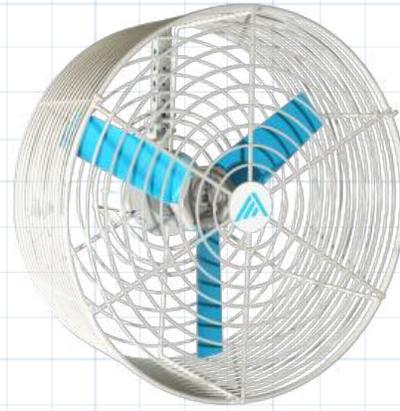


TECHNICAL SPECIFICATIONS

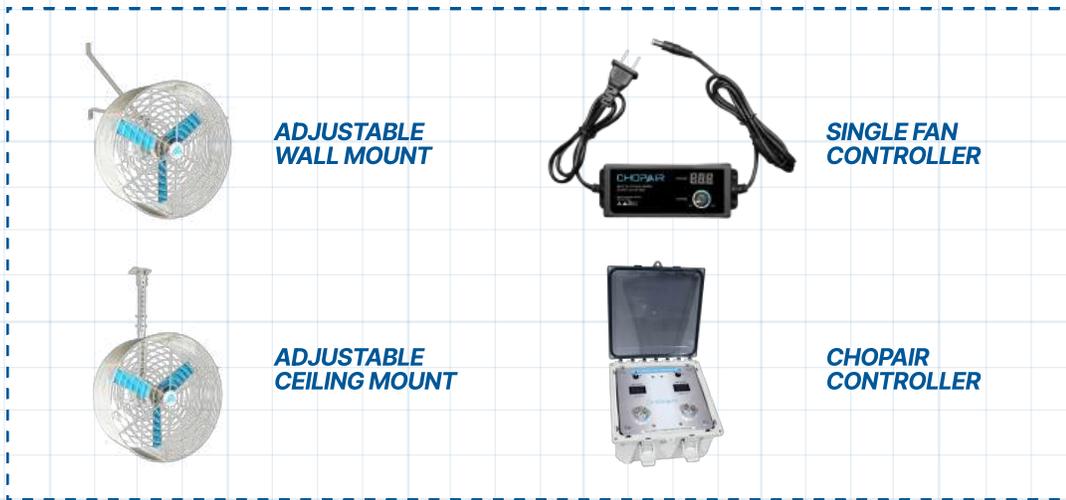
CHOP20

20" HVHS FAN



The Chop20 line of fans are all perfectly tuned, infinitely variable speed, and are built with the highest quality components available. The new 2025 model's internal components have received 3rd party independent testing indicating an expected 20+ year lifespan. The fan speed is infinitely variable, without the use of a VFD, so customers can fine tune exact airflow rates to optimize human and animal comfort.

CHOP20



ADJUSTABLE WALL MOUNT

SINGLE FAN CONTROLLER

ADJUSTABLE CEILING MOUNT

CHOPAIR CONTROLLER

SPECIFICATIONS

CFM (FREE AIR)	6100 @ TOP SPEED	OSCILLATING	NO
RPM	350-1800	FIXED OR PORTABLE	FIXED
MOTOR ENCLOSURE	TEAO	POWER (HP)	.42
IP RATING	66	NAMEPLATE AMPS	5.7 / 3.7 / 3.0
PHASE	1	CFM CALCULATION	ANSI/AMCA 230-23
SPEEDS	INFINITELY VARIABLE	LIFE EXPECTANCY	MOTOR - 20 YEARS
VFD REQUIRED	NO	WARRANTY	3 YEARS
SPEED CONTROL	0-10V SIGNAL	MOUNT TYPE	WALL OR CEILING
CFM/WATT (THRUST)	24.7 AVG / VARIABLE	MOTOR COLOR	WHITE OR BLACK
CORD	6' INCLUDED / NO PLUG	GUARD COLOR	WHITE OR BLACK
VOLTAGE	120 / 208-230 / 277	APPLICATION	INDUSTRIAL +
GUARD MATERIAL	POWDER COATED STEEL	MISTING RING	COMPATIBLE
GUARD SPACING	1/2 - 1 UL507	RATED FREQUENCY	50/60 HZ
BLADE MATERIAL	GLASS REINFORCED NYLON	0-10V IMPEDANCE	11,500 OHMS
BLADE DIAMETER	20"	MFG LOCATION	NEBRASKA
SHIPPING WEIGHT	29 LBS	COUNTRY OF ORIGIN	USA
SHIPPING DIM	24 X 24 X 18	TESTING LOCATION	UNIVERSITY OF ILLINOIS

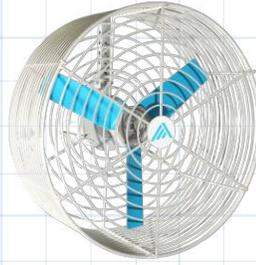
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LABORATORY TEST RESULTS

