

# Hynds Channels and Ducts

Technical Guide D7.3

Hynds Precast Concrete Channel units have been designed for use in a multitude of applications from light duty residential to heavy duty industrial.



## Applications

Water channels

Cable ducting

Pipe protection

## Product Attributes

Durability

Strength

Available in light and heavy duty versions

Interlocking joint for easy installation and sealing (if required)

Standard and custom lids available

Versatility

## Approvals/Standards

NZS3109 Concrete Construction

## Quality

ISO9001:2008 Quality Management Standard

*We are the supply partner of choice for New Zealand's civil construction industry, specialising in water and infrastructure based solutions.*

**HYNDS**  
PIPE SYSTEMS

Hynds precast concrete channels and ducts are a robust, easy to install system for conveying water, cabling, or providing pipe protection.

## Design Loadings

- Light Duty: LD20 ie.20kN wheel load.
- Heavy Duty: HD60 ie.60kN wheel load.
- Note: Design loadings are without any soil cover.

## Proposed new Design Loadings

- Standard Range designed for 12kPa UDL
- Highway Range designed for HN:HO-72 Wheel loads\*
- Travel direction perpendicular to channel
- 0 to 800mm soil cover Range  
contract Hynds for full design details

## Installation

Installation will vary according to the site conditions and requirements. However, a well compacted level base is required to prevent differential settlement. Where appropriate, provide mass concrete to the base or sides of the channel to minimise damage caused by traffic loading.

### 'U' Type Concrete Channels and Ducts

TABLE 1 'U' Type Light Duty Lid

Product Code	Lid Dimensions			Weight (kg)
	H (mm)	K (mm)	J (mm)	
CH3001500LDLID	300	100	1500	170
CH4502400LDLID	610	125	2400	458
CH6002400LDLID	760	125	2400	550
CH7501500LDLID	950	150	1500	560

TABLE 2 'U' Type Heavy Duty Lid

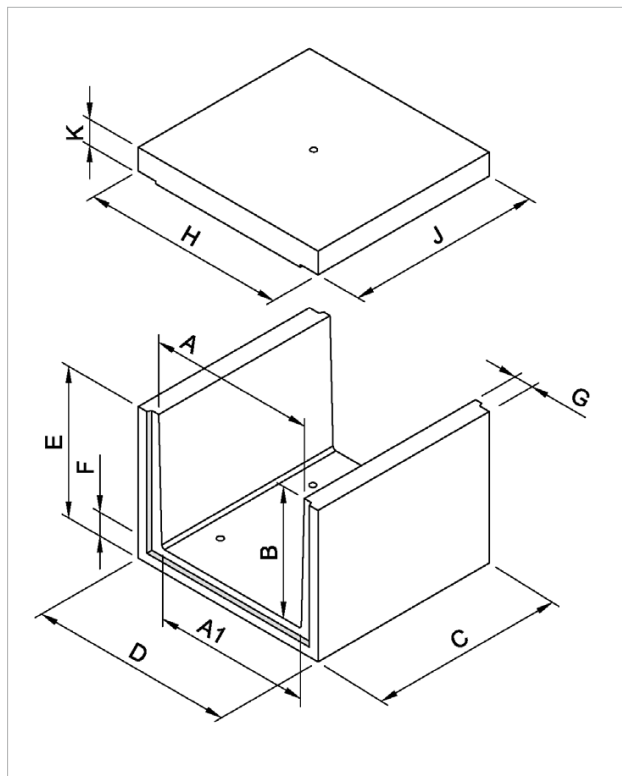
Product Code	Lid Dimensions			Weight (kg)
	H (mm)	K (mm)	J (mm)	
CH3001500HDLID	510	150	1500	287
CH6001200HDLID	800	150	1200	350
CH7501200HDLID	1050	175	1200	620
CH7501500HDLID	1050	175	1500	700

