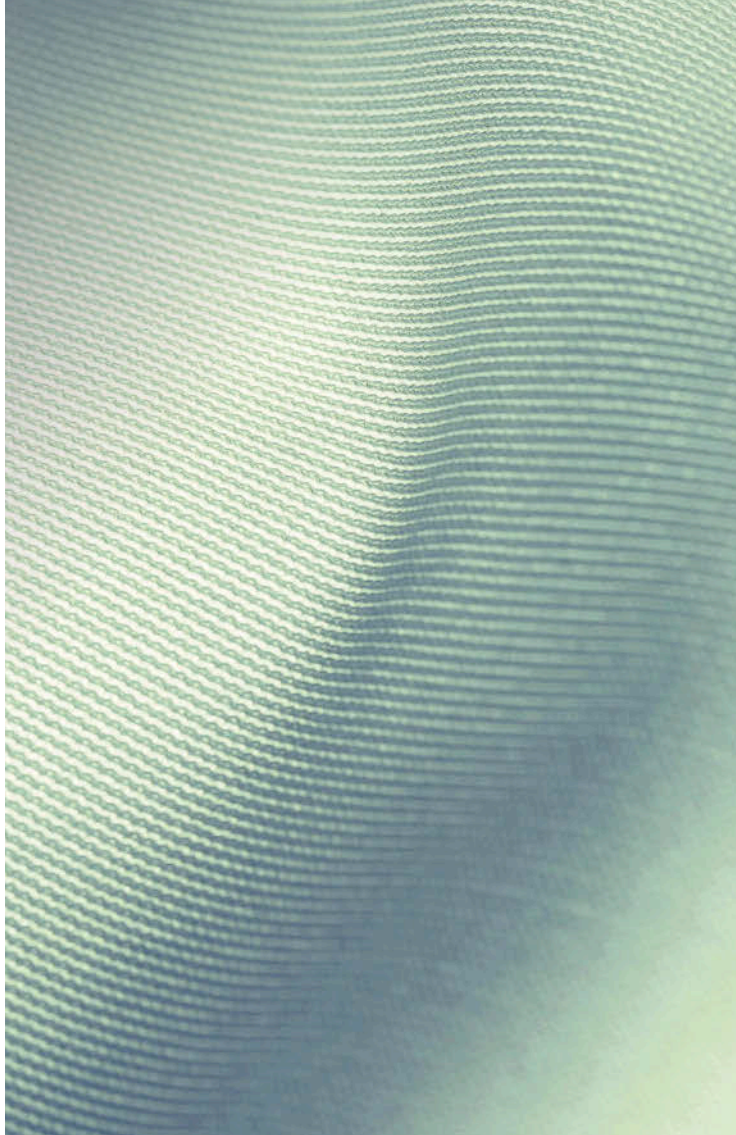


## PERFORMANCE ADVANTAGES – FLAT STEEL HEALDS WITH O-SHAPED END LOOPS



The weaving process – from warp preparation to fabric quality – is positively influenced by the utilization of the proper heald.



## GROZ-BECKERT FLAT STEEL HEALDS

### Quality products of Groz-Beckert for rider heald frames

Groz-Beckert offers an extensive assortment of healds with closed, O-shaped end loops for heald carrying rods 9.5 x 1.5 mm.

GROBEXO® and GROBIMEXO healds of tempered steel are suitable for water jet and air jet weaving machines equipped with rider heald frames.

#### Groz-Beckert quality

As with all Groz-Beckert products, healds are manufactured in optimal quality. Experience over decades, combined with the skills and latest techniques of specialists have caused well-known weaving machine manufacturers and weaving mills world-wide to rely on Groz-Beckert products and advice. The choice of the proper healds is vital for the cost-effective weaving of fabrics.



GROBEXO® DUOREV®



GROBIMEXO DUODIF®



GROBEXO® SOLOPUR®

#### Reduced wear in demanding applications

Healds made of tempered steel maintain their material width in the entire area of the highly-strained end loops. Therefore, an outstanding resistance to abrasion is achieved.

#### The thread eye: A market-leading quality

Depending on warp yarn counts various sizes of thread eyes are at your choice.

#### Good operating features

The optimised design of the end loops improves performance of healds.

#### Rust protection: Tuned to environment and application

Groz-Beckert healds are available in GROBINOX® stainless steel. They are particularly advantageous for water jet weaving machines.

#### GROBmicro PLUS – fine solution!

Healds with a GROBmicro PLUS highly-polished surface guarantee for a successful weaving of most delicate micro fibre-yarns. (Available with OPTIFIL® thread eye 5.5 x 1.2 mm).

