



***power-heat-set***  
GmbH

The perfect solution for every customer!

GVA 4.0+

GVA 5.0+

GVA 8.0+

HiPerSet 2.5+

HiPerSet 4.0+

HiPerSet 8.0+

# About us

## Perfect carpet yarn

## Power-Heat-Set: Perfect heatsetting equipment for the carpet industry

### 40 years of experience – more than 1,000 machines in the heatsetting market

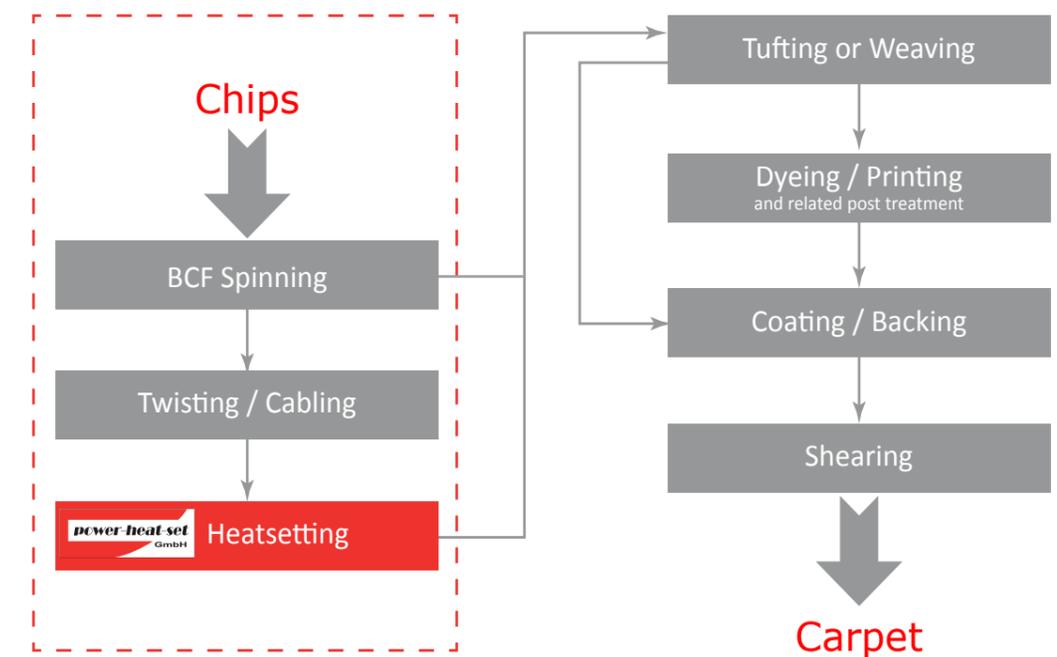
We have been supplying the carpet industry with machines and components for carpet yarn treatment for over 40 years. The different versions of our machines called GVA and HiPerSet, offer a wide variety of products and allow our customers to choose a machine that meets their needs.

### Innovative technology and development - We shape what you need!

A team of skilled and experienced engineers develops and designs our heatsetting machines. Our R&D department focuses on bringing advantages to our customers and constantly improves on topics such as quality, runability, productivity, energy saving or handling.

### Worldwide customer support with know-how and parts

All our equipment is manufactured by highly-qualified technicians at our German based headquarters in Toeing near Munich and a team of mechanics and technicians is available worldwide for set-ups and service. Our US subsidiary in Dalton and several sales agencies and representatives all over the world allow us to guarantee a quick response time.



# GVA

## Multi channel machine



Picture shows GVA 5000 / 2

## GVA - The benefits at a glance

The GVA Heatsetting machine offers proven reliability, flexibility and productivity in continuous heatsetting. It utilizes superheated steam with the full capacity of heatsetting natural or synthetic fibers.

The six channel configuration provides unmatched versatility for the customer. The GVA essentially provides six machines in one energy efficient package. Not only is the GVA a perfect solution for running high volumes of uniform production efficiently, but the GVA also provides the flexibility to run six individual lot sizes whilst offering the ability to process frieze or straight yarn on any position.

**For processing acrylic yarns, a special version of the machine using material with increased resistancy to corrosion is available on request.**

Our new modular system of GVAs gives our customers the possibility to choose the machine that meets their individual demands:



### GVA 4.0+

*The economic model*

Efficient production combined with low investment.  
Production up to 8 tons per day.



### GVA 5.0+

*The standard model*

Decades of global experience combined with modern design and functionality.  
Production up to 12 tons per day.



