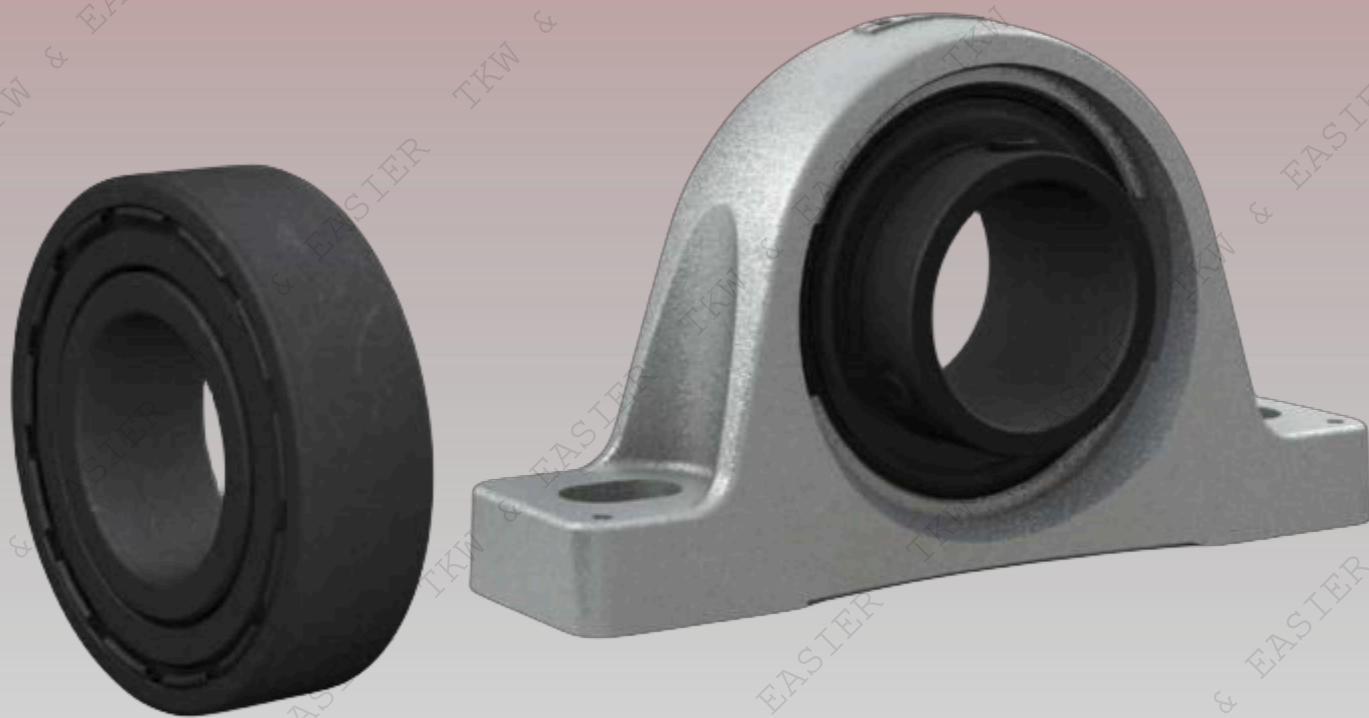


# EASIER high temperature bearings

For operating temperatures up to 350 °C (660 °F)

**XRB-ZWA BEARING INDUSTRY CO., LIMITED**



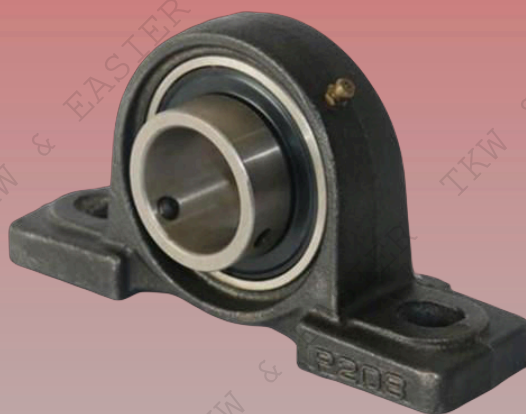
High temperature bearing is a kind of bearing that can withstand high temperature. There are many kinds of high temperature bearing, according to different needs and different environments, different types of bearings can be installed.

High temperature bearing can be divided into: ordinary structure high temperature bearing and special structure high temperature bearing. High temperature bearings are widely used in high temperature operation machinery such as metallurgy, kiln, glass, blast furnace, painting equipment, etc.

Ordinary structure high temperature bearing: mainly refers to the bearing designed according to the common bearing structure, using high temperature resistant materials such as high temperature resistant bearing steel, etc., mainly including



High temperature deep groove ball bearing



High temperature insert ball bearing unit



High temperature insert ball bearing



High temperature resistant self-aligning ball bearings



High temperature resistant spherical roller bearings



High temperature thrust ball bearings



High temperature cylindrical roller bearing



High temperature tapered roller bearing



**Depending on the variety and material, the high temperature resistance is different:**

Generally, high temperature bearing steel bearings are up to 600°C;

Zirconia bearings can withstand 700~900°C;

Silicon nitride bearings can reach 1200°C.

High temperature resistance of ordinary bearing steel: 150-200°C (the structure is full of rolling elements, the service life is short, and the maintenance cost is high)

High-temperature alloy steel: 300-500°C (its structure includes cage and full rolling elements; the service life is more than one year, recommended)

Silicon nitride ceramic rolling element: 800-1200°C (its structure is full of rolling elements, long service life, high cost)

High temperature bearings are mainly used in aviation jet engines, gas turbines, nuclear reactor systems, X-ray tube tungsten disks, and high-speed aircraft, rockets, and spacecraft.

**Features of high temperature bearings:**

1. Lifetime lubrication, no grease is added during use.
2. High cost performance, and the quality is dozens of times higher than that of ordinary bearings.
3. It has won the trust of customers with its long service life.
4. High-temperature bearings are widely used in machinery under high-temperature operations such as metallurgy, furnaces, glass, blast furnaces, painting equipment, etc.

# Reduce maintenance. Run longer. Run cleaner.

Bearings operating in high temperature applications can be unreliable due to Premature failure. The result is high costs and time wasted on frequent bearing replacements. EASIER offers a solution with an assortment of bearings designed to reduce maintenance, run longer and cleaner in high temperature applications.

## EASIER high temperature bearings run trouble-free

EASIER high temperature bearings incorporate a graphite-based lubrication that continuously lubricate the bearing, eliminating the use of grease and oil. Ideal for applications in industries such as metals and food & beverage, these bearings are designed for trouble-free operation at temperatures up to

350 °C (660 °F).

### EASIER high temperature bearings provide:

- Reduced total operating cost through increased bearing service life
- Relubrication-free operation
- Reduced machine complexity
- Reduced environmental impact
- Excellent performance in hot conditions, dry environments and applications with low rotational speeds



## Common issues in high temperature applications

Bearings operating in high temperature applications may be impacted by a number of factors that can reduce bearing service life. Common issues include:

### Inadequate lubrication

At high temperatures, lubricating grease or oil becomes very thin. Oil that is too thin, in combination with low rotational speeds, results in metal-to-metal contact in the bearing. This will cause wear, leading to noise and excessive play (→ **fig. 1**).

### Short grease life

Grease ages rapidly at high temperatures, resulting in the need for very frequent re-lubrication. This is time consuming and costly and is a task that can be forgotten or even neglected. Frequent re-lubrication also creates the potential to over-fill the bearing, increasing the risk of excess grease contaminating the process and possibly catching fire.

Additionally, old grease left in the bearings can carbonize at high temperatures and block the bearings (→ **fig. 2**).

### Loss of internal bearing clearance

When temperatures rise above the bearing stabilization temperature, thermal expansion and material structural changes will occur in the bearing. This can lead to an uncontrolled loss of internal radial clearance, and ultimately seized bearings (→ **fig. 3**).

## The EASIER high temperature bearing solution

EASIER high temperature bearings are designed for challenging operating conditions, with variants capable of performing at temperatures as high as 350 °C (660 °F).

These bearings incorporate graphite-based lubrication which can lubricate at high temperatures and low speeds, eliminating the risk of metal-to-metal contact. Unlike re-grease and oil, graphite does not age and will not lose its lubricating properties at temperatures up to 350 °C (660 °F). This eliminates the need to re-lubricate EASIER high temperature bearings. Additionally, these bearings are designed with a special radial clearance specified to maintain the required radial clearance at high operating temperatures. This avoids bearing seizure and enables a long service life.

