

# AGRICULTURAL BEARINGS



Utilizing  
**AGXTREME™**  
Technology

**BEARING SOLUTIONS FOR THE  
AGRICULTURAL INDUSTRY**



*Trusted Difference at Every Turn™*



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### About PEER.

Since 1941, PEER Bearing has grown into an industry leader offering a wide range of highly engineered, precision bearing products. With a strong focus on the agriculture industry, PEER manufactures, develops, and engineers bearing solutions to global market leaders. The PEER product range includes the most comprehensive offering for all agricultural implements, combines, and tractors. Our bearings will meet mounting requirements on your equipment to provide an easy drop-in replacement.

From mild to harsh conditions, PEER manufactures high-performance bearings that maximize productivity, increase uptime and eliminate daily maintenance operating costs. Supplying award winning, precision tailored solutions for agricultural equipment starts with an in-depth knowledge and evaluation by industry-specific application engineers. Bearing requirements are translated into engineered solutions, manufactured at our ISO/TS 16949 certified facilities and validated through lab and field testing. With facilities in North America, Europe, Latin America and Asia, we provide solutions for farmers, grounds maintenance and landscapers globally that you can rely on at every turn.



### Development and demands of agricultural industry.

Agriculture is one of the oldest economic pillars existing. About one third of the earth's surface is presently dominated by agricultural use. Nearly 12000 years ago, the first agricultural activities started. Since then, technological development has consistently contributed to increase productivity and yield in order to feed an ever increasing population.

Achievements in mechanization provide continuous improvement of effective use of natural resources. Realization of highest possible yield while considering growing population, working personal and environmental constraints are today's challenges in agriculture. Agricultural megatrends show a demand of crop

expected to satisfy nine billion people in 2050, with about 70% of the population living in cities and based on a grain intensive diet. At the same time the production of biofuel increases steadily.

Large areas of arable land are a clear tendency to reduce production cost, optimize agricultural processes to minimize time and to reach the highest yield.

Highly reliable equipment, user friendly, offering low maintenance cost and total cost of ownership while at the same time providing increased farm productivity is needed.

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™ Trusted Difference at Every Turn is a trademark of the PEER Group of Companies.

™ AGXTREME, TILLXTREME and TURFXTREME are trademarks of PEER Bearing Company.

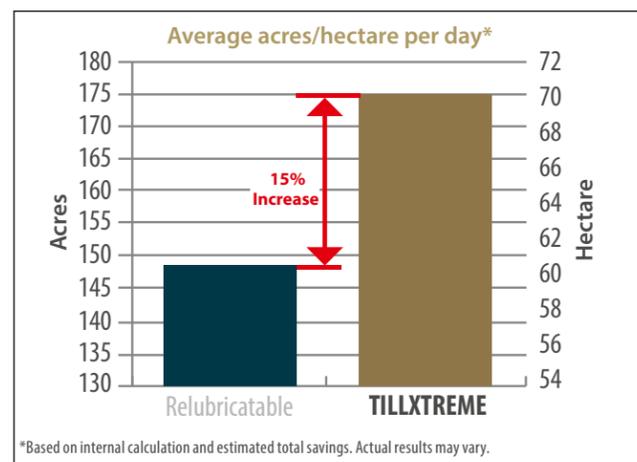


**PEER AGXTREME and agricultural bearing product range**

**AGXTREME™**

Today's agricultural industry demand is higher than ever for products that will keep the farmers equipment in the field, operating continuously. Farmers are operating equipment longer, faster and harder and will continue to push the boundaries to increase production. In order to support the top OEM manufacturers of farm equipment, PEER has developed the AGXTREME™ product portfolio.

maintenance-free, and simplify installation. As an environmentally friendly solution, there is no grease purge to contaminate the soil.



\*Based on internal calculation and estimated total savings. Actual results may vary.

More time in the field, more acres per day, less days to complete the tillage operation.

SEEDXTREME™ offers improved bearing solutions to support manufacturers of seeding equipment. Using our patented seal design and optimized internal bearing construction, PEER offers a range of bearings specifically designed for gauge wheels, disc openers and closing wheels, including integrated flange and shaft HUB design. Whether you have to produce equipment that runs faster or carries higher loads to cover the growing requirements for higher field productivity, PEER SEEDXTREME™ bearings have been designed to outperform the competition. These drop in replacements eliminate the need for redesign and increase your speed to market.

TURFXTREME™ offers the Lawn and Garden industries highest performance bearing seal to provide contamination exclusion and substantially increases the life of lawn and garden equipment, requiring less frequent customer maintenance and greatly reduced cost of machine ownership.

The AGXTREME™ portfolio consists of the TILLXTREME™, SEEDXTREME™, and TURFXTREME™ product offerings.

Proven through years of research, development and rigorous testing in both lab and field, the advanced sealing technology ensures optimal performance for the customer.

TILLXTREME™ offers a one of a kind, exclusive high-performance solution designed to eliminate the need for relubrication, saving precious hours needed for field work. PEER's patented seal design provides significantly improved contamination exclusion than the conventional triple lip seal design. Products include trunnion units for gang disc, HUB units for independent disc, and both stamped steel and ductile iron units for rolling basket applications.

PEER's TILLXTREME™ engineered assemblies are more reliable,

**PEER product validation and sealing solution**

**Lab Testing / Mud Slurry Testing**

PEER's Research and Development Center utilizes mud slurry testing to thoroughly study new seal concepts before extensive field tests are conducted to validate application performance. The test is performed to determine the effectiveness of the bearing sealing device to withstand contamination intrusion under aggressive environmental conditions. Seal designs are tested against competitive parts in side-by-side mud slurry testing.



The various seal designs show a different level of performance in the contaminated environment of application.

**PEER sealing performance overview**

Seal performance is one of the most crucial factors influencing bearing life and field performance in agricultural applications. PEER offers solutions which fit environmental and machine requirements.

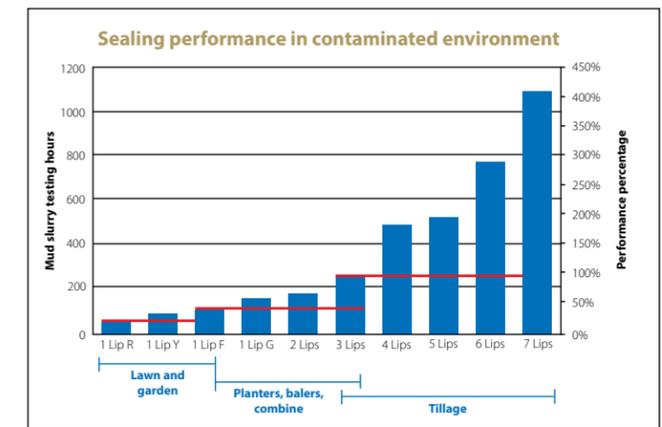
Mud slurry testing can show the contamination exclusion provided by a 6 lip TILLXTREME™ seal compared to a conventional 3 lip seal.

**Contamination ingress with 3 lips seal design**

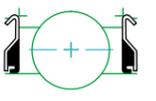
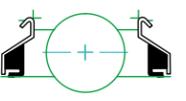
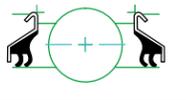
Bearing with 3 Lips      effect on raceway      effect on Lubricant

**Contamination ingress with 6 lips seal design, maintenance free**

Bearing with 6 Lips      effect on raceway      effect on Lubricant





Typical application	Typical environment	Seal Type	Seal Cross Section	Contamination Exclusion	Speed limit
Lawn and Garden Applications	Less contaminative environment	R, RST		<b>mild</b> moderate high - relubricatable severe - maintenance free maximum - maintenance free	3500 RPM
Combine power transmission (PT)	Indirect contamination, airborne dust, light/moderate water exposure	F		<b>mild</b> <b>moderate</b> high - relubricatable severe - maintenance free maximum - maintenance free	3500 RPM
Idler sprockets, conveyor rollers, combine PT, baler drive rolls	Indirect contamination, airborne dust, light/moderate water exposure	G		<b>mild</b> <b>moderate</b> <b>high - relubricatable</b> severe - maintenance free maximum - maintenance free	3000 RPM
Planters: press wheel, gauge wheel	Light direct contamination, at one foot distance from ground	Y, DBL		moderate <b>high - relubricatable</b> severe - maintenance free maximum - maintenance free	2000 RPM
Disc harrow and rolling basket relubricatable, baler idler rolls, augers with direct crop contact	Direct ground and crop contact, moisture exposure	P, TRL		moderate <b>high - relubricatable</b> severe - maintenance free maximum - maintenance free	800 RPM
Rolling basket maintenance free tillage FD units	Tillage - direct ground contact, moisture exposure	4 Lips		moderate high - relubricatable <b>severe - maintenance free</b> maximum - maintenance free	400 RPM
Rolling basket maintenance free tillage FD units	Tillage - direct ground contact, moisture exposure	5 Lips		moderate high - relubricatable <b>severe - maintenance free</b> maximum - maintenance free	400 RPM
Disc harrow maintenance free tillage trunnion units (TTU) and pillow block (TPU), HUB units	Tillage - direct ground contact, moisture exposure	6 Lips		moderate high - relubricatable severe - maintenance free <b>maximum - maintenance free</b>	400 RPM
Disc harrow maintenance free tillage trunnion units (TTU), HUB units	Tillage - direct ground contact, moisture exposure	7 Lips		moderate high - relubricatable severe - maintenance free <b>maximum - maintenance free</b>	400 RPM

### Tillage Bearings

Soil preparation aims to provide best possible growing conditions in preparing a seedbed for crops by mechanical agitation of soil while at the same time preventing soil erosion and damage.

Secondary tillage is typically performed in the following spring and is intended to reduce clod sizes, mix in crop residues and level the soil in preparation for seeding.

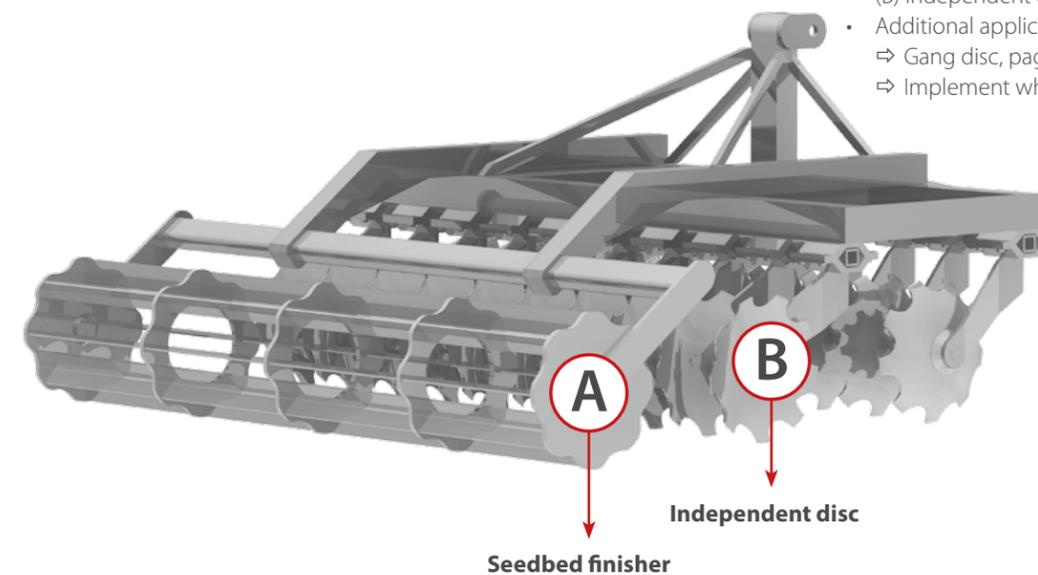
Optimal soil conditions are defined by parameters such as soil density, size of soil particles and crop residue left on the field. Significant for all tillage procedures is to optimize the balance of moisture and air throughout the soil.

Different set designs of disc harrows and cultivators are used to achieve this optimal soil condition. Gangs of rotating discs or independent discs with varying diameter, concavity, and design break up the soil. Often this machinery is combined with a seedbed finisher like a rolling basket to reduce clod size and improve the evenness of the seedbed.

Primary tillage is the first operation after the last harvest, and is the most aggressive tillage operation intended to mix and reduce the size of residual crop decomposition over the winter.

#### Bearing solutions for:

- (A) Seedbed finisher, page 18
- (B) Independent disc, page 12
- Additional application
  - ⇒ Gang disc, page 13
  - ⇒ Implement wheel, page 49



According to application and typical environment, recommended seal design differs. Our application engineers can guide and develop new product and seal designs together with you before mud slurry testing and field tests can validate the product.

### Application challenges

The typical bearing speed of disc harrow tillage application is between 100 and 150 rpm<sup>-1</sup>. The bearings supporting these tillage discs essentially operate at or even partially below ground level. Moist or dry, abrasive contamination forcefully pushes against bearing faces and seals during operation.

Bearings are exposed to shock and high moment loads due to angle of pull. They typically need to be replaced as a result of excessive internal wear due to contamination. High sealing technology is crucial.

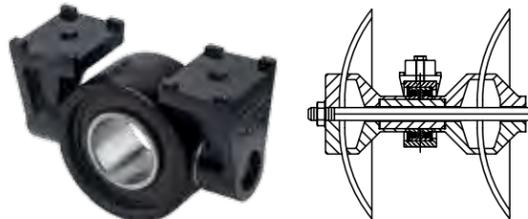
### Gang disc application conditions

- Utilizes two to three support bearings on a common shaft with several discs spaced with spools
- Constant and unpredictable movement of the gang shaft can generate severe stress on the internal components of the support bearings
- A great working depth places the bearings directly into the flow of soil and crop residue

### PEER proven engineered system solutions

#### Tillage Trunnion Unit (TTU)

One of the most commonly used gang disc bearing arrangements is the trunnion housing.



### Benefits and functional features

- Bolt-on performance:
  - ⇒ Directly interchangeable industry standard units
  - ⇒ Static misalignment capability accommodates imprecise mounting surfaces
- Increased productivity and bearing life in field:
  - ⇒ Dynamic misalignment capability eliminates internal bearing damage
  - ⇒ Shock load protection due to high grade ductile iron housing
  - ⇒ Exclusive patented sealing system eliminates the need for daily relubrication
- Increased speed to market:
  - ⇒ PEER offers the industry's largest range for common round and square bore sizes

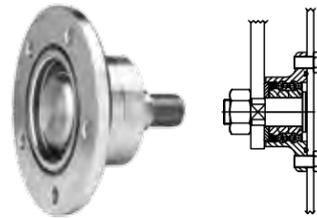
### Independent disc application conditions

- Utilizes one bearing assembly for each disc
- High loads and constant unpredictable movement of the disc can generate severe stress on the internal components
- A great working depth places the bearings directly into the flow of soil and crop residue

### PEER proven engineered system solutions

#### Tillage HUB Units

Another commonly used bearing arrangement is the HUB unit.



### Benefits and functional features

- Bolt-on performance:
  - ⇒ The integrated flange design replaces an external housing
  - ⇒ Reduces labor cost and eliminates damage due to incorrect assembly
- Increased productivity and operation life in field:
  - ⇒ Shock load protection from forged steel integrated flange
  - ⇒ Eliminate internal bearing damage
  - ⇒ Exclusive patented sealing system eliminates the need for daily relubrication
- Increased speed to the market
  - ⇒ PEER offers the industry's largest range of high performance tillage HUBs

### Seedbed finisher application conditions

- Utilizes two bearing assemblies
- High misalignment from imprecise mounting and wide bearing spread attachments can generate severe stress on the internal components
- Exposed directly into the flow of soil and crop residue

### PEER proven engineered system solutions

#### Tillage flanged disc units (FD and RFD), Mounted units (UCF and UCFT)

The most commonly used attachment bearing arrangements on a seedbed finishing tool are the FD and RFD units (flanged disc units), UCF and UCFT (mounted units).



### FD and RFD units (flanged disc units)

#### Benefits and functional features

- Bolt-on performance:
  - ⇒ Directly interchangeable industry standard units
  - ⇒ Static misalignment capability accommodates imprecise mounting surfaces
- Increased productivity and bearing life in field:
  - ⇒ Dynamic misalignment capability eliminates internal bearing damage and housing wear
  - ⇒ Shock load protection due to thick riveted steel housings
  - ⇒ Exclusive patented sealing system eliminates the need for daily relubrication
- Increased speed to market:
  - ⇒ PEER offers the industry's largest range for common round and square bore sizes

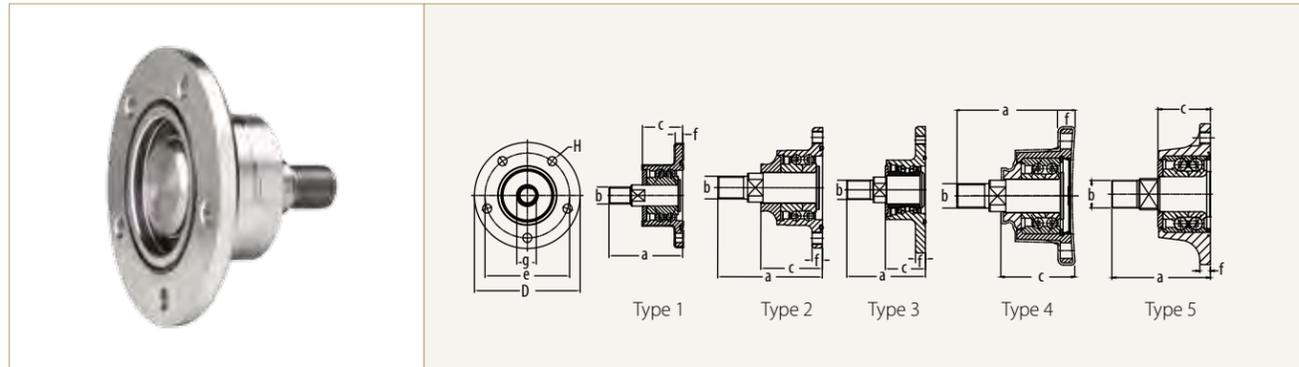
### Mounted units (UCF and UCFT)

#### Benefits and functional features

- Bolt-on performance:
  - ⇒ Directly interchangeable industry standard units
  - ⇒ Compensates misalignment from imprecise mounting or frame surfaces
- Increased productivity and bearing life in field due to:
  - ⇒ Shock load protection due to high grade ductile iron housing
  - ⇒ Exclusive sealing system eliminates the need for daily relubrication



**Independent disc HUB bearings**

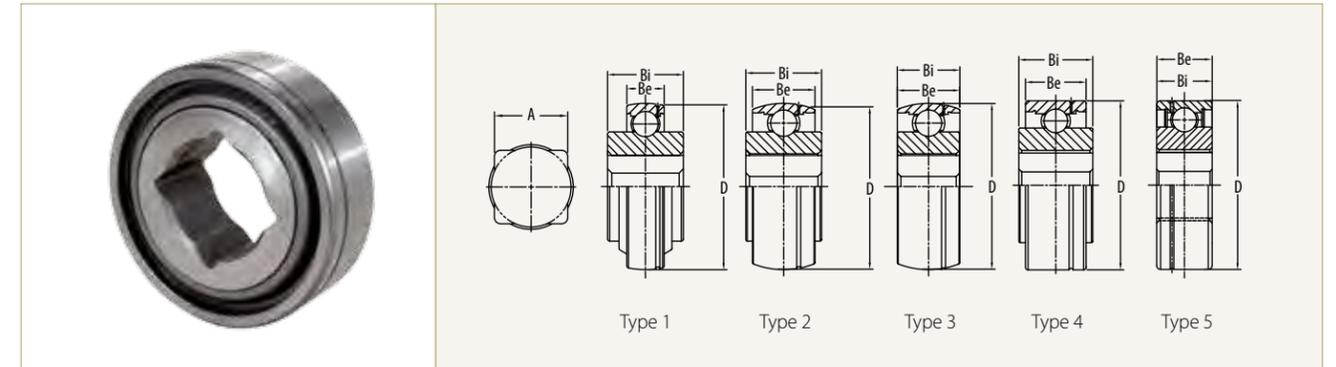


Detailed seal design description located on page 8

PEER Part Number	Type	b	e		c		a		D		f		g		H Bolt	Seal Type
			[inch]	[mm]												
*HUB-20MM-X	1	M16x2	3.1496	80	1.4961	38	2.8740	73	3.9370	100	0.2756	7	0.7283	18.5	5 x φ8.5H12	6 Lips
*HUB-20MM-X-ASSY-A605	1	M16x2	2.9528	75	1.4961	38	2.6771	68	3.9370	100	0.2756	7	0.7283	18.5	6x M6 x 0.75	6 Lips
*HUB-20MM-X-ASSY-A580	1	M16x2	3.1496	80	1.4961	38	2.7953	71	3.9370	100	0.2756	7	0.7283	18.5	5 x φ8.5H12	6 Lips
*HUB-20MM-X-ASSY-A543	1	M16x2	3.1496	80	1.6220	41.2	2.9600	75.2	3.9370	100	0.2756	7	0.7283	18.5	6x M8 x 1.25	6 Lips
*HUB-30MM	3	M22 x 1.50	3.8583	98	1.7717	45	3.4646	88	4.6063	117	0.3937	10	1.0039	25.5	4 x M12 x 1.25	6 Lips
*HUB-30MM-X-ASSY-A221	2	M22 x 1.5	3.8583	98	2.3622	60	4.0945	104	4.6063	117	0.3937	10	1.0039	25.5	4 x M12 x 1.25	6 Lips
*HUB-30MM-X-ASSY-A249	2	M22 x 1.5	3.8583	98	2.3622	60	4.0158	102	4.6063	117	0.3937	10	1.0039	25.5	6x M12 x 1.25	7 Lips
*HUB-35MM	3	M24 x 2.00	4.4094	112	2.0669	52.5	3.8780	98.5	5.5118	140	0.4134	10.5	1.1024	28	5 x M12 x 1.50	6 Lips
*HUB-35MM-X-ASSY-A243	3	M24 x 2	5.9055	150	2.4016	61	4.5669	116	7.0079	178	0.4134	10.5	1.1024	28	6 x M12 x 1.25	7 Lips
*HUB-35MM-ASSY-A519	5	M24 x 2	4.4094	112	2.776	70.5	3.8780	98.5	5.5118	140	0.4134	10.5	1.1024	28	6 x M12 x 1.50	6 Lips
*HUB-40MM-X-ASSY-A436	3	M27 x 2.00	5.5118	140	2.1654	55	4.3701	111	7.0079	178	0.5512	14	1.3189	33.5	5 x M12 x 1.25	7 Lips
*HUB-40MM-X-ASSY-A591	3	M27 x 2.00	5.5118	140	2.1654	55	4.3701	111	7.0079	178	0.5512	14	1.3189	33.5	5 x φ12.5	7 Lips
*HUB-30MM-X-ASSY-A577	4	M22 x 1.50	3.8583	98	2.441	62	4.0940	104	4.7240	120	-	-	1.1020	28	5 x φ12.5	7 Lips

