

# SKF agricultural Y-bearings

Relubrication-free units with high performance seals and an advanced locking method increase productivity and profitability



Today's farmers are under increasing pressure to stay productive for less money, and with less of an environmental impact. But mud, dust, water, sap, straw, stones and more take a heavy toll on the bearings in agricultural applications. Contaminant ingress and lubricant loss from failed seals, as well as locking device problems, often lead to premature bearing failures.

These early bearing failures reduce a farm's output and profitability, as farmers must devote significant time and money to maintain their machines and replace failed units. For OEMs, premature failures increase warranty costs and can damage customer relationships. SKF agricultural Y-bearing units can prevent such problems for OEMs and end users alike.

Developed specifically for agricultural applications, SKF agricultural Y-bearing units are designed to withstand the toughest operating conditions, reduce downtime and reduce environmental impact. Suitable for normal and demanding applications, SKF agricultural Y-bearing units are relubrication-free and feature a robust, five-lip seal design, an advanced, truly concentric locking method, and optional corrosion protection.





## Benefits

### OEMs

- Extend service life 30 to 50%\*
- Differentiate designs
- Reduce warranty, engineering, testing and assembly costs

### End users

- Increase farm productivity
- Reduce maintenance and ownership costs
- Reduce environmental impact

### Applications

- Combines and combine headers
- Balers
- Harvesters
- Hay tools/conditioner mowers
- Tillage gang disc/disc harrows
- Rolling cultivators/grain drills

## Four+ years in the field, less time on maintenance

To see how the high-performance, virtually maintenance-free SKF agricultural Y-bearing units compare to conventional units, SKF conducted a series of extensive laboratory and field tests. Results confirm that SKF agricultural Y-bearing units can significantly outlast and outperform conventional insert bearing units.

Thanks largely to their relubrication-free, five-lip seal design, SKF agricultural Y-bearing units will last four years or more, versus the one- to three-year life cycle of conventional bearings. SKF agricultural Y-bearing units with the SKF ConCentra advanced locking method will extend service life even further, as will those with optional corrosion-resistance.

The bottom line? SKF agricultural Y-bearing units can extend service life as much as 30 to 50%\*, enabling farmers to spend more time in the field. OEMs can also benefit by differentiating their designs and delivering improved reliability.

## Reduced ownership costs for farmers

Due to their increased service life and relubrication-free design, SKF agricultural Y-bearing units help reduce maintenance and ownership costs. SKF agricultural Y-bearing units with the SKF ConCentra advanced locking method cut repair demands even more. Farmers can spend less time and money on costly repairs and relubrication, and more time on profitable activities.

## Reduced management costs for OEMs

SKF agricultural Y-bearing units enable OEMs to purchase a total design solution from a single source, thus reducing a range of management expenses, including warranty, engineering, testing and assembly costs.

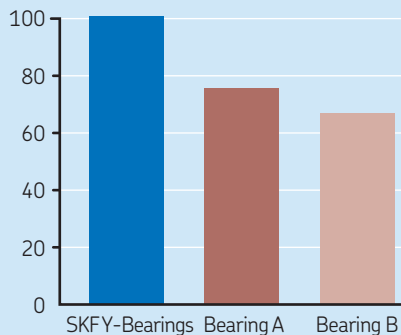
## Reduced environmental impact

Because they do not require relubrication, SKF agricultural Y-bearing units can significantly reduce grease consumption, saving up to 200 kg\* over the service life of a machine. The robust, five-lip seal design also helps keep grease from contaminating crops, soil, or groundwater supplies. Farmers can reduce their environmental impact, while OEMs can demonstrate their commitment to more environmentally friendly designs.

## SKF agricultural Y-bearing units – testing\*

Condition	Result
Mud	+ Productivity
Vegetal fiber	+ Productivity
Dust	+ Productivity
High water pressure	+ Productivity
Climatic cell	+ Productivity
Sand and stone	+ Productivity
High air pressure	+ Productivity
Friction	+ Reduced environmental impact

## Operational testing\* – service life in mud (%)



\* All figures and graphs are rounded off and based on SKF testing against conventional bearings. Savings and results will vary in specific applications.



*SKF agricultural Y-bearing units not only reduce lubricant use significantly, they reduce the risk of lubricant leakage, helping to protect both the environment and crops from contamination.*

### Product description

SKF agricultural Y-bearing units feature a five-lip seal and a greased-for-life bearing in three standard variants:

- YELAG Y-bearings feature an eccentric locking collar, and are intended for normal speed and load conditions
- YSPAG Y-bearings feature the SKF ConCentra concentric locking method, and are specifically designed for demanding applications in terms of loads and speeds
- YARAG Y-bearing feature a grub screw locking system, and are intended for normal application conditions

These three solutions allow for a great deal of design flexibility. All configurations offer optional corrosion resistance on one or both rings to protect against high-pressure washdowns and other sources of moisture. Bearings with a hexagonal or square bore as well as bearings with a cylindrical outer ring are available on request with standard seals on one or both sides.