TABLE 3 'U' Type Light Duty Channel

Product Code	Nominal Size		Channel Dimensions								Weight (kg)
	Width (mm)	Depth (mm)	A (mm)	A1 (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	
CH3003001500LD	300	300	310	300	300	1500	470	380	80	80	327
CH4503802400LD	450	380	450	440	380	2400	610	460	80	80	680
CH6004002400LD	600	400	600	580	400	2400	750	480	80	75	744
CH6005002400LD	600	500	600	590	500	2400	760	580	80	80	870
CH7505002400LD	750	500	750	740	500	2400	910	580	80	80	940

TABLE 4 'U' Type Heavy Duty Channel

Product Code	Nominal Size		Channel Dimensions								Weight (kg)
	Width (mm)	Depth (mm)	A (mm)	A1 (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	
CH3002251500HD	300	225	308	300	225	1500	520	330	105	106	390
CH3003001500HD	300	300	310	300	300	1500	510	400	100	100	428
CH3003001500HDR	300	300	310	300	300	1500	510	400	100	100	428
CH6004001200HD	600	400	600	580	400	1200	800	500	100	100	492
CH6005001200HD	600	500	600	590	500	1200	800	600	100	100	548
CH7505001200HD	750	500	750	740	500	1200	1000	625	125	125	760
CH7507001500HD	750	700	750	730	700	1500	1050	850	150	150	1380



### Concrete Channel Lid

**TABLE 5 Concrete Channel Lid 1000 Series**

	Product Code	Lid Dimensions			Weight (kg)
		H (mm)	J (mm)	K (mm)	
Heavy Duty	CCL100175150H	1325	1500	175	889
Light Duty	CCL100150150L	1275	1500	150	732

**TABLE 6 Concrete Channel Lid 1250 Series**

	Product Code	Lid Dimensions			Weight (kg)
		H (mm)	J (mm)	K (mm)	
Heavy Duty	CCL125200150H	1575	1500	200	1201
Light Duty	CCL125150150L	1525	1500	150	885

**TABLE 7 Concrete Channel Lid 1500 Series**

	Product Code	Lid Dimensions			Weight (kg)
		H (mm)	J (mm)	K (mm)	
Heavy Duty	CCL150200150H	1845	1500	200	1416
Light Duty	CCL150175150L	1805	1500	175	1212

### Lifting and Handling

All Hynds Channels and Ducts incorporate Swiftlift lifting anchors for safe lifting and must be used with the correct lifting clutch.

Hynds Pipe Systems has designed and manufactured Hynds Channels and Ducts with a minimum dynamic factor of 1.2. This dynamic factor requires that all the following conditions are observed when lifting, moving or placing the channels:

1. Lifting with mobile plant (*such as an excavator or similar*) where equipment is specifically exempt from the requirements of the PECPR Regulations 1999, subject to the conditions outlined in the New Zealand Gazette, No. 104, September 2015 and
2. Lifting, travelling and placing over rough or uneven ground where anchor failure is not anticipated to cause harm or injury, by adopting procedures such as:
  - a. Transporting the element as close as practical to ground level (300mm recommended)
  - b. Establishing and maintaining exclusion zones
  - c. Transporting only precast concrete elements that are unlikely to topple if they were to hit the ground
  - d. Inspecting lifting anchors both after transportation and before final lifting into place

Refer to "Safe work with precast concrete - Handling, transportation and erection of precast concrete elements" published by Worksafe New Zealand (October 2018)

Shock loads resulting from travelling with suspended Channels and Ducts over rough terrain and uneven ground may exceed design, dynamic and safety factors of the lifting systems. It is essential that care is taken during lifting and transporting as additional stresses could result in anchor failure.