\* PEER TILLXTREME

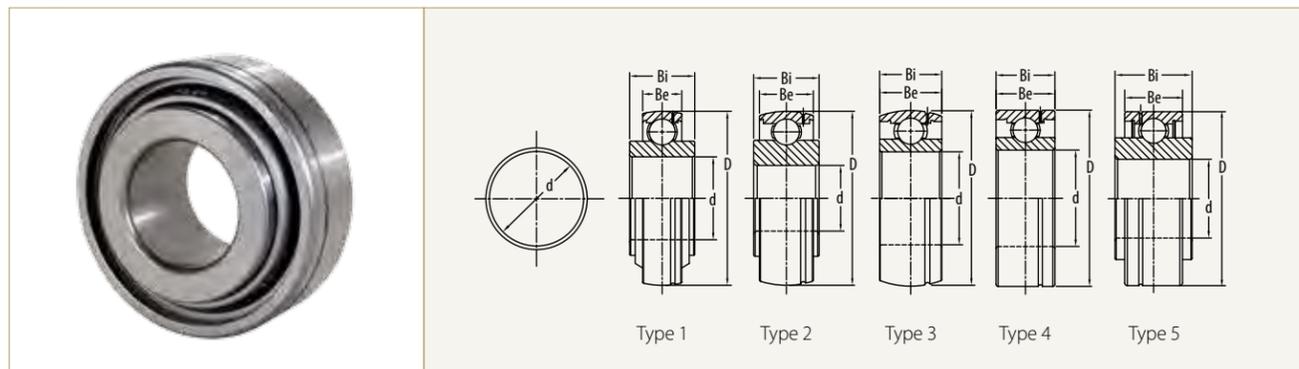
**Gang disc Standard relubricatable bearings, square bore**



Detailed seal design description located on page 8

PEER Part Number	Type	A		D		Bi		Be		Seal Type
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
GW208PP17	4	1.1800	29.972	3.3755	85.738	1.4375	36.512	1.1875	30.162	3 Lips
GW208PPB5	1	1.1800	29.972	3.1496	80	1.4375	36.512	0.8268	21	3 Lips
GW208PPB8	1	1.1800	29.972	3.1496	80	1.4375	36.512	1.1875	30.162	3 Lips
GW210PPB4	3	1.1580	29.413	3.5433	90	1.1875	30.162	1.1875	30.162	3 Lips
GW211PP17	4	1.5310	38.887	3.9370	100	1.7500	44.45	1.3120	33.325	3 Lips
GW211PP3-GX	5	1.5310	38.887	3.9370	100	1.3120	33.325	1.3120	33.325	3 Lips
GW211PPB3	3	1.5310	38.887	3.9370	100	1.3125	33.338	1.3125	33.338	3 Lips
GW212PP50-GX	4	1.7900	45.466	4.3307	110	2.0000	50.8	1.5060	38.252	3 Lips
GW214PPB4-GX	3	2.0551	52.2	4.9213	125	1.5625	39.688	1.5625	39.688	3 Lips
GW216PP2-GX	4	2.3125	58.738	5.5118	140	2.5000	63.5	1.1811	30	3 Lips

**Gang disc** Standard relubricatable bearings, round bore

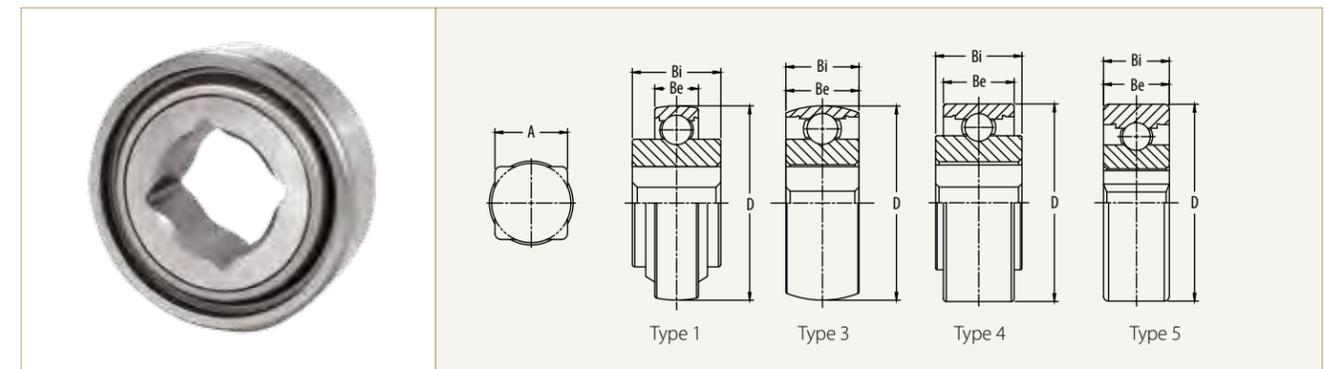


Detailed seal design description located on page 8

PEER Part Number	Type	d		D		Bi		Be		Seal Type
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
GW315PPB11-OX	3	2.7559	70	6.2992	160	2.6874	68.26	2.6874	68.26	3 Lips
GW214PPB6-GX	1	2.6881	68.278	4.9213	125	2.6875	68.262	1.1024	28	3 Lips
GW214PPB3-OX	3	2.6881	68.278	4.9213	125	2.6875	68.262	1.5625	39.688	3 Lips
GW214PPB2-GX	3	2.7559	70	4.9213	125	1.5625	39.688	1.5625	39.688	3 Lips
GW214PP2-GX	4	2.7559	70	4.9213	125	1.5625	39.688	1.5625	39.688	3 Lips
GW211PPB9-GX	2	2.1950	55.753	3.9370	100	1.5625	39.688	0.9843	25	3 Lips
GW211PPB2	3	2.1880	55.575	3.9370	100	1.3125	33.338	1.3125	33.338	3 Lips
GW211PPB14	2	2.0150	51.181	3.9370	100	1.3125	33.338	0.9843	25	3 Lips
GW211PPB13	2	1.7850	45.339	3.9370	100	1.3120	33.325	0.9843	25	3 Lips
GW211PP53	5	1.9685	50	3.9370	100	1.7500	44.45	1.3120	33.325	3 Lips
GW211PP25-GX	5	1.7850	45.339	3.9370	100	1.7500	44.45	1.3120	33.325	3 Lips
GW209PPB4-GX	3	1.5350	38.989	3.3465	85	1.1875	30.162	1.1875	30.162	3 Lips
GW209PPB22	2	1.7717	45	3.3465	85	1.1875	30.162	1.1875	30.162	3 Lips
GW209PPB22-BR209RH*	2	1.5350	38.989	3.4921	88.7	1.6875	42.862	1.2500	31.75	3 Lips
GW211PPB21-BR211RH*	2	1.7850	45.339	3.9800	101.092	2.1250	53.975	1.3350	33.909	3 Lips

\*rubber grommets over the OD

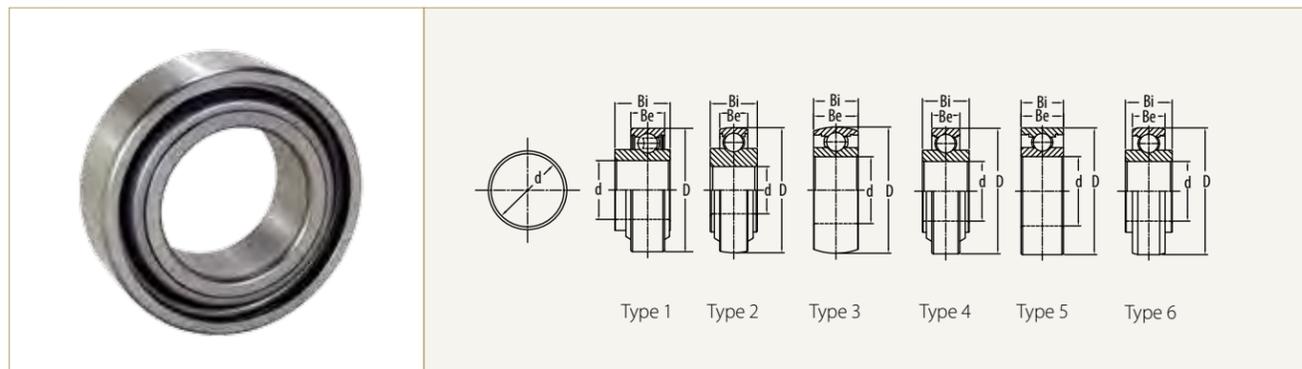
**Gang disc** Standard non-relubricatable bearings, square bore



Detailed seal design description located on page 8

PEER Part Number	Type	A		D		Bi		Be		Seal Type
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
W208PP5	4	1.1800	29.972	3.1496	80	1.4375	36.512	0.7087	18	3 Lips
W208PP6	4	1.0300	26.162	3.1496	80	1.4375	36.512	0.7087	18	3 Lips
W208PP8	4	1.1800	29.972	3.1496	80	1.4375	36.512	1.1875	30.162	3 Lips
W208PP5	1	1.1800	29.972	3.1496	80	1.4375	36.512	0.7087	18	3 Lips
W208PP6	1	1.0300	26.162	3.1496	80	1.4375	36.512	0.7087	18	3 Lips
W210PP4	5	1.1580	29.413	3.5433	90	1.1875	30.162	1.1875	30.162	3 Lips
W211PP3	5	1.5310	38.887	3.9370	100	1.3125	33.338	1.3125	33.338	3 Lips
W211PP5	4	1.5310	38.887	4.0000	101.6	1.7500	44.45	1.4380	36.525	3 Lips
W211PP3	3	1.5310	38.887	3.9370	100	1.3125	33.338	1.3125	33.338	3 Lips

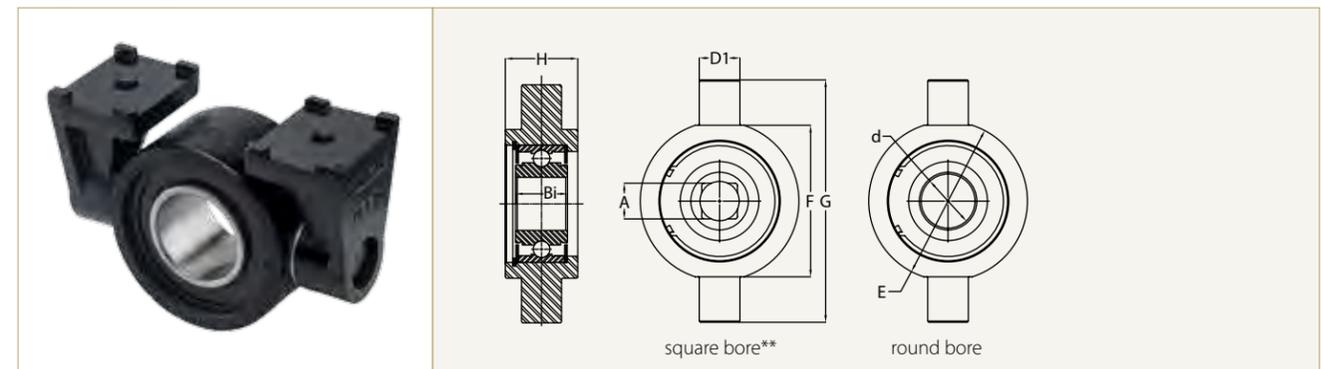
**Gang disc** Standard non-relubricatable bearings, round bore



Detailed seal design description located on page 8

PEER Part Number	Type	d		D		Bi		Be		Seal Type
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
W211PPB4	6	2.1880	55.575	3.9370	100	2.1875	55.562	1.3125	33.338	3 Lips
W211PPB2	3	2.1880	55.575	3.9370	100	1.3125	33.338	1.3125	33.338	3 Lips
W211PP54	4	2.0635	52.413	3.9370	100	2.1875	55.562	0.8268	21	3 Lips
W211PP2	5	2.1880	55.575	3.9370	100	1.3125	33.338	1.3125	33.338	3 Lips
W210PPB5	3	1.7850	45.339	3.5433	90	1.1875	30.162	1.1875	30.162	3 Lips
W210PPB2	3	1.9380	49.225	3.5433	90	1.1875	30.162	1.1875	30.162	3 Lips
W210PP2	5	1.9380	49.225	3.5433	90	1.1875	30.162	1.1875	30.162	3 Lips
W209PPB2	3	1.7717	45	3.3465	85	1.1880	30.175	1.1880	30.175	3 Lips
W209PPB4	3	1.5350	38.989	3.3465	85	1.1875	30.162	1.1875	30.162	3 Lips
W208PPB7	2	1.1879	30.172	3.1496	80	1.1875	30.162	0.7087	18	3 Lips
W208PPB23	2	1.5005	38.113	3.1496	80	1.6875	42.862	1.1875	30.162	3 Lips
W208PP10	4	1.5005	38.113	3.1496	80	1.6875	42.862	0.8268	21	3 Lips
W208KP53	1	1.5000	38.1	3.1496	80	1.4173	36	0.8661	22	3 Lips

**Gang disc** Tillage Trunnion Units (TTU)

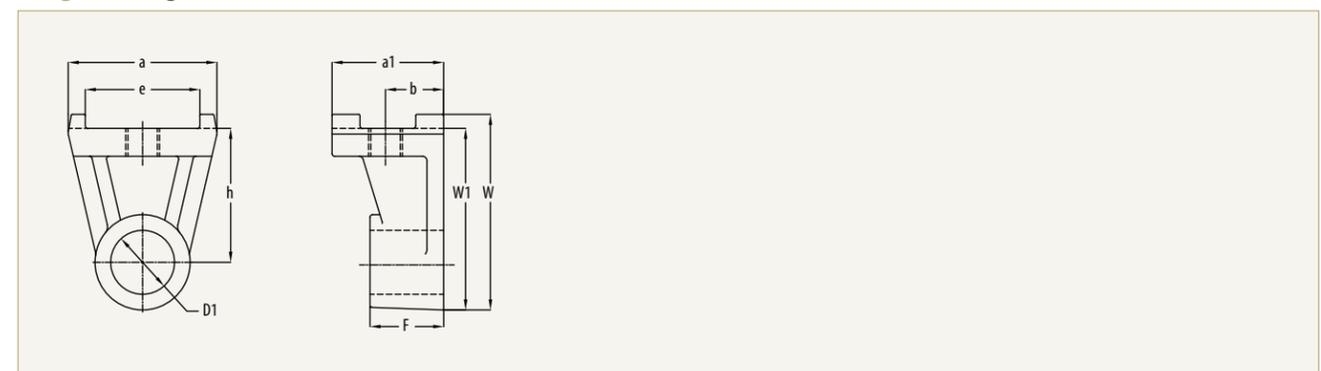


Detailed seal design description located on page 8

PEER Part Number	d		A Square Shaft		Bi		D1		E		F		G		H		Seal Type
	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
*W211K56-TTU	1.785	45.339	-	-	1.75	44.45	1.375	34.925	5.25	133.35	5	127	8	203.2	2.441	62	6 Lips
*W211K58-TTU	1.9692	50.018	-	-	1.9685	50	1.375	34.925	5.25	133.35	5	127	8	203.2	2.441	62	6 Lips
*W211K59-TTU**	-	-	1.5	38.1	1.75	44.45	1.375	34.925	5.25	133.35	5	127	8	203.2	2.323	59	6 Lips**
*W212-K53-7L-R-DTTU-A62**	2.1874	55.56	-	-	2.1874	55.56	1.2303	31.25	5.669	144	5.236	133	8.268	210	2.5200	64	7 Lips
*W212-K51-7L-R-DTTU-A62**	1.7700	44.958	-	-	1.687	42.85	1.2303	31.25	5.669	144	5.236	133	8.268	210	2.5200	64	7 Lips
*W214K51-TTU	2.6881	68.278	-	-	2.6875	68.262	1.5	38.1	6	152.4	6	152.4	9	228.6	2.992	76	6 Lips
*W214K52-TTU	2.28	57.912	-	-	2.6875	68.262	1.5	38.1	6	152.4	6	152.4	9	228.6	2.992	76	6 Lips
*W214K53-7L-TTU	2.7559	70	-	-	2.6875	68.262	1.5	38.1	6	152.4	6	152.4	9	228.6	2.992	76	7 Lips
*W214-K54-7L-DTTU-A62**	-	-	1.969	50	2.6875	68.262	1.5	38.1	6	152.4	6	152.4	9	228.6	2.992	76	7 Lips
*W214-K60-7L-DTTU-HANGER-A515	-	-	1.628	41.35	2.6875	68.262	1.5	38.1	6	152.4	6	152.4	9	228.6	2.992	76	7 Lips
GW211PP25-HDT	1.785	45.339	-	-	1.75	44.45	1.375	34.925	5.25	133.35	5	127	8	203.2	2.188	55.56	3 Lips
GW211PP2-HDT	2.188	55.575	-	-	1.3125	33.338	1.375	34.925	5.25	133.35	5	127	8	203.2	2.187	55.56	3 Lips

\*PEER TILLXTREME, \*\*square shaft

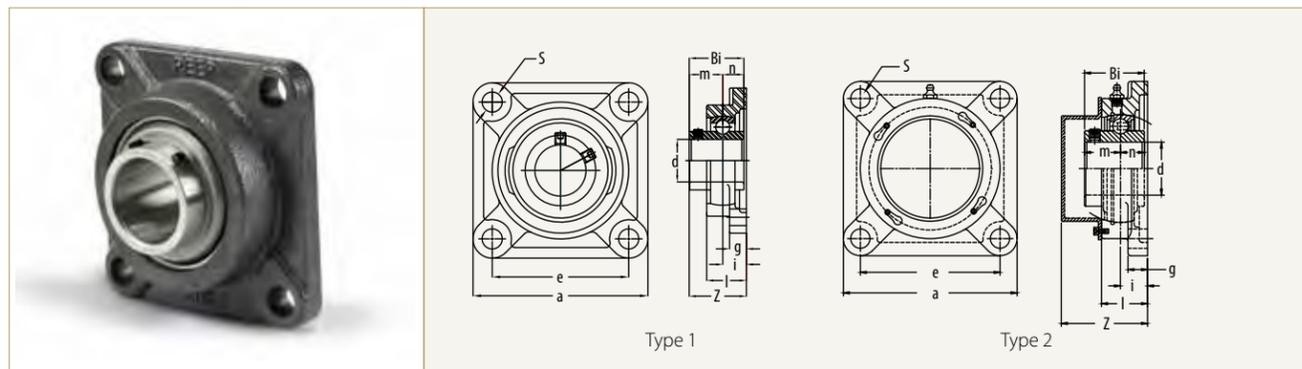
**Gang disc** Hangers for Trunnion Units



Detailed seal design description located on page 8

PEER Part Number	e		a		h		D1		a1		b		F		W		W1	
	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]
HANGER-211	2.5625	65.088	3.188	80.98	3	76.2	1.4375	36.512	2.5	63.5	1.375	34.93	1.625	41.28	4.403	111.84	4.0913	103.92
HANGER-214	3	76.2	3.78	96	3.543	90	1.5312	38.892	2.835	72	1.457	37	1.654	42	5	127	4.724	120

