



ROOF WINDOW 2015
ACCESSORIES



COLOURS OF NATURE

World delights with views. Plays with light,
mixes natural colours and blurs
them with wind to create a true masterpiece.

Now you're a painter.
Keep the colours of nature
in the attic with original accessories
for roof windows FAKRO.



WHY DO WE USE ROOF WINDOW ACCESSORIES ?

SPACE DECORATION

The main function of internal accessories is to enhance the decor of a loft. The wide range of their types and colours ensures harmony with the decor of any interior and offers the possibility of shaping your attic character.

PROTECTION FROM OVERHEATING

The external accessories are the best protection from high temperatures and help prevent overheating on hot, summer days.

CONTROL OF LIGHT

Accessories enable you to regulate the amount and intensity of light entering the room. As a result you can achieve complete darkness, even on a sunny day. They can additionally protect from the harmful influence of computer screen reflections.

PROTECTION FROM UV RAYS

The accessories also ensure a permanent protection from UV rays, and as a result materials and furniture are protected from fading.

PROTECTION OF PRIVACY

FAKRO roof window accessories can also increase the feeling of privacy.

EASY INSTALLATION AND COMFORT OF USE

The accessories fit Fakro roof windows perfectly and the installation is quick and easy. All Fakro accessories are characterised by high quality, innovative solutions and they enhance the aesthetics of any room.



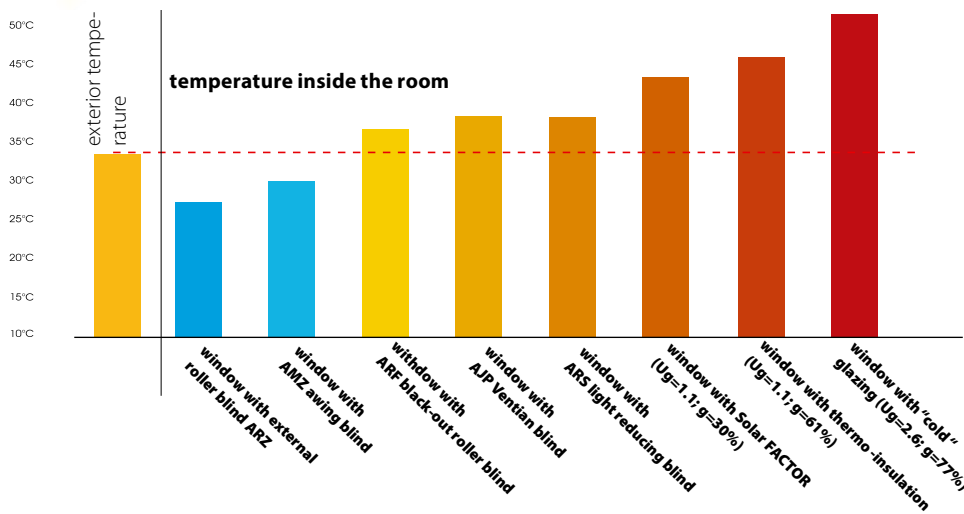
PROTECT YOURSELF FROM THE HEAT ...

Which of the accessories gives the best protection from overheating?
According to the **DIN 5034-1** norm rooms should be protected from overheating with the use of external accessories (awning blind, roller blind) which give better protection than internal accessories.

How does it work in reality?

Fakro, to improve the products and with due regard to the user's comfort, analyses the efficiency of protection from overheating with the use of different accessories. To this end eight similar investigation boxes have been made. They are exposed to the influence of the sun's rays and equipped with roof windows of the same type. The research was made with closed windows, the temperature was taken one metre above the floor in a few different places. These windows then have accessories installed. The results are shown in this diagram.

The space should be protected from overheating on summer days with the use of external covers placed outside the glass which reflect the heat. The overheating of rooms is a result of absorption of global radiation by objects in the room and surfaces which delimit the space (walls, floor). The absorbed radiation changes into long-wave infrared radiation (heat radiation), which does not pass the glass and causes undesirable overheating." - DIN 5034-1



Maximum temperature in the attic space on a hot summer day, depending on which protective accessories are installed.

The investigation results above show clearly that external accessories (awning blind and roller shutter) provide the best protection from outside heat. The optimum sun protection can be acquired by external awning blind, bearing in mind heat protection and ease of installation. Internal accessories also offer protection from the heat but to a lesser degree than external accessories; their main function is to decorate the space and regulate the amount of light entering the room.

Heat radiation in %

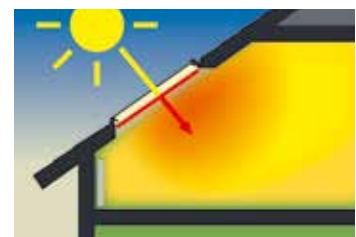
- window without blinds $g = 61\%$ (0.61) according to EN 410
- window with internal black-out blind $g = 37\%$ (0.37) according to EN 13363-1
- window with awning blind depending on type of fabric $g = 4-14\%$ (0.04 – 0.14) according to EN 13363-1

8 times
more effective

The external awning blind together with an internal accessory installed on a FAKRO roof window creates a set of accessories which ensure the highest levels of comfort in the loft space, because they protect from heat and light and decorate the room.



The external accessories keep the sun's rays outside the pane, reduce the heat flow and help prevent the room from overheating.



Heat radiation which enters through the pane is absorbed by internal blind. Changed into long-term infrared radiation (heat) which is not allowed to go outside the window pane, the blind emits the heat into the room and operates as radiator. It leads to undesirable overheating during hot days, especially those facing South.

VENETIAN BLINDS

AJP

AJP Z-Wave

LIGHT IN YOUR HANDS ...

The Venetian **AJP** blind is a popular roof window accessory which can control the amount of light entering the room. Through changing the angle of the lamellae we can control the direction of sunlight and create a unique atmosphere.



The Venetian blind protects from overheating and provides a decorative element. Side aluminium rails enable a complete shading of the room and also make it possible to rotate the sash with the blind pulled down.

CHARACTERISTICS:

- the ability to control the direction and the amount of light entering through by changing the angle of the lamellae,
 - element of decoration in the attic
 - the facility to partially cover the window
- partial reduction of the heat excess in a room*
- possibility to lock the blind in any position
 - protection from UV rays,
- providing privacy, without significatnly reducing natural light

CONTROL:

AJP blind operated manually

For operating Venetian blind installed out of reach, the universal **ZST** control rod is available

— **AJP Z-Wave** system, controlled by switch or remote control, powered by 15V DC



Electric drive of Venetian blind in **Z-Wave** system, enables changing the angle of the lamellae only with the window closed.



