Canadian IKO Shingles

www.iko.com

Jamaica , March 2010

Armoroof Export
Division of IKO Industries Ltd.

Agenda

- How we do shingles
- Who is IKO
- IKO projects around the world
- Importance of a good installation
- Why buy IKO shingles

IKO has been roofing North America houses for over 59 years

Asphalt shingles cover over 80% of the homes in the United States

Shingle History

- Asphalt has been used as a building material for thousands of years. Ancient Babylonians used it as mortar between clay bricks and as a waterproofing liner in canals.
- Roll roofing, consisting of long strips of asphalt-coated felt with a finishing layer of finely crushed stone, has been manufactured in the United States since 1893.

Shingle History

- In 1903, Henry M. Reynolds began marketing asphalt shingles he cut from sheets of roll roofing.
- By the 1920's, this roofing material had become so popular it was sold through mail-order catalogs.
- By the 1950's, the typical asphalt shingle looked much as it does today, including the tab-forming cutouts. (3 tab shingles)

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Asphalt shingles and their advantages

Three key raw material

Reinforcement: Fiberglass Mat

- Is the matrix which supports the other components
- Provide strength to the shingle

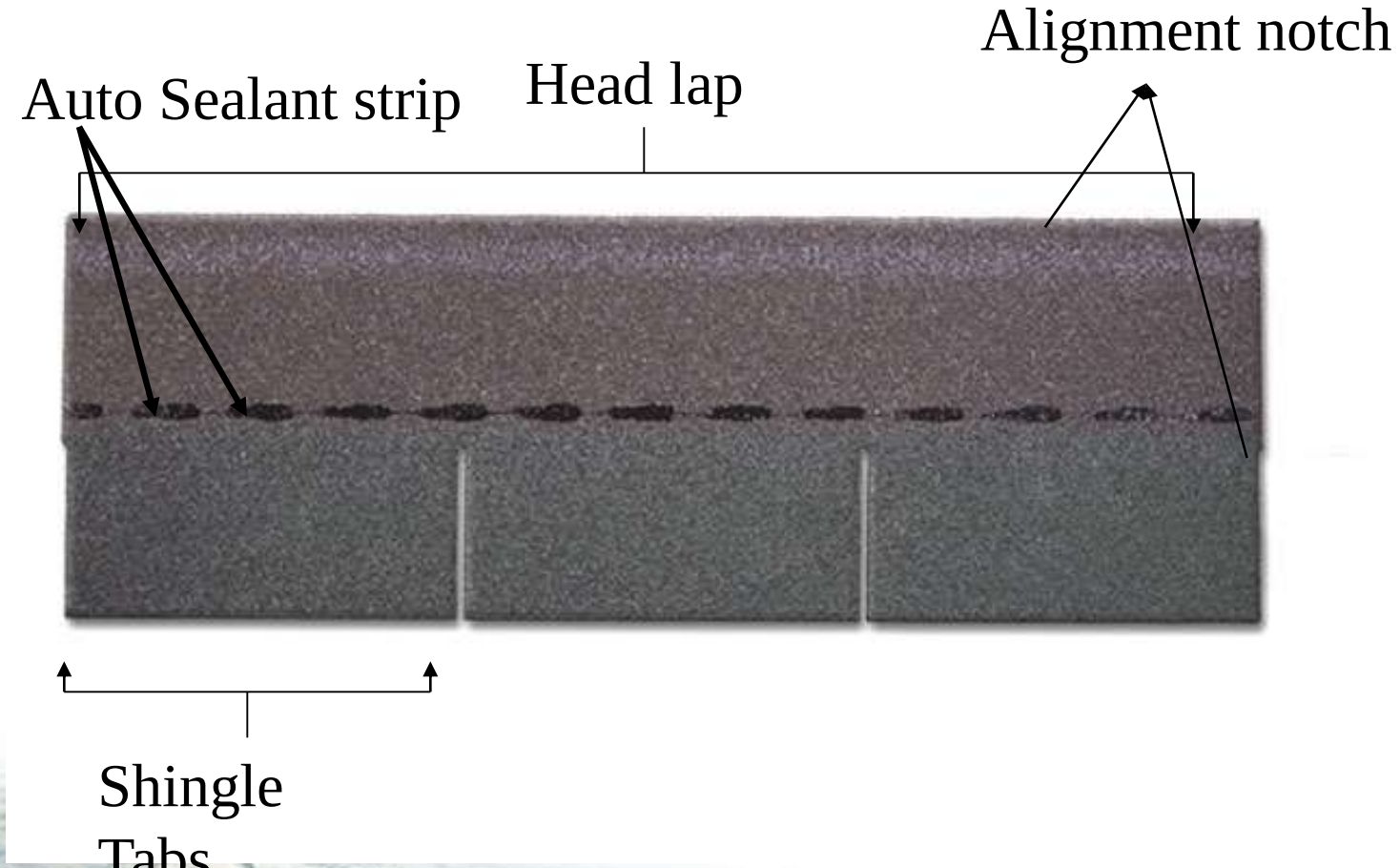
Asphalt (2 grades)

- Coating
  - Provides long term durability to weather
  - Remains stable under severe service temperatures
- Sealant (SBS)

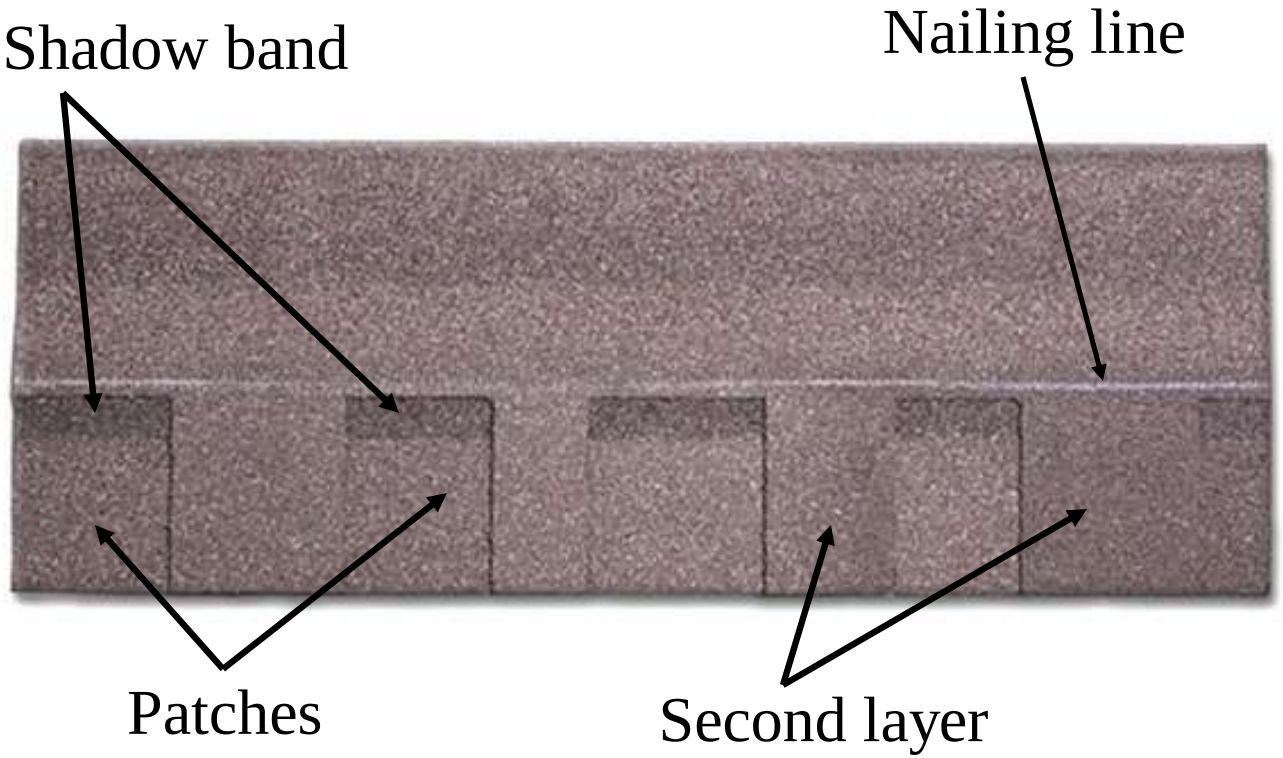
Granules (various colors)

- Shields the asphalt coating against sun's rays (UV rays)
- Add color to the product
- Provides fire resistance
- Provide Algae Resistance (AR)

3-Tab Shingles or Traditional



Laminated Shingles



Advantages of shingles

- Adaptability to any surface, flat or curve allowing any design
- Variety of designs and colors to give different appearance to any style home, such as modern, contemporaneous, country, old style.
- Natural waterproofing as asphalt is
- Resistance to fire and hits
- Very resistance to high winds

Advantages of shingles

- Resistance to hot and cold extreme
- Low installation costs, due to simplicity
- Light weight, requires a roof structure light and economy, weights vary from 9.5 Kg/sqm (3-tab) to 12Kg Kg/sqm (Laminated)
- Maintenance free.
- Easy to repair or re-roof
- Thermo acoustic (reduce noise)

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Who is IKO?

introduction

introduction

The Cornerstones of IKO's Success

The success and longevity of IKO is attributed to four valuable ingredients:

- The talent and commitment of our people.
- The manufacture of superior quality roofing materials and systems.
- Continuous innovation, from breakthrough technologies to advanced formulations.
- State-of-the-art manufacturing facilities, most of which include machinery of our own design.

residential products

[LAMINATED SHINGLES] [DESIGNER SHINGLES] [TRADITIONAL 3-TAB DESIGN SHINGLES]

We are constantly expanding our line of asphalt roofing products and accessories to meet the growing demands of today's homeowners. This includes fiberglass mat and organic shingles in a wide range of grades, styles, colors and price points.

OUR LAMINATED SHINGLES:

Dimensional Thickness and Strength

IKO-SBS Modified Asphalt

Class 4 Impact Resistance

AR Algae Resistant

110/177

Class 'A' Fire Resistance Rating

residential products [LAMINATED SHINGLES]

OUR LAMINATED SHINGLES:

Dimensional Thickness and Strength

- **CROWNE SLATE**
  Limited 30-year warranty
- **CAMBRIDGE LT, 30 AR & 30**
  Limited 40 and 30-year warranty
- **ROOFSHAKE**
  Limited 30-year warranty

*Selected IKO shingles have been independently assessed by SCS (Scientific Certification Systems) for recycled content to ensure LEED credit eligibility. Visit **www.iko.com** for details.

IKO-SBS Modified Asphalt

Class 4 Impact Resistance

AR Algae Resistant

110 | 177

Class 'A' Fire Resistance Rating

Recycled Content Minimum 40%

OUR DESIGNER SHINGLES:

Personalize The Look of Your Home

▪ARMOURSHAKE

Limited 30-year warranty

*Selected IKO shingles have been independently assessed by SCS (Scientific Certification Systems) for recycled content to ensure LEED credit eligibility. Visit **www.iko.com** for details.

AR Algae Resistant

110/177

Class 'A' Fire Resistance Rating

OUR TRADITIONAL 3-TAB DESIGN SHINGLES:

Time-tested and True

- Fiberglass or organic fiber mat.
- Perennial favorites because of their reliability, proven performance, and ease of installation.
- Available in our widest range of color choices.
- Limited warranties ranging from 20 to 30 years and 3-year IKO "Iron Clad" protection.

MARATHON 20, 25AR AND ULTRA AR

AR Algae Resistant

Class 'A' A Fire Resistance Rating

Recycled Content Minimum 33%

RESIDENTIAL ACCESSORIES

- ROOFGARD-SB
- ROFGARD COOLGRAY
- AM # 15 FELT
- HEAVY DUTY FELT
- GOLDSHIELD
- ARMOURGARD
- STORMSHIELD™
- PROTECTO
- LEADING EDGE
- ROOF-FAST
- HIP & RIDGE

GoldShield
Premium Ice & Water Protector

ArmourGard
Ice & Water Protector

ProTecto
Standard Ice & Water Protector

RoofGard-SB
Synthetic Underlayment

StormShield™
Standard Ice & Water Protector

commercial/industrial roofing & waterproofing products

IKO manufactures a complete line of roofing and building envelope products, specifically designed for commercial and industrial applications. Such products include:

MODIFLEX/TORCHFLEX SBS
[modified bitumen rolls]

- MP-180 Cap
- MP-250 Cap
- Prevent™ MP-180
- Prevent™ MP-250
- Prevent™ Premium MP-250
- TP-180 Cap
- TP-250 Cap
- TP-250 Cap (5.0)
- Prevent™ TP-180
- Prevent™ TP-250
- Prevent™ Premium TP-250
- MF-95-FS Base
- MF-95-SS Base
- MP-180-SS Base
- MP-180-FS-Base
- MP-180-FS-Base (3.0)
- Cold Gold™ Base
- TF-95-FF-Base
- TF-95-FF (22)
- TP-180-FF Base
- Fast-N-Stick™ 180 Base Sheet
- Armourbond Flash

ARMOURPLAST APP
[modified bitumen rolls]

- Armourplast Granular
- Armourplast Classic

COLD GOLD™
BUILT-UP ROOFING (BUR)
WOOD FIBER PRODUCTS
PROTECTOBOARD
INSULATION BOARDS
PACKAGED ASPHALT
AQUABARRIER™

WOOD FIBER PRODUCTS

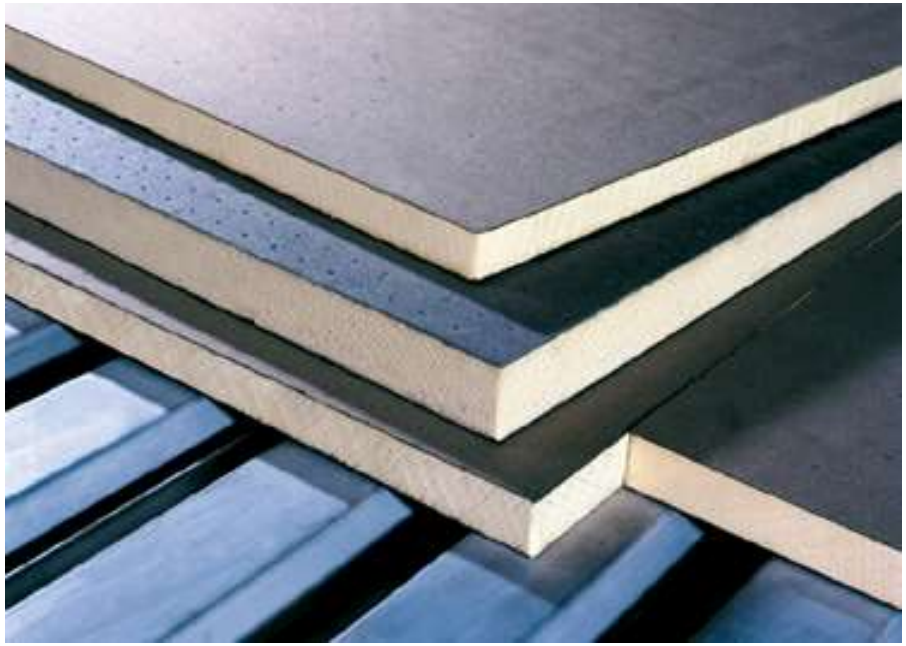
- High Density Sheathing & Roofboard, Natural Sheathing Soundboard, and Wood Fiber Roof Insulation
- Available in different styles: Plain, Standard/Coated, Impregnated/Coated, or Coated on 6 sides

