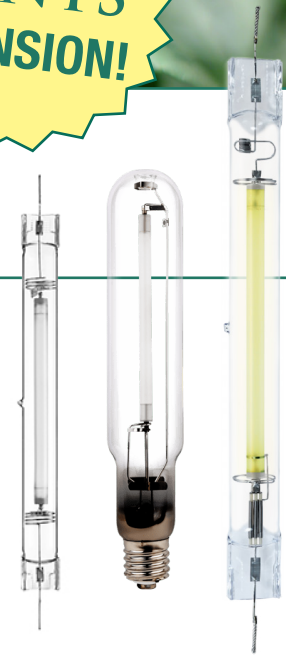


**MANTS
EXTENSION!**

YIELD-SAVING END OF YEAR CHECKLIST: BULBS AND FANS

☐ Change your HPS and MH bulbs

- Indoor cultivation relies on fixtures for sole source lighting
- HPS and MH lamps have a lifespan of 10,000 hours
- 1% decrease in light levels result in a 1% decrease in crop yield.
- Replace bulbs to maintain consistent, high yields
 - 10,000 hours = 2.25 years for bulbs used 12 hours/day
 - 10,000 hours = 1.75 years for bulbs used 16 hours/day
- Remember to clean reflectors when replacing bulbs



☐ Change to HAF or VAF fans

- Proper airflow avoids humidity- and disease-promoting microclimates
- Goal is to provide gentle airflow over the crop
- Engineered solutions circulate the air through the entire room
- Oscillating fans do not achieve proper airflow
 - Conflicting air movement is simply turbulent, not mixing
 - Excessive airflow over plants closes stomates, reduces photosynthesis and drops yields
- More is not better! A few properly positioned fans in a layout designed to circulate the air pays off



Item #	Description	MSRP	Griffin Commercial Pricing	Griffin Sale Pricing*
93-2500	ParSource AgroSun DE HPS 1000W bulb	\$159.95	\$89.21	\$81.01
93-2501	ParSource Phantom Pro DE HPS 1000W bulb	\$99.99	\$63.75	\$57.69
93-2502	Ushio HiLux GRO Pro Plus DE 1000W bulb	\$124.95	\$93.75	\$84.71
93-2503	Philips AGRO DE HPS Bulb 1000W bulb	\$149.99	\$95.61	\$86.83
93-2504	Hortilux DE HPS 1000W bulb	\$149.95	\$82.49	\$75.29
93-2505	Ushio HiLux GRO DE MH 1000W bulb	\$169.95	\$122.50	\$111.82
93-2506	Hortilux e-Start SE MH 1000W bulb	\$94.95	\$52.06	\$47.27
93-2507	Hortilux Super HPS SE 1000W bulb	\$129.95	\$68.20	\$61.93
23-5025	Schaefer 12" HAF Fan	---	\$201.65	\$181.48
41-350MM	Dramm 350 HAF Fan (210-240V)	\$459.68	\$445.25	\$400.73
41-400MM	Dramm 400 HAF Fan (210-240V)	\$514.56	\$488.83	\$469.30
23-10300	Vosterman 28" V-Flo Fan (120V)	\$676.43	\$462.86	\$416.57

*Order by end of January 2021 with delivery by end of April 2021. Prices subject to change.

Ask your Griffin sales person about pricing for other bulbs and fans not listed above.



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ARE YOU LOOKING TO INVEST IN OTHER WAYS TO IMPROVE EFFICIENCY AND YIELDS IN CULTIVATION?

TOP WAYS TO REDUCE LABOR

Utilize drip irrigation

- The shortest path to consistent irrigation and labor savings in a commercial cultivation facility is to utilize drip irrigation.
 - Fertigate/irrigate and entire zone of plants simultaneously
 - Ensure the first and the last plants on the line will get the same amount of water
 - Utilize redundancy for crop security
 - Trigger irrigation events manually or automatically with local or cloud-based software

DRAMM



Install an injector

- Mix stock tanks once every few days instead of creating batches daily.
 - Durable and reliable systems blend your fertigation solution from concentrated stock tanks
 - Minimize errors when measuring fertilizers – larger amounts going into stock solutions mean much smaller errors of margin
 - In-line systems plumb straight to zones or incorporate recipe- or zone-based batch tanks
 - Go simple or complex to support different recipes for different zones
 - Zone specific or facility wide systems, with local or cloud-based systems



TOP WAYS TO CONTROL YIELD-DECREASING DISEASES

Sanitize hard surfaces between crops

- Use a three-step process: Physical cleaning, chemical cleaning and sanitizing
- Utilize foam applications to increase contact times and efficacy of cleaners and sanitizers; choose from hand-held and carted foamers
- Use products safe for staff and equipment



Use the right spray equipment for preventive and curative control measures

- Fog whenever possible – smaller particle sizes penetrate the canopy better and provide more points of contact
- Use commercial sprayers with wet sprays are needed – achieve consistency in your spray application with a high-volume, easy to maneuver sprayer
- Keep hand-held units ready for spot treatments – use a backpack or specialty fogger to stop outbreaks quickly

