ZarifCarpets

TECHNOLOGY COLLECTION

ZarifCarpets

ABOUT US

ZarifCarpets is recognized as one of the most technologically advanced carpet manufacturers in the Middle East, with nearly five decades of continuous experience in flooring engineering, textile innovation, and industrial-scale production.

Our manufacturing capabilities span a complete spectrum of **tufted carpets (cut pile and loop pile), nonwoven needle-punched carpets**, and **high-precision decorative and printed flooring solutions**. Through the integration of advanced **Chromojet printing, digital and rotary printing, thermal embossing**, and **stitched surface technologies**, we transform creative concepts into engineered carpet products with exceptional visual depth, durability, and consistency.

Zarif Mosavar

ZarifCarpets operates a fully **vertically integrated production ecosystem.** From **fiber manufacturing and BCF yarn extrusion** to **twisting, heat-setting, latex production, backing systems, and finishing**, every critical process is developed and controlled in-house. This integration allows precise tuning of performance parameters such as pile structure, density, softness, dimensional stability, and long-term durability—tailored to residential, commercial, hospitality, sports, and project-based applications.

Our expertise extends deeply into **polymer science and material engineering**, including polyester, polyamide, polypropylene, and engineered blends. Advanced color technologies—supported by extensive masterbatch and pigment systems—enable unlimited color variation, long-term consistency, and superior fastness across all product categories.

Technology

Tufting Carpet

- Cut Pile
- Loop Pile
- Chromojet Print

Nonwoven Carpet

- Needle Punch
- Thermal
- Stitching
- Rotary Print
- Digital Print

Raw Material & Process

- Fiber
- Yarn
- Latex
- Finishing

ZarifCarpets

Datasheet (Tufting Machine)

VANDEWIELE COLOR-TEC

The Vandewiele Color-Tec tufting machine is capable of producing wall-to-wall rolls and small rugs with high quality using 8 versatile colors. Its zigzag tufting pattern allows for creating varied and precise designs, making it ideal for both custom rugs and decorative carpets

Technical Specifications

Gauge : 1/7
Pile Height (mm) : 20 mm
Stitch : Up to 80
Width : 4 m

Material Compatibility

- Polyamide
- Polyester
- Polypropylene
- Multi-ply and twisted yarns

Technical Advantages

- Precise pile height control for uniform texture
- Capable of producing classic and modern designs with 8 colors
- Accurate needle control for consistent stitching
- Tufting wall-to-wall rolls with a width of 4 meters
- Suitable for small to medium-sized rugs and carpets

Applications

- Custom rugs
- Decorative carpets
- Hospitality flooring hotels, commercial spaces
- Small to medium-batch carpet production

VANDEWIELE GROUP

ZarifCarpets

Datasheet

CUT PILE TUFTING

ZarifMosavar operates a full range of cut-pile tufting machines capable of producing carpets with varying pile heights, densities, and surface textures.

Technical Specifications

Gauge	Pile Height (mm)	Stitch Rate	Width
5/16	10 - 50	Up to 40	4 m
3/16	10 - 38	Up to 60	4 m
5/32	6 - 18	Up to 50	4 m
1/8	5.5 - 18	Up to 55	4 m
1/10	4 - 20	Up to 65	4 m

Material Compatibility

- Polyamide (PA6 / PA66)
- Polyester (PET)
- Polypropylene (PP)
- Multi-ply and twisted yarns

Technical Advantages

- Precise pile height control
- High stitch density capability
- Smooth surface definition
- Excellent durability and resilience

Applications

Residential carpets, hospitality flooring, commercial projects, high-traffic environments.

TUFTCO VANDEWIELE GROUP COBBLE TUFTING SYSTEMS CMC CARD-MONROE CORPORATION

ZarifCarpets

Datasheet

LOOP PILE TUFTING

ZarifMosavar operates a full range of loop-pile tufting machines, enabling the production of carpets with uniform or multi-level loops, diverse densities, and durable surface structures.

Technical Specifications

Gauge	Pile Height (mm)	Stitch Rate	Width
5/16	5 - 10	Up to 40	4 m
5/32	4 - 8	Up to 45	4 m
1/10	4 - 8	Up to 65	4 m

Key Features

- Loop pile and structured surfaces
- Jute mover systems for uniformity
- Support for PP, PA, and PET yarns

Design Capability

- Uniform textures
- Random and structured patterns
- High resistance to deformation

ZarifCarpets

Datasheet

CHROMOJET PRINTING

ZarifMosavar operates advanced Chromojet high-pressure digital printing technology, enabling deep-dye penetration into textile structures rather than surface-level coloration. This technology injects color directly into the fiber core, ensuring superior durability, vibrancy, and long-term stability.

Key Technical Features

- Printing Method: High-pressure jet injection (non-contact)
- Color Penetration: Deep fiber-level penetration (not surface coating)
- Maximum Working Width: Up to 4 meters
- Compatible Structures: Tufted carpets, felt-based carpets
- Color System: Multi-channel independent color tanks

Performance Advantages

- Exceptional color fastness and wash resistance
- No fading or surface abrasion
- Long-term aesthetic stability
- Suitable for high-traffic commercial environments

Production Capabilities

- Minimum order flexibility (from 1,000 m^2 per design)
- Seamless reproduction from sampling to mass production
- Unlimited design freedom with precise digital control

Applications

- Commercial and hospitality carpets
- Architectural interiors
- Custom-designed printed flooring

Zimmer AUSTRIA

ZarifCarpets

Datasheet

NEEDLE-PUNCHED CARPET

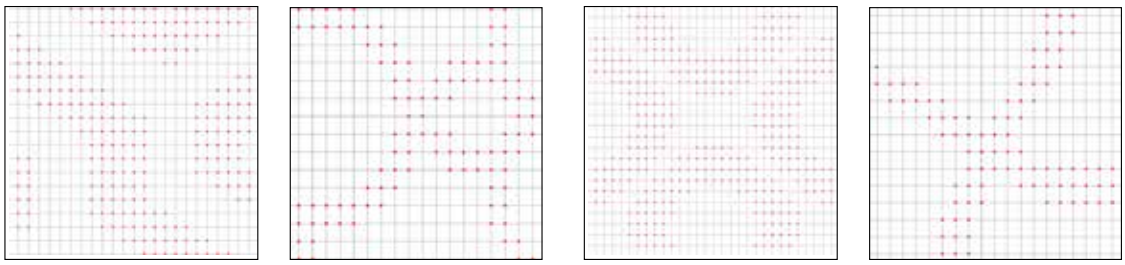
ZarifMosavar is a pioneer in needle-punched carpet production, combining mechanical precision with fiber science.

Core Features

- Multi-layer needle punching
- Advanced needle geometry
- High-density fiber entanglement

Applications

- Exhibition flooring
- Automotive and commercial carpets
- Architectural floor coverings



ZarifCarpets

Datasheet

THERMAL EMBOSSING

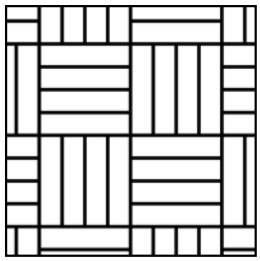
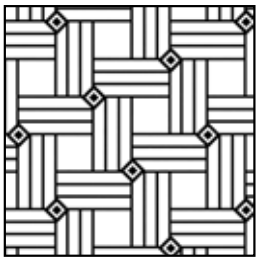
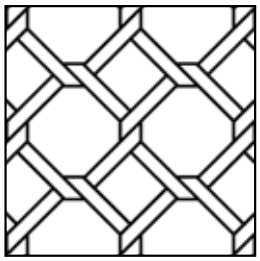
Thermal embossing uses heated metal screens to imprint permanent surface textures.

Key Capabilities

- Multi-screen systems (up to 4)
- Full-width embossing (4 m)
- High-definition surface patterns

Advantages

- Deep, long-lasting texture
- Uniform heat distribution
- Decorative and functional finishes

ZarifCarpets

Datasheet

THREAD STITCHING

ZarifMosavar operates advanced MECA stitching systems for decorative and structural textile enhancement.

