

GritX™ DSV PRESSURE COMPENSATING DRIPLINE TECHNICAL SPECIFICATIONS



Improve irrigation efficiency and precision with Rain Bird® GritX™ Dual Seal Valve Pressure Compensating Dripline. Featuring our reliable and self-flushing GritX Dual Seal Valve Emitter it offers a built in check valve with anti-drain and anti-siphon functionality to ensure that you're irrigating what you want when you want with precision.



WORKMANSHIP



ENVIRONMENTAL
STRESS CRACKING
(ESCR)

FEATURES

- GritX self-flushing emitter ensures consistent and reliable watering
- Dual Seal Valve provides both anti-drain and anti-siphon benefits
- Provides 3 psi [0.2 bar] of holdback
- Durable, kink free tubing means easy installation and long-lasting performance
- Dual green stripes help identify and orient emitters for installation

OPERATING RANGE

🔧 Operating Pressure	15 to 60 psi	1 to 4 bar
○ Opening Pressure	10 psi	0.7 bar
● Closing Pressure	3 psi	0.2 bar
📏 Holdback	7 feet	2 meters
⚡ Flow Rate	0.46 gph	1.7 lph
📏 Filtration	120 mesh	125 micron
💧 Water Temperature (up to)	110°F	43.3°C
🌡️ Ambient Temperature (up to)	150°F	65.6°C

APPLICATIONS

ORCHARDS



Walnuts



Pistachios



Almonds



Pecans



Citrus



Avocados

TRELLIS



Grapes



Apples



Stonefruit



Berries



Cherries

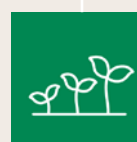
LOCATIONS



Agriculture

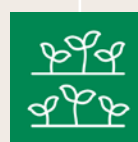


Greenhouse



Nursery

INSTALLATION



Flat Land



Undulating Land



Pulse Irrigation

GritX™ DSV EMITTER

Deep emitter pathway allows grit to pass through instead of plugging the emitter



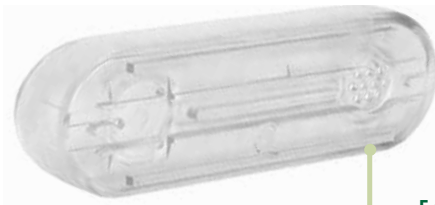
Low profile design draws in clean water and reduces friction loss



Chemical resistant, flexible diaphragm pushes grit out of the emitter



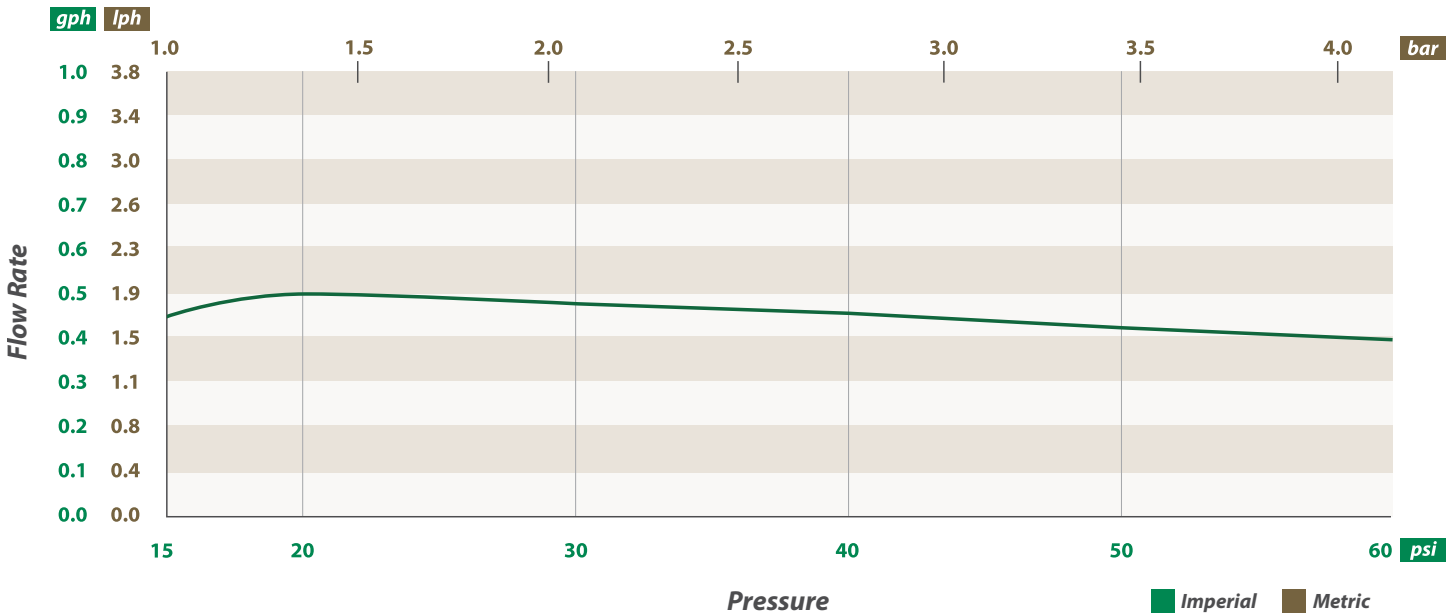
Dual Seal Valve anti-drain and anti-siphon functionality holds back water while irrigation is off while also preventing debris from flowing back into the emitter



