

# High Pressure Galaxy™ Twin Fans (BT)

## Features and Benefits

- **Belt driven high pressure, twin fans**
- **Performance range up to 5.5m<sup>3</sup>/s**
- **Static pressure development up to 1,400Pa**
- **Suitable for either internal or external mounting**
- **Optional IP65 service isolator**
- **Operating Temperatures up to +55°C**
- **Rigid anodised aluminium extruded frame casing**
- **Motors suitable for Inverter Speed Control where permissible**
- **Quality Assurance to BS EN ISO 9001**
- **Performance tested to BS 848 Part 1**

BT Twin units are constructed to the highest manufacturing standards and developed around a rigid anodised aluminium extruded frame. Panels shall be manufactured from prime quality galvanised or plastisol sheet steel, fixed to the frame, ensuring a robust casing, for those tough site conditions.

## Fan and Motor Assembly

Units are twin forward curved, double inlet double width centrifugal impellers, driven by totally enclosed fan ventilated motors, wound to suit either 220-240V/1ph/50Hz or 380-415V/3ph/50Hz electrical supply, with special voltage motors available on request. The fan and motors are assembled on a rigid angle iron framework, fitted with anti-vibration mounts and a flexible connection between the

unit casing and frame to ensure vibration free operation. The motors are protected to IP55, against dust and water jets complying with BS EN 60529. With motor insulation Class F as a minimum, suitable for operating temperatures up to +55°C. All belt driven fans have metric pulleys to ISO 4183 and wedge belts to ISO 4184 and DIN 7753. Protection of the motor is to be provided by a current overload protection switch such as a D.O.L. starter or equivalent which is required on all installations or the product guarantee will be invalidated.

## Twin Fan Controllers

The BT range offers a guaranteed operation in the unlikely event of fan failure. A full range of control packages are available with facilities of Auto Changeover on fan failure, 24hr Duty Share, BMS compatibility and sensor connections for Optical Timelocks, Humidity Sensors, Air Quality Sensors and PIR Detectors.

## Performance

The fan performance, shall be tested in accordance with BS 848 Part 1, with the fan sound levels measured in a reverberant chamber in accordance to BS 848 Part 2.

## Quality Assurance

Design and manufacture shall be in accordance with the standard for quality management systems BS EN ISO 9001.

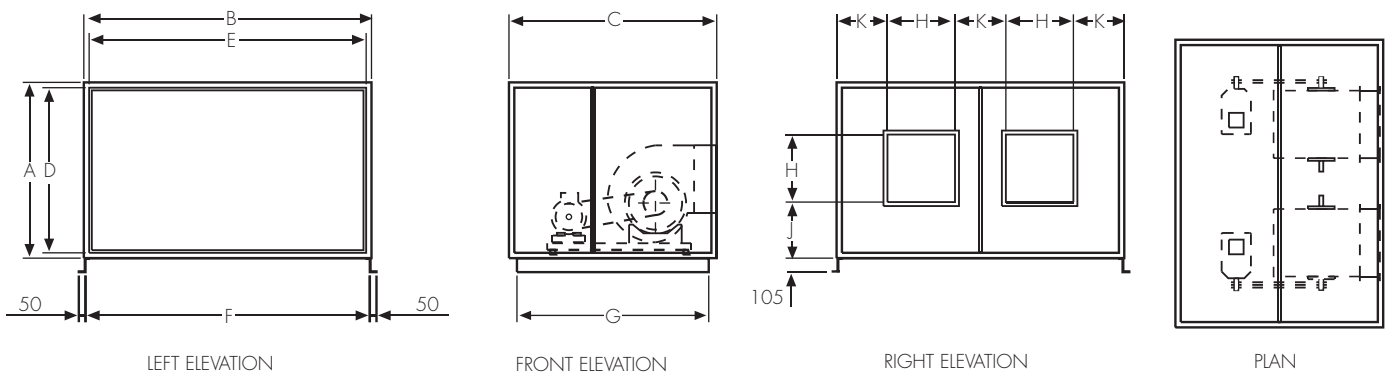
## Accessories

Full ranges of optional accessories are available, such as:

- Twin Fan Controllers
- Motor Isolators
- D.O.L. Starters
- Inlet Dampers
- Flexible Connections
- Attenuator



