

PacFlange

Conveyor Units



Oil and grease free, self lubricating units
for FOOD and WATER handling processes



www.PacFlange.com

PacFlange Conveyor Units

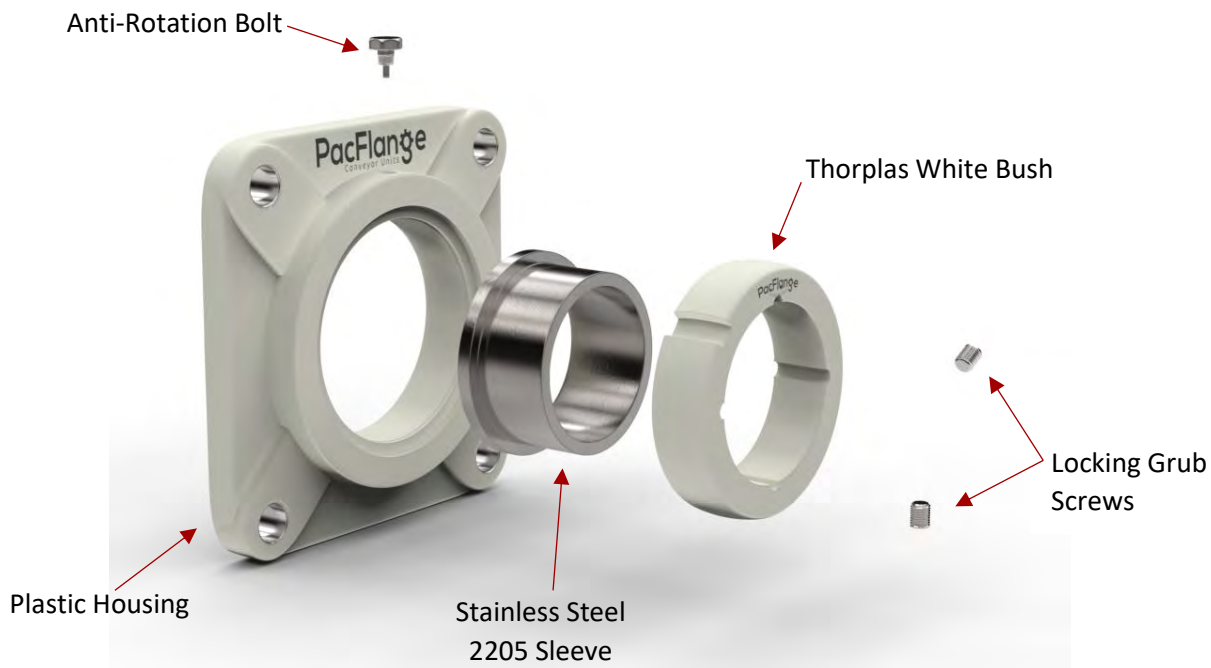
Developed for the food processing and production industry, PacFlange is designed to replace the conventional greased roller bearing thereby eliminating grease completely and providing a zero-maintenance solution. PacFlange consists of a food grade approved housing, a marine grade stainless steel sleeve (grub screwed to the shaft), which runs on a ThorPlas-White bush. This material is an engineered food grade thermoplastic that is self-lubricating with low friction and wear properties – specifically designed for FOOD and WATER handling environments.



Reduce Your Plants Maintenance Costs

- **Grease free** – no need for expensive food grade grease and eliminating chance of contamination.
- **Maintenance free** – as there is no need for grease, staff do not need to attend to each unit to apply grease periodically, freeing up their time for other maintenance tasks.
- **No catastrophic failure** – the PacFlange unit will wear out gradually, thus avoiding unexpected failure.
- **Planned replacement** – as there is no catastrophic failure for PacFlange units when installed within PV limits, you are able to plan well in advance when a unit is due for replacement, therefore reducing down time from unexpected unit failure.
- **Longer life** – reduced replacement of units and higher MTBF (Mean Time Between Failure)

Exploded view of a PacFlange Conveyor Unit

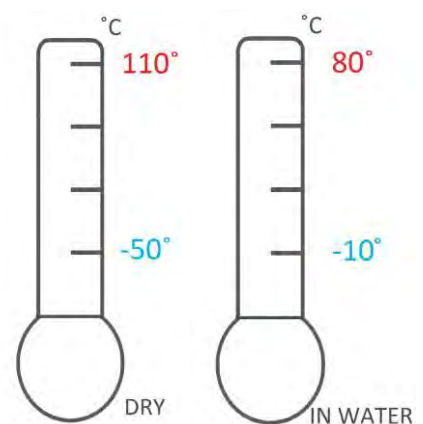


Advantages of PacFlange

(For entire product range)

