

Designs

Conventional SKF ball bearing units are referred to as Y-bearing units. These units consist of:

- an insert bearing (a single row deep groove ball bearing) with a convex sphered outside diameter
- a housing, which has a correspondingly sphered but concave bore

Y-bearing units can accommodate moderate initial misalignment, but normally do not permit axial displacement. They are ready-to-mount, ready-to-use units (→ **fig. 1**) and available as:

- Y-bearing plummer block units
- Flanged Y-bearing units
- Y-bearing take-up units

The housings are available in:

- composite material (→ **fig. 2**)
- grey cast iron (→ **fig. 3**)

SKF Y-bearing units provide designers with considerable freedom of choice so that compromises can be avoided. Numerous standard series Y-bearing units are available (→ tables on pages **20** to **23**). The tables list Y-bearings and Y-bearing housings and their possible combinations to units. For information about more specialized Y-bearing units, refer to the sections, *SKF Con-Centra ball bearings and units* and *SKF Food Line Y-bearing units* starting on **page 247**.

Fig. 1



Fig. 2



Because of their versatility and cost effectiveness, Y-bearing units are typically found in the following applications: agricultural machinery, construction equipment, conveyor systems, textile machines and fans as well as in machines for food and beverage processing and packaging.

Bearing terminology

For a better understanding of the information in this catalog, see the next two pages for frequently used bearing terms and their definitions for the following products:

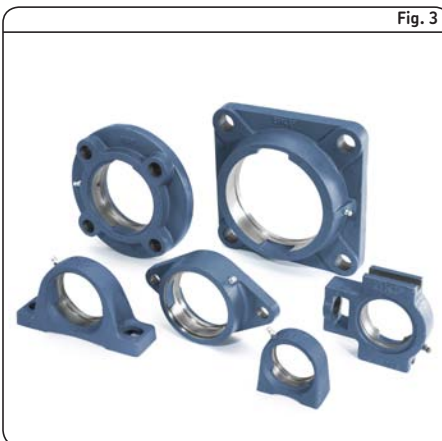
- Y-bearings
- Y-bearing plummer block units
- Flanged Y-bearing units
- Y-bearing take-up units

Essentially, these terms are in accordance with those in the following ISO standards:

- ISO 3228:1993 *Rolling bearings – Cast and pressed housings for insert bearings*
- ISO 9628:2006 *Rolling bearings – Insert bearings and eccentric locking collars*

A detailed collection of bearing specific terms and definitions are also listed in ISO 5593:1997 *Rolling bearings – Vocabulary*.

Fig. 3

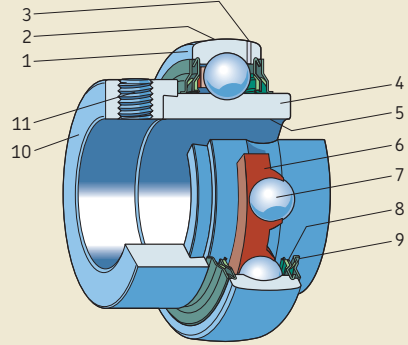


Y-bearings

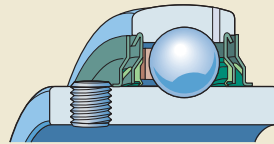
Insert bearings, wide inner ring bearings
(→ fig. 5)

- 1 Outer ring
- 2 Sphered outer surface
- 3 Lubrication hole
- 4 Inner ring
- 5 Bore
- 6 Cage
- 7 Ball
- 8 Integral seal
- 9 Flinger
- 10 Eccentric locking collar
- 11 Grub (set) screw

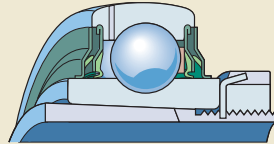
Fig. 5



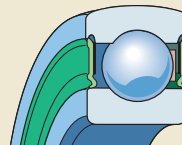
Inner ring with an eccentric locking collar



