



XG-BP-600 BYPASS AIR TERMINAL UNIT

INDEX OF SECTIONS	PAGE
Dimensional Data	3
AHRI Certified Rating Points	5
Sound Performance Data	6
Certifications and Standards	7
Control Sequence Offerings	8



XG-BP-600 BYPASS TERMINAL UNIT

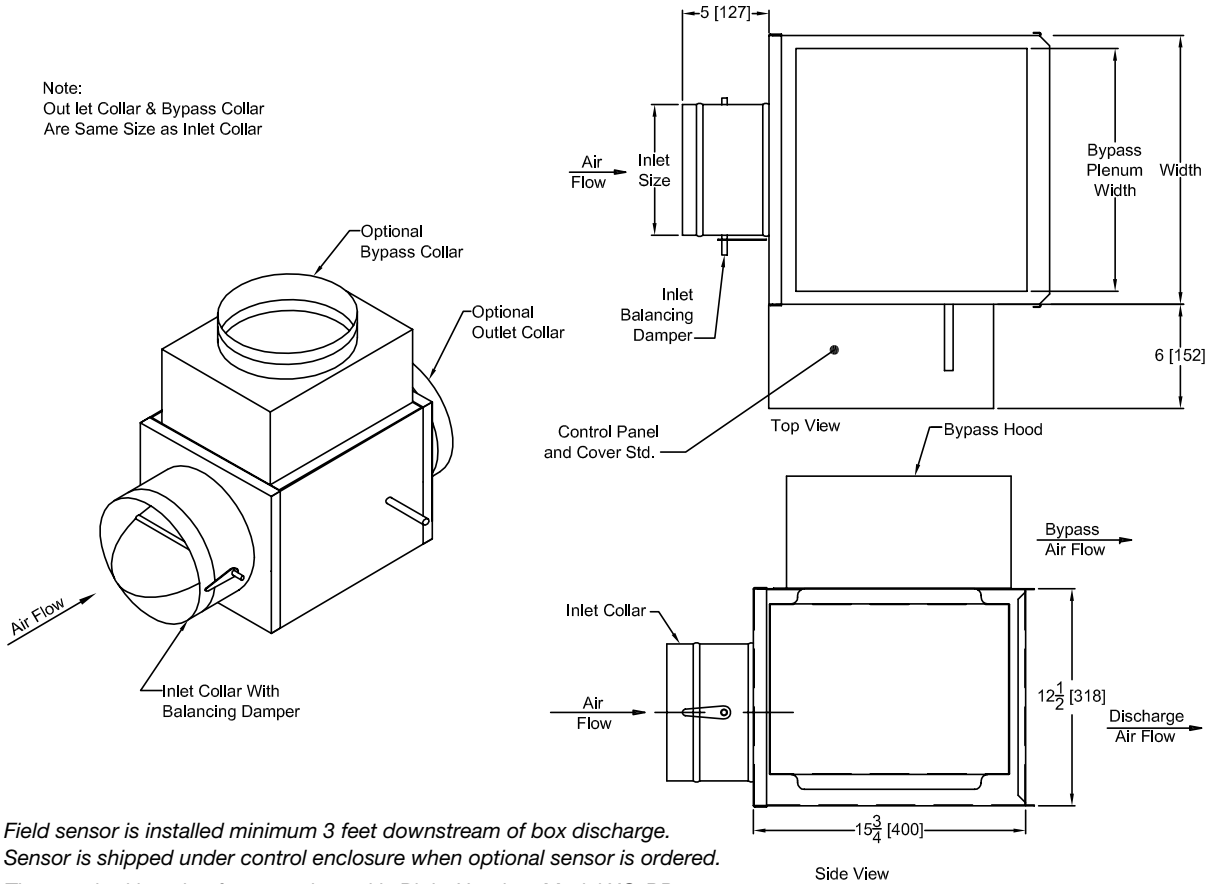
The XG-BP-600 Bypass Air Terminals are used to achieve variable air volume delivery of conditioned air to a space or zone where constant volume air handlers exist. Variable air volume control is achieved by directing air flow either to the space or to a bypass port in direct response to a signal from the room thermostat. The damper assembly design includes a galvanized single ½" thick box damper providing superior rigidity and close off for accurate control without the use of cumbersome and high maintenance internal linkage. The damper rotates in a self-lubricating, low friction, long life thermal plastic bearing. A constant volume of air is delivered by the air terminal, but varying amounts are delivered to the space and the bypass plenum. A locking quadrant on the inlet balancing damper determines the total air flow through the air terminal. The primary air valve is enclosed in an insulated sheet metal casing. Control components are shipped piped and wired, and a piping/wiring diagram is affixed to the bottom of the unit for field reference.

