High Voltage Drum Core Inductors

- Continuous winding-to-core isolation to 600 VDC / 400 VAC
- Can be mounted to board or chassis using metallic hardware
- Proprietary standoff allows for easy draining of wash solutions
- UL Class B (130°) insulation system
- Now available in new 35 x 55 mm size!

Model Selection Tables

Suffix Code	DHV1420- Inductance (NOM ± TOL)	DCR[1] (MAX)	Current Rating[2] (MAX)	DHV1820- Inductance (NOM ± TOL)	DCR[1] (MAX)	Current Rating[2] (MAX)	DHV2420- Inductance (NOM ± TOL)	DCR[1] (MAX)	Current Rating[2] (MAX)
10U	10 µH ± 15%	17 mΩ	6.0 A_{DC}	10 µH ± 15%	8 mΩ	12.0 A_{DC}	10 µH ± 15%	5 mΩ	19.3 A_{DC}
15U	15 µH ± 15%	21 mΩ	6.0 A_{DC}	15 µH ± 15%	8 mΩ	12.0 A_{DC}	15 µH ± 15%	8 mΩ	15.2 A_{DC}
22U	22 µH ± 10%	26 mΩ	6.0 A_{DC}	22 µH ± 15%	14 mΩ	10.0 A_{DC}	22 µH ± 15%	14 mΩ	11.5 A_{DC}
33U	33 µH ± 10%	31 mΩ	5.7 A_{DC}	33 µH ± 10%	26 mΩ	7.3 A_{DC}	33 µH ± 15%	21 mΩ	9.4 A_{DC}
47U	47 µH ± 10%	45 mΩ	4.8 A_{DC}	47 µH ± 10%	41 mΩ	5.8 A_{DC}	47 µH ± 10%	25 mΩ	8.6 A_{DC}
68U	68 µH ± 10%	91 mΩ	3.3 A_{DC}	68 µH ± 10%	55 mΩ	5.0 A_{DC}	68 µH ± 10%	31 mΩ	7.7 A_{DC}
100	100 µH ± 10%	140 mΩ	2.7 A_{DC}	100 µH ± 10%	69 mΩ	4.5 A_{DC}	100 µH ± 10%	39 mΩ	6.9 A_{DC}
150	150 µH ± 10%	250 mΩ	2.0 A_{DC}	150 µH ± 10%	86 mΩ	4.0 A_{DC}	150 µH ± 10%	59 mΩ	5.6 A_{DC}
220	220 µH ± 10%	300 mΩ	1.83 A_{DC}	220 µH ± 10%	107 mΩ	3.6 A_{DC}	220 µH ± 10%	93 mΩ	4.5 A_{DC}
330	330 µH ± 10%	380 mΩ	1.64 A_{DC}	330 µH ± 10%	169 mΩ	2.9 A_{DC}	330 µH ± 10%	133 mΩ	3.7 A_{DC}
470	470 µH ± 10%	460 mΩ	1.48 A_{DC}	470 µH ± 10%	320 mΩ	2.1 A_{DC}	470 µH ± 10%	165 mΩ	3.4 A_{DC}
680	680 µH ± 10%	570 mΩ	1.33 A_{DC}	680 µH ± 10%	460 mΩ	1.74 A_{DC}	680 µH ± 10%	260 mΩ	2.7 A_{DC}
1K0				1.0 mH ± 10%	570 mΩ	1.56 A_{DC}	1.0 mH ± 10%	400 mΩ	2.2 A_{DC}
1K5				1.5 mH ± 10%	730 mΩ	1.38 A_{DC}	1.5 mH ± 10%	580 mΩ	1.79 A_{DC}
2K2				2.2 mH ± 10%	1.32 Ω	1.03 A_{DC}	2.2 mH ± 10%	730 mΩ	1.59 A_{DC}
3K3							3.3 mH ± 10%	1.35 Ω	1.17 A_{DC}
4K7							4.7 mH ± 10%	1.69 Ω	1.05 A_{DC}

