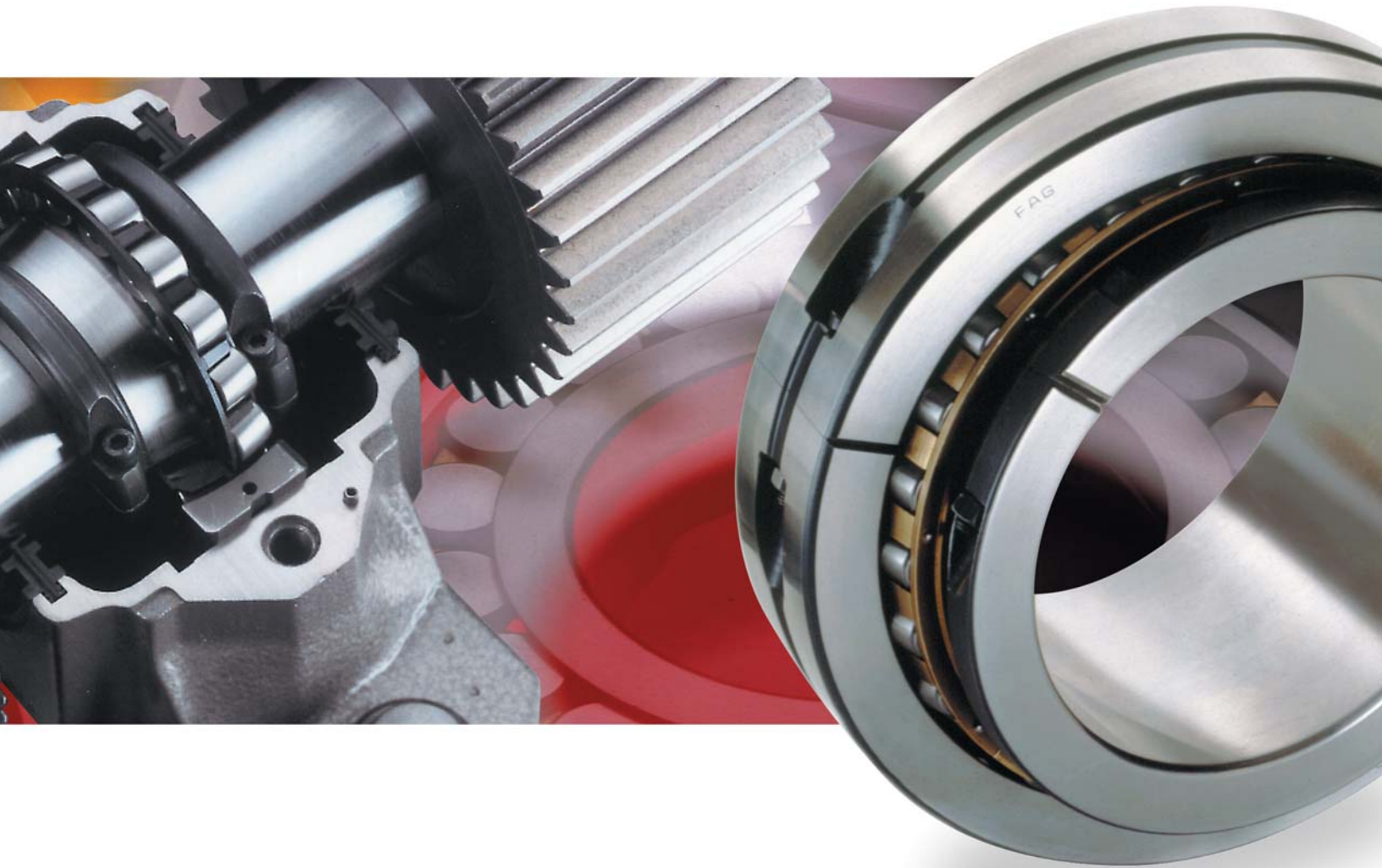


SCHAEFFLER



**FAG Split Spherical Roller Bearings
For Down-Time-Saving
Bearing Replacement**

Reducing Maintenance Downtime Costs by Splitting Bearing Replacement

Complicated bearing replacement procedures such as pulling gears and couplings, dismounting drives and stripping line shafting are primary causes of machinery and plant downtime. By effectively eliminating many of the steps and complications involved in bearing replacement, FAG split spherical roller bearings can dramatically reduce downtime and its associated

