

## TECHNICAL DATA SHEET

### DRIPLINE MULTIBAR F

#### Product description

Multibar F is a pressure compensating dripline with flat dripper, which keeps the flow rate constant as pressure varies thanks to the characteristics of the dripper and the silicone membrane inside. It guarantees a high level of emission uniformity, of water and nutrients, combining all of this with utmost precision in supply distribution, in any topographical situation, flat or with slopes.

It is available in three versions:

- **Pressure compensating (PC).**  
Pressure compensating dripline. It empties at the end of the irrigation cycle.
- **Pressure compensating Anti-siphon (PC AS).**  
Pressure compensating dripline. It empties at the end of the irrigation cycle. The anti-siphon system prevents intake of impurities and soil particles during the emptying of the lines when there are slopes.
- **Pressure compensating Anti-siphon and DropStop (PC AS and DS).**  
Pressure compensating dripline. It does not empty at the end of the irrigation cycle. The driplines remain full at the end of the irrigation cycle maintaining the closing pressure of the DS system, this favors the restarting of the irrigation optimizing emission times and precisely and homogeneously dosing the quantities of water and nutrients on all the plants in the row and improves homogeneous plant growth for a better harvest.

#### Product picture



#### Characteristics

- Low manufacturing Variation Coefficients and high emission uniformity.
- Drip molded with silicone membrane inside and welded to the pipe by coextrusion.
- The silicone membrane guarantees emission precision and durability over the time plus the advantage of constant flow uniformity.
- The integrated filter of the dripper has a wide pre-filtering surface with 3D development which increases the filtering surface and reduces the possibility of occlusion.
- Suitable for slopes and multi-seasonal crops.
- Produced from high quality raw materials.
- Resistant to UV rays and the most common chemicals used in agriculture.
- Multibar F meets the ISO 9261 standard.

#### Applications

Trees and orchard crops, vineyards, olive, nurseries, land with slopes.

#### Benefits, operation, materials

- The dripper labyrinth generates a turbulent flow that contributes to self-cleaning by reducing the risks of occlusion.
- The position of the integrated filter on the emitter, facing the center of the pipe and away from the stagnation area, allows the entry of clean water into the labyrinth, reducing the possibility of occlusion.
- The pipe of Multibar F dripline is produced from low density PE (PEBD), see table 1 for the characteristics.

Table 1. Main physical characteristics of the PEBD.

Properties of the raw material			
Raw material	Content of carbon black (%)	UV.	Density (gr/cm <sup>3</sup> )
PEBD	2 – 2.5	UV resistant	0.93

#### Technical design

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## Technical data

Table 2. Characteristic data of the pipe.

Nominal diameter	Ø Internal	Ø External	Thickness		Max. working pressure		Kd
			mm	mil	Bar	psi	
16	14	15.2	24	0.6	2.0	29	1.00
		15.8	35	0.9	3.0	43.5	
		16.0	40	1.0	3.5	51.0	
		16.2	44	1.1	4	58	
20	17,5	19.3	35	0.9	3.0	43.5	0.30
		19.5	40	1.0	3.5	51.0	
		19.9	47	1.2	4	58	
23	20.8	23.2	47	1.2	3.5	51.0	0.20
25	22.6	25.0	47	1.2	3.0	43.5	0.15

Table 3.1 Characteristic data of the dripper: flow-pressure relation

Nominal flowrate	Pressure (bar) /flowrate (lph) relation								
	0.5	0.7	1	1.5	2	2.5	3	3.5	4
lph a 2.0 bar									
1.10	1.0	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.0
1.60	1.5	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.6
2.10	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.2	2.2
3.80	3.7	3.8	3.9	3.8	3.9	3.9	3.9	3.9	3.8

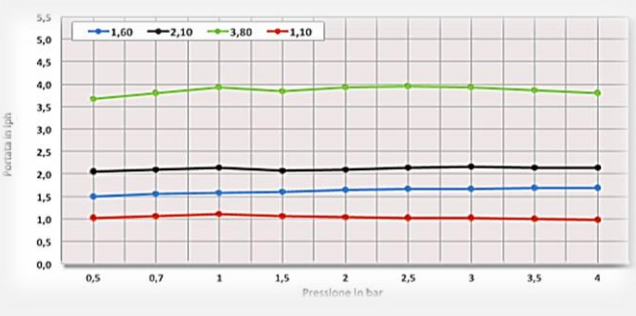


Table 3.2 Characteristic data of the dripper: dimension, min.working pressure, Drop Stop

Nominal flowrate	Labyrinth dimension in mm			Inlet filter		Flow equation		Minimum working pressure PC e PC AS		Minimum working pressure PC AS-DS		DropStop System (closing)		CV	Recomm. filtering
	Height	Width	Legnth	Area mm <sup>2</sup>	N° Fori	k	x	Bar	Psi	bar	PSI	bar	PSI	%	mesh
1.10	0.6	0.6	30	3	9	1.09	0.030	0.5	7	0.8	11,6	0,15	2,18	4	155
1.60	0.6	0.7	30	3	9	1.48	0.030	0.5	7	0.8	11,6	0,15	2,18	4	155
2.10	0.9	0.7	30	3	9	1.98	0.025	0.5	7	0.8	11,6	0,15	2,18	4	155
3.80	0.9	1.05	30	3	9	3.62	0.025	0.5	7	0.8	11,6	0,15	2,18	4	155

Table 4. Recommended lengths in meters according to the working pressure.