## Concrete Channels and Ducts - 1000, 1250, 1500 Series

**TABLE 8 Concrete Channels and Ducts 1000 series**

	Product Code	Nominal Size		Channel Dimensions								Weight (kg)
		Width (mm)	Depth (mm)	A (mm)	A1 (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	
Heavy Duty	CC100050150H	1000	500	1025	998	500	1500	1325	650	150	150	1323
	CC100075150H	1000	750	1025	985	750	1500	1325	900	150	150	1632
	CC100100150H	1000	1000	1025	972	1000	1500	1325	1150	150	150	1954
	CC100125150H	1000	1250	1025	958	1250	1500	1325	1400	150	150	2294
	CC100150150H	1000	1500	1025	945	1500	1500	1325	1650	150	150	2684
Light Duty	CC100050150L	1000	500	1025	998	500	1500	1275	625	125	125	1085
	CC100075150L	1000	750	1025	985	750	1500	1275	825	125	125	1349
	CC100100150L	1000	1000	1025	972	1000	1500	1275	1125	125	125	1625
	CC100125150L	1000	1250	1025	958	1250	1500	1275	1375	125	125	1918

**TABLE 9 Concrete Channels and Ducts 1250 series**

	Product Code	Nominal Size		Channel Dimensions								Weight (kg)
		Width (mm)	Depth (mm)	A (mm)	A1 (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	
Heavy Duty	CC125050150H	1250	500	1275	1248	500	1500	1575	650	150	150	1462
	CC125075150H	1250	750	1275	1235	750	1500	1575	900	150	150	1772
	CC125100150H	1250	1000	1275	1222	1000	1500	1575	1150	150	150	2094
	CC125125150H	1250	1250	1275	1208	1250	1500	1575	1400	150	150	2434
	CC125150150H	1250	1500	1275	1195	1500	1500	1575	1650	150	150	2788
Light Duty	CC125050150L	1250	500	1275	1248	500	1500	1525	650	150	125	1342
	CC125075150L	1250	750	1275	1235	750	1500	1525	900	150	125	1606
	CC125100150L	1250	1000	1275	1222	1000	1500	1525	1150	150	125	1882
	CC125125150L	1250	1250	1275	1208	1250	1500	1525	1400	150	125	2176
	CC125150150L	1250	1500	1275	1195	1500	1500	1525	1650	150	125	2487

**TABLE 10 Concrete Channels and Ducts 1500 series**

	Product Code	Nominal Size		Channel Dimensions								Weight (kg)
		Width (mm)	Depth (mm)	A (mm)	A1 (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	
Heavy Duty	CC150050150H	1500	500	1525	1498	500	1500	18745	675	175	160	1832
	CC150075150H	1500	750	1525	1485	750	1500	1845	925	175	160	2160
	CC150100150H	1500	1000	1525	1472	1000	1500	1845	1175	175	160	2501
	CC150125150H	1500	1250	1525	1458	1250	1500	1845	1425	175	160	2860
	CC150150150H	1500	1500	1525	1445	1500	1500	1845	1675	175	160	3233
	CC150175150H	1500	1750	1525	1432	1750	1500	1845	1925	175	160	3620
Light Duty	CC150050150L	1500	500	1525	1498	500	1500	1845	650	150	140	1554
	CC150075150L	1500	750	1525	1485	750	1500	1845	900	150	140	1845
	CC150100150L	1500	1000	1525	1472	1000	1500	1845	1150	150	140	2149
	CC150125150L	1500	1250	1525	1458	1250	1500	1845	1400	150	140	2471
	CC150150150L	1500	1500	1525	1445	1500	1500	1845	1650	150	140	2807
	CC150175150L	1500	1750	1525	1432	1750	1500	1845	1900	150	140	3168

Branches Nationwide Support Office & Technical Services 0800 93 7473

**Disclaimer:** While every effort has been made to ensure that the information in this document is correct and accurate, users of Hynds product or information within this document must make their own assessment of suitability for their particular application. Product dimensions are nominal only, and should be verified if critical to a particular installation. No warranty is either expressed, implied, or statutory made by Hynds unless expressly stated in any sale and purchase agreement entered into between Hynds and the user.