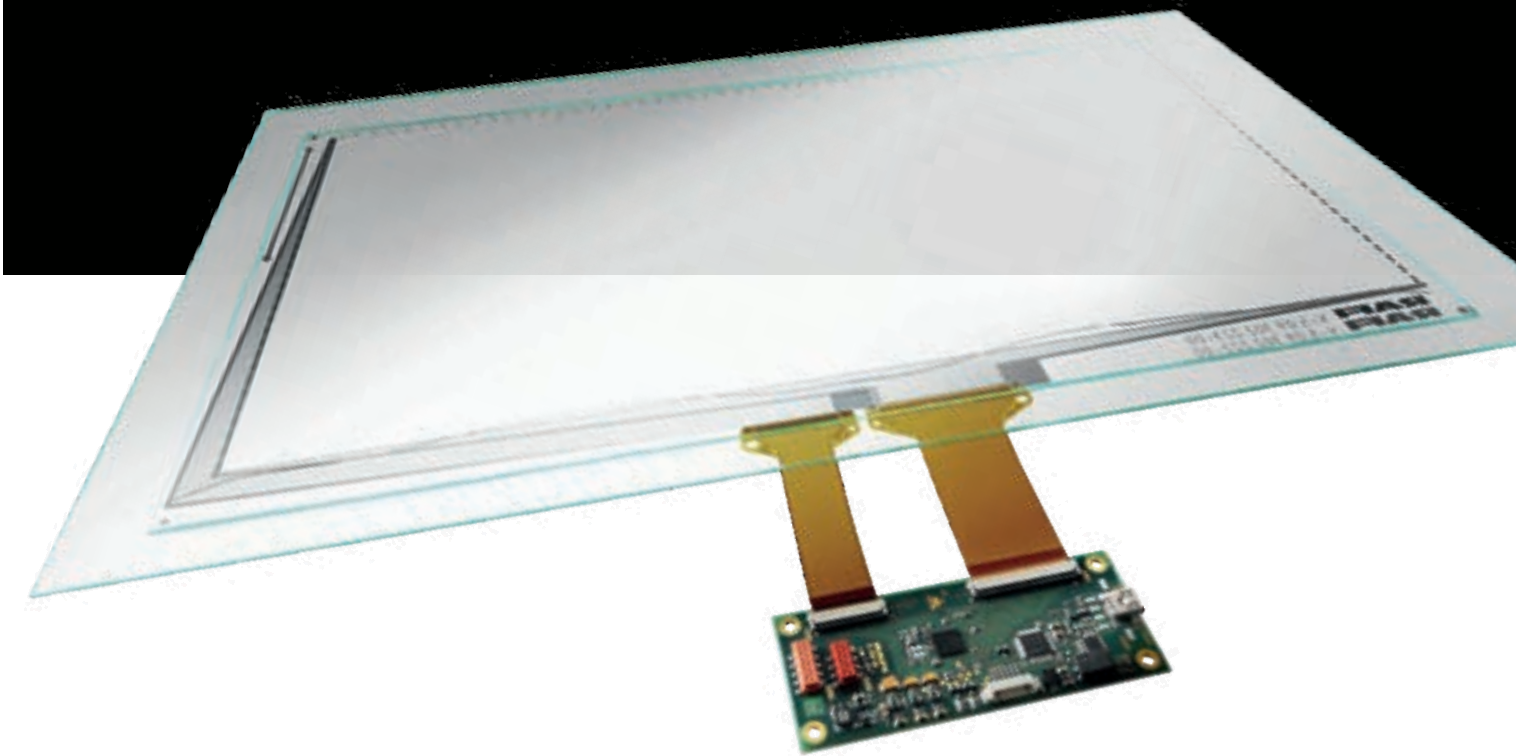
GLOVE OPERATION

SENSORS MADE BY RAFI

CONTROL WITH HIGH SENSITIVITY

The sensors are the heart of our **GLASSCAPE** touchscreens. Depending on customer requirements, either glass sensors or film sensors are available. Our glass sensors are manufactured 100% in-house by **RAFI**. This means we have no procurement problems or long delivery times – which gives us the flexibility to meet your requirements. Another advantage for you is the long-term availability of **RAFI** glass sensors.