## The EASIER advantage: optimum performance, efficiency and savings

EASIER high temperature bearings are designed to deliver increased reliability, reduced complexity, and decreased environmental impact. Because high temperature bearings

correspond to the ISO boundary dimensions for standard bearings, production efficiencies and cost savings can be realized with a simple change to EASIER high temperature bearings.



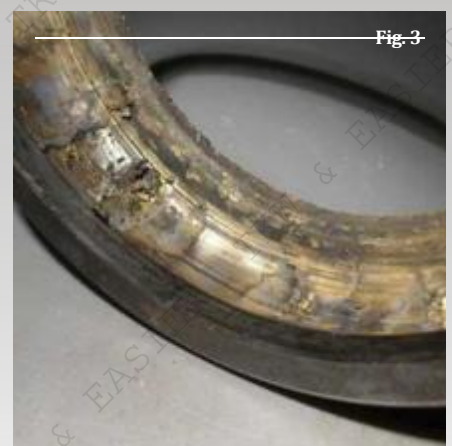
**Fig. 1**

*Inadequate lubrication cause wear which can be recognized by noise and excessive play*



**Fig. 2**

*Grease can carbonize and block the bearing at high operating temperatures*



**Fig. 3**

*Loss of internal radial clearance leading to a seized bearing*

## Customer benefits

### Increased reliability, reduced maintenance

By eliminating temperature related bearing failures, EASIER high temperature bearings improve machine uptime, output and overall reliability. The EASIER solution also eliminates the need to frequently relubricate bearings operating at high temperatures. This provides greater peace of mind, while enhancing operational efficiencies and cost savings.

### Reduced complexity

Because EASIER high temperature bearings are designed for relubrication-free operation at temperatures up to 350 °C (660 °F), manual and automatic lubrication systems are eliminated along with their related costs and issues. Complex cooling systems used to reduce bearing operating temperatures may also be unnecessary.

## Reduced environmental impact

### Global factors

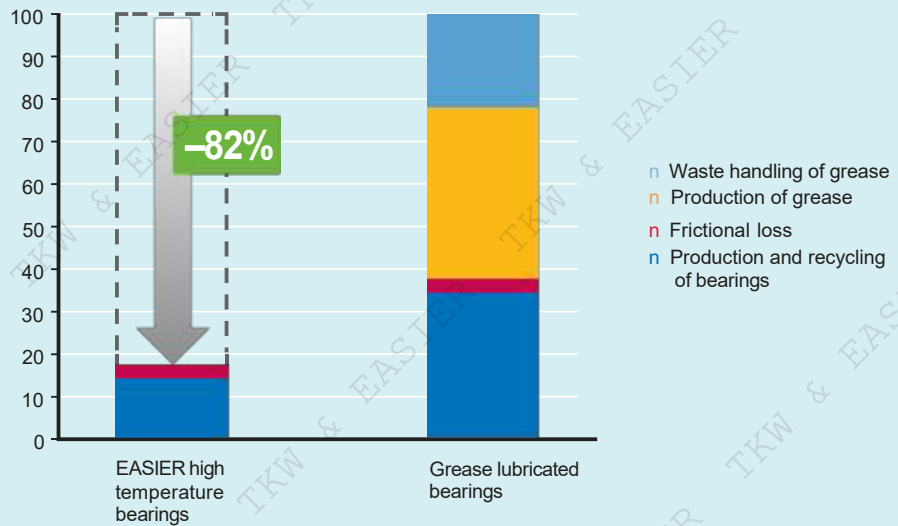
These products are designed to reduce environmental impact and contribute to sustainability efforts (→ **diagram 1**).

### Workplace and process safety

With grease removed from the process environment, relubrication procedures in potentially dangerous areas of the operation can be avoided. Slippery surfaces from grease leakage and the risk of excess grease catching fire are eliminated. EASIER high temperature bearings also contribute to food safety, because there is no risk of process lines and products being contaminated by grease.

**Diagram 1**

**EASIER high temperature bearings reduce CO<sub>2</sub>-emissions in a cooling bed for steel plates**



# Proven performance across industries

EASIER high temperature bearings provide solutions that are proven in a number of different applications across a variety of industries. Even if the design and purpose of the bearing applications differ greatly, they all share common operating conditions that are ideal for graphite lubrication.

Examples of successful installations are shown on the next few pages.

## Cooling bed for steel plates

In hot rolling mills, extremely large cooling beds accumulate and allow steel plates to cool. They use thousands of bearings, operating in intense heat standing still or rotating very slowly. A customer operating this application was using grease lubricated deep groove ball bearings with C4 radial clearance.

### Customer issues

The large number of bearings required large amounts of grease, making relubrication costly, difficult and time consuming.

Rollers that would not rotate due to seized bearings created scratches on the steel plates.

Replacing failed bearings was causing costly downtime.



*A large cooling bed for steel plates. Each wheel is supported by four high temperature bearings.*

## Customer case

Grease-lubricated, deep groove ball bearings were replaced with EASIER high temperature bearings. A total of 5 000 EASIER bearings were installed. Performance improvements were immediately realized, including:

- Bearing service life increased from six months to more than Three years
- Return on investment achieved in eight months
- Savings realized through eliminating grease purchase and waste handling costs
- Reduced maintenance time and costs
- Improved product quality (scratch marks eliminated)
- Reduced bearing related CO<sub>2</sub> emissions by 72%



*EASIER 6212-2Z/VA228 high temperature bearings are an outstanding solution for cooling*



## Continuous baking ovens

Continuous baking ovens are used by large-volume industrial bakeries. Requirements for throughput and reliability are very high.

Bearings rotate slowly and are exposed to high temperatures. A customer was using grease-lubricated ball bearing units in a continuous baking oven.

### Customer issues

High operating temperatures caused inadequate lubrication, increased wear in the bearings, poor reliability, unplanned stops and ultimately failure. Frequent relubrication using expensive high temperature grease required costly maintenance, while used grease ejected from the bearings created a risk of food contamination and worker safety issues.



*Continuous baking oven using high temperature ball bearing units to support the belt.*

### Customer case

The grease-lubricated bearing units were replaced with EASIER high temperature ball bearing units, resulting in a number of performance and productivity enhancements, including:

- Bearing service life extended from 6 to 36 months
- Return on investment achieved in less than eight months
- High temperature bearings enabled higher process temperatures resulting in higher output
- Significantly improved reliability
- Maintenance costs reduced
- Food and worker safety improved due to the elimination of grease



*EASIER high temperature ball bearing units FY25 TF/VA228 can enable higher output and reduced costs in food and beverage operations.*

## Wafer baking ovens

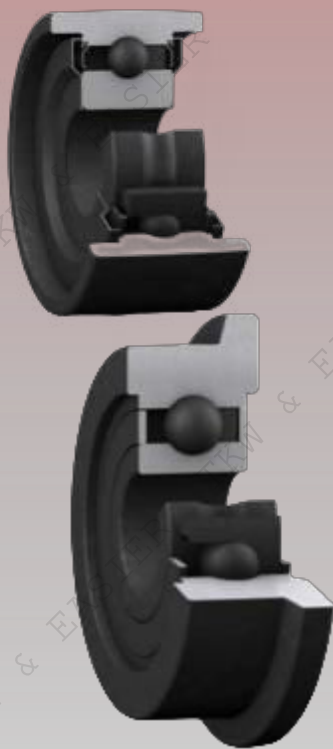
Producers of confectionary products usefully automated wafer baking ovens for high-volume production. A food and beverage manufacturer running this process was using deep groove ball bearings lubricated with high temperature grease.

### Customer issues

Bearing relubrication was needed every 16 weeks, requiring costly planned maintenance. Grease leakage impacted food safety. Output was limited by the oven temperature restrictions of grease-lubricated bearings.



*The chain of a wafer baking oven equipped with customized high temperature bearings.*



*EASIER high temperature flanged carrier wheel units and smaller top roller units without a flange offer relubrication-free performance and reliability in automatic wafer baking ovens.  
BB1-5098 B (top roller)  
BB1-5067 B (carrier wheel)*

### Customer case

EASIER high temperature wafer units were installed. These bearings incorporate graphite-based lubrication that continuously lubricates the bearing. Cost effectiveness and productivity were improved through benefits including:

- There lubrication-free wafer units ran for 2 years 24/7
- Eliminated costs for high temperature grease
- Eliminated 100 hours of labour annually
- 23 hours of planned downtime every 16 weeks was eliminated, increasing productivity through reduced maintenance
- Increased output, as graphite lubrication allows for higher process temperature
- Food and worker safety improved, due to eliminated consumption of grease

## Paint lines

Paint lines are conveyor systems that transport parts as they are painted and dried. For one customer, the bearing operating temperature in the drying section was up to 200 °C (390 °F). Deep groove ball bearings lubricated with high temperature grease needed frequent relubrication.