Emitter cover



GritX™ DSV Flow Chart








EMITTER PERFORMANCE DATA	0.46 gph	1.7 lph
Constant (k)	0.66	1.85
Exponent (x)	-0.11	-0.11

	16 mm	18 mm	20 mm
Barb Loss Factor (Kd)	0.90	0.54	0.27

HOW TO ORDER:

GritX™ DSV Pressure Compensating Heavywall Dripline


GXDSV	-	1645	-	4	-	18	-	W
								
<i>Model</i>		<i>Tube Diameter</i> 1645 = 16mm 0.045 wall 1845 = 18mm 0.045 wall 2048 = 20mm 0.048 wall		<i>Emitter Flow Rate</i> 4 = 0.46 gph <i>Metric</i> 4 = 1.75 lph		<i>Emitter Spacing*</i> 18 = 18" 24 = 24" 30 = 30" 36 = 36" 42 = 42" 48 = 48" 60 = 60" <i>Metric</i> M020 = 20 cm M030 = 30 cm M040 = 40 cm M050 = 50 cm		<i>Color (optional)</i> W = White

* You may specify any emitter spacing from 6 to 96 inches (0.15 to 2.4 meters)



GritX™ DSV in White - Citrus Orchard Retrofit, Installation in Progress

PACKAGING DATA

 Pallet	16 Coils	
	FEET	METERS
Standard Coil Length	1,000	305
COIL DIMENSIONS*	INCHES	METERS
Length	31	0.8
Width	16	0.4
Height	12	0.3
	LBS	KILOS
Coil Weight*	40	18.14
PALLET DIMENSIONS*	FEET	METERS
Length	5.2	1.6
Width	5.2	1.6
Height	4.5	1.4
	LBS	KILOS
Pallet Weight*	645	293

*Average dimensions based on 18mm dripline
Actuals will vary depending on your specification.

**Call 1-800-HELLO-AG for specific
pallet weights and dimensions.**

Vine Clips

Rain Bird® Vine Clips make it a snap to attach dripline to various vine or trellis applications, reducing labor and installation time in the field.