CHOP20

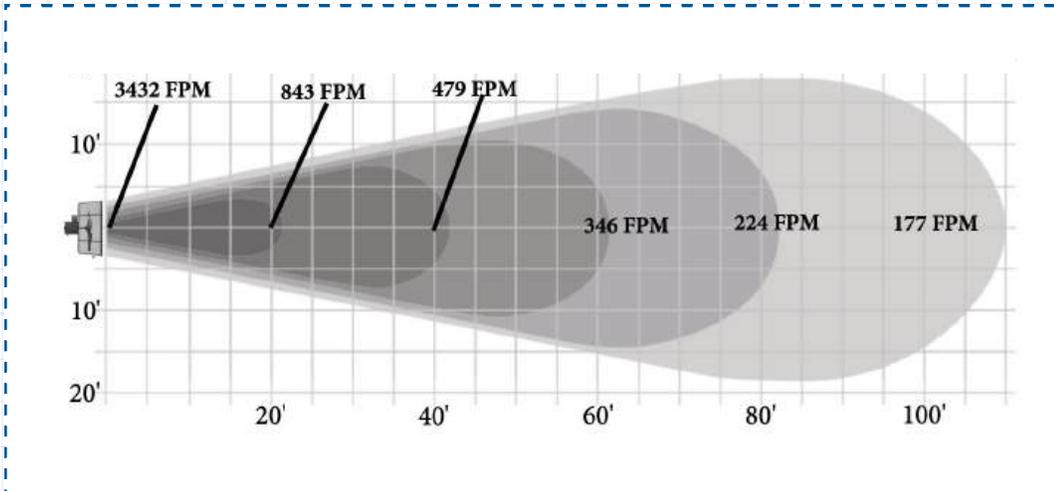
20" HVHS FAN



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AIR FLOW DIAGRAM



LAB RESULTS

COMPLETE 3RD PARTY INDEPENDENT TEST RESULTS
AVAILABLE UPON REQUEST.

POWER	D IMPELLER (IN.)	AMBIENT THRUST (LBF)	THRUST EFFICIENCY RATIO (LBF/KW)	RPM	VOLTS	AMPS	MEASURED INPUT POWER (KW)	AIRFLOW (THRUST CFM)	EFFICACY (THRUST CFM/W)	5D CENTERLINE VELOCITY (FPM)
10.9V	20.2	5.02	12.1	1771	120.1	4.82	0.415	4190	10.1	1210
9V	20.2	4.62	12.4	1691	120.1	4.49	0.371	4020	10.8	1240
8V	20.2	3.97	14.0	1529	120.5	3.43	0.283	3720	13.2	1120
7V	20.2	3.09	15.5	1362	120.1	2.5	0.2	3290	16.4	1060
6V	20.2	2.35	17.3	1193	120.4	1.78	0.136	2860	21.1	860
4V	20.2	1.26	21.0	873	120.5	0.84	0.06	2100	34.9	670
1V	20.2	0.22	22.3	553	120	0.18	0.01	880	88.3	190

TEST CONDITIONS:

T(WB): 53.5

T(DB): 68.5

BAROMETRIC PRESSURE, (IN.HG): 29.51

INSTRUMENTATION:

TEMPERATURE AND BAROMETRIC PRESSURE:

VAISALA INDIGO 520 POWER MEASUREMENT 1

PHASE: VALHALLA 2101

POWER MEASUREMENT 3 PHASE: VALHALLA 2301

TACHOMETER: NOVA PRO 100

LOAD CELL: OMEGA LC703-50

CENTERLINE VELOCITY: TSI VELOCICALC VANE

ANEMOMETER 8324

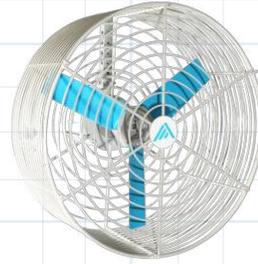
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INSTALLATION INSTRUCTIONS

CHOP20

20" HVHS FAN



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INSTALLATION (STEPS 1-4: MOUNTING)

STEP 1

ATTACH 1.25" SQUARE TUBE TO CEILING BRACKET USING PROVIDED FLANGE HEAD BOLTS AND NUTS. SECURELY MOUNT BRACKET IN DESIRED LOCATION.



STEP 2

ATTACH 1" SQUARE TUBE TO FAN BRACKET USING PROVIDED FLANGE HEAD BOLTS AND NUTS.



