



Technical Support Sheet

Civil Culverts

Updated
4/12/2023

Technical support sheet of the Hynds PKS Civil Culvert



Product Advantages

Design life of 100 years on PE100 material

Efficient hydraulic performance due to low surface friction

High abrasion resistance

Reduced installation costs due to its light weight and long lengths
(up to 18m lengths through in-house welding)

Minimum economic order quantity can be as little as 50m
depending on pipe size.

Inert to many chemicals including Hydrogen sulphide (HS₂) attack

Constructability to achieve required structures such as manholes
and fittings

No pipe chainage wastage due to pipelines being made to
exact chainage

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HYNDS **PKS**

Gravity pipe system / low pressure applications

Spiral pipe technology has been manufactured and used successfully throughout Europe since the 1960's.

Hynds PKS manufacture PE100 spiral wound pipe, in New Zealand for drainage, stormwater and wastewater applications ranging from 300mm (ID) to 2500mm (ID), with possible machine capability to 4200mm (ID) encompassing.

- Pipes
- Manholes
- Wet wells
- Tanks for retention and attenuation
- Reducers
- Bends
- T and Y junction

The ease of constructability allows for structures of a complex nature to be fabricated in the factory and delivered to site for installation therefore reducing construction time onsite.

Product Advantages

The manufacturing process enables us to produce the length of pipe you need in up to 6m standard lengths. Should 96.7m of pipe between manholes be required then this is what is manufactured and delivered. No waste.

If the actual length is unknown, it is feasible to provide a spool section that can adjust the required chainage distance to within a range of +/- 50mm, or we can provide a transition pipe with solid wall section that can be cut onsite and planed to suite.

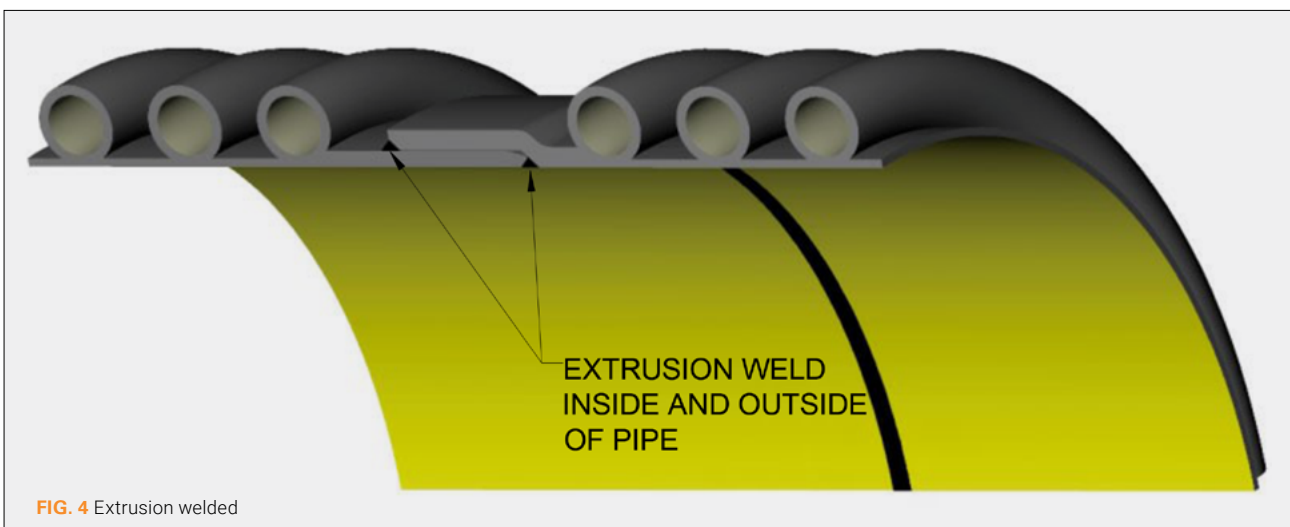
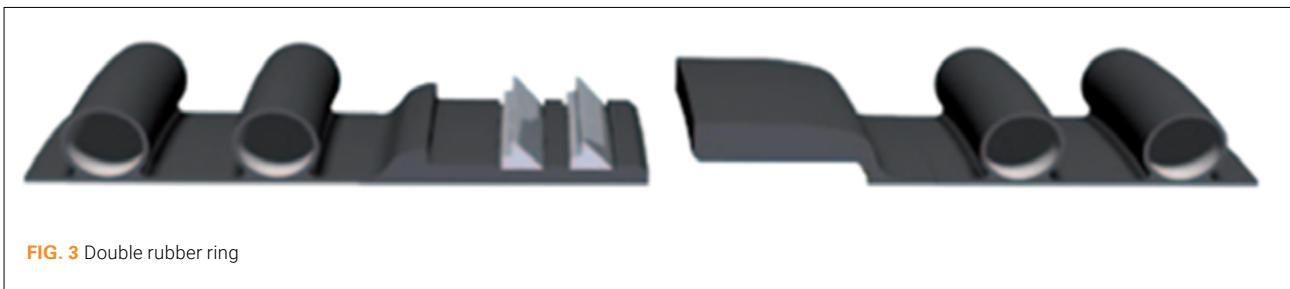
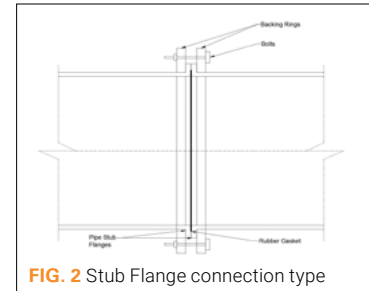
Wall profile determinations are based on the Static Load Questionnaire ensuring that you are getting the product that you need for the project in accordance with the requirements of AS/NZS2566:1 and the German DVWK ATV 127E Standard which the AS/NZ Standard is referenced from. Installation is carried out to AS/NZS 2566:2 for Flexible pipes which all contractors are well versed in.