- ✓ Improves control of water placement
- ✓ Easily adjustable to direct water droplets on plant
- ✓ Unparalleled strength on the wire
- ✓ Low profile for mechanical harvesting



GRITX™ DSV HEADLOSS AND LATERAL LENGTH

GritX DSV 16mm Dripline

Max. Lateral Length (feet)
GritX™ DSV - 16mm - 0.46 gph

Imperial

		Emitter Spacing (inches)									
Inlet Pressure (psi)		18	20	22	24	26	28	30	36	42	48
Uphill 2%	20	269	287	303	318	334	345	360	393	420	444
	25	359	385	411	436	457	481	500	555	606	648
	30	422	455	486	516	544	572	598	672	735	792
	35	471	510	546	580	613	646	675	762	837	908
	40	515	555	596	634	672	707	743	837	924	1,004
	45	551	597	640	682	722	761	800	903	1,001	1,088
	50	585	633	680	726	769	810	850	963	1,068	1,164
	55	615	667	717	764	810	854	898	1,020	1,131	1,232
	60	644	698	750	800	849	896	943	1,071	1,190	1,300
Flat	20	327	355	383	410	436	462	485	558	623	688
	25	408	443	479	512	546	579	610	699	784	864
	30	467	507	548	586	624	660	698	801	896	988
	35	513	558	603	646	687	728	768	882	987	1,092
	40	552	602	649	696	741	784	828	951	1,068	1,176
	45	588	640	691	740	789	835	883	1,014	1,138	1,252
	50	620	675	730	782	832	882	930	1,068	1,201	1,324
	55	650	707	765	818	871	924	975	1,119	1,257	1,388
	60	677	737	796	854	910	964	1,015	1,167	1,313	1,448
Downhill 2%	20	389	430	469	510	550	590	628	747	865	980
	25	461	507	552	598	641	686	730	858	987	1,112
	30	513	563	614	662	711	758	805	945	1,082	1,216
	35	557	612	664	716	769	819	870	1,017	1,162	1,304
	40	594	652	708	764	817	873	925	1,080	1,232	1,380
	45	627	688	746	806	862	919	975	1,137	1,295	1,448
	50	659	722	783	844	904	961	1,020	1,188	1,351	1,512
	55	686	752	816	878	940	1,001	1,060	1,236	1,404	1,568
	60	713	780	847	912	975	1,038	1,100	1,281	1,456	1,624

Minimum operating pressure = 15 psi

GRITX™ DSV HEADLOSS AND LATERAL LENGTH

GritX DSV 16mm Dripline

Max. Lateral Length (meter)

GritX™ DSV - 16mm -1.7 lph

Metric

		Emitter Spacing (cm)									
		30	40	50	60	70	80	90	100	110	120
Uphill 2%	Inlet Pressure (bar)										
	1.5	69	85	99	110	121	130	139	146	153	160
	2.0	91	113	134	151	167	182	196	209	221	232
	2.5	106	133	157	179	200	218	236	252	267	282
	3.0	118	148	176	202	225	246	266	286	304	322
	3.5	128	162	193	220	246	270	293	315	336	354
4.0	137	174	207	237	265	292	317	340	363	384	
Flat	1.5	77	98	118	136	153	170	185	200	215	228
	2.0	98	124	149	172	195	215	236	255	273	292
	2.5	112	143	172	199	224	248	271	293	315	335
	3.0	124	158	190	219	247	274	300	324	348	371
	3.5	134	170	205	237	267	297	324	351	376	402
	4.0	143	182	219	253	286	317	347	375	403	428
Downhill 2%	1.5	86	112	138	163	188	213	238	262	286	310
	2.0	105	136	167	196	224	252	280	307	333	360
	2.5	119	154	187	219	251	281	311	340	370	398
	3.0	130	168	204	238	272	305	337	368	399	430
	3.5	139	180	218	255	291	326	359	393	426	457
	4.0	148	190	231	270	308	344	380	415	449	482

Minimum operating pressure = 1 bar

GRITX™ DSV HEADLOSS AND LATERAL LENGTH (CONTINUED)

