

Welcome to RUREX-STAHl Dr. Otto Kukla GmbH

Product group Container glass



For technical information please mail to:
info@rurex.de

Product overview

Shear Blades



RUREX is worldwide supplier for Shear blades in a special anticorrosive alloy.

Due to our high-tech production process, you will obtain a maximum in **EFFICIENCY**, **PRECISION** and **QUALITY**.

On request **RUREX** supplies a various sort of special models (serrated cutting edge, cooling slots or drills, bigger radii, grinded fixing areas and others).

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Flatsprings



RUREX flatsprings for the neckring holders "stainless" or in "**ULTRA**" in various designs offer you high resistance and a long tool life all the time. We produce pressure springs as well.

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Deadplates



RUREX deadplates made from completely hardened stainless steel guarantee you extremely long tool life and high productivity.

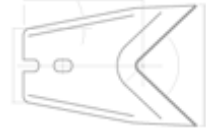
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Orifice Ring Holder



RUREX orifice ring holder made in "one piece" from casted, heat-resistant steel, long-lasting and fair in price.

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RUREX Shear Blades

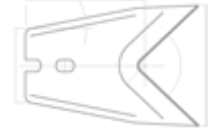


RUREX Shear Blades

RUREX is a worldwide supplier for Shear blades in a special anticorrosive alloy: - due to our high-tech production process you will obtain a maximum in **EFFICIENCY, PRECISION and QUALITY**.

RUREX supplies a various sort of special models (serrated cutting edge, cooling slots or drills, bigger radii, ground fixing areas and more)





Advantages of RUREX Shear Blades

All HS-type shear blades from **RUREX** are designed for the use on High-Speed IS-machines. We are using for this purpose a special stainless-steel alloy with a high hardness and toughness, developed only for cutting glass gobbs.

This guarantees you blades with:

- High performance due to a fine grain size with a high Vanadium content.
- No torsion and high elasticity even at high temperatures.
- No stain- and no corrosion – therefore very well suited for all biological lubricants with high water content.

Because of our patented heat-treatment, the cutting part is extremely hard, but the fixing area has the hardness of a spring. On all competition blades, only the cutting part is hardened, but the fixing area is weak. Due to the low toughness in this part, these blades mostly will have undesirable distortions. This will lead to stops and adjustment during production runs. High cutting speeds cannot be obtained. Because of the fact, that **RUREX** blades act like a spring, they will return to the initial position after each cut. They will have no distortion, and speeds of 190 cuts/min. are possible without any difficulties.

During the service of 2- 3 weeks, no adjustments are necessary, because once they are correctly adjusted, the blades will not bend any more. You will always get a „clean cut“ without marks.

The staff operating with **RUREX** blades should be instructed to adjust the blades carefully. Once correctly mounted and adjusted, with a little over-tension (approx. 0.2 to 0.3 mm), the blades return after each cut back into this position – even at the highest cutting speeds.

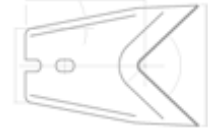
Different Material Qualities:

“KU 80”: 13% Chromium-Vanadium-Molybdenum Steel with a hardness of 56-58 Rockwell.

“K”: superior Steel with Aluminium and a hardness of 58-60 Rockwell. This Material has short-term emergency running properties.

“STELLITE”: pure Cobalt material for Opal Glass.

“HM”: Full Tungsten Carbide



Operating instructions for RUREX Shear Blades

You have purchased with a **RUREX** blade a precision tool for cutting glass.
The only shear blade with a “build-in“ cutting pressure!

Please follow carefully these instructions, in order to get a good performance of the **RUREX** blades.

Contrary to all competition shear blades, the **RUREX** blades act in the cutting process like a spring with a hardened cutting part.

Additionally, all blades are marked by a stamp with their cutting height in mm`s.

Please assemble in DG or TG on one holder only blades with nearly the same cutting height. (E.g. for the top shear blade holder in DG both blades should have for example 5.4 – on the bottom shear blade holder for example blades should have 5.2. Not same as top blades necessary, but each shear blade holder should have blades with the same height, to be sure that both blades are in one level.

Once correct adjusted – that means the tips of the blade have contact - the necessary pressure for cutting the gobs is „build-in“, due to the flexibility of the blades.

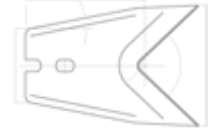
No further adjustment of the tension is necessary during the cutting process!

Therefore, **RUREX** blades have the best performance on high speed IS-machines and on parallel shear mechanism.

It is important, that your feeder men are instructed and informed.