### Customer issues

Painted car chassis frequently needed to be reworked due to paint damage caused by lubricant leakage from the bearings. Grease could stain the drying paint, an issue made worse when water-based paints were used. The high temperature greases used were not PWIS-free (Paint-Wetting Impairment Substances). Damage to the paint on chassis parts caused production stops.



*Paint line conveyors are supported by wheels equipped with graphite lubricated bearings.*

### Customer case

The grease-lubricated bearings were replaced with EASIER high temperature bearings. Quality and productivity in the paint line was significantly improved, with results including:

- Reduction in the number of chassis needing rework
- Significant increase in paint line efficiency
- Reduced downtime



*EASIER 6205-2Z/VA292 high temperature bearings*

# Assortment

EASIER offers a wide assortment of high temperature bearings and units according to ISO standard and also an assortment of customized high temperature bearings. Selection of an appropriate high temperature bearing is based on the bearing type and the operating conditions (primarily the temperature and speed) of the machinery.

The EASIER basic assortment of high temperature bearings and bearing units corresponding to ISO standards includes:

- Deep groove ball bearings
- Insert bearings
- Ball bearing units

The assortment includes variants that contain food-grade solid lubricants registered by NSF as category H1 (lubricant acceptable with incidental food contact for use in and around food processing areas).

In paint line applications, it is critical that the paint quality of the end product is not impaired by contamination. To address this need for high temperature paint lines, offers a high temperature bearing variant VA292 that has the same bearing characteristics as version VA228 (→ **table 1, page 12**) but, in addition, comply with common PWIS standards (Paint Wetting Impairment Substance).

## Customized high temperature bearings

In addition to high temperature bearings corresponding to ISO standards, EASIER offers an assortment of customized high temperature bearings.

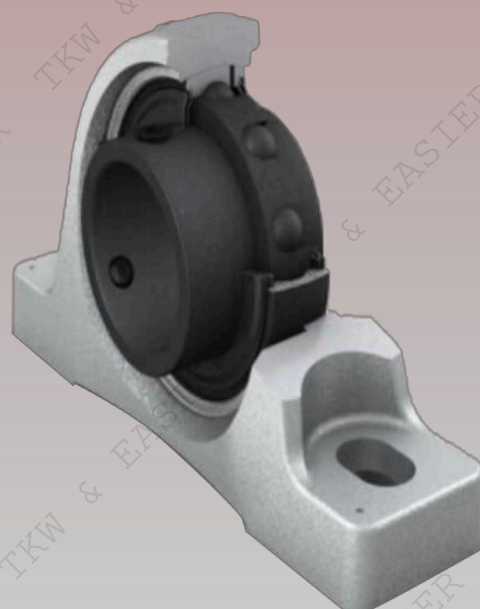
These bearings are customized for use in equipment such as automatic wafer baking ovens in the food and beverage industry, in industrial furnaces and in chains like customized cam rollers.



Deep groove ball bearing



Cam roller



Ball bearing unit

# Deep groove ball bearings for high temperature applications

## Features and benefits of high temperature deep groove ball bearings

The EASIER range of deep groove ball bearings for high temperature applications provides solutions for various combinations of operating temperature and speed.

All variants are lubricated for the life of the bearing, except for open VA201 bearings (that is, without integral shields) which require relubrication.

### VA228 3 EASIER highest performance at temperatures up to 350 °C (660 °F)

VA228 is an excellent choice for machinery operating with low speeds or oscillating movements in combination with very high operating temperatures. This bearing offers outstanding performance at temperatures up to 350 °C (660 °F) through the combination of the solid graphite cage, an adjusted high temperature bearing radial internal clearance and integral shields.

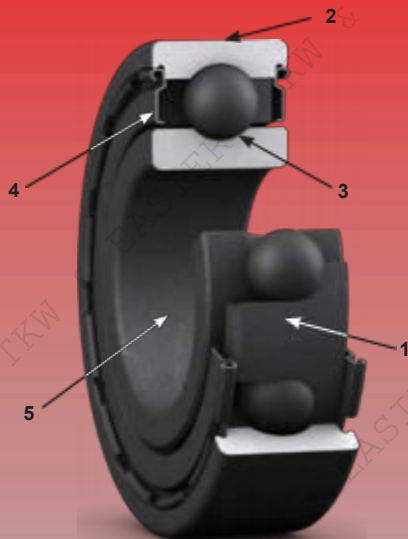
### VA208 3 Improved performance at temperatures up to 350 °C (660 °F)

The VA208 bearing is lubricated by a segmented graphite cage. The large amount of lubricating graphite gives along service life at temperatures up to 350 °C (660 °F).

### VA201 3 Basic performance at temperatures up to 250 °C (480 °F)

The VA201 bearing is lubricated with a polyalkylene glycol/graphite mixture suitable for temperatures up to 250 °C (480 °F). Version VA201 is an open bearing (without shields) while the 2Z/VA201 has an integral shield on both sides. Both versions are supplied pre-filled with lubricant. VA201 can be relubricated whilst 2Z/VA201 is lubricated for the life of the bearing. Depending on the speed and operating temperature, a special running-in procedure might be required

(→ *Lubrication and running in*, page 15).



- 1 no need for relubrication<sup>1)</sup>**  
- the bearings are lubricated with graphite-based high temperature lubricants and are lubricated for the life of the bearing
- 2 simple replacement**  
- the boundary dimensions are the same as those of standard bearings
- 3 operating temperature up to 350 °C (660 °F)**  
- the internal radial clearance and the lubricant are optimized for operation at high temperatures
- 4 protection against contamination**  
- shields (designation suffix 2Z) protect the bearing
- 5 improved running in**  
- the entire bearing surface is manganese phosphate coated

<sup>1)</sup> All variants, except for VA201 open bearings (that is, without integrated shields), are lubricated for the life of the bearing

**Table 1**

### Characteristics of high temperature variants for deep groove ball bearings

Characteristic	Variant		
	VA201 VA208		VA228
<b>Lubrication type</b>	Polyalkylene glycol/ graphite mixture	Segmented cage made of graphite	Coronet cage made of graphite
<b>Phosphated rings, rolling elements and cages</b>	yes	yes	yes
<b>NSF H1 food grade</b>	no	yes	yes
<b>Shields (designation suffix 2Z)</b>	yes / no (open bearing)	yes	yes
<b>Relubrication free</b>	yes / no (open bearing)	yes	yes
<b>Maximum operating temperature</b>	250 °C (480 °F)	350 °C (660 °F)	350 °C (660 °F)
<b>Limiting speed [r/min]<sup>1)</sup></b>	4 500/d <sub>m</sub>	4 500/d <sub>m</sub>	9 000/d <sub>m</sub>
<b>Running in required</b>	Yes	No	No

<sup>1)</sup> d<sub>m</sub> = bearing mean diameter = 0,5 (d + D). For outer ring rotation, used<sub>m</sub> = D.

## Insert bearings and ball bearing units for high temperature applications

The EASIER assortment of insert bearings and ball bearing units for high temperature applications, provides solutions for various temperature and speed combinations. Ball bearing units are available in three different designs in ISO standards. All variants are lubricated for the life of the bearing.