PROTECTOBOARD

- Semi-rigid asphaltic core panels
- Roofing and Re-covery board

INSULATION BOARDS
POLYISOCYANURATE

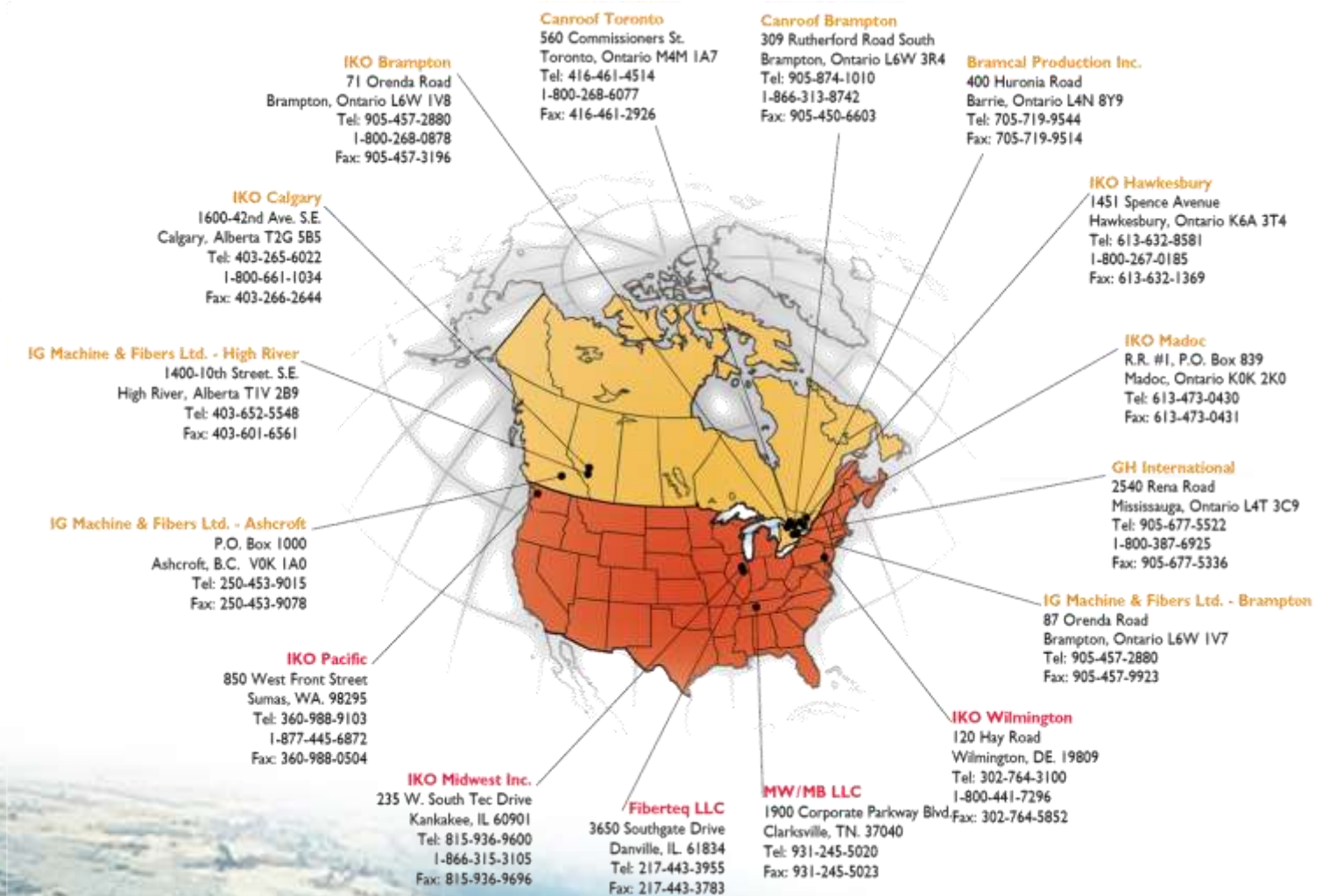
- IKOTherm
- IKOTherm Tapered
- IKOTherm III (Acrylic-coated fiberglass facer)
- EnerFoil
- EnerFoil-NR



manufacturing plants [NORTH AMERICA]

At IKO, our customers mean the world to us.

Let's take a closer look at IKO's facilities and affiliates around the globe, starting at home in North America.



manufacturing plants [NORTH AMERICA]

RAW MATERIAL PLANTS

- **IKO Hamilton Asphalt Facility**
  [Hamilton, ON -Canada]

- **IKO Madoc & IG Ashcroft Granule Facility**
  [Madoc, ON & Ashcroft, BC - Canada]

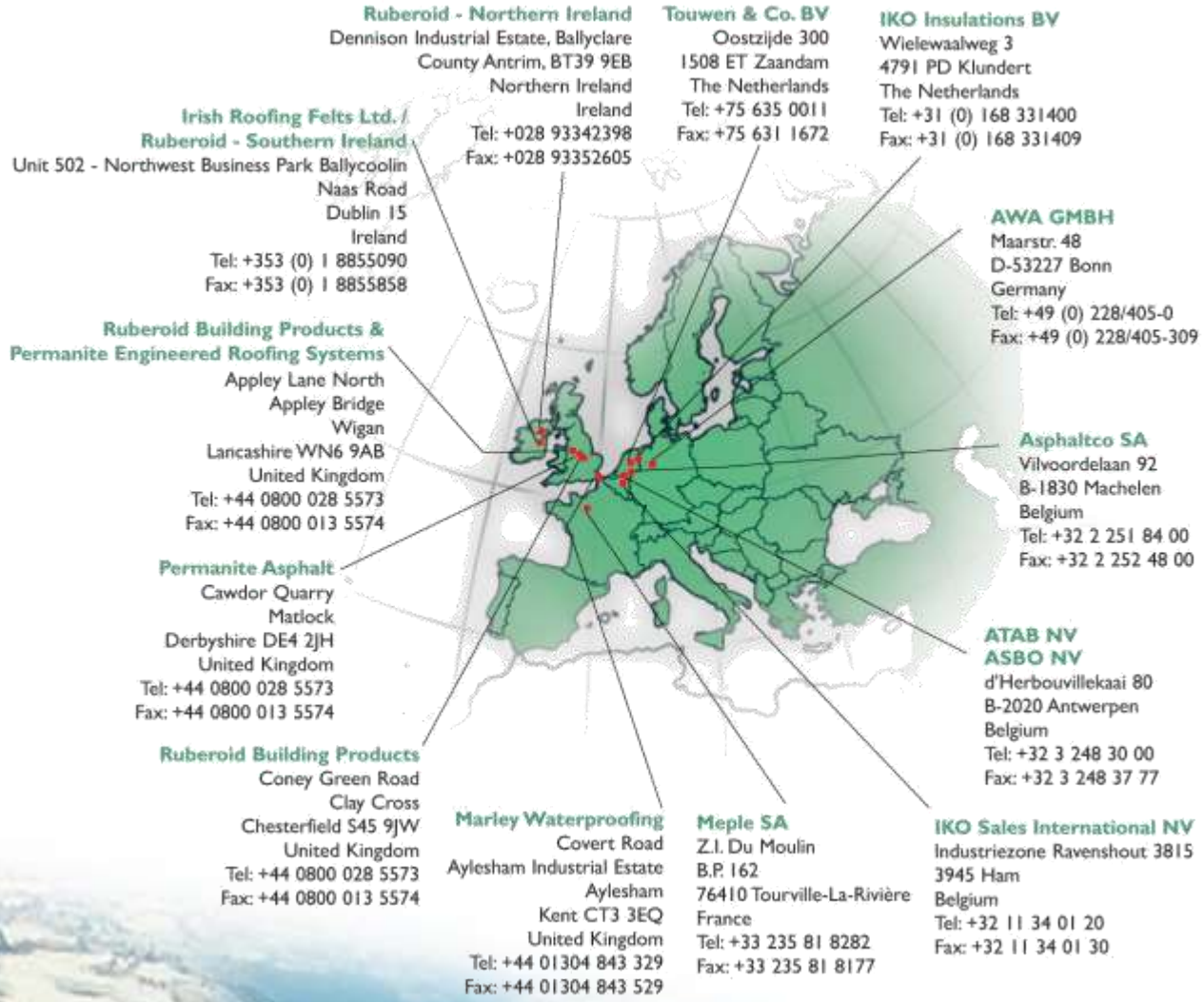
- **IKO Brampton Felt Mill**
  [Brampton, ON - Canada]

- **Fiberteq LLC**
  [Danville, IL - US]

- **MW/MB LLC**
  [Clarksville, TN - US]

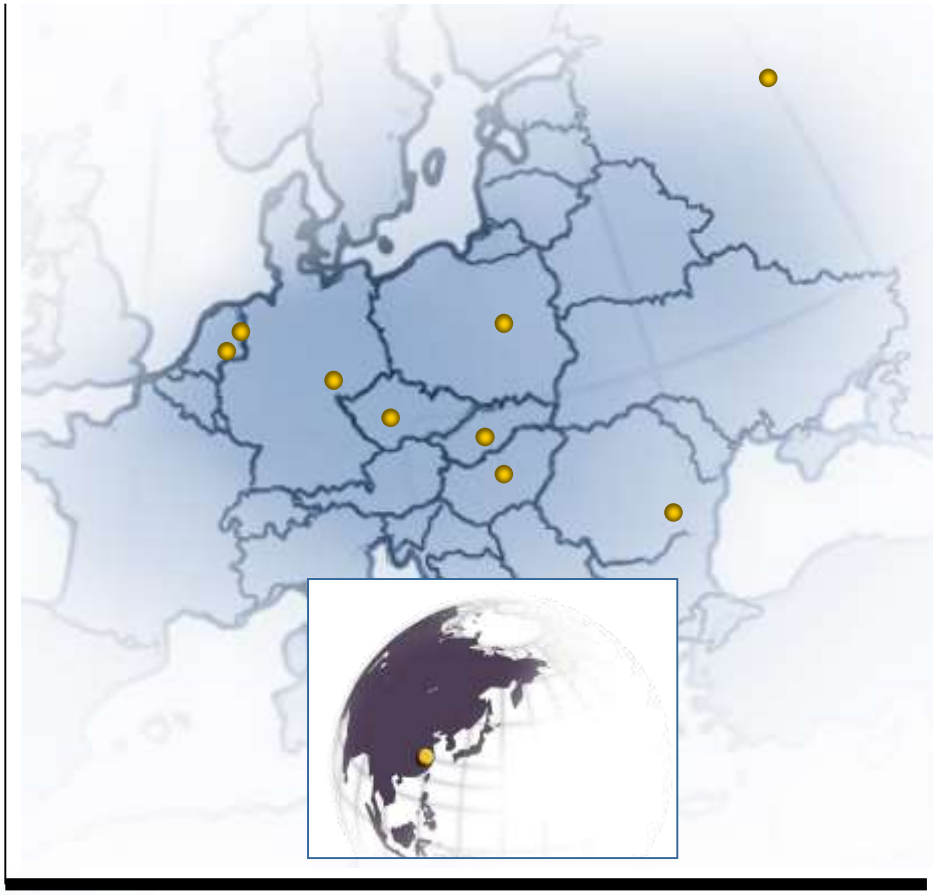
manufacturing plants [EUROPE]

IKO is sitting on top of the world



sales offices [EUROPE & ASIA]

At IKO, our commitment to customer service, from individual homeowners to networks of roofing professionals, has never wavered. When we decided to expand our operations overseas, we knew that we had to find affiliates who shared our devotion to excellence and who would provide superlative customer care. We are pleased and very proud to have found such people to manage our
sales offices.



Europe:

- IKO Dachschindeln Vertrieb GmbH - Coswig, Germany
- IKO s.r.o. - Prague, Czech Republic
- IKO Magyarorszag Kft - Budapest, Hungary
- IKO Sp. z. oo. - Lodz, Poland
- IKO LLC - Moscow, Russia
- IKO Slovakia s.r.o. - Bratislava, Slovakia
- Spectraroof B.V. - PD Klundert, Netherlands
- Nebiprofa B.V. - PD Klundert, Netherlands
- IKO Sales Romania SRL - Bucharest, Romania

Asia:

- IKO Sales Shanghai Co. Ltd. - Shanghai, China

distribution

ROOFMART / ROOF CENTRE / CANPAC

At IKO, we rely on a number of distribution networks to supply the world with our top-quality products. Given our total commitment to providing our customers with the best products for their needs, it was critical to find distributors who shared our passion for outstanding customer service.

- 41 stores Roofmart around Canada
- 2 stores Roof Center in B.C.
- Roofmart stores in Europe also

ROOFMART

ROOF CENTRE

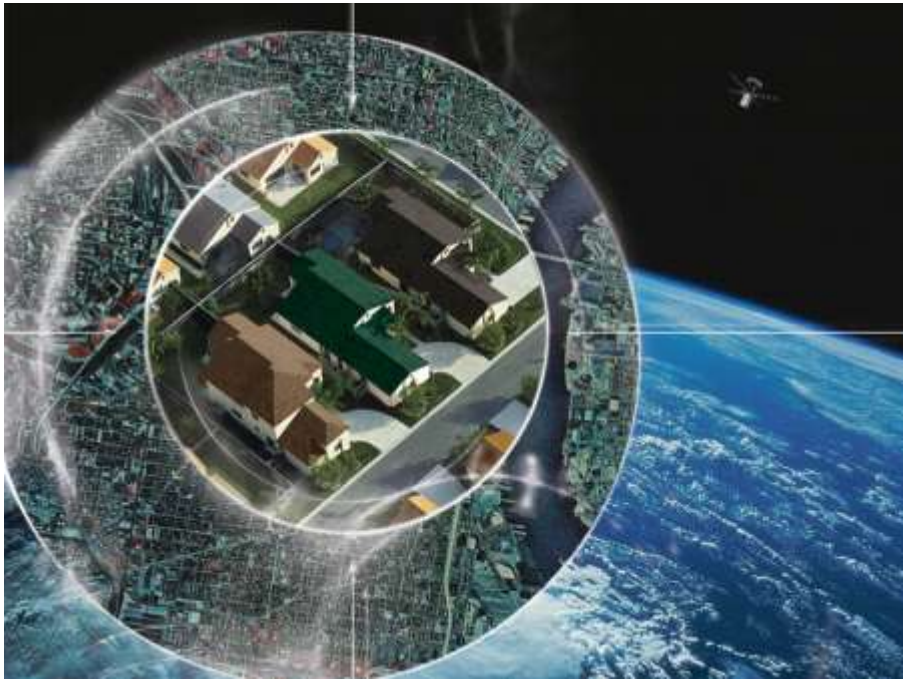
CANPAC DISTRIBUTION LTD.

export

We've already mentioned that IKO is the world's largest exporter of asphalt shingles, currently shipping to over 50 countries around the globe. In order to get IKO's domestic lines into export markets, the Armoroof division was created. Focused exclusively on offshore markets, its mandate is to scale typical export barriers. Armoroof makes its exporting expertise available to a large hub of manufacturing companies which comprises the IKO Group.

Through Armoroof, IKO exports product to every continent, in places as diverse as China, Japan, Australia, the Czech Republic, Slovenia and Chile.