- Self-lubricating – No oil or grease required
- Cleaner operation
- No maintenance required
- High strength, low wear – Long bearing wear life
- Gradual wear ensures no unplanned maintenance
- Elimination of food contamination
- Quick and easy installation
- High resistance to chemicals, heat, corrosion, and abrasion
- Self-aligning – Large Pivot Angles

Operating Temp. Range



*Please consult PacFlange if operating above 60°C (140°F) or below -20°C (-4°F)

SUPERIOR BUSH MATERIAL

ThorPlas White

A homogeneous polymer bush with lubricants to lower friction and wear formulated into the molecular structure. Once the PacFlange unit enters service and a transfer film is established between the sleeve and the bush, friction then stabilises for the life of the unit. As the lubricants are evenly dispersed throughout the homogeneous material, surface wear has no adverse effect on its self-lubricating or low friction properties.



General Properties	Unit	ThorPlas White	Method
Colour		Natural White	
Density	kg/m ³	1400	
Coefficient of friction		0.15-0.3	
Absorption in water	Vol %	< 0.3	ASTM D570
PV limit	MPa x m/min	7.35	
Mechanical Properties			
Compressive Strength	MPa	> 350	ASTM D695
Max. Operating Pressure	MPa	45	
Ultimate Tensile Strength	MPa	70	ASTM D638
Tensile Modulus of Elasticity	MPa	2770	ASTM D638
Hardness	Shore - D	83	ASTM D2240

Low water absorption

Water absorption is 0.15% of wall thickness. It is also directly proportional to operating temperature. This allowance has been accounted for in the design.

Pressure

The high strength and low creep of the material enables it to support high operating pressures. Maximum dynamic design pressure is 45 MPa either operating dry or lubricated by water. Peak static pressure is 60 MPa.

Abrasive Environments

PacFlange is more abrasive resistant than the majority of metallic and non-metallic materials, but it will perform better if it has less contact with abrasives. A clean water flush or wash-down (including CIP) helps to remove any abrasives present in the bush.

ThorPlas Approvals

- AsureQuality, Independent Quality Assurance – (NZ and Australia)
- WRAS Certification Mark (UK/Euro)
- NSF/ANSI 61 (US)
- NSF/ANSI 51 (US)

Product Range



4 Bolt Flange



3 Bolt Offset Flange



Pillow Block



2 Bolt Flange



Tapped Base Pillow Block



Take-Up Housing

Ideal applications

- Areas exposed to frequent washdowns
- Wet, clean room or moist environments
- Limited access
- Abrasive environments
- Areas exposed to chemicals
- Food handling and processing



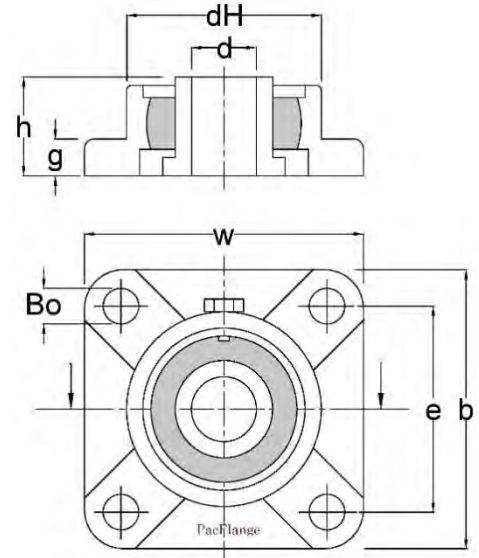
Industries

- Dairy
- Meat and Poultry
- Aquaculture
- Food processing
- Ready to eat food packaging
- Bottling Plants
- Confectionery
- Bakery
- Horticulture



4 Bolt Flange

PacFlange Conveyor unit with 4 mounting holes



Dimensions (mm)