FYTB/UCFL



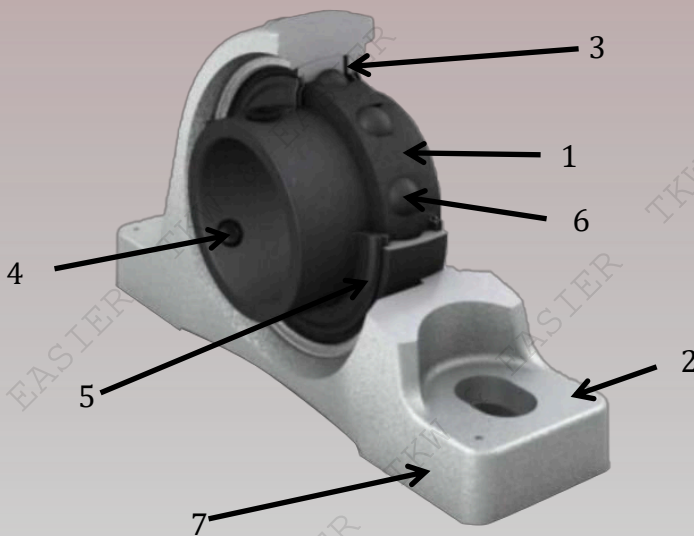
SY/UCP



FY/UCF

ISO standard designs

### Features and benefits of high temperature ball bearing units



#### 1 No need for relubrication

- the bearings are lubricated with graphite-based high temperature lubricants and, as such, are lubricated for the life of the bearing

#### 2 Simple replacement

- the boundary dimensions are the same as those of standard bearings and units

#### 3 Operating temperature up to 350 °C (660 °F)

- the radial internal clearance and the lubricant are optimized for operation at high temperatures

#### 4 Simple mounting and dismantling

- the grub (set) screws in the inner ring make mounting/dismounting easy

#### 5 Protection against contamination

- shields and flingers (designation suffix 2F) protect the bearing

#### 6 Improved running in

- the entire bearing surface is manganese-phosphate coated

#### 7 No colour flaking

- the housing is coated with a high temperature resistant coating



**VA228 3 EASIER highest performance at temperatures up to 350 °C (660 °F)**

VA228 is an excellent choice for machinery operating with low speeds or oscillating movements in combination with very high operating temperatures. This bearing offers outstanding performance at temperatures up to 350 °C (660 °F) through the combination of the solid graphite cage, an adjusted high temperature bearing radial internal clearance and integral shields and flingers.

ation of the solid graphite cage, an adjusted high temperature bearing radial internal clearance and integral shields and flingers.

**VA201 3 Basic performance at temperatures up to 250 °C (480 °F)**

The VA201 bearing is lubricated with a polyalkylene glycol/graphite mixture suitable for temperatures up to 250 °C (480 °F). This bearing is pre-filled and lubricated for the life of the bearing. A special running-in procedure is needed for lower temperature applications.

**Table 2**

**Characteristics of high temperature variants for insert bearings and ball bearing units**

Characteristic	Variant	
	VA201	VA228
<b>Lubrication type</b>	Polyalkylene glycol/graphite mixture	Coronet cage made of graphite
<b>Phosphated rings, rolling elements and cages</b>	yes	yes
<b>NSF H1 food grade</b>	no	yes
<b>Shields (suffix 2F)</b>	yes	yes
<b>Relubrication free</b>	yes	yes
<b>Maximum operating temperature</b>	250 °C (480 °F)	350 °C (660 °F)
<b>Limiting speed [r/min]<sup>1)</sup></b>	4 500/d <sub>m</sub>	9 000/d <sub>m</sub>
<b>Running in required</b>	Yes	No

<sup>1)</sup> d<sub>m</sub> = bearing mean diameter = 0,5 (d + D).

# Design of bearing arrangements

## Location of bearings

The selection of shaft and housing fits for high temperature deep groove ball bearings depends on the bearing operating condition and bearing size. An appropriate fit is needed to locate the shaft, provide satisfactory support, allow for thermal expansion and reach the stated maximum operating bearing temperature (→ table 4).

For moderate loads ( $0,035 C < P \leq 0,05 C$ ), the shaft seats for insert bearings should be machined to a  $h7\gamma$  tolerance. For light loads and low speeds, a  $h8\gamma$  shaft tolerance is sufficient.

All ISO tolerance classes are valid with the envelope requirement in accordance with ISO 14405-1.

## Mounting

EASIER high temperature insert bearings and ball bearing units have a clearance fit for the recommended shaft diameters. They can therefore be slid into position and secured with the grub (set) screws on the inner ring.

EASIER high temperature bearings (except high temperature insert bearings and ball bearing units) should always be hot mounted to

reduce the mounting force and the risk of cracking the graphite lubricant. Induction heater is the preferred choice to heat the bearing during mounting.

Submerging the EASIER high temperature bearings in hot oil is not recommended since the oil remaining in the bearing might carbonize later during operation. Do not use impact mounting methods such as hammer or bearing fitters because the impacts can make the graphite lubricant crack.

## Operating environment

Since all high temperature bearings are supplied without preservative oils and must be used without grease or oil lubrication, the anticorrosion property of the bearings is limited. Therefore, the bearings should be used in a dry environment or with a proper sealing arrangement to keep the bearings dry.

The most common sealing alternatives for high temperature deep groove ball bearings incorporate integral or external shields or labyrinth seals. These arrangements have a rather low complexity and none of these arrangements are capable of keeping the bearing dry in a wet environment.

## Sealing solutions

High temperature deep groove ball bearings can be protected from contaminants by either integral shields, external shields or a combination of both.

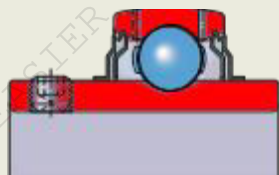
For high temperature bearings, metallic shields are the primary recommendation when a capping device with low complexity is required. Shields prevent the ingress of solid contaminants into the bearing. They are non-contact, generate almost no friction and do not wear. Due to the material and design, they are particularly well suited for high temperatures.

High temperature deep groove ball bearings with designation suffix 2Z have integrated shields, but the VA201 variant is also available as an open bearing (→ fig. 2). The shields on a 2Z/VA201 bearing enable the bearing to be filled with twice the amount of polyalkylene glycol/graphite lubricant that is used in an open VA201 bearing.

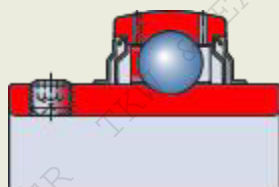
The capping device on high temperature insert bearings (designation suffix 2F) consists of a shield and a flinger that create a narrow gap labyrinth seal (→ fig. 1).

**Fig.1**

High temperature insert bearings with integrated shields and flingers (2F)



2F/VA201



2F/VA228

**Table 4**

Fits for high temperature ball bearings on solid steel shafts or in cast iron and steel housings

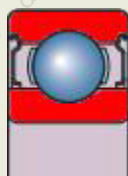
Conditions	Shaft diameter	Shaft tolerance	Housing tolerance
-	mm	-	-
Rotating inner ring load	all	$k6\gamma$	F7 $\gamma$
Stationary inner ring load	all	$g6\gamma$	J7 $\gamma$

**Fig. 2**

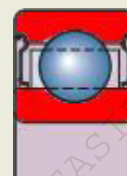
High temperature deep groove ball bearings and integrated shields (2Z)



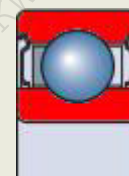
VA201



2Z/VA201



2Z/VA208



2Z/VA228



In many cases, the integral shields are sufficient to keep contaminants out of the bearing. However, in some cases, the integrated shields are insufficient, and so additional external shields should be considered—either Nilos rings (→ **fig. 3**), EASIER sealing washers (→ **fig. 4**) or custom made seals.

**Thermal axial expansion of shaft**

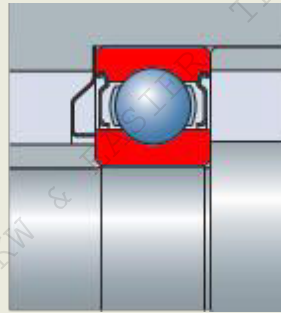
To accommodate thermal axial expansion of the shaft in ball bearing unit arrangements, the shaft on the non-locating side should be provided with either one, or two grooves located 120° apart, to engage with modified grub screws:

- Hexagon socket grub (set) screws with a dog point, in accordance with ISO 40 28, but with a fine thread according to **table 5**. The grub screw should be secured by a nut and spring washer or star lock washer (→ **fig. 5**).
- Slotted pan head screws in accordance with ISO 1580, but with fine thread according to table 5, locked with a spring or star lock washer (→ **fig. 6**).

The screws and groove(s) accommodate changes in shaft length and prevent the shaft from turning independently of the bearing inner ring. The ends of the grub screws should be ground and the sliding surfaces in the shaft grooves coated with a lubricant paste suitable for the operating temperature.