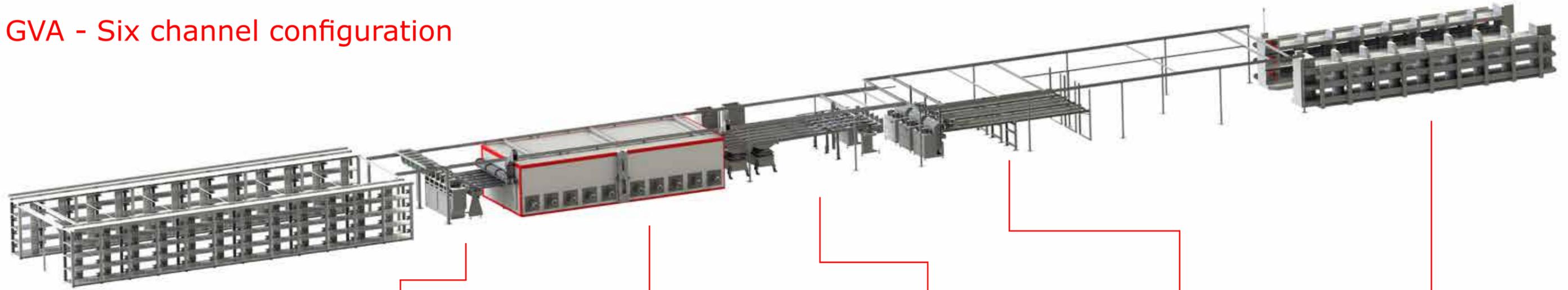
### GVA 8.0+

*The maximum production model*

Highest level of daily production on the market combined with next generation technology .  
Production up to 17 tons per day.



## GVA - Six channel configuration



### Creel

- Optimal ergonomic design and easy handling
- Flexible choice of distance between creel yarn packages according to size: ergonomic 400mm or larger 500mm
- Locking system for mandrels ensuring safe bobbin positioning
- Thread sensor with Quick Stop in the event a yarn end should break
- Antistatic design
- Variable set-up options
- Equipped for all bobbin forms
- Optional Extras:*
- Bobbin monitoring = Bobbin Monitoring Control (BMC) i.e. LED light tree indicates creel position status
- SpliceSet



### TRB & Coiler

- Combined solution for straight set yarn and frieze
- Good accessibility
- Easy to operate
- Pneumatic pressing lever improves the consistency of frieze
- Special perforations in steam channel enable uniform perfusion of yarn
- Quick and easy change from frieze to straight yarn
- Wide variety of texture levels
- An air injector enables easy threading
- Coiler yarn deposit on the belt can be either a circle or a figure eight
- Protection against yarn jam through sensors



### GKK

- Computer-controlled dew point regulation (steam control)
- Range of temperature for heatsetting between 110-200 °C
- Temperature monitoring on each heatsetting channel
- Energy saving design



### Six channels

- Maximum flexibility
- Possibility to process different specifications (frieze, color, etc.) at one time
- High efficiency factor when yarn breaks occur (5/6ths of machine capacity keep on running)
- Quick yarn break removal
- Optimal yarn cooling



### TwinAccu

- Quick and easy to thread
- Variable length of storage depending upon the modular design (3 m, 6 m, 9 m)
- Storage capacity is up to 45 minutes with 6 m
- Yarn tension is achieved with the help of the tension generator resulting in improved yarn separation over rollers, eliminating sliding friction and shiny spots
- Hard-wearing carbide coating on the deflection rollers promotes optimal yarn transport
- Smooth and continuous contact pressure
- Sliding rails with special high-tech coating
- Pneumatic pressing lever improves yarn transport



### TakeUp Winder

- Quick thread up and doffing (down to 25 sec.)
- Yarn speed up to 750m/min
- Accurate bobbin build-up



# HiPerSet

## Single channel machine



Picture shows HiPerSet 2500

## HiPerSet - The benefits at a glance

The HiPerSet is our single-belt solution. A special air guide system provides a constant thermal environment in the complete processing station. With the removal of obstructions to airflow, a high volume of climate circulation is achieved with relatively high compression allowing yarn to be heated quickly and thoroughly to the required heatset temperature. The HiPerSet offers easy maintenance and operation.

On the HiPerSet all kinds of yarn can be processed.  
Due to the modular system every customer can choose his ideal machine.

It utilizes superheated steam with the full capacity of heatsetting natural or synthetic fibers.



### HiPerSet 2.5+

*The perfect start up model*

For heatsetting up to 60 ends.

Production up to 6 tons per day.