- IKO Calgary exports to China, Japan and Korea.
- IKO Brampton and Hawkesbury export to Europe, Africa and the Middle East.
- IKO Pacific exports to the Pacific Rim, China, Japan, Korea, Taiwan, New Zealand, Australia and parts of South America.
- In Europe, IKO Sales International NV covers a large part of the continent; in particular, Germany, the Benelux, Poland, Czech Republic, Ex-Yugoslavia, Hungary, whole Central and Eastern Europe, Scandinavia, South Europe and to lesser extent, the Middle East and Africa. It also exports to China and other parts of Asia.



Armoroof Export
Division of IKO Industries Ltd.

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IKO projects around the world

North America

North America

North America

North America

North America

North America

North America

Lithuania

Lithuania

Lithuania

Lithuania

Lithuania
2007/06/09

Lithuania

Ukraine

Ukraine

Ukraine

Ukraine

Russia

Russia

Russia - Moscow

Italy- Lombardia

Italy

Italy - Lombardia

Italy- Lombardia

Italy - Lombardia

Europe

Europe

Europe

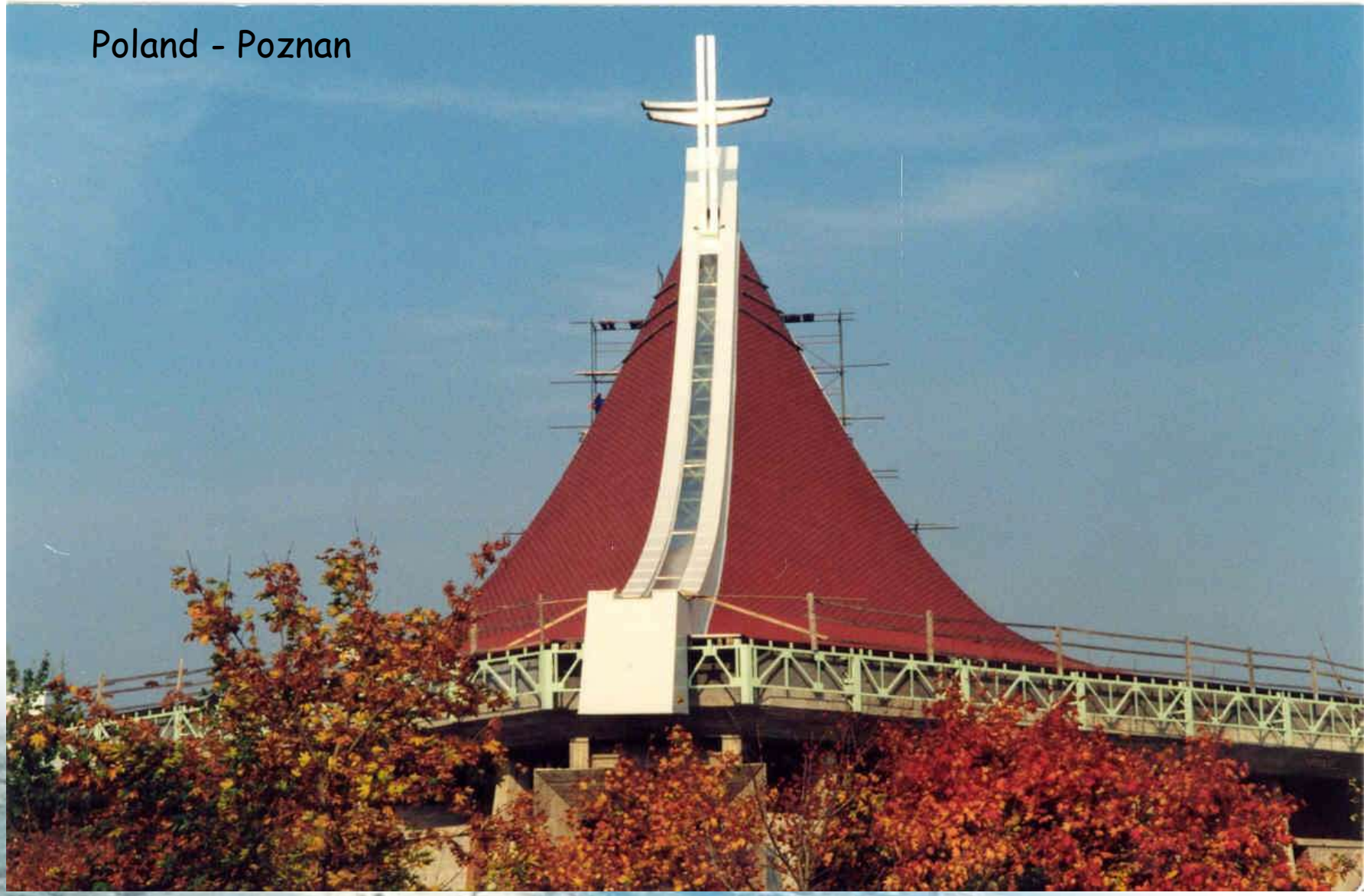
Bulgaria Blagoevgrad

Czech Rep - Brno

Czech Republic

Holland Wassenaar

Bulgaria Bansko


Poland - Poznan

Poland - Poznan

Spain - Cadiz

Germany

Germany – Madfeld project

Germany

Germany

Germany

Denmark

Iceland

Slovakia

Sovakia

Slovakia

Europe

Europe

Africa- Tanzania – Kibo Palace Hotel

Middle East – Iran – US Militar Base

Middle East – Iran – US Militar Base

Iran

Middle East - Iran

Middle East - Iran

Iran

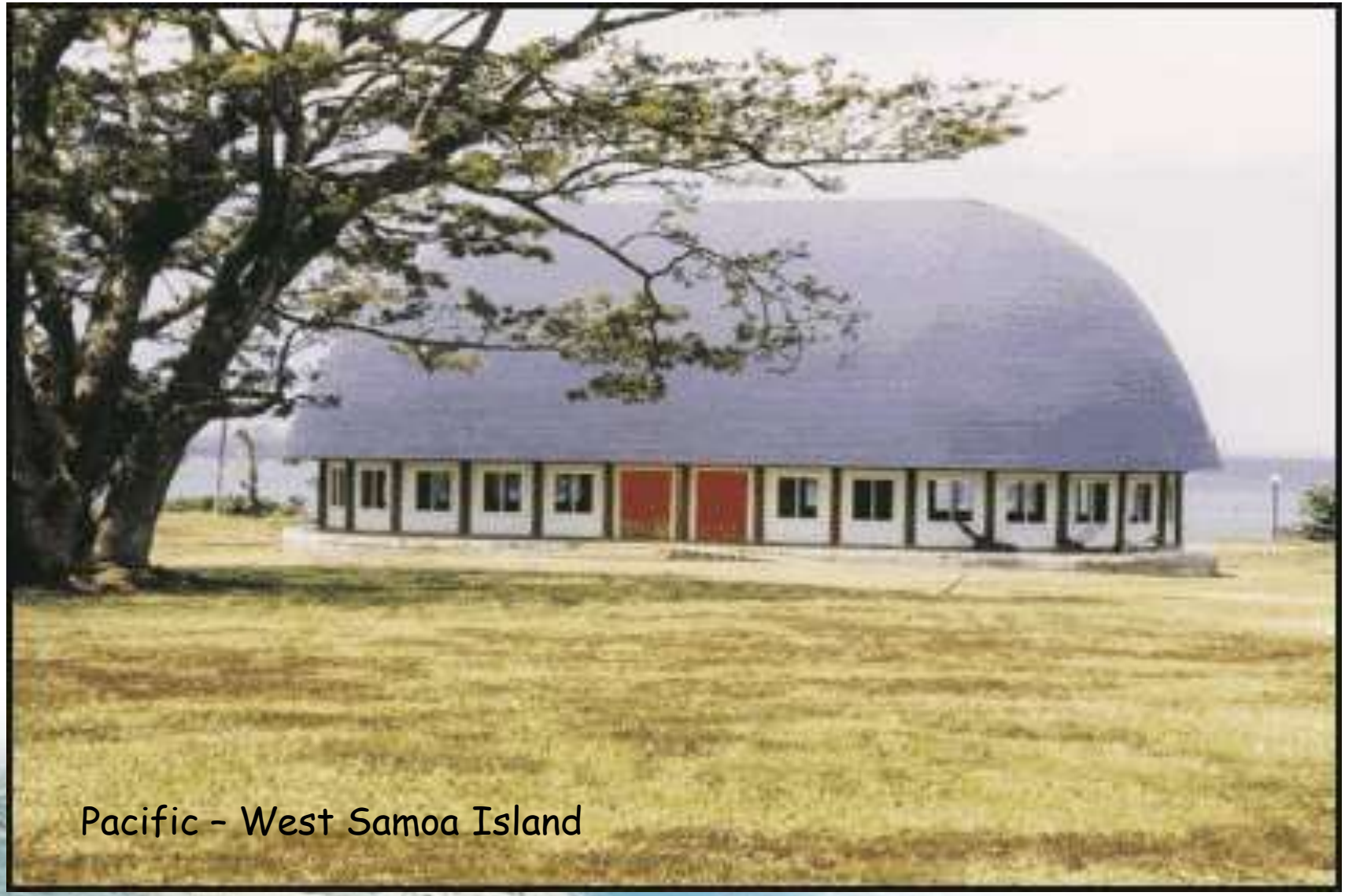
Middle East - Iran

Asia – Singapore – Sentosa Island – Before IKO

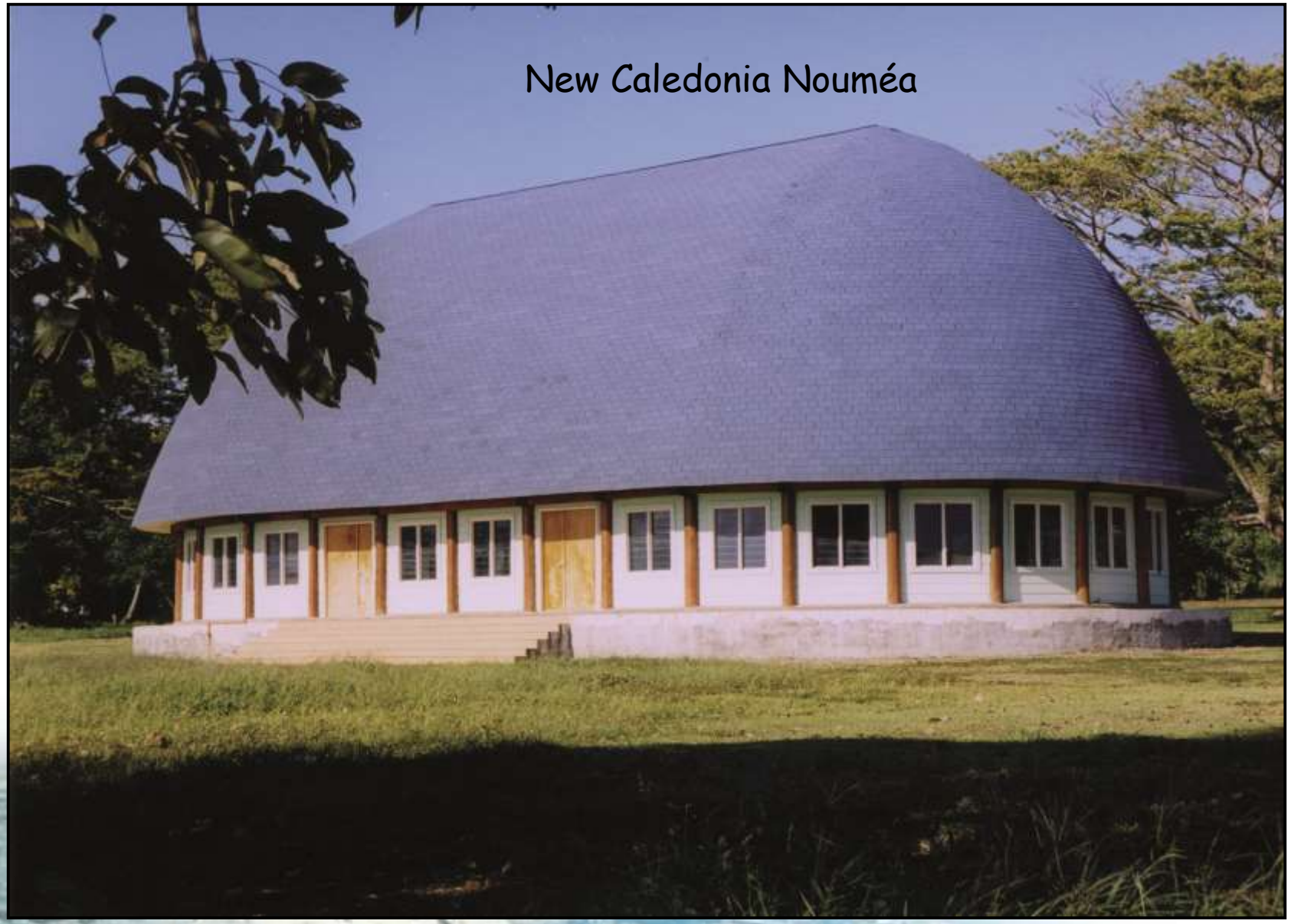
Asia – Singapore – Sentosa Island – after IKO

Rockwell Mall - Philippines

Pacific – West Samoa Island



Pacific – West Samoa Island


New Caledonia Nouméa

S.E. Asia – Malvides – Hadahaa Resort

S.E. Asia – Malvides – Hadahaa Resort

Indonesia

Indonesia

Indonesia

RTT
Shingel : IKO Marathon
Colour : Dual Bown
Roof Area : 711 M2
Since : 2004, April
Owner : Mr. S. Purba
Consultant & Contractor : Mr. Hendrik Kaban
11.06.2008 15:32