### Dimensions (mm)



Unit Size	A	B	C	D	E	F	G	H	J	K
BT1 F18	720	960	960	640	880	925	840	229	241	167
BT2 F22	720	1260	960	640	1180	1225	840	288	264	228
BT3 F28	1020	1560	1260	940	1480	1525	1140	361	286	279
BT4 F31	1020	1860	1260	940	1780	1825	1140	404	308	350
BT5 F40	1320	2160	1560	1240	2080	2125	1440	507	339	382

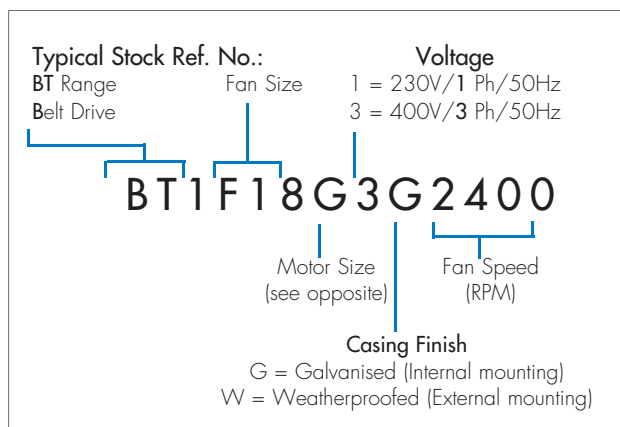
### Selection Procedure

Plot your specified duty on the overleaf graphs. Select motor size and fan speed required. The full Stock Ref. No. for your unit will comprise of the unit size, motor rating, supply and fan speed.

#### Motor Sizes :

0.55 kW = D	3.00 kW = J
0.75 kW = E	4.00 kW = K
1.10 kW = F	5.50 kW = L
1.50 kW = G	7.50 kW = M
2.20 kW = H	11.0 kW = N

Note:  
220-240V/1ph/50Hz units are only available up to 1.5kW.