Venetian blind AJP Z-Wave system controlled with wall switch or remote control



Side aluminium guides enable a complete shading of the room and they keep slats in line

COLOURS

OF VENETIAN BLIND AJP



GROUP I

GROUP II



ROLLER BLIND

ARS

LIVE WITH COLOURS ...

The standard ARS protects from the light and at the same time can be an additional element of decoration in the attic. The ARS roller blind reduces the amount of incoming light, adds style to the room, and the wide range of fabric designs (plain, patterned) allows you to match or contrast the blind's material with the decor of any room.



ARS blind is a material rolled up on a roller with a spring. It has an elegant aluminium fascia, which hides the roller. Three pairs of fastenings installed on the sash allow the blind to be fixed in different positions.

CHARACTERISTICS:

- gradual reduction of incoming light
- wide range of colours to satisfy individual tastes
 - three different fixing positions
- partial reduction of the heat excess in a room*
 - provides privacy by covering the window

CONTROL:

- **ARS** blind is manually controlled. **ZST** control rod enables operation of an ARS blind which is out of reach.



Fastenings of the blind-three different fixing positions



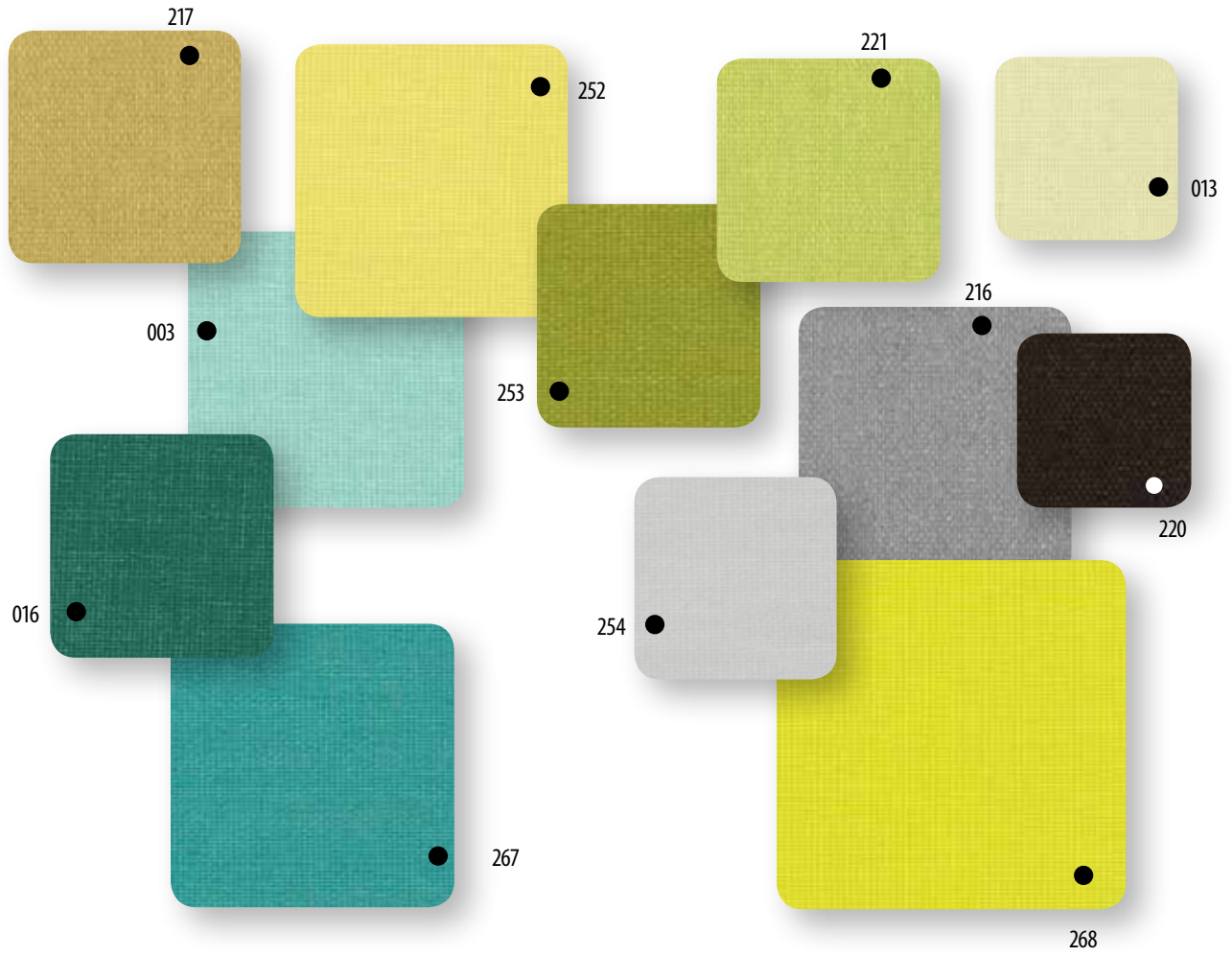
Aluminium fascia which hides a roller

COLOURS

ARS ROLLER BLINDS

GROUP I





GROUP II



ROLLER BLIND

ARP

ARP Z-Wave

DECORATE YOUR INTERIOR ...

The ARP roller blind provides protection against sunlight, pleasantly shading the interior during sunny days. When pulled down, ARP covers dazzling sunlight. The blind can be an additional decor of the attic as well.



The wide range of colours and patterns of the blind's fabric enhances the interior's aesthetics and allows you to match with the decor of any room. Side aluminium guides cover the edge of the fabric and additionally limit the amount of the incoming sunlight.

CHARACTERISTICS:

- gradual reduction of the incoming sunlight
- wide range of colours to satisfy individual needs
- partial protection against heat from the sun*
- possibility to lock the blind in any position
 - protection against UV radiation
- provides complete privacy by covering the window

CONTROL:

- **ARP** manually controlled
- **ZST** rod enables operation of ARP installed out of reach,
- **ARP Z-Wave** system controlled by switch or remote control, powered by 15V DC.



Operating **ARP Z-Wave** in standard version is possible only with the window closed.