**Seedbed finisher** Flanged unit assembly

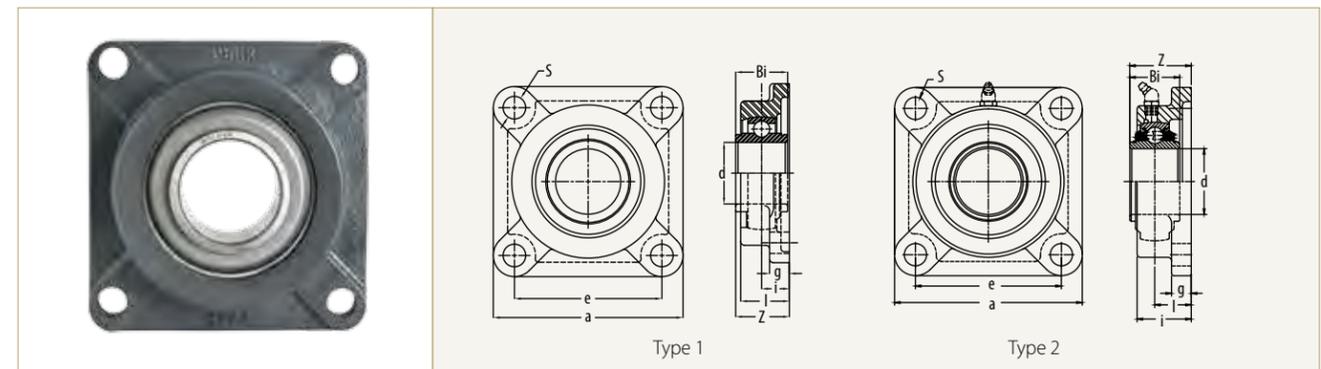


Detailed seal design description located on page 8

PEER Part Number	Type	d Round Shaft		a		e		i		g		l		s		Z		Bi		n		m		SEAL TYPE
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
*UCF208-40MM-MFRL	1	1.575	40	5.126	130.2	4	101.6	0.835	21.2	0.594	15.1	1.406	35.7	0.65	16.5	2.024	51.4	1.937	49.2	0.748	19	1.189	30.2	5 Lips
*UCF308-40MM-AP-MF	1	1.575	40	5.906	150	4.409	112	0.906	23	0.669	17	1.575	40	0.748	19	2.205	56	2.047	43.7	0.748	19	1.299	33	6 Lips
*XD-UCF208-40MM-XB-AP-TLSL-U435	1	1.575	40	5.126	130.2	4	101.6	1.043	26.5	0.594	15.1	1.516	38.5	0.512	13	2.232	56.7	1.72	43.7	0.531	13.5	1.189	30.2	6 Lips
*XD-UCF208-40MM-XB-AP-TLSL-U31	1	1.575	40	5.126	130.2	4	101.6	1.043	26.5	0.594	15.1	1.516	38.5	0.512	13	2.232	56.7	1.72	52	0.531	13.5	1.189	30.2	5 Lips
*XD-UCF209-45MM-AP-TLSL-U26	1	1.772	45	4.252	108	5.843	148.4	0.866	22	0.594	15.1	1.378	35	0.669	17	2.055	52.2	1.937	49.2	0.748	19	1.189	30.2	5 Lips
*UCFS210-50MM-AP-BLSL-U265	1	1.969	50	5.626	142.9	4.374	111.1	1.142	29	0.626	15.9	1.811	46	0.669	17	2.425	61.6	2.0315	51.6	0.748	19	1.2835	32.6	6 Lips
*XD-UCF210-50MM-XB-AP-TLSL-U409	1	1.969	50	5.626	142.9	4.374	111.1	1.079	27.4	0.626	15.9	1.768	44.9	0.512	13	0.039	60	2.0315	51.6	2.0315	51.6	1.2835	32.6	6 Lips
*XD-UCF210-50MM-XB-AP-TLSL-U117	1	1.969	50	5.626	142.9	4.374	111.1	0.874	22.2	0.626	15.9	1.563	39.7	0.65	16.5	2.157	54.8	2.0315	51.6	0.748	19	1.2835	32.6	5 Lips
*XD-UCFS210-50MM-AP-BLSL-U448	1	1.969	50	5.626	142.9	4.374	111.1	1.142	29	0.626	15.9	1.811	46	0.669	17	2.425	61.6	2.0315	51.6	0.748	19	1.2835	32.6	6 Lips
UCXF11-32-OX-AP-U131	2	2	50.8	6.874	174.6	5.626	142.9	1.157	29.4	0.72	18.3	1.874	47.6	0.709	18	3.488	88.6	2.563	65.1	1	25.4	1.563	39.7	G
UCXF12-38-OX-AP-U132	2	2.375	60.325	7.374	187.3	5.8661	149	1.185	30.1	0.874	22.2	1.969	50	0.709	18	3.701	94	2.563	65.1	1	25.4	1.563	39.7	G
*XD-UCF212-60MM-XB-AP-TLSL-U26	1	2.362	60	6.874	174.6	5.626	142.9	1.158	29.4	0.72	18.3	1.874	47.6	0.709	18	2.72	69.1	1.937	49.2	0.748	19	1.189	30.2	5 Lips
XD-UCXF213-65MM-OB-AP-TRL	1	2.56	65	7.5945	192.9	6	152.4	1.22	31	0.874	22.2	2.122	53.9	0.709	18	2.967	75.4	2.937	74.6	1.748	44.4	1.189	30.2	3 Lips

\* PEER TILLXTREME

**Seedbed finisher** Flanged unit assembly

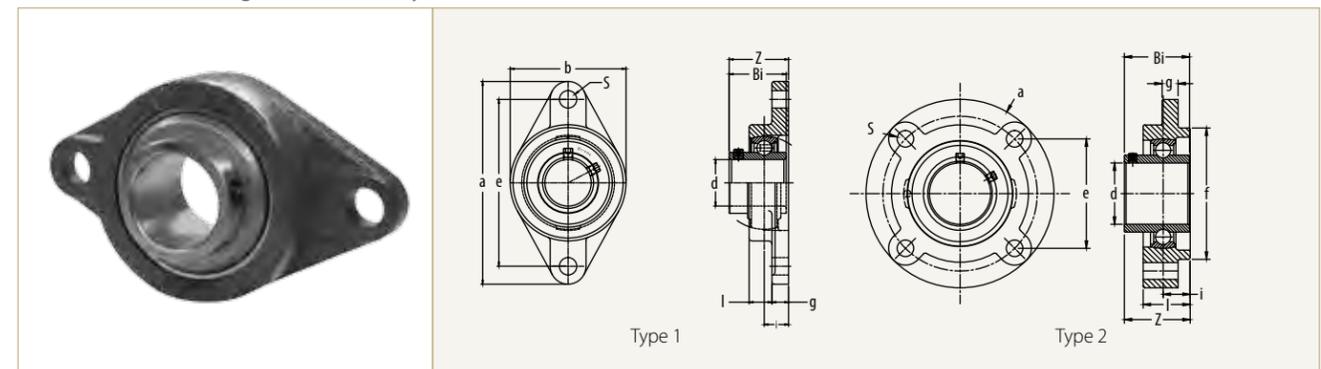


Detailed seal design description located on page 8

PEER Part Number	Type	d Round Shaft		a		e		i		g		l		s		Z		Bi		SEAL TYPE
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
*W212-60MM-MF-DF-A112	1	2.362	60	6.874	174.6	5.626	142.9	1.158	29.4	0.72	18.3	1.874	47.6	0.709	18	2.1575	54.8	2	50.8	6 Lips
*W210-50MM-MF-R-DF-A490	2	1.969	50	5.626	142.9	4.374	111.1	1.093	27.75	0.591	15	1.622	41.2	0.669	17	1.841	46.75	1.496	38	6 Lips

\* PEER TILLXTREME

**Seedbed finisher** Flanged unit assembly

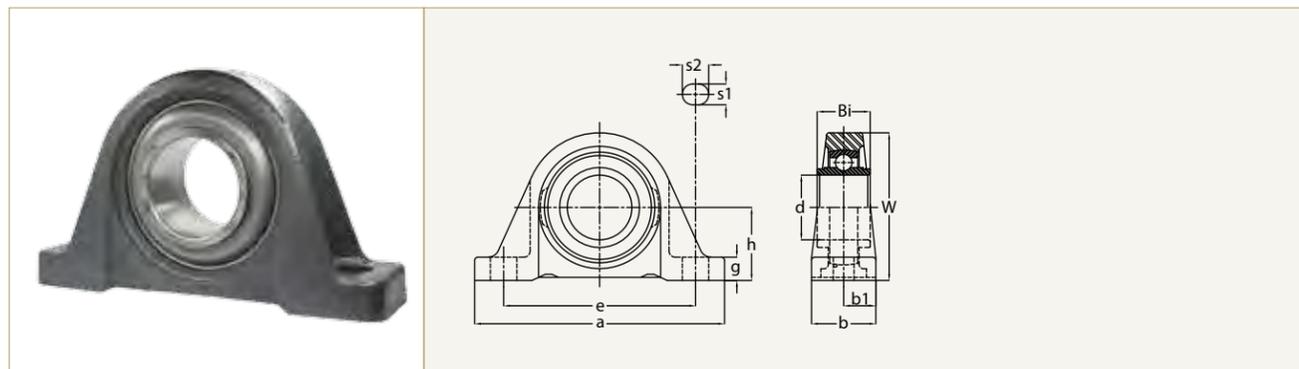


Detailed seal design description located on page 8

PEER Part Number	Type	d		a		e		i		g		l		s		Z		Bi		b		SEAL TYPE
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]			
*XD-UCFT208-40MM-XB-AP-TLSL-U26	1	1.575	40	6.874	174.6	5.657	143.7	0.827	21	0.563	14.3	1.339	34	0.591	15	2.016	51.2	1.937	49.2	3.937	100	5 Lips
*XD-UCFT208-40MM-XB-AP-TLSL-NSS-U239	1	1.575	40	6.874	174.6	5.657	143.7	0.827	21	0.563	14.3	1.339	34	0.591	15	2.016	51.2	1.937	49.2	3.937	100	5 Lips
*XD-UCFT206-30MM-XB-AP-TLSL-U236	1	1.181	30	5.811	147.6	4.594	116.7	0.709	18	0.5	12.7	1.142	29	0.531	13.5	1.646	41.8	1.563	39.7	3.157	80.2	5 Lips
*XD-UCFT206-30MM-XB-AP-TLSL-U469	1	1.181	30	5.811	147.6	4.594	116.7	0.7086	18	0.5	12.7	1.1417	29	M 12x 1.75		1.646	41.8	1.563	39.7	3.157	80.2	6 Lips
*W208-40MM-MF-R-DFT-A374	1	1.575	40	6.874	174.6	5.657	143.7	1.22	31	0.563	14.3	1.772	45	0.65	16.5	2.008	51	1.575	40	3.937	100	6 Lips
*W207-35MM-FTDT-MF-AP	1	1.378	35	6.343	161.1	5.126	130.2	0.748	19	0.563	14.3	1.181	30	0.65	16.5	1.437	36.5	1.378	35	3.531	89.7	6 Lips
**KX-GRFT206-30MM-AP-TDSL-U429	1	1.181	30	5.811	147.6	4.594	116.7	0.7086	18	0.5	12.7	1.1417	29	0.531	13.5	1.7323	44	1.5	38.1	3.157	80.2	5 Lips
*XD-UCFC214-70MM-XB-AP-TLSL	2	2.756	70	8.467	215.1	4.921	125	1.22	31	0.72	18.3	2.122	53.9	0.752	19.1	2.937	74.6	2.937	74.6	/	/	5 Lips

\* PEER TILLXTREME, \*\* PEER TILLXTREME with Grip it locking collar

**Seedbed finisher** Pillow block units

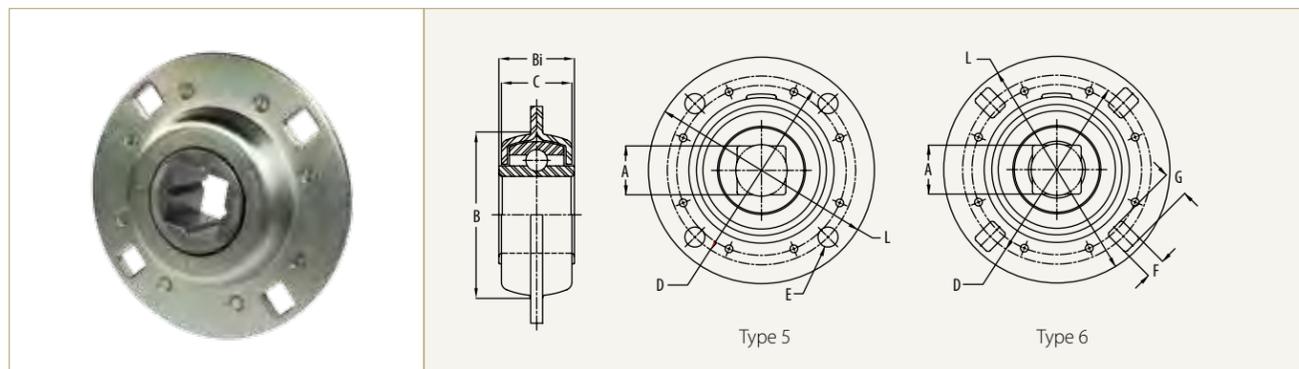


Detailed seal design description located on page 8

PEER Part Number	d		h		a		e		b		s1		s2		g		W		Bi		SEAL TYPE
	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
*W212-60MM-MF-R-P-A290	2.3622	60	2.75	69.85	9.4374	239.71	7.25	184.15	2.4252	61.6	0.7811	19.84	1	25.4	0.8752	22.23	5.5626	141.29	2	50.8	6 Lips

\* PEER TILLXTREME

**Seedbed finisher** Flanged disc

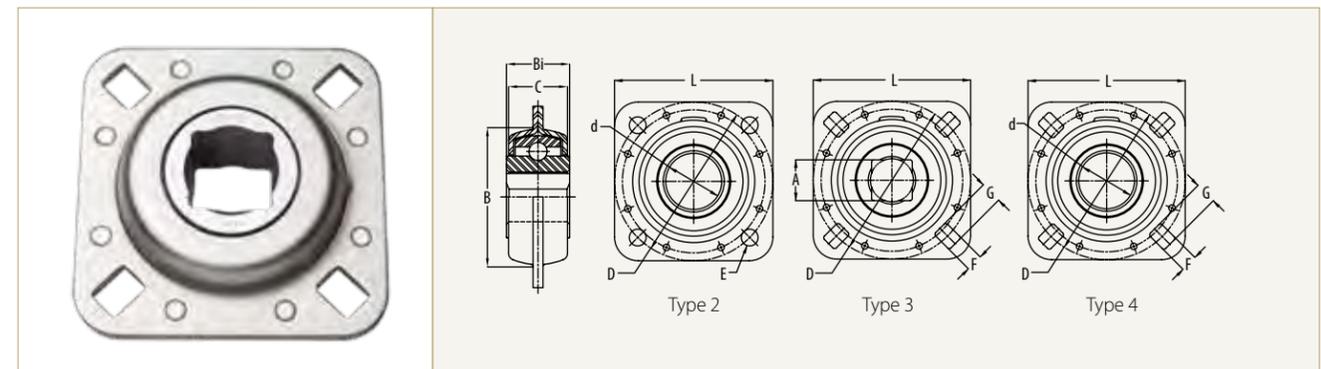


Detailed seal design description located on page 8

PEER Part Number	TYPE	A		Bi		L		D BOLT CIRCLE		E		F		G		B MIN. FRAME OPENING		C		SEAL TYPE
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
*RFD209K50-1-1/8SQ	5	1.6845	42.786	6	152.4	5	127	5	127	0.531	13.5	-	-	-	-	3.865	98.17	1.63	41.4	5 Lips
*RFD209K51-30MMSQ-SP2	6	1.6845	42.786	6	152.4	5	127	5	127	-	-	0.531	13.5	0.531	13.5	3.865	98.17	1.63	41.4	5 Lips
*RFD211K51-40MMSQ-A371	6	2.0078	52	7.559	192	5.5	139.7	5.5	139.7	-	-	0.59	15	0.59	15	4.491	114.07	1.811	46	5 Lips

\* PEER TILLXTREME

**Seedbed finisher** Flanged disc



Detailed seal design description located on page 8

**Round Bore Non Relubricatable**

PEER Part Number	TYPE	A/d		Bi		L		D BOLT CIRCLE		E		F		G		B MIN. FRAME OPENING		C		SEAL TYPE
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
*FD209K58-1-3/4RD-A326	2	1.77	44.958	1.6845	42.786	5	127	5	127	0.531	13.487	-	-	-	-	3.865	98.17	1.63	41.4	5 Lips
*FD209K50-1-3/4RD	2	1.77	49.958	1.747	44.374	5	127	5	127	0.531	13.487	-	-	-	-	3.865	98.17	1.63	41.4	5 Lips
*FD209K52-1-1/2RD	4	1.535	38.989	1.6845	42.786	5	127	5	127	-	-	0.531	13.487	0.687	17.45	3.865	98.17	1.63	41.4	5 Lips
*FD209K53-1-1/2RD	4	1.535	38.989	1.6845	42.786	5	127	5	127	-	-	0.531	13.487	0.687	17.45	3.865	98.17	-	-	6 Lips
*FD209K54-1-1/4RD	2	1.27	32.258	1.6845	42.786	5	127	5	127	0.531	13.487	-	-	-	-	3.865	98.17	1.63	41.4	5 Lips
*FD211K65-1-15/16RDC-A326	2	1.938	49.253	2.125	53.975	139.7	5.5	5.5	139.7	0.531	13.487	-	-	-	-	4.491	114.07	1.811	46	5 Lips
*FD211K51-1-3/4RD-A366	3	1.78	45.212	2.1875	55.562	5.5	139.7	5.5	139.7	-	-	0.531	13.487	0.687	17.45	4.491	114.07	1.811	46	5 Lips
*FD211K52-1-3/4RD-A365	2	1.78	45.212	2.1875	55.562	5.5	139.7	5.5	139.7	0.531	13.487	-	-	-	-	4.491	114.07	1.811	46	5 Lips
*FD211K61-2-3/16RD	2	2.188	55.575	2.1845	55.486	5.5	139.7	5.5	139.7	0.531	13.487	-	-	-	-	4.491	114.07	1.811	46	5 Lips
*FD212K51-60RD	2	2.4016	61	2.2047	56	6.811	173	5.63	143	6.4	16.25	-	-	-	-	5	127	1.968	50	5 Lips

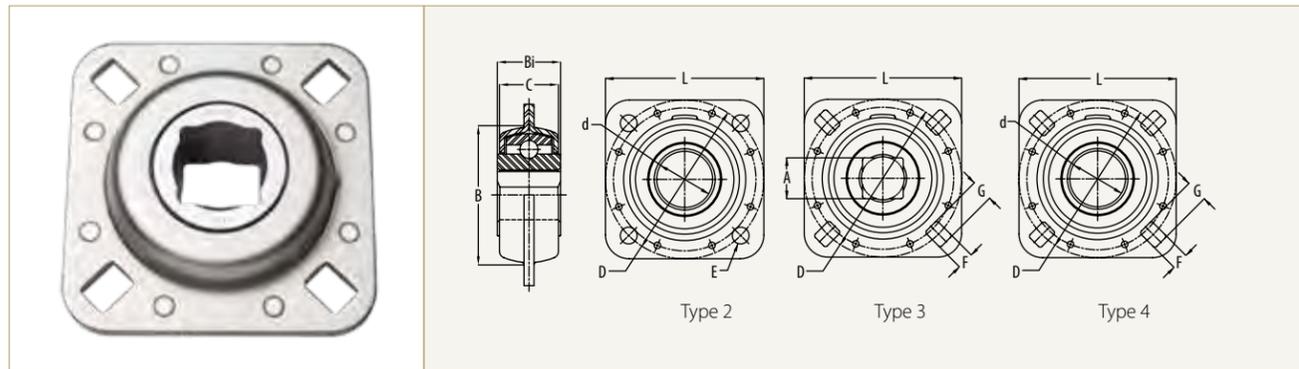
\* PEER TILLXTREME

**Square Bore Non-Relubricatable**

PEER Part Number	TYPE	A/d		Bi		L		D BOLT CIRCLE		F		G		B MIN. FRAME OPENING		C		SEAL TYPE
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
*FD209K51-1-1/4SQ	3	1.3	33.02	1.6845	42.786	5	127	5	127	0.531	13.487	0.687	17.45	3.865	98.17	1.63	41.4	5 Lips
*FD209K57-1-1/8SQ-A366	3	1.18	29.972	1.6845	42.786	5	127	5	127	0.531	13.487	0.687	17.45	3.865	98.17	1.63	41.4	5 Lips
*FD211K53-1-1/2SQ	3	1.531	38.887	2	50.8	5.5	139.7	5.5	139.7	0.531	13.487	0.687	17.45	4.491	114.07	1.811	46	5 Lips

\* PEER TILLXTREME

**Seedbed finisher** Flanged disc



Detailed seal design description located on page 8

**Round Bore Relubricatable**

PEER Part Number	TYPE	A/d		Bi		L		D BOLT CIRCLE		E		F		G		B MIN. FRAME OPENING		C		SEAL TYPE
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
FD211-1-3/4RD	2	1.78	45.212	2.1875	55.563	5.5	139.7	5.5	139.7	0.531	13.487	-	-	-	-	4.491	114.07	1.811	46	3 Lips
FD211-2-3/16RD	2	2.188	55.575	2.1845	55.486	5.5	139.7	5.5	139.7	0.531	13.487	-	-	-	-	4.491	114.07	1.811	46	3 Lips
FD211-1-15/16RDC	2	1.938	49.225	2.125	53.975	5.5	139.7	5.5	139.7	0.531	13.487	-	-	-	-	4.491	114.07	1.811	46	3 Lips
ST491A	2	1.77	44.958	1.6845	42.786	5	127	5	127	0.531	13.487	-	-	-	-	3.865	98.17	-	-	3 Lips
ST491A-B	2	1.77	44.958	1.747	44.374	5	127	5	127	0.531	13.487	-	-	-	-	3.865	98.17	1.63	41.4	3 Lips
ST491B	4	1.535	38.989	1.6845	42.786	5	127	5	127	-	-	0.531	13.487	0.687	17.45	3.865	98.17	1.63	41.4	3 Lips

**Square Bore Relubricatable**

PEER Part Number	TYPE	A/d		Bi		L		D BOLT CIRCLE		E		F		G		B MIN. FRAME OPENING		C		SEAL TYPE
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
FD209-1-1/4SQ	3	1.3	33.02	1.6845	42.786	5	127	5	127	-	-	0.531	13.5	0.687	17.45	3.865	98.17	1.63	41.4	3 Lips
FD209-1-1/8SQ	3	1.18	29.972	1.6845	42.786	5	127	5	127	-	-	0.531	13.5	0.687	17.45	3.865	98.17	1.63	41.4	3 Lips
FD211-1-1/2SQ	3	1.531	38.887	2	50.8	5.5	139.7	5.5	139.7	-	-	0.531	13.5	0.687	17.45	4.491	114.07	1.811	46	3 Lips



**Seeder Bearings**

Best possible growing conditions are determined by an adequately prepared seedbed. Perfectly placed and distributed seeds in a consistent furrow at a determined depth are prerequisites for high yield. Different influencing parameters such as seed type, soil type, and environmental conditions demand different seeding procedures and machinery. The three basic categories include drills, planters and seeders, using mechanical metering system or air pressure differentials to convey or singulate the seeds.