### HiPerSet 4.0+

*The economic medium-sized model*

For heatsetting up to 72 ends.

Production up to 8 tons per day.



### HiPerSet 8.0+

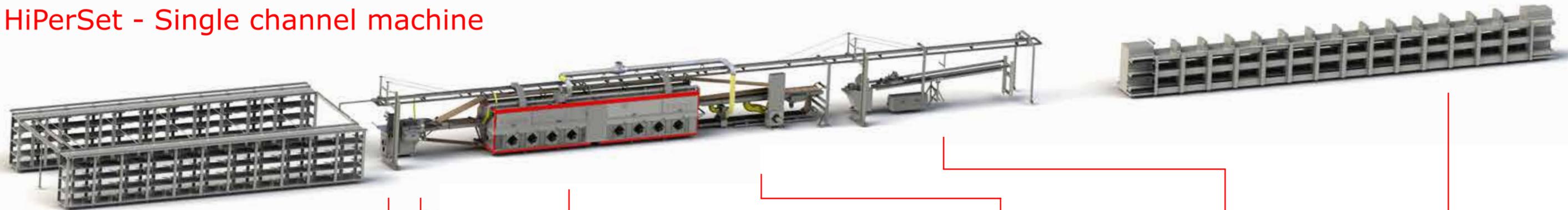
*The strongest single channel model*

For heatsetting up to 84 ends.

Production up to 12 tons per day.



## HiPerSet - Single channel machine



### Creel

- Optimal ergonomic design and easy handling
- Flexible choice of distance between creel yarn packages according to size: ergonomic 400mm or larger 500mm
- Locking system for mandrels ensuring safe bobbin positioning
- Thread sensor with Quick Stop in the event a yarn end should break
- Anti- static design
- Variable set-up options
- Optional Extras:*
- Bobbin monitoring = Bobbin Monitoring Control (BMC)
- LED light tree indicates creel position status
- SpliceSet

### TRB

- Newly designed steam channel allows more efficient perfusion of yarn
- Directional side to side oscillator enables yarn deposit over the complete width of the conveyor belt
- If there is a hang, the yarn will be kept in the steam channel by means of a rake
- The yarn is deposited directly and flat from the TRB onto the conveyor belt. Therefore a yarn chute is not necessary
- For quality control, the temperature in the steam channel is monitored
- The servo driven synchronized running of all transport rollers results in an even frieze effect, particularly in the stop – start phase
- It is possible to adjust the rotations and the rotational speed of the false twist

### Coiler

- Air injector enables easy threading
- Coiler flyer with servo drive to synchronize coiler belts and yarn feed rollers with conveyor belt
- Possible to take up yarn onto winder without causing differences in tension, also in the start – stop operations
- Coiler pattern can be either a circle or a figure eight

### HiPerBox

- One channel system for equal heatsetting effect
- Computer-controlled dew point regulation (steam control)
- Range of temperature for heatsetting between 110-200 °C
- Strong energy saving design, steam consumption < 30kg/h
- Modular sizes

### Cooling System

- High performing cooling unit
- Monitoring unit of yarn temperature at yarn take-off
- Tension generators for equal yarn take-off
- Vacuum system for easy and defined yarn take-off

### Accumulator

- Quick and easy to thread
- Variable length of storage depending upon the modular design (3m, 6m, 9m).
- Yarn tension is achieved with the help of the tension generator resulting in improved yarn separation over rollers, eliminating sliding friction capable of creating “lean” or “stretched” yarn
- Hard-wearing carbide coating on the deflection rollers promotes optimal yarn transport
- Smooth and continuous contact pressure
- Sliding rails with special high-tech coating
- Pneumatic pressing lever improves yarn transport

### TakeUp Winder

- Quick threadup and doffing (down to 25 sec.)
- Yarn speed up to 750m/min
- Accurate bobbin build-up



# Technical data

## Overview GVA & HiPerSet

### GVA - Technical data\*

	GVA 4.0+	GVA 5.0+	GVA 8.0+
Number of operators	2	2	2
Maximum ends on creel	96	96	96
Maximum yarn speed overfeed	600	600	600
Straight and frieze yarn possible	✓	✓	✓
Maximum production (tons/day)	7 - 8	11 - 12	15 - 17
Channels with yarn relaxing zone	6	6	6
Accumulator for optimizing machine efficiency	✓	✓	✓
Take up winder maximum yarn speed (m/min)	750 m/min	750 m/min	750 m/min
Maximum belt density (g/m length of belt)	185	185	185
Steam consumption (kg/h)	40 - 75	50 - 80	60 - 90
Electricity consumption (KWh)	50 - 70	60 - 80	80 - 90
Air consumption (without TRB transport air)	1 Nm <sup>3</sup> /h	1 Nm <sup>3</sup> /h	1 Nm <sup>3</sup> /h