STEP 3

INSERT 1" SQUARE TUBE ATTACHED TO THE FAN INTO THE PREVIOUSLY MOUNTED 1.25" SQUARE TUBE. ADJUST FAN HEIGHT ENSURING AT LEAST 5" OF TUBE OVERLAP. INSTALL FLANGE HEAD BOLTS AND NUTS TO SECURE FAN IN PLACE. ADJUST FAN ANGLE AS DESIRED BY LOOSENING FLANGE HEAD BOLT IN THE HALF MOON SLOT ON THE FAN. ***ENSURE ALL HARDWARE IS TIGHT PRIOR TO CONNECTING TO ELECTRICITY***



STEP 4

ENSURE ALL HARDWARE IS TIGHT PRIOR TO CONNECTING TO ELECTRICITY.

STEP 5

WIRING -- SEE NEXT PAGE.

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INSTALLATION INSTRUCTIONS

CONTROLLER

ADJUSTABLE SPEED MULTI-FAN



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INSTALLATION

THE CONTROLLER CAN BE MOUNTED TO MOST SURFACES USING THE ENCLOSED WPPCACCKIT.

STEP 1

BEFORE OR AFTER MOUNTING – REMOVE FRONT PLATE BY REMOVING 4 ACORN NUTS LOCATED IN EACH CORNER OF THE FRONT PLATE.

PENETRATE THE BOX IN DESIRED LOCATIONS TO CONNECT TO 120V AC POWER CORD AND LOW VOLTAGE FAN WIRES.

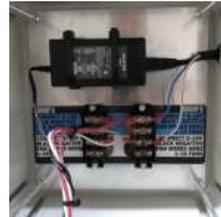
STEP 2

CONNECT BLUE LOW VOLTAGE POSITIVE FAN WIRES TO CORRESPONDING BLUE LOW VOLTAGE TERMINALS ON BASE PLATE.

CONNECT BLACK LOW VOLTAGE NEGATIVE FAN WIRES TO CORRESPONDING BLACK LOW VOLTAGE TERMINALS.

*LOW VOLTAGE WIRES MAY BE DAISY CHAINED FOR UP TO 20 FANS PER GROUP A OR GROUP B. DO NOT EXCEED 40 FANS TOTAL PER CONTROLLER.

REPLACE FRONT COVER.



OPERATION

TURN ON THE TOGGLE SWITCH ON THE FRONT PLATE FOR THE CORRESPONDING AREA/GROUP. ADJUST FAN SPEED UP OR DOWN USING SILVER DIAL. THE DIAL MUST BE SET TO THE MINIMUM SPEED OF 2.5 TO TURN THE FANS ON.



SPECIFICATIONS

*IP66 SEALED - SUITABLE FOR OUTDOOR USE
*POWER INPUT - PLUGS INTO STANDARD 120V WALL OUTLET UL
*POWER OUT - 0-12V MULTI CHANNEL (LOW VOLTAGE TO FAN CONTROL)
*DESIGNED, ENGINEERED, AND ASSEMBLED IN THE USA

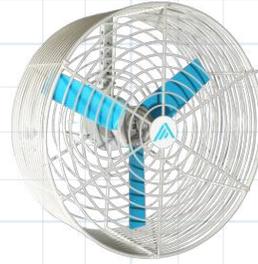
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INSTALLATION INSTRUCTIONS

CHOP20

20" HVHS FAN



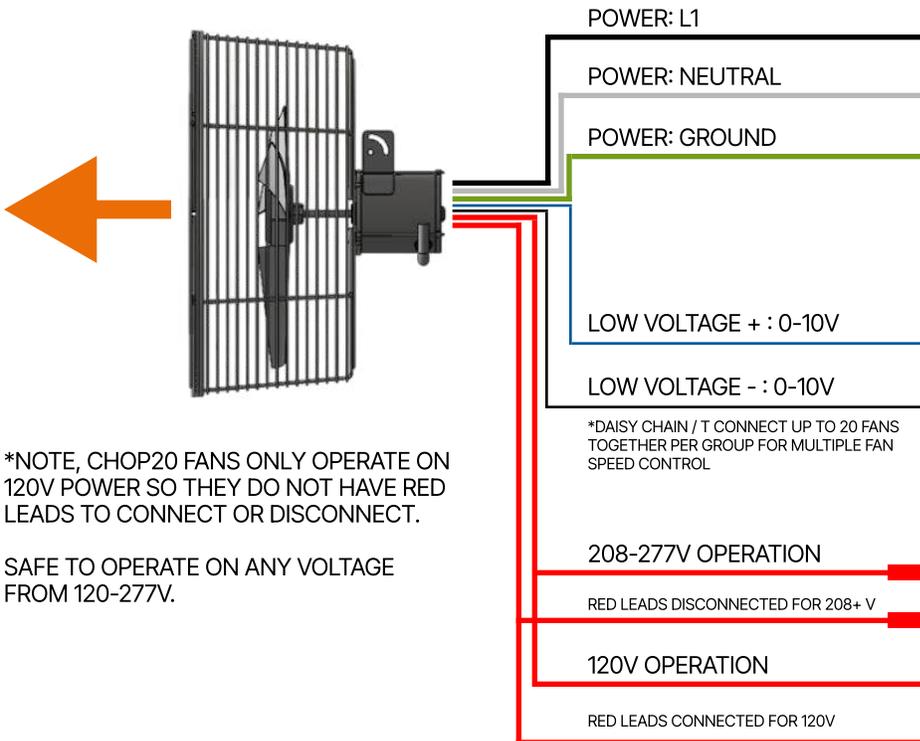
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INSTALLATION (STEP 5: WIRING)