Capabilities

- Multi-needle stitching
- High-speed continuous operation
- Multi-yarn compatibility (BCF, CF, textured)

Design Outcomes

- Embroidered effects
- 3D surface texture
- Artistic and architectural designs

MECA ITALY

ZarifCarpets

Datasheet

ROTARY PRINTING

ZarifMosavar operates one of the most advanced rotary carpet printing systems in the region, offering unmatched productivity, precision, and design freedom.
The system supports up to -5meter-wide printing, delivering finished products up to 4 meters in width.

Capabilities

- High-speed continuous printing
- Up to six rotary screens in a single run
- Precision color registration and alignment
- Suitable for both felt and tufted substrates

Large Repeat & Design Freedom

Unlike standard 64 cm repeat systems, ZARIFMOSAVAR utilizes large-diameter rotary screens (up to 92 cm repeat), enabling:

- Large-scale, open designs
- Reduced visual repetition
- Enhanced aesthetic depth

Screen Technology & Resolution

- Titanium rotary screens
- High-definition mesh structures
- Excellent ink transfer and durability
- Long operational life with minimal deformation

Advanced Fixation System

Color fixation is achieved through German-engineered thermal fixation units, ensuring:

- Uniform heat distribution

Zarif Mosavar

- Deep dye penetration
- Outstanding wash and wear resistance

Application Scope

Rotary printing is optimized for:

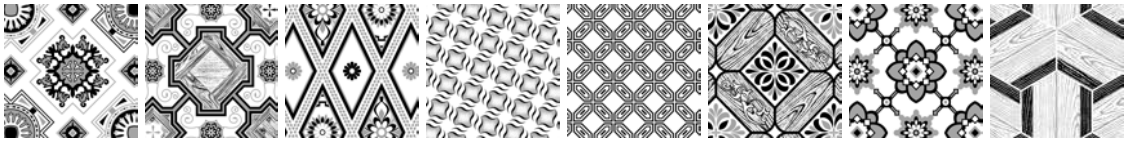
- Felt and needle-punched carpets
- Decorative and contract flooring
- High-volume, cost-efficient production

When required, it can also be applied to selected tufted structures.

Design Flexibility & Efficiency

- Extensive in-house rotary screen library
- Rapid design deployment
- Ideal for high-volume and repeatable collections

This makes rotary printing the most cost-efficient solution for large-scale production while maintaining high visual quality.



ZarifCarpets

Datasheet

DIGITAL PRINTING

ZarifMosavar utilizes advanced digital inkjet systems specifically designed for needle-felt carpets, enabling ultra-high-resolution image reproduction

Key Features

- Wide-format digital printers (up to 4 meters)
- Thermosol fixation technology
- High-energy, fade-resistant inks
- Precise color management systems (ICC profiling)

Advantages

- Photographic-level detail
- Excellent color consistency
- High resistance to washing and abrasion
- Fast production and design flexibility

Applications

- Custom graphic carpets
- Exhibition flooring
- Architectural and branded environments

ZarifCarpets

Datasheet

FIBER PRODUCTION

ZarifMosavar operates integrated fiber manufacturing lines producing fibers for nonwoven and tufted carpets.

Fiber Types

- Polyester (PET)
- Polyamide (PA)
- Polypropylene (PP)

Technical Range

- Denier range: 1.5 – 20 +
- Custom cross-sections and filament geometry
- Controlled crimp and elongation properties

Capabilities

- Virgin and recycled raw materials
- In-house pigment and masterbatch formulation
- Controlled blending and color consistency

Applications

- Needle-punched carpets
- Tufted carpets
- Technical and industrial textiles

ZarifCarpets

Datasheet

YARN PRODUCTION

Integrated Yarn Manufacturing Platform

ZarifMosavar operates a fully integrated, high-capacity yarn manufacturing system covering polymer processing, spinning, texturing, and finishing—ensuring complete control from raw material to finished yarn.

Polymer & Material Capability

- Supported polymer systems include:
- Polypropylene (PP)
- Polyamide (PA6 / PA66)
- Polyester (PET)
- Hybrid polymer blends

This flexibility allows optimization of yarn performance for durability, softness, elasticity, and cost efficiency.

Advanced Extrusion & BCF Technology

Using state-of-the-art German Neumag extrusion lines, ZARIFMOSAVAR produces BCF yarns with:

- Uniform filament geometry
- High bulk and resilience
- Excellent dye uptake and color stability

Denier Range: 8,000 – 600 dtex

Filament Count: Customized per application

Masterbatch & Color Engineering

An in-house pigment and masterbatch development facility enables:

- Custom color formulation
- Excellent batch-to-batch color consistency
- Long-term color repeatability for ongoing projects

This vertical integration ensures precise color control unmatched by outsourced systems.

ZarifCarpets

Twisting & Yarn Stabilization

Advanced twisting technologies (including TFO systems) deliver:

- Balanced yarn torque
- Enhanced tensile strength
- Uniform twist distribution

This results in yarns with superior processing stability and surface appearance.

Heat-Setting & Thermal Stabilization

Superba and Super Heat technologies are used to:

- Lock in yarn geometry
- Improve bulk recovery
- Stabilize crimp structure

These processes guarantee consistent performance during tufting and throughout the product's lifecycle.

Space Dyeing Technology

ZarifMosavar employs advanced space-dye systems enabling:

- Multi-color effects on a single yarn
- Controlled repeat lengths
- Dynamic visual patterns

This technology is ideal for premium loop pile and designer carpets.

Strategic Value

The yarn division forms the backbone of ZarifMosavar production ecosystem, enabling unmatched consistency, flexibility, and innovation across all downstream carpet technologies.

SUPERBA oerlikon neumag

ZarifCarpets

Datasheet

LATEX & ADHESIVE

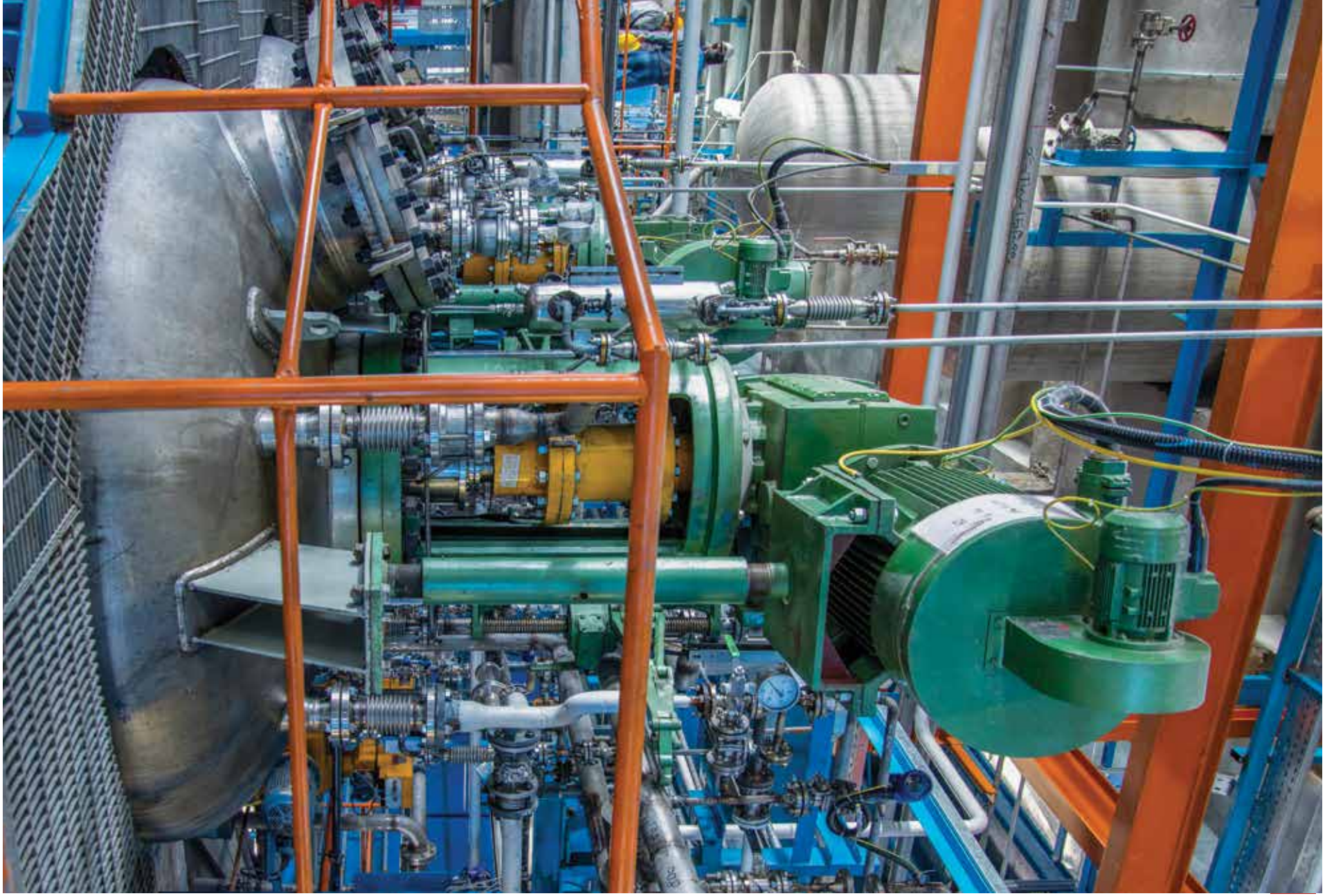
In-house production of SBR and PVAc adhesives ensures complete control over bonding performance.