For analysis of our **GLASSCAPE** touchscreens, we use standard electronics based on the maXTouch technology developed by our partner Microchip – a very stable and highly parameterizable system.



GLASS SENSORS MADE BY RAFI

Thanks to in-house production, RAFI can guarantee supply and ensure continuous technical development.

- Standard sizes up to 24" available
- Long-term availability
- Temperature range from -40°C to +85°C
- Custom sizes possible
- Extremely rugged design (laminated glass system)

FILM SENSORS

Depending on the application, we use film sensors to ensure small system diagonals. Due to their thickness and weight, these sensors are ideal for use in flat or curved applications.

- Temperature range from -20°C to +65°C
- Customer-specific sensor designs
- Suitable for high quantities
- Custom contours can be easily realized

TOUCHKEYS AND TOUCHPAD

SENSOR-BASED OPERATING ELEMENTS

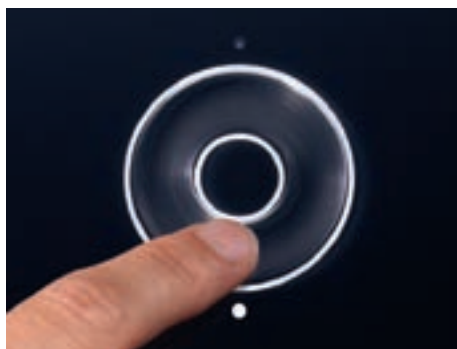
In addition to the input option via the touchscreen, **TOUCHKEYS** and **TOUCHPADS** can be used as additional operating elements.



TOUCHPAD

Our customized TOUCHPADS are developed and produced for industrial use. The robust user interface is made from foil or glass and houses a capacitive sensor in your required format.

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- Individual illumination – night design
 - EMC, ESD and media-resistant
 - Glove operation
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TOUCHKEYS

The TOUCHKEYS – button, slider and wheel – are located behind a protective glass panel. Even after millions of actuations, our GLASSCAPE sensors continue to work faultlessly. Neither mechanical systems nor resistive touch technology can even come close to these results.

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- User guidance via light signals
 - Visual and acoustic feedback
 - Disappearance effect of inactive key switches
 - EMC, ESD and media-resistant
 - Illuminated sensor fields
-



**MULTIPLE FUNCTIONS IMPLEMENTED
ON A SINGLE OPERATING ELEMENT**



**FLEXIBLY ADJUSTABLE
FORCE DETECTION**





TWIN TOUCH

FORCE INSIDE – GLASSCAPE WITH FORCE DETECTION

TWIN TOUCH evaluates touch as well as the pressure applied to the panel. The force detection prevents false actuation due to external influences, increases the operating safety and allows the implementation of additional input levels. The switching threshold at which the applied pressure triggers an input can be configured via the software. This ensures that moisture, dirt and unwanted contact do not cause false actuations. So **TWIN TOUCH** is ideal for industrial use.



POSITION SENSING



CERTIFIED
QUALITY



REDUNDANT
DATA ENTRY SYSTEM

METALSCAPE

TOUCH INPUT IN A METALLIC LOOK

GLASSCAPE and a metallic finish – **RAFI** has combined the two in **METALSCAPE**. This technology delivers a high level of security paired with outstanding ease of use and a premium design. The operating elements of the **METALSCAPE** application are located behind glass – with a metallic look. Only RAFI knows the secret, but we'd be more than happy to show you the benefits.