Suffix Code	DHV3525- Inductance (NOM ± TOL)	DCR[1] (MAX)	Current Rating[2] (MAX)	DHV3535- Inductance (NOM ± TOL)	DCR[1] (MAX)	Current Rating[2] (MAX)	DHV3555- Inductance (NOM ± TOL)	DCR[1] (MAX)	Current Rating[2] (MAX)
15U	15 µH ± 15%	5 mΩ	20 A_{DC}						
22U	22 µH ± 15%	7 mΩ	20 A_{DC}	22 µH ± 15%	6 mΩ	20 A_{DC}			
33U	33 µH ± 15%	11 mΩ	17.3 A_{DC}	33 µH ± 15%	7 mΩ	20 A_{DC}			
47U	47 µH ± 15%	18 mΩ	13.5 A_{DC}	47 µH ± 15%	9 mΩ	20 A_{DC}			
68U	68 µH ± 10%	23 mΩ	11.9 A_{DC}	68 µH ± 10%	12 mΩ	19.0 A_{DC}	68 µH ± 10%	12 mΩ	20 A_{DC}
100	100 µH ± 10%	28 mΩ	10.8 A_{DC}	100 µH ± 10%	22 mΩ	13.9 A_{DC}	100 µH ± 10%	12 mΩ	20 A_{DC}
150	150 µH ± 10%	36 mΩ	9.5 A_{DC}	150 µH ± 10%	36 mΩ	10.8 A_{DC}	150 µH ± 10%	18 mΩ	18.0 A_{DC}
220	220 µH ± 10%	55 mΩ	7.7 A_{DC}	220 µH ± 10%	43 mΩ	10.0 A_{DC}	220 µH ± 10%	27 mΩ	14.8 A_{DC}
330	330 µH ± 10%	87 mΩ	6.1 A_{DC}	330 µH ± 10%	56 mΩ	8.7 A_{DC}	330 µH ± 10%	51 mΩ	10.7 A_{DC}
470	470 µH ± 10%	150 mΩ	4.7 A_{DC}	470 µH ± 10%	67 mΩ	8.0 A_{DC}	470 µH ± 10%	65 mΩ	9.5 A_{DC}
680	680 µH ± 10%	185 mΩ	4.2 A_{DC}	680 µH ± 10%	98 mΩ	6.6 A_{DC}	680 µH ± 10%	79 mΩ	8.7 A_{DC}
1K0	1.0 mH ± 10%	240 mΩ	3.7 A_{DC}	1.0 mH ± 10%	184 mΩ	4.8 A_{DC}	1.0 mH ± 10%	100 mΩ	7.7 A_{DC}
1K5	1.5 mH ± 10%	370 mΩ	3.0 A_{DC}	1.5 mH ± 10%	290 mΩ	3.8 A_{DC}	1.5 mH ± 10%	151 mΩ	6.3 A_{DC}
2K2	2.2 mH ± 10%	540 mΩ	2.5 A_{DC}	2.2 mH ± 10%	350 mΩ	3.5 A_{DC}	2.2 mH ± 10%	230 mΩ	5.1 A_{DC}
3K3	3.3 mH ± 10%	690 mΩ	2.2 A_{DC}	3.3 mH ± 10%	440 mΩ	3.1 A_{DC}	3.3 mH ± 10%	430 mΩ	3.7 A_{DC}
4K7	4.7 mH ± 10%	1.23 Ω	1.63 A_{DC}	4.7 mH ± 10%	810 mΩ	2.3 A_{DC}	4.7 mH ± 10%	530 mΩ	3.3 A_{DC}
6K8	6.8 mH ± 10%	1.53 Ω	1.46 A_{DC}	6.8 mH ± 10%	1.00 Ω	2.1 A_{DC}	6.8 mH ± 10%	650 mΩ	3.0 A_{DC}
10K	10 mH ± 10%	2.4 Ω	1.17 A_{DC}	10 mH ± 10%	1.54 Ω	1.67 A_{DC}	10 mH ± 10%	980 mΩ	2.4 A_{DC}
15K	15 mH ± 10%	3.7 Ω	0.94 A_{DC}	15 mH ± 10%	2.4 Ω	1.34 A_{DC}	15 mH ± 10%	1.53 Ω	1.96 A_{DC}
22K				22 mH ± 10%	3.6 Ω	1.09 A_{DC}	22 mH ± 10%	1.90 Ω	1.76 A_{DC}
33K				33 mH ± 10%	4.5 Ω	0.97 A_{DC}	33 mH ± 10%	3.6 Ω	1.29 A_{DC}

1. T_A = 25°C. 2. Rated current is dervied from device thermal performance. Saturation current exceeds rated current in all cases.

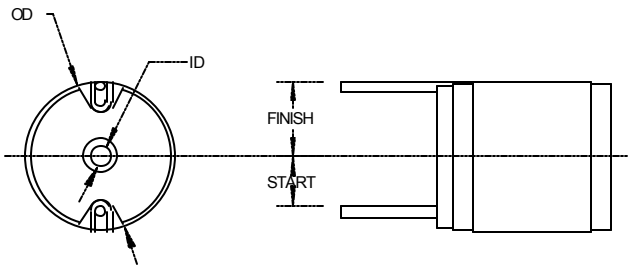
www.hirelsystems.com sales@hirelsystems.com engineering@hirelsystems.com

Hi-Rel Systems, Inc.
11100 Wayzata Boulevard
Suite 501
Minnetonka, MN 55305
Phone: 952-544-1344
Fax: 952-544-1345