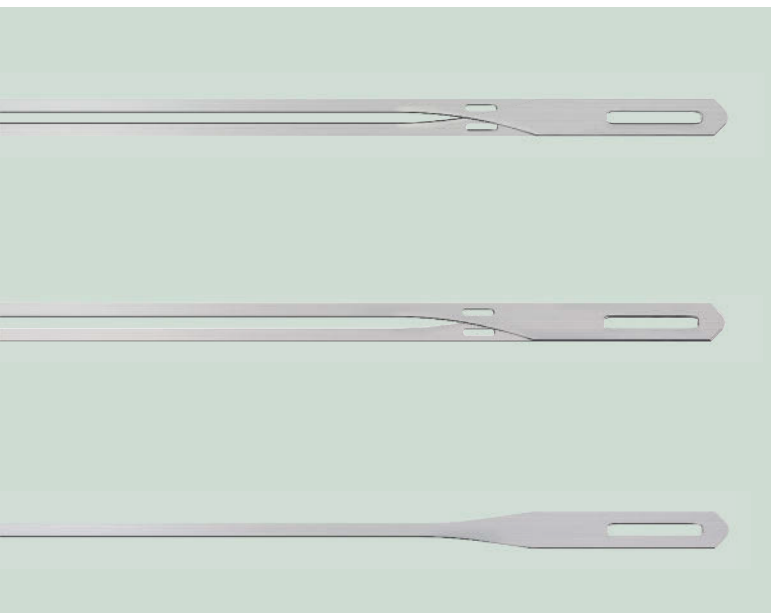
### Fast, easy and economical handling

Healds with double rows of eyes have **DIVI dividing slots** near the end loops. Before the automatic drawing-in, dividing rods can be inserted through these openings to segregate healds, so that the healds with the thread eye situated at the rear are separated from those with the thread eye situated in front.

Flat steel healds of Groz-Beckert are supplied on handy auxiliary rods and in stable, well stackable boxes.



DIVI-DIVIDING SLOTS



### Densities adjusted to application requirements

Standard executions of Groz-Beckert healds are for a single row of eyes. Healds with a double row of eyes are normally used for fabrics with high warp densities. These types of healds also minimise the potential for the sticking together of moist healds in water jet machine applications.

### High performance by automatic drawing-in

Automatic drawing-in machines require healds with smallest tolerances. Groz-Beckert Weblitzen healds meet this requirement even in the case of large manufacturing quantities. However, for automatic drawing-in, healds with OPTIFIL® thread eyes must not be mixed with other heald types.

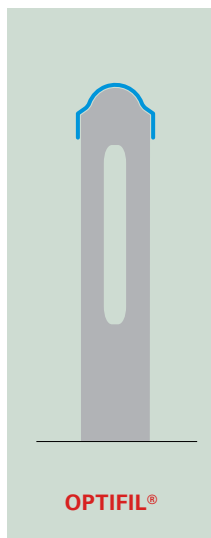
For the replacement of healds or the correction of drawing-in faults, Groz-Beckert offers repair healds with open end loops. Two tempered steel plates of different lengths are welded onto the heald ends, facilitating the installation of healds onto heald carrying rods.

## THE OPTIFIL® THREAD EYE

**With the OPTIFIL® tread eye Groz-Beckert offers an advanced design manufactured in finest quality.**

The special design of the OPTIFIL® thread eye is most efficient because the passing of the warp through the eye and along the neighbouring healds has been thoroughly studied and optimised.

Specifically, the OPTIFIL® thread eye provides warp yarns significantly more space. It facilitates an increase of 30 % in density, in comparison with healds with a standard thread eye.

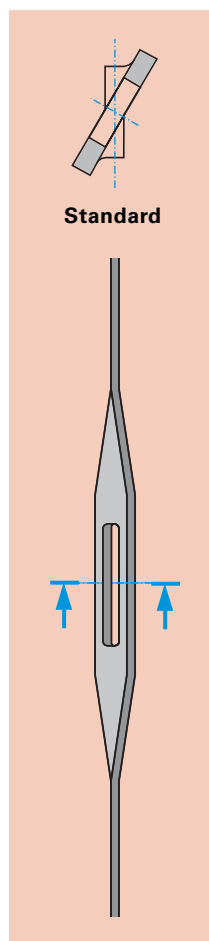
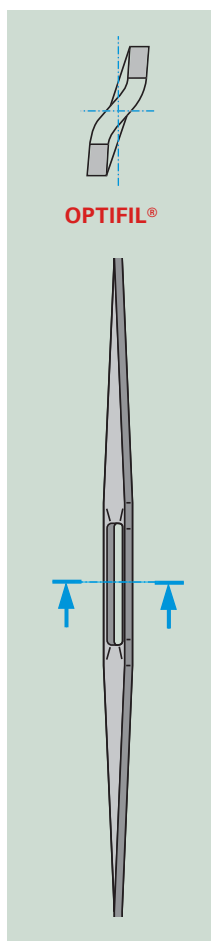


Because the warp yarn is moving past a flat surface, instead of edges, friction is avoided. Depending on the pattern, the number of heald frames can be reduced providing potential for increases in machine operating speeds.