Item code	d		dH	w	b	h	e	g	Bo
	Shaft dia (inch)	Shaft dia (mm)	Hub dia	Width	Breadth	Total height	Hole pitch	Height of flange	Bolt Size
PAC020F	3/4	20	62	88	86	36.3	63.5	13.4	M10
PAC025F	1	25	67	95	95	36.7	70	14	M10
PAC030F	1 1/8	30	76	107	107	41.4	83	14.3	M10
PAC035F	1 1/4	35	89	118	118	46.9	92	15.5	M12

Product Codes & Static Load

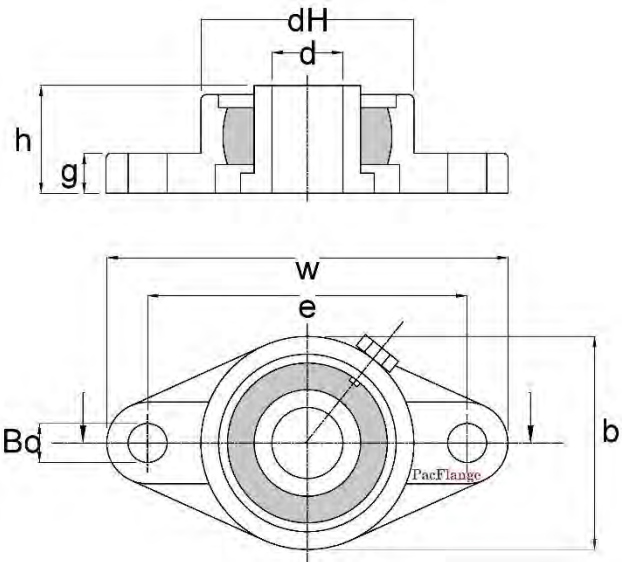
Shaft Size		PacFlange Part No.					Max. Static Radial Load	
Metric (mm)	Imperial (inch)	Metric	Imperial	TPW Bush	Housing	SS Sleeve	N (Long Term)	kg (Long Term)
20	0.75	PAC020F	PAC075F	TPWF204	F204	2205020	5125	522
25	1	PAC025F	PAC100F	TPWF205	F205	2205025	6075	619
30	1.125	PAC030F	PAC1125F	TPWF206	F206	2205030	8850	902
35	1.25	PAC035F	PAC125F	TPWF207	F207	2205035	9250	943

Dynamic Load

RPM	Shaft dia. 20 mm		Shaft dia. 25 mm		Shaft dia. 30 mm		Shaft dia. 35 mm	
	Dynamic Load		Dynamic Load		Dynamic Load		Dynamic Load	
	N	kg	N	kg	N	kg	N	kg
10	2059	210	2501	255	2648	270	2795	285
20	1079	110	1226	125	1324	135	1402	143
30	686	70	834	85	883	90	932	95
40	490	50	637	65	657	67	696	71
50	343	35	392	40	441	45	461	47
80	245	25	294	30	333	34	343	35
100	196	20	245	25	265	27	275	28
150	137	14	147	15	177	18	177	18
200	98	10	98	10	127	13	137	14

2 Bolt Flange

PacFlange Conveyor unit with 2 mounting holes



Dimensions (mm)

Item code	d		dH	w	b	h	e	g	Bo
	Shaft dia (inch)	Shaft dia (mm)	Hub dia	Width	Breadth	Total height	Hole pitch	Height of flange	Bolt Size
PACO20FL	3/4	20	64	113	64	33.7	90	11.4	M10
PACO25FL	1	25	69.5	131	69.5	36.7	99	13	M10
PACO30FL	1 1/8	30	80	148	80	41.2	117	14.3	M10
PACO35FL	1 1/4	35	90	164	90	43.4	130	16.1	M12

Product Codes & Static Load

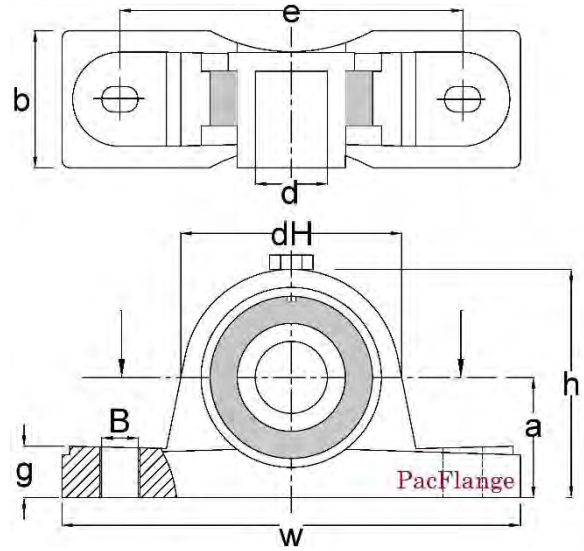
Shaft Size		PacFlange Part No.		TPW Bush	Housing	SS Sleeve	Max. Static Radial Load	
Metric (mm)	Imperial (inch)	Metric	Imperial				N (Long Term)	kg (Long Term)
20	0.75	PACO20FL	PAC075FL	TPWFL204	FL204	2205020	4250	433
25	1	PACO25FL	PAC100FL	TPWFL205	FL205	2250525	5550	566
30	1.125	PACO30FL	PAC1125FL	TPWFL206	FL206	2205030	7100	724
35	1.25	PACO35FL	PAC125FL	TPWFL207	FL207	2205035	7450	759