Inner ring with two grub screws

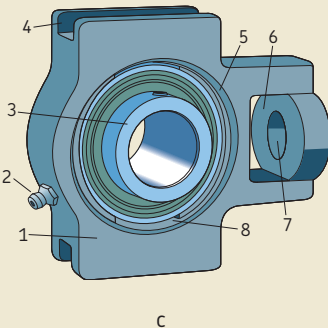
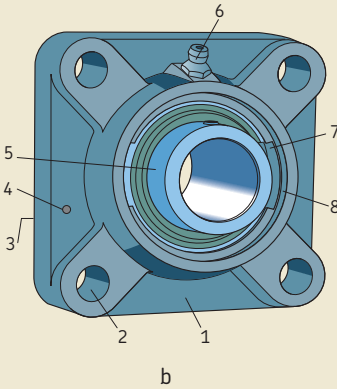
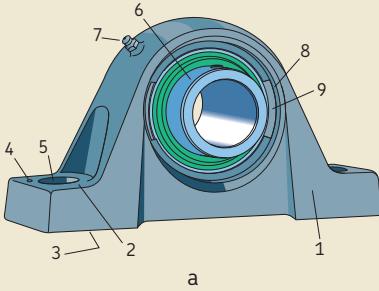


Inner ring with a tapered bore
(on an adapter sleeve)



Inner ring of a standard deep
groove ball bearing

Fig. 6



Y-bearing units

Mounted ball bearing, unit ball

Y-bearing plummer (pillow) block unit (→ fig. 6a)

- 1 Y-bearing plummer block housing of grey cast iron
- 2 Housing base
- 3 Housing support face
- 4 Cast dimple for dowel pin
- 5 Attachment bolt hole
- 6 Y-bearing
- 7 Grease fitting
- 8 Recess for end cover
- 9 Filling slot for Y-bearing

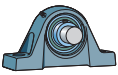






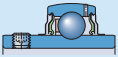
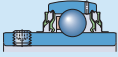
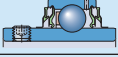
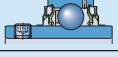

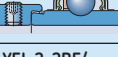




Flanged Y-bearing unit (→ fig. 6b)

- 1 Square flanged housing of grey cast iron
- 2 Attachment bolt hole
- 3 Back of flanged housing with or without centring recess
- 4 Cast dimple for dowel pin
- 5 Y-bearing
- 6 Grease fitting
- 7 Filling slot for Y-bearing
- 8 Recess for end cover







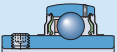







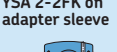
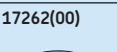
Y-bearing take-up unit (→ fig. 6c)

- 1 Take-up housing of grey cast iron
- 2 Grease fitting
- 3 Y-bearing
- 4 Piloting groove
- 5 Recess for end cover
- 6 Receiving opening for adjustment screw location
- 7 Centre bore for adjustment screw
- 8 Filling slot for Y-bearing







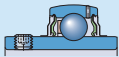
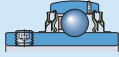

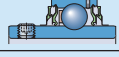
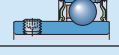
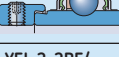