STANDARD FEATURES

- XG-BP-600 available in 10 unit sizes to handle 30-4100 CFM
- Casing constructed of 22 ga. galvanized steel.
- Damper assembly includes a galvanized single ½" thick box damper providing superior rigidity and close off for accurate control without the use of internal linkage.
- Insulation is 1/2" thick, 1.5lb / ft³ dual density coated fiberglass that complies with NFPA 90A, ASTM C-665, and UL-181 requirements.
- 3-beaded inlet connection tube for added rigidity and secure flex duct connections.
- All XG-BP-600 terminal units are AHRI certified and shipped with the AHRI seal.

**XG-BP-600
 BYPASS AIR TERMINAL UNIT**

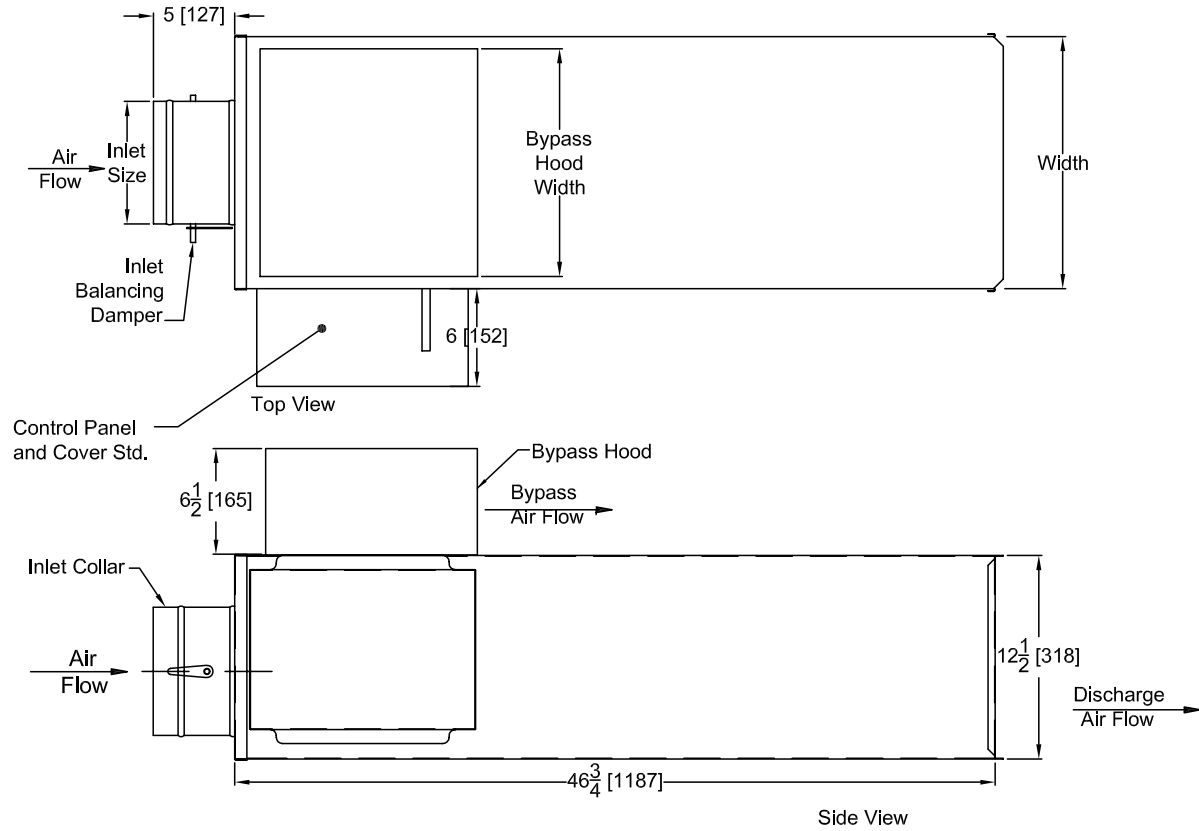
Note:
 Out let Collar & Bypass Collar
 Are Same Size as Inlet Collar



Field sensor is installed minimum 3 feet downstream of box discharge.
 Sensor is shipped under control enclosure when optional sensor is ordered.
 The standard location for control panel is Right Hand on Model XG-BP.
 Looking in the direction of airflow, the control panel is on the right.
 Unit Size 12-OV, 14-OV, & 16-OV have flat oval inlet ducts.