Indonesia

Indonesia

Indonesia
12 06 2008 13 47

Malaysia - Kuching

Malaysia- Setia – Eco Park

Malaysia – Setia – Eco Park

Malaysia

Malaysia

Malaysia

Malaysia

Malaysia

Malaysia

Vietnam

Hong Kong

Hong Kong

China Beijing

Asia- China

China - Hefei

China - Xiamen Tongchen

China – Dalian – Mingxiu project

China – Dalian – Shenyang Fangdi

Golf Club Buenos Aires

Golf Club Buenos Aires

Buenos Aires - Argentina

Buenos Aires - Argentina

Buenos Aires - Argentina

Argentina - Patagonia

Argentina – Las Lenas

Argentina

Argentina – Patagonia

Argentina – Buenos Aires

Argentina – Buenos Aires

Uruguay – El Pinar

Uruguay – El Pinar

Uruguay – Montevideo

Uruguay - Montevideo

Chile - Santiago
2006/10/16

Chile - Santiago
2006/10/16

Chile - Santiago

Chile - Santiago

Chile - Santiago

Chile - Santiago

Chile - Santiago

Brazil - Curitiba

Brazil - Curitiba

Brazil – Curitiba

Brazil - Curitiba

Dominican Republic

Dominican Republic

Dominican Republic

Dominican Republic

Dominican Rep – Punta Cana – Bahia Principe

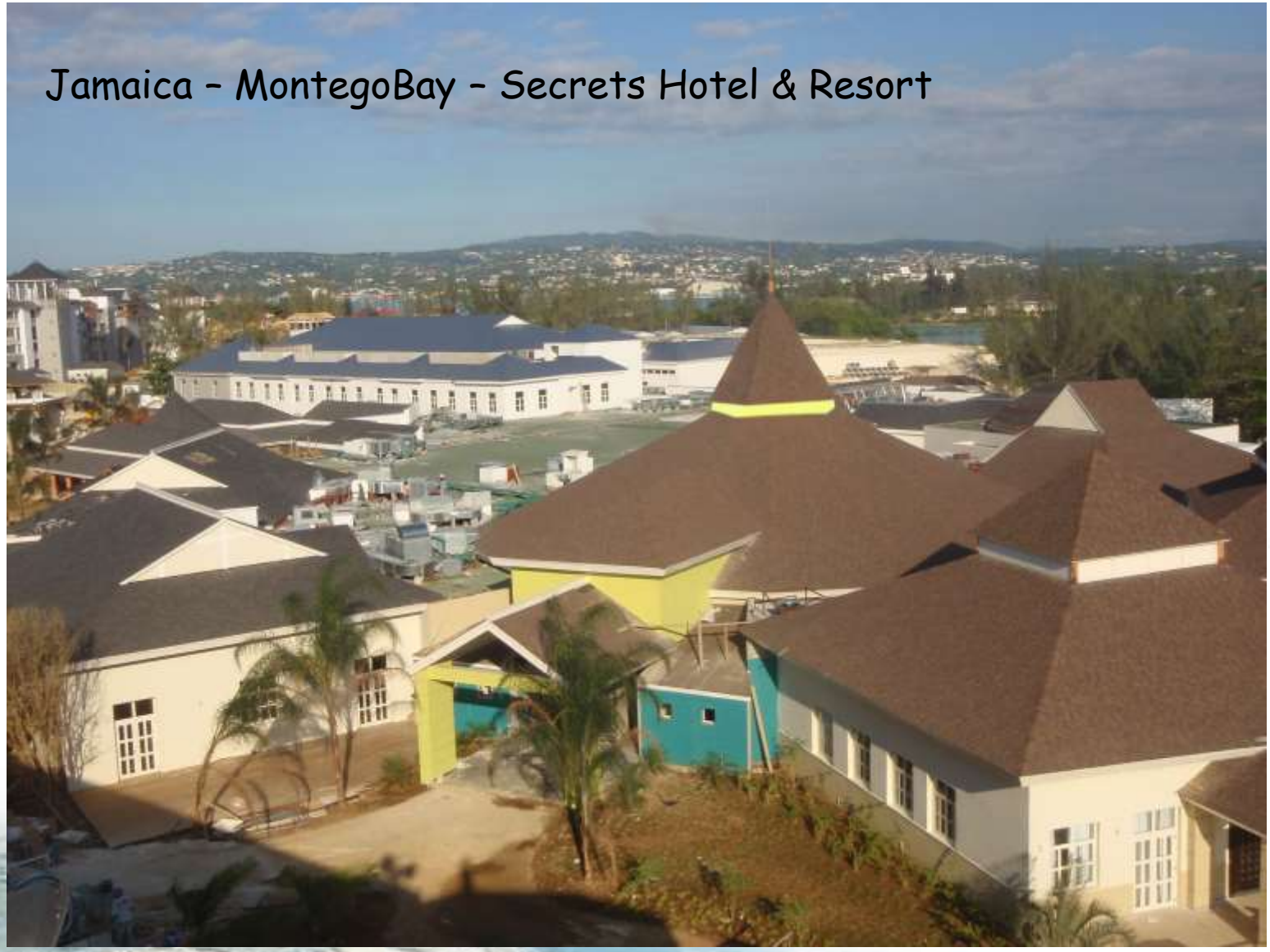
Dominican Rep – Punta Cana – Bahia Principe

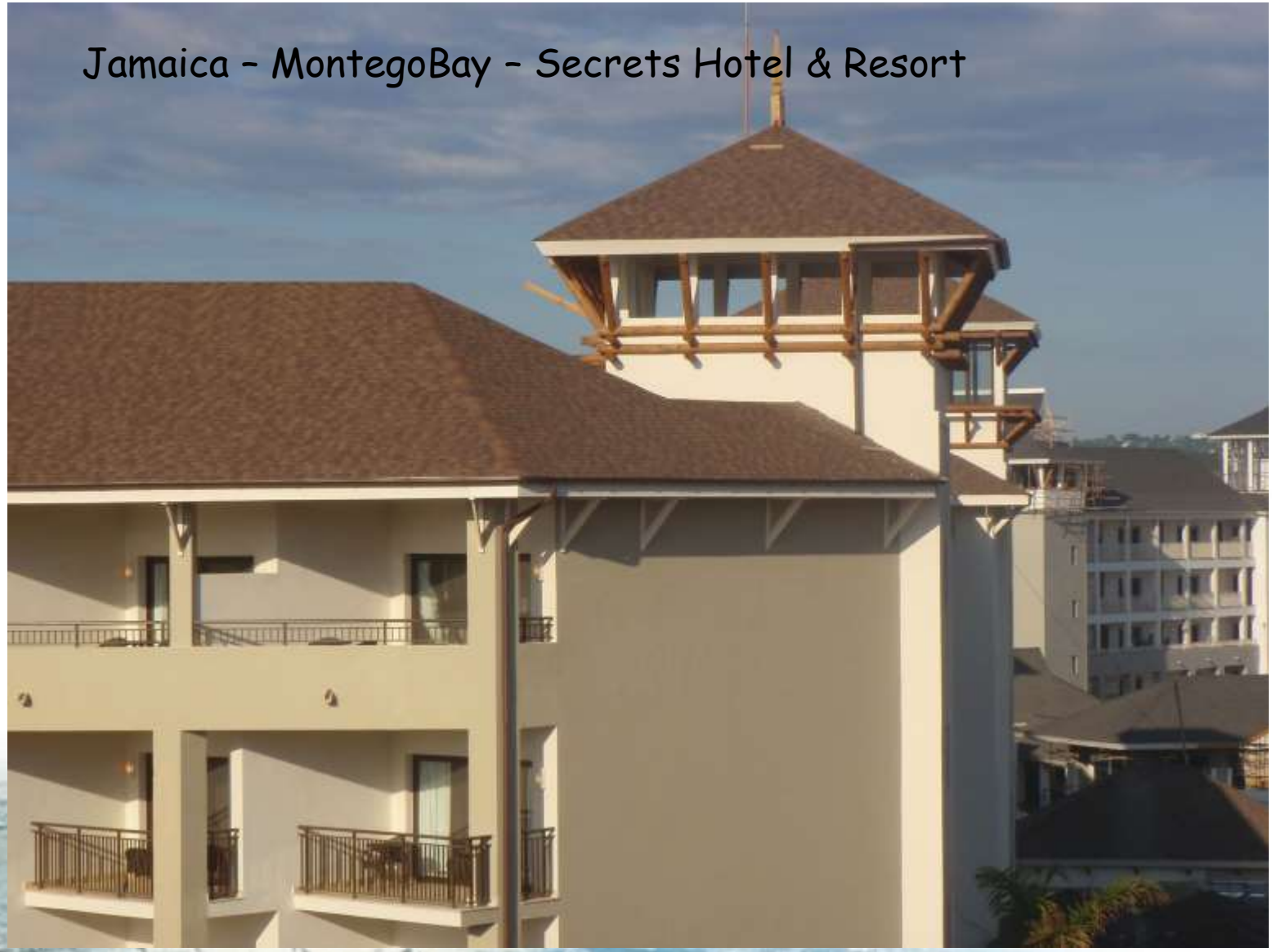
Cuba – Cayo coco
02/01/2004 16:27:44

Cuba – Cayo coco
02/01/2004 16:31:57

Cuba – Varadero – Melia Paradisus

Cuba - Varadero


Jamaica – MontegoBay – Secrets Hotel & Resort


Jamaica – MontegoBay – Secrets Hotel & Resort

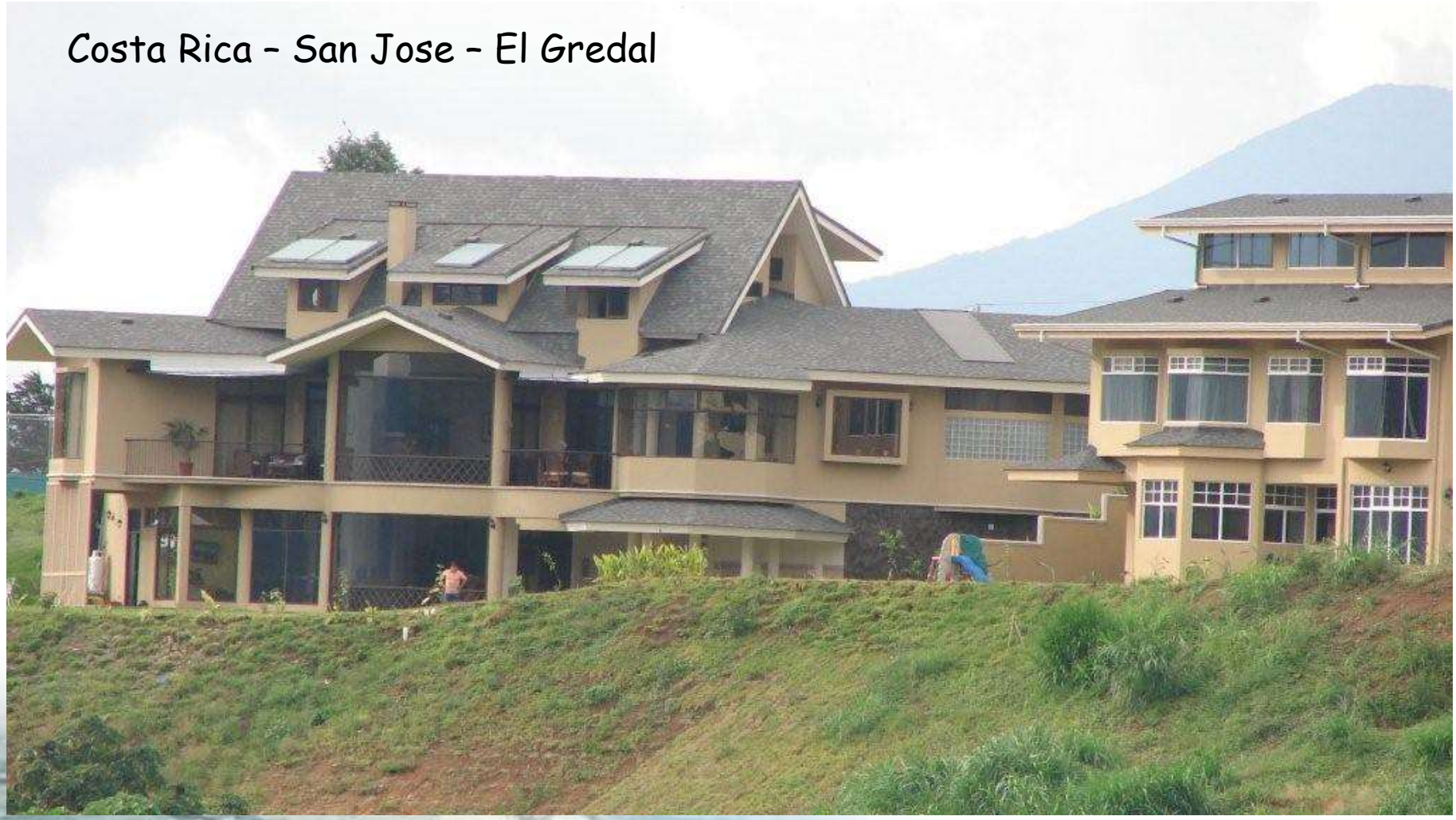
San Jose – Costa Rica - Escazú

San Jose – Costa Rica - Escazú

Costa Rica – San Jose – San Isidro de Heredia

Costa Rica

Costa Rica – San Jose – El Gredal



Cost Rica – San Jose – San Isidro de Heredia

Mexico

Mexico

Guatemala

Guatemala

Guatemala

SELF STORAGE

Jewellers

EXPRESS

JOHN KNOX
CHRISTIAN SCHOOL
Welcome to
JKCS
2232 Sheridan Garden Drive

Armoroof Export
Division of IKO Industries Ltd.

Importance of a good installation

Deck

- DECK is an essential part of the roof. Has to be firm, dry, even and provide a good support for the nails.

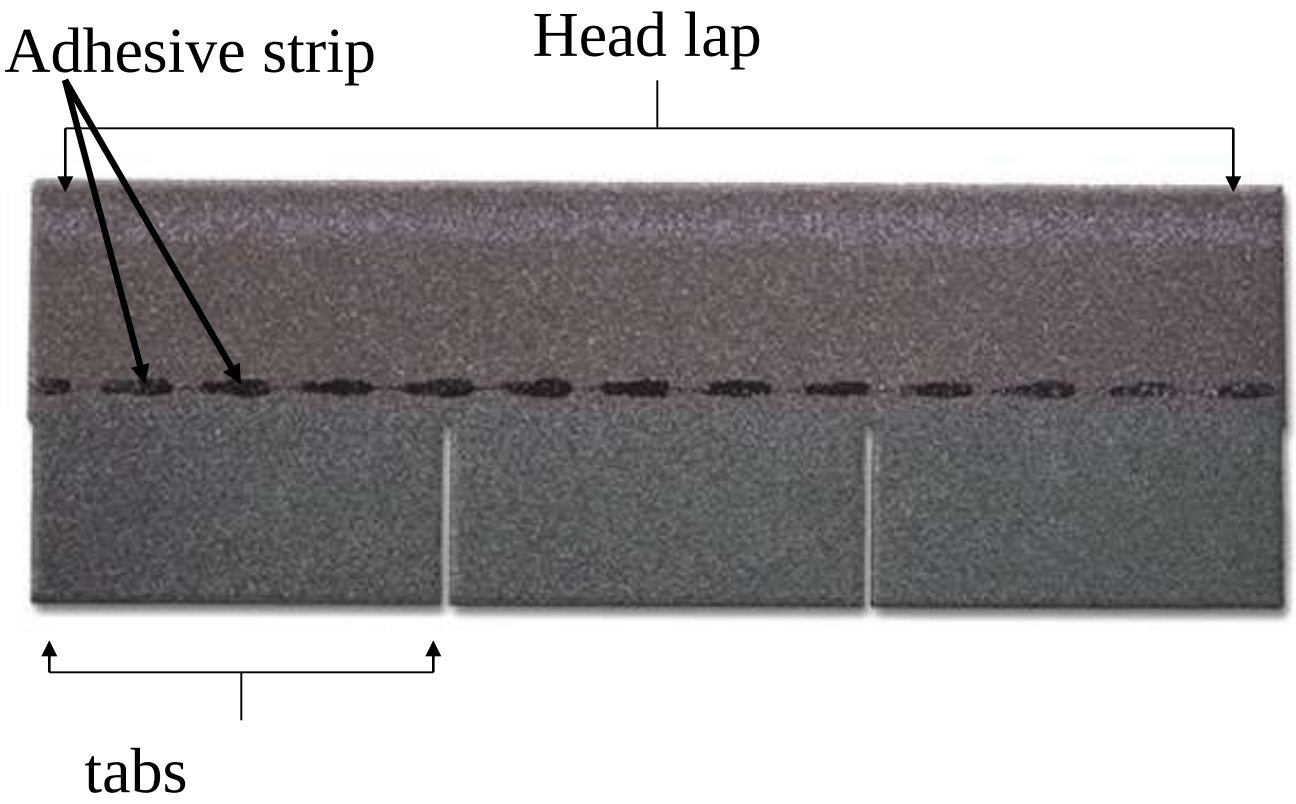
- We suggest to use OSB or Plywood (mimimum 11 mm = 7/16”) for the deck, but could be also concrete.