Dynamic Load

RPM	Shaft dia. 20 mm		Shaft dia. 25 mm		Shaft dia. 30 mm		Shaft dia. 35 mm	
	Dynamic Load		Dynamic Load		Dynamic Load		Dynamic Load	
	N	kg	N	kg	N	kg	N	kg
10	2059	210	2501	255	2648	270	2795	285
20	1079	110	1226	125	1324	135	1402	143
30	686	70	834	85	883	90	932	95
40	490	50	637	65	657	67	696	71
50	343	35	392	40	441	45	461	47
80	245	25	294	30	333	34	343	35
100	196	20	245	25	265	27	275	28
150	137	14	147	15	177	18	177	18
200	98	10	98	10	127	13	137	14

Pillow Block

PacFlange Conveyor unit with 2 mounting holes



Dimensions (mm)

Item code	d		dH	a	w	b	h	e	g	Bo
	Shaft dia (inch)	Shaft dia (mm)	Hub dia	Centre of shaft from base	Width	Breadth	Total height (mm)	Hole pitch	Height of flange	Bolt Size
PAC020P	3/4	20	62.5	33.3	127	38	65.5	95	14.2	M10
PAC025P	1	25	74.5	36.5	140.5	38	71	105	14.5	M10
PAC030P	1 1/8	30	81	42.9	163	46	84	119	17.8	M12
PAC035P	1 1/4	35	93	47.6	168	48	94.5	127	18	M12

Product Codes & Static Load

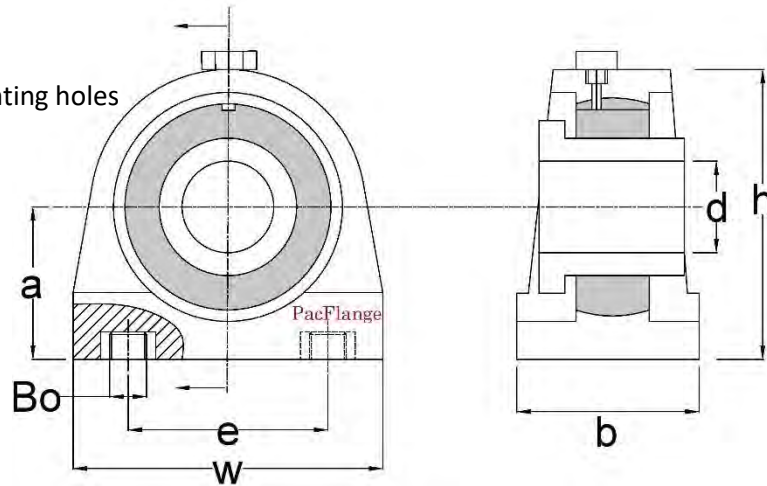
Shaft Size		PacFlange Part No.		TPW Bush	Housing	SS Sleeve	Max. Static Radial Load	
Metric (mm)	Imperial (inch)	Metric	Imperial				N (Long Term)	kg (Long Term)
20	0.75	PAC020P	PAC075P	TPWP204	P204	2205020	3850	392
25	1	PAC025P	PAC100P	TPWP205	P205	2250525	5000	510
30	1.125	PAC030P	PAC1125P	TPWP206	P206	2205030	5300	540
35	1.25	PAC035P	PAC125P	TPWP207	P207	2205035	5400	550