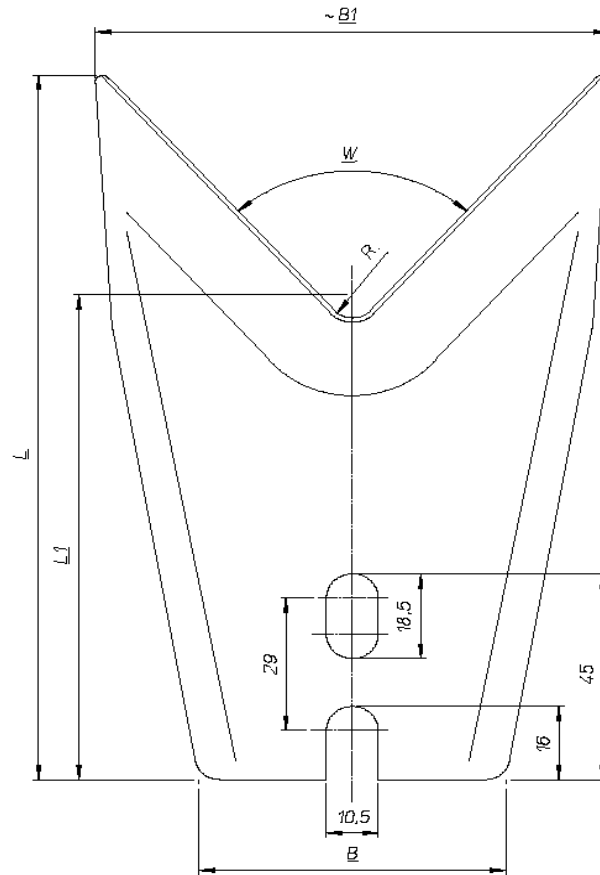
If **RUREX** blades are treated like competition blades – that means the pressure on the blades will be increased by your staff every shift – the blades will be worn down quickly and cause damage to the blades and the whole cutting and shear mechanism!

If you pay attention to these hints, you will have best results and long life of the **RUREX** Shear blades.



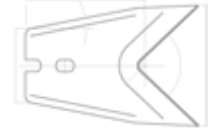
Shear Blade Size Comparison

Top view



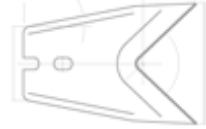
Type	L	L1	B	B1	W	R
R 129 R	119	104	43	43	90	5
R 128 R	122.5	105	56.5	51.4	90	5
R 130/20	130	125	50	67	70	20
R 130 HS/80	130	105	50	67	90	5
R 130 HS/90	130	105	50	67	90	5
R 130 HS/100	130	105	50	75	100	5
R 131 HS/60	146	124.5	62	73	60	22
R 131 HS/70	146	119.5	62	73	64	17
R 131 HS/75-20	154.5	121	62	104	73.5	20
R 131 HS/80	154.5	106	62	104	84	5
R 141	166	109	62	130	86	7
R 142	154.5	140	63.5	104	46	40

*all dimensions in mm



RUREX recommendation of different Shear Blades

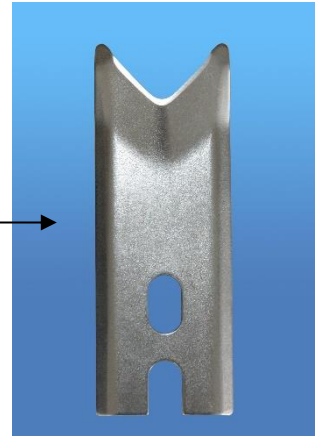
Type of Shear Blade	Blade radius in "mm"	Gob diameter in "mm"	Gob diameter in "grams"	Type of Gob
R 129 R	5	10 ~ 20	5 ~ 30	Quadruple Gob
R 128 R	5	10 ~ 30	5 ~ 50	Triple Gob
R 130/20	20	40 ~ 60	170 ~ 350	Double Gob / Triple Gob
R 130 HS/80	5	10 ~ 40	30 ~ 300	
R 130 HS/80 with 3 cooling drills	5	10 ~ 40	30 ~ 300	
R 130 HS/80 with 2 lateral cooling slots	5	10 ~ 40	30 ~ 300	
R 130 HS/80 with cooling - V	5	10 ~ 40	30 ~ 300	
R 130 HS/80 with waves	5	10 ~ 40	30 ~ 300	
R 130 HS/90	5	10 ~ 40	30 ~ 300	
R 130 HS/100	5	10 ~ 90	100 ~ 700	
R 131 HS/60	22	45 ~ 70	170 ~ 500	
R 131 HS/70	17	35 ~ 65	170 ~ 400	
R 131 HS/75-20	20	40 ~ 90	170 ~ 1000	
R 131 HS/75-30	30	60 ~ 90	170 ~ 1000	
R 131 HS/80	5	10 ~ 90	100 ~ 1000	
R 131 HS/80 with 3 cooling drills	5	10 ~ 90	100 ~ 1000	
R 131 HS/80 with 2 lateral cooling slots	5	10 ~ 90	100 ~ 1000	
R 131 HS/80 with cooling - V	5	10 ~ 90	100 ~ 1000	
R 131 HS/80 with waves	5	10 ~ 90	100 ~ 1000	
R 141	5	10 ~ 120	300 ~ 2000	Big Single Gob (Big Bottles, Tableware)
R 142	40	80 ~ 100	300 ~ 2000	
WR 140	5	10 ~ 120	300 ~ 2000	
Shear blade R 87 CH31	17 - 50			Big Single Gob (Big Bottles, Glass Blocks, Jars, Plates)
Shear blade Gr.0 dimension 142x60x5.5	4			Single Gob (Crystal Glass, Stemware)
Shear blade Gr.1 dimension 142x60x5.5	6			
Shear blade Gr.2 dimension 142x60x5.5	8			



Small Shear Blades “R 128” & “R 129”

R 129 R

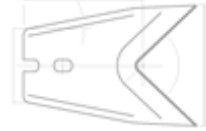
Used for triple or quadruple gob for very small glass articles.
Available in superior “K” quality too as:
R 129 K



R 128 R

Used for triple gob, for small glass articles.
Special blades when Type R 129 R is too small.