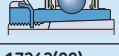

Designs

 Y-bearing unit	Composite housings			Cast housings		
						
Y-bearings	SYK 5(00)	FYK 5(00)	FYTBK 5(00)	SY 5(00)	SYJ 5(00)	SYH 5(00)
YAR 2-2F 	SYK .. TF 20–40 mm	FYK .. TF 20–40 mm $\frac{3}{4}$ –1 $\frac{1}{2}$ in. ¹⁾	FYTBK .. TF 20–35 mm $\frac{3}{4}$ –1 $\frac{1}{4}$ in. ¹⁾	SY .. TF 12–65 mm $\frac{1}{2}$ –2 $\frac{15}{16}$ in.	SYJ .. TF 20–100 mm $\frac{3}{4}$ –2 $\frac{1}{2}$ in.	SYH .. TF $\frac{1}{2}$ –2 $\frac{7}{16}$ in.
YAR 2-2RF 	SYK .. TR 20–40 mm	FYK .. TR 20–40 mm $\frac{3}{4}$ –1 $\frac{1}{2}$ in. ¹⁾	FYTBK .. TR 20–35 mm $\frac{3}{4}$ –1 $\frac{1}{4}$ in. ¹⁾	SY .. TR 20–60 mm $\frac{3}{4}$ –2 $\frac{1}{2}$ in. ¹⁾	20–65 mm ¹⁾ $\frac{3}{4}$ –2 $\frac{1}{2}$ in. ¹⁾	–
YAR 2-2RF/HV 	20–40 mm ¹⁾ $\frac{3}{4}$ –1 $\frac{1}{2}$ in. ¹⁾	20–40 mm ¹⁾ $\frac{3}{4}$ –1 $\frac{1}{2}$ in. ¹⁾	20–35 mm ¹⁾ $\frac{3}{4}$ –1 $\frac{7}{16}$ in. ¹⁾	20–50 mm $\frac{3}{4}$ –1 $\frac{15}{16}$ in.	20–50 mm $\frac{3}{4}$ –1 $\frac{15}{16}$ in.	–
YAR 2-2RF/VE495 	20–40 mm ¹⁾	20–40 mm ¹⁾	20–35 mm ¹⁾	20–50 mm	20–50 mm	–
YAT 2 	20–40 mm ¹⁾	20–40 mm ¹⁾	20–35 mm ¹⁾	17–50 mm ¹⁾	20–50 mm ¹⁾	–
YEL 2-2F 	20–40 mm ¹⁾	20–40 mm ¹⁾	20–35 mm ¹⁾	SY .. WF 20–60 mm $\frac{17}{16}$ –1 $\frac{15}{16}$ in.	20–60 mm ¹⁾	SYH .. WF $\frac{3}{4}$ –2 $\frac{7}{16}$ in.
YEL 2-2RF/VL065 	20–40 mm ¹⁾	20–40 mm ¹⁾	20–35 mm ¹⁾	20–40 mm ¹⁾	20–40 mm ¹⁾	–
YET 2 	20–40 mm ¹⁾	20–40 mm ¹⁾ $\frac{3}{4}$ –1 $\frac{1}{4}$ in. ¹⁾	20–35 mm ¹⁾ $\frac{3}{4}$ –1 $\frac{7}{16}$ in. ¹⁾	SY .. FM 15–60 mm $\frac{3}{4}$ –1 $\frac{1}{2}$ in. ¹⁾	20–60 mm ¹⁾ $\frac{3}{4}$ –1 $\frac{1}{2}$ in. ¹⁾	SYH .. FM 1–2 in.
YSA 2-2FK on adapter sleeve 	20–35 mm ¹⁾ $\frac{3}{4}$ –1 $\frac{1}{4}$ in. ¹⁾	20–35 mm ¹⁾ $\frac{3}{4}$ –1 $\frac{1}{4}$ in. ¹⁾	20–30 mm ¹⁾ $\frac{3}{4}$ –1 $\frac{3}{16}$ in. ¹⁾	20–60 mm ¹⁾ $\frac{3}{4}$ –2 $\frac{3}{8}$ in. ¹⁾	SYJ .. KF 20–60 mm $\frac{3}{4}$ –2 $\frac{3}{8}$ in. ¹⁾	–
17262(00) 	20–40 mm ¹⁾	20–40 mm ¹⁾	20–35 mm ¹⁾	17–60 mm ¹⁾	20–60 mm ¹⁾	–




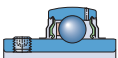
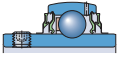

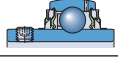
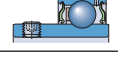



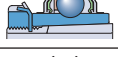

¹⁾ Parts must be ordered separately.