The furrow opening, seed depth control and seed covering is accomplished by disc openers, gauge wheel, press wheel and closing wheel.

**Disk opener:** opens a narrow furrow in the ground where the seed is planted

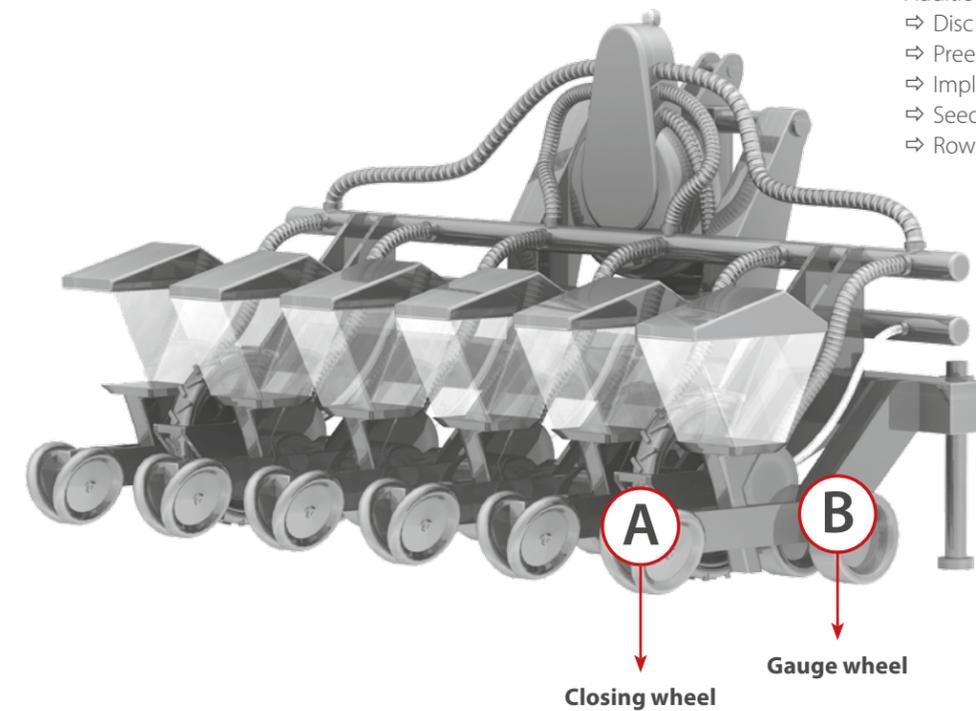
**Gauge wheel:** determines the depth at which the seed is planted by controlling the depth at which the disc opener operates

**Press wheel:** presses the seed into contact with the soil in the furrow

**Closing wheel:** drags soil over the seed and fills in the furrow

**Bearing solutions for:**

- (A) Closing wheel, page 29
- (B) Gauge wheel, page 28
- Additional application
  - ⇒ Disc opener, page 26
  - ⇒ Press wheel, page 29
  - ⇒ Implement wheel, page 49
  - ⇒ Seedmeter drive shaft, page 30
  - ⇒ Row marker, page 29



### Drills

Seeding of multiple rows by row placement of seeds with a common seeder hopper and a volumetric displacement seeding meter for all the seeding rows. The seeding units are each mounted on a main frame and seed delivery is accomplished pneumatically or by free seed fall through individual delivery tubes.

### Planters

Seeding of multiple rows by multiple row seeding units, each typically containing a ground engaging tool, depth control components and a singulating meter device for each row. Seeding units are individually mounted on the main frame. The singulating and conveying of seeds from the seed hopper takes place pneumatically or by air pressure differential.

### Seeders

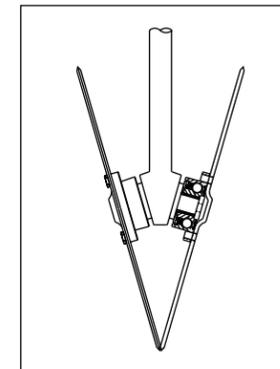
Seeding by spreading or dropping the seed on the soil surface without the use of furrow openers or seed covering devices under the use of volumetric seed metering devices. Also a pneumatically conveying of seeds to the ground openers of the seeding tool or to spreaders at the front of the tillage tool might be used.

\*Content derived from the American Society of Agricultural and Biological Engineers (ASABE)

### Application challenges

#### Disk opener application condition

- Single disc or double disc arrangements are used to open the furrow
- Bearings are pressed into the housing which is riveted or screwed to the disc. The disc assembly is bolted to the machine frame
- High loads are encountered in no-till farming and due to angle of pull
- Rigid assembly is required for a precise disc mounting which creates a consistent furrow
- Dusty and sometimes moist environment

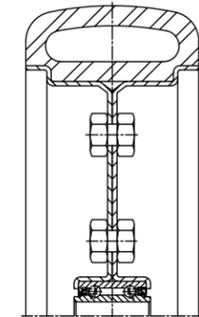


#### Benefits and functional features:

- Bolt-on performance:
  - ⇒ HUB assembly is available for ease of mounting
  - ⇒ Reduced labor cost and eliminate damage due to incorrect assembly
- Increased productivity and operation life in field due to:
  - ⇒ Optimized internal geometry
  - ⇒ High load capacity
  - ⇒ High contamination feature package with exclusive sealing system
- Precise furrow opening:
  - ⇒ Rigid disc
  - ⇒ Minimized operating internal clearance
  - ⇒ Optimized internal geometry

#### Gauge wheel application condition

- Bearing is assembled in gauge wheel and bolted on machine
- Dusty and sometimes moist environment



#### Benefits and functional features:

- Increased productivity and operation life in field due to:
  - ⇒ Optimized internal geometry
  - ⇒ High load capacity
  - ⇒ High contamination feature package with exclusive sealing system
- Increased speed to the market
  - ⇒ PEER bearing solutions are interchangeable with standard gauge wheel bearings

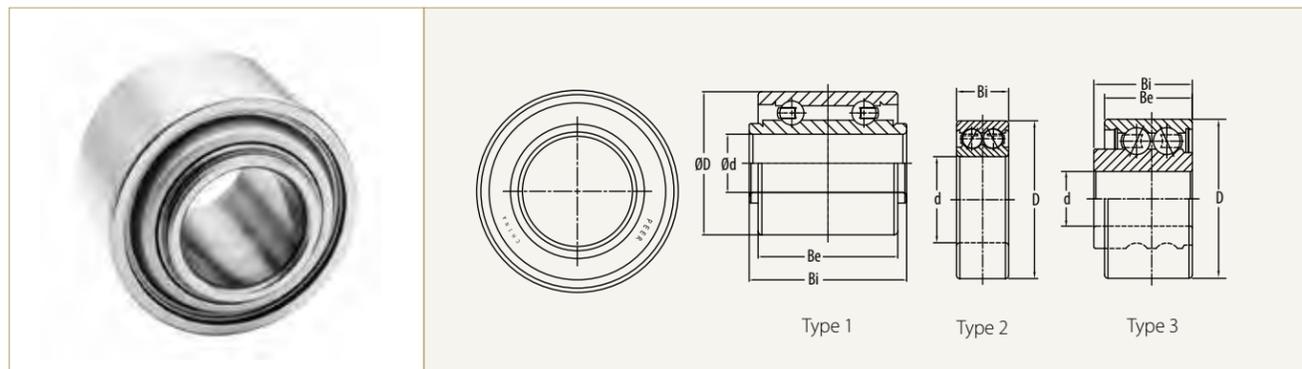
#### Press wheel and closing wheel application conditions

- Press and closing wheel perform different functions in the machine but are exposed to similar application conditions; similar bearing solutions are used
- Dusty and sometimes moist environment

#### Benefits and functional features:

- Increased productivity and operating life in field due to:
  - ⇒ Optimized internal geometry
  - ⇒ High load capacity
  - ⇒ High contamination feature package with exclusive sealing system
- Increased speed to the market
  - ⇒ PEER offers the industry's largest range of high performance seeding bearings

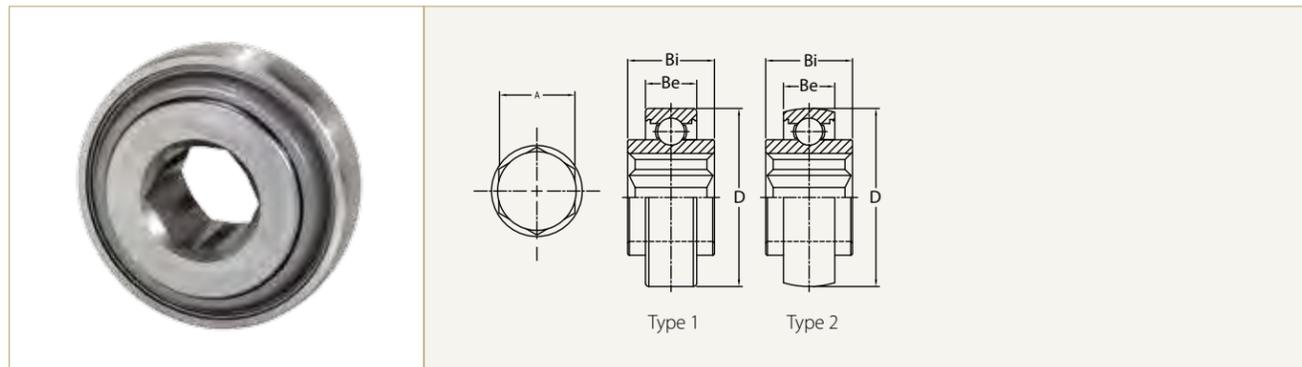
### Disc opener



Detailed seal design description located on page 8

PEER Part Number	Type	d		D		Bi		Be		Seal Type
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
5203-KPP2-R-A574	1	0.64	16.256	1.5748	40	1.737	44.12	1.5402	39.12	3 Lips
5204-ZRS	2	0.7874	20	1.8504	47	0.813	20.638	-	-	RS
5204-KP52-R-A116	3	0.7874	20	1.8504	47	0.992	25.2	0.8622	21.9	3 Lips
5204KP52-SP6	3	0.7874	20	1.8504	47	0.992	25.2	0.8622	21.9	3 Lips
5204-KPP55-R-A248	1	0.6398	16.25	1.8504	47	1.737	44.12	1.5402	39.12	3 Lips
5204KRP50	2	0.6350	16.129	1.8504	47	1.102	28	-	-	3 Lips
5204KRP51	3	0.6350	16.129	1.8504	47	1.149	29.175	1.0236	26	3 Lips
5206KPP3	1	1.1870	30.15	2.4409	62	1.969	50	1.4567	37	3 Lips
5204-KRMF-R-A517	2	0.6339	16.1	1.8504	47	0.969	24.6	-	-	4 Lips
WS204-2RSTFP-C3-TN	2	0.7874	20	1.8504	47	0.938	23.812	-	-	F

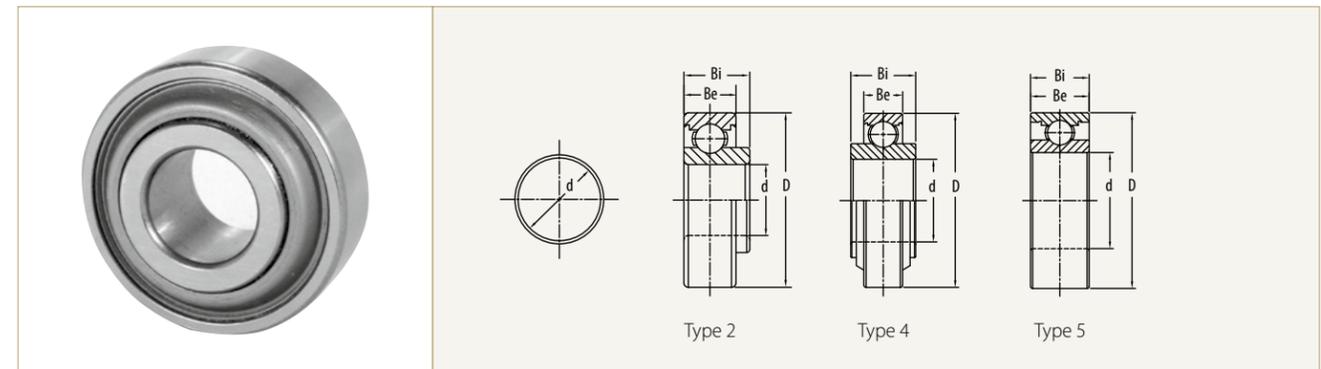
### Disc opener



Detailed seal design description located on page 8

PEER Part Number	Type	A		D		Bi		Be		Seal Type
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
205KPP2	1	0.876	22.25	2.0472	52	1.000	25.4	0.5906	15	3 Lips
205KRRB2	2	0.876	22.25	2.0472	52	1.000	25.4	0.5906	15	G

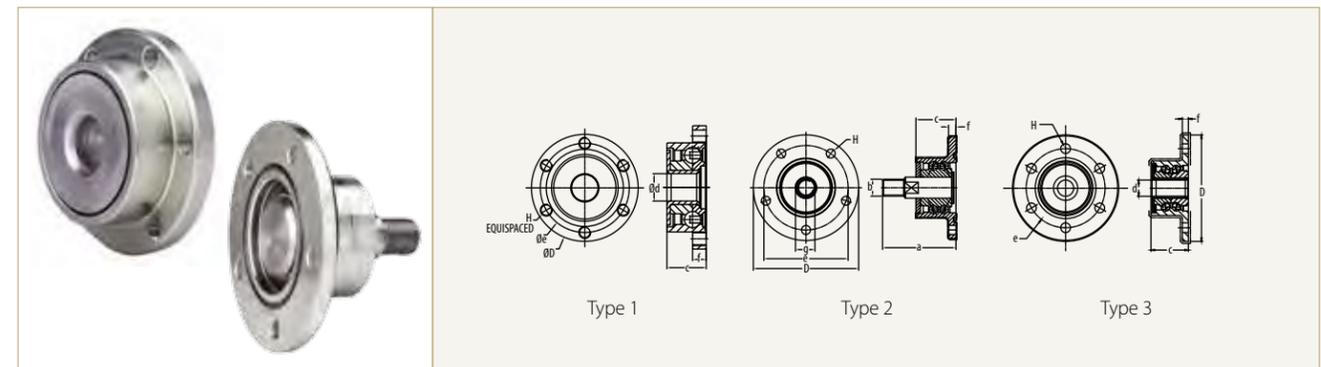
### Disc opener



Detailed seal design description located on page 8

PEER Part Number	Type	d		D		Bi		Be		Seal Type
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
204PY3	2	0.6320	16.053	1.7805	45.225	0.735	18.669	0.6100	15.494	2 Lips
205KRP2	2	0.7560	19.202	2.0472	52	0.831	21.107	0.5906	15	3 Lips
205-KRP5-R-A17	2	0.7874	20	2.0472	52	0.831	21.107	0.5906	15	3 Lips
206KRP4	2	0.9900	25.146	2.4409	62	0.875	22.225	0.7087	18	3 Lips
206-KRP50-R-A422	2	1.1810	30	2.4409	62	0.875	22.225	0.7087	18	3 Lips
BB204-PF3-R-A453	2	0.6320	16.053	1.7805	45.225	0.735	18.669	0.6100	15.494	3 Lips
BB204-PY3-R-A513	2	0.6320	16.053	2.1350	54.225	0.735	18.669	0.6100	15.494	2 Lips
BB205KRP2	2	0.7560	19.202	2.0472	52	0.831	21.107	0.5906	15	3 Lips
203KRR2FD	4	0.6400	16.256	1.5748	40	0.720	18.288	0.4724	12	2 Lips
203NPP9	5	0.6260	15.9	1.5748	40	0.510	12.954	0.5100	12.954	R
BB304PP50	4	0.6350	16.129	2.0900	53.086	0.969	24.608	0.7189	18.26	3 Lips

### Disc opener HUB bearings

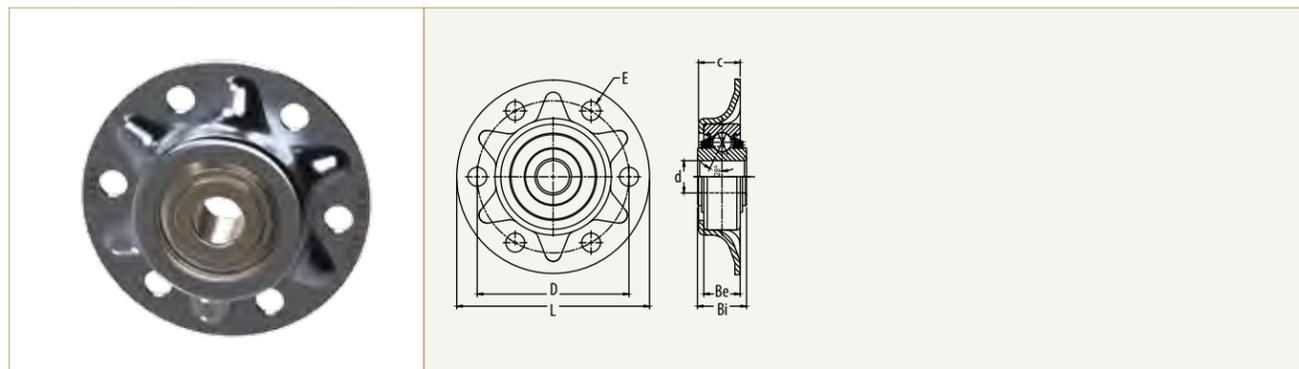


Detailed seal design description located on page 8

PEER Part Number	Type	b	e		c		a		D		f		g		ø d		H Bolt	Seal Type
			[inch]	[mm]														
* HUB-16MM-X	1	-	2.3622	60	0.9055	23	-	-	2.8346	72	0.3150	8	-	-	0.6299	16	M8 x 1.0. 6x	6 Lips
**HUB-16MM-X-R-A391	3	-	3.0700	78	1.4570	37	-	-	4.1340	105	0.2360	6	-	-	0.6320	16.065	ø9.6	6 Lips
* HUB-20MM-X	2	M16x2	3.1496	80	1.4961	38	2.8740	73	3.9370	100	0.2756	7	0.7283	18.5	-	-	5 x ø8.5H12	6 Lips
*HUB-20MM-X-ASSY-A605	2	M16x2	2.9528	75	1.4961	38	2.6771	68	3.9370	100	0.2756	7	0.7283	18.5	-	-	6x M6 x 0.75	6 Lips
**HUB-20MM-X-ASSY-A543	2	M16x2	3.1496	80	1.6220	41.2	2.9600	75.2	3.9370	100	0.2756	7	0.7283	18.5	-	-	6x M8 x 1.25	6 Lips

\* PEER SEEDXTREME, \*\* PEER SEEDXTREME modular HUB

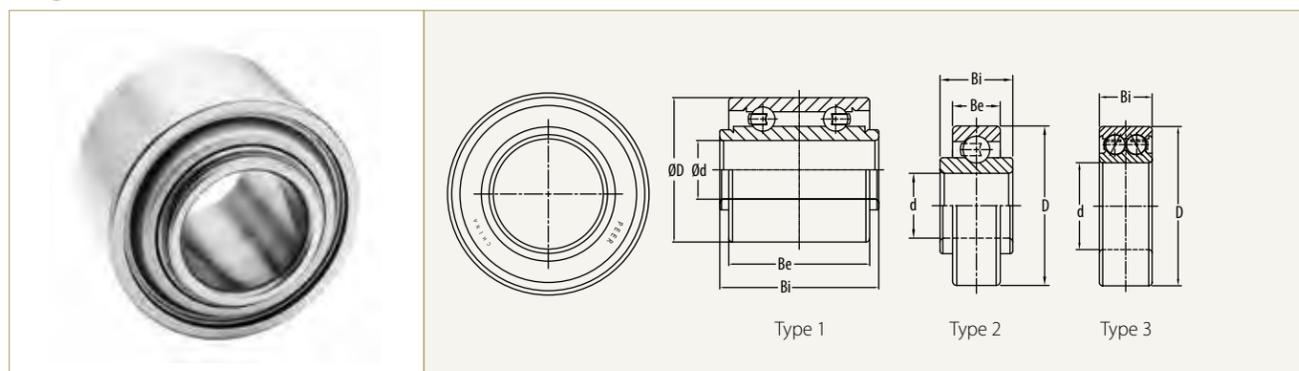
### Disc opener Flanged disc bearings



Detailed seal design description located on page 8

PEER Part Number	C		E		d		D		L		Bi		Be		Seal Type
	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
BB304-KPP50-R-P6F-A48	0.8268	21	6 x Ø 0.3748	6 x Ø 9.52	0.6350	16.129	3.0000	76.2	3.8123	96.84	0.9688	24.6	0.7205	18.3	3 Lips