Dynamic Load

RPM	Shaft dia. 20 mm		Shaft dia. 25 mm		Shaft dia. 30 mm		Shaft dia. 35 mm	
	Dynamic Load		Dynamic Load		Dynamic Load		Dynamic Load	
	N	kg	N	kg	N	kg	N	kg
10	2059	210	2501	255	2648	270	2795	285
20	1079	110	1226	125	1324	135	1402	143
30	686	70	834	85	883	90	932	95
40	490	50	637	65	657	67	696	71
50	343	35	392	40	441	45	461	47
80	245	25	294	30	333	34	343	35
100	196	20	245	25	265	27	275	28
150	137	14	147	15	177	18	177	18
200	98	10	98	10	127	13	137	14

Tapped Base Pillow Block

PacFlange Conveyor unit with 2 tapped base mounting holes



Dimensions (mm)

Item code	d		a	w	b	h	e	Bo
	Shaft dia (inch)	Shaft dia (mm)	Centre of shaft from base	Width	Breadth	Total height	Hole pitch	Bolt Size
PAC020PA	3/4	20	33.3	72.8	34.5	66	50.8	M8
PAC025PA	1	25	36.5	76.2	39.5	73.5	50.8	M10
PAC030PA	1 1/8	30	42.9	101	42.5	84	76.2	M10
PAC035PA	1 1/4	35	47.6	110	47.5	95	82.6	M10

Product Codes & Static Load

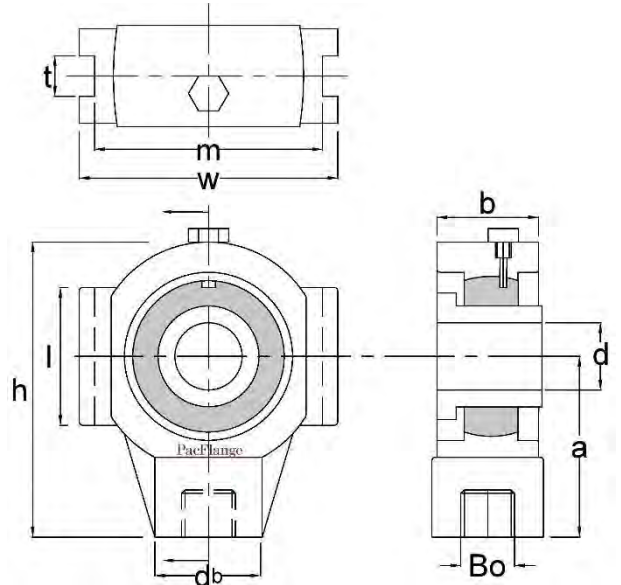
Shaft Size		PacFlange Part No.		TPW Bush	Housing	SS Sleeve	Max. Static Radial Load	
Metric (mm)	Imperial (inch)	Metric	Imperial				N (Long Term)	kg (Long Term)
20	0.75	PAC020PA	PAC075PA	TPWPA204	PA204	2205020	3450	351
25	1	PAC025PA	PAC100PA	TPWPA205	PA205	2250525	3505	357
30	1.125	PAC030PA	PAC1125PA	TPWPA206	PA206	2205030	3790	386
35	1.25	PAC035PA	PAC125PA	TPWPA207	PA207	2205035	4040	412

Dynamic Load

RPM	Shaft dia. 20 mm		Shaft dia. 25 mm		Shaft dia. 30 mm		Shaft dia. 35 mm	
	Dynamic Load		Dynamic Load		Dynamic Load		Dynamic Load	
	N	kg	N	kg	N	kg	N	kg
10	2059	210	2501	255	2648	270	2795	285
20	1079	110	1226	125	1324	135	1402	143
30	686	70	834	85	883	90	932	95
40	490	50	637	65	657	67	696	71
50	343	35	392	40	441	45	461	47
80	245	25	294	30	333	34	343	35
100	196	20	245	25	265	27	275	28
150	137	14	147	15	177	18	177	18
200	98	10	98	10	127	13	137	14

Take-up Housing

PacFlange Conveyor unit with 1 tapped mounting hole



Dimensions (mm)

Item code	d		a	l	T	m	w	b	db	h	Bo
	Shaft dia (inch)	Shaft dia (mm)	Centre of shaft from base	Length of guide slot	Width of slot	Distance Between Slot	Width	Breadth	Base Dia	Total height	Bolt Size
PACT204	3/4	20	64	47	12	76	88	27.5	35	99	M16
PACT205	1	25	64	47	12	76	88	27.5	35	99	M16
PACT205	1 1/8	30	76	63	12	89	102	34.5	40	125	M16
PACT206	1 1/4	35	76	63	12	89	102	34.5	40	125	M16