- If concrete deck, you should apply a 2.5 – 3.0 cm mortar to get the surface even, then primer and wait it drys before apply the shingles with concrete steel nails

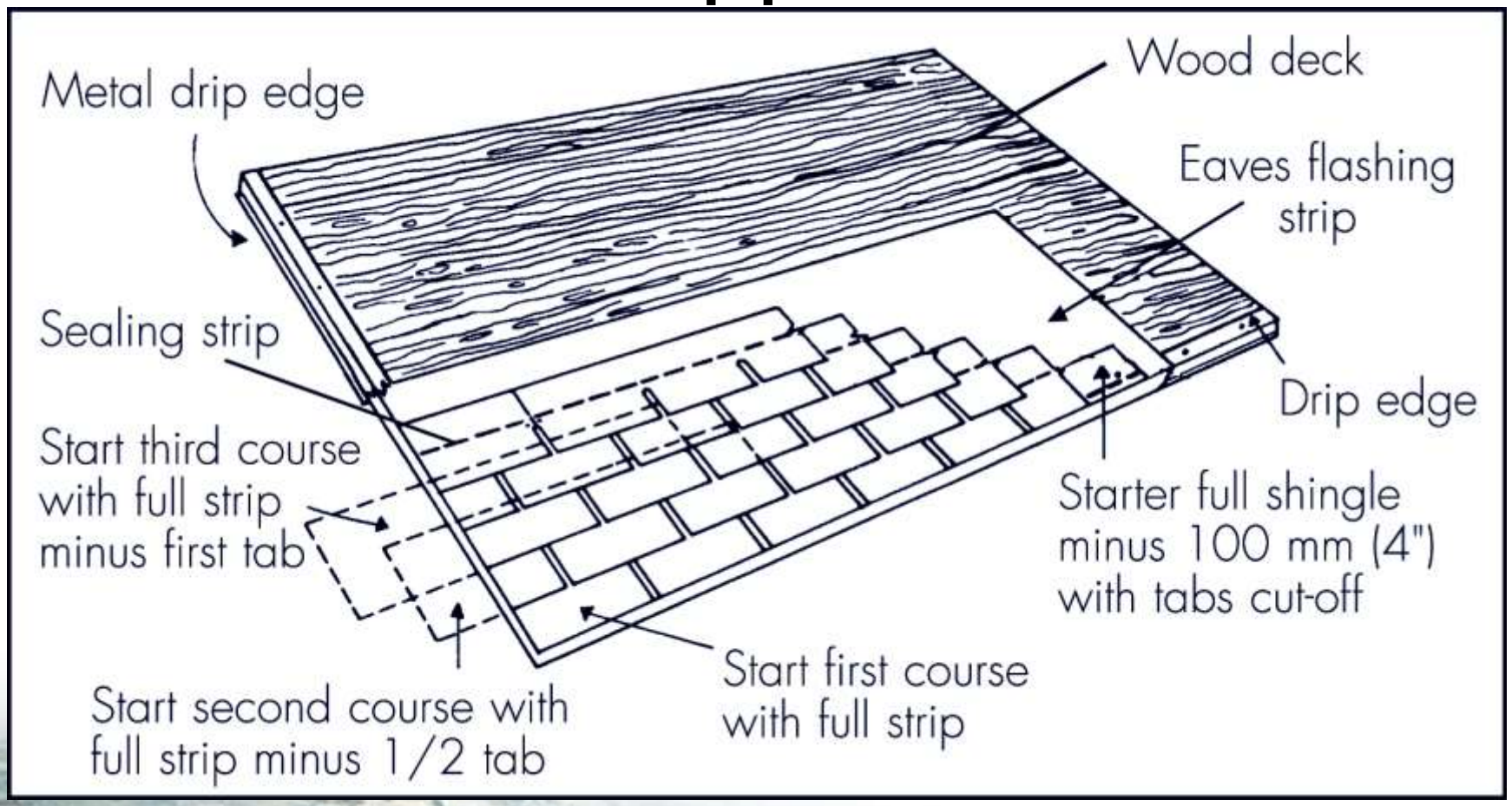
Nailing

- Galvanized roofing nails are the best fastener to use for roofing, and they should be long enough to penetrate through the shingles and into the deck approximately ¾ of an inch, or through the deck if it is plywood (recommended 20 mm nails). Nails no less than ¼ inch longer will be required for capping the hips and ridges
- Use four nails to secure each shingle. Nails should be placed below the sealing strip and above the tops of the cut-outs. Apply the nails starting at one edge, and nailing to the other.

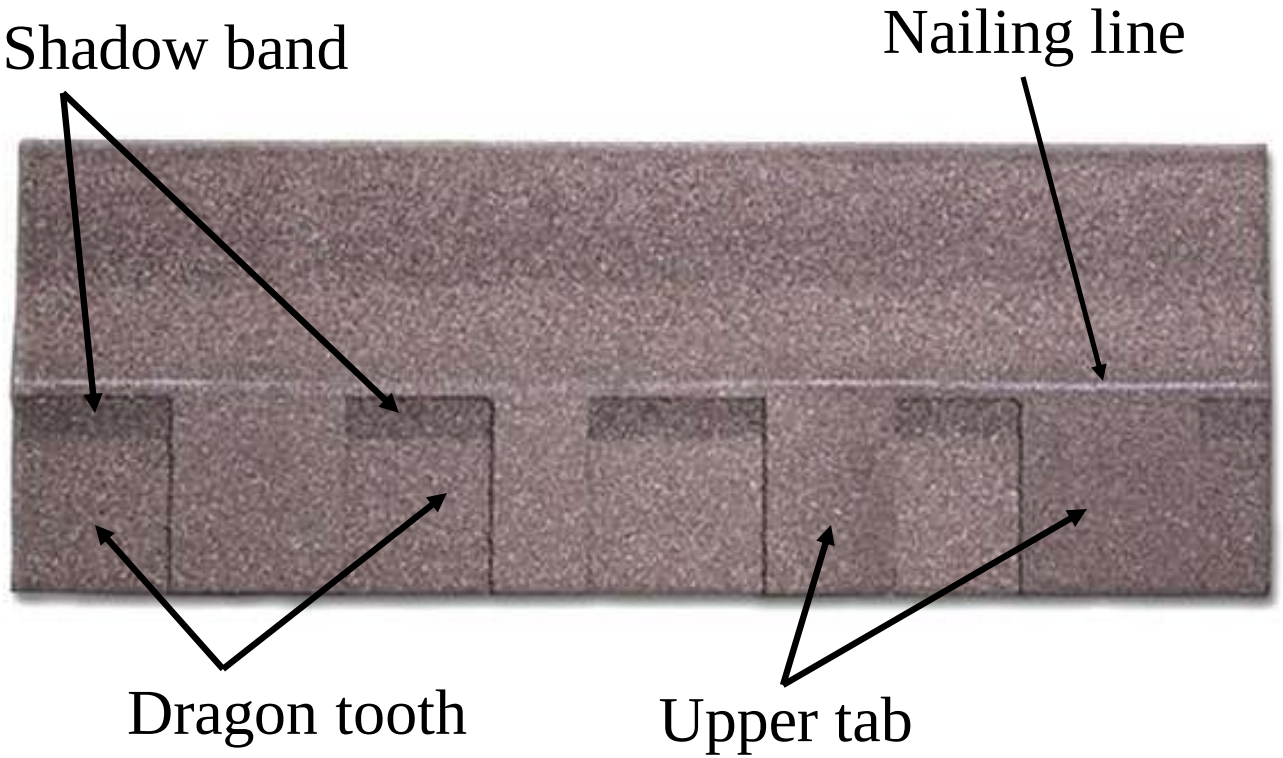
3-Tab Shingle



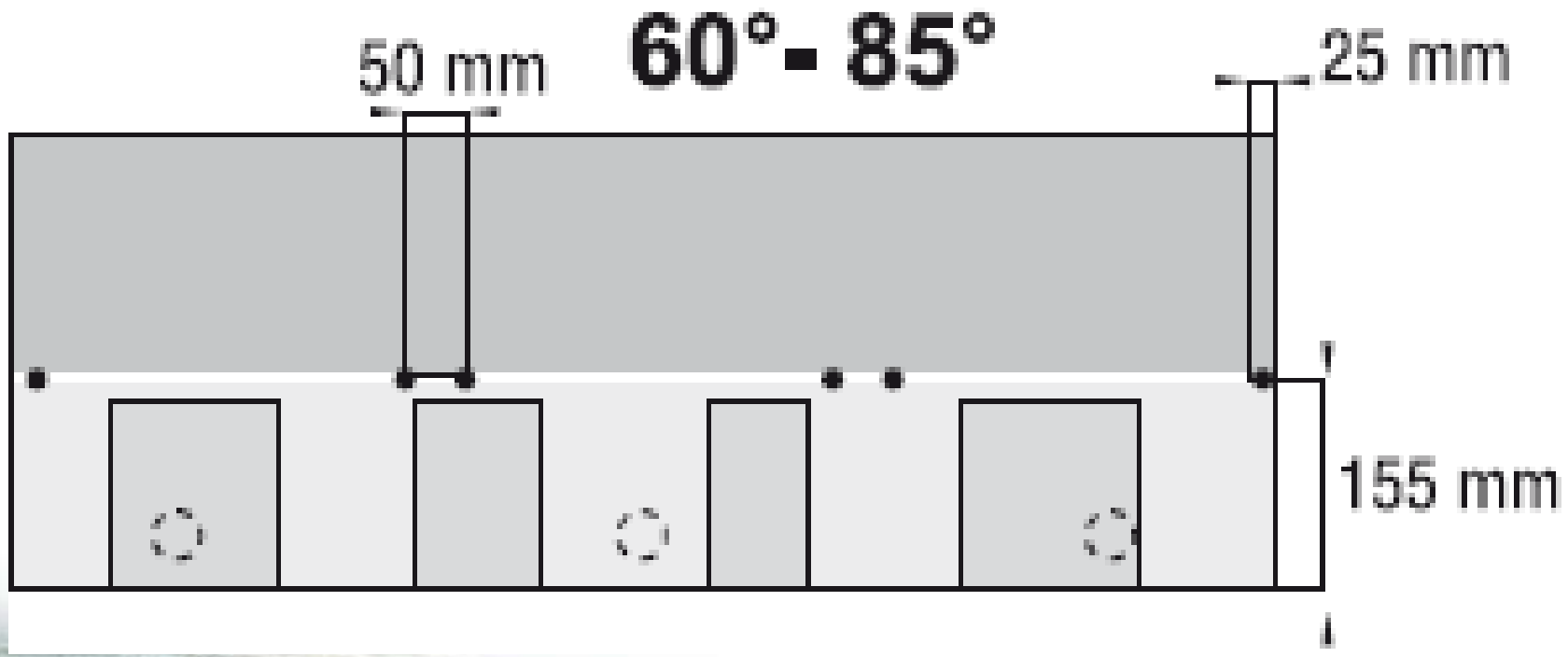
3-tab application



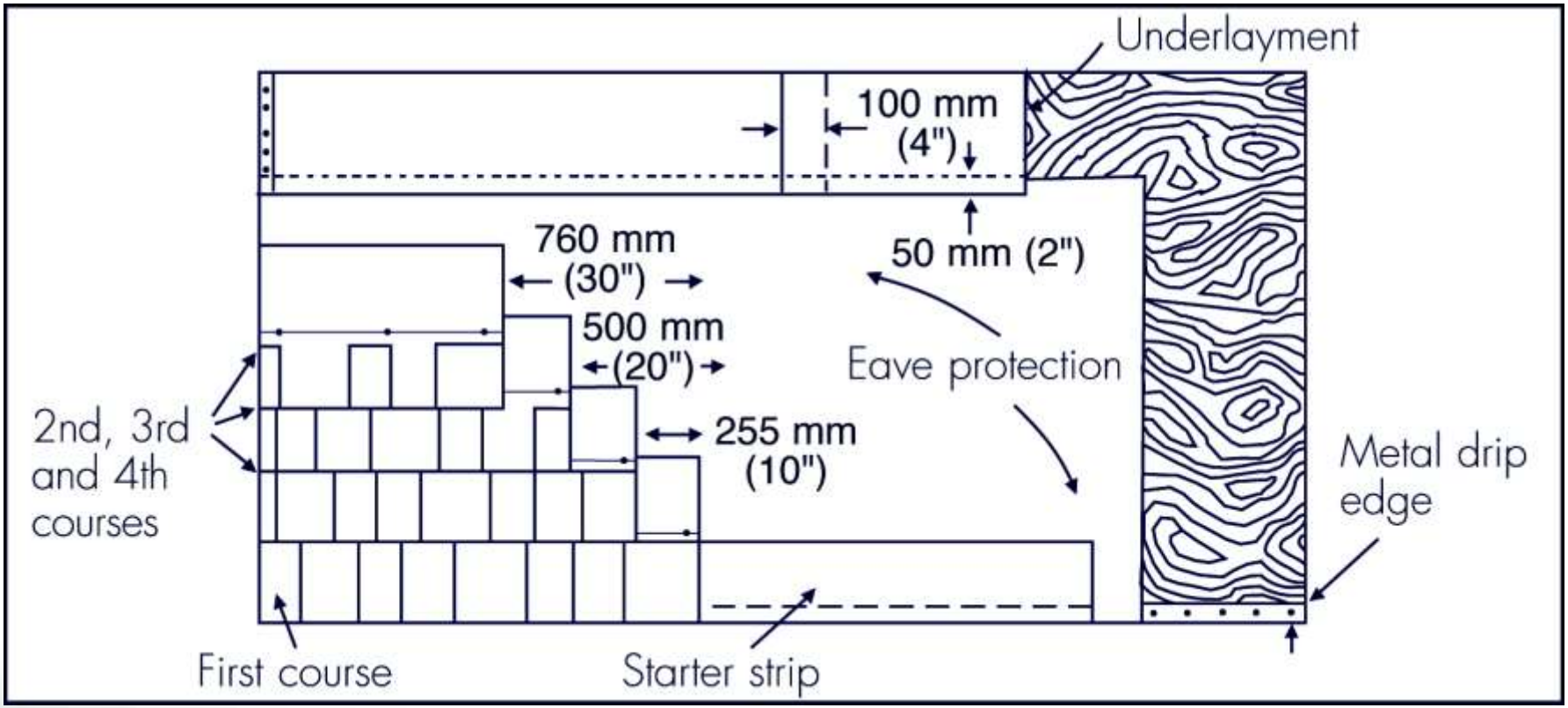
Laminated shingle



Application of 6 nails



Laminated shingle application



Underlayment

- UNDERLAYMENT, Please note that a felt underlayment or equivalent, is strongly recommended beneath fiber glass shingles applied to slopes below 6:12. (26 degrees)

- Underlayment should be applied over the whole deck.

- Underlayment comes in rolls. It must be unrolled, cut to convenient lengths, and laid out flat until completely relaxed before shingles are applied over it.

Tips

- Never apply asphalt shingles to roof slopes below 9.5 degrees. Optimal slope over 18 degrees. Between 9.5 and 18 degrees warranty lower to 12 years.

- For the starter strip, trim off the shingle tabs from a 3-tab shingle so that the sealant is at the bottom of the eave edge .