### Gauge wheel

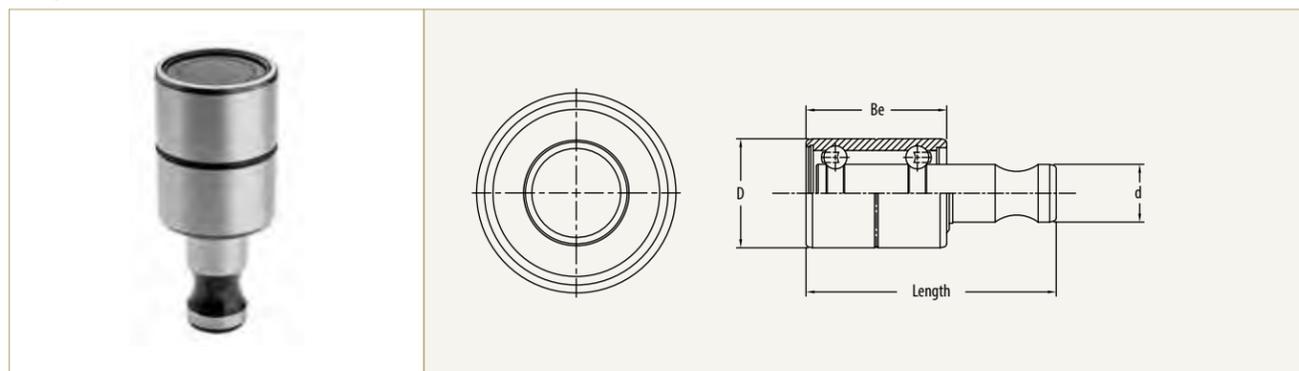


Detailed seal design description located on page 8

PEER Part Number	Type	d		D		Bi		Be		Seal Type
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
5203KPP2	1	0.64	16.256	1.5748	40	1.7370	44.12	1.5402	39.12	3 Lips
5203KYY2	1	0.64	16.256	1.5748	40	1.7370	44.12	1.5402	39.12	2 Lips
5203-KRR2-R-A230	1	0.64	16.256	1.5748	40	1.7370	44.12	1.5402	39.12	G
5203KYY50	1	0.624	15.85	1.5748	40	1.1969	30.4	1	25.4	2 Lips
5203-ZZ	3	0.6693	17	1.5748	40	0.6875	17.463	-	-	Z
203KRR2	2	0.6400	16.256	1.5748	40	0.7200	18.288	0.4724	12	R
*5203-KMF-R-A120	1	0.6400	16.256	1.5748	40	1.737	44.12	1.5402	39.12	6 Lips

\* PEER SEEDXTREME

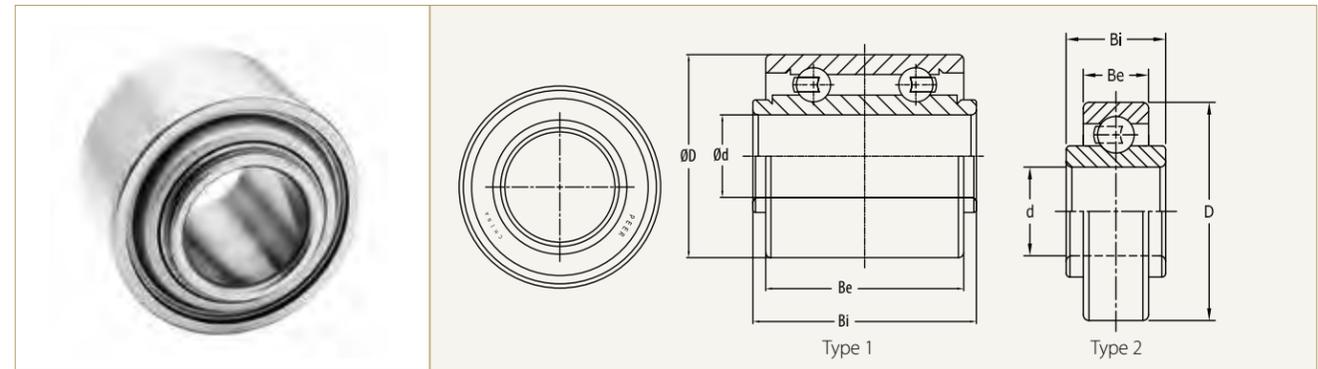
### Gauge wheel



Detailed seal design description located on page 8

PEER Part Number	d		D		Be		Length		Seal Type
	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
WP5203-KRP2-N-A217	0.6252	15.88	1.1811	30	1.5275	38.8	2.716	69	3 Lips

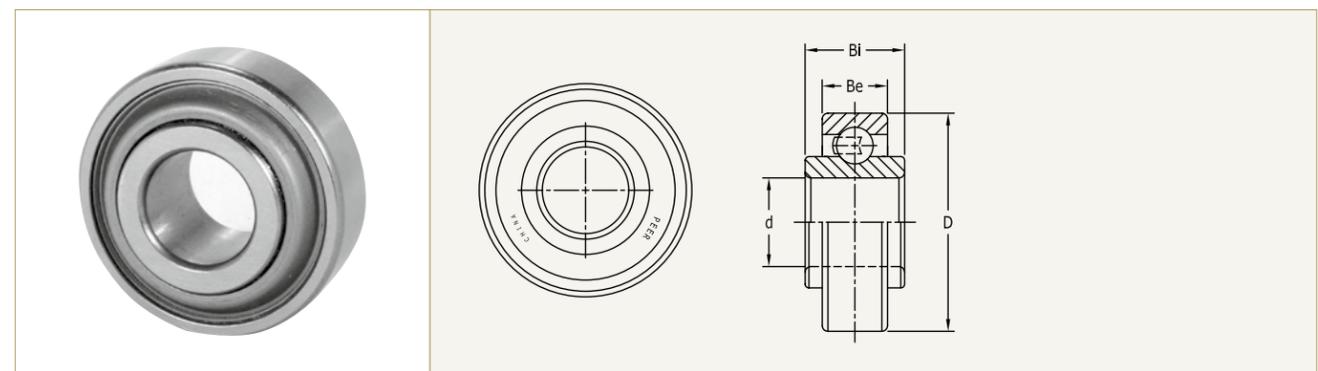
### Closing wheel



Detailed seal design description located on page 8

PEER Part Number	Type	d		D		Bi		Be		Seal Type
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
5203KPP2	1	0.6400	16.256	1.5748	40	1.7370	44.12	1.5402	39.12	3 Lips
5203KYY2	1	0.6400	16.256	1.5748	40	1.7370	44.12	1.5402	39.12	2 Lips
BB203KRR2FD	2	0.6400	16.256	1.5748	40	0.7200	18.288	0.4724	12	2 Lips

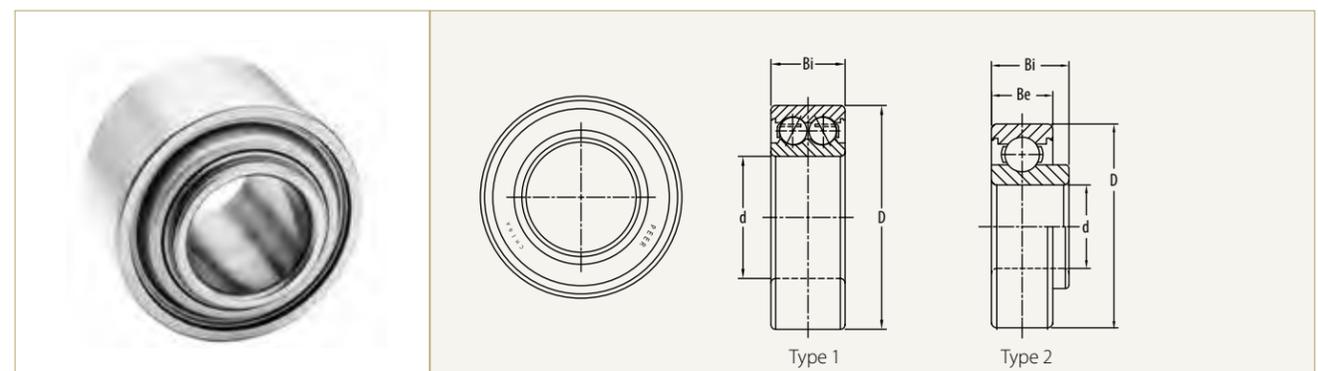
### Press wheel



Detailed seal design description located on page 8

PEER Part Number	d		D		Bi		Be		Seal Type
	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
BB203KRR2FD	0.6400	16.256	1.5748	40	0.7200	18.288	0.4724	12	2 Lips
BB203KYY2	0.6400	16.256	1.5748	40	0.7200	18.288	0.4724	12	2 Lips
BB203KRR5	0.5150	13.081	1.5748	40	0.7200	18.288	0.4724	12	R

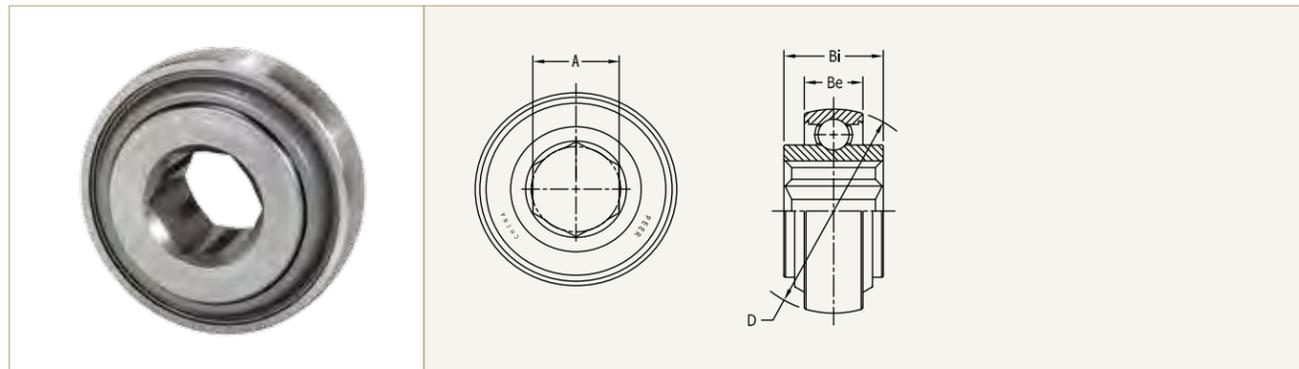
### Row marker



Detailed seal design description located on page 8

PEER Part Number	Type	d		D		Bi		Be		Seal Type
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
206KRP4	2	0.9900	25.146	2.4409	62	0.8750	22.23	0.7087	18	3 Lips
5204KRP50	1	0.6350	16.129	1.8504	47	1.1024	28.00	/	/	3 Lips

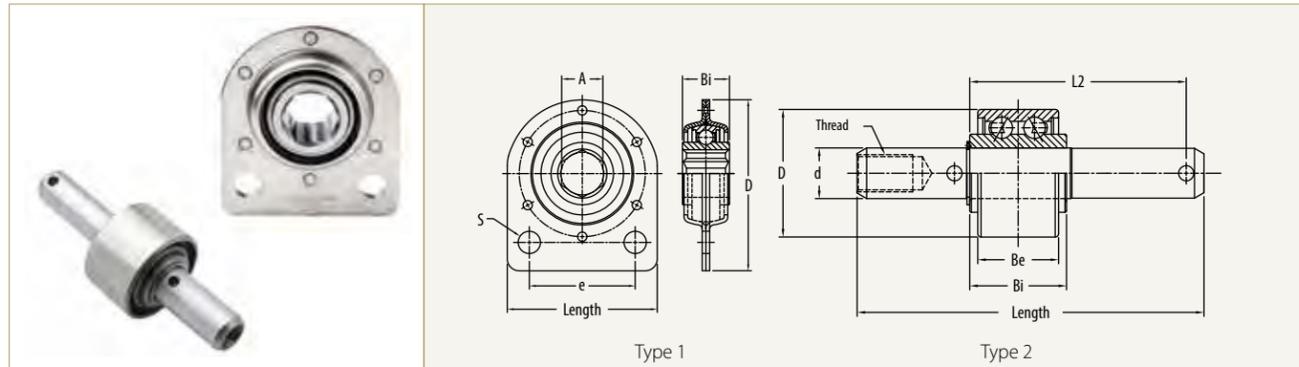
### Seedmeter drive shaft



Detailed seal design description located on page 8

PEER Part Number	A		D		Bi		Be		Seal Type
	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
205KPPB54	0.8760	22.25	2.0472	52	0.903	22.936	0.5906	15	3 Lips
Z206-KRR52-H-A415	0.8940	22.7	2.441	62	0.866	22	0.63	16	G

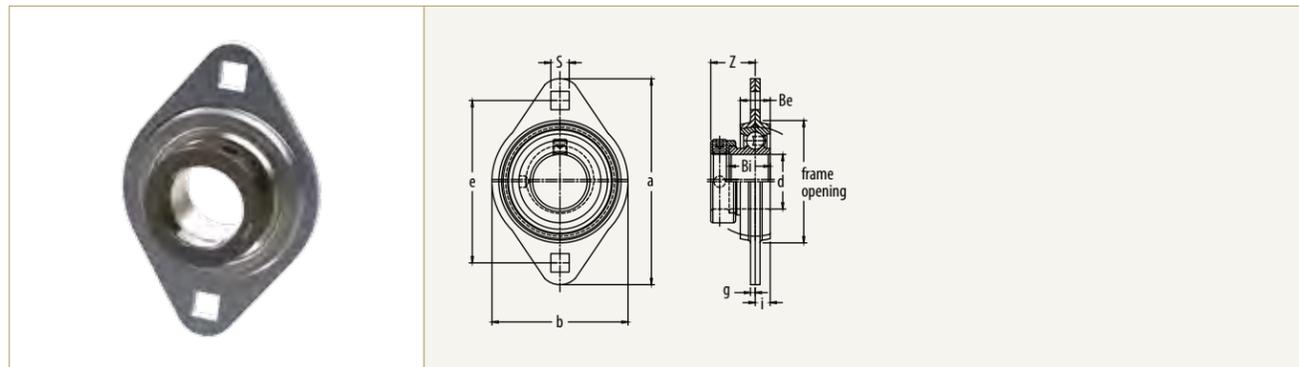
### Seedmeter drive shaft



Detailed seal design description located on page 8

PEER Part Number	Type	A		d		D		Bi		Be		e		s		Length		L2		Thread	Seal Type
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]		
2BF205-7/8HX	1	0.876	22.25	/	/	3.625	92.08	1	25.4	/	/	2.25	57.15	0.4724	12	3.188	80.98	/	/	/	3 Lips
5203KYY50-ASSY	2	/	/	0.6240	15.85	1.5748	40	1.1969	30.4	1	25.4	/	/	/	/	4.291	109	2.677	68	M10X1.5-6H	2 Lips

### Seedmeter drive shaft



Detailed seal design description located on page 8

PEER Part Number	d		a		e		i		g		frame opening		s		z		Bi		Be		b		Seal Type
	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]									
FHPFL208-40MM-AP	1.575	40	5.945	151	4.69	119	0.433	11	0.12	3	3.543	90	0.531	13.5 square	0.04	32.7	1.189	30.2	0.866	22	3.937	100	F



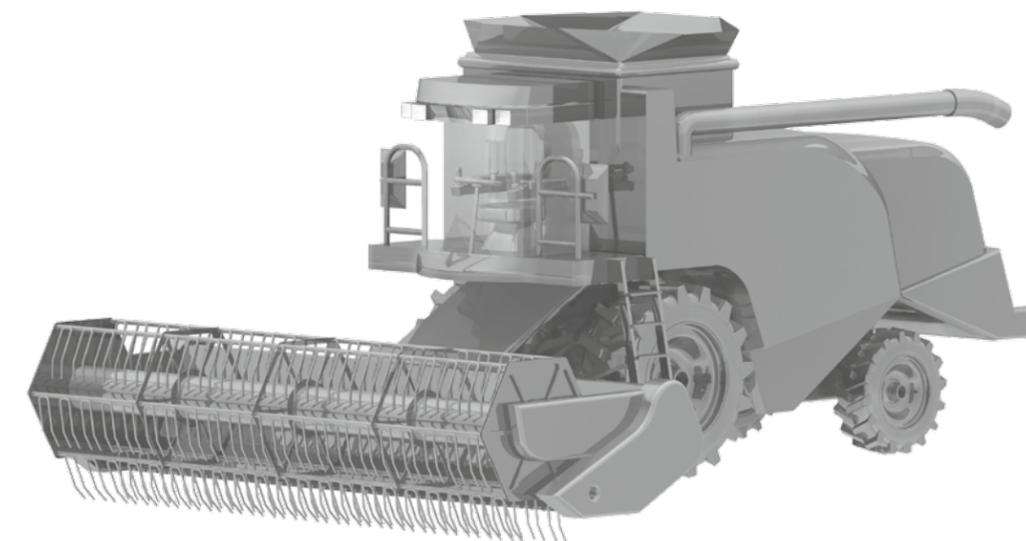
### Combine Bearings

A combine harvester has the following main functional units:

- Header and feeder house: cutting of crops and transportation into the threshing unit
- Threshing unit: threshing of crop in order to loosen the grain from chaff and dust
- Shaker: separation of dust, straw, chaff and grain as well as movement of straw towards the straw chopper or spreader
- Cleaning unit: cleaning of grain using air ventilation to achieve clean grain

- Grain tank, auger: storage, transportation and unloading of grain
- Straw chopper and straw spreader: chopping and spreading of straw residue

After cutting and threshing, the desired crop is separated from dust, chaff and straw. Optionally the straw is chopped and the residue is left on field.