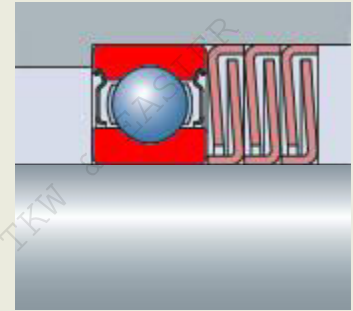
**Fig. 3**

**Sealing solution using Nilos rings**



**Fig. 4**

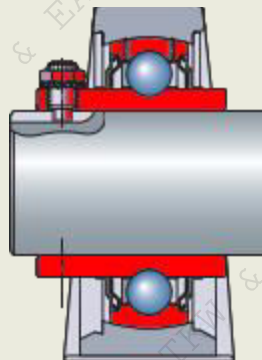
**Sealing solution using EASIER sealing washers**



Example showing bearing 6205-2Z/VA201 and triple sealing washers Z 205

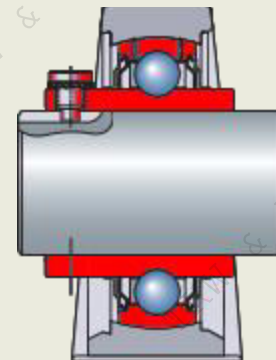
**Fig. 5**

**Hexagonal socket grub screw with a dog point secured by a nut and spring washer**



**Fig. 6**

**Slotted pan head screw secured by a spring washer**



**Table 5**

**Grubscrew key sizes and recommended tightening torques**

Bearing bore	Threaded holes	Hexagonal key size	Tightening torque
over incl.			
mm/in.	-	mm/in.	Nm
<b>For metric shaft</b>			
3	35	M 6 x 0.75	3
4			
35	45	M 8 x 1	4
6.5			
45	80	M 10 x 1	5
16.5			
<b>For inch shaft</b>			

**Single row deep groove ball bearings for high temperature applications**

Designation	Principal dimensions			Basic load ratings	Limiting speed	Operating temperature	Mass
	d[mm]	D[mm]	B[mm]	static C0[kN]	[r/min]	Tmax.[°C]	
6201-2Z/VA201	12	32	10	3.1	200	250	0.04
6201-2Z/VA228	12	32	10	3.1	410	350	0.04
6201/VA201	12	32	10	3.1	200	250	0.037
6202-2Z/VA201	15	35	11	3.75	180	250	0.048
6202-2Z/VA228	15	35	11	3.75	360	350	0.048
6202/VA201	15	35	11	3.75	180	250	0.045
6003-2Z/VA201	17	35	10	3.25	170	250	0.068
6003-2Z/VA208	17	35	10	3.25	170	350	0.041
6003/VA201	17	35	10	3.25	170	250	0.038
6203-2Z/VA201	17	40	12	4.75	160	250	0.068
6203-2Z/VA228	17	40	12	4.75	310	350	0.068
6203/VA201	17	40	12	4.75	160	250	0.065
6303-2Z/VA228	17	47	14	6.55	280	350	0.12
6303/VA201	17	47	14	6.55	140	250	0.11
6004-2Z/VA201	20	42	12	5	140	250	0.071
6004-2Z/VA208	20	42	12	5	140	350	0.071
6004/VA201	20	42	12	5	140	250	0.061
6204-2Z/VA201	20	47	14	6.55	130	250	0.11
6204-2Z/VA228	20	47	14	6.55	260	350	0.11
6204/VA201	20	47	14	6.55	130	250	0.1
6304-2Z/VA201	20	52	15	7.8	120	250	0.15
6304-2Z/VA208	20	52	15	7.8	120	350	0.15
6304-2Z/VA228	20	52	15	7.8	250	350	0.15
6304/VA201	20	52	15	7.8	120	250	0.14
6005-2Z/VA201	25	47	12	6.55	120	250	0.083
6005-2Z/VA208	25	47	12	6.55	120	350	0.083
6005/VA201	25	47	12	6.55	120	250	0.078
6205-2Z/VA201	25	52	15	7.8	120	250	0.13
6205-2Z/VA208	25	52	15	7.8	110	350	0.13
6205-2Z/VA228	25	52	15	7.8	230	350	0.13
6205/VA201	25	52	15	7.8	120	250	0.13
6305-2Z/VA201	25	62	17	11.6	100	250	0.23
6305-2Z/VA208	25	62	17	11.6	100	350	0.037
6305-2Z/VA228	25	62	17	11.6	200	350	0.23
6305/VA201	25	62	17	11.6	100	250	0.23
6006-2Z/VA208	30	55	13	8.3	100	350	0.12
6206-2Z/VA201	30	62	16	11.2	100	250	0.21
6206-2Z/VA208	30	62	16	11.2	90	350	0.21
6206-2Z/VA228	30	62	16	11.2	190	350	0.21
6206/VA201	30	62	16	11.2	100	250	0.2
6306-2Z/VA208	30	72	19	16	80	350	0.36
6306-2Z/VA228	30	72	19	16	170	350	0.36
6306/VA201	30	72	19	16	90	250	0.35
6207-2Z/VA201	35	72	17	15.3	80	250	0.3
6207-2Z/VA208	35	72	17	15.3	80	350	0.3
6207-2Z/VA228	35	72	17	15.3	160	350	0.3
6207/VA201	35	72	17	15.3	80	250	0.29

**Single row deep groove ball bearings for high temperature applications**

Designation	Principal dimensions			Basic load ratings	Limiting speed	Operating temperature	Mass
	d[mm]	D[mm]	B[mm]	static C0[kN]	[r/min]	Tmax.[°C]	
6307-2Z/VA208	35	80	21	19	70	350	0.48
6307/VA201	35	80	21	19	80	250	0.46
6008-2Z/VA208	40	68	15	11	80	350	0.2
6208-2Z/VA201	40	80	18	19	70	250	0.38
6208-2Z/VA208	40	80	18	19	70	350	0.38
6208-2Z/VA228	40	80	18	19	150	350	0.38
6208/VA201	40	80	18	19	70	250	0.37
6308-2Z/VA201	40	90	23	24	70	250	0.65
6308-2Z/VA208	40	90	23	24	60	350	0.65
6308-2Z/VA228	40	90	23	24	130	350	0.65
6308/VA201	40	90	23	24	70	250	0.63
6209-2Z/VA201	45	85	19	21.6	70	250	0.43
6209-2Z/VA208	45	85	19	21.6	60	350	0.43
6209-2Z/VA228	45	85	19	21.6	130	350	0.43
6209/VA201	45	85	19	21.6	70	250	0.42
6309-2Z/VA208	45	100	25	31.5	60	350	0.97
6309/VA201	45	100	25	31.5	60	250	0.84
6010-2Z/VA208	50	80	16	15.6	60	350	0.27
6210-2Z/VA201	50	90	20	23.2	60	250	0.47
6210-2Z/VA208	50	90	20	23.2	60	350	0.47
6210-2Z/VA228	50	90	20	23.2	120	350	0.47
6210/VA201	50	90	20	23.2	60	250	0.45
6310-2Z/VA201	50	110	27	38	60	250	1.12
6310-2Z/VA208	50	110	27	38	50	350	1.12
6310-2Z/VA228	50	110	27	38	110	350	1.12
6310/VA201	50	110	27	38	60	250	1.08
6011-2Z/VA208	55	90	18	21.2	60	350	0.4
6211-2Z/VA201	55	100	21	29	60	250	0.64
6211-2Z/VA208	55	100	21	29	50	350	0.64
6211-2Z/VA228	55	100	21	29	110	350	0.64
6211/VA201	55	100	21	29	60	250	0.61
6311-2Z/VA201	55	120	29	45	50	250	1.42
6311-2Z/VA208	55	120	29	45	50	350	1.42
6311-2Z/VA228	55	120	29	45	100	350	1.42
6311/VA201	55	120	29	45	50	250	1.37
6212-2Z/VA201	60	110	22	36	50	250	0.81
6212-2Z/VA208	60	110	22	36	50	350	0.81
6212-2Z/VA228	60	110	22	36	100	350	0.81
6212/VA201	60	110	22	36	50	250	0.78
6312-2Z/VA208	60	130	31	52	40	350	1.78
6312-2Z/VA228	60	130	31	52	90	350	1.78
6312/VA201	60	130	31	52	50	250	1.72
6213-2Z/VA201	65	120	23	40.5	50	250	1.05
6213-2Z/VA208	65	120	23	40.5	40	350	1.05
6213-2Z/VA228	65	120	23	40.5	90	350	1.05
6213/VA201	65	120	23	40.5	50	250	1.01
6313-2Z/VA201	65	140	33	60	40	250	2.19
6313-2Z/VA208	65	140	33	60	40	350	2.19