Capabilities

- Customized formulations per product
- High bonding strength with low add-on weight
- Compatibility with multiple backings

Applications

- Tufted carpets
- Needle-punched carpets
- Technical textiles



ZarifCarpets

Datasheet

FINISHING

ZarifMosavar operates advanced finishing lines designed to optimize performance, durability, and aesthetics.

Capabilities

- Customized formulations per product
- High bonding strength with low add-on weight
- Compatibility with multiple backings

Key Features

- SBR & PVAc adhesive systems
- Ultra-low adhesive weight control (from 100 g/m²)
- Multi-layer finishing capability
- High-temperature controlled drying zones

Functional Additives

- Anti-slip coatings
- Flame retardants
- Antibacterial treatments
- Soil-resistant finishes

Advantages

- Improved dimensional stability
- Reduced material consumption
- Enhanced durability

Sellers Textile Engineers BRÜCKNER

ZarifCarpets

Datasheet

CUT PILE TUFTING

The following table summarizes the tufting capabilities of **ZarifMosavar** across multiple cut-gauge platforms, highlighting the achievable ranges of pile height, stitch rate, and production width.
This technical diversity enables precise control over texture, density, and performance, allowing each construction to be optimized for its intended application.
Such flexibility ensures consistent quality across residential, commercial, and technical flooring solutions.

Gauge	Pile Height (mm)	Stitch Rate	Width
5/16	10 - 50	Up to 40	4 m
3/16	10 - 38	Up to 60	4 m
5/32	6 - 18	Up to 50	4 m
1/8	5.5 - 18	Up to 55	4 m
1/10	4 - 20	Up to 65	4 m

Engineering Diversity in Gauge, Texture, and Stitch Density

A Strategic Advantage at ZARIFMOSAVAR

At **ZarifMosavar**, gauge diversity is not merely a machine specification it is a strategic engineering platform that defines our flexibility in texture, stitch density, pile architecture, and end-use performance.
By operating a wide spectrum of tufting gauges, we are able to systematically control loop geometry, pile openness, yarn packing factor, and stitch frequency, enabling us to engineer products ranging from ultra-soft residential carpets to high-performance commercial and technical surfaces.

This gauge diversity allows us to categorize and deliver distinct product families:
• **Fine-gauge constructions** for high stitch density, superior surface definition, and premium tactile softness
• **Medium-gauge structures** optimized for balanced durability, cost efficiency, and aesthetic versatility
• **Coarse-gauge platforms** designed for heavy-duty applications such as artificial turf, exhibition flooring, and high-traffic commercial zones
For our customers, this translates into full freedom of product definition—from appearance and performance to cost positioning—without being constrained by machine limitations.

Yarn Acceptance Capability Enabled by Gauge Engineering

Leveraging this broad gauge portfolio, ZARIFMOSAVAR supports an exceptional range of yarn configurations and polymer systems.

We are technically equipped to process:
• **Single-ply, two-ply, three-ply, and multi-ply yarns**
• **Polyester (PET), Polyamide (PA6 / PA66), Polypropylene (PP), Polyethylene (PE)** and hybrid blends thereof
• **Heat-set, relaxed, high-bulk (HB), twisted and non-twisted yarns**
• **High-filament-count yarns with advanced bulk and resilience profiles**

Our machines are fully compatible with cuttable yarns starting from DPF = 1 and above, where DPF 1 represents the ultimate benchmark of softness and luxury in tufted carpets.
Denier ranges from 1,000 up to 12,000 are reliably supported—covering everything from fine tufted residential carpets to technical yarn systems for artificial grass.
This technical openness allows customers to define any desired quality–price equilibrium, making ZARIFMOSAVAR a true engineering partner rather than a fixed-spec supplier.

World-Class Tufting Technology Infrastructure

ZARIFMOSAVAR operates its weaving halls with state-of-the-art European and American tufting technologies, continuously updated to the highest industry standards.

We proudly utilize machinery from:

• Van de Wiele
A globally renowned Belgian manufacturer, Van de Wiele represents the pinnacle of tufting precision, pattern control, and mechanical reliability in premium carpet manufacturing.

• CMC (Costruzioni Meccaniche Carù)
An Italian engineering leader recognized for robust, flexible tufting systems designed for high productivity and long-term dimensional stability.

• Tuftco
A prestigious American brand specializing in innovative tufting platforms, particularly known for customization capability and technological depth.

The integration of these technologies ensures process stability, repeatability, and advanced pattern execution, even in complex or low-volume projects.

Intelligent Combination of Gauge, Pile, Density, and Width

What truly differentiates ZARIFMOSAVAR in the Middle East is not only machine ownership, but machine diversity at scale.
While many regional manufacturers operate a single-gauge philosophy—simple, economical, and limiting—ZARIFMOSAVAR has made a significant capital investment to support multiple gauges, variable stitch densities, adjustable pile heights, and wide-width tufting capabilities.

This enables us to identify and engineer golden ratios between:
• Pile height
• Gauge
• Stitch density
• Yarn material and structure

By aligning these parameters with specific end-use applications—residential, commercial, hospitality, sports, exhibition, and large-scale projects—we deliver solutions that are technically optimized, economically justified, and performance-driven.

Vertical Technical Strength in Yarn and Color Supply Chain

Beyond tufting itself, ZARIFMOSAVAR benefits from deep technical control within its yarn and masterbatch supply chain.

Our capabilities include:
• Broad masterbatch systems enabling exceptional color variety and consistency
• Advanced BCF yarn lines with high-filament spinnerets
• Professional twisting, heat-setting, and stabilization processes
This upstream technical strength transforms high-quality yarn inputs into high-value flooring products, delivering superior aesthetics, durability, and color stability—an advantage directly transferred to the end consumer.

Van de Wiele Design Tufting: Weaving Imagination into Reality

Among our most distinguished assets is a Van de Wiele design tufting machine—a machine built not merely to tuft carpets, but to weave imagination itself.
Only a very limited number of such machines exist worldwide, and ZARIFMOSAVAR operates one of the finest examples.

Key capabilities include:
• Up to -8color tufting in a single construction
• Single-tuft (non-twin) operation, ensuring unmatched precision and design integrity
• Exceptional suitability for hotels, signature projects, designers, and architects

This platform allows designers to convert personalized concepts, artistic visions, and architectural ideas directly into woven flooring solutions—customized, exclusive, and technically flawless.

At ZARIFMOSAVAR, we have made this rare capability accessible to creative professionals, redefining what is possible in bespoke tufted flooring.

ZarifCarpets

Datasheet

LOOP PILE TUFTING

The table above represents the loop pile tufting capabilities of ZARIFMOSAVAR, covering a wide spectrum of fine to coarse gauges, along with variable pile heights and stitch densities.
This technical range enables precise engineering of loop constructions with different surface textures, durability levels, and aesthetic identities—from minimal and architectural to rich and decorative loop carpets.

