

# SDVD split plummer block housing assemblies

For mining conveyor pulley bearings











# SDVD concept

Market driven features

Market driven performance



COMPATIBLE
WITH EXISTING
PULLEY
ARRANGEMENTS









# SKF SDVD Housings

# Specifically designed & developed for conveyor pulleys in Australian mining, minerals processing and bulk materials handling.

Interface dimensions (mounting bolt pattern, shaft centre height, base footprint) are fully compatible with the market standard SD and SDD 31 series.

Design features and manufacturing specifications for SDVD housing assemblies are tailored to provide the optimum balance of:

- User-friendliness
- High performance
- Cost

To be suitable for conveyor duty in a wide range of industries

# Market demands

Application duties in coal and other mining industries vary from moderate to severe.

High focus on contamination exclusion and greasing effectiveness

### End users require:

- High performance
- Reliable operation
- Ease of maintenance
- Cost-effective products which enable:
  - Standardisation
  - Interchangeability
  - Low cost of ownership

## Pulley designers and manufacturers require:

- Readily available product
- Cost-effective products
- Minimised overall width
  - optimisation of pulley design
  - cost reduction benefits
- Simplicity of installation

# Industry sectors

SKF SDVD housings are designed specifically for the demands of the coal sector and similar industries.

#### Housing Assemblies

- Have minimised width
- Can be fitted to any existing pulleys using the same basic bearing series

#### Housings

- 4 bolt mount base
- Manufactured in SG iron for robustness
- Bolt-on closed end covers

### Housing seals

- Bolt-on (unsplit) TKV taconite style
- With axial labyrinth and V-ring

## SKF SDVD series housings

- Incorporate SKF Sealed Explorer Spherical Roller Bearings (SSRB), the perfect choice for this industry segment
- Conventional unsealed SRBs are also fully compatible



# Optimised design

# Summary of benefits for conveyor pulley application

- Universally applicable due to minimised assembly width; SDVD housings can be retrofitted to all existing pulleys which use the same basic bearing housing size series
- Optimised design and reduced cost for new pulleys, due to minimised assembly width
- Simple installation (initial assembly and in-situ rebuilds)
- Easy and accurate pulley alignment and in-situ maintenance; SDVD design facilitates bearing changes in-situ
- Delivers high performance, high reliability and long service life for bearings

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# SIMPLE INSTALLATION

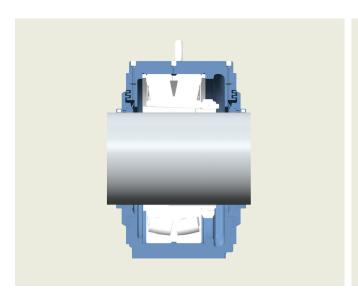
# SDVD housing design features

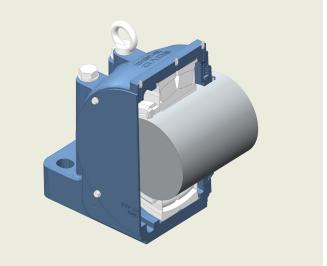
- Non-symmetrical design: minimised width at inboard (pulley drum) side
- Seal carrier recessed into housing body: minimised assembly width
- Bearing seat form optimised for longest service life and minimum vibration levels
- Seal carrier mounting opening diameter maximised:
  - minimum pulley lift required to change bearings in-situ, if required
  - SKF hydraulic nut can be used with bearing already inside housing
  - allows accurate and reliable mounting if changing bearing in-situ
- Centre line markings on base to assist pulley installation and alignment in both planes
- Spot faced positions for vibration sensors (horizontal, vertical and axial positions)
- Base and cap with unique match mark to eliminate risk of mixing components

\* Patent pending



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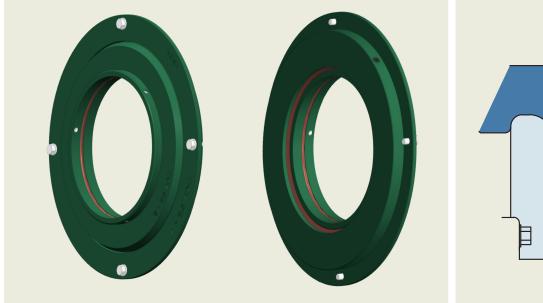
# TKV taconite seal design features

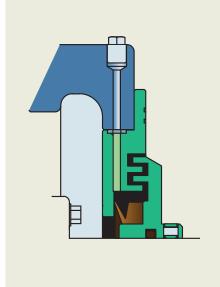
- Axial labyrinth configuration
  - Flinger effect from rotating labyrinth part
  - Rubbing seal element can't damage shaft
  - High quality V-ring runs on unsplit counter face
  - Easy and precise installation (labyrinth gap setting)
  - Positive location on shaft (set screws)
  - Static sealing on shaft (0-ring)

- Labyrinth clearances optimised
  - Sealing performance
  - Misalignment capability
  - Axial displacement capability
- Grease inlet on housing cap
  - Robust attachment
  - No access limitations (safety)
  - Assembly width minimised