**Single row deep groove ball bearings for high temperature applications**

Designation	Principal dimensions			Basic load ratings	Limiting speed	Operating temperature	Mass
	d[mm]	D[mm]	B[mm]	static C0[kN]	[r/min]	Tmax.[°C]	kg
6313-2Z/VA228	65	140	33	60	80	350	2.19
6313/VA201	65	140	33	60	40	250	2.1
6214-2Z/VA201	70	125	24	45	50	250	1.13
6214-2Z/VA208	70	125	24	45	40	350	1.13
6214-2Z/VA228	70	125	24	45	90	350	1.13
6214/VA201	70	125	24	45	50	250	1.08
6314-2Z/VA208	70	150	35	68	40	350	2.65
6314/VA201	70	150	35	68	40	250	2.55
6215-2Z/VA201	75	130	25	49	40	250	1.23
6215-2Z/VA208	75	130	25	49	40	350	1.23
6215-2Z/VA228	75	130	25	49	80	350	1.23
6215/VA201	75	130	25	49	40	250	1.18
6315-2Z/VA208	75	160	37	76.5	30	350	3.17
6315/VA201	75	160	37	76.5	40	250	3.05
6216-2Z/VA208	80	140	26	55	40	350	1.53
6316-2Z/VA208	80	170	39	86.5	30	350	3.73
6217-2Z/VA208	85	150	28	64	30	350	1.88
6217/VA201	85	150	28	64	40	250	1.79
6218-2Z/VA228	90	160	30	73.5	70	350	2.3
6219-2Z/VA201	95	170	32	81.5	30	250	2.71
6219-2Z/VA228	95	170	32	81.5	60	350	2.71
6219/VA201	95	170	32	81.5	30	250	0.078
6020-2Z/VA208	100	150	24	54	30	350	1.33
6220-2Z/VA208	100	180	34	93	30	350	3.27
6220-2Z/VA228	100	180	34	93	60	350	3.27
	d[mm]	D[mm]	B[mm]	C0[kN]	[r/min]	Tmax.[°C]	kg
6220/VA201	100	180	34	93	30	250	3.16
6022-2Z/VA208	110	170	28	73.5	30	350	2.06
6024-2Z/VA208	120	180	28	80	30	350	2.21

Insert bearings for high temperature applications, with set screws									
Designation	Principal dimensions				Basic load ratings		Limiting speed	Operating temperature	Mass
	d[mm]	D[mm]	B[mm]	C[mm]	dynamic	static			
	d[mm]	D[mm]	B[mm]	C[mm]	C[kN]	C0[kN]	[r/min]	Tmax.[°C]	kg
YAR 204-012-2F/VA201	19.05	47	31	14	12.7	6.55	130	250	0.16
YAR 204-012-2F/VA228	19.05	47	31	14	12.7	6.55	260	350	0.16
YAR 204-2F/VA201	20	47	31	14	12.7	6.55	130	250	0.15
YAR 204-2F/VA228	20	47	31	14	12.7	6.55	260	350	0.15
YAR 205-2F/VA201	25	52	34.1	15	14	7.8	110	250	0.19
YAR 205-2F/VA228	25	52	34.1	15	14	7.8	230	350	0.19
YAR 205-100-2F/VA201	25.4	52	34.1	15	14	7.8	110	250	0.19
YAR 205-100-2F/VA228	25.4	52	34.1	15	14	7.8	230	350	0.19
YAR 206-2F/VA201	30	62	38.1	18	19.5	11.2	90	250	0.31
YAR 206-2F/VA228	30	62	38.1	18	19.5	11.2	190	350	0.31
YAR 206-103-2F/VA201	30.163	62	38.1	18	19.5	11.2	90	250	0.31
YAR 206-103-2F/VA228	30.163	62	38.1	18	19.5	11.2	190	350	0.31
YAR 207-104-2F/VA201	31.75	72	42.9	19	25.5	15.3	80	250	0.48
YAR 207-104-2F/VA228	31.75	72	42.9	19	25.5	15.3	160	350	0.48
YAR 207-106-2F/VA201	34.925	72	42.9	19	25.5	15.3	80	250	0.48
YAR 207-106-2F/VA228	34.925	72	42.9	19	25.5	15.3	160	350	0.48
YAR 207-2F/VA201	35	72	42.9	19	25.5	15.3	80	250	0.42
YAR 207-2F/VA228	35	72	42.9	19	25.5	15.3	160	350	0.42
YAR 207-107-2F/VA201	36.512	72	42.9	19	25.5	15.3	80	250	0.42
YAR 207-107-2F/VA228	36.512	72	42.9	19	25.5	15.3	160	350	0.42
YAR 208-108-2F/VA201	38.1	80	49.2	21	30.7	19	70	250	0.66
YAR 208-108-2F/VA228	38.1	80	49.2	21	30.7	19	150	350	0.66
YAR 208-2F/VA201	40	80	49.2	21	30.7	19	70	250	0.61
YAR 208-2F/VA228	40	80	49.2	21	30.7	19	150	350	0.61
YAR 209-111-2F/VA201	42.862	85	49.2	22	33.2	21.6	60	250	0.74
YAR 209-111-2F/VA228	42.862	85	49.2	22	33.2	21.6	130	350	0.74
YAR 209-112-2F/VA201	44.45	85	49.2	22	33.2	21.6	60	250	0.74
YAR 209-112-2F/VA228	44.45	85	49.2	22	33.2	21.6	130	350	0.74
YAR 209-2F/VA201	45	85	49.2	22	33.2	21.6	60	250	0.68
YAR 209-2F/VA228	45	85	49.2	22	33.2	21.6	130	350	0.68
YAR 210-115-2F/VA201	49.213	90	51.6	22	35.1	23.2	60	250	0.8
YAR 210-115-2F/VA228	49.213	90	51.6	22	35.1	23.2	120	350	0.8
YAR 210-2F/VA201	50	90	51.6	22	35.1	23.2	60	250	0.77
YAR 210-2F/VA228	50	90	51.6	22	35.1	23.2	120	350	0.77
YAR 211-200-2F/VA201	50.8	100	55.6	25	43.6	29	50	250	1.2
YAR 211-200-2F/VA228	50.8	100	55.6	25	43.6	29	110	350	1.2
YAR 211-2F/VA201	55	100	55.6	25	43.6	29	50	250	1.05
YAR 211-2F/VA228	55	100	55.6	25	43.6	29	110	350	1.05
YAR 211-203-2F/VA201	55.562	100	55.6	25	43.6	29	50	250	1.05
YAR 211-203-2F/VA228	55.562	100	55.6	25	43.6	29	110	350	1.05
YAR 212-2F/VA201	60	110	65.1	26	52.7	36	50	250	1.45
YAR 212-2F/VA228	60	110	65.1	26	52.7	36	100	350	1.45
YAR 212-207-2F/VA201	61.913	110	65.1	26	52.7	36	50	250	1.35
YAR 212-207-2F/VA228	61.913	110	65.1	26	52.7	36	100	350	1.35
YAR 214-2F/VA228	70	125	69.9	28	62.4	45	80	350	1.95
YAR 215-215-2F/VA201	74.613	130	73.3	29	66.3	49	40	250	2.2
YAR 215-215-2F/VA228	74.613	130	73.3	29	66.3	49	80	350	2.2
YAR 216-2F/VA228	80	140	77.8	30	72.8	53	60	350	2.55