### Bearing solutions for:

- Auger bearings, page 33
- Feederhouse bearings, page 34
- Draper head bearings, page 34
- Corn head bearings, page 35
- Conveyor roller bearings, page 35
- Cleaning system shaker drive shaft bearings, page 36
- Clean grain elevator bearings, page 36

### Application challenges

#### Common application conditions and environment

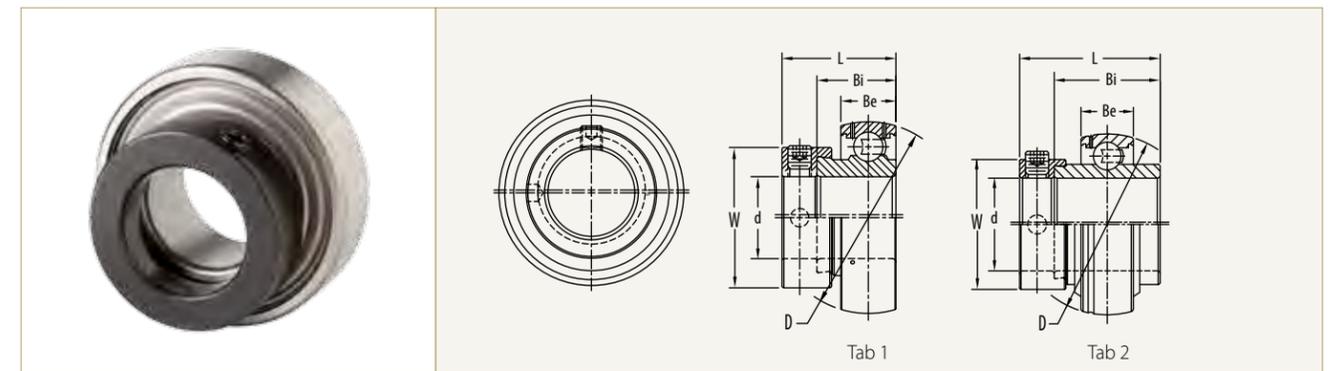
A combine has several different bearing positions, each with similar conditions but having unique challenges:

- Dry, dust-filled environment; several positions have direct crop contact
- Medium to high speed (500 - 2000 min<sup>-1</sup>)
- Crop wrap and abrasive wear of bearing components
- Shock loads can be common

#### PEER proven engineering solutions

- Bolt-on performance
  - ⇒ Full range of stamped steel and cast iron housings
  - ⇒ Common use of set screws, eccentric lock collars or hex bore bearings
- Increased productivity and bearing life in field due to:
  - ⇒ High contamination feature package with seals matched to the application
- Increased speed to the market
  - ⇒ PEER bearing solutions are interchangeable with industry standard designs
  - ⇒ PEER offers one of the industry's largest range of high performance combine bearings

### Auger



Detailed seal design description located on page 8

Table 1

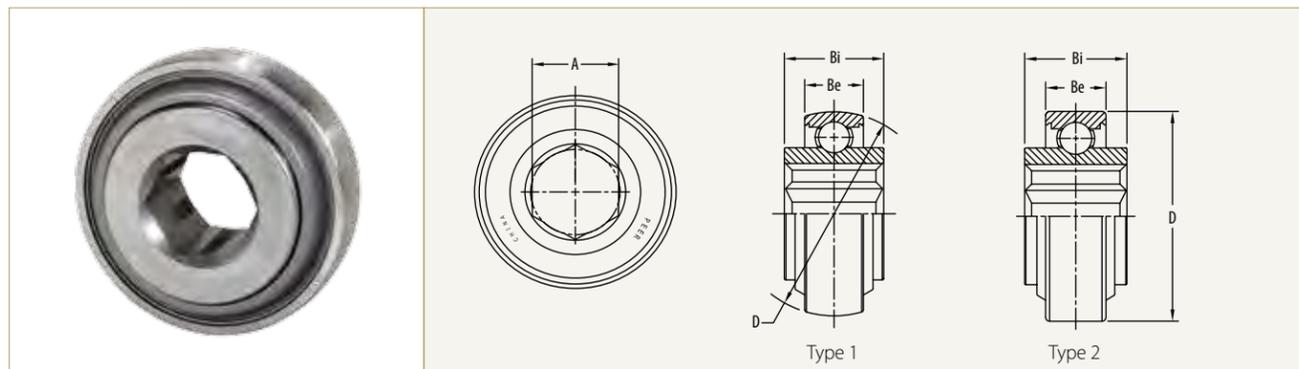
PEER Part Number	d		D		Bi		Be		L		W		Seal Type
	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
FH205-14-AP	0.8750	22.225	2.0472	52	0.8465	21.5	0.5906	15	1.22	31	1.5	38.1	F
FH205-16-AP	1.0000	25.4	2.0472	52	0.8465	21.5	0.5906	15	1.22	31	1.5	38.1	F
FH205-25MM-AP	0.9843	25	2.0472	52	0.8465	21.5	0.5906	15	1.22	31	1.5	38.1	F
FH206-18-AP	1.1250	28.575	2.4409	62	0.9370	23.8	0.7087	18	1.4055	35.7	1.7520	44.5	F
FH206-19-AP	1.1875	30.162	2.4409	62	0.9370	23.8	0.7087	18	1.4055	35.7	1.7520	44.5	F
FH206-20-AP	1.2500	31.75	2.4409	62	0.9370	23.8	0.7087	18	1.4055	35.7	1.7520	44.5	F
FH206-30MM-AP	1.1811	30	2.4409	62	0.9370	23.8	0.7087	18	1.4063	35.72	1.7520	44.5	F
FH207-20-AP	1.2500	31.75	2.8346	72	1.0000	25.4	0.7480	19	1.5315	38.9	2.1890	55.6	F
FH207-22-AP	1.3750	34.925	2.8346	72	1.0000	25.4	0.7480	19	1.5315	38.9	2.1890	55.6	F
FH207-23	1.4375	36.512	2.8346	72	1.0000	25.4	0.7480	19	1.5315	38.9	2.1890	55.6	F
FH207-35MM-AP	1.3780	35	2.8346	72	1.0000	25.4	0.7480	19	1.5315	38.9	2.1890	55.6	F
FH208-24-AP	1.5000	38.1	3.1496	80	1.1890	30.2	0.8661	22	1.7205	43.7	2.3740	60.3	F
FH208-40MM-AP	1.5748	40	3.1496	80	1.1890	30.2	0.8661	22	1.7205	43.7	2.3740	60.3	F
FH209-28-AP	1.7500	44.45	3.3465	85	1.1890	30.2	0.8661	22	1.7205	43.7	2.5000	63.5	F
FH209-45MM-AP	1.7717	45	3.3465	85	1.1890	30.2	0.8661	22	1.7205	43.7	2.5000	63.5	F

Table 2

PEER Part Number	d		D		Bi		Be		L		W		Seal Type
	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
HC205-16-AP	1.0000	25.4	2.0472	52	1.3701	34.8	0.5906	15	1.7441	44.30	1.7520	44.50	*
HC206-19-GO-AP	1.1875	30.162	2.4409	62	1.4331	36.4	0.7087	18	1.9016	48.30	1.7520	44.50	*
HC206-20-AP	1.2500	31.75	2.4409	62	1.4331	36.4	0.7087	18	1.9016	48.30	1.7520	44.50	*
HC206-30MM-GO-AP	1.1811	30	2.4409	62	1.4331	36.4	0.7087	18	1.9016	48.30	1.7520	44.50	*
HC207-20-AP	1.2500	31.75	2.8346	72	1.4803	37.6	0.7480	19	2.0118	51.10	2.1890	55.60	*
HC207-22-AP	1.3750	34.925	2.8346	72	1.4803	37.6	0.7480	19	2.0118	51.10	2.1890	55.60	*
HC207-23	1.4375	36.513	2.8346	72	1.4803	37.6	0.7480	19	2.0118	51.10	2.1890	55.60	*
HC207-35MM-AP	1.3780	35	2.8346	72	1.4803	37.6	0.7480	19	2.0118	51.10	2.1890	55.60	*
HC208-24-AP	1.5000	38.1	3.1496	80	1.6850	42.8	0.8661	22	2.2200	56.30	2.3740	60.30	*
HC209-26-GO-AP	1.6250	41.275	3.3465	85	1.6850	42.8	0.8661	22	2.2165	56.30	2.5000	63.50	*
HC209-28-AP	1.7500	44.45	3.3465	85	1.6850	42.8	0.8661	22	2.2165	56.30	2.5000	63.50	*
HC207-22-XO-AP-NLC**	1.3750	34.925	2.8346	72	1.4803	37.6	0.7480	19	no locking collar		no locking collar		*

\*single lip or triple lips can be used, \*\*without locking collar

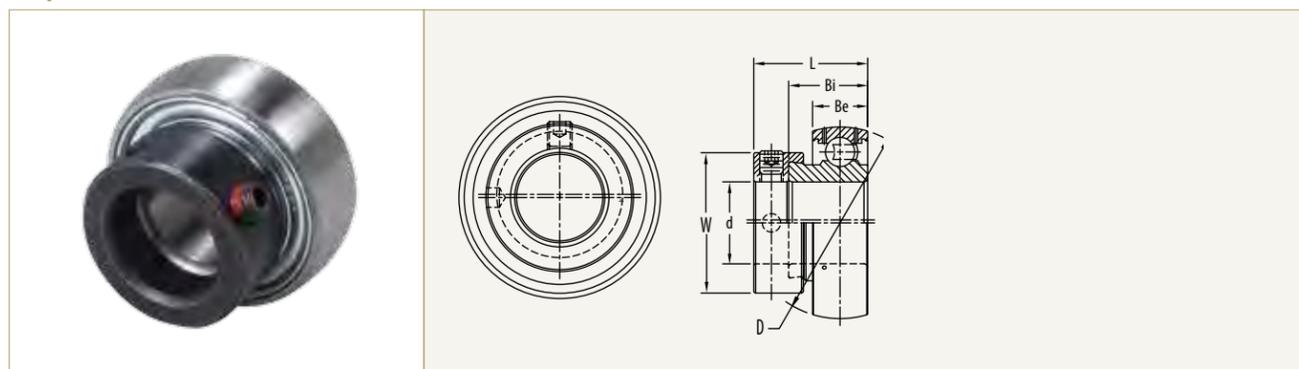
### Feederhouse/Draper head



Detailed seal design description located on page 8

PEER Part Number	Type	A		D		Bi		Be		Seal Type
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
209KRRB2	1	1.5000	38.1	3.3465	85	1.1811	30	0.7480	19	G
W208PPB16	1	1.2512	31.78	3.1496	80	1.4374	36.51	0.7087	18	3 Lips
W211KRRB50	1	1.7510	44.475	3.9370	100	1.6875	42.862	0.9843	25	G
<b>Draper head</b>										
204KRR2	2	0.6950	17.653	1.8504	47	0.8250	20.955	0.5512	14	G
207KRRB9	1	1.1260	28.6	2.8346	72	1.4844	37.704	0.6693	17	G

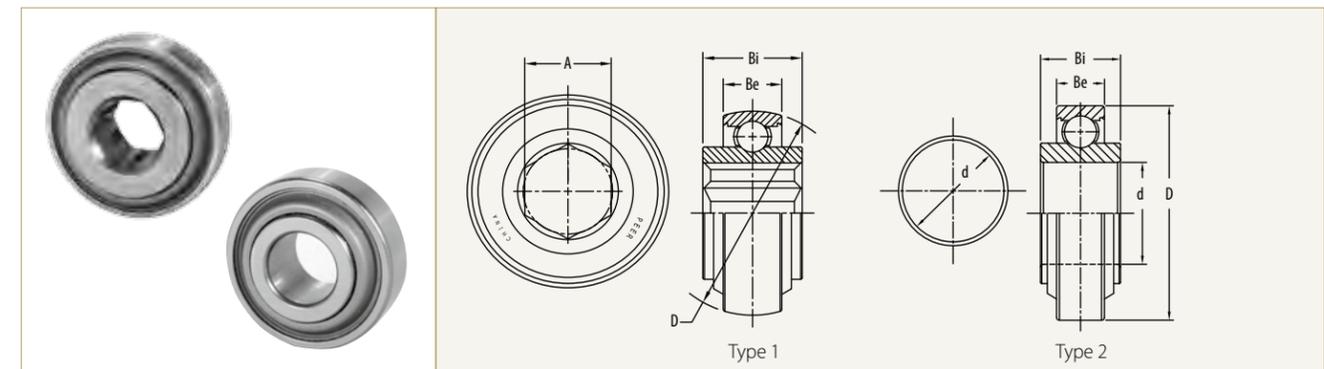
### Draper head



Detailed seal design description located on page 8

PEER Part Number	d		D		Bi		Be		L		W		Seal Type
	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
FH206-18-AP	1.1250	28.575	2.4409	62	0.9370	23.8	0.7087	18	1.4055	35.7	1.7520	44.5	F

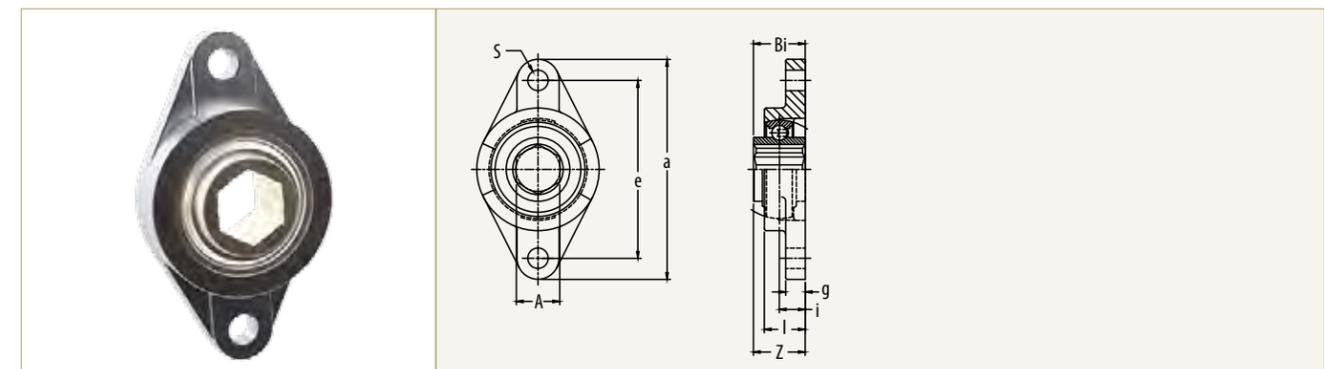
### Corn head



Detailed seal design description located on page 8

PEER Part Number	Type	A/d		D		Bi		Be		Seal Type
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
207KPPB57	1	1.2510	31.775	2.8346	72	1.4941	37.95	0.7480	19	3 Lips
203KPP50	2	0.6400	16.256	1.5748	40	0.7200	18.288	0.4724	12	3 Lips

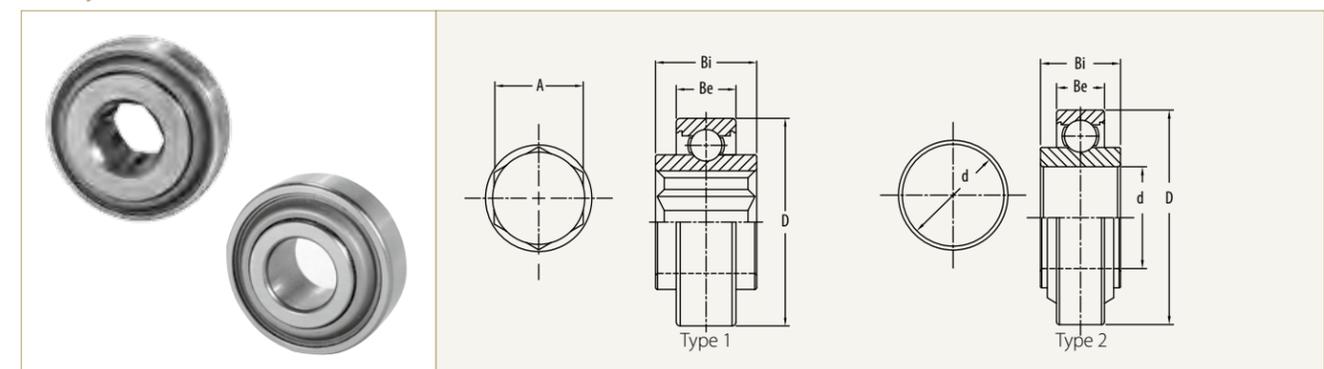
### Corn head



Detailed seal design description located on page 8

PEER Part Number	Type	A		a		e		i		g		l		S		Z		Bi		b		Seal Type
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
207-KPPB57-H-FT-A17	1	1.2510	31.775	6.3430	161.1	5.1260	130.2	0.7480	19	0.5630	14.3	1.1811	30	0.5906	15	1.4953	37.98	1.4941	37.95	3.5315	89.7	3 Lips

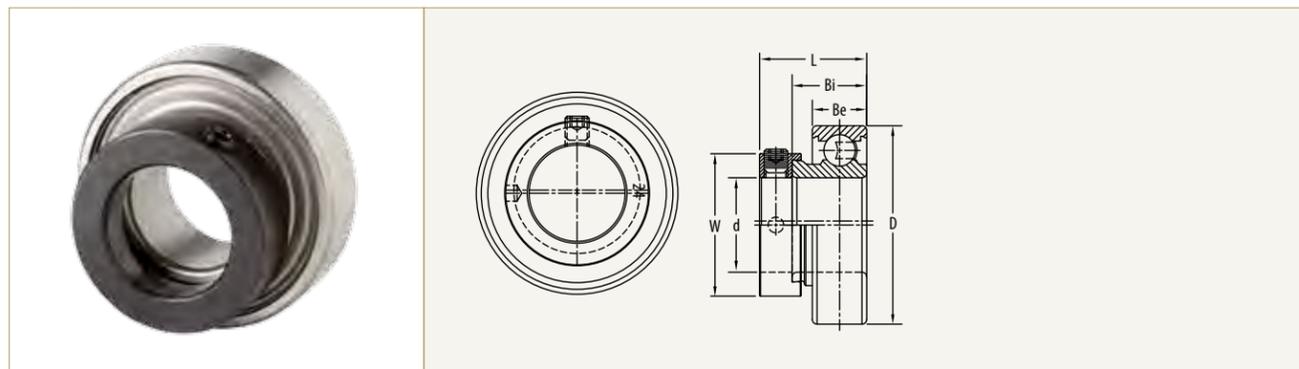
### Conveyor rollers



Detailed seal design description located on page 8

PEER Part Number	Type	A/d		D		Bi		Be		Seal Type
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
206KRR6	1	1.0010	25.425	2.4409	62	0.9449	24	0.6299	16	R
204KRR2	1	0.6950	17.653	1.8504	47	0.8250	20.955	0.5512	14	R
207KRR3	2	1.3780	35	2.8346	72	0.9843	25	0.6693	17	G

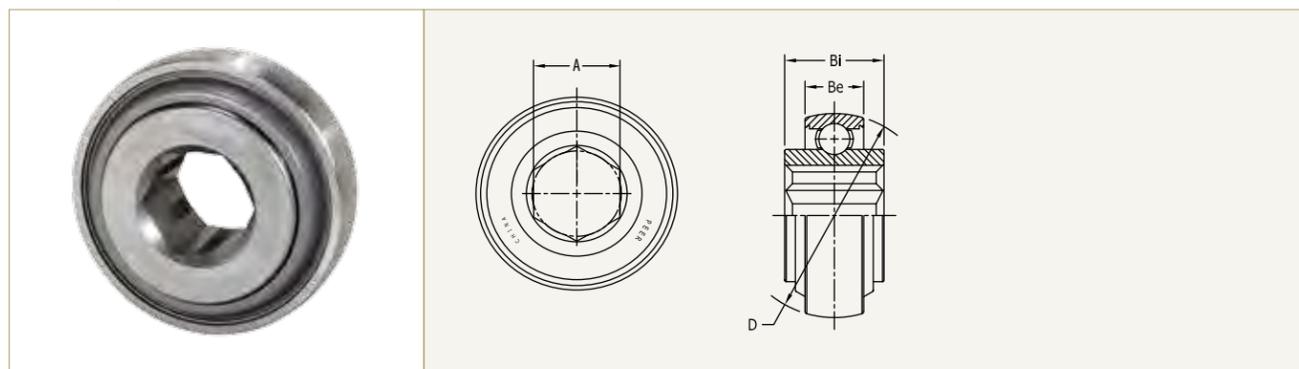
### Conveyor rollers



Detailed seal design description located on page 8

PEER Part Number	d		D		Bi		Be		L		W		Seal Type
	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
FHR207-22-AP-SP2	1.3750	34.925	2.8346	72	1.0000	25.4	0.7480	19	1.5315	38.9	2.1890	55.6	F

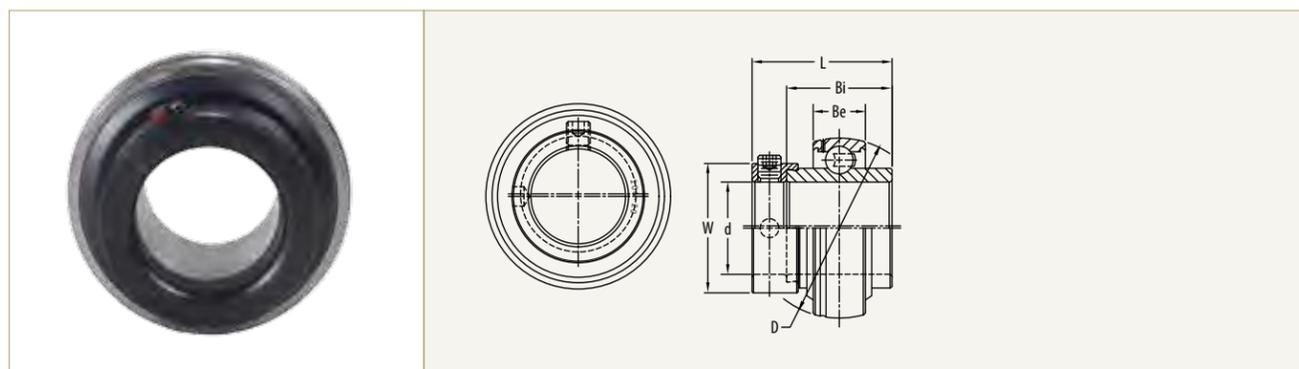
### Cleaning system shaker drive shaft



Detailed seal design description located on page 8

PEER Part Number	A		D		Bi		Be		Seal Type
	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
205KPPB2	0.8760	22.25	2.0472	52	1.0000	25.4	0.5906	15	3 Lips
208KPPB52	1.1260	28.6	3.1496	80	1.1024	28	0.7087	18	3 Lips

### Clean Grain Elevator



Detailed seal design description located on page 8

PEER Part Number	d		D		Bi		Be		L		W		Seal Type
	[inch]	[mm]	[inch]	[mm]									
HC207-35MM-AP	1.3780	35	2.8346	72	1.4803	37.6	0.7480	19	2.0118	51.1000	2.1890	55.6000	*
HC208-40MM-AP	1.5748	40	3.1496	80	1.6850	42.8	0.8661	22	2.2165	56.3000	2.3740	60.3000	*

\*single lip or triple lips can be used



### Baler Bearings

To harvest fodder, (such as tall grasses and legumes) or plant residue (such as corn stalks, wheat straw or peanut vines) crops are first cut, dried to specific moisture content, and formed into a windrow. Then balers pick up and compact the crop to form round or square bales for ease of transport and storage.

The more recent practice of baling corn stalks and peanut vines creates extra stress on the internal components of balers and special, heavy duty bearing designs have been created to provide the expected reliability to accommodate this practice.

Round balers use belts or chains to roll crop into round bales and can have either variable or fixed chambers. Inside the baling chamber it is formed and compressed and discharged on the field afterwards to be collected and stored.