costs: labor, equipment rental and, most importantly, lost production. Additionally, they provide a compact design solution for replacing solid spherical roller bearings that are not easily accessible.

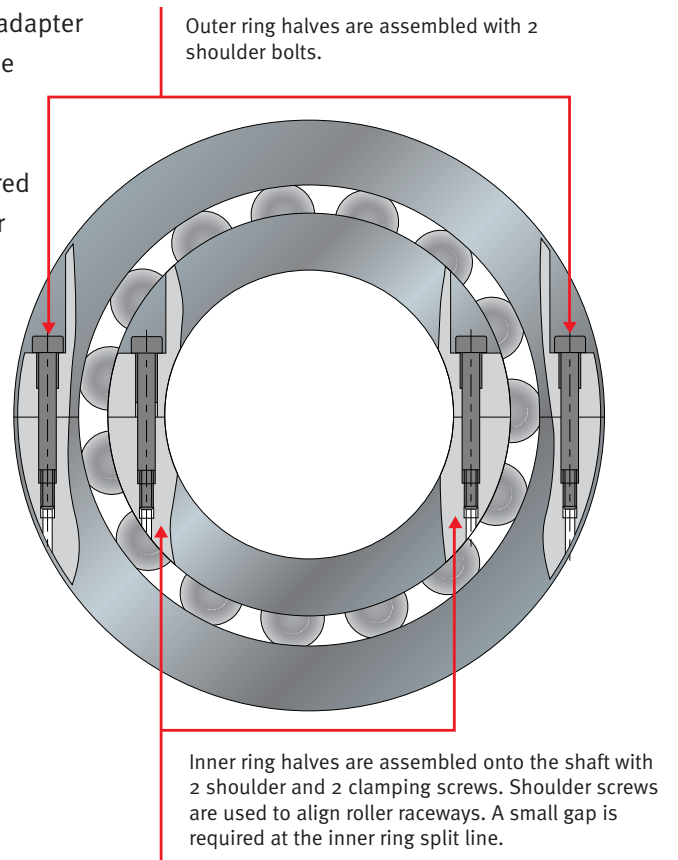
Replacement Cost:



Design

- FAG split spherical roller bearings have a cylindrical bore
- inner ring, outer ring and roller/cage assemblies are split into halves
- split bearing rings are bolted together directly onto the shaft
- internal design is adapted from the FAG E-type spherical roller bearing for maximum load capacity and longer service life
- split bearings have the normal tolerances of solid radial bearings, and the normal clearance of solid spherical roller bearings with a cylindrical bore

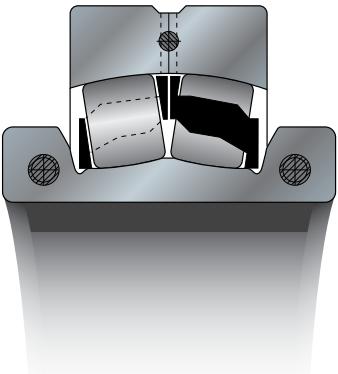
- external dimensions require no more additional space than an adapter sleeve mounted FAG E-type spherical roller bearings
- designed for direct replacement of solid tapered bore bearings and adapter sleeves in SAF and SN series housings



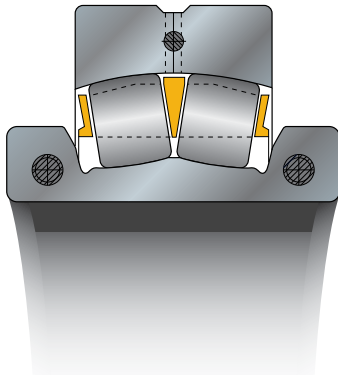
Product Program

The wide range of FAG split spherical roller bearings are available in series 222, 230 and 231:

- in inch dimensions, for shafts ranging from 2 $\frac{3}{16}$ " to 14"
- in metric dimensions, for shafts ranging from 55mm to 420mm



Four polyamide cage halves, outer ring guided, for 2 $\frac{3}{16}$ " to 7" shafts



Two machined brass cage halves, outer ring guided, for 3 $\frac{1}{16}$ " shafts and larger

Features % Benefits

FAG vs. Competitive Designs	FAG	Competitive Design
can be used in existing inch or metric housings – reduced replacement costs	YES	NO
no major modification required to existing housings – maintain existing shaft center height	YES	NO
comparable capacity to solid bearings % no decrease in bearing operating life	YES	NO
double row spherical design – provides high thrust capability	YES	NO
internally self-aligning – increased dynamic misalignment capability	YES	NO
simplified installation with fewer parts – less downtime	YES	NO
one bearing design for fixed or floating arrangements – reduced inventory costs	YES	NO



Bearing Replacement Interchange

Inch Shaft Dimensions

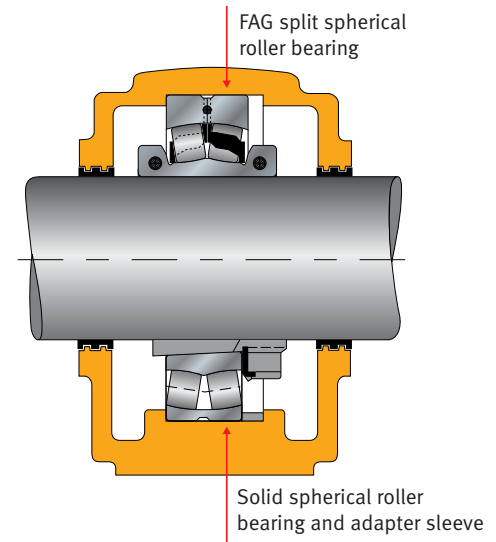
FAG Split Spherical Roller Bearings for Inch Shafts