GritX DSV 18mm Dripline

Max. Lateral Length (feet)
GritX™ DSV - 18mm - 0.46 gph

Imperial

		Emitter Spacing (inches)									
Inlet Pressure (psi)		18	20	22	24	26	28	30	36	42	48
Uphill 2%	20	333	352	370	386	401	413	425	459	483	504
	25	458	488	517	544	570	595	618	678	728	772
	30	545	583	620	656	689	719	750	831	903	964
	35	612	658	702	742	782	819	855	951	1,040	1,116
	40	671	722	770	816	860	903	943	1,056	1,155	1,244
	45	722	777	831	882	930	975	1,020	1,146	1,257	1,360
	50	767	827	886	940	992	1,043	1,090	1,227	1,348	1,460
	55	809	873	935	992	1,049	1,104	1,155	1,299	1,432	1,552
	60	848	915	981	1,042	1,103	1,160	1,215	1,368	1,509	1,640
Flat	20	435	472	508	542	576	609	640	729	816	896
	25	545	592	636	680	722	763	803	915	1,022	1,124
	30	623	677	728	778	826	873	918	1,050	1,173	1,288
	35	686	745	801	856	910	961	1,013	1,158	1,292	1,420
	40	740	803	865	924	982	1,038	1,093	1,248	1,397	1,536
	45	788	855	920	984	1,044	1,106	1,163	1,329	1,488	1,636
	50	831	902	972	1,038	1,103	1,167	1,228	1,404	1,572	1,728
	55	870	945	1,018	1,088	1,157	1,223	1,288	1,473	1,645	1,812
	60	908	985	1,062	1,134	1,205	1,274	1,343	1,536	1,719	1,888
Downhill 2%	20	549	607	664	720	778	833	890	1,062	1,232	1,404
	25	641	705	768	830	893	954	1,015	1,200	1,383	1,564
	30	710	778	847	914	982	1,048	1,113	1,308	1,502	1,692
	35	767	840	913	984	1,055	1,125	1,195	1,398	1,600	1,800
	40	816	893	970	1,046	1,120	1,192	1,265	1,479	1,687	1,896
	45	860	942	1,021	1,100	1,177	1,253	1,330	1,551	1,768	1,980
	50	900	985	1,069	1,150	1,231	1,309	1,388	1,617	1,841	2,060
	55	938	1,025	1,111	1,196	1,278	1,360	1,443	1,677	1,908	2,136
	60	974	1,063	1,153	1,240	1,326	1,409	1,493	1,737	1,974	2,204

Minimum operating pressure = 15 psi

GRITX™ DSV HEADLOSS AND LATERAL LENGTH

GritX DSV 18mm Dripline

Max. Lateral Length (meter)
GritX™ DSV - 18mm -1.7 lph

Metric

		Emitter Spacing (cm)									
		30	40	50	60	70	80	90	100	110	120
Uphill 2%	Inlet Pressure (bar)										
	1.5	89	108	123	136	147	157	166	173	179	185
	2.0	120	147	171	192	211	227	243	257	270	281
	2.5	141	174	204	230	254	276	296	314	331	348
	3.0	158	196	230	260	288	314	338	360	381	401
	3.5	172	214	252	286	317	346	374	399	422	445
4.0	184	230	271	308	343	375	405	433	460	485	
Flat	1.5	104	132	157	180	202	222	242	261	279	298
	2.0	133	167	199	229	257	283	309	333	356	379
	2.5	152	192	229	263	295	326	356	384	411	437
	3.0	168	212	253	291	327	361	393	425	455	484
	3.5	182	229	274	315	354	391	427	460	493	524
	4.0	194	245	292	336	378	418	455	491	527	560
Downhill 2%	1.5	121	158	194	229	265	299	335	370	405	439
	2.0	146	189	230	270	309	349	387	425	463	500
	2.5	164	212	257	301	344	386	427	468	508	548
	3.0	179	230	279	326	372	416	460	503	546	588
	3.5	192	246	298	348	396	443	490	534	579	623
	4.0	203	261	316	368	418	467	516	563	609	655

Minimum operating pressure = 1 bar

GRITX™ DSV HEADLOSS AND LATERAL LENGTH (CONTINUED)