Intermediate Shear Blades “R 130”



R 130/20

U-shape blade with R = 20 mm used for double or triple gob, cutting gob sizes from 2½” (40 mm) up to max. 3” (50 mm).
Also available in superior “K” quality too as:
R 130/20 K

R 130 HS/80

V-shape blade with R = 5 mm used for double or triple gob, cutting gob sizes from ⅓” (10 mm) up to max. 1⅝” (40 mm).
Also available in superior “K” quality too as:
R 130 HS/80 K



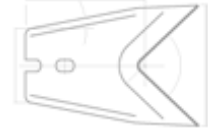
R 130 HS/90

V-shape blade with R = 5 mm used for double or triple gob, cutting gob sizes from ⅓” (10 mm) up to max. 1⅝” (40 mm)
With ground fixing surface.

R 130 HS/100

V-shape blade with R = 5 mm used for double or triple gob, cutting big gob sizes from ⅓” (10 mm) up to max. 3½” (90 mm).
Large opening.





Large Shear Blades “R 131”



R 131 HS/60

U-shape blade with R = 22 mm used for single or double gob, cutting gob sizes from 1³/₄” (44 mm) up to max. 2³/₄” (69 mm). Chamfered edges for better adjustment on shear blade holder.

R 131 HS/70

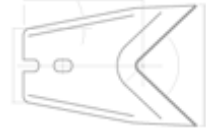
U-shape blade with R = 17 mm used for single or double gob, cutting gob sizes from 1³/₈” (34 mm) up to max. 2³/₄” (69 mm). Chamfered edges for better adjustment on shear blade holder.



R 131 HS/75-20

U-shape blade with R = 20 mm used for single or double gob, cutting gob sizes from 1⁵/₈” (40 mm) up to max. 3¹/₂” (90 mm). Also available in superior “K” quality too as: **R 131 HS/75-20 K**





Large Shear Blades “R 131”



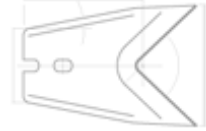
R 131 HS/75-30

U-shape blade with R = 30 mm used for single or double gob, cutting gob sizes from 2³/₈" (60 mm) up to max. 3¹/₂" (90 mm). Also available in superior "K" quality too as:
R 131 HS/75-30 K

R 131 HS/80

V-shape blade with R = 5 mm used for single or double gob, cutting gob sizes from 1¹/₃" (10 mm) to max. 3¹/₂" (90 mm). Also available in superior "K" quality too as:
R 131 HS/K





Very Large Shear Blades “R 141” & “R 142”

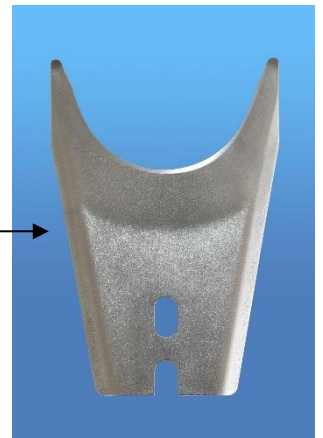


R 141

Special V-shape blade with $R = 7$ mm used for big single gobs, cutting gob sizes from 10 mm up to max. 120 mm gob diameter.
bottles / tableware / glass blocks

R 142

Special U-Shape blade with $R = 40$ mm used for big single gobs, cutting gob sizes from 80 mm up to max 100 mm gob diameter.
bottles / tableware / glass blocks



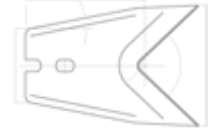


Massive Shear Blades “WR 140”

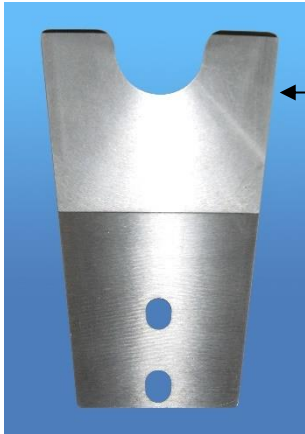
WR 140

Shear blade with R=7 mm
Massive 3,5 mm thick blade
used for big single gobs, cutting gob sizes
from 10 mm up to 120 mm.
glass blocks / big bottles / tableware





Massive Shear Blades “R 87 CH31” & “Gr.1” & “Gr.2”

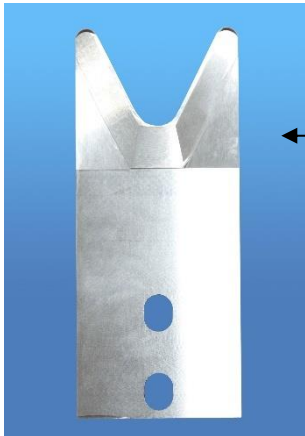
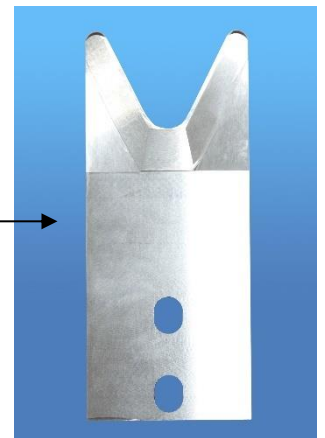


R 87 CH31

Massive blade with R = 17 mm up to 50 mm
used for big single gobbs.
Big Bottles, Glass Blocks, Jars, Plates

Gr.0

Massive blade with R = 4 mm used for big
single gobbs with the dimensions
142x60x5.5 mm.
Crystal Glass, Stemware