CHOPAIR STRONGLY RECOMMENDS THE USE OF A LICENSED ELECTRICIAN FOR THE INSTALLATION OF ALL CHOPAIR PRODUCTS. IMPROPER INSTALLATION VOIDS ALL PRODUCT WARRANTIES AND ABSOLVES CHOPAIR FROM DAMAGES OR INJURIES THAT MAY OCCUR AS A RESULT.



*NOTE, CHOP20 FANS ONLY OPERATE ON 120V POWER SO THEY DO NOT HAVE RED LEADS TO CONNECT OR DISCONNECT.

SAFE TO OPERATE ON ANY VOLTAGE FROM 120-277V.

LIQUID TIGHT FITTINGS SHOULD BE USED ON ALL CONDUIT AND JUNCTION BOXES TO MAINTAIN ALL BVS PRODUCTS' IP66 SEAL RATING.

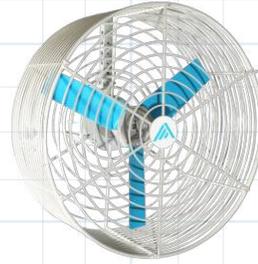
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INSTALLATION INSTRUCTIONS

CHOP20

20" HVHS FAN



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OPERATION

ONCE FANS ARE SECURELY INSTALLED, AND WIRING HAS BEEN PROPERLY CONNECTED, CONSTANT HIGH VOLTAGE SHOULD BE SUPPLIED TO THE FANS. THE FANS WILL NOT RUN, OR CONSUME ANY ENERGY, UNTIL A 0-10V SIGNAL IS PROVIDED.

**0-10V LOW VOLTAGE WIRES CAN BE DAISY CHAINED / T CONNECTED, TO CONTROL GROUPS OF UP TO 20 FANS AT ONCE. CONNECTING MORE THAN 20 FANS CAN RESULT IN LINE LOSS AND VARIATIONS IN FAN SPEED WITHIN THE GROUP.

0-10V SIGNAL CAN BE PROVIDED BY ENVIRONMENTAL CONTROLLER OR BY CHOPAIR'S MULTIFAN CONTROLLER.

VOLTAGE TO START VARIES BY MODEL BUT MOST WILL BEGIN RUNNING ONCE SUPPLIED WITH 1.5+V.

AS ADDITIONAL VOLTAGE IS SUPPLIED, FAN SPEED WILL INCREASE UNTIL A MAXIMUM IS REACHED AT 10V.

NOTE, THE INTERNAL CONTROLS OF ALL BVS FANS CAN SAFELY ACCEPT UP TO 13V. ANY VOLTAGE HIGHER THAN 13V WILL DAMAGE INTERNAL CONTROLS AND VOID ALL WARRANTIES.

MAINTENANCE

OCCASIONAL CLEANING IS THE ONLY MAINTENANCE REQUIRED. ALL FAN AND MOUNT COMPONENTS ARE DESIGNED TO LAST 20+ YEARS IN THE FIELD WITH PROPER CLEANING.

LIKE ALL FANS, THE CHOPAIR LINE OF FANS PERFORM THEIR BEST WHEN CLEAN. FANS WILL COLLECT DUST AND DEBRIS AT DIFFERENT RATES DEPENDING ON THE ENVIRONMENT THEY ARE PLACED. IF YOU NOTICE THEY ARE DIRTY, SIMPLY SPRAY THEM OFF WITH WATER TO REMOVE DIRT AND DEBRIS. THE FRONT COVER CAN BE REMOVED, IF NECESSARY, BY CUTTING THE SINGLE ZIP TIE. REINSTALL THE FRONT COVER AFTER CLEANING AND INSTALL A NEW ZIP TIE TO SECURE THE COVER.

THE CHOPAIR LINE OF FANS ARE DESIGNED TO TAKE SOME ABUSE. HOWEVER, IF REPAIRS BECOME NECESSARY DUE TO AN ACCIDENT, THEY ARE 100% SERVICEABLE.

EMAIL BOBBY@CHOPAIR.COM OR CALL (816) 643-3875 FOR ANY NEEDED REPLACEMENT PARTS.

CALL DAVE FOR TECHNICAL ASSISTANCE AT (402) 534-2015 - EXT 100 OR AFTER HOURS AT (402) 366-1993.

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