Tips - APPLICATION

- Shingle sealant is activated by the sun
- NO need to remove the polyfilm strip from the back of the shingle before applying it
- You should take steps to minimize the effects of shading variations as you work. Space several bundles around the working area and draw from each of the bundles randomly as the work progresses.

VENTILATION

- Proper ventilation is necessary to avoid condensation problems that may cause dampness to rot the roof deck and distort the roofing materials.

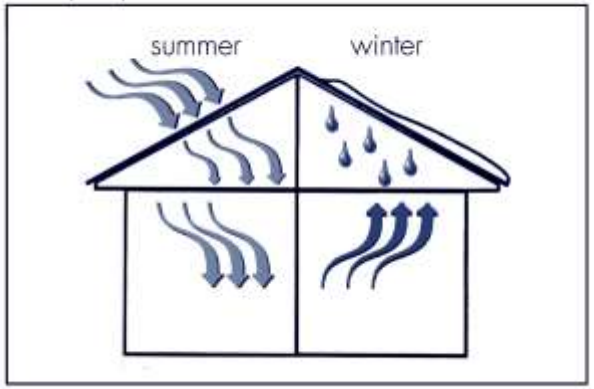
- The air in your home is laden with moisture from cooking, laundry, bathing, the respiration of plants and animals and the evaporation from plumbing fixtures. Much of this air finds its way into the attic.

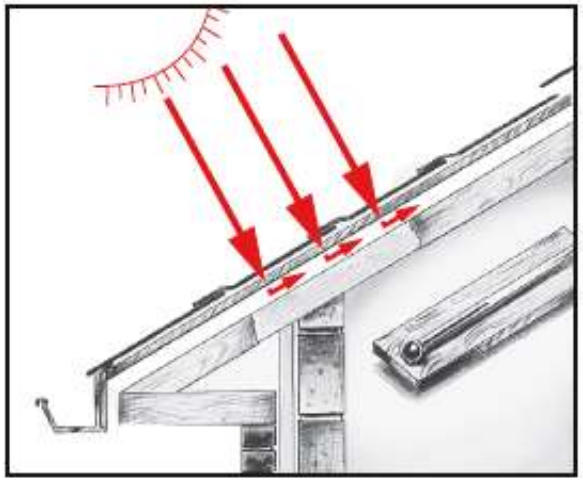
- When determining the need for vents, multiple the horizontal area of the roof by 1/150, divided in equal proportions between the soffits and the peak of the roof (ridge), is required by most building codes.

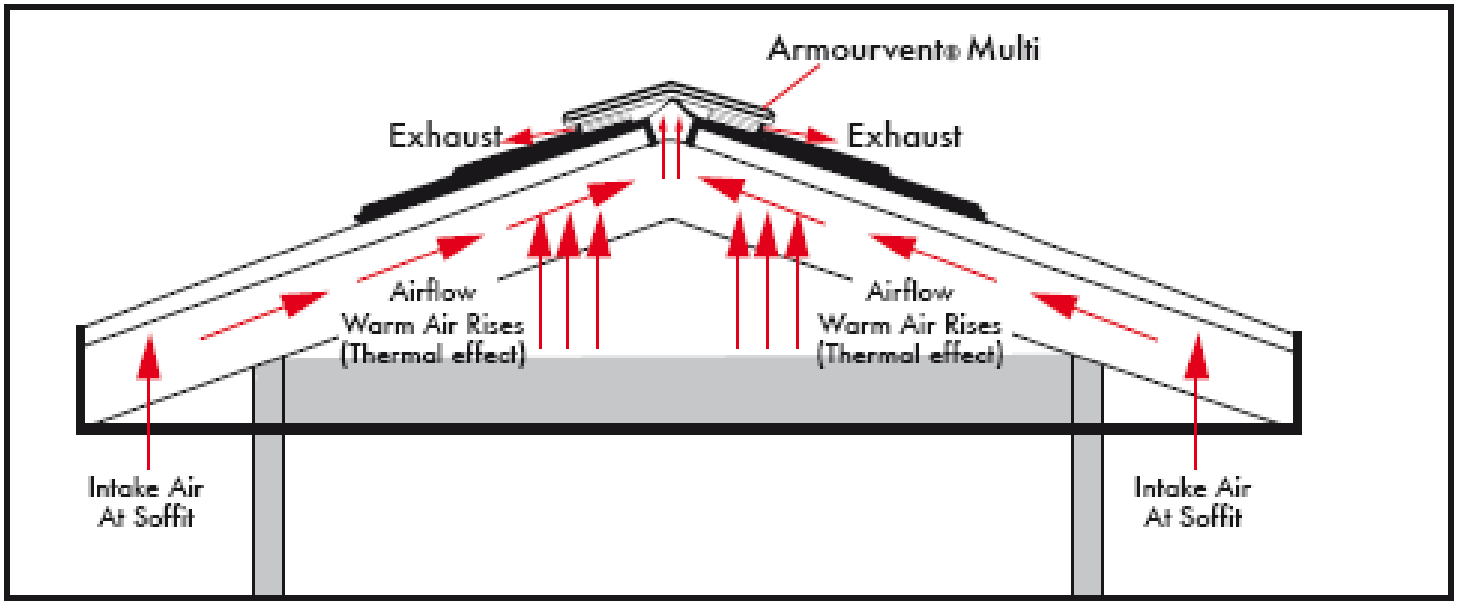
Ventilation

Proper ventilation.

Improper ventilation.

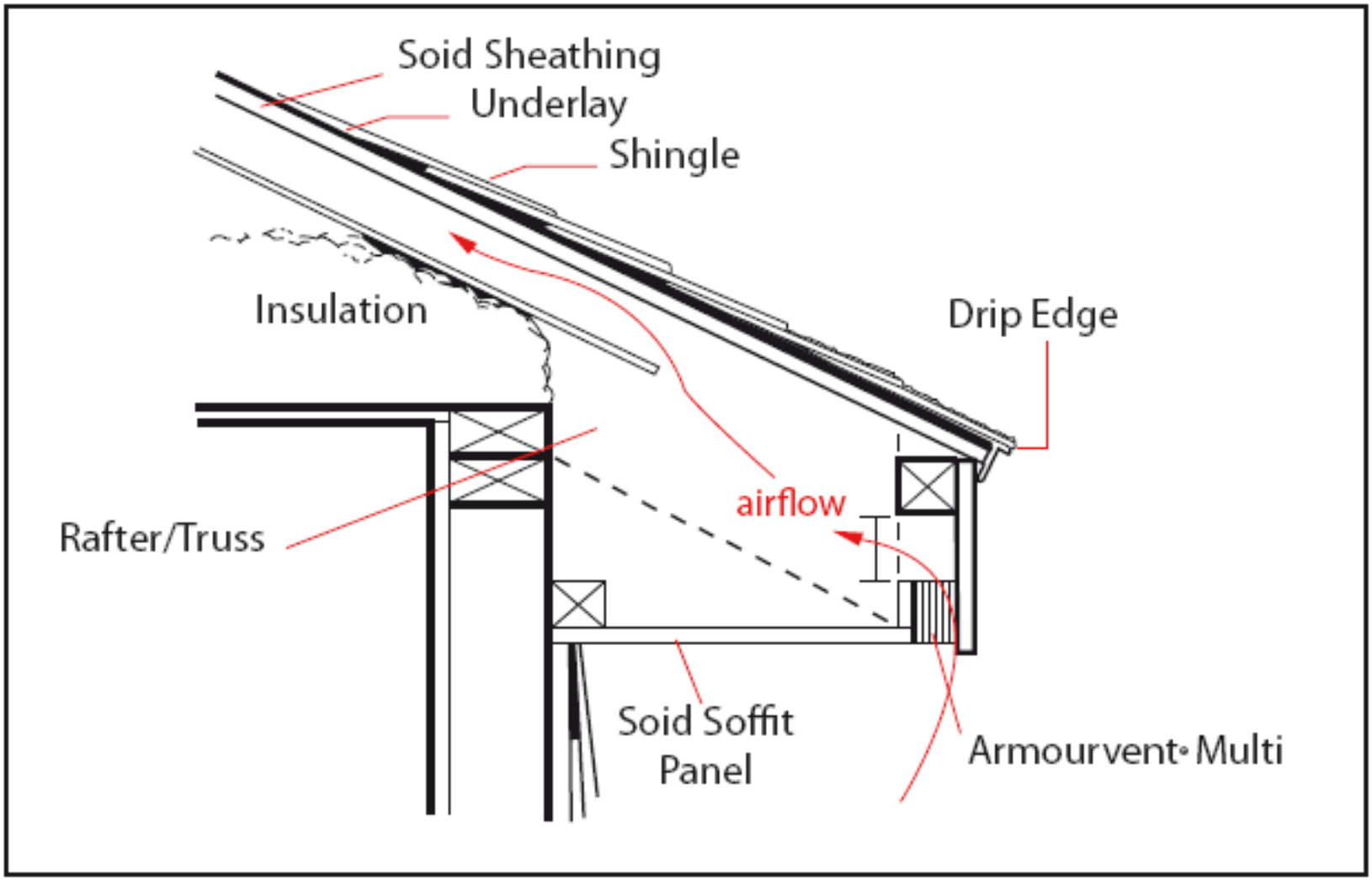


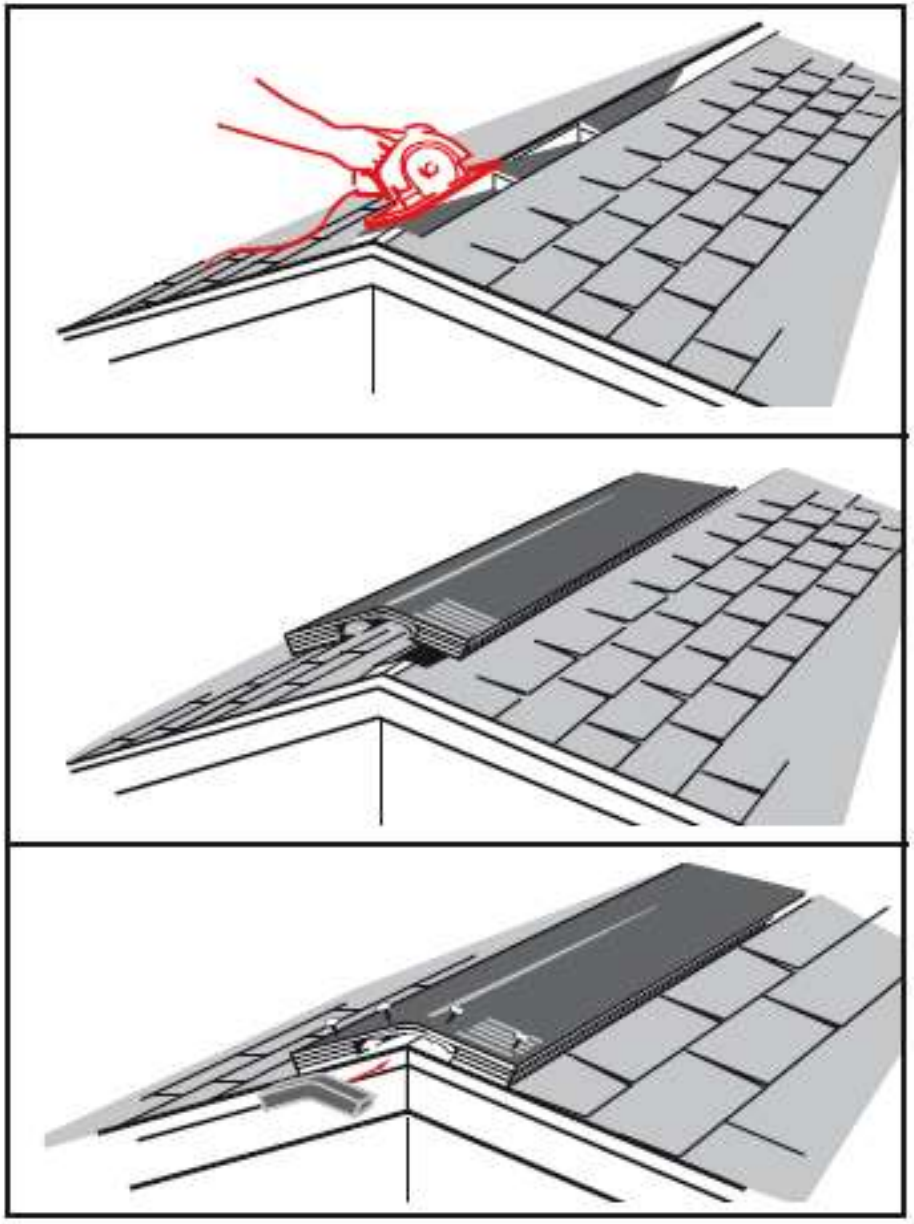


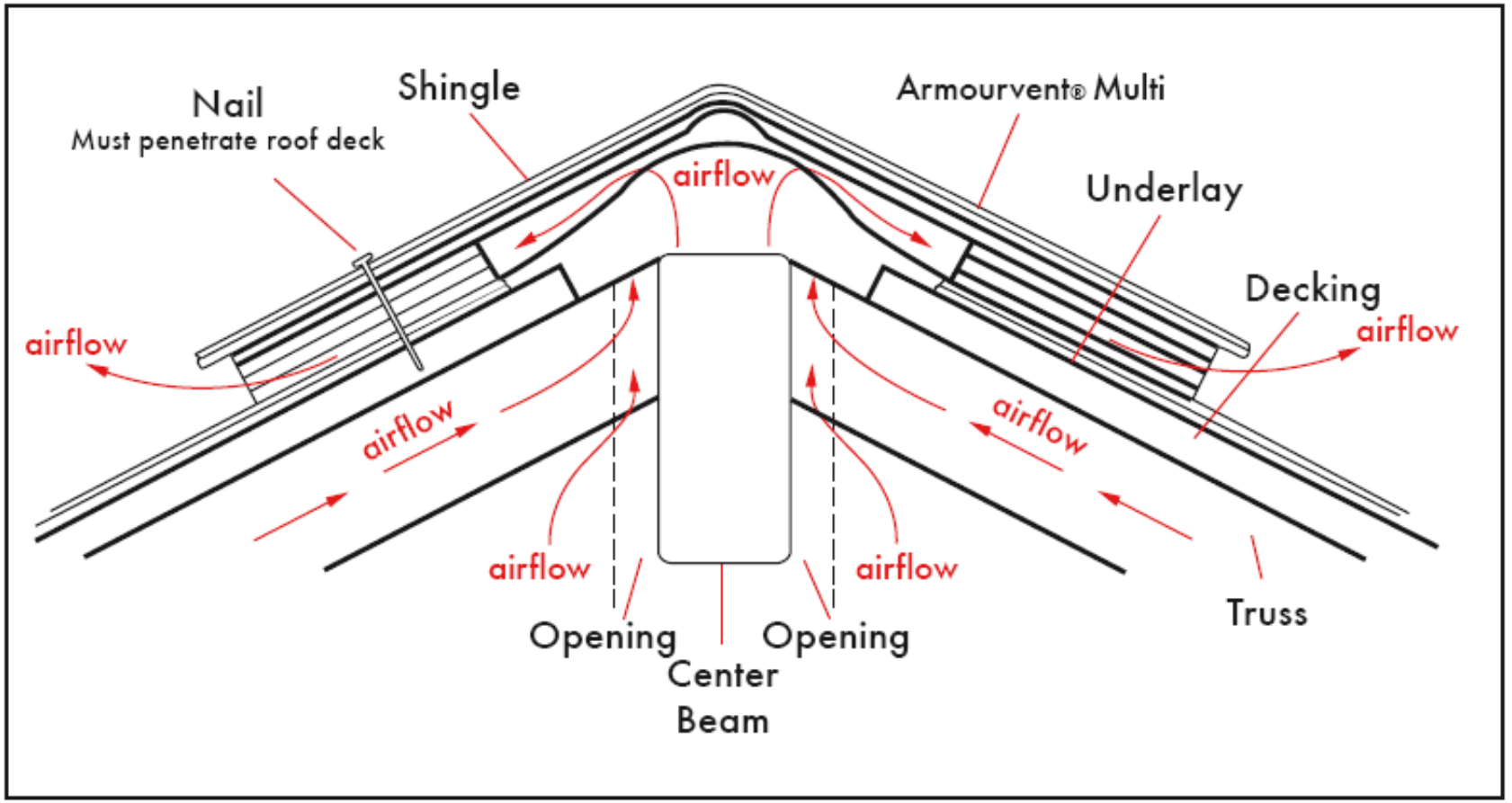

Armourvent® Multi
Exhaust
Exhaust
Airflow
Warm Air Rises
(Thermal effect)
Airflow
Warm Air Rises
(Thermal effect)
Intake Air
At Soffit
Intake Air
At Soffit