Joining Methods

Joining methods offered are designed to suit the individual project requirements.

These can include the following:

- Double rubber ring
- Flange joint
- Extrusion welded
- EF joint

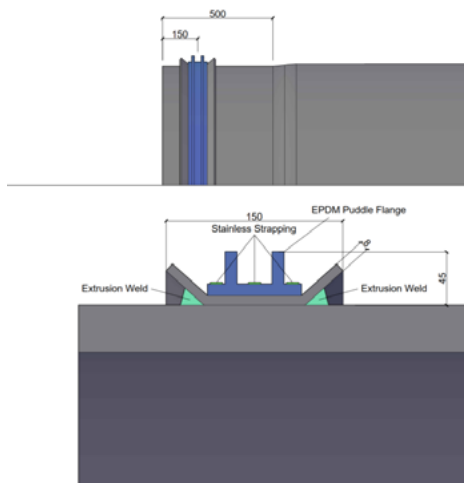


Pipe transitions and fittings

We can manufacture a ribbed pipe with a transition section on the pipe end to match up with another pipe OD or a connection to a solid structure that requires trimming on site.

Pipe shorts with puddle flanges into wingwalls / concrete manholes

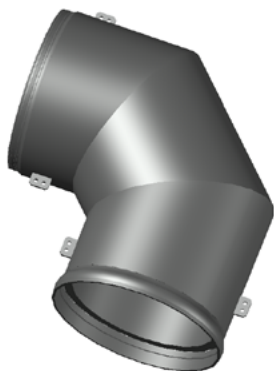
As part of a pipe end transition we can also fabricate a type 2 puddle flange to a fixed location onto the pipe with a trimming margin specified by the design engineer. (ref image below)



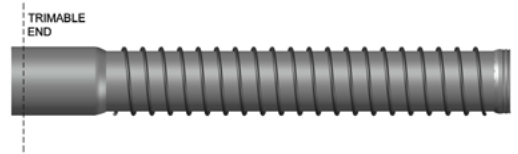
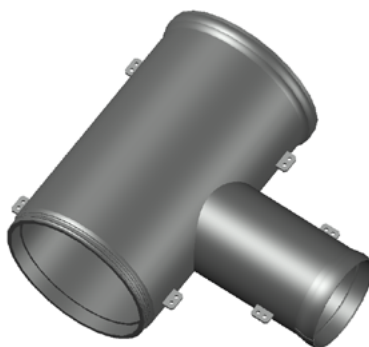
Bends and tees with pulling lugs – socket socket or socket spigot option

We manufacture mitre bends in segments in a variety of socket spigot / socket socket / spigot spigot or plain ends to suite another pipe connection with pulling lugs.