Date code 0229

High Voltage Drum Core Inductors

Absolute Maximum Ratings								
Parameter	**Conditions**	**DHV1420**	**DHV1820**	**DHV2420**	**DHV3525**	**DHV3535**	**DHV3555**	**Units**
Energy Storage	Continuous DC; T_A = 25°C	0.95	1.44	3.3	9.2	19.6	55	$mH°A^2$
Power Dissipation	T_A = 25°C	1.01	1.39	1.85	3.3	4.3	5.9	W
Thermal Derating	Above 25°C	9.6	13.2	17.6	31	41	56	mW / °C
Working Isolation Voltage	Continuous winding-to-core	600 / 400						VDC / VAC
Operating Temperature Range		-40 ~ +130						°C
Storage Temperature Range		-40 ~ +130						°C



Dimension	DHV1420	DHV1820	DHV2420	DHV3525	DHV3535	DHV3555
OD (MAX)	0.610 [15.49]	0.800 [20.32]	1.010 [25.65]	1.450 [36.83]	1.450 [36.83]	1.450 [36.83]
ID (MIN)	0.115 [2.92]	0.115 [2.92]	0.115 [2.92]	0.260 [6.60]	0.260 [6.60]	0.260 [6.60]
HEIGHT (MAX)	0.935 [23.75]	0.935 [23.75]	0.935 [23.75]	1.130 [28.70]	1.540 [39.12]	2.200 [55.88]
START (REF)	0.214 [5.44]	0.256 [6.50]	0.296 [7.52]	0.459 [11.66]	0.459 [11.66]	0.459 [11.66]
FINISH (REF)	0.300 [7.62]	0.396 [10.06]	0.500 [12.70]	0.705 [17.91]	0.705 [17.91]	0.705 [17.91]

Suffix	Lead Diameter Table					
Code	**DHV1420**	**DHV1820**	**DHV2420**	**DHV3525**	**DHV3535**	**DHV3555**
10U	0.037 [0.95]	0.059 [1.49]	0.075 [1.90]			
15U	0.037 [0.95]	0.066 [1.67]	0.066 [1.67]	0.094 [2.39]		
22U	0.037 [0.95]	0.052 [1.33]	0.052 [1.33]	0.084 [2.13]	0.094 [2.39]	
33U	0.037 [0.95]	0.042 [1.06]	0.047 [1.19]	0.066 [1.67]	0.094 [2.39]	
47U	0.033 [0.85]	0.037 [0.95]	0.047 [1.19]	0.059 [1.49]	0.094 [2.39]	
68U	0.027 [0.68]	0.033 [0.85]	0.047 [1.19]	0.059 [1.49]	0.084 [2.13]	0.094 [2.39]
100	0.024 [0.61]	0.033 [0.85]	0.047 [1.19]	0.059 [1.49]	0.066 [1.67]	0.094 [2.39]
150	0.019 [0.48]	0.033 [0.85]	0.042 [1.06]	0.059 [1.49]	0.059 [1.49]	0.084 [2.13]
220	0.019 [0.48]	0.033 [0.85]	0.037 [0.95]	0.052 [1.33]	0.059 [1.49]	0.075 [1.90]
330	0.019 [0.48]	0.030 [0.76]	0.033 [0.85]	0.047 [1.19]	0.059 [1.49]	0.059 [1.49]
470	0.019 [0.48]	0.024 [0.61]	0.033 [0.85]	0.037 [0.95]	0.059 [1.49]	0.059 [1.49]
680	0.019 [0.48]	0.021 [0.54]	0.030 [0.76]	0.037 [0.95]	0.052 [1.33]	0.059 [1.49]
1K0		0.021 [0.54]	0.027 [0.68]	0.037 [0.95]	0.042 [1.06]	0.059 [1.49]
1K5		0.021 [0.54]	0.024 [0.61]	0.033 [0.85]	0.037 [0.95]	0.052 [1.33]
2K2			0.024 [0.61]	0.030 [0.76]	0.037 [0.95]	0.047 [1.19]
3K3			0.021 [0.54]	0.030 [0.76]	0.037 [0.95]	0.037 [0.95]
4K7			0.019 [0.48]	0.027 [0.68]	0.030 [0.76]	0.037 [0.95]
6K8				0.024 [0.61]	0.030 [0.76]	0.037 [0.95]
10K				0.021 [0.54]	0.027 [0.68]	0.033 [0.85]
15K				0.019 [0.48]	0.024 [0.61]	0.030 [0.76]
22K					0.021 [0.54]	0.030 [0.76]
33K					0.021 [0.54]	0.024 [0.61]

Units are inches [mm].
Lead start and finish positions may vary, but are conformable to the reference values.
Specifications are subject to change without notice.

www.hirelsystems.com sales@hirelsystems.com engineering@hirelsystems.com

Hi-Rel Systems, Inc.
11100 Wayzata Boulevard
Suite 501
Minnetonka, MN 55305
Phone: 952-544-1344
Fax: 952-544-1345

Date code 0229