Calculation of ventilation

- 1 square feet = 0.093 square meters = 144 square inches
- A roof of 6 mt x 10 mt = 60 mt2 = 645 sq ft
- Ventilation area is equal to:
- 60 mt2 x 1/300 = 0.20 mt2 = 310 sq inches
- 50% = 0.10 mt2 = 155 sq inches to install on or close to the ridge
- 50% to install on the soffits


Soid Sheathing
Underlay
Shingle
Insulation
Drip Edge
airflow
Rafter/Truss
Soid Soffit
Panel
Armourvent• Multi




Nail
Must penetrate roof deck
Shingle
Armourvent® Multi
airflow
Underlay
Decking
airflow
airflow
airflow
airflow
airflow
airflow
Truss
Opening
Opening
Center
Beam

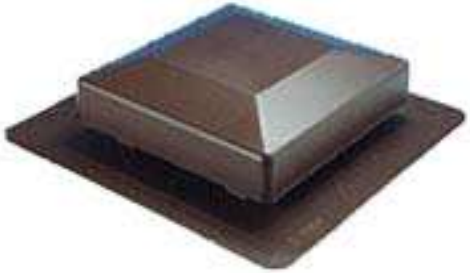
ROLL VENT Ventilation in rolls

Click product images
to view spec sheets

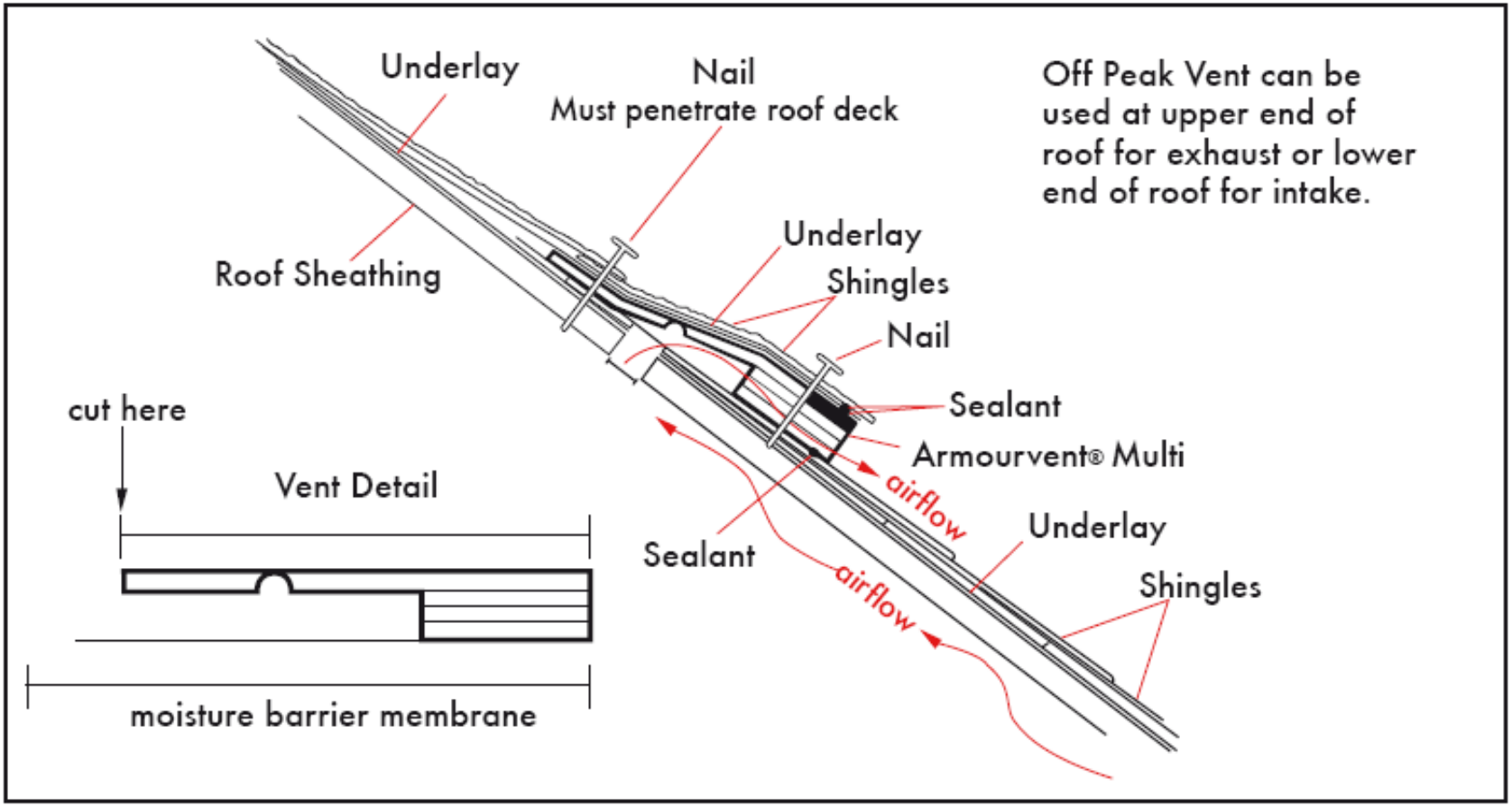
RIDGE ROLL

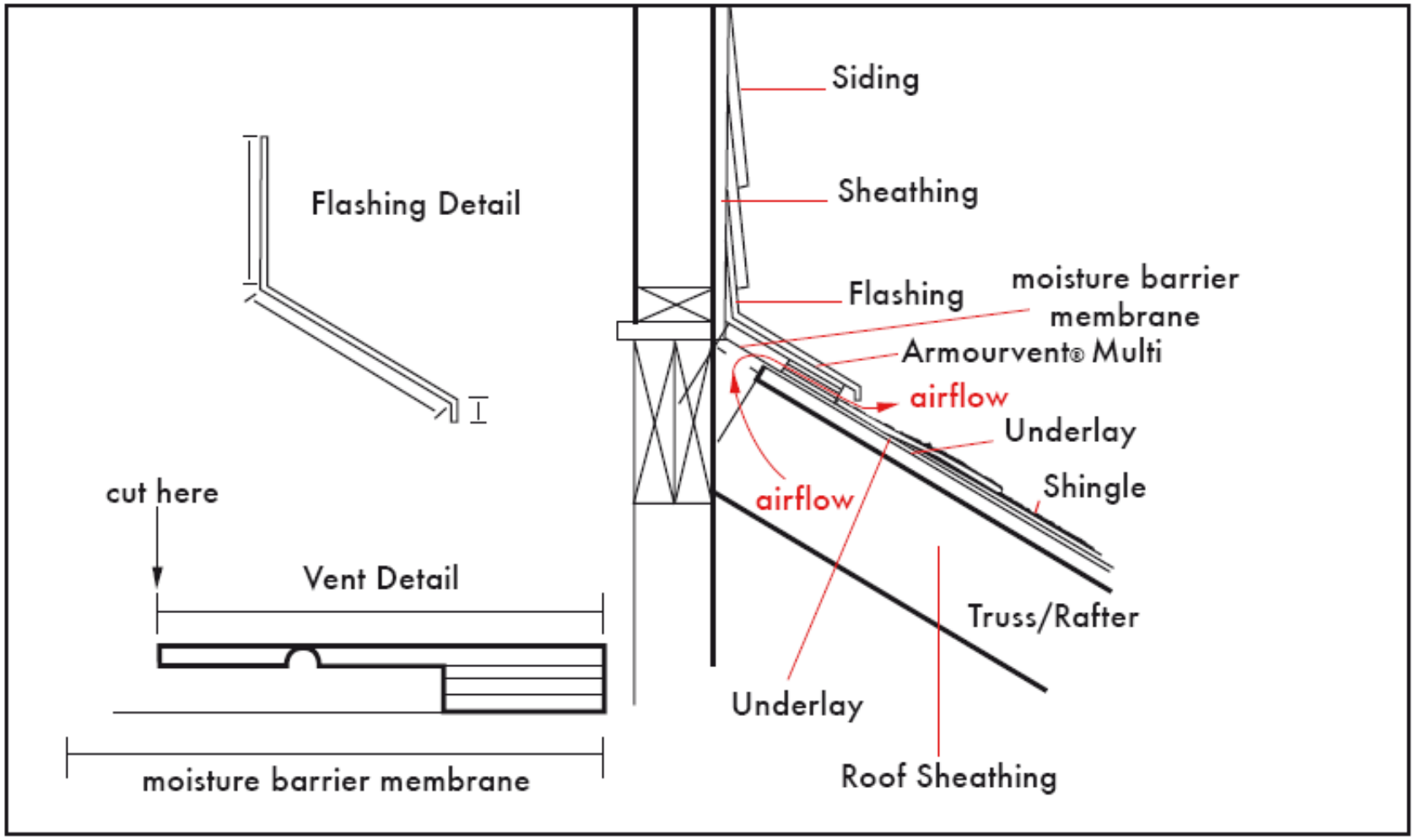
WEATHER PRO
RIDGE

Ventilation in rolls Lomanco Omni Roll



RIDGE
Control the Weather

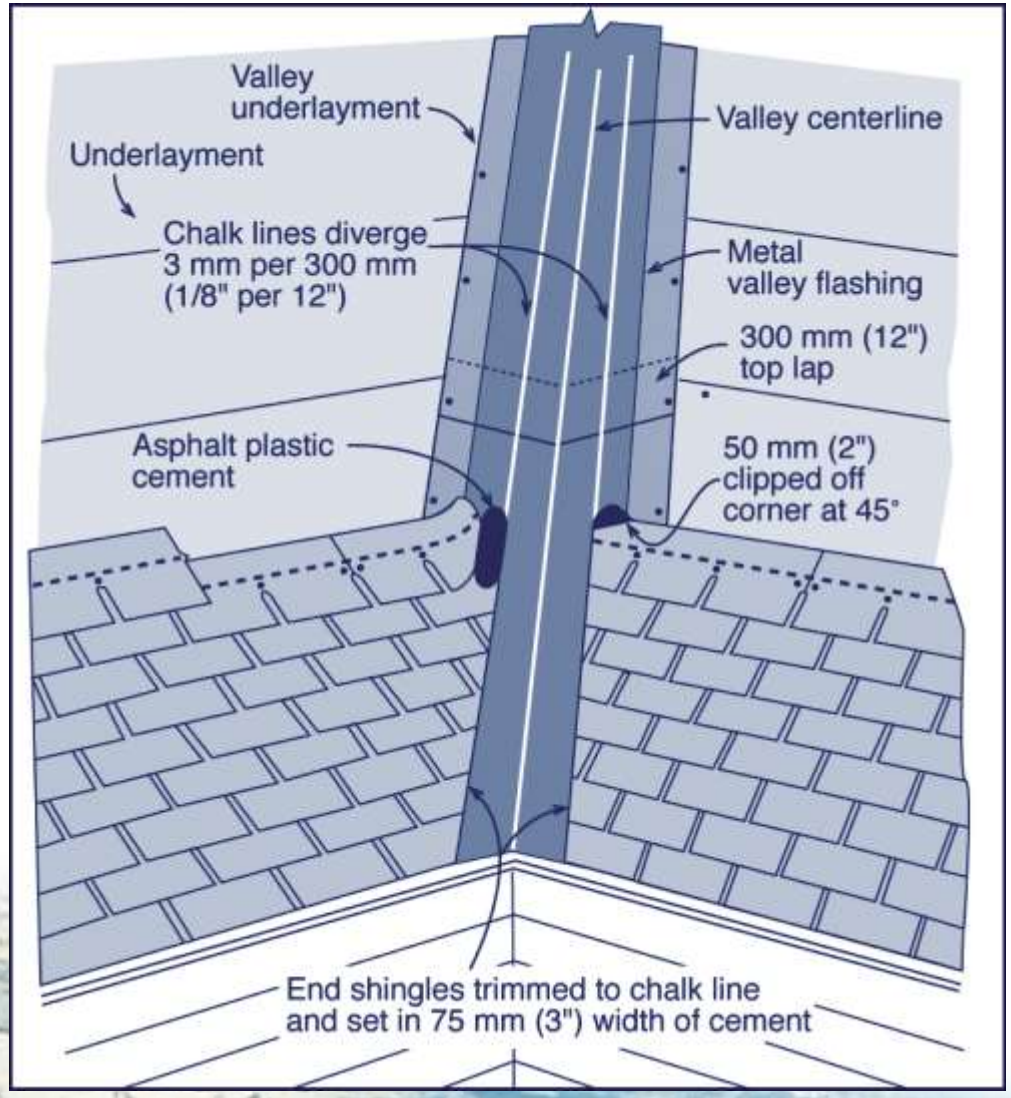

Underlay
Nail
Must penetrate roof deck
Off Peak Vent can be used at upper end of roof for exhaust or lower end of roof for intake.
Roof Sheathing
Underlay
Shingles
Nail
Sealant
Armourvent® Multi
airflow
Underlay
Shingles
Sealant
airflow
cut here
Vent Detail
moisture barrier membrane


Flashing Detail
cut here
Vent Detail
moisture barrier membrane
Siding
Sheathing
Flashing
moisture barrier membrane
Armourvent® Multi
airflow
Underlay
Shingle
airflow
Truss/Rafter
Underlay
Roof Sheathing