Gauge	Pile Height (mm)	Stitch Rate	Width
5/16	5 - 10	Up to 40	4 m
5/32	4 - 8	Up to 45	4 m
1/10	4 - 6	Up to 65	4 m

Material and Yarn Versatility in Loop Constructions

Thanks to this gauge diversity, ZARIFMOSAVAR is fully capable of processing Polyester (PET), Polypropylene (PP), and Polyamide (PA) yarn systems for loop pile applications.
This versatility allows us to manufacture simple, economical loop carpets, as well as high-end, professional, and design-driven products.

For example:
• We can produce high-durability polyamide loop carpets on fine gauges (such as 10/1), ideal for high-traffic commercial environments.
• At the same time, we are able to create extremely soft, voluminous loop carpets on coarse gauges such as 16/5, using high yarn mass—textures reminiscent of Moroccan flatwoven and loop-inspired carpets, known for their unique visual depth and tactile richness.

Jute Mover Technology and Surface Uniformity

One of the key technical advantages of our loop pile machines is the availability of jute mover systems.
While loop carpets can technically be produced with or without jute movement, the jute mover introduces controlled micro zigzag motions during tufting, resulting in a more uniform, visually balanced, and aesthetically refined surface.

At ZARIFMOSAVAR:
• We operate straight-line loop machines for clean, structured designs
• And jute-mover-equipped machines for enhanced texture uniformity and visual softness
This dual capability gives designers and customers full freedom in defining the final appearance of loop pile carpets.

Advanced Yarn Structures and Textural Innovation

ZARIFMOSAVAR supports an extensive range of yarn structures, from single-ply raw yarns with high filament counts to complex multi-ply systems.

This technical openness enables the creation of rich and sophisticated surface textures, including:
• Mélange and mouliné yarns
• Multi-color and space-dyed yarns
• Variable-denier yarns (multi-ply yarns with different deniers per ply)
• Hybrid polymer yarns (multi-material constructions)

Space-dyeing, in particular, represents one of the most advanced yarn technologies for modern tufted loop carpets, and ZARIFMOSAVAR has extensive experience in translating these yarn innovations into stable, repeatable woven structures.

Performance Flexibility Driven by Gauge, Density, and Pile Control

By combining multiple loop gauges with variable stitch densities and pile heights, ZARIFMOSAVAR achieves a high level of responsiveness to customer requirements.

- When a customer seeks high durability with superior softness, we deliver.
- When the requirement is maximum durability with certified traffic resistance, we deliver.

This engineering flexibility ensures that every functional and aesthetic demand can be precisely addressed, without compromise.

Random Pattern Capability – Controlled Irregularity by Design

One of the most distinctive features across all ZARIFMOSAVAR loop machines is the Random Pattern capability.
This technology allows for non-repetitive, unpredictable yarn placement across the surface, generating unique textural visuals that cannot be replicated by conventional patterned tufting. The result is a natural, organic, and highly decorative surface, particularly suited for architectural, interior design, and bespoke decorative projects.

World-Class Loop Tufting Technologies

All loop pile machines at ZARIFMOSAVAR are sourced from top-tier European and American manufacturers, operating with the most up-to-date configurations available in the industry:

- Van de Wiele
A global leader in tufting technology, renowned for precision engineering, design flexibility, and long-term mechanical reliability.

- Cobble
An Belgium specialist in robust loop and commercial tufting systems, particularly strong in architectural and contract flooring solutions.

- Tuftco
A highly respected U.S. manufacturer known for innovation, customization capability, and advanced loop pile engineering.

- CMC (Costruzioni Meccaniche Carù)
An Italian engineering reference in loop and specialty tufting, valued for machine stability, versatility, and refined fabric control.

Together, these platforms represent the highest technological level a tufting manufacturer can operate today.

Economic Efficiency and Exceptional Durability

Loop pile carpets are often selected for their economic efficiency, and ZARIFMOSAVAR has elevated this advantage through intensive engineering and R&D efforts.
We have successfully developed one of the lightest professional loop constructions globally, using only 190 grams of yarn per square meter, while maintaining a full, dense surface and excellent performance.
In parallel, loop carpets are inherently durable because dynamic and static loads are absorbed by the loop structure itself, rather than the fiber tips.
As a result, ZARIFMOSAVAR produces exceptionally durable polyamide loop carpets, compliant with European CE standards, featuring slow-burning behavior, and ideally suited for high-traffic commercial environments.

Alongside its advanced cut pile tufting platforms, ZARIFMOSAVAR operates a full range of professional loop pile tufting machines, capable of supporting customer orders up to 4 meters in width.
This dual mastery of cut and loop technologies positions ZARIFMOSAVAR as one of the most technically complete tufting manufacturers in the region, capable of translating any customer vision into a reliable, engineered flooring solution.

ZarifCarpets

Datasheet

CHROMOJET PRINTING

Many of our printed products are often perceived as woven rather than printed—and this perception is fully justified.
This is because the dye penetrates deep into the root of the yarn, a capability made possible by our advanced high-pressure Chromojet technology. Through precisely engineered jet nozzles and specialized textile-grade thickeners, color is driven into the yarn structure rather than deposited on the surface.

Yes, this is not surface printing.
This is deep penetration printing.

Such a process guarantees exceptional color durability, long-term stability, and lasting visual beauty, enabling our customers to confidently offer aesthetic warranties on ZARIFMOSAVAR printed products.

Material Independence: Felt or Tufted – No Limitation

Whether felt or tufted structures, our Chromojet line handles them all seamlessly.
The system is capable of printing, fixing, and finishing:

- Felt products from 300 g/m²
- Tufted carpets up to 2,000 g/m²

All at a production width of up to 4 meters, with no limitation on design size, scale, or complexity.

Minimal Order Constraints – Maximum Commercial Advantage

One of the most strategic advantages of ZARIFMOSAVAR's Chromojet system is its extremely low order limitation.
Thanks to our multiple color tanks and independent dye reservoirs, we impose no restrictive minimum order volumes.
For each design—or more precisely, for each color palette—we accept orders starting from 1,000 square meters.
For traders and commercial partners, this represents a significant reduction in market risk, enabling flexible product launches and controlled inventory strategies.

From Concept to Industry: Advanced Sampling Capability

To convert ideas into industrial-grade products, ZARIFMOSAVAR operates advanced sampling lines.

Our sampling unit is effectively a scaled-down replica of the industrial Chromojet line, ensuring absolute consistency between sample and mass production.

The product you approve at the sampling stage is exactly the same product delivered in industrial volumes—no surprises, no compromises.

Unlimited Design Freedom

There are no design limitations.
Any concept, artwork, or visual expectation can be transformed into a printed carpet—simply share your vision.

Our in-house design team re-engineers your concept specifically for Chromojet application, optimizing it for jet loading, color behavior, and structural compatibility before producing the first prototypes.

Superior Penetration and Fixation – The Signature of ZARIFMOSAVAR Chromojet

Deep penetration and exceptional fixation are the defining characteristics of ZARIFMOSAVAR's Chromojet technology.
Through a controlled combination of high temperature, steam, pressure, and chemical fixation, dyes are locked inside the crystalline structure of the polymer.
Yes—locked.

- We do not spray color onto the surface
- We inject color into the polymer matrix itself

The result is a final product that does not bleed, fade, or degrade under washing, detergents, or long-term use.
This dyeing mechanism is inspired by sustainable and organic coloring principles historically used in handwoven carpets and yarn hank dyeing—preserving the softness, elasticity, and filament integrity of the fibers.

Datasheet

NEEDLE-PUNCHED CARPET

ZARIFMOSAVAR is recognized as the largest carpet manufacturer in the Middle East, with its very first industrial production rooted in needle-punched nonwoven carpets.

Today, backed by nearly five decades of experience, engineering expertise, and continuous development, the company holds a strong and confident position in the production of advanced needle-felt carpet solutions.

Needle-punched carpets are not only a historical foundation for ZARIFMOSAVAR, but remain a core technological strength, continuously refined through modern machinery, material science, and process optimization.

Plain Velour Needle-Felt Carpets

Plain velour needle-felt carpets are produced through controlled fiber entanglement combined with simple yet precise needle-punching processes.
By using specially designed needles with optimized surface geometry, fibers are interlocked in a way that creates a soft, velvety, and uniform surface texture.