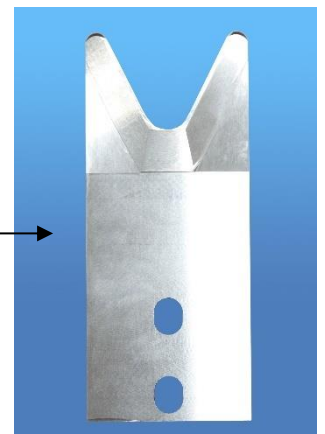


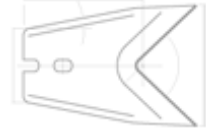
Gr.1

Massive blade with R = 6 mm used for big
single gobbs with the dimensions
142x60x5.5 mm.
Crystal Glass, Stemware

Gr.2

Massive blade with R = 8 mm used for big
single gobbs with the dimensions
142x60x5.5 mm.
Crystal Glass, Stemware





Full Tungsten Carbide Shear Blades



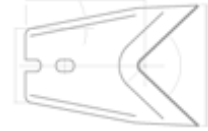
R130 HM



R 131 HM

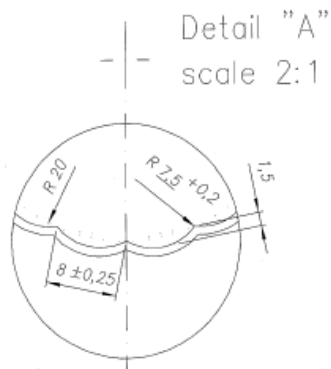
RUREX can offer High Quality Tungsten carbide blades for the following benefit and advantages:

- Longer life time than steel blade under same conditions, provided the blades are correctly aligned, blades can be expected to have a lifetime of 3 months and more
- Possible reducing of the shear spray amount
- Reduced machine down time = More productivity
- Insulated fixing area to prevent electro spark corrosion
- Less shear marks to ultrafine grinded cutting edge
- Better Quality of glass cut
- No tension necessary – initial set-up will fit for whole production cycle



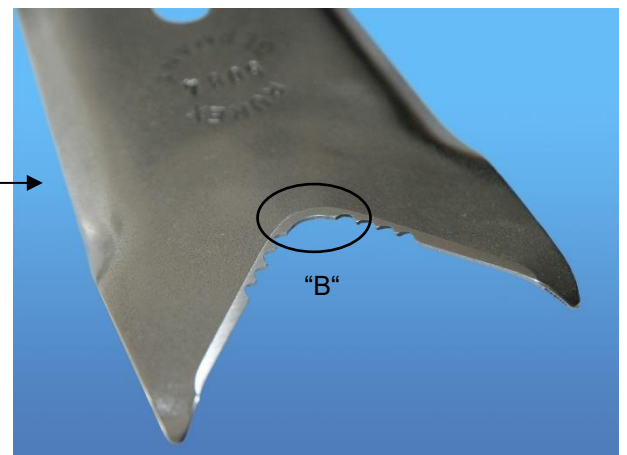
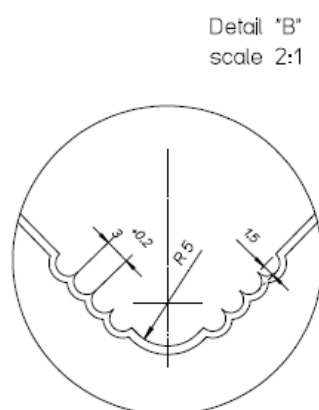
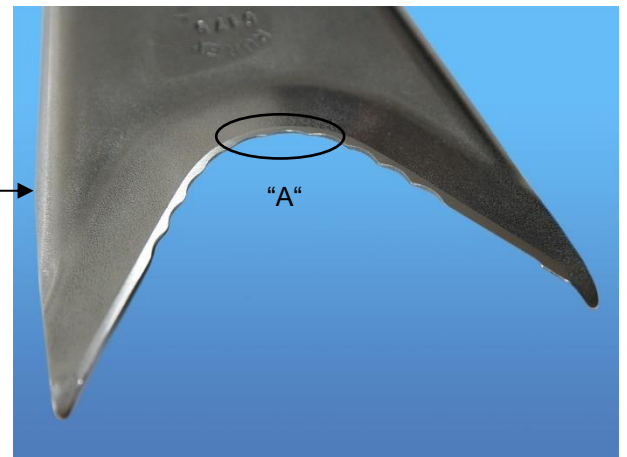
Special Shear Blades

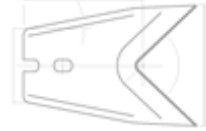
Special Shear blades can range from Serrated (with waves), cooling Drills, V-cut outs, lateral cooling slots, 14 mm fixing holes, surface polishing or different ground angles.



Serrated cutting edge (Waves)

Designed to help eliminate shear marks on wine and champagne production, allowing lots of tiny shear marks which re-melt into the gob.





Special Shear Blades



3 cooling drills (5, 6 or 10 mm)

drilled holes for extra cooling and lubrication on both sides giving extra longevity to the life of the Shear blades and for allowing coolant to get through to drop guides when spraying from above.

Cooling – V

for cooling of drop guide when spraying from above.

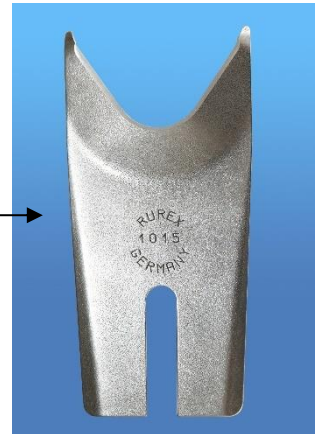


2 Lateral cooling slots

offering extra cooling and lubrication on both sides giving extra longevity to the life of the Shear blades. Improved drop guide cooling when spraying from above.

