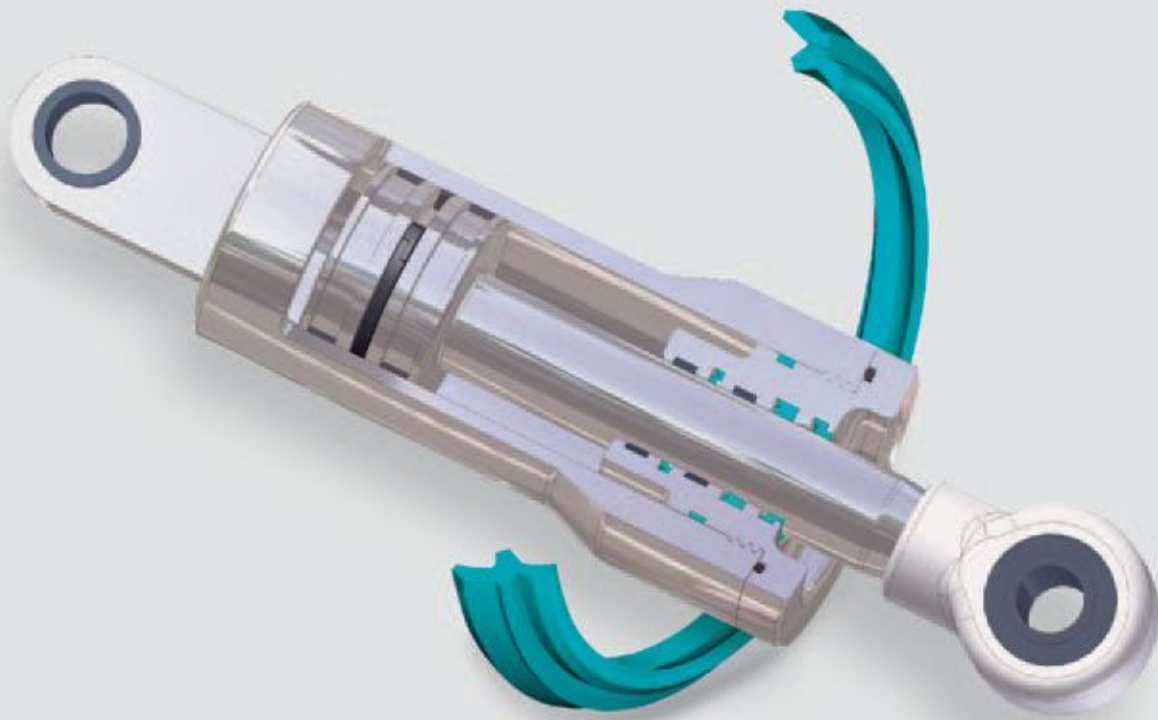
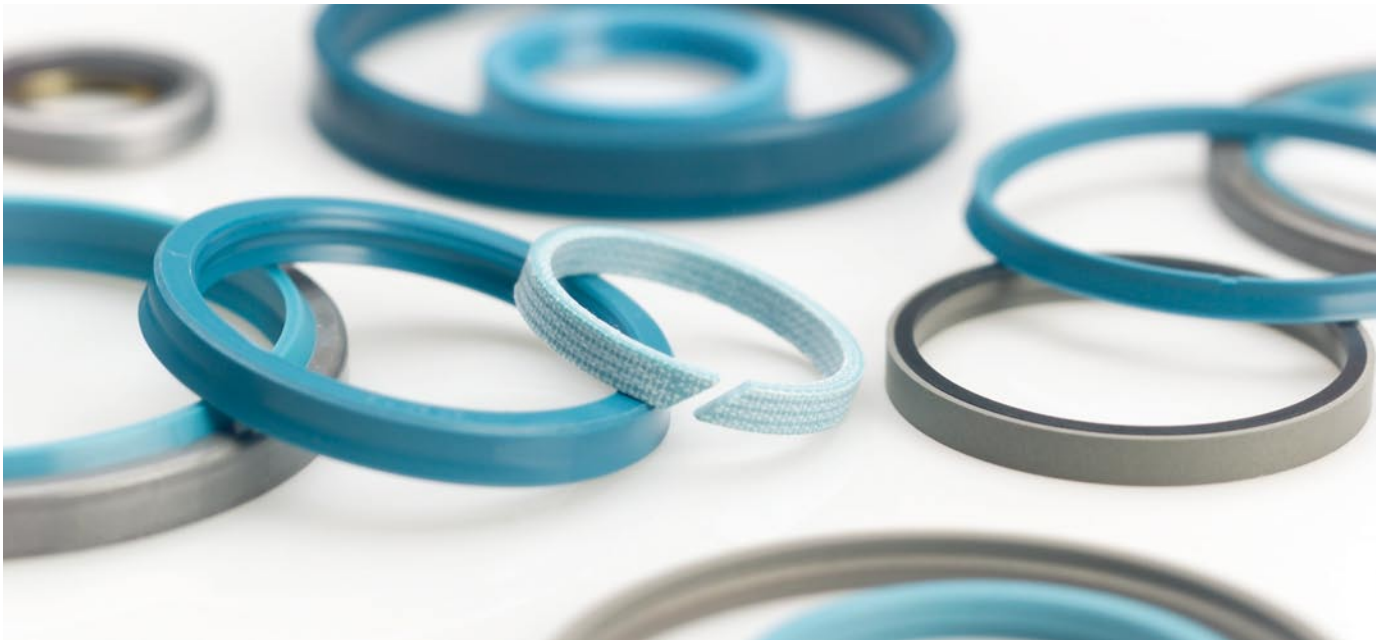