Unit Size	Inlet Size	CFM Range	Unit Width	Bypass Hood		Shipping Weight Lbs
				Width	Length	
4	3 7/8	0-300	12	12	12	23
5	4 7/8	0-375	12	12	12	23
6	5 7/8	0-540	12	12	12	23
7	6 7/8	0-760	14	14	14	26
8	7 7/8	0-990	14	14	14	26
9	8 7/8	0-1250	16	16	16	29
10	9 7/8	0-1640	16	16	16	29
12-OV	13 x 9 7/8	0-2270	18	18	20	31
14-OV	16 1/4 x 9 7/8	0-2850	24	24	26	34
16-OV	19 3/8 x 9 7/8	0-3550	28	28	34	38

XG-BP-600 BYPASS AIR TERMINAL UNIT WITH INTEGRAL SOUND ATTENUATOR



Field sensor is installed minimum 3 feet downstream of box discharge. Sensor is shipped under control enclosure when optional sensor is ordered.

The standard location for control panel is Right Hand on Model XG-BP. Looking in the direction of airflow, the control panel is on the right.

Unit Size 12-OV, 14-OV, & 16-OV have flat oval inlet ducts.

Unit Size	Inlet Size	CFM Range	Unit Width	Bypass Hood		Shipping Weight Lbs
				Width	Length	
4	3 7/8	0-300	12	12	12	37
5	4 7/8	0-375	12	12	12	37
6	5 7/8	0-540	12	12	12	37
7	6 7/8	0-760	14	14	14	42
8	7 7/8	0-990	14	14	14	42
9	8 7/8	0-1250	16	16	16	47
10	9 7/8	0-1640	16	16	16	47
12-OV	13 x 9 7/8	0-2270	18	18	20	50
14-OV	16 1/4 x 9 7/8	0-2850	24	24	26	55
16-OV	19 3/8 x 9 7/8	0-3550	28	28	34	62

**XG-BP-600
 AHRI CERTIFIED RATING POINTS**

RADIATED SOUND

Power Levels @ Min ΔPs

Unit Size	CFM	Min ΔPs	Octave Band					
			2	3	4	5	6	7
4	150	0.01	35	29	26	22	19	17
5	250	0.05	40	37	36	32	24	20
6	400	0.13	50	46	45	43	36	29
7	550	0.03	53	44	39	35	25	22
8	700	0.05	60	53	45	40	31	27
9	900	0.03	57	45	40	35	29	25
10	1100	0.05	57	49	45	40	33	28
12-OV	1500	0.08	55	51	47	41	33	26
14-OV	2000	0.10	57	54	53	49	43	41
16-OV	2400	0.09	59	58	57	53	45	31

DISCHARGE SOUND

Power Levels @ Min ΔPs

Unit Size	CFM	Min ΔPs	Octave Band					
			2	3	4	5	6	7
4	150	0.01	54	39	33	29	27	19
5	250	0.06	57	46	40	38	33	24
6	400	0.13	61	57	52	51	44	39
7	550	0.03	64	52	48	45	40	31
8	700	0.05	65	59	56	53	45	38
9	900	0.04	64	58	54	50	41	35
10	1100	0.05	66	62	58	54	46	41
12-OV	1500	0.08	63	60	58	55	48	42
14-OV	2000	0.10	64	65	65	58	53	50
16-OV	2400	0.09	62	59	59	58	49	42

PERFORMANCE NOTES

- 1) Radiated sound is the noise transmitted through the unit casing
- 2) Discharge sound is noise emitted from unit discharge into downstream ductwork
- 3) Sound power levels expressed in decibels, (dB) re 10⁻¹² Watts
- 4) Min ΔPs is the min. operating pressure requirement of the unit with the damper full open and is the static pressure drop from the unit inlet to the unit discharge
- 5) Performance data based on laboratory tests conducted in accordance with ASHRAE 130-2016 and AHRI 880-2017
- 6) Discharge sound power levels include duct end reflection corrections per AHRI Standard 880-2017
- 7) Sound performance based on units lined with standard dual density fiberglass insulation