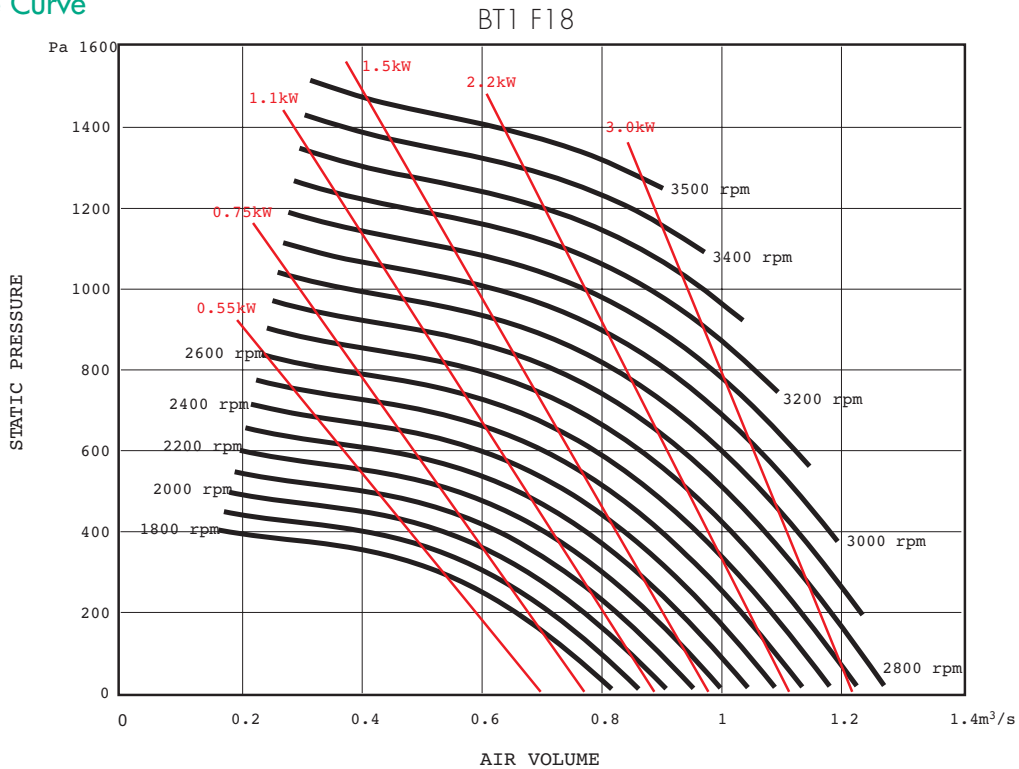


#### Example:

Duty required = 0.8m<sup>3</sup>/s @ 400Pa  
 Unit Size = BT 1  
 Supply phase = 3  
 From above graph (BT 1):  
 Speed = 2400rpm  
 Motor = 1.5kW

# High Pressure Galaxy™ Twin Fans (BT)

## Performance Curve



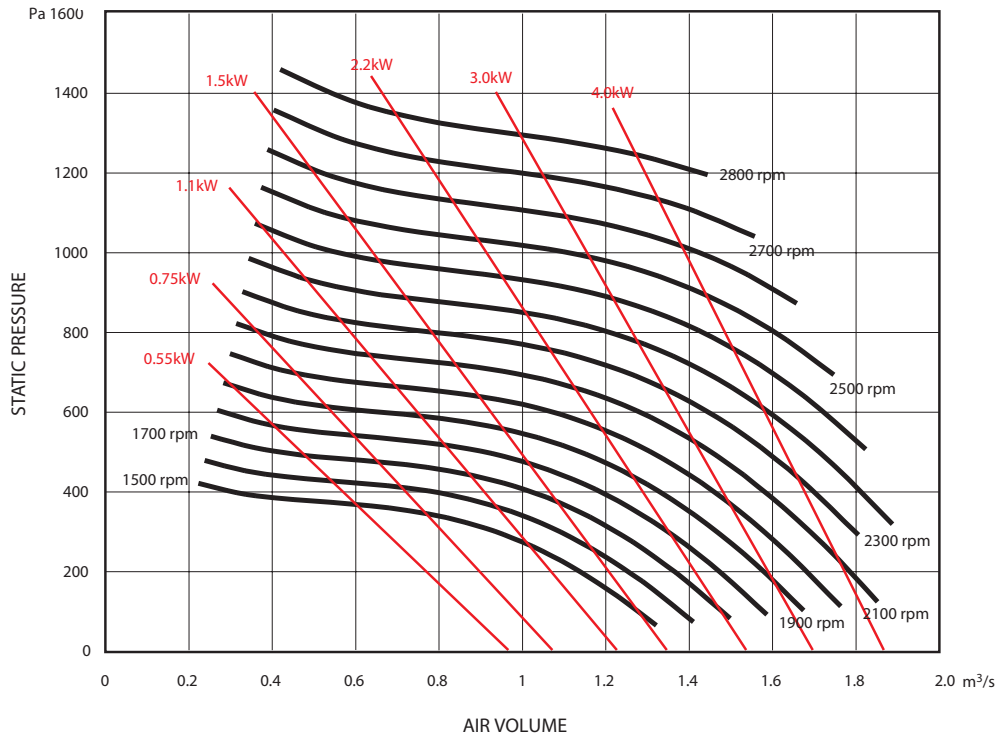
## Sound Power Level Spectra dB (re 10<sup>-12</sup>Watts)