**Ball bearing pillow block units for high temperature applications**

Designation	Principal dimensions					Basic load ratings		Operating temperature	Included products	Mass
						dynami c	static			
	d[mm]	A [mm]	H [mm]	H2 [mm]	L [mm]	C[kN]	C0 [kN]	Tmax.[°C]		kg
SY 3/4 TF/VA201	19.05	32	33.3	64.5	127	12.7	6.55	250	YAR 204-012-2F/VA201	0.57
SY 3/4 TF/VA228	19.05	32	33.3	64.5	127	12.7	6.55	350	YAR 204-012-2F/VA228	0.57
SY 20 TF/VA201	20	32	33.3	64.5	127	12.7	6.55	250	YAR 204-2F/VA201	0.56
SY 20 TF/VA228	20	32	33.3	64.5	127	12.7	6.55	350	YAR 204-2F/VA228	0.56
SY 25 TF/VA201	25	36	36.5	70	130	14	7.8	250	YAR 205-2F/VA201	0.73
SY 25 TF/VA228	25	36	36.5	70	130	14	7.8	350	YAR 205-2F/VA228	0.73
SY 1. TF/VA201	25.4	36	36.5	70	130	14	7.8	250	YAR 205-100-2F/VA201	0.72
SY 1. TF/VA228	25.4	36	36.5	70	130	14	7.8	350	YAR 205-100-2F/VA228	0.72
SY 30 TF/VA201	30	40	42.9	82	152	19.5	11.2	250	YAR 206-2F/VA201	1.05
SY 30 TF/VA228	30	40	42.9	82	152	19.5	11.2	350	YAR 206-2F/VA228	1.05
SY 1.3/16 TF/VA201	30.16 <sub>3</sub>	40	42.9	82	152	19.5	11.2	250	YAR 206-103-2F/VA201	1.05
SY 1.3/16 TF/VA228	30.16 <sub>3</sub>	40	42.9	82	152	19.5	11.2	350	YAR 206-103-2F/VA228	1.05
SY 1.1/4 TF/VA201	31.75	45	47.6	93	160	25.5	15.3	250	YAR 207-104-2F/VA201	1.5
SY 1.1/4 TF/VA228	31.75	45	47.6	93	160	25.5	15.3	350	YAR 207-104-2F/VA228	1.5
SY 1.3/8 TF/VA201	34.92 <sub>5</sub>	45	47.6	93	160	25.5	15.3	250	YAR 207-106-2F/VA201	1.45
SY 1.3/8 TF/VA228	34.92 <sub>5</sub>	45	47.6	93	160	25.5	15.3	350	YAR 207-106-2F/VA228	1.45
SY 35 TF/VA201	35	45	47.6	93	160	25.5	15.3	250	YAR 207-2F/VA201	1.45
SY 35 TF/VA228	35	45	47.6	93	160	25.5	15.3	350	YAR 207-2F/VA228	1.45
SY 1.7/16 TF/VA201	36.51 <sub>2</sub>	45	47.6	93	160	25.5	15.3	250	YAR 207-107-2F/VA201	1.45
SY 1.7/16 TF/VA228	36.51 <sub>2</sub>	45	47.6	93	160	25.5	15.3	350	YAR 207-107-2F/VA228	1.45
SY 1.1/2 TF/VA201	38.1	48	49.2	99	175	30.7	19	250	YAR 208-108-2F/VA201	1.85
SY 1.1/2 TF/VA228	38.1	48	49.2	99	175	30.7	19	350	YAR 208-108-2F/VA228	1.85
SY 40 TF/VA201	40	48	49.2	99	175	30.7	19	250	YAR 208-2F/VA201	1.8
SY 40 TF/VA228	40	48	49.2	99	175	30.7	19	350	YAR 208-2F/VA228	1.8
SY 1.11/16 TF/VA201	42.86 <sub>2</sub>	48	54	107	187	33.2	21.6	250	YAR 209-111-2F/VA201	2.25
SY 1.11/16 TF/VA228	42.86 <sub>2</sub>	48	54	107	187	33.2	21.6	350	YAR 209-111-2F/VA228	2.25
SY 1.3/4 TF/VA201	44.45	48	54	107	187	33.2	21.6	250	YAR 209-112-2F/VA201	2.2
SY 1.3/4 TF/VA228	44.45	48	54	107	187	33.2	21.6	350	YAR 209-112-2F/VA228	2.2
SY 45 TF/VA201	45	48	54	107	187	33.2	21.6	250	YAR 209-2F/VA201	2.2
SY 45 TF/VA228	45	48	54	107	187	33.2	21.6	350	YAR 209-2F/VA228	2.2
SY 1.15/16 TF/VA201	49.21 <sub>3</sub>	54	57.2	114	203	35.1	23.2	250	YAR 210-115-2F/VA201	2.7
SY 1.15/16 TF/VA228	49.21 <sub>3</sub>	54	57.2	114	203	35.1	23.2	350	YAR 210-115-2F/VA228	2.7
SY 50 TF/VA201	50	54	57.2	114	203	35.1	23.2	250	YAR 210-2F/VA201	2.65
SY 50 TF/VA228	50	54	57.2	114	203	35.1	23.2	350	YAR 210-2F/VA228	2.65
SY 2. TF/VA201	50.8	60	63.5	126	219	43.6	29	250	YAR 211-200-2F/VA201	3.6
SY 2. TF/VA228	50.8	60	63.5	126	219	43.6	29	350	YAR 211-200-2F/VA228	3.6
SY 55 TF/VA201	55	60	63.5	126	219	43.6	29	250	YAR 211-2F/VA201	3.45
SY 55 TF/VA228	55	60	63.5	126	219	43.6	29	350	YAR 211-2F/VA228	3.45
SY 2.3/16 TF/VA201	55.56 <sub>2</sub>	60	63.5	126	219	43.6	29	250	YAR 211-203-2F/VA201	3.4
SY 2.3/16 TF/VA228	55.56 <sub>2</sub>	60	63.5	126	219	43.6	29	350	YAR 211-203-2F/VA228	3.4
SY 60 TF/VA201	60	60	69.9	137.5	240	52.7	36	250	YAR 212-2F/VA201	4.45

**Ball bearing pillow block units for high temperature applications**

Designation	Principal dimensions					Basic load ratings		Operating temperature	Included products	Mass
						dynami c	static			
	d[mm]	A [mm]	H [mm]	H2 [mm]	L [mm]	C[kN]	C0 [kN]	Tmax.[°C]		kg
SY 60 TF/VA228	60	60	69.9	137.5	240	52.7	36	350	YAR 212-2F/VA228	4.45
SY 2.7/16 TF/VA201	61.91 3	60	69.9	137.5	240	52.7	36	250	YAR 212-207- 2F/VA201	4.35
SY 2.7/16 TF/VA228	61.91 3	60	69.9	137.5	240	52.7	36	350	YAR 212-207- 2F/VA228	4.35