RADIATED SOUND MODEL BP

OCTAVE BAND SOUND POWER, L _w , dB									
Unit Size	CFM	Min ΔPs	ΔPs = Min ΔPs						NC
			2	3	4	5	6	7	
4	50	0.01	33	27	25	21	18	13	<15
	100	0.01	35	29	26	22	19	14	<15
	150	0.01	35	29	26	22	19	17	<15
	200	0.05	35	35	29	29	20	20	<15
	250	0.05	40	37	36	32	24	20	<15
5	150	0.01	35	29	26	22	19	17	<15
	200	0.05	35	35	29	29	20	20	<15
	250	0.05	40	37	36	32	24	20	<15
	300	0.08	45	39	42	35	27	20	15
	350	0.10	47	42	43	39	33	25	17
6	200	0.05	35	35	29	29	20	20	<15
	300	0.08	45	39	42	35	27	20	15
	400	0.13	50	46	45	43	36	29	19
	500	0.20	52	47	45	44	38	34	20
	600	0.30	54	49	46	47	41	39	20
7	350	0.01	46	38	33	28	20	20	<15
	450	0.02	48	40	35	30	22	20	<15
	550	0.03	53	44	39	35	25	22	17
	650	0.04	58	51	43	38	29	25	21
	750	0.05	61	54	46	41	32	27	22
8	400	0.02	45	38	33	26	20	20	<15
	550	0.03	53	44	39	35	25	22	17
	700	0.05	60	53	45	40	31	27	22
	850	0.08	63	54	47	44	35	33	25
	1000	0.10	66	55	48	46	40	35	30
9	500	0.01	55	38	30	23	20	20	16
	700	0.02	56	40	35	29	22	20	17
	900	0.03	57	45	40	35	29	25	19
	1100	0.07	58	50	48	43	36	31	22
	1300	0.07	58	50	48	43	36	31	22
10	700	0.02	56	40	35	29	22	20	17
	900	0.03	57	45	40	35	29	25	19
	1100	0.05	57	49	45	40	33	28	19
	1300	0.07	58	50	48	43	36	31	22
	1500	0.13	59	51	52	46	40	35	26
12-0V	700	0.02	47	45	42	34	28	20	<15
	1100	0.04	50	48	45	37	28	20	19
	1500	0.08	55	51	47	41	33	26	21
	1900	0.15	60	55	50	44	36	30	26
	2300	0.20	65	59	52	47	40	34	28
14-0V	1000	0.02	55	46	44	39	31	25	20
	1500	0.05	58	49	47	42	34	25	21
	2000	0.10	57	54	53	49	43	41	27
	2500	0.15	57	59	59	54	49	50	34
	3000	0.20	71	68	64	57	52	50	39
16-0V	1200	0.03	55	54	53	49	41	27	22
	1800	0.05	57	56	55	51	43	29	28
	2400	0.09	59	58	57	53	45	31	34
	3000	0.14	61	62	61	58	51	43	37
	3600	0.21	67	68	67	64	58	53	43