Product Codes & Static Load

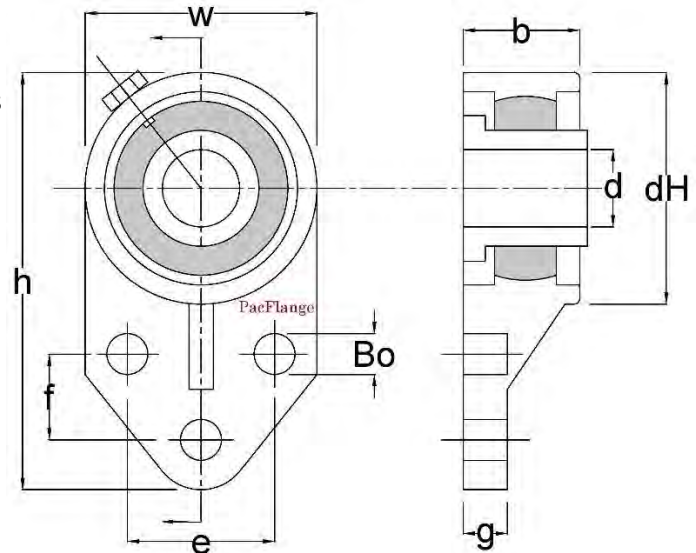
Shaft Size		PacFlange Part No.		TPW Bush	Housing	SS Sleeve	Max. Static Radial Load	
Metric (mm)	Imperial (inch)	Metric	Imperial				N (Long Term)	kg (Long Term)
20	0.75	PAC020T	PAC075T	TPWT204	T204	2205020	4933	503
25	1	PAC025T	PAC100T	TPWT205	T205	2250525	7750	790
30	1.125	PAC030T	PAC1125T	TPWT206	T206	2205030	7900	805
35	1.25	PAC035T	PAC125T	TPWT207	T207	2205035	8250	841

Dynamic Load

RPM	Shaft dia. 20 mm		Shaft dia. 25 mm		Shaft dia. 30 mm		Shaft dia. 35 mm	
	Dynamic Load		Dynamic Load		Dynamic Load		Dynamic Load	
	N	kg	N	kg	N	kg	N	kg
10	2059	210	2501	255	2648	270	2795	285
20	1079	110	1226	125	1324	135	1402	143
30	686	70	834	85	883	90	932	95
40	490	50	637	65	657	67	696	71
50	343	35	392	40	441	45	461	47
80	245	25	294	30	333	34	343	35
100	196	20	245	25	265	27	275	28
150	137	14	147	15	177	18	177	18
200	98	10	98	10	127	13	137	14

3 Bolt Offset Flange

PacFlange Conveyor unit with 3 mounting holes



Dimensions (mm)

Item code	d	dH	w	b	h	f	e	g	Bo	
	Shaft dia (inch)	Shaft dia (mm)	Hub dia	Width	Breadth	Total height	Hole pitch (Horizontal)	Hole pitch (Vertical)	Height of flange	Bolt Size
PAC020FK	3/4	20	63.5	86	26.5	108	38.1	22.2	11.3	M10
PAC025FK	1	25	70	95	34	120.6	41.3	28.6	12.3	M10
PAC030FK	1 1/8	30	83	107	32	138.5	47.6	31.8	14	M10
PAC035FK	1 1/4	35	94	118	35.5	157	50.8	31.8	16.5	M12

Product Codes & Static Load

Shaft Size		PacFlange Part No.		TPW Bush	Housing	SS Sleeve	Max. Static Radial Load	
Metric (mm)	Imperial (inch)	Metric	Imperial				N (Long Term)	kg (Long Term)
20	0.75	PAC020FK	PAC075FK	TPWFK204	FK204	2205020	3600	367
25	1	PAC025FK	PAC100FK	TPWFK205	FK205	2250525	4550	464
30	1.125	PAC030FK	PAC1125FK	TPWFK206	FK206	2205030	6100	622
35	1.25	PAC035FK	PAC125FK	TPWFK207	FK207	2205035	6450	657