Y-bearing unit 	Cast housings				
					
Y-bearings	SYM 5(00)	SYF 5(00)	SYFJ 5(00)	FY (500)	FYJ 5(00)
YAR 2-2F 	SYM .. TF 1 $\frac{7}{16}$ –3 in.	SYF .. TF 20–50 mm $\frac{3}{4}$ –1 $\frac{3}{4}$ in. ¹⁾	SYFJ .. TF 20–50 mm $\frac{3}{4}$ –1 $\frac{3}{4}$ in. ¹⁾	FY .. TF 12–65 mm $\frac{1}{2}$ –2 $\frac{7}{16}$ in.	FYJ .. TF 20–100 mm $\frac{3}{4}$ –2 $\frac{1}{2}$ in. ¹⁾
YAR 2-2RF 	–	20–50 mm ¹⁾ $\frac{3}{4}$ –1 $\frac{3}{4}$ in. ¹⁾	20–50 mm ¹⁾ $\frac{3}{4}$ –1 $\frac{3}{4}$ in. ¹⁾	FY .. TR 20–60 mm $\frac{3}{4}$ –2 $\frac{1}{2}$ in. ¹⁾	20–60 mm ¹⁾ $\frac{3}{4}$ –2 $\frac{1}{2}$ in. ¹⁾
YAR 2-2RF/HV 	–	20–50 mm $\frac{3}{4}$ –1 $\frac{15}{16}$ in.	20–50 mm $\frac{3}{4}$ –1 $\frac{15}{16}$ in.	20–50 mm $\frac{3}{4}$ –1 $\frac{15}{16}$ in.	20–50 mm $\frac{3}{4}$ –1 $\frac{15}{16}$ in.
YAR 2-2RF/VE495 	–	20–50 mm	20–50 mm	20–50 mm	20–50 mm
YAT 2 	–	20–50 mm ¹⁾	20–50 mm ¹⁾	17–50 mm ¹⁾	20–50 mm ¹⁾
YEL 2-2F 	–	20–50 mm ¹⁾	20–50 mm ¹⁾	FY .. WF 20–60 mm 1–2 $\frac{7}{16}$ in.	20–50 mm ¹⁾
YEL 2-2RF/VL065 	–	20–40 mm ¹⁾	20–40 mm ¹⁾	20–40 mm ¹⁾	20–40 mm ¹⁾
YET 2 	–	SYF .. FM 20–50 mm $\frac{3}{4}$ –1 $\frac{1}{2}$ in. ¹⁾	SYFJ .. FM 20–50 mm $\frac{3}{4}$ –1 $\frac{1}{2}$ in. ¹⁾	FY .. FM 15–60 mm $\frac{3}{4}$ –2 $\frac{3}{16}$ in. ¹⁾	20–60 mm ¹⁾ $\frac{3}{4}$ –1 $\frac{1}{2}$ in. ¹⁾
YSA 2-2FK on adapter sleeve 	–	20–45 mm ¹⁾ $\frac{3}{4}$ –1 $\frac{3}{4}$ in. ¹⁾	12–45 mm ¹⁾ $\frac{3}{4}$ –1 $\frac{3}{4}$ in. ¹⁾	20–60 mm ¹⁾ $\frac{3}{4}$ –2 $\frac{3}{8}$ in. ¹⁾	FYJ .. KF 20–60 mm $\frac{3}{4}$ –2 $\frac{3}{8}$ in. ¹⁾
17262(00) 	–	20–50 mm ¹⁾	20–50 mm ¹⁾	17–60 mm ¹⁾	20–60 mm ¹⁾

¹⁾ Parts must be ordered separately.