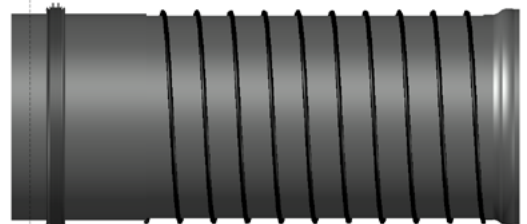
Fittings can be made to nearly any SN or SDR requirements



Socket Socket /
Socket Spigot /
Spigot Spigot
options
are available

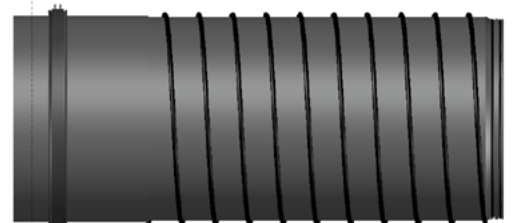


Socket Cut End PR Pipe



Cut to suit

Spigot Cut End PR Pipe



Cut to suit

Socket Cut End PKS Plus and Solid Wall Pipe



Cut to suit

Spigot Cut End PKS Plus and Solid Wall Pipe



Cut to suit

TABLE 1 PKS CIVIL - SN8 AS/NZS 5065 COMPLIANT

DN	M3 Code	SN Ratings	Effective Length (+/-50mm)	ID	OD (+/- 10mm)	Ave. Weight (kg)
DN500	PK05CIVDRR.SN8	SN8	5800	500	594	90
DN600	PK06CIVDRR.SN8	SN8	5800	600	694	125
DN700	PK07CIVDRR.SN8	SN8	5800	700	820	162
DN800	PK08CIVDRR.SN8	SN8	5800	800	926	232
DN900	PK09CIVDRR.SN8	SN8	5800	900	1032	313
DN1000	PK10CIVDRR.SN8	SN8	5800	1000	1166	369
DN1100	PK11CIVDRR.SN8	SN8	5800	1200	1370	470
DN1200	PK12CIVDRR.SN8	SN8	5800	1200	1374	530
DN1400	PK14CIVDRR.SN8	SN8	5800	1400	1582	791
DN1500	PK15CIVDRR.SN8	SN8	5800	1500	1742	942
DN1660	PK16CIVDRR.SN8	SN8	5800	1660	1900	984
DN1800	PK18CIVDRR.SN8	SN8	5800	1800	2050	990
DN2000	PK20CIVDRR.SN8	SN8	5800	2000	2248	1358
DN2500	PK25CIVDRR.SN8	SN8	5000	2500	2798	2200

TABLE 2 PKS CIVIL - SN16 AS/NZS 5065 COMPLIANT

DN	M3 Code	SN Ratings	Effective Length (+/-50mm)	ID	OD (+/- 10mm)	Ave. Weight (kg)
DN500	PK05CIVDRR.SN16	SN16	5800	500	596	120
DN600	PK06CIVDRR.SN16	SN16	5800	600	724	161
DN700	PK07CIVDRR.SN16	SN16	5800	700	832	247
DN800	PK08CIVDRR.SN16	SN16	5800	800	966	312
DN900	PK09CIVDRR.SN16	SN16	5800	900	1074	437
DN1000	PK10CIVDRR.SN16	SN16	5800	1000	1174	495
DN1100	PK11CIVDRR.SN16	SN16	5800	1200	1282	655
DN1200	PK12CIVDRR.SN16	SN16	5800	1200	1390	792
DN1400	PK14CIVDRR.SN16	SN16	5800	1400	1608	1201
DN1500	PK15CIVDRR.SN16	SN16	5800	1500	1718	1382
DN1660	PK16CIVDRR.SN16	SN16	5800	1660	1924	1460
DN1800	PK18CIVDRR.SN16	SN16	5800	1800	2078	1718
DN2000	PK20CIVDRR.SN16	SN16	5800	2000	2298	2131
DN2500	PK25CIVDRR.SN16	SN16	3500	2500	2852	2244

TABLE 3 Minimum Embedment Zone Dimensions as per AS/NZS 2566.2:2002

(De) (mm) Pipe Outside Diameter	(Lc) (mm) Minimum distance - Can be enlarged to fit compaction equipment	(B) (mm) Trench Width to AS/NZS 2566.2:2002 (B=De+2Lc)
>300 ≤450	200	700 - 850
>450 ≤900	300	1050 - 1500
>900 ≤1500	350	1600 - 2200
>1500 ≤4000	0.25D	2250 - 6000

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