HEALDS MADE OF TEMPERED STEEL WITH OPTIFIL® THREAD EYE ARE RECOGNISED BY THEIR SPECIAL DESIGN AT THE UPPER END LOOP.

**OPTIFIL® contributes significantly to a cost-effective weaving of fabric of highest quality.**

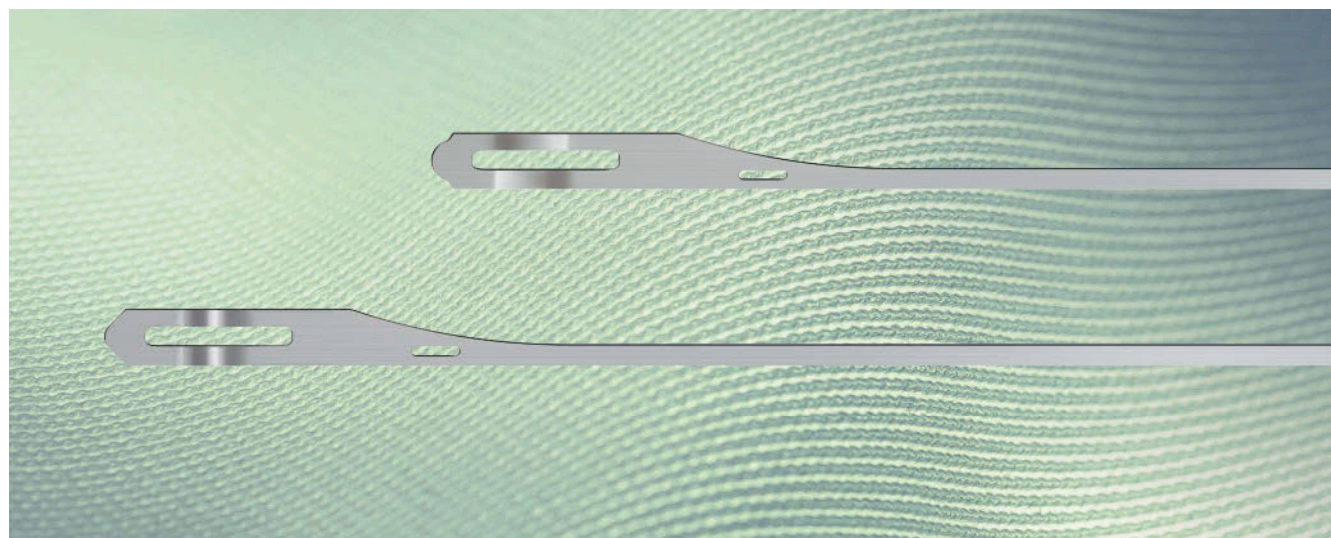
With OPTIFIL® densities per heald frame and centimetre can be increased by 30 %. Depending on the pattern, the number of heald frames can be reduced and, therefore, an increased machine operating speed is possible.



OPTIFIL® IN COMPARISON  
WITH STANDARD THREAD EYE



## TABLE FOR DETERMINATION OF HEALD SPECIFICATIONS






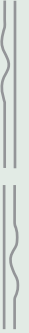




suitable for warp counts					maximum density <sup>2)</sup> per heald frame						healds made of tempered steel with closed O-shaped end loops		
tex system	metric number	denier	engl. Nr.		Standard thread eye			OPTIFIL® thread eye			cross section	thread eye	trade mark
			cotton	worsted	SOLOPUR®	DUOREV®	DUODIF®	SOLOPUR®	DUOREV®	DUODIF®			
Tt	Nm	Td	NeB	NeK	per cm	per cm	per cm	per cm	per cm	per cm	mm	mm	
30	34	300	20	30		20			28		5.5 x 0.25	5.5 x 1.2 <sup>1)</sup>	GROBEXO®
30	34	300	20	30		18			23		5.5 x 0.30	5.5 x 1.2 <sup>1)</sup>	GROBEXO®
							15			17			GROBIMEXO
72	14	650	8	12	8			10			5.5 x 0.30	6.5 x 1.8	GROBEXO®

1) GROBmicro PLUS surface is only available with OPTIFIL® thread eye 5.5 x 1.2 mm.

2) The density corresponds with average standard applications. Variations depend on the number of heald frames in use and the type of warp yarns.

O

GROZ-BECKERT HEALDS PROGRAM

	drawing-in machines		end loops			position of eyes			materials	
flat steel healds with closed O-shaped end loops	Stäubli and VEGA	Reed Chatwood	upper offset, lower flat	upper and lower alternately corrugated or flat respectively	O-shaped	single row, symmetric	double row, asymmetric		in the center	stainless steel
symbol										GROBINOX®
trade mark	...EX...	...IM...			...O	SOLOPUR®	DUOREV®	DUODIF®		
GROBEXO®	●		●		●	●			●	●
	●		●		●		●		●	●
GROBIMEXO	●	●		●	●			●	●	●

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