r.p.m		63	125	250	500	1k	2k	4k	8k	@3m
1800	Inlet	75	76	77	77	76	72	70	63	60
1800	Outlet	81	75	75	74	73	71	68	63	58
1800	Breakout	67	68	61	47	46	39	37	30	36
1900	Inlet	74	76	77	76	77	75	71	67	61
1900	Outlet	81	76	75	74	73	73	70	65	59
1900	Breakout	66	68	61	46	47	42	38	34	36
2000	Inlet	75	77	78	77	78	76	72	68	62
2000	Outlet	82	77	76	75	74	74	71	66	60
2000	Breakout	67	69	62	47	48	43	39	35	37
2100	Inlet	76	78	79	78	79	77	73	69	63
2100	Outlet	83	78	77	76	75	75	72	67	61
2100	Breakout	68	70	63	48	49	44	40	36	38
2200	Inlet	77	79	80	79	80	78	74	70	64
2200	Outlet	84	79	78	77	76	76	73	68	62
2200	Breakout	69	71	64	49	50	45	41	37	39
2300	Inlet	78	80	81	80	81	79	75	71	65
2300	Outlet	85	80	79	78	77	77	74	69	63
2300	Breakout	70	72	65	50	51	46	42	38	40
2400	Inlet	79	81	82	81	82	80	76	72	66
2400	Outlet	86	81	80	79	78	78	75	70	64
2400	Breakout	71	73	66	51	52	47	43	39	41
2500	Inlet	80	82	83	82	83	81	77	73	67
2500	Outlet	87	82	81	80	79	79	76	71	65
2500	Breakout	72	74	67	52	53	48	44	40	42
2600	Inlet	81	83	84	83	84	82	78	74	68
2600	Outlet	88	83	82	81	80	80	77	72	66
2600	Breakout	73	75	68	53	54	49	45	41	43

r.p.m		63	125	250	500	1k	2k	4k	8k	@3m
2700	Inlet	81	83	84	83	84	82	78	74	68
2700	Outlet	88	83	82	81	80	80	77	72	66
2700	Breakout	73	75	68	53	54	49	45	41	43
2800	Inlet	82	84	85	84	85	83	79	75	69
2800	Outlet	89	84	83	82	81	81	78	73	67
2800	Breakout	74	76	69	54	55	50	46	42	44
2900	Inlet	82	84	85	84	85	83	79	75	69
2900	Outlet	89	84	83	82	81	81	78	73	67
2900	Breakout	74	76	69	54	55	50	46	42	44
3000	Inlet	83	85	86	85	86	84	80	76	70
3000	Outlet	90	85	84	83	82	82	79	74	68
3000	Breakout	75	77	70	55	56	51	47	43	45
3100	Inlet	83	85	86	85	86	84	80	76	70
3100	Outlet	90	85	84	83	82	82	79	74	68
3100	Breakout	75	77	70	55	56	51	47	43	45
3200	Inlet	84	86	87	86	87	85	81	77	71
3200	Outlet	91	86	85	84	83	83	80	75	69
3200	Breakout	76	78	71	56	57	52	48	44	46
3300	Inlet	84	86	87	86	87	85	81	77	71
3300	Outlet	91	86	85	84	83	83	80	75	69
3300	Breakout	76	78	71	56	57	52	48	44	46
3400	Inlet	85	87	88	87	88	86	82	78	72
3400	Outlet	92	87	86	85	84	84	81	76	70
3400	Breakout	77	79	72	57	58	53	49	45	47
3500	Inlet	85	87	88	87	88	86	82	78	72
3500	Outlet	92	87	86	85	84	84	81	76	70
3500	Breakout	77	79	72	57	58	53	49	45	47