These constructions are characterized by:

- Smooth and pleasant tactile feel
- Visual uniformity
- High dimensional stability
- Suitability for commercial, exhibition, and general-purpose flooring

Single-Layer Patterned Needle-Punched Carpets

Through advanced needle-board engineering and customized needle layouts, ZARIFMOSAVAR is capable of creating embossed and structured patterns directly on single-layer nonwoven carpets.
The most basic and well-known example is the classic ribbed (corduroy-style) pattern, but the design possibilities extend far beyond this.
A key advantage of ZARIFMOSAVAR lies in its access to multiple needle types with different geometries, barb structures, and penetration characteristics.
These variations generate distinct knot formations and fiber movements, allowing a wide range of surface effects—from subtle textures to pronounced relief patterns.

ZarifCarpets

Multi-Layer Needle-Punched Carpet Structures

ZARIFMOSAVAR also specializes in multi-layer needle-punched carpets, where different nonwoven layers are stacked and mechanically entangled together.
By carefully controlling layer interaction, fiber migration, and punch density, we create enclosed and visually rich structures with enhanced depth and color dynamics.

These multilayer constructions offer:
- Increased visual complexity
- Strong color contrast effects
- Enhanced durability and mass distribution
- Superior aesthetic appeal for decorative and architectural applications

Fiber Versatility and Material Engineering

In the production of our nonwoven felt substrates, ZARIFMOSAVAR supports a wide range of fiber systems, including:

- Polyamide (PA)
- Polyester (PET)
- Polypropylene (PP)

Fibers are selected with varied deniers, cut lengths, and cross-sectional properties, allowing precise control over performance, appearance, and cost structure.

Advanced Blending and Mélange Color Creation

Within our in-house opening and blending (carding) lines, fibers of different colors are blended at controlled ratios to create distinctive mélange and heather effects.

This fiber-level coloration technique results in:

- Deep, integrated color appearance
- Natural visual movement
- Superior color consistency throughout the thickness of the carpet

Unlike surface coloration, mélange effects are embedded within the structure itself, ensuring long-term visual stability and resistance to wear.

A Proven Technology with Contemporary Relevance

Needle-punched carpet technology at ZARIFMOSAVAR represents a mature yet continuously evolving discipline, combining mechanical engineering, fiber science, and aesthetic design.
From economical solutions to architecturally expressive surfaces, our needle-felt carpets deliver reliability, versatility, and industrial scalability, making them suitable for a wide spectrum of applications—from high-traffic commercial spaces to large-scale project flooring.

Datasheet

THERMAL EMBOSSING

Hot Embossing Screens as a Proven Industry Method

The use of thermal (hot) embossing screens is one of the most widely adopted methods for creating surface patterns on carpets, particularly Nonwoven and loop tufting carpets.
These embossing screens operate at high temperatures, transferring their raised designs directly onto the carpet surface and creating permanent three-dimensional relief effects.

Multi-Screen Embossing Capability at ZARIFMOSAVAR

ZARIFMOSAVAR is among the very few manufacturers globally capable of operating up to four embossing screens simultaneously within a single production line.
This capability is enabled by an advanced screen changer mechanism, a highly specialized system possessed by only a limited number of companies worldwide.

Screen Changer System — Speed and Flexibility in Order Management

The integrated screen changer system dramatically enhances production flexibility and responsiveness.
It allows rapid switching between embossing patterns, significantly improving order management speed and enabling customers to receive a broader and more diversified product portfolio from ZARIFMOSAVAR within shorter lead times.

Uniform Thermal Distribution Across Full Carpet Width

ZARIFMOSAVAR's thermal embossing screens are engineered for a full working width of up to 4 meters, with a design that ensures uniform heat distribution across the entire screen surface.
This uniformity is critical when consistent pattern depth and visual coherence are required across the full carpet width—especially in large-format flooring applications.

Large-Diameter Screens for Enhanced Design Rapport

The large diameter of ZARIFMOSAVAR's embossing screens allows for expanded design repeats (rapport) and prevents patterns from appearing small or visually compressed.
As a result, the embossed designs achieve distinctive, elegant, and visually striking repeats, contributing to a premium aesthetic and superior surface definition.

Engineering Precision for Decorative Performance

Through precise thermal control, large-format screen engineering, and advanced screen-changing mechanics, ZARIFMOSAVAR delivers highly consistent, decorative embossing effects that elevate both the visual and tactile performance of carpet products.

This technology enables the creation of deep, uniform, and architecturally refined surface patterns, meeting the expectations of high-end residential, commercial, and project-based flooring markets.

ZarifCarpets

Datasheet

THREAD STITCHING

Strategic Partnership and Joint Innovation

In an unprecedented strategic investment and technology collaboration, ZARIFMOSAVAR and MECA – Textile Technology Italy jointly developed and patented a novel thread stitching technique for carpet applications.
Originally showcased at DOMOTEX Germany as a co-invented breakthrough, this innovation adapted MECA's advanced sewing and embroidery machinery—previously dedicated to bedding and curtain textiles—towards decorative and structural stitching on carpet substrates.

Today, ZARIFMOSAVAR deploys multiple MECA multineedle stitching machines configured specifically for carpet patterning, enabling complex embroidered effects and stitched textures directly on tufted and woven bases.

Global Textile Technology Leader — MECA Machinery

MECA is recognized internationally for over 50 years of technological leadership in quilting, cording, and multineedle sewing systems, with a focus on modular, programmable, and extendable textile machinery platforms. meca.it
Their core innovations include fully automatic, multineedle, continuous-motion stitching machines capable of complex patterns, embroidery-style effects, and integrated cording—making MECA systems ideal for high-throughput, decorative textile production. meca.it

Capabilities of MECA Stitching Platforms at ZARIFMOSAVAR

ZARIFMOSAVAR's MECA-based stitching lines support an extensive range of yarn types and densities:

- Denier Range: From 1,000 dpf up to 10,000 dpf
- Yarn Types:

o Woolly / textured yarns (for rich tactile effects)
o Channel / chenille yarns
o BCF (Bulked Continuous Filament) and CF yarns
o FDY (Fully Drawn Yarn) and other high-performance filament yarns

This broad acceptance range allows for a very wide variety of decorative stitching possibilities, including textured looped and raised stitch patterns that significantly enhance both visual and tactile appeal.

Technical Advantages of MECA Thread Stitching in Carpet

1. High Precision Multi-Needle Control

MECA machines use accurate needle positioning and synchronized feed systems that produce consistent, repeatable stitch patterns across wide carpet widths with minimal variation.

2. Multifunctional Program Execution

With interchangeable robotized stitching feet and programmable sequences, the system can generate:

o Standard stitched lines
o Embroidery-like decorative motifs
o 3D raised effects and cording
o Complex geometric and artistic textures

Such flexibility parallels advanced quilting systems used in premium bedding and luxury textile sectors. meca.it

3. Continuous Roll-to-Roll Production
The MECA platform allows for continuous, roll-to-roll stitching without pre-cut panel segmentation, optimizing throughput and reducing handling and setup time—transforming decorative stitching into a high-efficiency industrial process. meca.it

Unique Textural and Aesthetic Outcomes

By integrating thread stitching directly into pile structures, ZARIFMOSAVAR achieves effects that resemble handcrafted embroidery and high-end woven detailing—far beyond conventional tufted surface patterns. These outcomes include:

- Raised, three-dimensional visual texture
- Multi-directional stitched motifs
- Enhanced surface tactile richness
- Durable stitched accents that integrate with pile geometry

This approach creates carpet surfaces that look and feel sculpted rather than simply printed or tufted, opening new design possibilities previously confined to couture textiles.

Conclusion — A Transformational Textile Technology

The integration of MECA's advanced stitching systems with ZARIFMOSAVAR's tufting and Nonwovens technologies creates a comprehensive textile product development platform. This platform supports not only traditional pile carpets but also decoratively stitched carpet surfaces, delivering visual complexity, structural richness, and enhanced functional performance—empowering customers and designers with unmatched creative freedom.

Datasheet

ROTARY PRINTING

Rotary printing is a technology that has not become obsolete, but rather has been continuously upgraded due to its exceptionally high production speed and outstanding print resolution.
At ZARIFMOSAVAR, this technology is deployed at one of the widest rotary carpet printing lines in the world—a -5meter-wide printing line delivering a finished product width of up to 4 meters, with the capability to operate up to six rotary screens simultaneously.