Shaft inch	Split Bearing No.	Replaces Unsplit Bearing and Sleeve		Shaft inch	Split Bearing No.	Replaces Unsplit Bearing and Sleeve		Shaft inch	Split Bearing No.	Replaces Unsplit Bearing and Sleeve	
		No.	No.			No.	No.			No.	No.
2 ¹ / ₁₆	222S.203	22213K	SNW13.203 H313.203	4 ¹ / ₁₆	222S.408	22226K	SNW26.408 H3126.408	7 ¹ / ₁₆	222S.703	22240K	SNW40.703 H3140.703
2 ¹ / ₈	222S.204	22213K	SNW13.204 H313.204	4 ³ / ₁₆	222S.415MA	22228K	SNW28.415 H3128.415	7 ¹ / ₈	222S.708	22244K	SNW44.708 H3144X.708
2 ¹ / ₈	222S.207	22215K	SNW15.207 H315.207		222S.415	22228K	SNW28.415 H3128.415	7 ³ / ₁₆	222S.715	22244K	SNW44.715 H3144X.715
2 ¹ / ₄	222S.208	22215K	SNW15.208 H315.208	5	222S.500	22228K	SNW28.500 H3128.500	8	222S.800	22244K	SNW44.800 H3144X.800
2 ³ / ₁₆	222S.211	22216K	SNW16.211 H316.211	5 ¹ / ₁₆	222S.503	22230K	SNW30.503 H3130.503	8 ¹ / ₂	230S.808	23048K	SNP3048.808 H3048.808
2 ¹ / ₂	222S.215	22217K	SNW17.215 H317.215	5 ³ / ₁₆	222S.507MA	22232K	SNW32.507 H3132.507	9	230S.900	23048K	SNP3048.900 H3048.900
3	222S.300	22217K	SNW17.300 H317.300		222S.507	22232K	SNW32.507 H3132.507	9 ¹ / ₂	230S.908	23052K	SNP3052.908 H3052X.908
3 ¹ / ₁₆	222S.303	22218K	SNW18.303 H318.303	5 ¹ / ₂	230S.508MA	23032K	SNW3032.508 H3032.508	10	230S.1000	23056K	SNP3056.1000 H3056.1000
3 ¹ / ₈	222S.304	22218K	SNW18.304 H318.304		222S.508	22232K	SNW32.508 H3132.508	11	230S.1100	23060K	SNP3060.1100 H3060.1100
3 ³ / ₁₆	222S.307MA	22220K	SNW20.307 H320.307	5 ⁵ / ₁₆	222S.515	22234K	SNW34.515 H3134.515		231S.1100	23160K	SNP3160.1100 H3160HG.1100
	222S.307	22220K	SNW20.307 H320.307	6	222S.600	22234K	SNW34.600 H3134.600	12	230S.1200	23064K	SNP3064.1200 H3064.1200
3 ¹ / ₂	222S.308MA	22220K	SNW20.308 H320.308	6 ¹ / ₁₆	230S.607	23038K	SNW3038.607 H3038.607		231S.1200	23164K	SNP3164.1200 H3164.1200
	222S.308	22220K	SNW20.308 H320.308		231S.607MA	23136K	SNW3136.607 H3136.607	13	230S.1300	23072K	SNP3072.1300 H3072HG.1300
3 ⁵ / ₁₆	222S.315	22222K	SNW22.315 H322.315		222S.607	22236K	SNW36.607 H3136.607		231S.1300	23172K	SNP3172.1300 H3172HG.1300
4	222S.400	22222K	SNW22.400 H322.400	6 ¹ / ₂	222S.608	22236K	SNW36.608 H3136.608	14	230S.1400	23076K	SNP3076.1400 H3076HG.1400
4 ¹ / ₁₆	222S.403	22224K	SNW24.403 H324.403	6 ³ / ₁₆	222S.615	22238K	SNW38.615 H3138.615		231S.1400	23176K	SNP3176.1400 H3176HG.1400
4 ³ / ₁₆	222S.407	22226K	SNW26.407 H3126.407	7	230S.700	23038K	SNW3038.700 H3038.700				