OPTIMUM
BEARING
PERFORMANCE

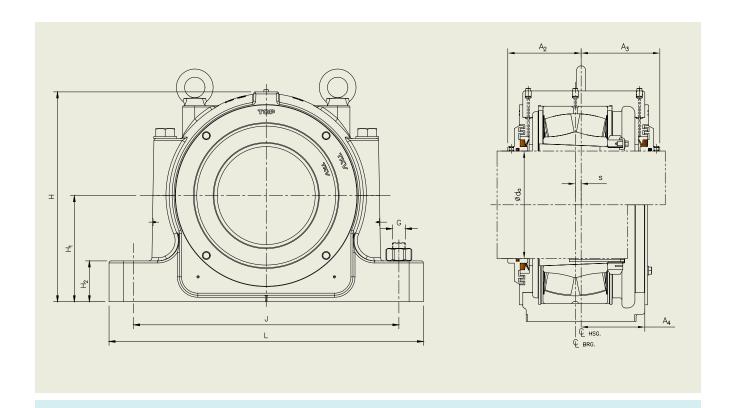
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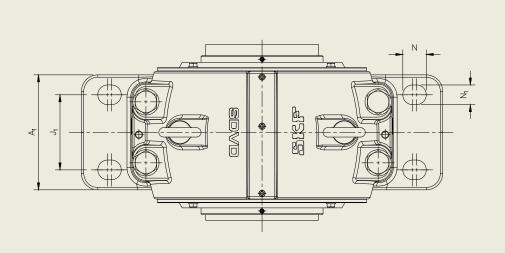
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Shaft Dia.	Housing	Bearing <sup>1)</sup>	Adapter Sleeve <sup>1)</sup>	Locating rings (2 per fixed bearing)	Seal Kit (1 per side)	End cover	Mass <sup>2)</sup>	
mm	-	-					kg	
150	SDVD 3134	23134-2CS5K/VT143 23134 CCK/W33	ОН 3134 НЕ ОН 3134 Н	FRB 10/280	TKV34	ETV 290/265/4	73	
160	SDVD 3136	23136-2CS5K/VT143 23136 CCK/W33	0H 3136 HL 0H 3136 H	FRB 10/300	TKV36	ETV 310/285/4	81	
170	SDVD 3138	23138-2CS5K/VT143 23138 CCK/W33	ОН 3138 Н ОН 3138 Н	FRB 10/320	TKV38	ETV 330/305/4	99	
180	SDVD 3140	23140-2CS5K/VT143 23140 CCK/W33	OH 3140 H OH 3140 H	FRB 10/340	TKV40	ETV 346/315/4	121	
200	SDVD 3144	23144-2CS5K/VT143 23144 CCK/W33	OH 3144 HTL OH 3144 H	FRB 10/370	TKV44	ETV 376/345/4	136	
220	SDVD 3148	23148-2CS5K/VT143 23148 CCK/W33	OH 3148 HTL OH 3148 H	FRB 10/400	TKV48	ETV 406/375/4	169	
240	SDVD 3152	23152-2CS5K/VT143 23152 CCK/W33	0H 3152 HTL 0H 3152 H	FRB 10/440	TKV52	ETV 446/415/4	205	
260	SDVD 3156	23156-2CS5K/VT143 23156 CCK/W33	OH 3156 HTL OH 3156 H	FRB 10/460	TKV56	ETV 466/435/4	234	
280	SDVD 3160	23160-2CS5K/VT143 23160 CCK/W33	OH 3160 HE OH 3160 H	FRB 10/500	TKV60	ETV 506/475/4	284	
300	SDVD 3164	23164-2CS5K/VT143 23164 CCK/W33	OH 3164 H OH 3164 H	FRB 10/540	TKV64	ETV 546/515/4	322	

 $<sup>^{1)}</sup>$ Adapter sleeves listed are suitable for oil injection. Sleeves without provision for oil injection can also be used.  $^{2)}$  Mass is for housing assembly only (housing body with 2 seal kits), not including bearing and adapter sleeve.



## Dimensions

$A_1$	$A_2$	$A_3$	$A_4$	Н	$H_{1}$	H <sub>2</sub>	J	$J_{1}$	L	N	$N_1$	S	G
mm													
174	133	133	100	335	170	70	430	100	510	34	28	14	M24
184	138	138	106	352	180	75	450	110	530	34	28	15	M24
200	138	146	114	375	190	80	480	120	560	34	28	10	M24
206	142	152	120	410	210	85	510	130	610	42	35	10	M30
220	151	161	126	435	220	90	540	140	640	42	35	12	M30
230	155	170	136	475	240	95	600	150	700	42	35	12	M30
245	165	176	142	514	260	100	650	160	770	50	42	13	M36
250	173	185	148	550	280	105	670	160	790	50	42	16	M36
288	183	189	153	590	300	110	710	190	830	50	42	22	M36
300	191	201	165	625	320	115	750	200	880	50	42	23	M36

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# Ordering information

For SDVD housings, each of the following items must be ordered separately:

- housing
- seal kits (1 per closed housing, 2 per open housing)
- end cover (1 per closed housing)
- locating rings (2 per fixed bearing)
- bearing
- adapter sleeve

### Order example

Two plummer block housings with taconite seals are required for two 23138-2CS5K/VT143 Sealed Spherical Roller Bearings on H 3138 adapter sleeves. One housing will accommodate the non-locating bearing at the end of the shaft. The other housing will accommodate the locating bearing and a through shaft.

The following items should be ordered:

## Example:

- 2 housings SDVD 3138
- 3 seal kits TKV 38 (each pack contains one seal assembly)
- 1 end cover ETV 330/305/4
- 2 locating rings FRB 10/320
- 2 bearings 23138-2CS5K/VT143
- 2 adapter sleeves OH 3138 H

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