# Zurcon® Scraper DA 24

VENTING VERSION





## Your Partner for Sealing Technology

Trelleborg Sealing Solutions is a major international sealing force, uniquely placed to offer dedicated design and development from our market leading product and material portfolio; a one-stop shop providing the best in elastomer, thermoplastic, PTFE and composite technologies for applications in aerospace, industrial, and automotive industries.

With 50-years experience, Trelleborg Sealing Solutions engineers support customers with design, prototyping, production, test and installation using state-of-the-art design tools. An international network of over 70 facilities worldwide includes 30 manufacturing sites, strategically positioned research and development centers, including materials and development laboratories and locations specializing in design and applications.

Developing and formulating materials in-house, we utilize the resource of our material database, including over 2,000 proprietary compounds and a range of unique products.

Trelleborg Sealing Solutions fulfills challenging service requirements, supplying standard parts in volume or a single custom-manufactured component, through our integrated logistical support, which effectively delivers over 40,000 sealing products to customers worldwide.

Facilities are certified to ISO 9001:2000 and ISO/TS 16949:2002. Trelleborg Sealing Solutions is backed by the experiences and resources of one of the world's foremost experts in polymer technology, Trelleborg AB.

ISO 9001:2000

ISO/TS 16949:2002

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# Zurcon® Scraper DA24 Venting Version

## ■ Zurcon® Scraper DA24 Venting Version

### Introduction

The double-acting scraper DA24 in Zurcon® thermoplastic polyurethane has proved effective in applications with severe operating conditions for many years, especially in environments where there is a high level of external contamination and dirt.

In some situations when there is pressure build-up behind the scraper, the scraper can be pushed out of the groove causing total sealing system failure. Based on DA24, DA24 H is a venting version where axial holes through the section operate as pressure relief 'valves', allowing oil to be released in the case of overpressure.

### Description

Zurcon® DA24 H is a double-acting thermoplastic polyurethane scraper where axial holes through the section operate as pressure relief 'valves', allowing oil to be released in the case of overpressure. Its main features are:

- Trimmed inner sealing lip:  
Provides optimum contact pressure for efficient sealing and wiping of residual oil film.
- Pressure relief through axial holes:  
Positioned above the external scraping lip the holes allow oil to be released when there is pressure build-up on the inner lip by activating the outer lip temporarily.

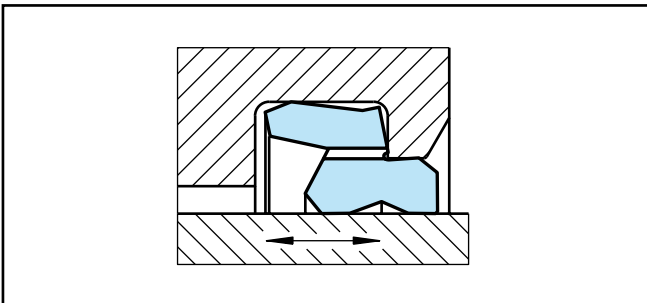


Figure 1 Scraper DA24 H Venting Version

- Robust outer scraper lip:  
Supported by a housing recess, it ensures a high contact force on the rod, preventing penetration of moisture, dirt and impurities even when radial deflections of the rod occur.

DA24 H is produced in Zurcon®, the Trelleborg Sealing Solutions proprietary thermoplastic polyurethane material specially developed for sealing applications. This provides long service life under harsh working conditions and resistance against installation damage.

### Method of operation

Pressure raised oil will flow through a holes in the profile on top of the scraping lip. The scraping lip will be pressed to the rod during pressure build up. A gap will open between scraping lip and housing at a certain pressure level. The oil flows out and the scraper becomes pressure relieves.