Operating ARP Z-Wave is possible with wall switch or remote control



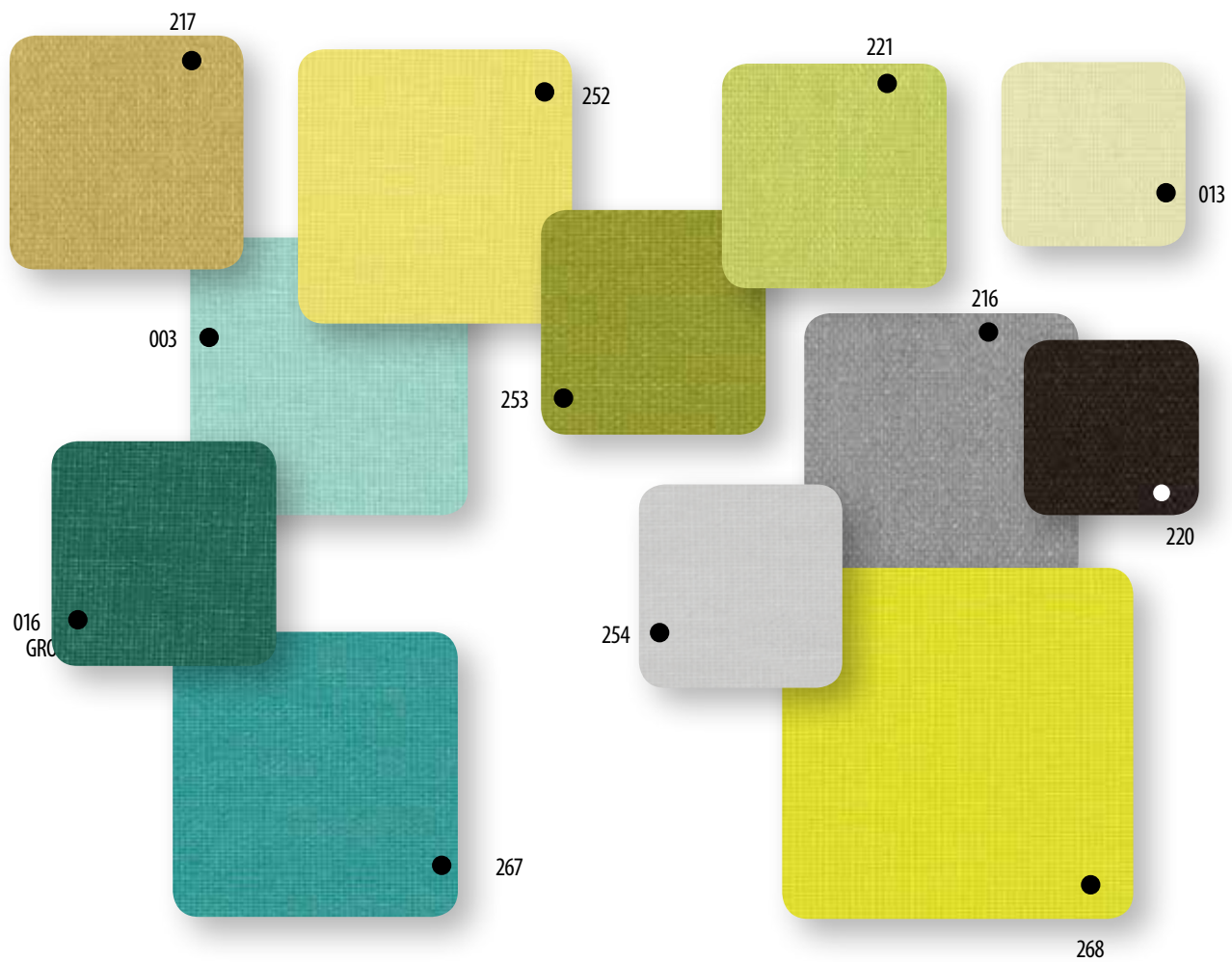
Side aluminium guides enable locking the blind in any position

COLOURS

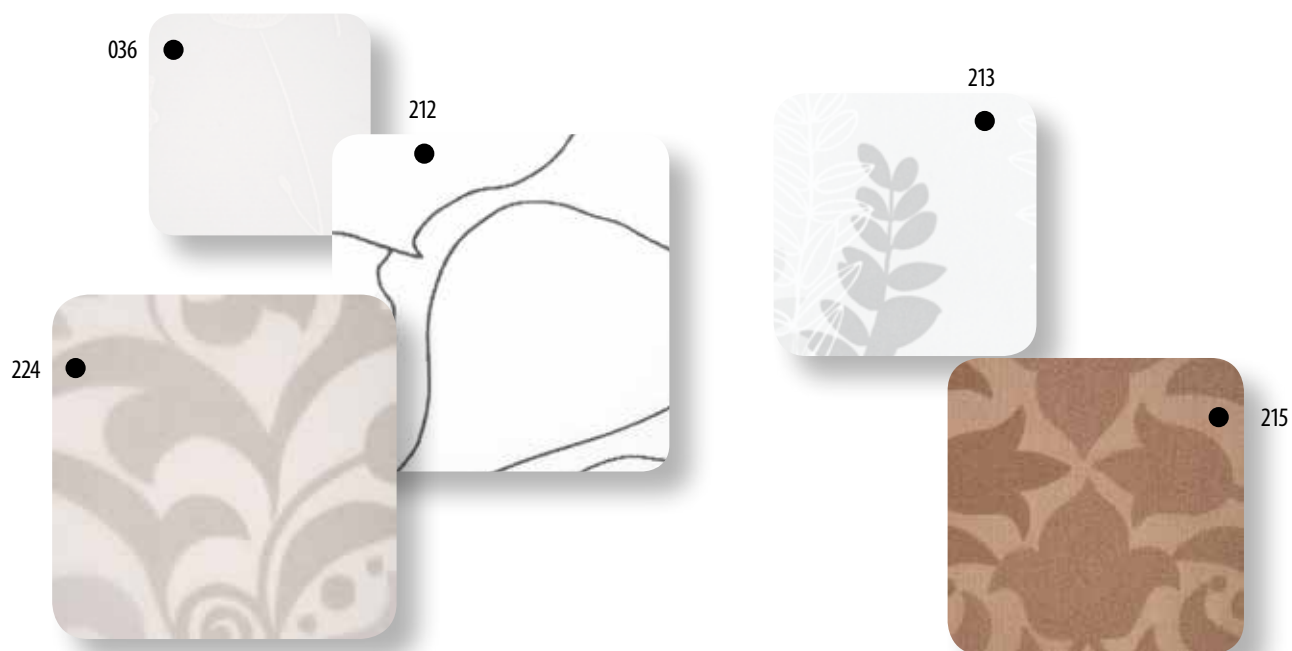
OF ARP ROLLER BLIND

GROUP I





II GRUPA



BLACKOUT BLINDS

ARF

ARF Z-Wave

NIGHT BY DAY ...