TRANSPARENT GLASS
WITH A METALLIC FINISH



INTUITIVE
CONTROL





**HIGH
MEDIA RESISTANCE**



**LOW
MOUNTING DEPTH**



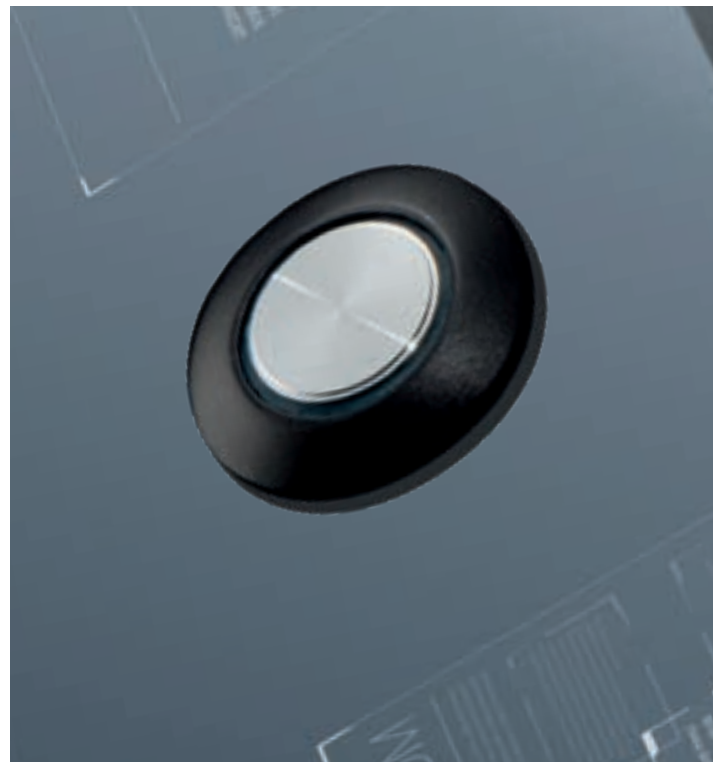
**DISAPPEARING EFFECT
FOR INACTIVE CONTROLS**

FLEXSCAPE

HAPTIC OPERATING ELEMENTS FOR GLASSCAPE

Complex machine setups require a high degree of precision – from human and machine alike. This requires a system that responds quickly and is easy to operate. The **FLEXSCAPE ONE** and **FLEXSCAPE WHEEL** haptic operating elements are positioned on a sealed surface without cut-outs or holes. You decide on the number of elements and the positions you want. By means of tactility and haptics, **FLEXSCAPE** increases both operating comfort and safety.



**FLEXSCAPE ONE****FLEXSCAPE WHEEL****FLEXSCAPE ONE**

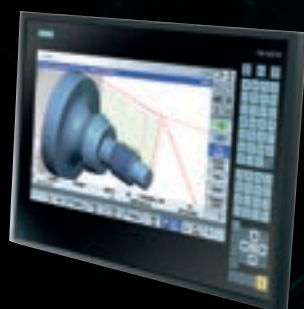
The FLEXSCAPE ONE pushbutton is activated by touch. During switching, the button must overcome a pressure point. The haptic feedback thus allows safe blind operation.

FLEXSCAPE WHEEL

The FLEXSCAPE WHEEL finger guidance offers a low-cost alternative to milled contours on the glass surface. The perceptible contours ensure guided and safe blind operation.

INDUSTRY LEADERS RELY ON RAFI

GLASSCAPE meets the differing requirements of diverse industries when it comes to control systems. Which is why leading companies choose to rely on **RAFI**'s expertise.



ELECTRICAL ENGINEERING
HMI FOR CNC MILLING MACHINES



FOOD PRODUCTION MACHINES
HMI AND CONTROL FOR COFFEE MACHINES



MEDICAL ENGINEERING
HMI FOR VENTILATORS





AUTOMOTIVE INDUSTRY
ARMREST INCLUDING
TOUCH SYSTEM FOR PISTENBULLY

MACHINE/PLANT ENGINEERING AND CONSTRUCTION
MOBILE HMI FOR INDUSTRIAL ROBOTS

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