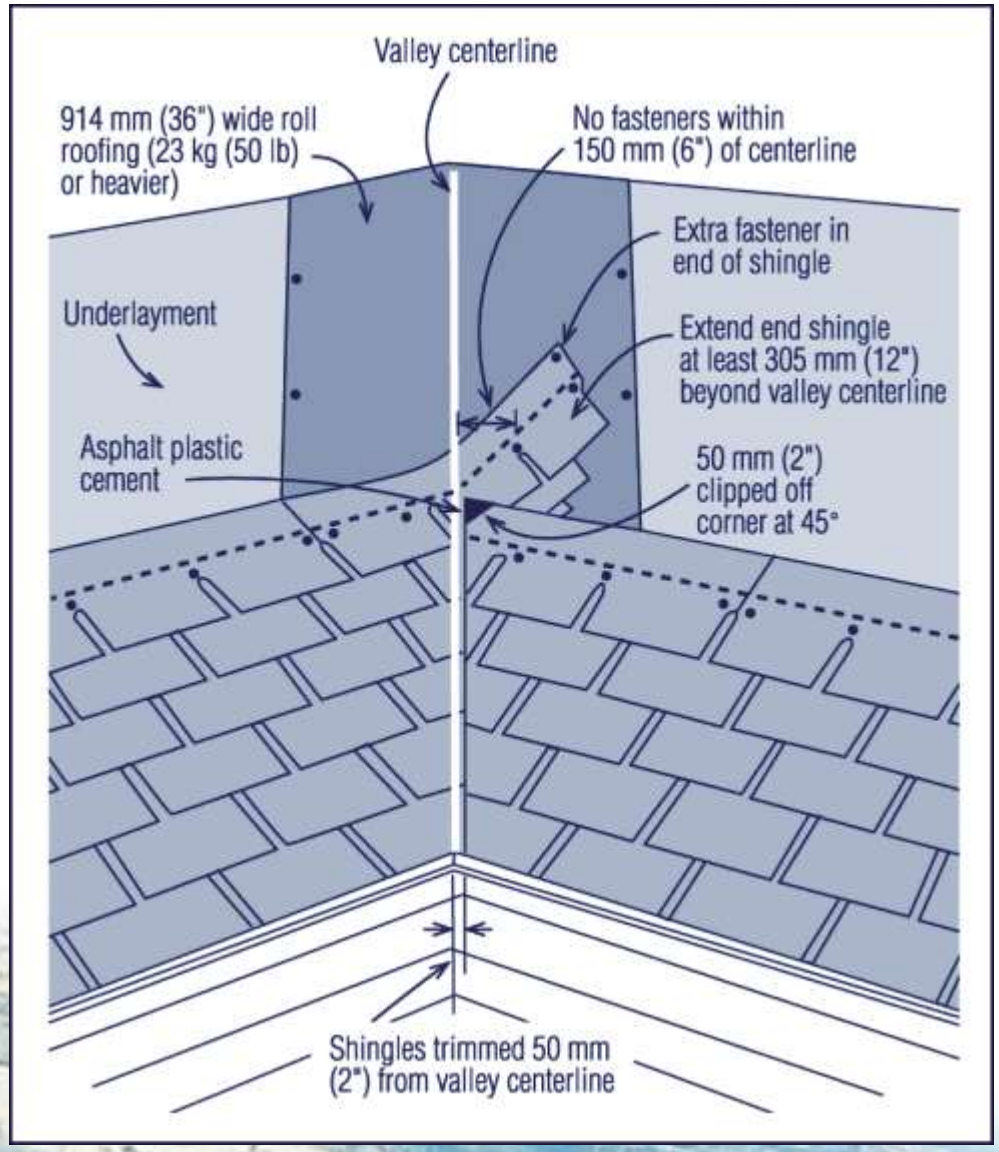
Valleys

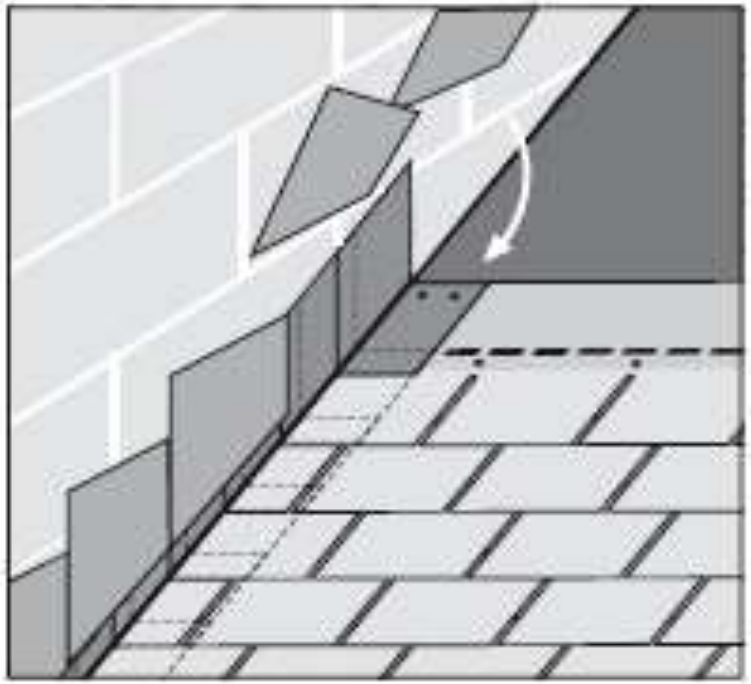
- For longer roof performance, open (metal flashings) on valleys are recommended. Complete the application of underlayment and valley flashing before the shingles are applied
- For best protection, use Ice & Water Protector in the valley
- Center a minimum 24 inch wide, minimum 28 gauge pre-finished/galvanized metal valley liner in the valley

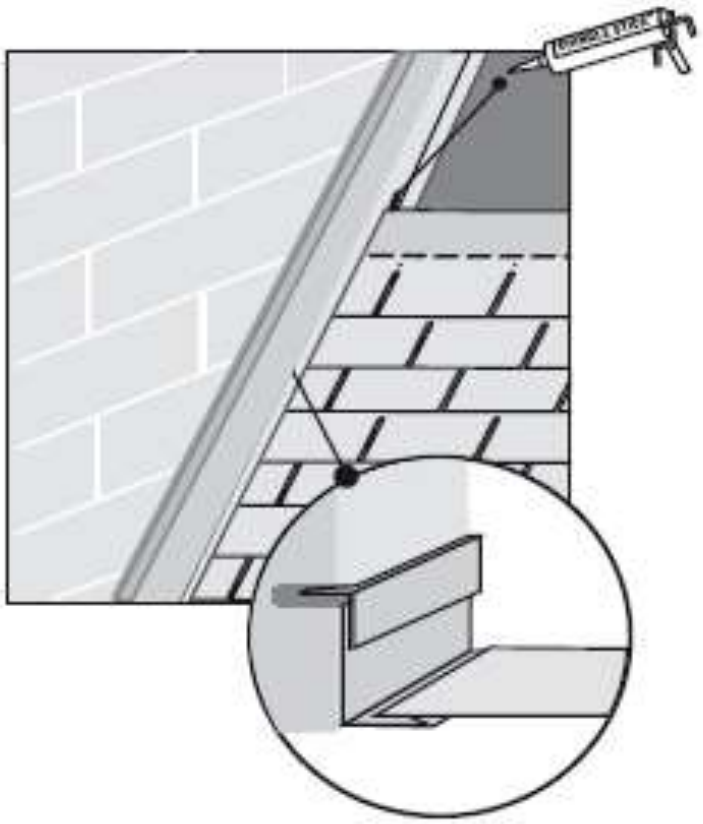
Open valley


Valley underlayment
Underlayment
Chalk lines diverge 3 mm per 300 mm (1/8" per 12")
Asphalt plastic cement
Valley centerline
Metal valley flashing
300 mm (12") top lap
50 mm (2") clipped off corner at 45°
End shingles trimmed to chalk line and set in 75 mm (3") width of cement

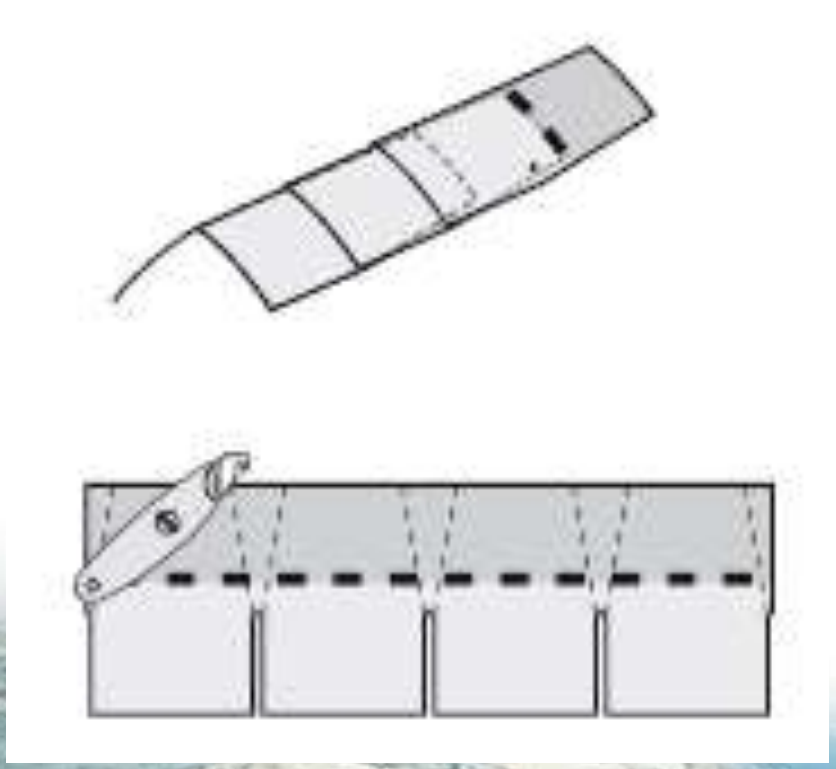
Closed valley







Ridges



Armoroof Export
Division of IKO Industries Ltd.

Why buy IKO shingles?

Armoroof Export
Division of IKO Industries Ltd.

How “More is Less” with IKO?

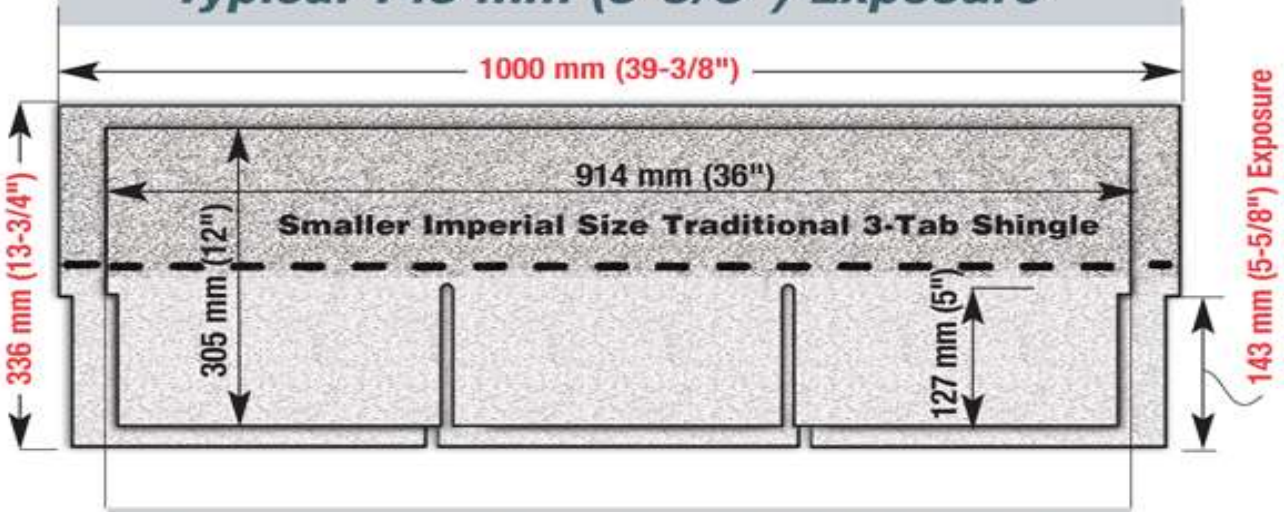
- With our bigger 3 tab shingles (Marathon) you can save a 23% in material (nails and shingles) and labor.
- With our bigger laminate shingles IKO CAMBRIDGE 30, you save a 33% in material and labour

Armoroof Export
Division of IKO Industries Ltd.

IKO Marathon 25 - Metric Size

Traditional 3-Tab Shingle

Typical 143 mm (5-5/8") Exposure



Imperial Size Traditional 3-Tab Shingle

Typical 127 mm (5") Exposure

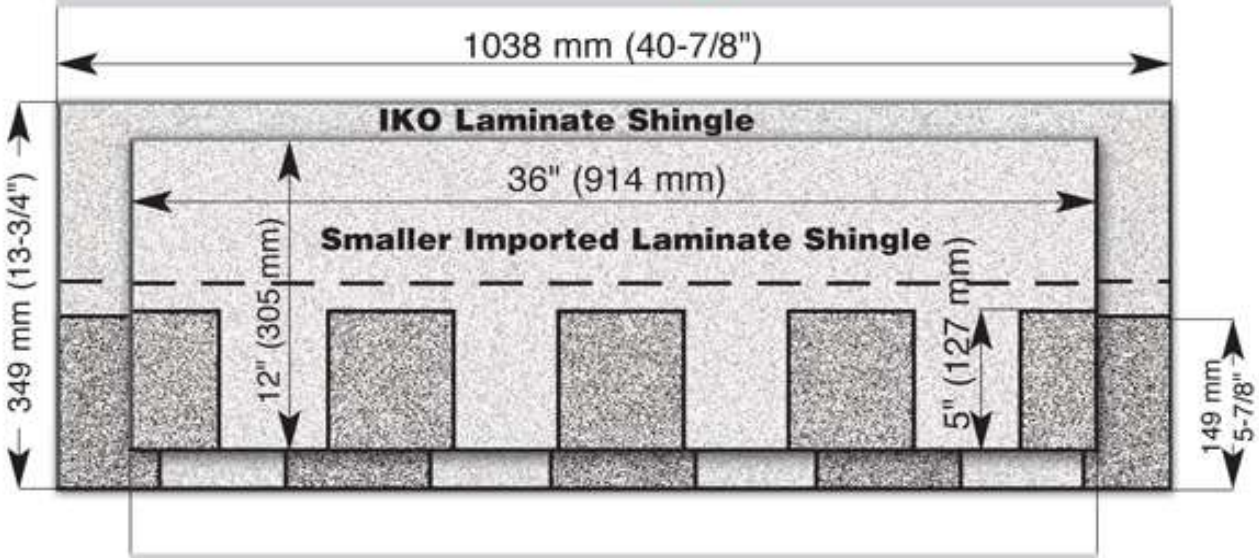
Armoroof Export
Division of IKO Industries Ltd.

Laminate IKO CAMBRIDGE 30 **Savings in Material and Labor**			
Area in	# Shingles	# Nails	# hours
Mtr 2			Labor
9.3	20	60	20 min
140	300	1200	5 hours
280	600	2400	10 hours

Savings 33% in Shingles, nails and labour

Armoroof Export
Division of IKO Industries Ltd.

IKO Shingles



Smaller 5" Exposure Laminated Shingles

Armoroof Export
Division of IKO Industries Ltd.

3-Tab IKO Armour Plus, MARATHON **Savings on Material and Labour**			
Area in	**# Shingles**	**# Nails**	**# hours**
Mtr2			**Labor**
9.3	**15**	**60**	**15 min**
140	**225**	**900**	**3.5 hours**
280	**450**	**1800**	**7 hours**

Saving 23% in Shingles, nails and labour

Why buy IKO?

- QUALITY, best shingles warranty by our 100% vertical integration
- LONGEVITY , almost 60 years on the market and we keep growing (Slovakia plant)
- EXPERIENCE, dedicated only to manufacture roofing products
- SUPPORT around the world
- DEDICATION AND COMMITMENT with international markets
- SAVINGS for home owner and end user due to “more is less”

Thank you for your attention.