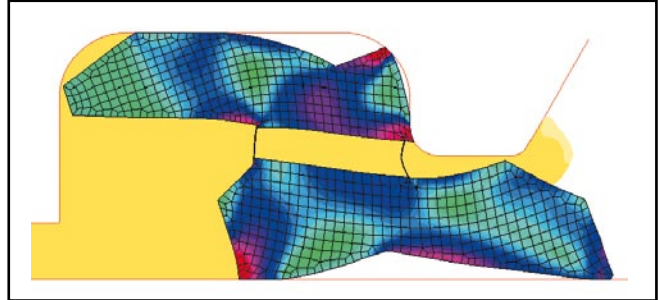


Figure 2 Valve functionality

### Advantages

With improved stability in the groove the DA24 H becomes one of the most efficient scrapers available on the market. It has:

- Excellent scraping performance
- Superior protection against ingress of dirt, external media and moisture
- Efficient sealing behaviour
- Advanced friction characteristics
- Limited heat generation extending service life
- Stability in the groove securing function

### Application Examples

The scraper DA24 is especially suitable for application in:

- Construction machinery
- Mobile hydraulic
- High attack of dirt
- Forestry machinery



## Materials - Standard application

For hydraulic components in mineral oils or medias with good lubricating performance.

Seal Ring: Zurcon® Z20 Standard polyurethane

Set reference: Z201

## Premium Materials – Hydrolysis Resistance

Seal Ring: Zurcon® Z24 Premium polyurethane

Set reference: Z24

The Zurcon® polyurethane has high abrasion resistance, a low compression set, high extrusion resistance and a wide temperature range.

## Technical Data

Operating conditions:

Pressure: max. 2 MPa in static condition  
max. 1 MPa in dynamic condition

Velocity: Up to 0.5 m/s

Temperature: -35° C to +110° C

Media: Hydraulic fluids based on mineral oil

### Important Note

The above stated limits for pressure and speed are maximum values individually. Friction heat generated by the combination of pressure and speed may cause local heat built-up. Care should be taken not to apply high values for pressure and speed at the same time.



# Zurcon® Scraper DA24 Venting Version

## ■ Installation Recommendation

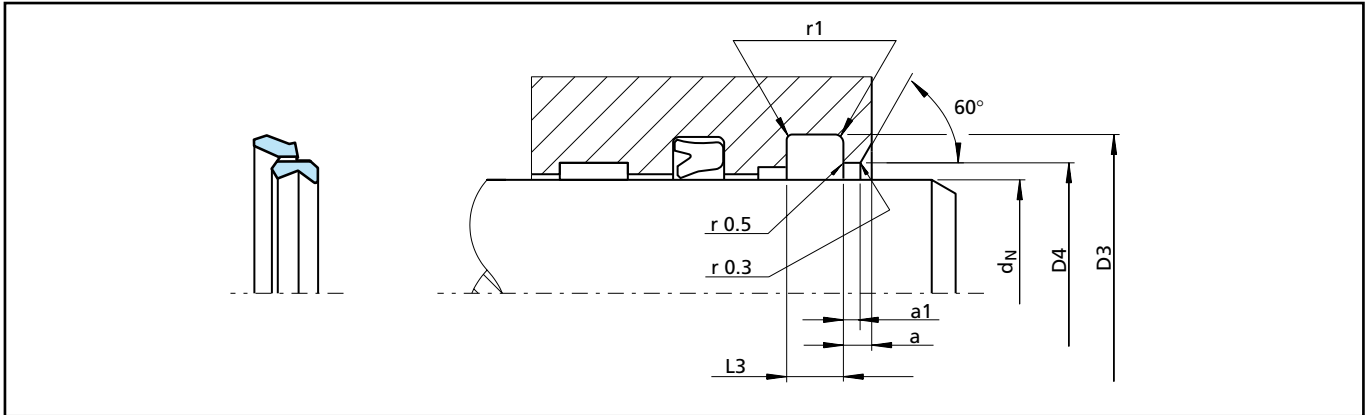


Figure 3 Installation drawing

Table Preferred Series / TSS Order No.