Large Rapport Screens – Design Freedom Without Compromise

One of the most distinctive features of ZARIFMOSAVAR's rotary line is the use of large-rapport rotary screens with a repeat length of 92 cm.
Such extended repeats significantly enhance design freedom and allow for large-scale, open, and sophisticated patterns.

In contrast, many competitors rely on 64 cm repeat screens, which inherently limit pattern size and restrict designers' creative flexibility.
At ZARIFMOSAVAR, this limitation is fully eliminated.

Titanium Rotary Screens with Ultra-High Resolution
ZARIFMOSAVAR utilizes hardened titanium metal rotary screens, water-tempered for maximum dimensional stability and durability, featuring mesh resolutions up to 600 DPI.
This results in exceptional print sharpness, precise color registration, full coverage, and stain-free output—a printing quality that is both rare and technically demanding.

ZarifCarpets

Our rotary printing technology is sourced from Italy, while the screens themselves are manufactured by (Germany)—globally recognized for producing large-format, high-precision rotary screens with outstanding synchronization and repeat accuracy.

Extensive Design Archive and Custom Screen Development

ZARIFMOSAVAR maintains a vast rotary screen archive, representing an extraordinary diversity of patterns accumulated over more than 40 years of production history.
This collection covers a wide range of aesthetic preferences and market demands across different regions of the world.

In addition, we offer the capability to develop fully customized rotary screens for mass production of proprietary designs.
This process requires technical consultation prior to order confirmation, ensuring optimal compatibility between design, substrate, and printing parameters.

That said, we are confident that the breadth and depth of our existing screen archive will readily capture the interest of most customers.

Advanced Color Fixation Using German Thermal Technology

For color fixation of rotary-printed carpets, ZARIFMOSAVAR employs Brückner technology from Germany.
This system consists of a dual-level thermal fixation unit with independently controlled top and bottom temperatures, ensuring optimal dye fixation across the entire carpet thickness.

We fully recognize that color fixation is a critical parameter in carpet printing.
Proper fixation enhances color brilliance, depth, and visual clarity, while simultaneously eliminating risks of fading, bleeding, or instability during use.

Optimized Application Scope of Rotary Printing

At ZARIFMOSAVAR, rotary printing is primarily utilized for felt-based products, where it offers maximum efficiency and cost-effectiveness.
For tufted carpets—particularly cut-pile structures—we rely mainly on Chromojet printing technology from Zimmer Austria.

However, we also retain full technical capability to apply rotary printing to tufted carpets, especially loop pile constructions, whenever the design concept, production volume, or economic model requires it.

High-Speed Production from Existing Designs

When very fast delivery is required and the customer selects a design from our existing rotary screen archive, ZARIFMOSAVAR's rotary printing technology becomes the fastest and most efficient solution available.

In such cases, rotary printing is not merely an option—it is the optimal production route.

Cost Optimization Through Pre-Colored Substrates

To further reduce customer costs, we sometimes apply rotary printing onto pre-colored felt substrates.

This approach delivers multiple advantages:

- Significant reduction in dye consumption
- Higher production speed
- Expanded creative freedom for graphic designers

The result is a highly economical yet visually expressive product, achieved without compromising print quality or durability.

Datasheet

DIGITAL PRINTING

High-Resolution Digital Printing for Needle-Felt Products

ZARIFMOSAVAR utilizes advanced digital printing technology specifically optimized for the production of needle-felt (nonwoven) carpet products.
This technology enables us to print designs with exceptionally high resolution, sharp detail, and superior color accuracy, meeting the expectations of both technical and design-driven markets.

Digital printing provides the flexibility required to produce complex visuals, gradients, and fine graphic elements that are not achievable through conventional printing methods.

Technology Selection: Chromojet vs. Digital Printing

While ZARIFMOSAVAR operates a state-of-the-art Chromojet system for printing tufted carpets, digital printing is the preferred and optimized solution for felt-based products.
For this purpose, we employ latest-generation wide-format digital printing machines with a working width of up to 4 meters, ensuring:

- Full compatibility with large-format flooring applications
- Seamless pattern continuity
- Industrial-level productivity combined with design flexibility

Each printing technology is selected based on substrate structure, fiber behavior, and desired visual outcome, ensuring optimal performance across product categories.

Thermosol Fixation Process

The fixation of digital prints at ZARIFMOSAVAR is performed using a Thermosol heat-setting process.
In this process, very high and precisely controlled temperatures are applied to prepare the crystalline structure of the fibers for effective dye penetration and fixation.

This thermal activation ensures:

- Strong dye–fiber bonding
- Deep color anchoring
- Long-term color stability and wash resistance

The result is a printed product that maintains its visual integrity throughout its service life.

Professional Color Profiling & Color Management

Color accuracy and harmony are central to our digital printing philosophy.
ZARIFMOSAVAR applies advanced color profiling and color management systems to achieve optimized and balanced color palettes for each design and substrate.

Our digital printing specialists dedicate extensive time to:

- Developing custom ICC profiles
- Fine-tuning color relationships and tonal balance
- Ensuring meaningful color coexistence within each design

This meticulous profiling process guarantees visual coherence, repeatability, and precise color reproduction across production batches.

ZarifCarpets

High-Energy Inks for Superior Durability

In our digital printing lines, ZARIFMOSAVAR uses high-energy industrial-grade inks specifically engineered for textile applications.

These inks offer:

- Enhanced resistance to UV radiation and sunlight exposure
- Excellent wash fastness
- Long-term color retention without premature fading

As a result, digitally printed felt carpets retain their brightness, clarity, and depth even under demanding usage and maintenance conditions.

Performance, Flexibility, and Design Freedom

The integration of advanced digital printing technology allows ZARIFMOSAVAR to deliver:

- Short lead times
- High design flexibility
- Consistent industrial quality

From customized designs to large-scale production runs, digital printing enables us to respond rapidly and precisely to customer requirements—without compromising durability or visual excellence.

Digital Printing as a Strategic Capability

At ZARIFMOSAVAR, digital printing is not merely a decorative process; it is a strategic manufacturing capability grounded in textile science, color chemistry, and process control.

By combining wide-format digital printing, thermosol fixation, professional color profiling, and high-performance inks, we ensure that every digitally printed felt product meets the highest standards of resolution, durability, and aesthetic integrity.

Datasheet

FIBER PRODUCTION

Fiber Production Technology

Integrated Fiber Manufacturing as a Strategic Capability
As the largest carpet manufacturer in the Middle East, ZARIFMOSAVAR maintains a strategic obligation to internally supply a significant portion of the fibers required for its nonwoven and needle-felt production lines.
To meet this scale and diversity of demand, the company operates multiple advanced fiber production lines sourced from Germany and South Korea, forming a vertically integrated fiber manufacturing platform.

These fiber lines are designed to process both:

- **Virgin raw materials**
- **Recycled polymer streams**, under strict quality control protocols

This dual capability allows ZARIFMOSAVAR to balance performance, sustainability, and supply security.

Polymer Systems and Fiber Types

ZARIFMOSAVAR is technically proficient in producing fibers based on all major polymers used in nonwoven and carpet applications, including:

- Polyester (PET)
- Polyamide (PA)
- Polypropylene (PP)

Each polymer system is selected and engineered according to the mechanical, aesthetic, and functional requirements of the downstream application.
Denier Range and Fiber Fineness

Fiber production spans a wide denier range:
- Starting from 1.5 dtex (cotton-type, ultra-fine fibers)
- Extending to high denier fibers for structural and technical applications

This flexibility allows precise tuning of:
- Softness and hand-feel
- Mechanical reinforcement
- Bulk, coverage, and durability

Advanced Spinneret and Cross-Section Engineering

The presence of specialized spinnerets (spinner heads) enables ZARIFMOSAVAR to produce melt-spun fibers with custom microscopic cross-sectional geometries, tailored to specific industries and applications.

These engineered cross sections influence:

- Fiber interlocking behavior
- Surface friction and cohesion
- Optical properties (light diffusion, matte vs. shine)
- Mechanical anchoring in nonwoven structures

Such precision is critical for achieving consistent performance in needle-punched carpets and technical felts.

Color Technology: Pigment & Masterbatch Control
Alongside polymer engineering, ZARIFMOSAVAR maintains an extensive pigment and masterbatch bank covering multiple polymer families.