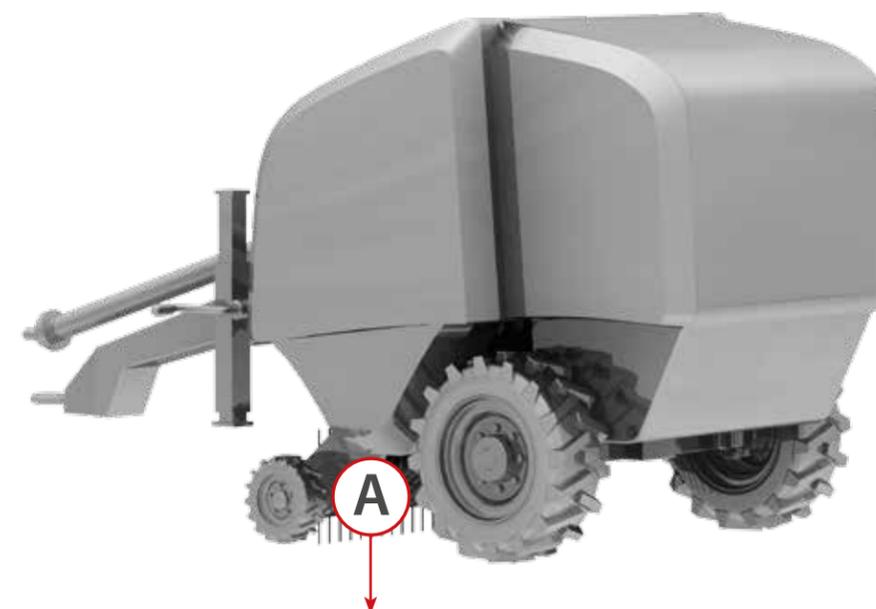
Square balers form the crop residue in square bales: augers feed the straw into the baling chamber for compression. Plungers give the bale the density and shape - when the appropriate length and shape of the bale is reached, the bale is tied and exits the chamber.

Typical weight of bale:

- 635 Kg / 1400 lbs large (square bale)
- 20 - 40 Kg / 50 - 100 lbs small (square bale)

### Additional applications:

- Roller bearings
  - ⇒ Drive roll, page 42
  - ⇒ Idler roll, page 40
- Implement wheel, page 49



### Bearing solutions for:

- Pickup tine bar, page 45
- Pickup cam follower, page 44

### Application challenges

The baler has several different bearing positions, each with similar conditions but having unique challenges. In a high level, it can be broken up into the following sections:

- Pickup
- Bale chamber

Load and contamination typically contribute to bearing damage.

### Pickup assembly application condition

The pickup assembly rakes the hay from the windrow into the baling chamber. Tine bar, pickup drum and cam follower are all part of the pickup subassembly.

- The tine bar is a bar of tine that rakes the hay off the field and into the baling chamber
- The cam follower creates a flipping action to the tine bar to deposit the hay into the baling chamber

### Tine bar application condition

- Four to six tine bars on a reel with two bearings supporting each tine bar
- Exposed to oscillating motion from the pickup cam follower
- Medium to high contamination due to dry and wrapping hay and contact with soil

### Proven engineered solutions:

#### Tine bar bearings

#### Benefits and functional features:

- Increased productivity and operating life in field due to:
  - ⇒ High contamination feature package with exclusive sealing system
- Bolt-on performance:
  - ⇒ For ease of mounting an extended inner ring with through hole for roll-pin

### Cam follower application condition

- Each tine bar is connected to two cam followers which ride on a cam track
- Medium to high contamination due to dry and wrapping hay and contact with soil
- High load impacts
- Wear of the OD occurs from contact with cam track

### Proven engineered solutions:

#### Cam follower bearings

#### Benefits and functional features:

- Bolt-on performance:
  - ⇒ Optional stud for ease of mounting
- Increased bearing life in field:
  - ⇒ Double row bearing design offers high load capacity in compact space
  - ⇒ Thick crowned outer ring resists wear and impact
  - ⇒ High contamination feature package

### Bale chamber application condition

Idler roll bearings support and establish the belt tension.

Drive rolls rotate belts at appropriate speed. Both rollers are mostly exposed to the following application conditions:

### Idler and driver roller application conditions

- Two bearings support the roll which spans the width of the bale chamber
- Rolls can either be chain-driven or non-chain-driven with driven rolls typically using larger bearings
- Support bearings placed outside the chamber are exposed to medium contamination
- Support bearings placed inside the chamber are exposed to high contamination
- Loading at the end of a baling cycle combined with shaft deflection can generate severe stress on the internal components of the support bearings

### Proven engineered solutions:

#### Idler, drive roll bearings

#### Benefits and functional features:

- Bolt on performance
  - ⇒ Several mounting and housing options available
- Increased bearing life in field:
  - ⇒ Application specific internal construction accommodates shaft deflection
  - ⇒ High contamination feature package with exclusive sealing system

### Plunger application condition

- Four bearings support the plunger
- Medium to high contamination due to dry and wrapping hay
- High load impacts
- Wear of the outer diameter occurs from rolling contact on the bale chamber

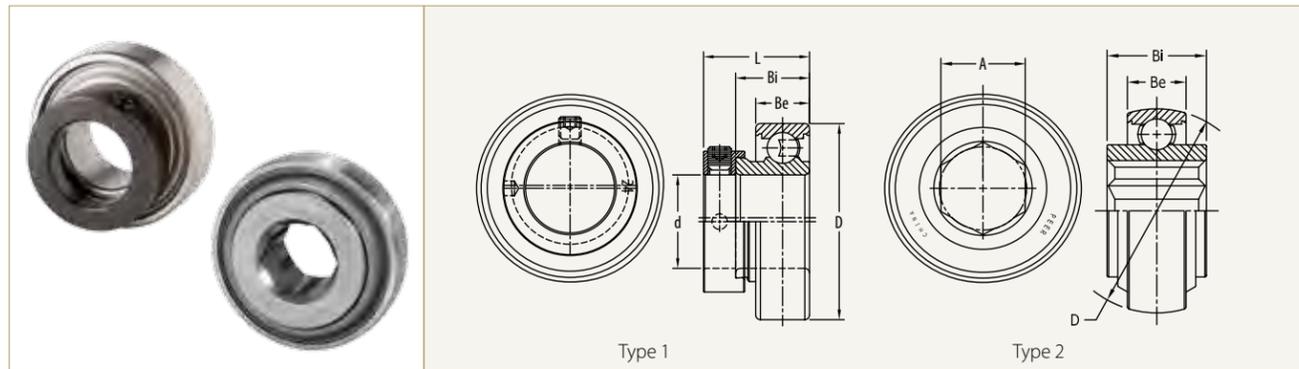
### Proven engineered solutions:

#### Plunger bearings

#### Benefits and functional features:

- Increased bearing life in field:
  - ⇒ Thick crowned outer ring resists wear and impact
  - ⇒ High contamination feature package

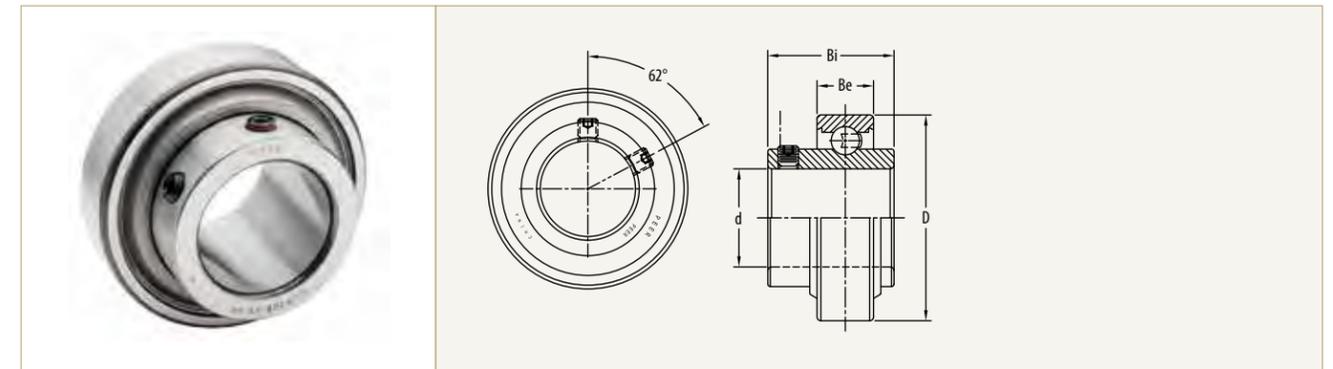
**Roller bearings Idler roll**



Detailed seal design description located on page 8

PEER Part Number	Type	A/d		D		Bi		Be		L		Seal Type
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
FHR208-24-AP	1	1.5000	38.1	3.1496	80	1.1890	30.2	0.8661	22	0.1850	4.7	F
GW208-KPPB50-H-OX-A17	2	1.2510	31.775	3.1496	80	1.4375	36.512	0.8661	22	/	/	3 Lips

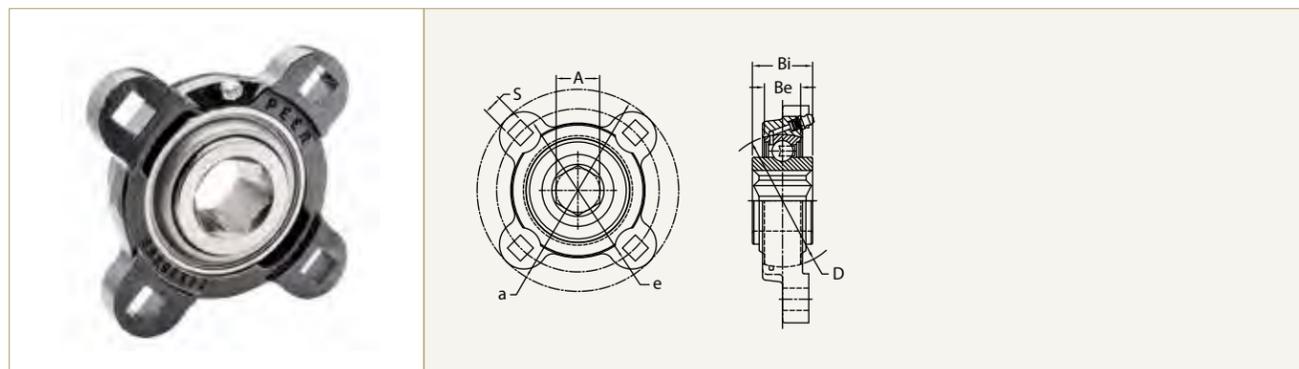
**Roller bearings Idler roll**



Detailed seal design description located on page 8

PEER Part Number	d		D		Bi		Be		Seal Type
	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
UCR208-24-AP-TRL-M164	1.5000	38.1	3.1496	80	1.9370	49.2	0.8661	22	3 Lips
UCR212-39-TRL-AP	2.4375	61.912	4.3307	110	2.5630	65.1	1.0630	27	3 Lips
UCR212-39-AP-TRL-M170	2.4375	61.912	4.3307	110	2.5039	63.6	0.8661	22	3 Lips

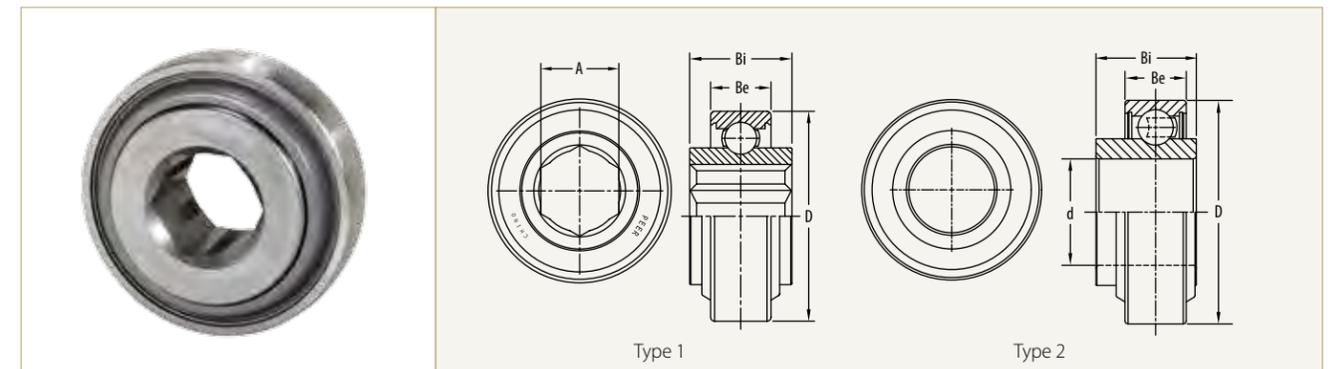
**Roller bearings Idler roll**



Detailed seal design description located on page 8

PEER Part Number	A		D		Bi		Be		e		S		a		Seal Type
	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
GW208-KPPB50-H-OX-DF4X-A226	1.2510	31.775	3.1496	80	1.4375	36.512	0.8661	22	4.6890	119.110	0.5315 (square)	13.5 (square)	5.811	147.60	3 Lips

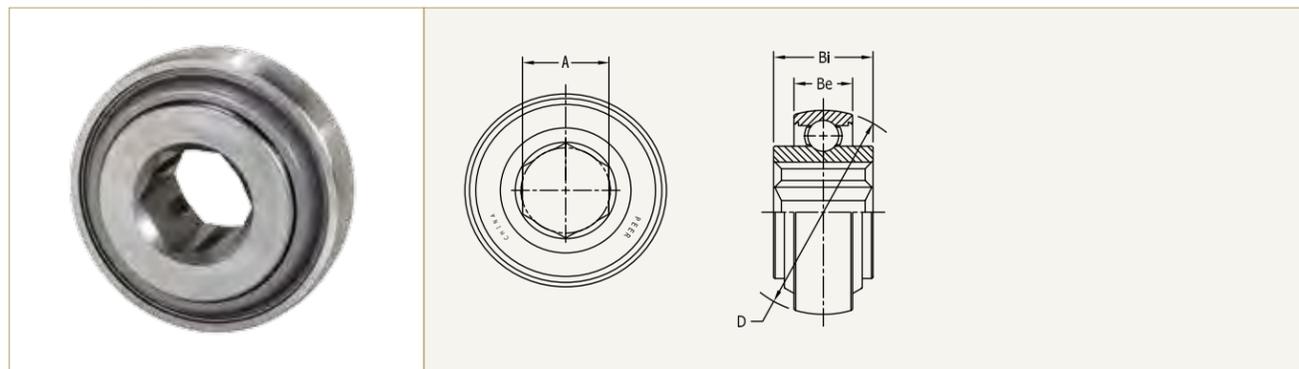
**Roller bearings Idler roll**



Detailed seal design description located on page 8

PEER Part Number	Type	A		D		Bi		Be		Seal Type
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
W208KPP53	2	1.5000	38.1	3.1496	80	1.4173	36	0.8661	22	3 Lips
W215KPP52	1	1.5059	38.25	5.1181	130	1.6929	43	1.1024	28	3 Lips
W312KPP51	1	1.7560	44.602	5.1181	130	1.8898	48	1.2992	33	3 Lips

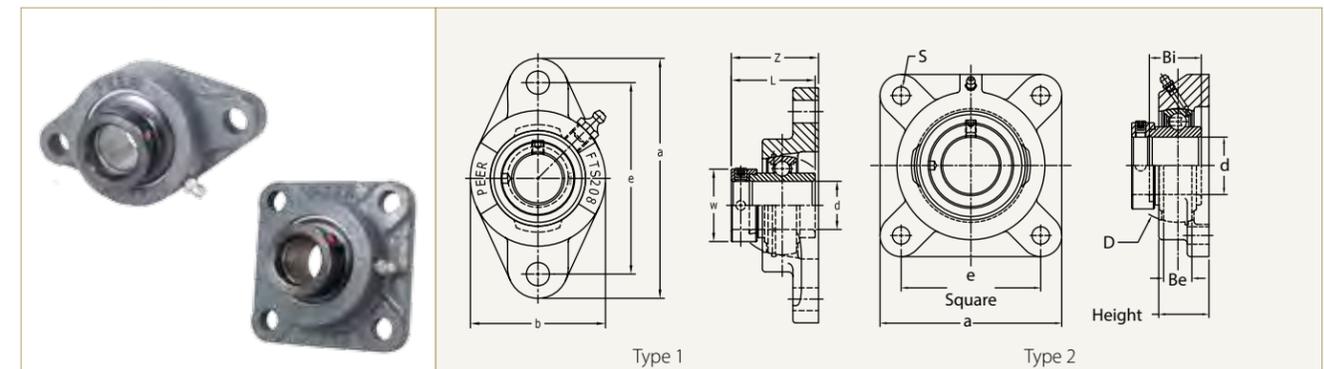
**Roller bearings Drive roll**



Detailed seal design description located on page 8

PEER Part Number	A		D		Bi		Be		Seal Type
	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
BB210-KPPB2-H-GX-A126	1.4980	38.05	3.5433	90	1.2598	32	0.8661	22	3 Lips

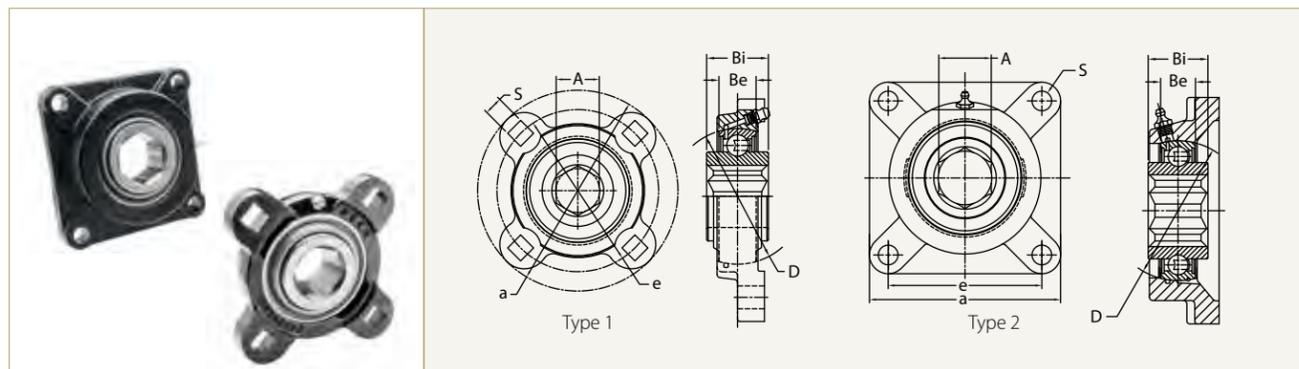
**Roller bearings Drive roll**



Detailed seal design description located on page 8

PEER Part Number	Type	d		D		Bi		Be		e		S		a		Height		Seal Type
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]									
HCFTS208-40MM	1	1.5748	40	3.1496	80	1.6850	42.8	0.8661	22	5.6535	143.6	0.5157	13.1	6.75	171.5	/	/	2 Lips
HCFS209-45MM	2	1.7717	45	3.3465	85	1.6850	42.8	0.8661	22	4.128	104.85	0.63	16	5.374	136.5	1.484	37.7	3 Lips
HCFS310-50MM-AP	2	1.9685	50	4.3307	110	1.9370	49.2	1.2598	32	5.1252	130.18	0.689	17.5	6.5	165.1	2.094	53.2	G

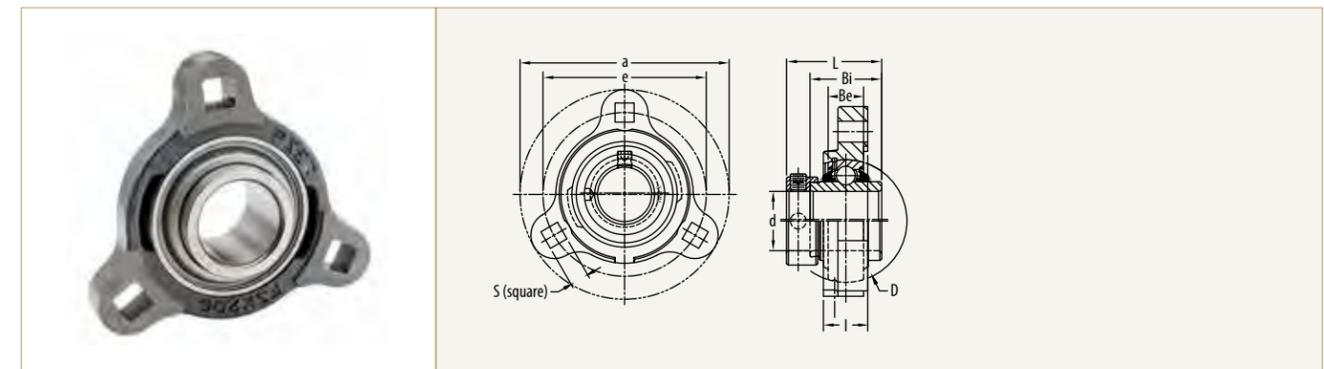
**Roller bearings Drive roll**



Detailed seal design description located on page 8

PEER Part Number	Type	A		D		Bi		Be		e		S		a		Seal Type
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
GW210KPPB50-F4X	1	1.7510	44.475	3.5433	90	1.6875	42.863	0.8661	22	5.0000	127.000	0.5720	14.530	6.126	155.60	3 Lips
GW210-KPPB50-H-OX-DF4X-A237	1	1.7510	44.475	3.5433	90	1.6875	42.863	0.8661	22	5.0000	127.000	0.5720	14.530	6.126	155.60	3 Lips
GW211KPPB51-FS	2	1.7510	44.475	3.9370	100	1.6875	42.863	0.9843	25	5.126	130.2	0.656	16.66	6.374	161.9	3 Lips
GW211-KPPB51-H-OB-FS-A222	2	1.7510	44.475	3.9370	100	1.6875	42.863	0.9843	25	5.126	130.2	0.656	16.66	6.374	161.9	3 Lips
GW309-KPPB2-H-GX-DF4X-A525	2	1.4980	38.05	3.9370	100	1.4960	38	1.0630	27	3.8976	99	4 x 0.559 square	4 x 14.2 square	5.0787	129	3 Lips
BB210-KPPB2-H-GX-DF4X-A525	2	1.4980	38.05	3.5433	90	1.2598	32	0.8661	22	3.5078	89.1	4 x 0.559 square	4 x 14.2 square	4.7244	120	3 Lips