ARF Sunset- provides perfect protection from the sunlight ensuring complete room interior black out.



ARF blackout blinds are made of an elegant, decorative material. They have side runners enabling room interior black out. ARF blackout blind can be stopped at any point up the window.

CHARACTERISTICS:

- gradual reduction of the incoming sunlight up to black out
 - partial protection against heat from the sun*
 - possibility to lock the blind in any position
 - reduction of heat loss in the room in winter
 - protection against UV radiation
- provides complete privacy by covering the window
 - suitable for cleaning

CONTROL:

- **ARF** manually controlled
- **ZST** rod enables operation of **ARF** installed high up in the roof
- **ARF Z-Wave** system controlled by switch or remote control, powered by 1.5V DC



Operating **ARF Z-Wave** in standard version is possible only with the window closed.



ARF Z-Wave can be controlled with wall switch or a remote control



Side aluminium guides enable positioning the blind at any point and limit the amount of the incoming sunlight

*protection from high temperatures is provided by external awning blind

COLOURS

OF ARF BLIND



GROUP I

051



052



GROUP II



GROUP III



PLEATED BLIND

APS

SURROUND YOURSELF WITH
BEAUTY ...

APS pleated blind is a stylish and decorative blind. It provides a soft, diffused level of light in the room, in colours to match any interior design.



Side white aluminium guides cover the edge of the fabric and additionally limit the amount of incoming sunlight. The blind can be positioned at any point.

CHARACTERISTICS:

- provides a soft, diffused light into the room, in colours to match interior design
 - reduction of incoming sunlight
- partial protection against heat from the sun*
- possibility to lock the blind in any position
 - protection against UV radiation
- provides privacy by covering the window

CONTROL:

- **APS** manually controlled



Side aluminium guides limit the amount of incoming sunlight

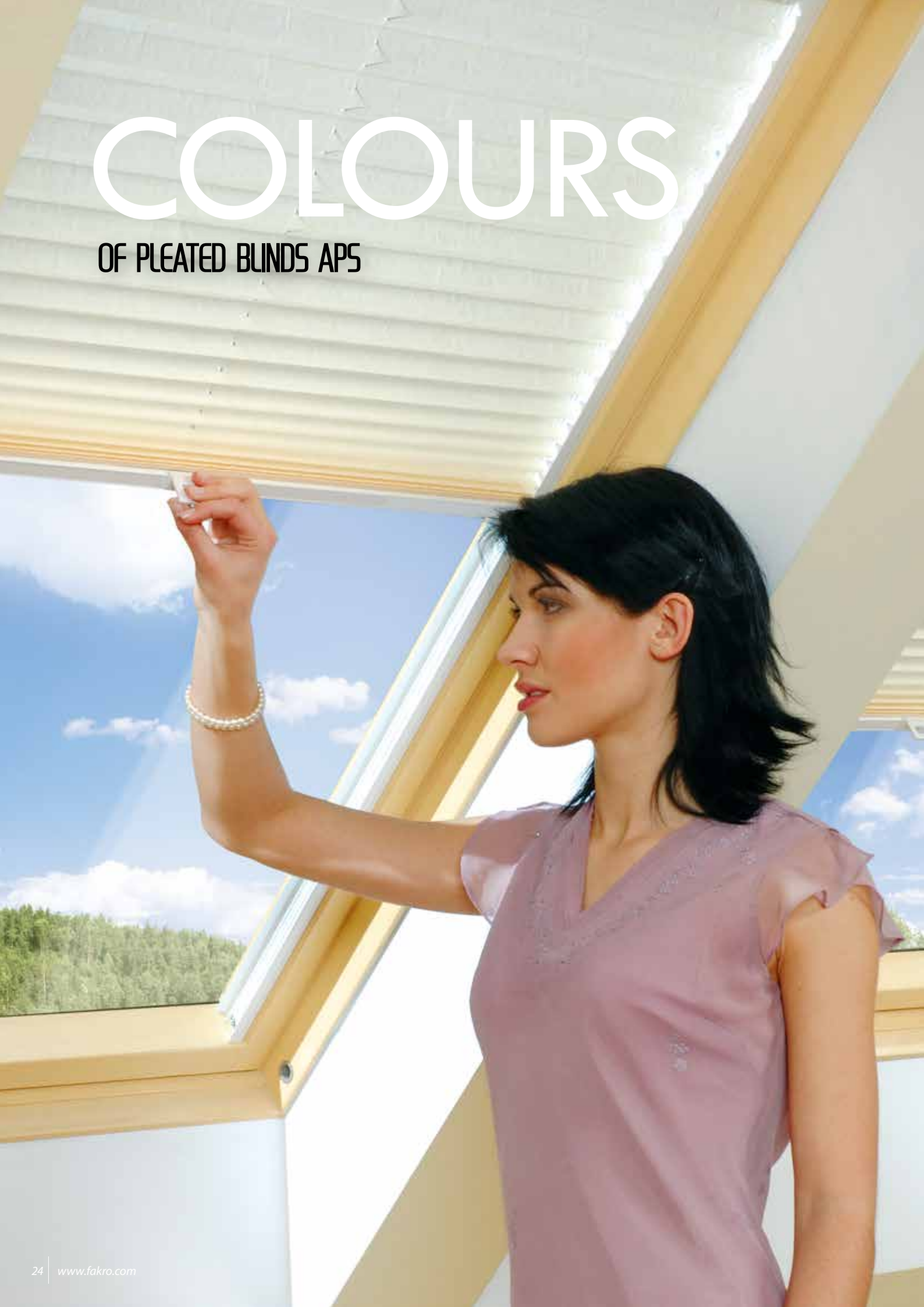


Comfortable handle to operate the blind

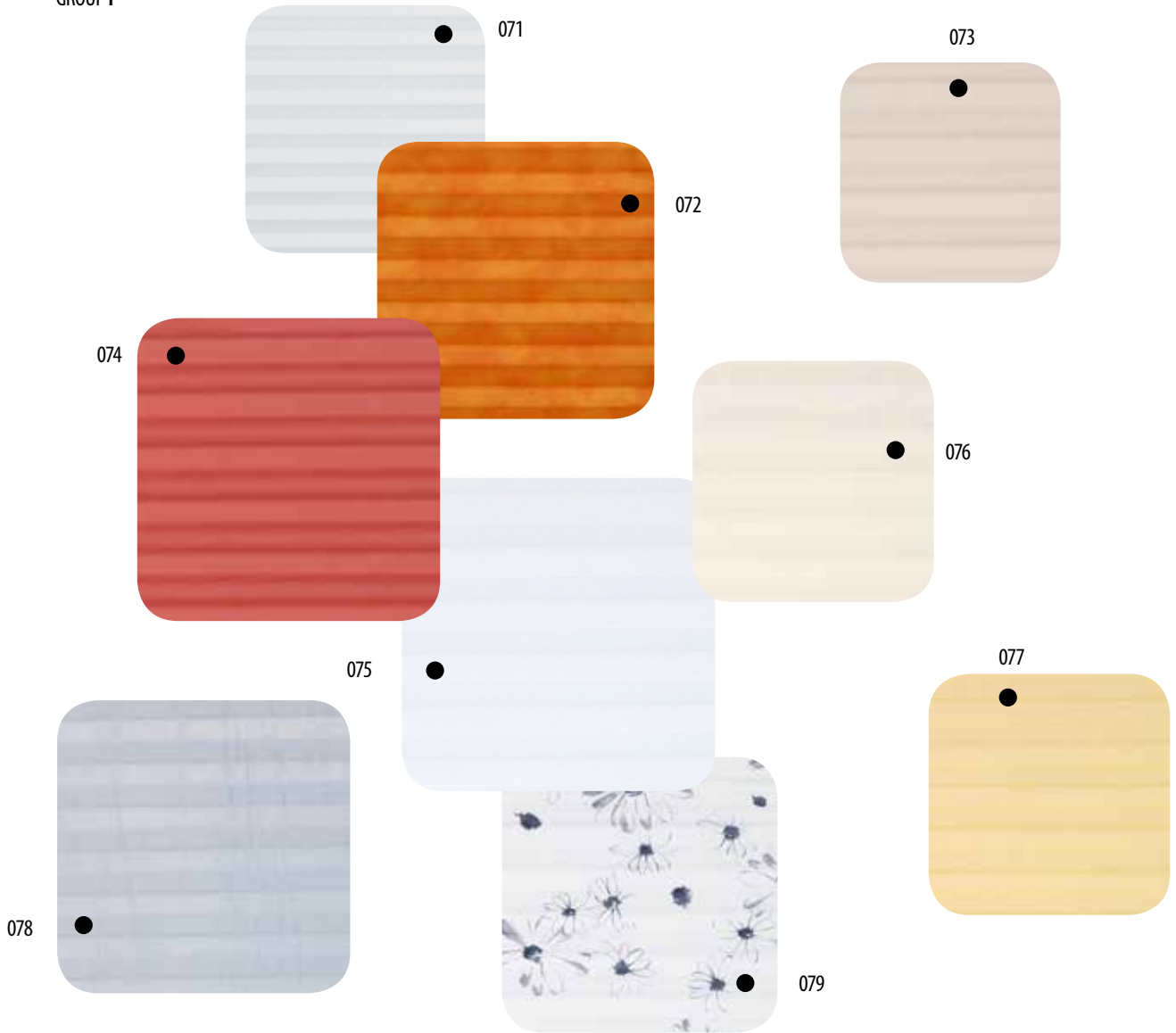
*protection from high temperatures is provided by external awning blind

COLOURS

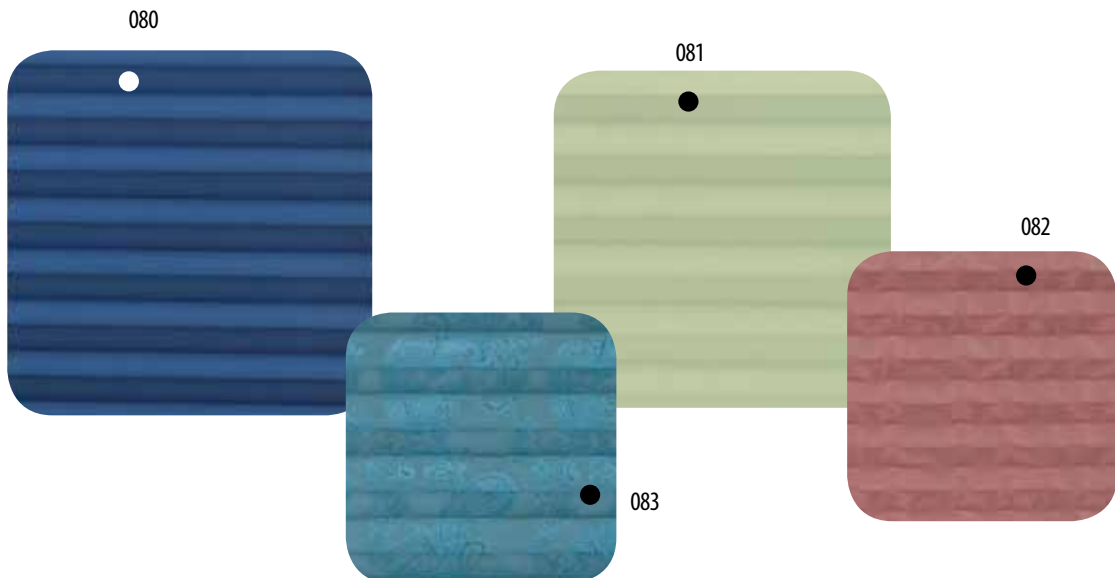
OF PLEATED BLINDS APS



GROUP I



GROUP II



AMS

INSECT SCREEN

UNDISTURBED TRANQUILLITY ...

AMS insect screen stops mosquitoes and other insects entering the room. Fitting an Insect Screen means we can leave a roof window ajar and no insects will enter the room.



AMS Insect Screen is the only accessory that is mounted onto the lining and not the window.

It is made of glass fibre netting covered with PVC and comes with white or silver aluminium runners.

CHARACTERISTICS:

- stops mosquitoes and other insects from entering the room when the roof window is open,
- minimum shading of the room.
- possibility to install with other internal and external accessories

CONTROL:

- **AMS** insect screen is operated manually
- ZST** rod enables operation of AMS installed out of reach



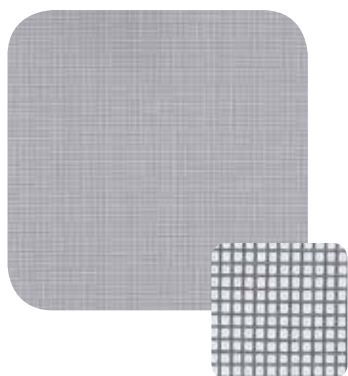
Glass fibre netting covered with PVC.



The construction of AMS Insect Screen ensures full protection from insects.