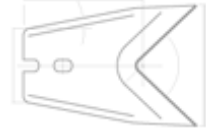
Straight cut mounting groove

for faster fixing on the holder and more adjustment possibilities.



14 mm fixing holes

for offset fixing or using special isolating washers for better isolation and prevention against spark corrosion.

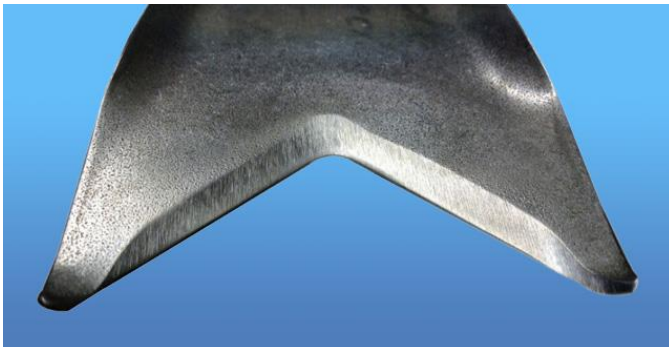


Special Shear Blades



Polished Blade

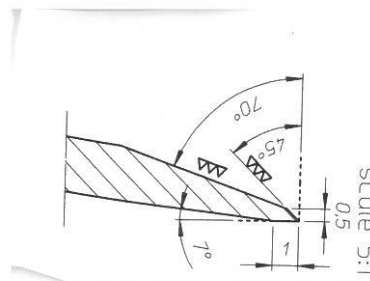
This blade has been highly polished to give a better cut when shearing.

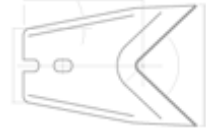


70° - 2 step ground inside angle

This blade has been ground on two different angles. By keeping the cutting edge of the blades at the highest point it gives you a better cut.

Detail sketch of the 70° 2-step inside grinding

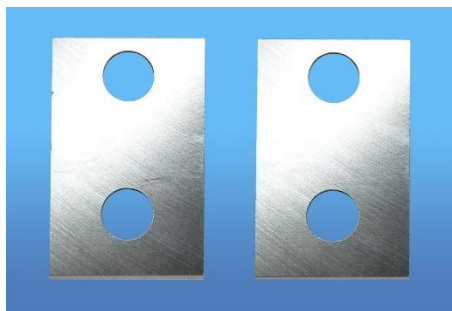
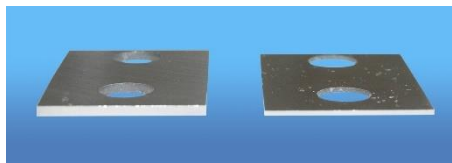




Special Equipment for Shear Blades

Precision Metal Washers

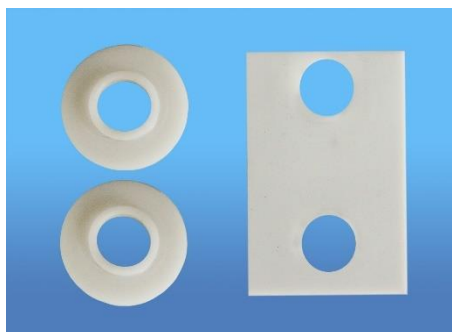
If more height than the normal blade height is needed, we offer metal washer with 2 mm or 3 mm width.

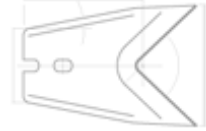


Special Isolating Washers

(only for 14 mm fixing holes)

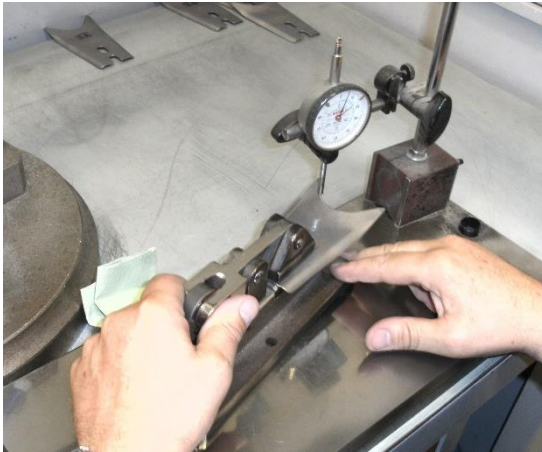
for better isolation and prevention against spark corrosion.





Shear Blade Quality Inspection

Before leaving the factory, all blades are measured and rectified.



Measuring



Rectifying

All blades are marked by a stamp with their cutting height in mm`s.



Choice of stamp



Cutting height in mm



Cutting height in mm



Neck Ring Arm Flatsprings

In quality "**STAINLESS STEEL**", tensile strength min. 1450 N/mm², max. 1550 N/mm² (up to 250° centigrade),
or in quality "**ULTRA**" tensile strength up to max. 1700 N/mm² (up to 500° centigrade).

Length: all lengths are available • Width: 10.5 mm • Thickness: 0.6 mm, 0.7 mm or 0.8 mm

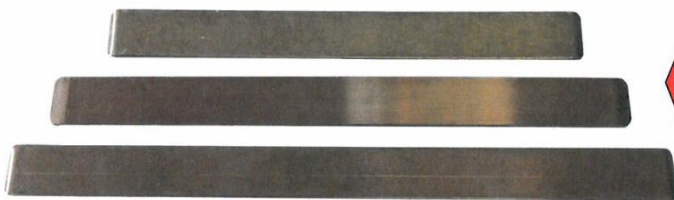
"**ULTRA**" springs only available in 0.7 mm thickness and Standard Ends.