16 mm											20 mm										
Q lph	P bar	Spacing (cm)									Q lph	P bar	Spacing (cm)								
		20	30	40	50	60	75	100	125	150			20	30	40	50	60	75	100	125	150
1.1	1	74	105	133	160	186	233	276	325	372	1.1	1	121	169	212	252	289	324	419	490	557
	2	109	155	198	238	275	345	409	483	551		2	180	251	315	374	429	481	622	728	825
	3	131	187	238	286	331	415	492	581	663		3	217	302	380	450	517	579	749	875	993
	3.5	140	199	254	306	354	443	525	620	708		3.5	232	323	406	481	552	619	799	935	1061
1.6	1	58	82	105	126	146	183	216	255	292	1.6	1	100	139	174	207	237	293	344	402	457
	2	85	122	155	186	216	271	321	379	433		2	147	206	258	307	352	435	510	597	678
	3	103	146	187	224	260	325	386	456	520		3	177	247	311	369	423	523	614	718	814
	3.5	110	156	199	239	277	348	412	487	556		3.5	189	264	332	394	452	558	655	766	870
2.1	1	49	69	88	106	123	154	182	215	246	2.1	1	84	117	147	174	200	247	290	339	384
	2	72	103	131	157	182	228	270	319	365		2	124	173	217	258	296	366	429	503	570
	3	86	123	157	189	219	274	325	384	438		3	149	208	262	310	356	440	516	604	686
	3.5	92	132	168	202	234	293	347	410	468		3.5	159	222	279	332	380	470	552	646	733
3.8	1	34	48	61	73	85	106	126	149	170	3.8	1	57	80	100	119	136	168	197	231	262
	2	50	71	90	109	126	157	187	220	252		2	85	118	148	176	202	249	293	342	389
	3	60	85	109	130	151	189	224	265	302		3	102	142	178	212	243	300	352	412	467
	3.5	64	91	116	139	161	202	240	283	323		3.5	109	152	190	226	259	320	376	440	499

Slope 0 Minimum working pressure 0,5bar

Table 4. Recommended lengths in meters according to the working pressure.

Ø 23 mm											Ø 25 mm										
Q lph	P bar	Spacing (cm)									Q lph	P bar	Spacing (cm)								
		20	30	40	50	60	75	100	125	150			20	30	40	50	60	75	100	125	150
1.1	1	173	239	297	350	400	446	573	667	754	1.1	1	200	275	343	404	461	515	661	769	870
	2	257	354	441	520	593	662	849	989	1120		2	297	409	508	600	684	763	980	1142	1292
	3	310	426	530	625	714	796	1022	1191	1348		3	357	592	612	722	750	918	1179	1374	1555
	3.5	340	468	582	687	750	961	1123	1310	1482		3.5	382	526	654	750	750	981	1200	1469	1662
1.6	1	141	194	241	285	325	398	465	542	614	1.6	1	166	227	282	332	378	463	540	629	711
	2	209	287	358	422	482	591	690	804	910		2	246	337	418	492	561	687	801	932	1054
	3	251	346	430	507	579	711	829	967	1094		3	295	405	503	592	675	825	963	1130	1278
	3.5	268	369	459	542	618	758	885	1032	1168		3.5	318	436	541	637	726	809	1037	1207	1366
2.1	1	119	163	203	240	273	335	392	457	517	2.1	1	140	191	237	279	318	390	455	530	599
	2	176	242	301	355	405	497	581	677	765		2	207	284	352	414	472	578	675	785	887
	3	211	291	362	427	488	598	699	811	911		3	249	341	423	498	568	696	811	944	1068
	3.5	224	308	384	452	516	634	740	862	976		3.5	266	364	452	532	607	777	866	1008	1140
3.8	1	81	111	138	163	186	229	267	311	352	3.8	1	95	130	162	190	217	266	310	361	408
	2	120	165	205	242	276	339	396	461	522		2	141	193	240	282	322	394	460	535	605
	3	144	193	247	291	332	408	476	555	628		3	169	232	288	340	387	474	553	644	728
	3.5	154	213	265	312	356	437	511	595	674		3.5	181	248	308	363	413	461	591	688	777

Slope 0 Minimum working pressure 0,5bar

**Applicable standards**

Code	Title	Edition	Certificate
ISO 9261	Agricultural irrigation equipment - Emitters and emitting pipe - Specification and test methods	2004	□

**Use and/or assembly instructions**

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**Packaging**

Table 5. Reel packaging for Multibar "F" - mm.

Nominal diameter mm	Thickness mil	Reel length metri	Packaging in carton	Nominal diameter mm	Thickness mil	Reel length metri	Packaging in reels
16	24 - 35	500			16	35 - 44	
20	35	300	20		40 - 47	300	
			23		47	300	
			25		47	300	

**Notes e annexes**

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