INSECT SCREEN DIMENSIONS

Window width [cm]	134	134	114	114	94	94	78	78	66	66	55	55
Internal lining width [cm]	127,5	127,5	107,5	107,5	87,5	87,5	71,5	71,5	59,5	59,5	48,5	48,5
Max. lining internal height [cm]	250	200	2450	200	250	200	250	200	250	200	200	170



AWNING BLIND

AMZ

AMZ Solar
AMZ Z-Wave
AME
AMB

- **AMZ** for centre pivot windows **FT_PTP** with raised axis of rotation **FYP proSky**, and top hung and pivot windows **FP_PPP preSelect**,
- **AME** for panoramic windows **FEP**,
- **AMB** for L-shaped windows **B_...**

HAVE A REST IN SHADE ...

The awning blind provides optimum protection from overheating while at the same time providing a view to the outside. Fakro awning blind reflects sun rays before they reach the glass and thus protects against heat build-up on sunny days, providing relief for the eyes and protection from the harmful effects of strong reflected light, which is especially important when working with computers.



The awning blind is made of durable, weather-resistant fibre glass fabric. The fabric is roller mounted, spring loaded and fitted inside an aluminium casing which is installed at the top of the window. This enables easy control of the blind and makes it possible to use a wider fabric, thus providing additional protection against ingress of light. To control the blind an 80cm long rod is supplied in package. There is also available a rod ZSZ which is 150 cm long.

CHARACTERISTICS:

- up to 8 times more effective protection against overheating when compared with internal blinds,
 - the best protection from tiresome heat,
 - effective shading of the room whilst still allowing some light in,
 - comfortable use – we can cover the window for a whole summer without the need to roll it up and down every day,
 - easy installation – we install the blind from the inside (unscrew four screws and then rescrew them again in the same holes),
 - protection from harmful UV radiation,
 - when used in rainy weather, reduces noise of rain.

CONTROL:

- **AMZ, AME, AMB** manually operated or with the use of rod (supplied in package)
- **AMZ Z-Wave** system, controlled by wall switch or remote control, powered by 15V DC
- **AMZ Solar** awning blind controlled by a remote control

Solar awning blind is equipped with a control unit and accumulator. The accumulator is powered by a solar cell placed on the roller shutter. Recommended for places with no access to 230V supply.



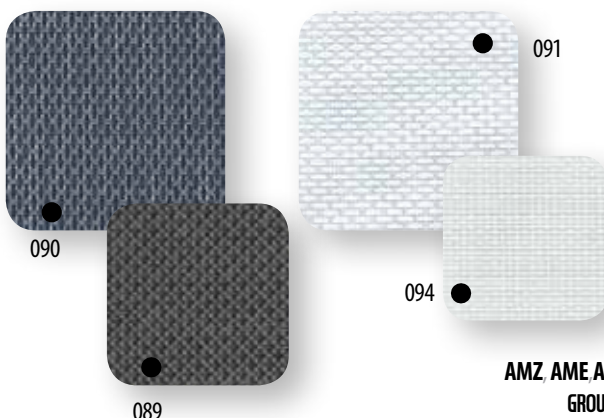
8 times more effective



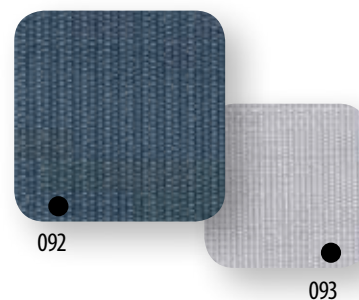
Effective shading of the room whilst still allowing some light in

Easy operating

AMZ GROUP I



AMZ GROUP II



AMZ, AME, AMB, AMZ Solar, AMZ Z-Wave awning blinds are available in two groups:
GROUP I - in four colours (material with **10% relative fabric transparency**),
GROUP II - available in two colours (with **1% relative fabric transparency**).

ROLLER SHUTTERS

ARZ

ARZ-H

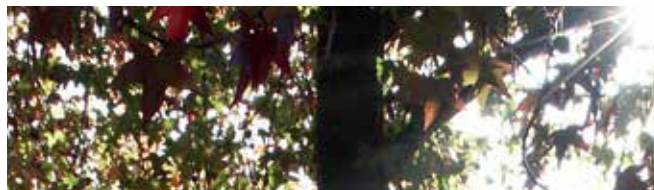
ARZ Z-Wave

ARZ SOLAR

— **ARZ-H** for centre pivot windows **FT_**
and with raised axis of rotation **FYP proSky**
— **ARZ-Wave** and **ARZ Solar** for centre pivot windows **FT_**,
PT_, top hung and pivot windows **FP_**, **PPP preSelect**,
and with raised axis of rotation **FYP proSky**.

DISCOVER OASIS ...

External roller shutter provides total comfort when using the attic space because it protects from overheating, enables complete shading of the room, reduces noise from the outside and ensures privacy by completely covering the window.



Installed on the outside, roller shutters improve protection on sunny days from uncomfortable heat gain. The inside surface of the aluminium slats is covered with a special coating, which limits incoming heat

CHARACTERISTICS:

- effective reduction of heat entering the room,
- reduction of heat loss during winter,
- complete blackout,
- increases the feeling of privacy,
- protection from UV radiation,
- good sound reduction, increased security

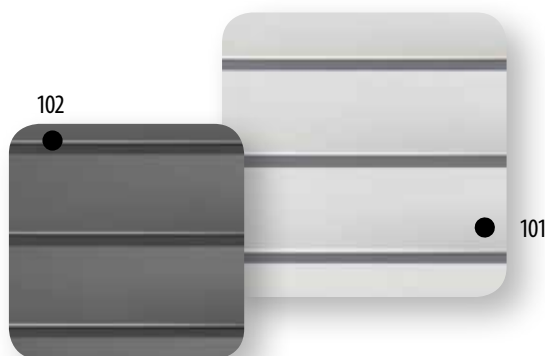
CONTROL:

- **ARZ-H** operated manually from the inside with a crank (supplied in package)
- **ARZ-Z-Wave** system, controlled by wall switch or remote control, powered by 15V DC
- **ARZ Solar** roller shutter controlled by a remote control



Solar roller shutter is equipped with a control unit and accumulator. The accumulator is powered by a solar cell placed on the roller shutter. Recommended for places with no access to 230V supply.

When installing roller shutters on windows in any vertical combinations the **minimum 20cm** distance between them must be observed and **10cm** between the windows installed side by side.



External roller shutters ARZ-Z-Wave can be operated with wall mounted switch or a remote control.