Dynamic Load

RPM	Shaft dia. 20 mm		Shaft dia. 25 mm		Shaft dia. 30 mm		Shaft dia. 35 mm	
	Dynamic Load		Dynamic Load		Dynamic Load		Dynamic Load	
	N	kg	N	kg	N	kg	N	kg
10	2059	210	2501	255	2648	270	2795	285
20	1079	110	1226	125	1324	135	1402	143
30	686	70	834	85	883	90	932	95
40	490	50	637	65	657	67	696	71
50	343	35	392	40	441	45	461	47
80	245	25	294	30	333	34	343	35
100	196	20	245	25	265	27	275	28
150	137	14	147	15	177	18	177	18
200	98	10	98	10	127	13	137	14

ThorPlas White Chemical Resistance Chart

Chemical/Fluid	Resistance	Chemical/Fluid	Resistance
Salt solutions	A	Hydrocarbon/fuels	A
Ammonium chloride	A	Aromatic hydrocarbons	A
Calcium chloride	A	Benzene	A
Cupric chloride	A	Toluene	A
Magnesium chloride	A	Xylene	A
Potassium chloride	A	Aliphatic –	
Sodium chloride	A	gasoline, grease	A
Weak Acids	A-B	Lubricating oils	
Acetic acid	B	(petroleum)	A
Benzoic acid	A	Liquid propane gas	A
Boric acid	A	Chlorinated Solvents	C-D
Carbonic acid	A	Ethylene Chloride	C
Chromic acid	A	Chloroform	D
Citric acid	A	Alcohols	A
Formic acid, 3%	B	Ethanol	A
Lactic acid	A	Methanol	A
Strong Acids	A-C	Isopropyl alcohol	A
Hydrochloric, 10%	C	Ketones	A-B
Nitric acid, 0.1%	C	Methyl ethyl ketone	A
Phosphoric acid, 3%	A	Acetone	B
Sulphuric, 5%	A	Ethers	A
Sulphuric, concentrated	C	Diethyl ether	A
Weak Bases	A-B	Isopropyl ether	A
Ammonia 10% Aq.	A	Esters	A
Magnesium hydroxide, 10%	B	Ethyl acetate	A
Potassium carbonate	A	Methyl acetate	A
Sodium carbonate	A	Freon 12	A
Triethanolamine	B	Detergents, Organic	A
Strong Bases	C	Castor oil	A
Potassium hydroxide, 10%	C	Silicone fluids	A
Sodium hydroxide, 10%	C	Vegetable Oils	A
Oxidizing agents	A		
Hydrogen peroxide, 1-3%	A		
Chromic acid A C	A		

A: Excellent-No Effect B: Good-Little Effect C: Fair-Moderate Effect D: Unacceptable

***We have good experience with daily chemical wash downs using Caustic Soda (Sodium Hydroxide) ThorPlas-White stands up well to this chemical.**

Terms & Conditions of Trade

(a) Basic Terms. PacFlange provides a limited warranty on the Goods of its own manufacture sold by it to the Buyer thereof, against defects of material and workmanship (the "Limited Warranty").

(b) Coverage. This Limited Warranty covers the repair or replacement or the refund of the purchase price, as PacFlange may elect, of any defective products regarding which, upon discovery of the defect, the buyer has given immediate written notice. PacFlange does NOT warrant the merchant ability of its product and does NOT make any warranty express or implied other than the warranty contained herein.

(c) Third Party Products. Accessories, equipment and parts not manufactured by PacFlange are warranted or otherwise guaranteed only to the extent and in the manner warranted or guaranteed to PacFlange by the actual manufacturer, and then only to the extent PacFlange is able to enforce such warranty or guarantee.

(d) Limited Liability. PacFlange's liability for any and all claims, damages, losses and injuries arising out of or relating to its performance or breach of any contract of sale of goods and the manufacture, sale delivery, re-sale, repair, or use of any goods, shall NOT exceed the agreed price of such Goods. The Buyer's remedy shall be at PacFlange's option, the replacement or repair of the Goods. This shall be the buyer's sole, exclusive and only remedy against PacFlange. IN NO EVENT SHALL PACFLANGE BE LIABLE FOR INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, BUSINESS, GOODWILL, INCURRING OF MACHINERY DOWNTIME, DESTRUCTION OR LOSS OF ANY CAPITAL GOODS, LIABILITY FOR PERSONAL INJURY, DEATH, PROPERTY DAMAGE AND ANY OTHER TYPE OF DAMAGES WHETHER SIMILAR TO OR DIFFERENT FROM THIS LISTING.