### Advanced seal design, materials and performance

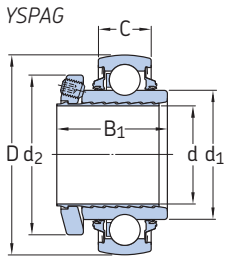
The patented SKF agricultural Y-bearing five-lip seal is made of a lowfriction compound and reinforced with a sheet steel insert. These unique seals deliver several benefits:

- The steel insert protects the bearings from solid contaminants, anchoring the complete, vulcanized seal to the bearing outer ring
- Each lip of the vulcanized seal features a different design to provide superior sealing performance in response to different operating conditions, including ring misalignment
- The outermost and innermost lips act as a labyrinth, preventing contaminant ingress and grease leakage, respectively
- The three inner lips maintain constant contact with the inner ring shoulder.

Bearings that use SKF ConCentra locking technology feature a true concentric locking method that facilitates mounting. The true

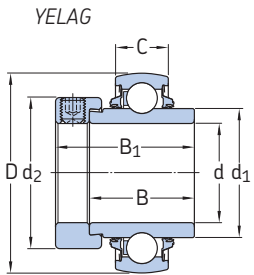
concentric mounting enables bearing arrangements to operate at higher speeds with less vibration, resulting in quieter operation and extended service life while virtually eliminating fretting corrosion.

**For additional information about SKF's product range and wide assortment of housings, contact your SKF representative, or visit us at [www.skf.com/agrisolutions](http://www.skf.com/agrisolutions).**



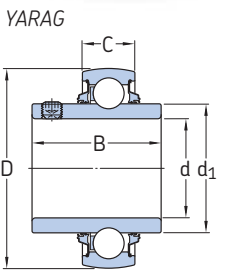
### YSPAG

Designation	Dimensions						Basic load ratings		Fatigue load limit
	d	D	B <sub>1</sub>	C	d <sub>1</sub>	d <sub>2</sub>	C	C <sub>0</sub>	P <sub>u</sub>
	mm/inch	mm					N		N
YSPAG 205	25	52	33	15	33,7	40,6	14 000	7 800	335
YSPAG 205-100	1								
YSPAG 206	30	62	37	18	39,7	48	19 500	11 200	475
YSPAG 206-103	1.1875								
YSPAG 207-104	1.25	72	39,5	19	46,1	57	25 500	15 300	655
YSPAG 207-106	1.375								
YSPAG 207	35								
YSPAG 207-107	1.4375								
YSPAG 208-108	1,5	80	42,9	21	51,8	62	30 700	19 000	800
YSPAG 208	40								
YSPAG 209-111	1.6875	85	44	22	56,8	67	33 200	21 600	915
YSPAG 209	45								
YSPAG 210-115	1.9375	90	46	22	62,5	72	35 100	23 200	980
YSPAG 210	50								



### YELAG

Designation	Dimensions						Basic load ratings		Fatigue load limit	
	d	D	B <sub>1</sub>	B	C	d <sub>1</sub>	d <sub>2</sub>	C	C <sub>0</sub>	P <sub>u</sub>
	mm/inch	mm						N		N
YELAG 204	20	47	43,7	34,2	14	28,2	33,3	12 700	6 550	280
YELAG 205	25	52	44,4	34,9	15	33,7	38,1	14 000	7 800	335
YELAG 205-100	1									
YELAG 206-102	1.125	62	48,4	36,5	18	39,7	44,5	19 500	11 200	475
YELAG 206	30									
YELAG 206-103	1.1875									
YELAG 207-104	1.25	72	51,1	37,6	19	46,1	55,6	25 500	15 300	655
YELAG 207-106	1.375									
YELAG 207	35									
YELAG 207-107	1.4375									
YELAG 208-108	1,5	80	56,3	42,75	21	51,8	60,3	30 700	19 000	800
YELAG 208	40									
YELAG 209-111	1,6875	85	56,3	42,75	22	56,8	63,5	33 200	21 600	915
YELAG 209-112	1.75									
YELAG 209	45									
YELAG 210-115	1.9375	90	62,7	49,15	22	62,5	69,9	35 100	23 200	980
YELAG 210	50									



### YARAG

Designation	Dimensions					Basic load ratings		Fatigue load limit
	d	D	B	C	d <sub>1</sub>	C	C <sub>0</sub>	P <sub>u</sub>
	mm/inch	mm				N		N
YARAG 204	20	47	31	14	28,2	12 700	6 550	280
YARAG 205	25	52	34,1	15	33,7	14 000	7 800	335
YARAG 205-100	1							
YARAG 206-102	1.125	62	38,1	18	39,7	19 500	11 200	475
YARAG 206	30							
YARAG 206-103	1.1875							
YARAG 206-104	1.25							
YARAG 207-104	1.25	72	42,9	19	46,1	25 500	15 300	655
YARAG 207-106	1.375							
YARAG 207	35							
YARAG 207-107	1.4375							
YARAG 208-108	1,5	80	49,2	21	51,8	30 700	19 000	800
YARAG 208	40							
YARAG 209-110	1.625	85	49,2	22	56,8	33 200	21 600	915
YARAG 209-111	1.6875							
YARAG 209	45							
YARAG 210-115	1.9375	90	51,6	22	62,5	35 100	23 200	980
YARAG 210	50							

**Note:** YELAG Y-bearing units are intended for normal application conditions while YSPAG Y-bearing units are specifically designed for demanding applications in terms of loads and speeds. Please contact SKF to choose the right Y-bearing units for your application.

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