ARZ Solar roller shutter, powered with a solar cell, controlled with a remote control

102

WIRELESS CONTROL

Z-WAVE

For roof windows installed in places difficult to reach, FAKRO offers electrical accessories fitted as standard with Z-Wave system module. Z-Wave is a wireless radio protocol used to communicate home electrical equipment. It is used to connect into one network -electrical equipment such as lighting, thermostats, alarms, computers, telephones, air conditioning and to control electric windows and blinds. All electrical equipment, which has a Z-Wave module can be connected into the network.



ELECTRIC CONTROLLING DEVICES

ZWK 1

The **ZWK 1** wall keyboard enables control of one or more receivers separately **Z-Wave** window, actuator **ZWS230** for operating the window, external roller shutter **ARZ Z-Wave**, internal blind **ARF Z-Wave**, internal blind **ARP Z-Wave** or Venetian blind **AJP Z-Wave**.



ZWK 10

The **ZWK 10** wall keyboard enables control of many receivers separately or simultaneously **Z-Wave** window, actuator **ZWS230** for operating the window, external roller shutter **ARZ Z-Wave**, internal blind **ARF Z-Wave**, internal blind **ARP Z-Wave** or Venetian blind **AJP Z-Wave**.



ZWP 10

The **ZWP 10** remote used for control of many products separately or simultaneously **Z-Wave** window, actuator **ZWS230** for operating the window, external roller shutter **ARZ Z-Wave**, internal blind **ARF Z-Wave**, internal blind **ARP Z-Wave** or Venetian blind **AJP Z-Wave**.



ZWG 1

The modern-looking, touch keyboard **ZWG 1** made of toughened glass enables control of one or more devices simultaneously **Z-Wave** window, actuator **ZWS230** for operating the window, external roller shutter **ARZ Z-Wave**, internal blind **ARF Z-Wave**, internal blind **ARP Z-Wave** or Venetian blind **AJP Z-Wave**.



ZWG 3

The modern-looking, touch keyboard **ZWG 3** made of toughened glass enables control of many devices separately or simultaneously **Z-Wave** window, actuator **ZWS230** for operating the window, external roller shutter **ARZ Z-Wave**, internal blind **ARF Z-Wave**, internal blind **ARP Z-Wave** or Venetian blind **AJP Z-Wave**.



ZWP TV

The **ZWP TV** remote control used for control of RTV devices and many electric accessories form FAKRO product range separately or simultaneously **Z-Wave** window, actuator **ZWS230** for operating the window, external roller shutter **ARZ Z-Wave**, internal blind **ARF Z-Wave**, internal blind **ARP Z-Wave** or Venetian blind **AJP Z-Wave**.




ZZ60

Power supply unit 15 VDC used to feed **Z-Wave** devices. Output power 60W. To be installed on **DIN TS35** rail. Provides power for a maximum of three electric accessories.