(e) Latent Defects. In cases of defects in materials or workmanship or defects arising from the selection of material or processes of manufacturer, such defects must be apparent in the Goods within three (3) months, after delivery and acceptance of the Goods to the Buyer.

(f) Exclusions. PacFlange shall, as to each aforesaid defect, be relieved of all obligations and liability under this Limited Warranty if:

1. The Goods are operated with any accessory, equipment or part not specifically approved by PacFlange and not manufactured by PacFlange or

to PacFlange's design and specifications, unless the Buyer furnishes reasonable evidence that such installation was not a cause of the defect; provided, that this provision shall not apply to any accessory, equipment or part, the use of which does not affect the safety of the Goods;

2. The Goods shall not be operated or maintained in accordance with PacFlange's written instructions as delivered to the Buyer, at any time or from time to time, unless the Buyer furnishes reasonable evidence that such operation or maintenance was not a cause of the defect;

3. The Goods shall not be operated or maintained under normal industry use, unless the Buyer furnishes reasonable evidence that such operation was not a cause of the defect;

4. The Goods shall have been repaired, altered or Modified without PacFlange's written approval or, if the goods shall have been operated subsequent to its involvement in an accident or breakdown, unless the Buyer furnishes reasonable evidence that such repair, alteration, modification, operation, accident or breakdown was not a cause of the defect; provided, however, that this limitation insofar as it relates to repairs, accidents and breakdowns, shall NOT be applicable to routine repairs or replacements or minor accidents or minor breakdowns which normally occur in the operation of a machine, if such repairs or replacements are made with suitable materials and according to standard practice and engineering;

5. The Buyer does not submit reasonable proof to PacFlange that the defect is due to a material embraced within PacFlange's Limited Warranty hereunder.

(g) Warranty Term. This Limited Warranty made by PacFlange contained in these Terms and Conditions, or contained in any document given in order to carry out the transactions contemplated hereby, shall continue in full force and effect for the benefit of the Buyer, save and except, no warranty claim may be made or brought by the Buyer after the date which is twelve (12) months following delivery and acceptance of the Goods pursuant to this Contract.

(h) Expiration and Release. After the expiration of this Limited Warranty's period of time, as aforesaid, PacFlange shall be released from all obligations and liabilities in respect of such warranty made by PacFlange and contained in this Contract or in any document given in order to carry out the transactions contemplated hereby.

Client Testimonials

Industry: Meat Date of Installation: July 2015
Plant: **Silverfern, Hawera**

*"We installed two x trial PacFlange units back in July 2015, they performed very well and 2 months later we ordered a further 22 PacFlange units to replace our harder to get to greased rolling element bearings. These have **reduced our maintenance expenditure for the plant, saving money on grease and time** and they are still in operation (maintenance free) to date, where the greased rolling element bearings were replaced yearly. The old bearings were being greased weekly which we now do not have to do. Our plant operates 16hrs/day – 5days/week with daily chemical wash downs which these PacFlange Units handle superbly."*

– Dan Mapp - Engineering Supervisor, March 2017

Industry: Meat Date of Installation: July 2015
Plant: **Silverfern, Takapau**

"We installed these in our dip tank which runs a conveyor through showered 82 deg water, although PacFlange units aren't in direct contact with the hot water, so far so good, no sign of failure so am impressed with product."

Mike Isaacson – Plant Engineer, Feb 2017

Industry: Seafood
Date of Installation: Feb 2016
Plant: **Moana, Auckland**

"Running almost every day since installation, brilliantly, no issues" –

Mark, Plant Manager, Feb 2017

Industry: Meat
Date of Installation: August 2016
Plant: **ANZCO, Blenheim**

"The PacFlange Units you supplied are in use and as time goes on through our production season we will be able to assess how well they perform in our environment, to date they appear to be working well."

Peter Hadfield -Engineering Supervisor, Feb 2017

June 2017 – 24 PacFlange units ordered after successful trial

Industry: Pet Food
Date of Installation: July 2015
Plant: **Ovation, Waipukurau**

"Installed in a hard to reach location (forklift access to grease) & haven't touched since. Still in operation with zero maintenance"

Installed and operating in:





Eliminate Grease
Eliminate Labour / Maintenance
Eliminate Unexpected Catastrophic Failures
Eliminate Risk of Contamination



PacFlange

Conveyor Units



Our Environmentally Friendly Solution

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