GritX DSV 20mm Dripline

Max. Lateral Length (feet)
GritX™ DSV - 20mm - 0.46 gph

Imperial

		Emitter Spacing (inches)									
Inlet Pressure (psi)		18	20	22	24	26	28	30	36	42	48
Uphill 2%	20	392	412	427	442	455	469	480	507	525	544
	25	557	590	620	648	674	698	720	780	830	868
	30	671	713	754	792	826	859	890	975	1,047	1,108
	35	761	812	860	906	947	987	1,028	1,131	1,222	1,304
	40	837	895	950	1,002	1,051	1,097	1,140	1,263	1,369	1,464
	45	905	968	1,029	1,086	1,140	1,192	1,240	1,377	1,498	1,608
	50	965	1,033	1,098	1,162	1,220	1,276	1,330	1,482	1,617	1,736
	55	1,020	1,093	1,164	1,230	1,294	1,356	1,413	1,575	1,722	1,856
	60	1,071	1,150	1,225	1,294	1,363	1,428	1,490	1,665	1,820	1,964
Flat	20	557	602	644	686	726	763	803	909	1,012	1,108
	25	698	753	809	860	910	959	1,008	1,143	1,271	1,392
	30	800	863	926	986	1,042	1,099	1,155	1,311	1,456	1,596
	35	881	952	1,021	1,086	1,151	1,213	1,273	1,446	1,607	1,760
	40	951	1,028	1,102	1,172	1,242	1,309	1,375	1,563	1,736	1,904
	45	1,013	1,095	1,173	1,250	1,324	1,395	1,465	1,665	1,852	2,028
	50	1,068	1,155	1,239	1,318	1,398	1,472	1,548	1,758	1,957	2,144
	55	1,121	1,212	1,298	1,384	1,465	1,545	1,623	1,842	2,051	2,248
	60	1,169	1,263	1,355	1,442	1,528	1,612	1,693	1,923	2,142	2,344
Downhill 2%	20	746	823	898	976	1,053	1,129	1,205	1,437	1,673	1,912
	25	858	943	1,027	1,108	1,192	1,272	1,355	1,599	1,845	2,096
	30	945	1,035	1,124	1,212	1,300	1,386	1,473	1,728	1,985	2,244
	35	1,017	1,112	1,206	1,298	1,391	1,482	1,570	1,839	2,107	2,372
	40	1,080	1,180	1,278	1,374	1,469	1,566	1,658	1,938	2,212	2,488
	45	1,137	1,240	1,342	1,442	1,543	1,640	1,738	2,025	2,310	2,592
	50	1,188	1,295	1,401	1,506	1,608	1,710	1,810	2,106	2,398	2,688
	55	1,236	1,347	1,456	1,564	1,668	1,773	1,878	2,181	2,482	2,776
	60	1,281	1,395	1,507	1,618	1,727	1,834	1,940	2,253	2,559	2,860

Minimum operating pressure = 15 psi

GRITX™ DSV HEADLOSS AND LATERAL LENGTH

GritX DSV 20mm Dripline

Max. Lateral Length (meter)

GritX™ DSV - 20mm -1.7 lph

Metric

		Emitter Spacing (cm)									
		30	40	50	60	70	80	90	100	110	120
Uphill 2%	Inlet Pressure (bar)										
	1.5	111	130	146	159	169	178	186	193	199	204
	2.0	152	183	209	232	251	269	284	298	311	323
	2.5	180	218	252	281	307	330	352	372	391	407
	3.0	203	247	286	320	351	380	406	430	453	474
	3.5	221	271	315	353	389	422	452	480	506	530
4.0	238	292	340	383	422	458	492	523	553	581	
Flat	1.5	137	170	200	227	254	278	302	325	347	368
	2.0	173	216	254	290	323	355	386	415	443	470
	2.5	199	248	293	334	373	410	446	479	512	542
	3.0	220	274	324	370	413	454	493	530	567	601
	3.5	238	297	351	400	447	491	534	574	614	650
	4.0	254	317	375	428	477	525	571	614	656	696
Downhill 2%	1.5	164	213	261	308	356	403	450	498	546	594
	2.0	197	252	306	359	410	462	512	563	614	666
	2.5	220	281	340	397	452	506	561	614	668	722
	3.0	240	305	368	428	487	544	601	658	714	769
	3.5	257	326	392	455	517	578	637	696	754	812
	4.0	272	345	414	481	545	607	670	730	791	851

Minimum operating pressure = 1 bar