Rod Diameter	Groove Diameter	Groove Width	Radius	Bore Diameter	Step Width	Step Width	TSS Order No.
$d_N$ f8/h9	$D_3$ H9	$L_3 +0.15$	$r1$ max.	$D_4$ H9	$a$ min.	$a1$ min.	
45.0	53.8	6.3	1.2	49.4	3.2	2.0	WD24H0450-Z201
50.0	58.8	6.3	1.2	54.4	3.2	2.0	WD24H0500-Z201
56.0	64.8	6.3	1.2	60.4	3.2	2.0	WD24H0560-Z201
60.0	68.8	6.3	1.2	64.4	3.2	2.0	WD24H0600-Z201
70.0	82.2	8.1	1.6	76.0	4.0	2.5	WD24H0700-Z201
75.0	87.2	8.1	1.6	81.0	4.0	2.5	WD24H0750-Z201
80.0	92.2	8.1	1.6	86.0	4.0	2.5	WD24H0800-Z201
85.0	97.2	8.1	1.6	91.0	4.0	2.5	WD24H0850-Z201
90.0	102.2	8.1	1.6	96.0	4.0	2.5	WD24H0900-Z201
95.0	107.2	8.1	1.6	101.0	4.0	2.5	WD24H0950-Z201
100.0	112.2	8.1	1.6	106.0	4.0	2.5	WD24H1000-Z201
105.0	117.2	8.1	1.6	111.0	4.0	2.5	WD24H1050-Z201
110.0	122.2	8.1	1.6	116.0	4.0	2.5	WD24H1100-Z201
125.0	137.2	8.1	1.6	131.0	4.0	2.5	WD24H1250-Z201
140.0	156.0	9.5	2.0	148.0	5.0	3.0	WD24H1400-Z201
150.0	166.0	9.5	2.0	158.0	5.0	3.0	WD24H1500-Z201
160.0	176.0	9.5	2.0	168.0	5.0	3.0	WD24H1600-Z201
170.0	186.0	9.5	2.0	178.0	5.0	3.0	WD24H1700-Z201
180.0	196.0	9.5	2.0	188.0	5.0	3.0	WD24H1800-Z201
200.0	216.0	9.5	2.0	208.0	5.0	3.0	WD24H2000-Z201
220.0	236.0	9.5	2.0	228.0	5.0	3.0	WD24H2200-Z201
240.0	256.0	9.5	2.0	248.0	5.0	3.0	WD24H2400-Z201
260.0	276.0	9.5	2.0	258.0	5.0	3.0	WD24H2600-Z201
280.0	296.0	9.5	2.0	288.0	5.0	3.0	WD24H2800-Z201



## LOCAL CONTACTS

### EUROPE

**Austria – Vienna** (Slovenia)

+43 (0) 1 406 47 33

**Belgium - Dion-Valmont** (Luxembourg)

+32 (0) 10 22 57 50

**Bulgaria – Sofia**

(Azerbaijan, Belarus, Greece, Romania, Ukraine)

+359 (0) 2 969 95 99

**Croatia – Zagreb** (Albania, Bosnia and Herzegovina,

Macedonia, Serbia, Montenegro)

+385 (0) 1 24 56 387

**Czech Republic - Rakovnik** (Slovakia)

+420 313 529 111

**Denmark – Copenhagen**

+45 48 22 80 80

**Finland – Vantaa** (Estonia, Latvia)

+358 (0) 207 12 13 50

**France - Maisons-Laffitte**

+33 (0) 1 30 86 56 00

**Germany - Stuttgart**

+49 (0) 711 7864 0

**Hungary – Budaörs**

+36 (06) 23 50 21 21

**Italy – Livorno**

+39 0586 22 6111

**The Netherlands - Rotterdam**

+31 (0) 10 29 22 111

**Norway – Oslo**

+47 22 64 60 80

**Poland – Warsaw** (Lithuania)

+48 (0) 22 863 30 11

**Russia – Moscow**

+7 495 627 57 22

**Spain – Madrid** (Portugal)

+34 (0) 91 71057 30

**Sweden – Jönköping**

+46 (0) 36 34 15 00

**Switzerland – Crissier**

+41 (0) 21 631 41 11

**Turkey – Istanbul**

+90 216 569 73 00

**United Kingdom - Solihull** (Eire, South Africa)

+44 (0) 121 744 1221

**Aerospace Hub Europe, North**

(UK and Nordic Countries)

+44 (0) 121 744 1221

**Aerospace Hub Europe, South & West**

(Continental Europe and Middle East)

+33 (0) 1 30 86 56 00

**Automotive Hub Europe**

+49 (0) 711 7864 0

### AMERICAS

**Americas Regional**

+1 260 749 9631

**Brazil – São José dos Campos**

+55 12 3932 7600

**Canada Central – Etobicoke, ON**

+1 416 213 9444

**Canada East – Montreal, QC**

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### ASIA PACIFIC

**Asia Pacific Regional**

+65 6 577 1778

**China – Hong Kong**

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**Singapore and all other countries in South**

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### AFRICA, CENTRAL ASIA AND MIDDLE EAST

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