Y-bearing flanged unit 	Cast housings				
					
Y-bearings	FYM 5(00)	FYT 5(00)	FYTB 5(00)	FYTJ (500)	FYC 5(00)
YAR 2-2F 	FYM .. TF 1 $\frac{7}{16}$ –3 in.	FYT .. TF 1/2–2 $\frac{3}{16}$ in.	FYTB .. TF 12–50 mm $\frac{3}{4}$ –1 $\frac{3}{4}$ in.	FYTJ .. TF 20–50 mm $\frac{3}{4}$ –1 $\frac{3}{4}$ in.	FYC .. TF 20–65 mm $\frac{3}{4}$ –2 $\frac{1}{2}$ in. ¹⁾
YAR 2-2RF 	–	–	FYTB .. TR 20–50 mm $\frac{3}{4}$ –1 $\frac{3}{4}$ in. ¹⁾	20–50 mm ¹⁾ $\frac{3}{4}$ –1 $\frac{3}{4}$ in. ¹⁾	20–65 mm ¹⁾ $\frac{3}{4}$ –2 $\frac{1}{2}$ in. ¹⁾
YAR 2-2RF/HV 	–	–	20–50 mm $\frac{3}{4}$ –1 $\frac{15}{16}$ in.	20–50 mm $\frac{3}{4}$ –1 $\frac{15}{16}$ in.	20–50 mm $\frac{3}{4}$ –1 $\frac{15}{16}$ in.
YAR 2-2RF/ VE495 	–	–	20–50 mm	20–50 mm	20–50 mm
YAT 2 	–	FYT .. RM 1/2–2 $\frac{3}{16}$ in.	17–50 mm ¹⁾	20–50 mm ¹⁾	20–50 mm ¹⁾
YEL 2-2F 	–	–	FYTB .. WF 20–50 mm	20–50 mm ¹⁾	20–60 mm ¹⁾
YEL 2-2RF/ VL065 	–	–	20–40 mm ¹⁾	20–40 mm ¹⁾	20–40 mm ¹⁾
YET 2 	–	FYT .. FM 1/2–2 $\frac{3}{16}$ in.	FYTB .. FM 15–50 mm $\frac{3}{4}$ –1 $\frac{1}{2}$ in. ¹⁾	20–50 mm ¹⁾ $\frac{3}{4}$ –1 $\frac{1}{2}$ in. ¹⁾	20–40 mm ¹⁾ $\frac{3}{4}$ –1 $\frac{1}{2}$ in. ¹⁾
YSA 2-2FK on adapter sleeve 	–	–	20–45 mm ¹⁾ $\frac{3}{4}$ –1 $\frac{3}{4}$ in. ¹⁾	FYTJ .. KF 20–45 mm $\frac{3}{4}$ –1 $\frac{3}{4}$ in.	20–60 mm ¹⁾ $\frac{3}{4}$ –2 $\frac{3}{8}$ in. ¹⁾
17262(00) 	–	–	17–50 mm ¹⁾	20–50 mm ¹⁾	20–60 mm ¹⁾

¹⁾ Parts must be ordered separately.

Y-bearing unit 	Cast housings					
						
Y-bearings	TU 5(00)	TUI 5(00)				
YAR 2-2F 	TU .. TF 20–55 mm $\frac{3}{4}$ –2 $\frac{3}{16}$ in. ¹⁾	TUI .. TF 20–60 mm $\frac{3}{4}$ –2 in. ¹⁾				
YAR 2-2RF 	20–55 mm ¹⁾ $\frac{3}{4}$ –2 in. ¹⁾	20–60 mm ¹⁾ $\frac{3}{4}$ –2 in. ¹⁾				
YAR 2-2RF/HV 	20–50 mm $\frac{3}{4}$ –1 $\frac{15}{16}$ in.	20–50 mm $\frac{3}{4}$ –1 $\frac{15}{16}$ in.				
YAR 2-2RF/ VE495 	20–50 mm	20–50 mm				
YAT 2 	20–50 mm ¹⁾	20–50 mm ¹⁾				
YEL 2-2F 	20–55 mm ¹⁾	20–60 mm ¹⁾				
YEL 2-2RF/ VL065 	20–40 mm ¹⁾	20–40 mm ¹⁾				
YET 2 	TU .. FM 20–55 mm $\frac{3}{4}$ –1 $\frac{1}{2}$ in. ¹⁾	20–60 mm ¹⁾ $\frac{3}{4}$ –1 $\frac{1}{2}$ in. ¹⁾				
YSA 2-2FK on adapter sleeve 	20–50 mm ¹⁾ $\frac{3}{4}$ –2 in. ¹⁾	20–55 mm ¹⁾ $\frac{3}{4}$ –2 $\frac{1}{8}$ in. ¹⁾				
17262(00) 	20–55 mm ¹⁾	20–60 mm ¹⁾				

¹⁾ Parts must be ordered separately.