### HiPerSet - Technical data\*

	HiPerSet 2.5+	HiPerSet 4.0+	HiPerSet 8.0+
Number of operators	2	2	2
Maximum ends on creel	60	72	84
Maximum yarn speed overfeed	600	600	600
Straight and frieze yarn possible	✓	✓	✓
Maximum production (tons/day)	5 - 6	7 - 8	10 - 12
Channels with yarn relaxing zone	1	1	1
Accumulator for optimizing machine efficiency	✓	✓	✓
Take up winder maximum yarn speed (m/min)	750 m/min	750 m/min	750 m/min
Maximum belt density (g/m length of belt)	650	650	650
Steam consumption (kg/h)	15 - 25	15 - 35	15 - 40
Electricity consumption (KWh)	30 - 40	30 - 55	30 - 70
Air consumption (without TRB transport air)	40 Nm <sup>3</sup> /h	40 Nm <sup>3</sup> /h	40 Nm <sup>3</sup> /h

\* All data without guarantee and excluding all liability. These are approximate values which can vary depending on conditions. Production data depending on dtex, twist, filaments, yarn quality, yarn speed, belt density, etc. The belts must not be loaded with more than the recommended quantity.

# Service

## Professional support

## Customer support

### We love to support you!

We are not only your machine and spare part supplier, but we are also your best source for technical support and service. Excelling in customer service is of the utmost importance to us.

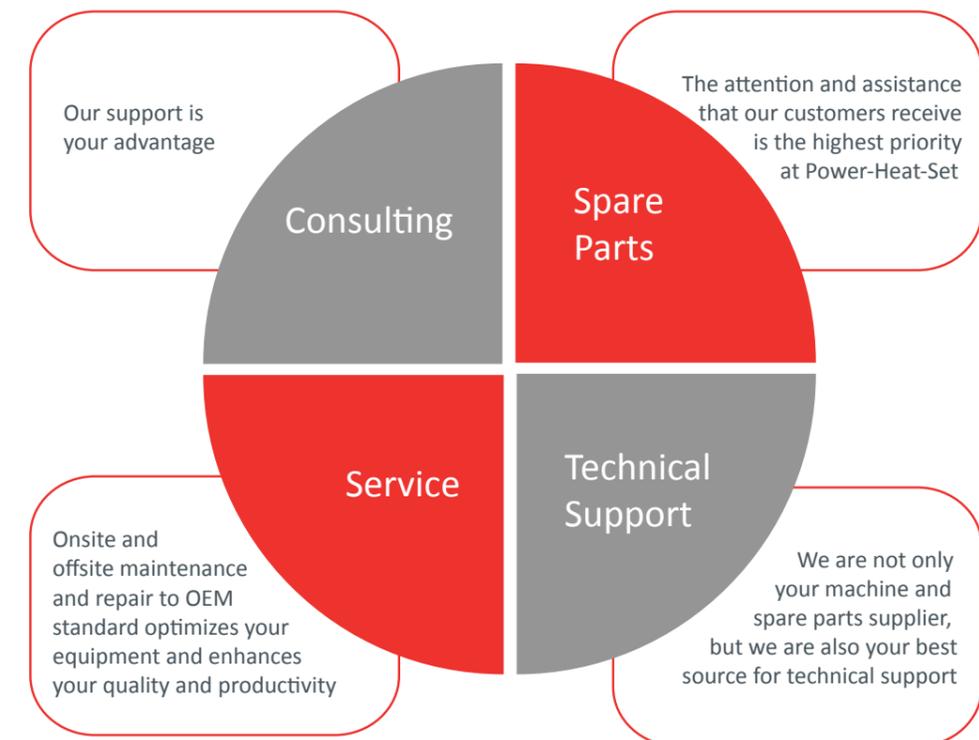
### Parts and technical support

Installation, commissioning, training for staff, maintenance, supply of spare parts, technical advice, .... We have the expertise and experience. For example, we provide a training and R&D center where we process material trials for customers or offer training for operators.

### Consulting for all matters

Consulting you on which of our products fits your needs, planning the machine layout, supporting you with financing models, .... Whatever you need, our worldwide operating team is happy to offer a comprehensive carefree package for our customers.

Let us know what we can do for you!





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