DISCHARGE SOUND MODEL BP

OCTAVE BAND SOUND POWER, L _w , dB									
Unit Size	CFM	Min ΔPs	ΔPs = Min ΔPs						NC
			2	3	4	5	6	7	
4	50	0.01	48	33	27	23	21	13	<15
	100	0.01	51	36	30	26	24	16	<15
	150	0.01	54	39	33	29	27	19	<15
	200	0.05	57	42	36	32	30	22	<15
	250	0.06	57	46	40	38	33	24	<15
5	150	0.01	54	39	33	29	27	19	<15
	200	0.05	57	42	36	32	30	22	<15
	250	0.06	57	46	40	38	33	24	<15
	300	0.08	56	50	45	43	35	25	<15
	350	0.10	58	54	48	47	39	35	<15
6	200	0.05	57	42	36	32	30	22	<15
	300	0.08	56	50	45	43	35	32	<15
	400	0.13	61	57	52	51	44	39	<15
	500	0.20	66	62	58	56	49	45	21
	600	0.30	72	68	64	62	55	52	27
7	350	0.01	61	46	42	38	37	26	<15
	450	0.02	63	48	44	40	39	28	15
	550	0.03	64	52	48	45	40	31	16
	650	0.04	65	57	51	49	43	35	17
	750	0.06	66	60	57	54	46	39	18
8	400	0.02	63	46	40	36	36	25	<15
	550	0.03	64	52	48	45	40	31	16
	700	0.05	65	59	56	53	45	38	17
	850	0.08	68	64	60	58	50	42	21
	1000	0.10	72	68	64	63	55	49	26
9	500	0.01	61	50	45	39	31	24	<15
	700	0.03	63	52	47	41	33	26	<15
	900	0.04	64	58	54	50	41	35	16
	1100	0.05	66	62	58	54	46	41	19
	1300	0.07	67	63	61	58	51	42	20
10	700	0.03	63	52	47	41	33	26	<15
	900	0.04	64	58	54	50	41	35	16
	1100	0.05	66	62	58	54	46	41	19
	1300	0.07	67	63	61	58	51	42	20
	1500	0.10	69	64	65	60	57	43	22
12-0V	700	0.02	57	49	46	43	35	27	<15
	1100	0.04	59	51	48	45	37	27	15
	1500	0.08	63	60	58	55	48	42	16
	1900	0.12	65	62	61	58	52	47	17
	2300	0.17	68	63	63	62	56	52	19
14-0V	1000	0.02	55	56	51	44	38	33	<15
	1500	0.05	58	59	54	47	41	36	15
	2000	0.10	64	65	65	58	53	50	22
	2500	0.15	70	69	69	63	58	55	27
	3000	0.20	77	74	74	68	63	60	33
16-0V	1200	0.03	55	50	51	49	41	34	<15
	1800	0.05	58	53	54	52	44	37	15
	2400	0.09	62	59	59	58	49	42	17
	3000	0.14	68	71	66	65	58	54	29
	3600	0.21	73	71	73	72	65	60	29

1) AHRI certified data is highlighted while all other data are application ratings
 2) Radiated sound is the noise transmitted through the unit casing
 3) Discharge sound is noise emitted from unit discharge into downstream ductwork
 4) Sound power levels expressed in decibels, (dB) re 10⁻¹² Watts
 5) Min ΔPs is the minimum operating pressure requirement of the unit with the damper full open and is the static pressure drop from the unit inlet to the unit discharge
 6) Performance data based on laboratory tests conducted in accordance with ASHRAE 130-2016 and AHRI 880-2017

7) NC values are calculated using attenuation credits outlined in AHRI 885-2008 Appendix E
 8) Blank spaces indicate Minimum Ps if unit exceeds the ΔPs across the unit
 9) Sound performance based on units lined with standard dual density fiberglass insulation
 10) Discharge sound power levels include duct end reflection corrections per AHRI Standard 880-2017
 11) Size 12, 14, and 16 are flat ovals and the AHRI rating points are calculated from multiplying the inlet area, ft², by 2000 fpm per AHRI Standard 880-2017

CERTIFICATIONS AND STANDARDS

- Units tested per ASHRAE Standard 130-2016.
- All model sizes certified in accordance with AHRI 880-2017 certification program.
- ETL listed to meet requirements of UL 1995 and CSA 236.
- Dual-density fiberglass insulation meets UL 181 and NFPA 90A/90B.
- Insulation meets ASHRAE 62.1 requirements for resistance to mold growth and erosion.
- Hot water coils are manufactured in accordance to AHRI Standard 410.



XG-BP-600 CONTROL SEQUENCE OFFERINGS



PPD-PNEUMATIC PRESSURE DEPENDENT

- Direct Acting / Normally Closed (DA / NC)
- Reverse Acting / Normally Open (RA / NO)



PPI-PNEUMATIC PRESSURE INDEPENDENT

- Direct Acting / Normally Closed (DA / NC)
- Direct Acting / Normally Open (DA / NO)
- Reverse Acting / Normally Closed (RA / NC)
- Reverse Acting / Normally Open (RA / NO)
- Static Pressure Control



EPD-ELECTRIC PRESSURE DEPENDENT

- Cooling Only
- Cooling with Reheat
- Static Control
- Actuator Only



API-ANALOG PRESSURE INDEPENDENT

- Cooling Only
- Cooling with Heat
- Night Setback / Morning Warm-up
- Heating / Cooling Changeover
- Static Pressure Control



DDC-DIRECT DIGITAL CONTROL

BACnet

- Cooling Only
- Cooling or Heating
- Hot Water Reheat
- Electric Reheat