This infrastructure enables the production of fibers in exceptionally wide color ranges, including:

- Solid and custom colors
- Mélange and blended fiber tones
- Long-term color consistency across production batches

Color is introduced at the polymer stage, ensuring deep, integral coloration rather than surface-level effects.

Engineering Complexity and Process Control

While fiber production may appear straightforward at first glance, it is, in reality, a highly complex engineering discipline.

At ZARIFMOSAVAR, parameters such as:
- Denier design
- Cut length specification
- Elongation and tensile behavior
- Fiber crimp and elasticity

are carefully engineered by dedicated technical teams.

ZarifCarpets

Preventing issues such as:

- Fiber breakage
- Inclusions or contamination
- Inconsistent elongation behavior

is essential to ensure high-quality downstream processing.

Our quality control teams continuously monitor fiber output to guarantee that only fibers meeting strict standards proceed to subsequent manufacturing stages.

Beyond Carpets: Multi-Industry Fiber Applications

Fiber production at ZARIFMOSAVAR is not limited to carpet manufacturing.ف
Our fiber portfolio also supports a variety of industrial and technical applications, including:

- Concrete reinforcement fibers for construction
- Hygienic and sanitary fibers
- Industrial technical fibers
- Decorative colored fibers for composite and design applications

This diversity demonstrates the adaptability and robustness of our fiber engineering capabilities.

Fibers as the Lifeblood of Needle-Felt Production

Within ZARIFMOSAVAR, fibers are the lifeblood flowing through the production arteries of needle-felt carpets.
Pre-colored fibers are blended in our opening, blending, and carding lines, forming uniform nonwoven layers.
These layers are then:

- Mechanically consolidated
- Patterned through needle-punching
- Transformed into finished carpets

Through this process, fibers evolve from raw polymer to architectural, decorative, and functional flooring products.

Fiber Engineering Without Compromise

At ZARIFMOSAVAR, fiber production is not merely a supporting operation—it is a core technological pillar.

By mastering polymer science, melt spinning, color engineering, and quality control, we ensure that every fiber entering our production lines contributes to consistent performance, aesthetic excellence, and long-term durability.

This vertical integration empowers us to respond precisely to customer expectations—whether for performance-driven industrial applications or design-focused carpet solutions—without compromise.

Datasheet

YARN PRODUCTION

Yarn Production Technology

Integrated, High-End Yarn Manufacturing Platform
ZARIFMOSAVAR operates one of the most advanced and modern yarn production platforms in the region, integrating BCF extrusion, intelligent twisting, and professional heat-setting technologies within a unified manufacturing ecosystem.
This integrated approach enables us to fully support both regular and highly specialized carpet yarn requirements, ensuring consistency, scalability, and engineering-grade reliability across all product categories.

Raw Material & Polymer Engineering Technology

At ZARIFMOSAVAR, we maintain full technical mastery over all major polymers used in the carpet industry, including:

- Polypropylene (PP)
- Polyamide (PA6 / PA66)
- Polyester (PET)
- Hybrid and multi-polymer blends

For us, blending or engineering polymer systems is not a limitation—it is a controlled, repeatable process driven by a single question:
What is the customer's performance expectation?

Color Technology & Masterbatch Excellence

Our color capabilities are among the most advanced in the industry.
Beyond maintaining a comprehensive masterbatch archive, ZARIFMOSAVAR also holds an extensive pigment library—the raw materials used to manufacture masterbatches.

This dual-level control allows us to:

- Engineer custom masterbatches in-house
- Achieve virtually unlimited color variability
- Guarantee batch-to-batch color consistency
- Support long-term strategic partnerships requiring color continuity over years

For customers seeking differentiation, this means access to one of the widest color spectrums available globally.

Extrusion & BCF Technology — German Engineering at Its Core

At the heart of yarn production at ZARIFMOSAVAR lies Neumag technology from Germany, globally recognized as a benchmark in synthetic filament and BCF systems.

Our Neumag BCF extrusion lines are equipped with high-capacity extruders capable of processing:

- PP, PET, and PA polymers
- Single-polymer and engineered blend systems

ZarifCarpets

Filament Engineering & Yarn Structure

These BCF lines deliver yarns with exceptional control over:

- Bulk development
- Elongation and elastic recovery
- Surface shine (luster)
- Crystalline structure stability

Filament configurations range from low filament counts up to 360 filaments, allowing precise tuning of softness, resilience, and visual density.

Denier Capability

ZARIFMOSAVAR's BCF platforms support a wide denier spectrum from 600 dtex up to 8,000 dtex, offering full coverage from fine residential applications to heavy-duty commercial and technical carpets.

Advanced Dosing & Additive Control

Highly sophisticated masterbatch and additive dosing systems ensure uniform dispersion of:

- Color masterbatches
- Textile spin finishes
- UV stabilizers
- Functional additives

This guarantees longitudinal consistency across the entire yarn length—an essential requirement for industrial-scale tufting and needle-punch applications.

Intelligent Twisting Technology — Built for Tufting Performance

Twisting at ZARIFMOSAVAR is executed using fully automated, intelligent twisting systems, specifically configured for carpet yarn performance.

We employ cable twisting and -2for1- (TFO) technologies, enabling:

- Controlled multi-ply yarn construction
- Stable twist chains along the yarn length
- Significant improvement in mechanical durability

Unlike ring twisting—which is not optimized for tufting yarns—our approach produces yarns that:

- Do not exhibit live or reverse twist behavior
- Maintain structural balance during tufting
- Deliver clean, well-defined yarn ends in the final carpet surface

This results in superior appearance, durability, and processing stability.

Yarn Heat-Setting & Stabilization Technology

After extrusion and twisting, yarn performance is ultimately defined by professional heat-setting. ZARIFMOSAVAR operates state-of-the-art Super Heat and Superba heat-setting systems, recognized globally as the most advanced technologies for carpet yarn stabilization.

Purpose-Driven Heat Setting

Our heat-setting process is engineered to:

- Preserve intrinsic textile properties (softness, bulk, elasticity)
- Enhance mechanical performance (dimensional stability, twist memory)
- Eliminate internal stresses from extrusion and twisting

The result is yarns that:
- Maintain shape during tufting
- Develop beautiful, consistent yarn tips after cutting
- Deliver long-term performance in finished carpets

Space Dyeing Technology — Spectral Yarn Coloration

ZARIFMOSAVAR also operates an advanced Space Dyeing technology, enabling spectral and segmental coloration of yarns.

This technology allows:

- Polyester and polyamide yarns to transition gradually between colors
- Precise repeat control (e.g., a color transition every 40 cm, or any specified length)
- Creation of dynamic, non-repetitive visual effects

For example, a yarn can smoothly shift from yellow to red, repeating at controlled intervals—an ideal solution for:

- Loop carpets
- Decorative tufted surfaces
- High-end design-driven collections

This capability adds a powerful design dimension to ZARIFMOSAVAR's yarn portfolio

Yarn Engineering Without Limits

At ZARIFMOSAVAR, yarn production is not treated as a standalone process—it is a strategic engineering discipline integrating polymer science, extrusion technology, mechanical processing, and aesthetic control.

From raw polymer to finished, stabilized, color-engineered yarn, every parameter is under control. This allows our customers to define any performance level, appearance, and price positioning—with confidence, repeatability, and long-term reliability.

ZarifCarpets

Datasheet

LATEX & ADHESIVE

In-House Production of SBR Latex and PVAc Adhesives

At ZARIFMOSAVAR, both SBR latex and PVAc adhesive systems are produced in-house, forming a critical part of our vertically integrated carpet manufacturing strategy.

In general:

- SBR latex is primarily used for tufted carpets
- PVAc adhesives are mainly applied in needle-felt (nonwoven) carpets

By producing our own adhesive systems, we maintain full control over formulation, performance tuning, and long-term consistency.

Application-Oriented Adhesive Engineering

As a specialized adhesive manufacturer, ZARIFMOSAVAR does not treat carpet backing as a generic bonding operation.
We precisely understand that each carpet construction—defined by pile height, stitch density, thickness, and backing structure—requires a dedicated adhesive formulation.

For this reason, adhesive selection and formulation are engineered from the base polymer level, rather than adjusted superficially at the application stage.