Neck Ring Arm Flatsprings

- Hard wearing Stainless Steel Flatsprings
- Available in 0.6mm, 0.7mm, 0.8mm Thickness
- Excellent strength at high temperatures
(Maintaining elasticity and preventing spring deformation)
- To fit all types of Neck Ring Arms

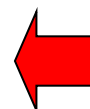


**All lengths of
spring
manufacture**

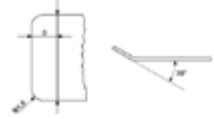


**Any configuration
of spring form
manufactured**

**Flat, Bellville or
Standard Ends**

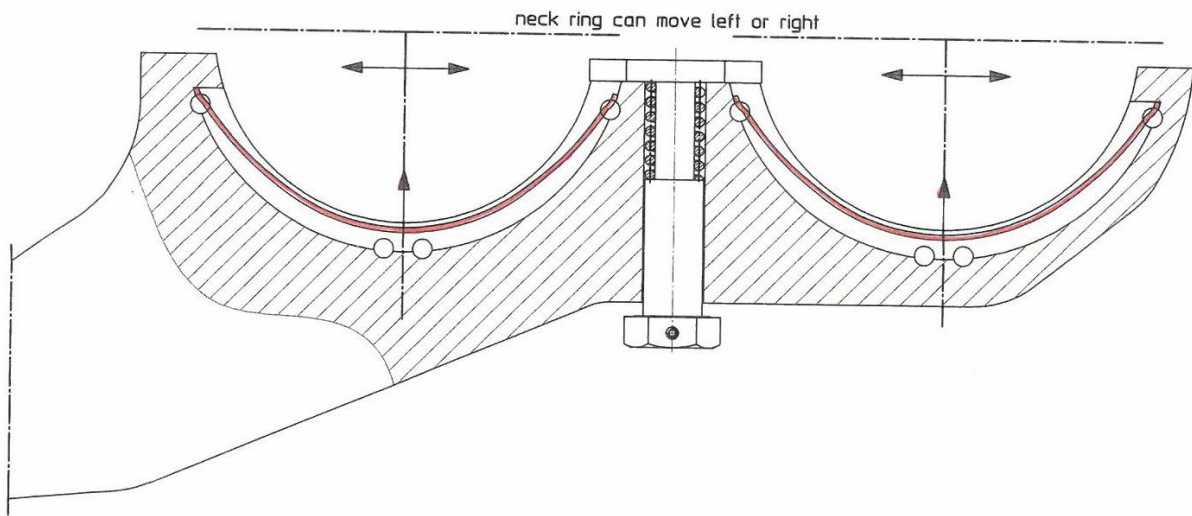


**BOW form special for
better Neck Ring
centralization and to
help prevent long term
carbon build up**

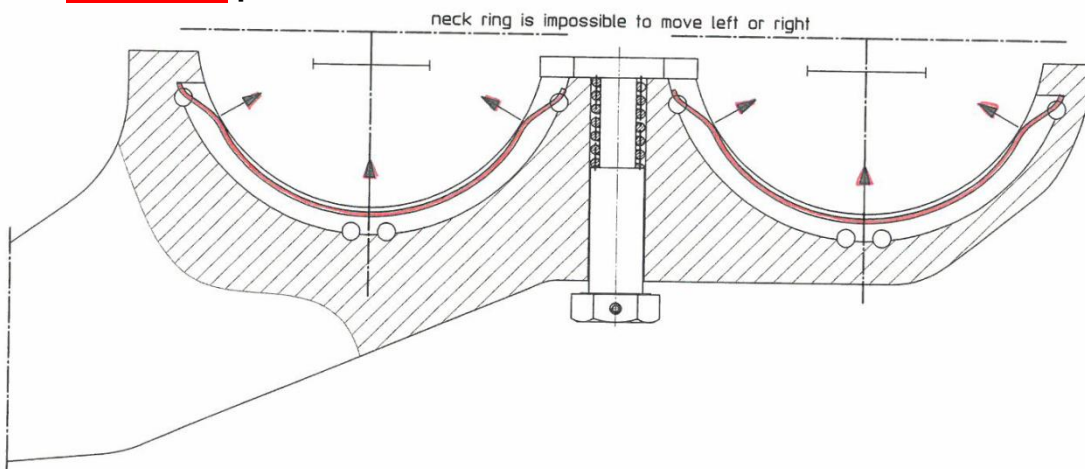


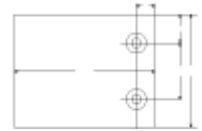
Neck Ring Arm Flatsprings

RUREX-STAHL
Flatspring (Standard)
“A” or “B” shape
with 1 pressure point!



RUREX-STAHL
Flatspring
“C” or “D” shape
with 3 pressure points!