**ALARMS
SECURITY**


**ROOF
WINDOWS
INTERNAL
AND EXTERNAL
BLINDS**



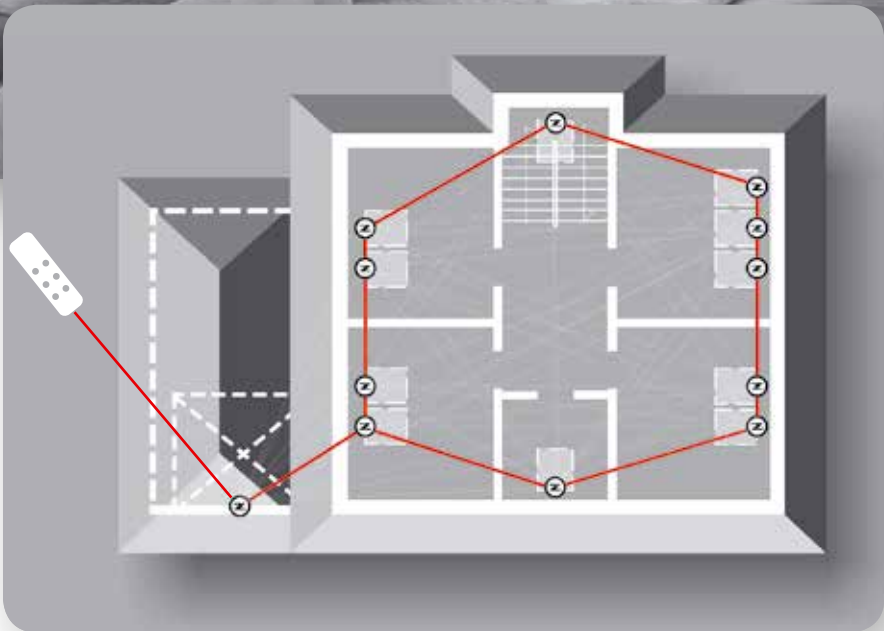

**DOORS
BLINDS**

**AV
EQUIPMENT**

GARAGE

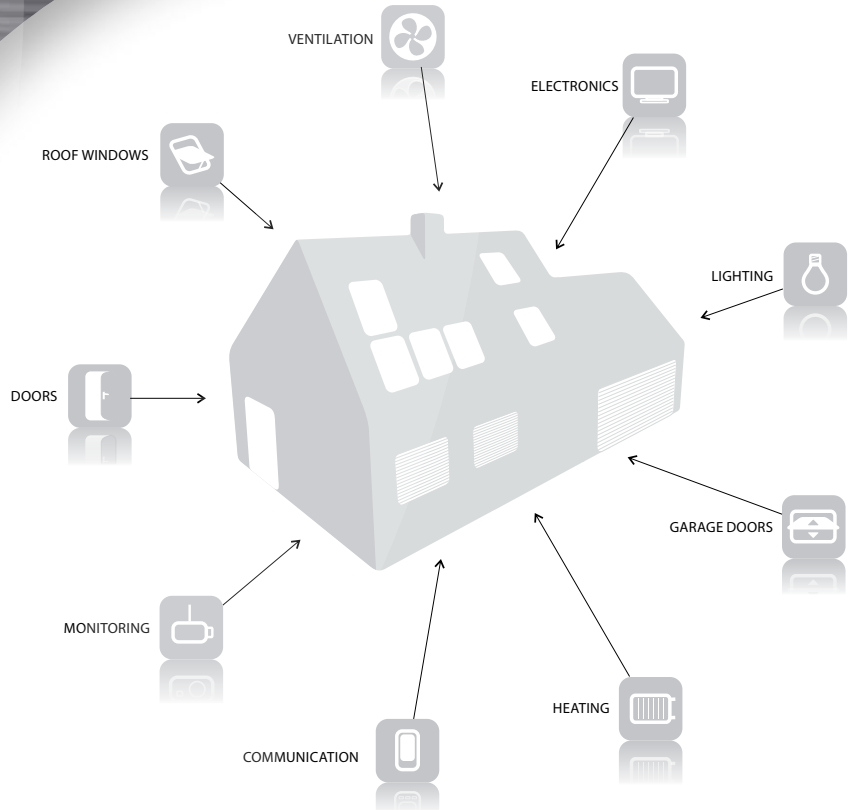




SYSTEM FUNCTIONING DESCRIPTION

The operating principle of this system consists in **“mapping out a route” for a signal**. For radio waves sent from a controlling device (e.g. remote control) there is set a route in such a way so that a command reaches the right device and is always performed. This is achieved by means of requiring conformation of command reception by a device sending out commands, in this case a remote control. The confirmation is sent by a device to which the command has been addressed. If there is an obstacle in the way of radio waves and signal cannot reach the device to which the command was directed, the Z-Wave system searches for “a new route” to a given device. The new route leads through other devices in the Z-Wave network. It is this feature which ensures high system reliability. Thanks to it, the Z-Wave protocol can have a virtually unlimited range as, for the command sending, it uses other devices in the network, thus contributing to a reduction in energy consumption as well.

The whole Z-Wave protocol is contained in a single small chip. The basic Z-Wave chip includes: processor, flash memory, radio transmitter and receiver.



CONTROL RODS FOR OPERATING ACCESSORIES

ZST

The FAKRO Company offers functional control rods for operating roof windows installed out of user's direct reach. They make it possible to easily open and close the windows installed high above the floor level and operate internal Venetian blinds, blackout blinds, roller blinds as well as external awning blinds.



MANUAL CONTROL WINDOW ACCESSORIES



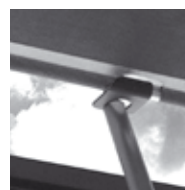
Help in operating windows installed high above floor level

CONTROL ROD ZST

The universal **ZST** telescopic rod enables the user to operate **ARS, ARP, ARF** blinds, **AJP** Venetian blinds and **AMS** insect screen on windows in out-of-reach positions. It also enables easy opening and closing of windows. Standard rod length is 119cm, which can be extended to 134, 164, 190 and 218 cm. By using the **ZSP** extension, it is possible to extend the rod further to 246, 274, 302 and 330cm.

ZSZ ROD

The **ZSZ** Rod is an aluminium bar (circular in cross-section) with a plastic hook, for operation awning blinds such as the **AMZ** on windows in out-of-reach positions. Standard rod length is 150cm. Note: The standard **AMZ** awning blind is supplied with an 80cm rod.





CHOOSING THE ACCESSORIES

In order to select type and size of accessories correctly it is essential to know the window type and its dimensions which are to be found on a data plate placed on the window sash.

Accessories for FAKRO roof windows are available:

- in FAKRO roof windows sales chain
- in on-line store at shop.fakro.co.uk

Using original FAKRO accessories ensures maintaining the **10-year warranty** for roof windows.

Printed swatches presented in this catalogue may not correspond to the real ones. There are three kinds of samplers available in stores containing all material swatches used in FAKRO accessories



type and dimensions



Internal accessories are adapted to all FAKRO roof window types. In order to properly choose the size of the accessories the window size which is given on the identification label of the window sash has to be known. FAKRO offers a wide range of external awnings blinds and blinds adjusted to various roof window designs. An external awning blind and internal accessory installed on the same FAKRO roof window form a set of accessories providing maximum comfort of living in the attic. They protect the room against excessive heat and light, additionally decorating the interior.

INTERNAL ACCESSORIES

	FTS, FTP, FTU	FTT U5*, FPT U5*	FTT U6, FTT U8 Thermo	PTP PTP-V	FPP-V, FPU-V preSelect	PPP-V preSelect	FEP	FYP-V	FDY-V		FGH-V		FTP/D, FTU/D	BD, BVP, BXP
									top sash	bottom sash	top sash	bottom sash		
AJP Venetian Blind	+	+	+	+	+	+	+	+	+	+	+	+	+	+
AJP Z-Wave Venetian Blind	+	+	—	+	+	+	+	+	+	—	+	—	+	—
ARS roller blind	+	+	+	+	+	+	+	+	+	+	+	+	+	+
ARP roller blind	+	+	+	+	+	+	+	+	+	+	+	+	+	+
ARPZ-Wave Blind	+	+	—	+	+	+	+	+	+	—	+	—	+	—
ARF blackout blind	+	+	+	+	+	+	+	+	+	+	+	+	+	+
ARF Z-Wave blackout blind	+	+	—	+	+	+	+	+	+	—	+	—	+	—
APS pleated blind	+	+	+	+	+	+	+	+	+	+	+	+	+	+
AMS insect screen	+	+	+	+	+	+	+	+	+	+	—	—	+ ¹	—

EXTERNAL ACCESSORIES

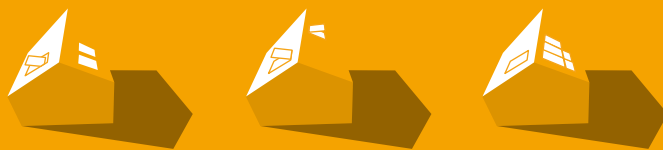
	FTS, FTP, FTU	FTT U5*, FPT U5*	FTT U6, FTT U8 Thermo	PTP PTP-V	FPP-V, FPU-V preSelect	PPP-V preSelect	FEP	FYP-V	FDY-V		FGH-V		FTP/D, FTU/D	BD, BVP, BXP
									top sash	bottom sash	top sash	bottom sash		
AMZ awning blind	+	+	+	+	+	+	—	+	+	—	—	+	—	
AMZZ-Wave, AMZSolar awning blind	+	+	+	+	+	+	—	+	+	—	—	+	—	
AME awning blind	—	—	—	—	—	—	+	—	—	—	—	—	—	
AMB awning blind	—	—	—	—	—	—	+	—	—	—	—	—	+	
ARZ-H roller shutter	+	+	—	—	+	—	—	+	+	—	—	+ ²	—	
Roller shutters ARZ-Wave, ARZSolar	+	+	+	+	+	+	—	+	+	—	—	+ ²	—	

* - internal accessories made to order, standard external accessories

1 - for lining for combination up to 250 cm long

2 - retaining 20 cm distance between the windows in vertical position





FAKRO®

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