Tailored Adhesive Systems for Different Carpet Segments

ZARIFMOSAVAR develops and applies distinct adhesive families for different usage environments, including:

- **Residential carpets**
  Optimized for comfort, flexibility, and long-term dimensional stability.
- **Hospitality carpets (hotels)**
  Engineered for moisture resistance, enhanced durability, and intensive foot traffic.
- **Office and commercial carpets**
  Designed to balance rigidity, flatness, and ease of installation.
- **Sports and technical carpets**
  Formulated for mechanical resilience, impact resistance, and structural integrity.

Each formulation contributes unique functional characteristics to the final carpet product.

Beyond Carpets: Multi-Industry Adhesive Expertise

ZARIFMOSAVAR's adhesive production capabilities extend far beyond carpet manufacturing.

Our product portfolio also includes adhesives and latex systems for:

- Textile sizing (fabric starching and finishing)
- Paper industry applications
- Hygienic and sanitary latex products
- Double-sided adhesive systems
- Other specialized industrial uses

This cross-industry expertise strengthens our understanding of polymer behavior, adhesion mechanisms, and performance under diverse conditions.

Balancing Softness and Handling Performance

One of the most critical challenges in carpet adhesive engineering is achieving the correct balance between softness and handling stability.

A carpet should:

- Not be too soft, causing wrinkling, deformation, or instability
- Not be too rigid, making installation difficult and reducing tactile comfort

Achieving this balance requires precise control over polymer composition, solids content, plasticization, and curing behavior—a capability that represents one of ZARIFMOSAVAR's key technical strengths.

Chemistry-Driven Performance Control

Through advanced formulation techniques, ZARIFMOSAVAR ensures that:

- Adhesives contribute to structural fixation and tuft lock
- Flexibility and "hand feel" are preserved
- Long-term performance is maintained without brittleness or creep

This chemistry-driven approach allows us to deliver carpets that are stable, easy to install, pleasant to touch, and durable throughout their service life.

Adhesion as a Core Technology

At ZARIFMOSAVAR, latex and adhesive technology is not an auxiliary process—it is a core scientific discipline.
By combining polymer chemistry, textile engineering, and application expertise, we engineer adhesive systems that precisely match each carpet's functional and aesthetic requirements.

This integrated capability ensures consistent quality, superior performance, and long-term reliability—from residential comfort carpets to demanding commercial and technical applications.

ZarifCarpets

Datasheet

FINISHING

At ZARIFMOSAVAR, carpet finishing is engineered with a clear philosophy:
adhesives are meant to stabilize and protect the carpet structure—not to artificially add weight.

From a material perspective, we are fully equipped to work with both SBR (Styrene Butadiene Rubber) and PVAc (Polyvinyl Acetate) adhesive systems.
Beyond material selection, our core strength lies in proprietary application techniques that allow us to minimize adhesive loading while maximizing bonding efficiency.

Through continuous R&D, we have developed innovative finishing methods that enable adhesive loads starting from as low as 100 g/m², without compromising dimensional stability, tuft lock performance, or long-term durability.

This approach:

- Preserves the authentic quality of the carpet
- Reduces unnecessary material consumption
- Demonstrates our environmental responsibility
- Protects customer value by delivering lighter, more efficient products

Calcium carbonate is used only in minimal, controlled quantities as a filler, ensuring that product integrity is maintained and that no long-term quality degradation occurs.

Specialized Adhesive Systems for Hospitality Applications

For hotel and hospitality carpets, where moisture resistance and water repellency are critical, ZARIFMOSAVAR employs specialized adhesive formulations specifically designed for high-humidity and intensive-use environments.
These systems enhance dimensional stability, inhibit moisture migration, and significantly extend product service life in demanding applications.

Functional Additives and Surface Coating Technologies

ZARIFMOSAVAR offers a wide range of specialized functional additives that can be incorporated during the final finishing stage or applied as advanced surface coatings, fully tailored to customer requirements:

- Softeners
Improve surface hand-feel, flexibility, and tactile comfort.

- Flame Retardants (Slow-Burn Additives)
Enhance fire resistance and help carpets meet international safety standards.

- Anti-Static Agents
Reduce electrostatic charge accumulation, particularly important in commercial and office environments.

- Antibacterial & Antimicrobial Additives
Inhibit bacterial and microbial growth, supporting hygiene and odor control.

- Stain-Resistant Treatments
Improve resistance to soiling and simplify maintenance over the product's lifecycle.

Each additive system is selected and dosed according to application type, fiber composition, and performance expectations, ensuring reliable and repeatable results.

Multi-Line, Multi-Level Finishing Infrastructure

ZARIFMOSAVAR operates multiple finishing lines, all upgraded to the latest global technology standards, supporting widths of up to 2 meters per line.

Our finishing infrastructure includes advanced equipment from leading manufacturers such as Brückner (Germany), Tuftco (USA), and Sellars (UK)—systems specifically designed for professional carpet finishing.

A defining advantage of our finishing halls is the multi-level (multi-deck) configuration of the lines.

This architecture allows us to:

- Apply higher temperatures to the backing layer for efficient drying and bonding
- Maintain lower, controlled temperatures on the face layer, preserving softness, touch, and surface aesthetics

As a result, our systems are true finishing technologies for tufted carpets and felts, not merely conventional drying ovens.

Intelligent Motion Control and Pattern Stability

All finishing lines at ZARIFMOSAVAR are equipped with intelligent motion-balancing mechanisms that ensure uniform linear movement throughout the process.
This precision prevents pattern distortion, misalignment, or stretching—particularly critical for printed, embossed, stitched, or patterned carpets.

Ultra-Light Finishing Technology for Felt Carpets

For felt carpets, ZARIFMOSAVAR has developed a unique ultra-light finishing method.

This innovation offers substantial economic benefits, especially for traders and bulk buyers:

- Eliminates unnecessary weight gain
- Maintains structural integrity and performance
- Significantly reduces shipping and logistics costs
- Enables higher square-meter loading per shipment

This approach supports both environmental sustainability and commercial efficiency.

Backing and Secondary Layer Finishing Options for Tufted Carpets

ZARIFMOSAVAR provides a comprehensive range of backing solutions for tufted carpets:

Pure Primary Backing (No Secondary Layer)

Used for artificial grass and special custom carpets where secondary backing is not required.

Action Backing (Custom Orders)

Produced on demand, with finishing capability up to 4 meters width, offering high dimensional stability.

Felt Backing Systems

Applied as a standard solution, with an exceptional weight range from 100 g/m² up to 1,000 g/m².
Backing layers can be supplied in PP, PES, or PA, each selected according to durability, resilience, and application requirements.

ZarifCarpets

Anti-Slip PVC Dot Backing Technology

One of ZARIFMOSAVAR's most distinctive finishing capabilities is PVC dot backing technology, designed to provide anti-slip performance without the need for additional adhesives during installation.

- Anti-slip dots are applied using PVC-based compounds
- Prevent carpet movement on smooth surfaces
- Eliminate the need for gluing or fixing after cutting and installation

In addition, we operate a separate European finishing line that uses natural rubber-based materials for anti-slip dots—an environmentally safer alternative to PVC for eco-conscious projects.

The availability of multiple patterned dot molds has made this solution particularly popular for fashion-oriented carpets, where design, flexibility, and ease of installation are critical.

Chemical-Free Thermal Lamination Technology

Beyond adhesive-based bonding, ZARIFMOSAVAR also employs thermal double-layer lamination technology.
In this process, two layers are partially melted and bonded through controlled thermal energy, forming a unified structure without the use of chemical adhesives such as SBR or PVA.

This forward-looking technology offers:

- Reduced chemical dependency
- Improved recyclability potential
- Clean, stable bonding performance
- Enhanced sustainability credentials

Finishing Without Limitations

At ZARIFMOSAVAR, finishing is not a constraint—it is a capability.
Simply communicate your desired finishing method and performance expectations, and we will engineer the solution.

Our technical flexibility, process depth, and infrastructure ensure that every finishing requirement can be met with confidence, precision, and consistency—without compromise.

ZarifCarpets

ZarifCarpets

CONTACT US

Negin-E-Zayandeh Rood Bldg
1St Moshtagh Ave., Isfahan, Iran

+98 31 38350000

zarifcarpetsarabic (Arabic)
zarifcarpetexport
zarifmosavar (Afghanistan)
zarif-carpets