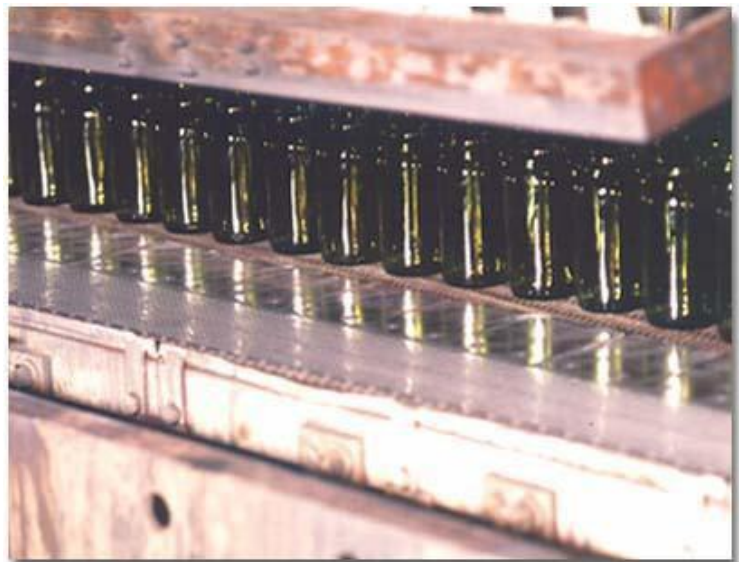
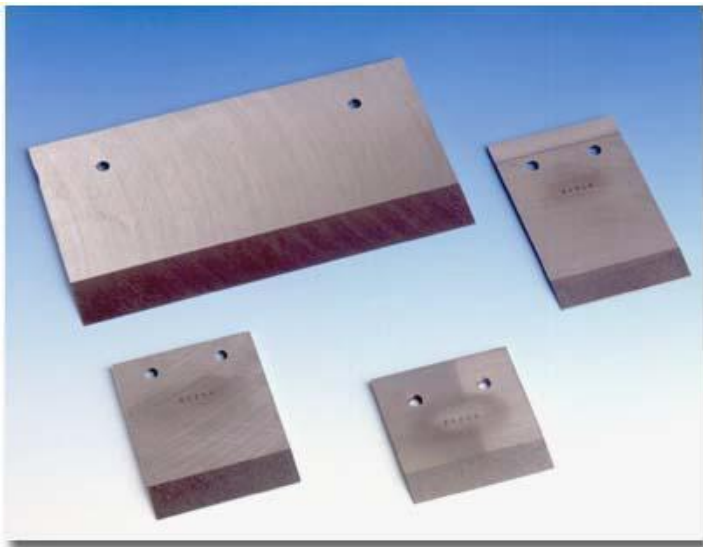


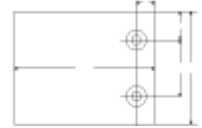


Deadplates

Wear resistant, made from special hardened stainless steel "UP 13 V"

Guarantee life- time of several years!



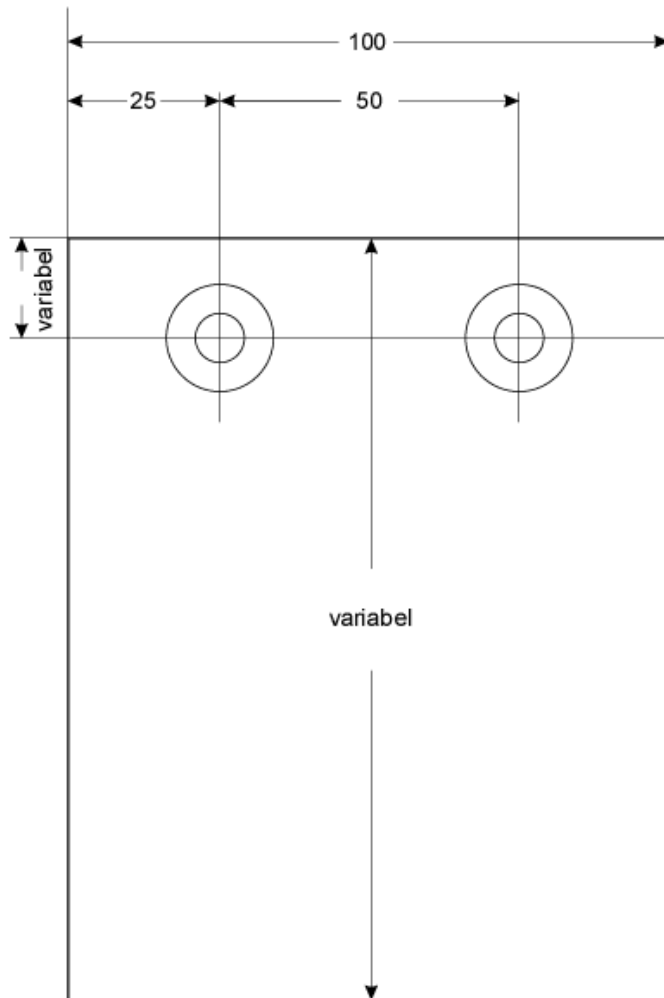


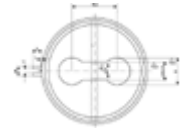
Deadplates

Manufactured to your requirements and according to your drawing

Please send us drawing for an inquiry

RUREX DEADPLATES (example)