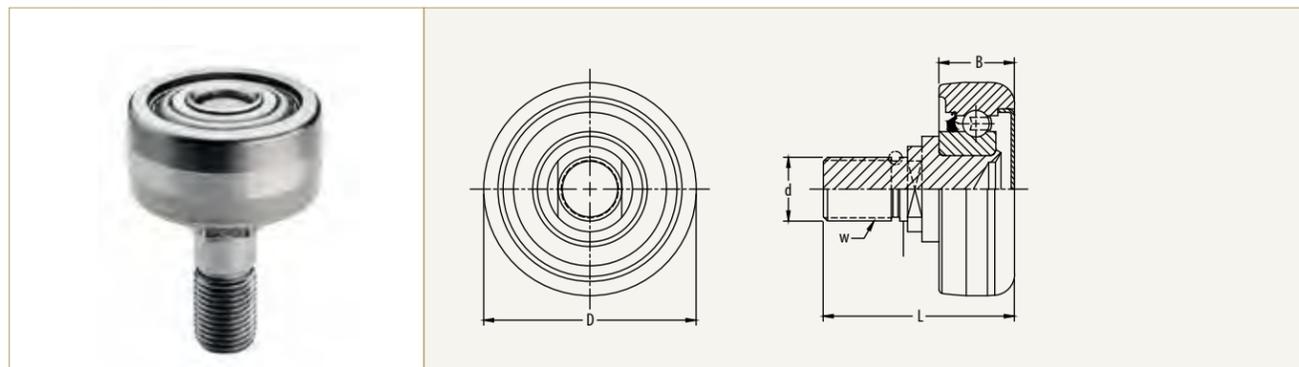
**Roller bearings Drive roll**



Detailed seal design description located on page 8

PEER Part Number	d		D		Bi		Be		e		S		a		Height		Seal Type
	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]											
HCFS3X206-30MM-TRL-AP	1.1811	30	2.4409	62	1.4331	36.4	0.8858	22.5	3.563	90.5	0.416	10.57	4.563	115.9	/	/	3 Lips

**Pick up bearings** Cam follower

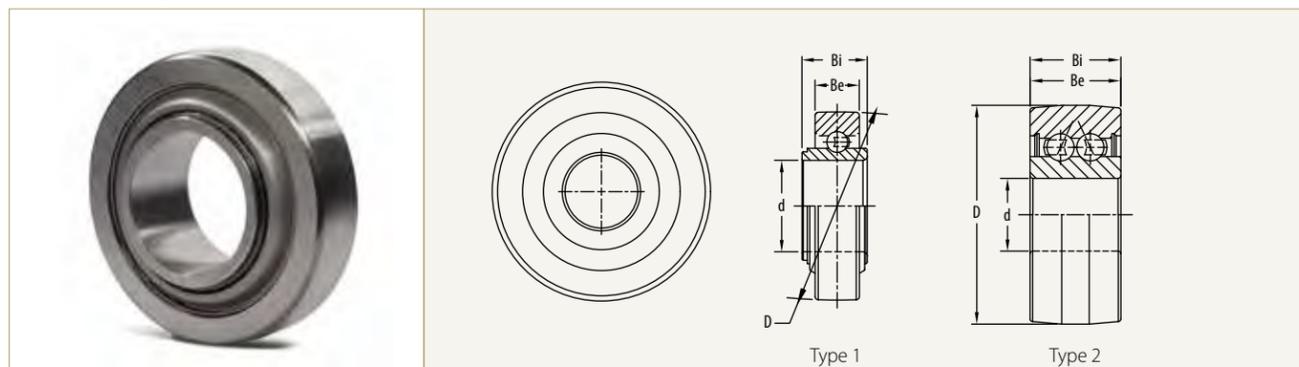


Detailed seal design description located on page 8

PEER Part Number	d		D		B		Assembly Length		Thread	Seal Type
	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]		
6901PJ-ASSY-A557	0.7480	19	2.5000	63.5	0.8882	22.56	2.25	57.15	3/4-16 UNF - 2A	2 Lips
6901PK-ASSY-A557*	0.7490	19.02	2.5000	63.5	0.8882	22.56	2.25	57.15	3/4-16 UNF - 2A	2 Lips
6901PK-ASSY-A539*	0.7490	19.02	2.5000	63.5	0.8882	22.56	2.50	63.50	3/4-16 UNF - 2A	2 Lips

\*with Nylon slinger

**Pick up bearings** Cam follower

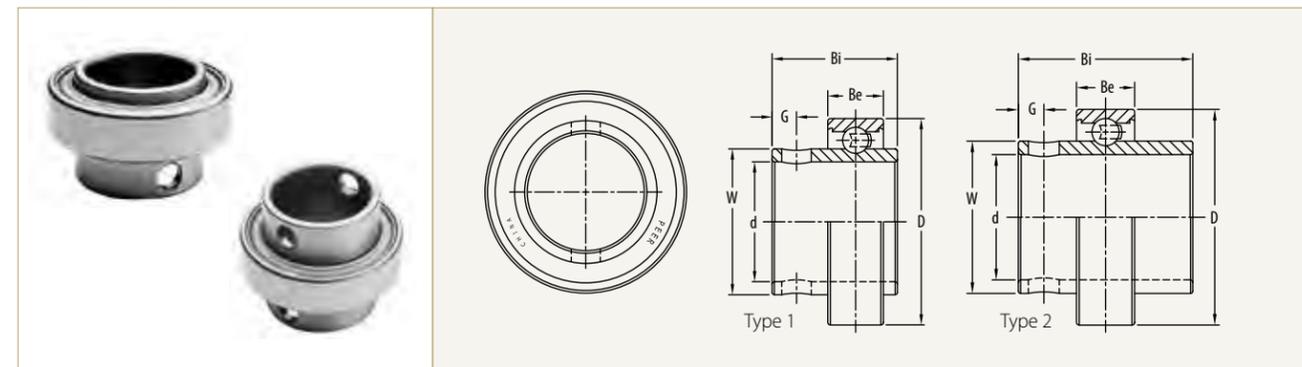


Detailed seal design description located on page 8

PEER Part Number	Type	d		D		Bi		Be		Seal Type
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
CF6007PP51-SP1	1	1.3780	35	2.8346	72	0.9843	25	0.6693	17	3 Lips
CF5202-2RST-8-SP2	2	0.5000	12.7	1.5000	38.1	0.6260	15.9	0.6260	15.9	2 Lips
CF5202-2RST-R-A492*	2	0.5906	15	1.5750	40	0.6260	15.9	0.6260	15.9	F
CF5202-2RST-R-A482	2	0.5906	15	1.5750	40	0.6260	15.9	0.6260	15.9	F

\*spherical outer ring

**Pick up bearings** Tine bar

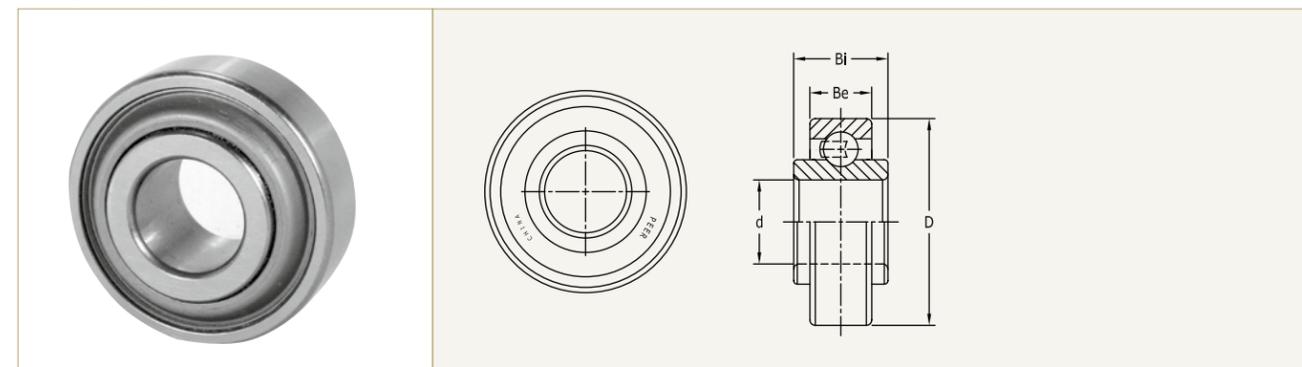


Detailed seal design description located on page 8

PEER Part Number	Type	d		D		Bi		Be		G		W		Seal Type
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
FHRL6005-BB9105-EE-SP1*	2	1.0740	27.28	1.8504	47	1.5000	38.1	0.5000	12.7	0.2190	5.563	1.3071	33.2	2 Lips
FHRL6005-BB9105	1	1.0740	27.28	1.8504	47	1.1250	28.575	0.5000	12.7	0.2190	5.563	1.3071	33.2	2 Lips
FHRL6005-BB9105-EE	2	1.0740	27.28	1.8504	47	1.5000	38.1	0.5000	12.7	0.2190	5.563	1.3071	33.2	2 Lips

\*with through-hole on both sides

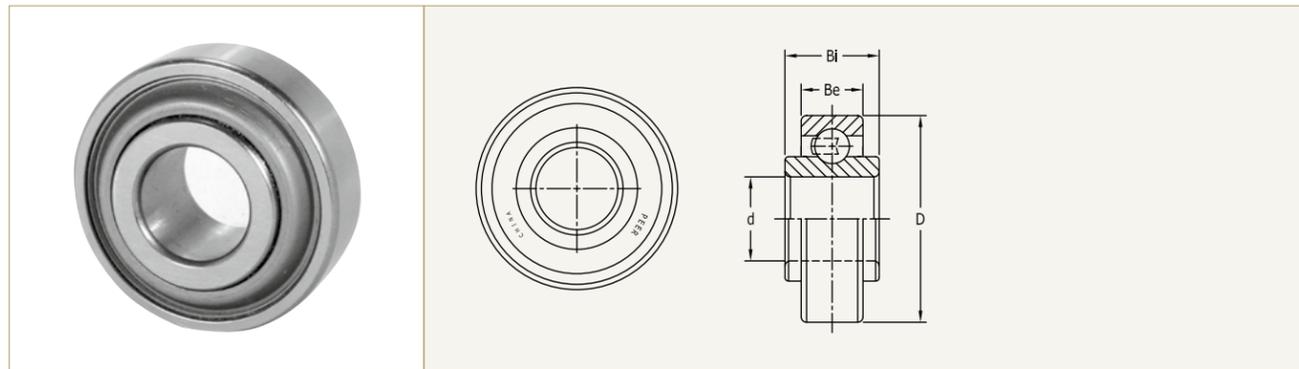
**Idler gear support**



Detailed seal design description located on page 8

PEER Part Number	d		D		Bi		Be		Seal Type
	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
208KRR4	1.5312	38.892	3.1496	80	1.083	27.508	1.083	27.508	R

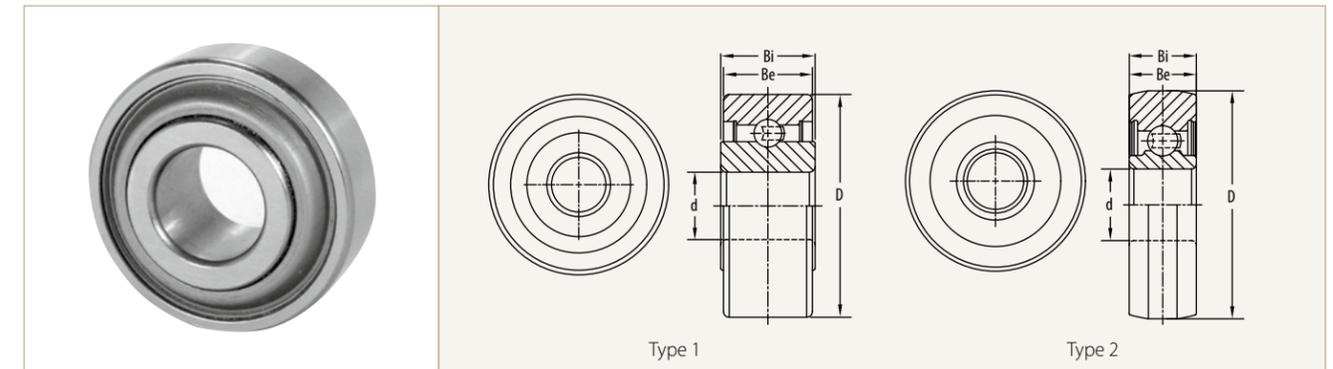
### Idler pulley sprocket



Detailed seal design description located on page 8

PEER Part Number	d		D		Bi		Be		Seal Type
	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
203KRR50	0.6400	16.256	1.5748	40	0.7200	18.2880	0.4724	12	G
203KRR2	0.6400	16.256	1.5748	40	0.7200	18.2880	0.4724	12	R

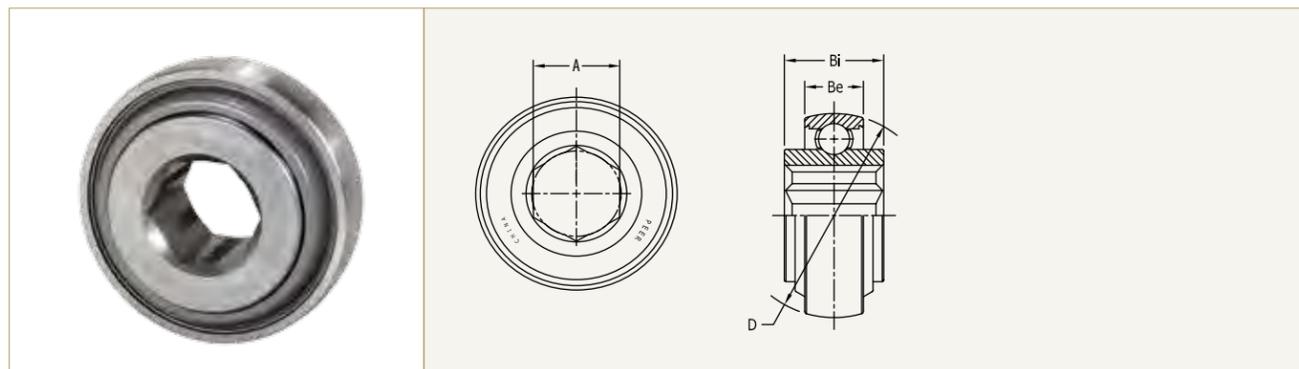
### Plunger



Detailed seal design description located on page 8

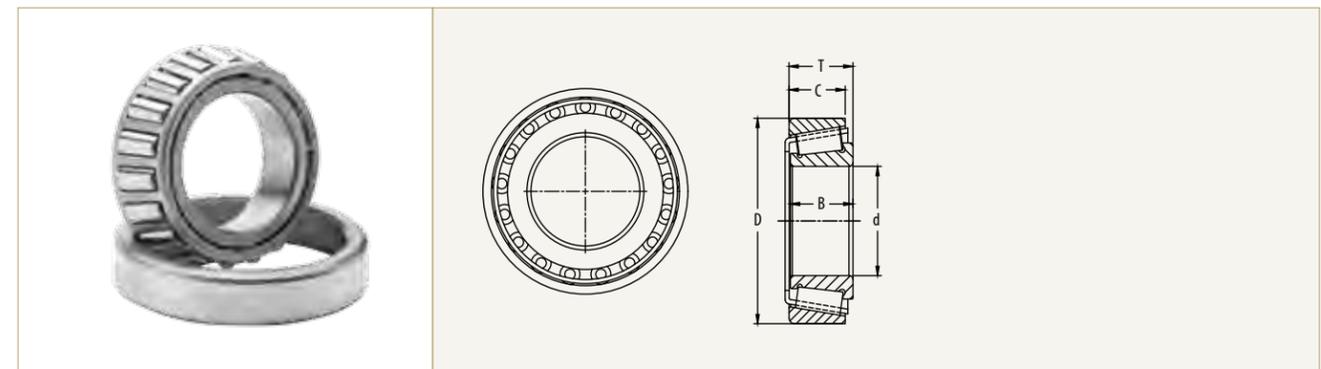
PEER Part Number	Type	d		D		Bi		Be		Seal Type
		[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
205KYY3	1	0.7560	19.202	2.500	63.5	1.0620	26.975	1.0000	25.4	2 Lips
203KRR3	2	0.6280	15.951	2.000	50.8	0.5906	15	0.5906	15	F

### Pick up drive



Detailed seal design description located on page 8

PEER Part Number	A		D		Bi		Be		Seal Type
	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	
207KRRB17	1.2510	31.775	2.8346	72	0.9843	25	0.6693	17	G

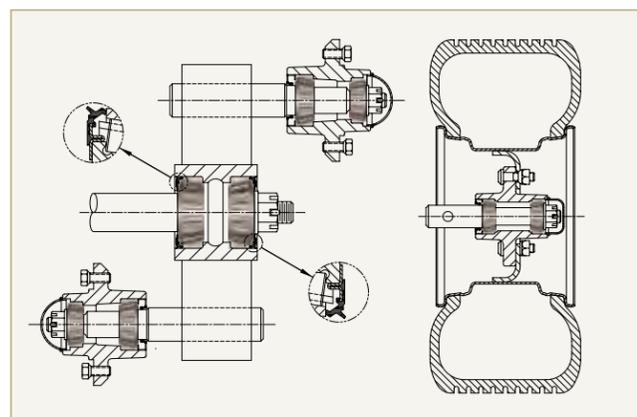


### Implement Wheel and Walking Beam

PEER solutions for agricultural implement wheel and walking beam include Tapered Roller Bearings and Sealed Tapered Roller Bearings.

Tapered Roller Bearings (TRB) offer increased axial and radial load capacity relative to other bearing types. The inherent design allows for clearance adjustment during mounting to achieve the correct bearing setting for optimized performance.

Sealed Tapered Roller Bearings (Sealed TRB) offer an integrated solution for grease lubricated applications as an economical replacement to a traditional shaft seal and bearing as individual components.



PEER Part Number	CONE		CUP		T (mm)
	d (mm)	B (mm)	D (mm)	C (mm)	
460 / 453A	44.45	29.317	107.95	22.225	27.783
2790 / 2720	33.338	25.654	76.2	19.05	23.774
3780 / 3720	50.8	30.302	93.264	23.812	30.162
15123 / 15250	31.75	19.05	63.5	15.875	19.478
15126 / 15250	31.75	20.638	63.5	15.875	20.638
25580 / 25520	44.45	25.4	82.931	19.05	23.812
25590 / 25520	45.618	25.4	82.931	19.05	23.812
25877 / 25821	34.925	24.608	73.025	19.05	23.812
30207	35	17	72	15	18.25
33109	45	26	80	20.5	26
33889 / 33821	50.8	28.575	95.25	22.225	27.783
39585 / 39520	63.500	30.162	112.712	23.812	30.162
45289 / 45220	57.15	30.958	104.775	23.812	30.162
342A-d2 / 332	41.275	29.977	80	17.826	28.575
387AS / 382A	57.15	21.946	96.838	15.875	21
HM212049 / HM212011	66.675	38.354	122.238	29.718	38.1
HM218248 / HM218210	89.974	40	146.975	32.5	40
HM803149 / HM803110	44.45	29.37	88.9	23.02	30.162
JL69349 / JL69310	38	17	62	13.5	17
JLM506849 / JLM506810	55	23	90	18.5	23
L44643 / L44610	25.4	14.732	50.292	10.668	14.224
L44649 / L44610	26.988	14.732	50.292	10.668	14.224
L68149 / L68111	34.988	16.764	59.975	11.938	15.875
LM104949 / LM104911	50.8	22.225	82.55	16.51	21.59
LM29749 / LM29710	38.1	18.288	65.088	13.97	18.034
LM48548 / LM48510	34.925	18.288	65.088	13.97	18.034
LM501349 / LM501310	41.275	19.812	73.431	14.732	19.558
LM603049 / LM603011	45.242	19.842	77.788	15.08	19.842
LM67048 / LM67010	31.75	16.764	59.131	11.811	15.875

## Year After Year, PEER Bearing Offers Award-Winning Manufacturing, Quality and Delivery



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Dana Partners in Excellence Award



John Deere Crop Award



John Deere 10 Year Hall of Fame Award



John Deere North American Supplier of the Year Award



Kinze Supplier Performance Award

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Tillage Equipment, Maschio Gaspardo

"The TILLXTREME™ passed 2011 and 2012 tillage seasons in the rolling basket application without any failure and perform way better than the previous solution."

**Cyril Thirouin, Engineering Director**  
Grégoire-Besson, Rabe Agri

"The maintenance-free bearings offered by PEER Bearing offer significantly improved bearing life over the traditional bearings being used."

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Great Plains





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