**Ball bearing square flanged units for high temperature applications**

Designation	Principal dimensions					Basic load ratings		Limiting speed	Operating temperature	Included products	Mass
						dynam ic	static				
	D [mm]	A [mm]	J [mm]	L [mm]	T [mm]					kg	
FY 3/4 TF/VA201	19.05	29.5	63.5	86	37.3	12.7	6.55	130	250	YAR 204-012-2F/VA201	0.55
FY 3/4 TF/VA228	19.05	29.5	63.5	86	37.3	12.7	6.55	260	350	YAR 204-012-2F/VA228	0.55
FY 20 TF/VA201	20	29.5	63.5	86	37.3	12.7	6.55	130	250	YAR 204-2F/VA201	0.54
FY 20 TF/VA228	20	29.5	63.5	86	37.3	12.7	6.55	260	350	YAR 204-2F/VA228	0.54
FY 25 TF/VA201	25	30	70	95	38.8	14	7.8	110	250	YAR 205-2F/VA201	0.72
FY 25 TF/VA228	25	30	70	95	38.8	14	7.8	230	350	YAR 205-2F/VA228	0.72
FY 1. TF/VA201	25.4	30	70	95	38.8	14	7.8	110	250	YAR 205-100-2F/VA201	0.72
FY 1. TF/VA228	25.4	30	70	95	38.8	14	7.8	230	350	YAR 205-100-2F/VA228	0.72
FY 30 TF/VA201	30	32.5	82.5	108	42.2	19.5	11.2	90	250	YAR 206-2F/VA201	1.05
FY 30 TF/VA228	30	32.5	82.5	108	42.2	19.5	11.2	190	350	YAR 206-2F/VA228	1.05
FY 1.3/16 TF/VA201	30.163	32.5	82.5	108	42.2	19.5	11.2	90	250	YAR 206-103-2F/VA201	1.05
FY 1.3/16 TF/VA228	30.163	32.5	82.5	108	42.2	19.5	11.2	190	350	YAR 206-103-2F/VA228	1.05
FY 1.1/4 TF/VA201	31.75	34.5	92	118	46.4	25.5	15.3	80	250	YAR 207-104-2F/VA201	1.35
FY 1.1/4 TF/VA228	31.75	34.5	92	118	46.4	25.5	15.3	160	350	YAR 207-104-2F/VA228	1.35
FY 35 TF/VA201	35	34.5	92	118	46.4	25.5	15.3	80	250	YAR 207-2F/VA201	1.3
FY 35 TF/VA228	35	34.5	92	118	46.4	25.5	15.3	160	350	YAR 207-2F/VA228	1.3
FY 1.7/16 TF/VA201	36.512	34.5	92	118	46.4	25.5	15.3	80	250	YAR 207-107-2F/VA201	1.3
FY 1.7/16 TF/VA228	36.512	34.5	92	118	46.4	25.5	15.3	160	350	YAR 207-107-2F/VA228	1.3
FY 1.1/2 TF/VA201	38.1	38.5	101.5	130	54.2	30.7	19	70	250	YAR 208-108-2F/VA201	1.85
FY 1.1/2 TF/VA228	38.1	38.5	101.5	130	54.2	30.7	19	150	350	YAR 208-108-2F/VA228	1.85
FY 40 TF/VA201	40	38.5	101.5	130	54.2	30.7	19	70	250	YAR 208-2F/VA201	1.8
FY 40 TF/VA228	40	38.5	101.5	130	54.2	30.7	19	150	350	YAR 208-2F/VA228	1.8
FY 1.11/16 TF/VA201	42.862	39	105	137	54.2	33.2	21.6	60	250	YAR 209-111-2F/VA201	2.05
FY 1.11/16 TF/VA228	42.862	39	105	137	54.2	33.2	21.6	130	350	YAR 209-111-2F/VA228	2.05
FY 1.3/4 TF/VA201	44.45	39	105	137	54.2	33.2	21.6	60	250	YAR 209-112-2F/VA201	2
FY 1.3/4 TF/VA228	44.45	39	105	137	54.2	33.2	21.6	130	350	YAR 209-112-2F/VA228	2
FY 45 TF/VA201	45	39	105	137	54.2	33.2	21.6	60	250	YAR 209-2F/VA201	2
FY 45 TF/VA228	45	39	105	137	54.2	33.2	21.6	130	350	YAR 209-2F/VA228	2
FY 1.15/16 TF/VA201	49.213	43	111	143	60.6	35.1	23.2	60	250	YAR 210-115-2F/VA201	2.35
FY 1.15/16 TF/VA228	49.213	43	111	143	60.6	35.1	23.2	120	350	YAR 210-115-2F/VA228	2.35
FY 50 TF/VA201	50	43	111	143	60.6	35.1	23.2	60	250	YAR 210-2F/VA201	2.3
FY 50 TF/VA228	50	43	111	143	60.6	35.1	23.2	120	350	YAR 210-2F/VA228	2.3
FY 2. TF/VA201	50.8	47.5	130	162	64.4	43.6	29	50	250	YAR 211-200-2F/VA201	3.5
FY 2. TF/VA228	50.8	47.5	130	162	64.4	43.6	29	110	350	YAR 211-200-2F/VA228	3.5
FY 55 TF/VA201	55	47.5	130	162	64.4	43.6	29	50	250	YAR 211-2F/VA201	3.35
FY 55 TF/VA228	55	47.5	130	162	64.4	43.6	29	110	350	YAR 211-2F/VA228	3.35
FY 2.3/16 TF/VA201	55.562	47.5	130	162	64.4	43.6	29	50	250	YAR 211-203-2F/VA201	3.3
FY 2.3/16 TF/VA228	55.562	47.5	130	162	64.4	43.6	29	110	350	YAR 211-203-2F/VA228	3.3
FY 60 TF/VA201	60	52	143	175	73.7	52.7	36	50	250	YAR 212-2F/VA201	4
FY 60 TF/VA228	60	52	143	175	73.7	52.7	36	100	350	YAR 212-2F/VA228	4
FY 2.7/16 TF/VA201	61.913	52	143	175	73.7	52.7	36	50	250	YAR 212-207-2F/VA201	3.9
FY 2.7/16 TF/VA228	61.913	52	143	175	73.7	52.7	36	100	350	YAR 212-207-2F/VA228	3.9



**Ball bearing oval flanged units for high temperature applications**

Designation	Principal dimensions				Basic load ratings		Limiting speed	Operating temperature	Included products	Mass
					dynami c	static				
	d[mm]	A[mm]	L[mm]	T[mm]	C[kN]	C0[kN]	[r/min]	Tmax.[°C]		kg
FYTB 3/4 TF/VA201	19.05	29.5	60.5	37.3	12.7	6.55	130	250	YAR 204-012-2F/VA201	0.46
FYTB 3/4 TF/VA228	19.05	29.5	60.5	37.3	12.7	6.55	260	350	YAR 204-012-2F/VA228	0.46
FYTB 20 TF/VA201	20	29.5	60.5	37.3	12.7	6.55	130	250	YAR 204-2F/VA201	0.45
FYTB 20 TF/VA228	20	29.5	60.5	37.3	12.7	6.55	260	350	YAR 204-2F/VA228	0.45
FYTB 25 TF/VA201	25	30	70	38.8	14	7.8	110	250	YAR 205-2F/VA201	0.59
FYTB 25 TF/VA228	25	30	70	38.8	14	7.8	230	350	YAR 205-2F/VA228	0.59
FYTB 1. TF/VA201	25.4	30	70	38.8	14	7.8	110	250	YAR 205-100-2F/VA201	0.59
FYTB 1. TF/VA228	25.4	30	70	38.8	14	7.8	230	350	YAR 205-100-2F/VA228	0.59
FYTB 30 TF/VA201	30	32.5	83	42.2	19.5	11.2	90	250	YAR 206-2F/VA201	0.88
FYTB 30 TF/VA228	30	32.5	83	42.2	19.5	11.2	190	350	YAR 206-2F/VA228	0.88
FYTB 1.1/4 TF/VA201	31.75	34.5	96	46.4	25.5	15.3	80	250	YAR 207-104-2F/VA201	1.25
FYTB 1.1/4 TF/VA228	31.75	34.5	96	46.4	25.5	15.3	160	350	YAR 207-104-2F/VA228	1.25
FYTB 1.3/8 TF/VA201	34.925	34.5	96	46.4	25.5	15.3	80	250	YAR 207-106-2F/VA201	1.2
FYTB 1.3/8 TF/VA228	34.925	34.5	96	46.4	25.5	15.3	160	350	YAR 207-106-2F/VA228	1.2
FYTB 35 TF/VA201	35	34.5	96	46.4	25.5	15.3	80	250	YAR 207-2F/VA201	1.2
FYTB 35 TF/VA228	35	34.5	96	46.4	25.5	15.3	160	350	YAR 207-2F/VA228	1.2
FYTB 1.1/2 TF/VA201	38.1	38.5	102	54.2	30.7	19	70	250	YAR 208-108-2F/VA201	1.65
FYTB 1.1/2 TF/VA228	38.1	38.5	102	54.2	30.7	19	150	350	YAR 208-108-2F/VA228	1.65
FYTB 40 TF/VA201	40	38.5	102	54.2	30.7	19	70	250	YAR 208-2F/VA201	1.6
FYTB 40 TF/VA228	40	38.5	102	54.2	30.7	19	150	350	YAR 208-2F/VA228	1.6
FYTB 1.11/16 TF/VA201	42.862	39	111	54.2	33.2	21.6	60	250	YAR 209-111-2F/VA201	1.85
FYTB 1.11/16 TF/VA228	42.862	39	111	54.2	33.2	21.6	130	350	YAR 209-111-2F/VA228	1.85
FYTB 1.3/4 TF/VA201	44.45	39	111	54.2	33.2	21.6	60	250	YAR 209-112-2F/VA201	1.8
FYTB 1.3/4 TF/VA228	44.45	39	111	54.2	33.2	21.6	130	350	YAR 209-112-2F/VA228	1.8
FYTB 45 TF/VA201	45	39	111	54.2	33.2	21.6	60	250	YAR 209-2F/VA201	1.8
FYTB 45 TF/VA228	45	39	111	54.2	33.2	21.6	130	350	YAR 209-2F/VA228	1.8
FYTB 1.15/16 TF/VA201	49.213	43	116	60.6	35.1	23.2	60	250	YAR 210-115-2F/VA201	2.1
FYTB 1.15/16 TF/VA228	49.213	43	116	60.6	35.1	23.2	120	350	YAR 210-115-2F/VA228	2.1
FYTB 50 TF/VA201	50	43	116	60.6	35.1	23.2	60	250	YAR 210-2F/VA201	2.1
FYTB 50 TF/VA228	50	43	116	60.6	35.1	23.2	120	350	YAR 210-2F/VA228	2.1
FYTB 2. TF/VA201	50.8	47	127	64.4	43.6	29	50	250	YAR 211-200-2F/VA201	2.9
FYTB 2. TF/VA228	50.8	47	127	64.4	43.6	29	110	350	YAR 211-200-2F/VA228	2.9
FYTB 55 TF/VA201	55	47	127	64.4	43.6	29	50	250	YAR 211-2F/VA201	2.75
FYTB 55 TF/VA228	55	47	127	64.4	43.6	29	110	350	YAR 211-2F/VA228	2.75

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