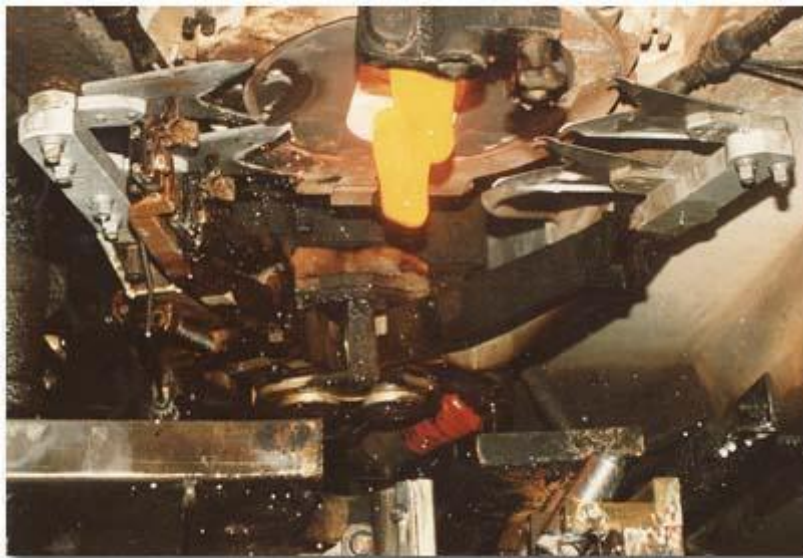


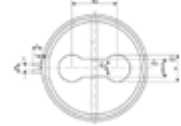


Solid casted “MONOBLOC” ORIFICE RING HOLDER

5” + 7” + 10” Made from heat resistant steel

“Manufactured to your requirements and according to your drawing”





Solid casted "MONOBLOC" ORIFICE RING HOLDER

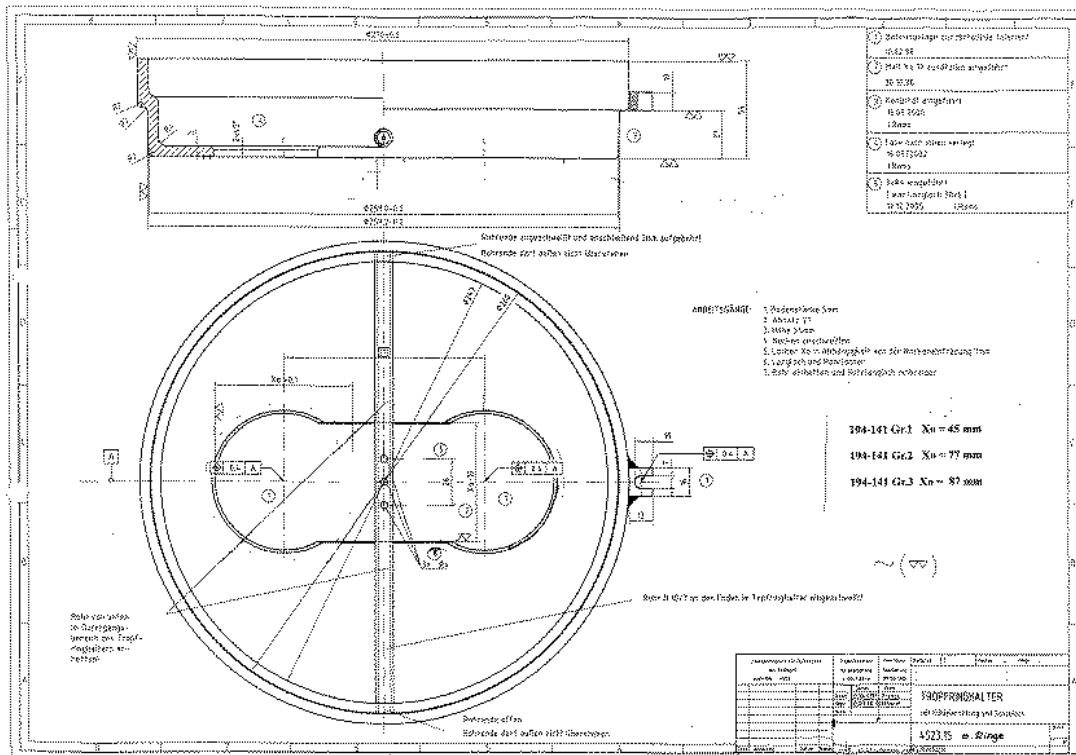
5" Spout – (Dimensions in mm)

7" Spout – (Dimensions in mm)

Ringholder No.	Gob-Ø		x
	mm	inch	
81-297 Gr.1	9,5 – 17,5	3/8" – 11/16"	33
81-297 Gr.2	18,5 – 25,5	23/32" – 1"	39
81-297 Gr.3	27 – 31,5	1 1/16" – 1 1/4"	45

Ringholder No.	Gob-Ø		x ₀	d ₁	D ₁	H
	mm	inch				
194-141 Gr.1	12,5 – 30,0	1/2" – 1 3/16"	45	80	88	8
194-141 Gr.2	31,5 – 65,0	1 1/4" – 2 9/16"	77	80	88	8
194-141 Gr.3	67,0 – 75,0	2 5/8" – 2 15/16"	87	90	98	8

ORIFICE RING HOLDER 7" 194-141 Gr.1- 3



RUREX-STAHl Dr. Otto Kukla GmbH

Glasshow 2016



Founded in October 1949, RUREX-STAHl Dr. Otto Kukla GmbH has celebrated in 2014 its 65th anniversary.

Starting as a trading company in special stainless steel, RUREX-STAHl today is a worldwide operating manufacturer for the glass industry.

With approx. 17 employees in Gelsenkirchen, Germany, the turnover in 2016 was 4,0 million EURO.

The export rate was more than 80% in 2016 (more than 70% in non-EU countries).

RUREX-STAHl is a technology leader in the manufacturing and commissioning of complete glass production lines for solar, figured and profiled glass.

For the container glass industry, we are supplying worldwide our heat- and wear resistant spare parts, such as springs, dead plates, shear blades in many special designs and alloys, especially made for high-speed IS- machines.

RUREX-STAHl is also manufacturer for glass crushing units.



Solar Glass Forming Machine