Metric Shaft Dimensions

FAG Split Spherical Roller Bearings for Metric Shafts

Shaft mm	Split Bearing No.	Replaces Unsplit Bearing and Sleeve No. No.		Shaft mm	Split Bearing No.	Replaces Unsplit Bearing and Sleeve No. No.		Shaft mm	Split Bearing No.	Replaces Unsplit Bearing and Sleeve No. No.	
55	222SM55T	22212K	H312	160	230SM160MA	23036K	H3036	320	230SM320MA	23068K	H3068HG
60	222SM60T	22213K	H313		231SM160MA	23136K	H3136		231SM320MA	23168K	H3168HG
65	222SM65T	22215K	H315		222SM160T	22236K	H3136		222SM320MA	22268K	H3168HG
70	222SM70T	22216K	H316	170	230SM170MA	23038K	H3038	340	230SM340MA	23072K	H3072HG
75	222SM75T	22217K	H317		231SM170MA	23138K	H3138		231SM340MA	23172K	H3172HG
80	222SM80T	22218K	H318		222SM170T	22238K	H3138		222SM340MA	22272K	H3172HG
85	222SM85T	22219K	H319	180	230SM180MA	23040K	H3040	360	230SM360MA	23076K	H3076HG
90	222SM90T	22220K	H320		231SM180MA	23140K	H3140		231SM360MA	23176K	H3176HG
100	231SM100MA	23122K	H3122		222SM180MA	22240K	H3140	380	230SM380MA	23080K	H3080HG
	222SM100T	22222K	H322	200	230SM200MA	23044K	H3044X		231SM380MA	23180K	H3180HG
110	230SM110MA	23024K	H3024		231SM200MA	23144K	H3144X	400	230SM400MA	23084K	H3084XHG
	231SM110MA	23124K	H3124		222SM200MA	22244K	H3144X		231SM400MA	23184K	H3184HG
	222SM110T	22224K	H3124	220	230SM220MA	23048K	H3048	410	230SM410MA	23088K	H3088HG
115	230SM115MA	23026K	H3026		231SM220MA	23148K	H3148X		231SM410MA	23188K	H3188HG
	231SM115MA	23126K	H3126		222SM220MA	22248K	H3148X	420	230SM420MA		
	222SM115T	22226K	H3126	240	230SM240MA	23052K	H3052X				
125	230SM125MA	23028K	H3028		231SM240MA	23152K	H3152X				
	231SM125MA	23128K	H3128		222SM240MA	22252K	H3152X				
	222SM125T	22228K	H3128	260	230SM260MA	23056K	H3056				
135	230SM135MA	23030K	H3030		231SM260MA	23156K	H3156X				
	231SM135MA	23130K	H3130		222SM260MA	22256K	H3156X				
	222SM135T	22230K	H3130	280	230SM280MA	23060K	H3060				
140	230SM140MA	23032K	H3032		231SM280MA	23160K	H3160HG				
	231SM140MA	23132K	H3132		222SM280MA	22260K	H3160HG				
	222SM140T	22232K	H3132	300	230SM300MA	23064K	H3064HG				
150	230SM150MA	23034K	H3034		231SM300MA	23164K	H3164HG				
	231SM150MA	23134K	H3134		222SM300MA	22264K	H3164HG				
	222SM150T	22234K	H3134								



Mounting

FAG split spherical roller bearings are designed for direct replacement of solid tapered bore bearings and adapter sleeves in SAF and SN series housings. The outside diameter, outer ring width and shaft seat diameter are identical to the dimensions of standard solid spherical roller bearings mounted with

adapter sleeves. Therefore, they require no more additional mounting space. In general, “classic” applications of split spherical roller bearings range from shafts supported by several bearings to bearing locations with restricted access.



Mounting in Split Pillow Block Housings

FAG split spherical roller bearings can be mounted into FAG pillow block housings without requiring any additional machining of the housing. The same applies to housings from other manufacturers, provided that the internal dimensions are identical.

FAG offers a variety of pillow block options in cast iron, ductile iron and cast steel SAF and SN series housings, as well as the capability to design and manufacture pillow blocks to suit highly specialized requirements.

Mounting Costs Reduced

By effectively eliminating many of the steps and complications involved in bearing replacement, FAG split spherical roller bearings can dramatically reduce machinery downtime and the associated costs: labor, equipment rental and, most importantly, lost production.



FAG Bearing Replacement % Split vs. Solid Bearings

Procedures	Split	Solid
Remove housing cap	●	●
Support shaft assembly weight	●	
Disconnect drive components		●
Remove shaft assembly from housings		●
Remove drive components from shaft		●
Remove and replace bearings	●	●
Mount drive components		●
Mount shaft assembly in housings		●
Connect drive components		●
Secure housing cap	●	●
Mounting Steps	4	9
Mounting Time	50%	100%
Maintenance Downtime	33%	100%

Paper machine dryer section



Conveyor plant drive unit



Applications

FAG split spherical roller bearings offer a compact design solution for replacing solid spherical roller bearings and adapter sleeves that are not easily accessible, and in applications where minimized downtime is critical, such as:

- mining equipment
- conveyor pulleys
- material handling equipment
- fans and blowers
- dryer rolls
- line shafting
- agitators and mixing equipment
- continuous casters
- basic oxygen furnace (B.O.F.) trunnions
- marine propeller shafting
- crankshafts
- elevators



Ventilator drive unit



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