## Performance Curve

BT2 F22



## Sound Power Level Spectra dB (re 10<sup>-12</sup>Watts)

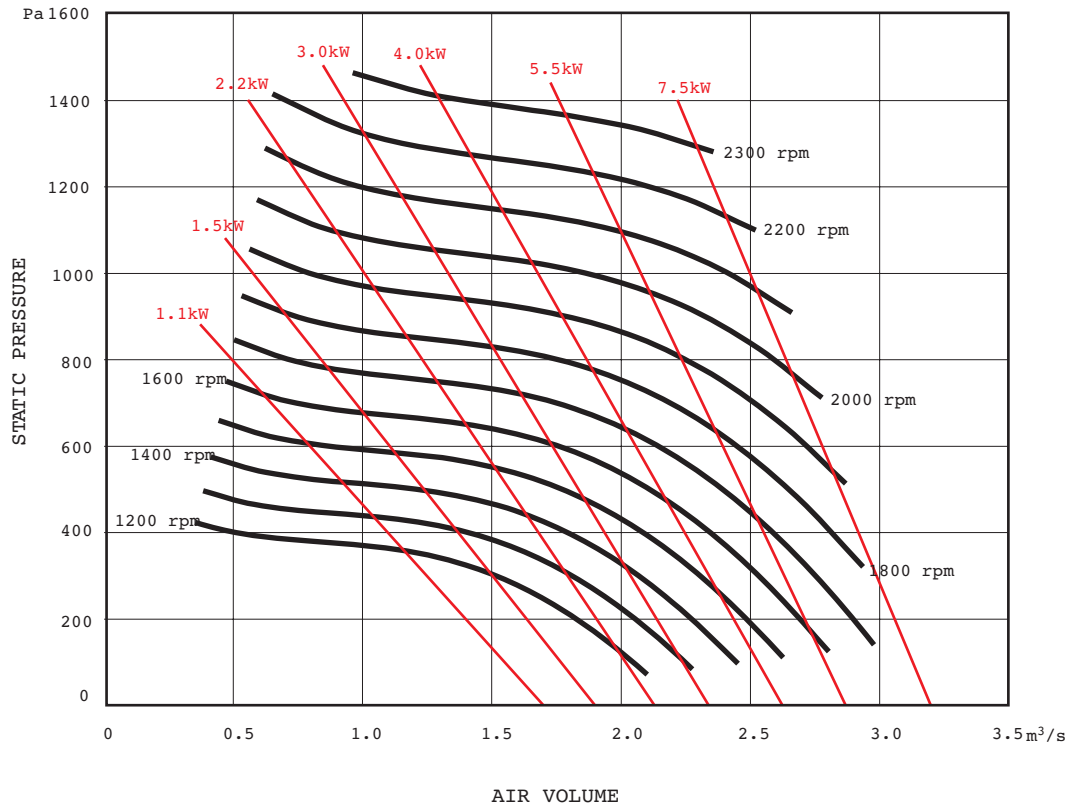
r.p.m		dBA								
		63	125	250	500	1k	2k	4k	8k	@3m
1500	Inlet	79	80	81	81	80	76	74	67	64
1500	Outlet	85	79	79	78	77	75	72	67	62
1500	Breakout	71	72	65	51	50	43	41	34	40
1600	Inlet	81	82	83	83	82	78	76	69	66
1600	Outlet	87	81	81	80	79	77	74	69	64
1600	Breakout	73	74	67	53	52	45	43	36	42
1700	Inlet	82	83	84	84	83	79	77	70	67
1700	Outlet	88	82	82	81	80	78	75	70	65
1700	Breakout	74	75	68	54	53	46	44	37	43
1800	Inlet	83	84	85	85	84	80	78	71	68
1800	Outlet	89	83	83	82	81	79	76	71	66
1800	Breakout	75	76	69	55	54	47	45	38	44
1900	Inlet	82	84	85	84	85	83	79	75	69
1900	Outlet	89	84	83	82	81	81	78	73	67
1900	Breakout	74	76	69	54	55	50	46	42	44
2000	Inlet	83	85	86	85	86	84	80	76	70
2000	Outlet	90	85	84	83	82	82	79	74	68
2000	Breakout	75	77	70	55	56	51	47	43	45

r.p.m		dBA								
		63	125	250	500	1k	2k	4k	8k	@3m
2100	Inlet	84	86	87	86	87	85	81	77	71
2100	Outlet	91	86	85	84	83	83	80	75	69
2100	Breakout	76	78	71	56	57	52	48	44	46
2200	Inlet	85	87	88	87	88	86	82	78	72
2200	Outlet	92	87	86	85	84	84	81	76	70
2200	Breakout	77	79	72	57	58	53	49	45	47
2300	Inlet	85	87	88	87	88	86	82	78	72
2300	Outlet	92	87	86	85	84	84	81	76	70
2300	Breakout	77	79	72	57	58	53	49	45	47
2400	Inlet	86	88	89	88	89	87	83	79	73
2400	Outlet	93	88	87	86	85	85	82	77	71
2400	Breakout	78	80	73	58	59	54	50	46	48
2600	Inlet	87	89	90	89	90	88	84	80	74
2600	Outlet	94	89	88	87	86	86	83	78	72
2600	Breakout	79	81	74	59	60	55	51	47	49
2800	Inlet	87	89	90	89	90	88	84	80	74
2800	Outlet	94	89	88	87	86	86	83	78	72
2800	Breakout	79	81	74	59	60	55	51	47	49

# High Pressure Galaxy™ Twin Fans (BT)

## Performance Curve

BT3 F28



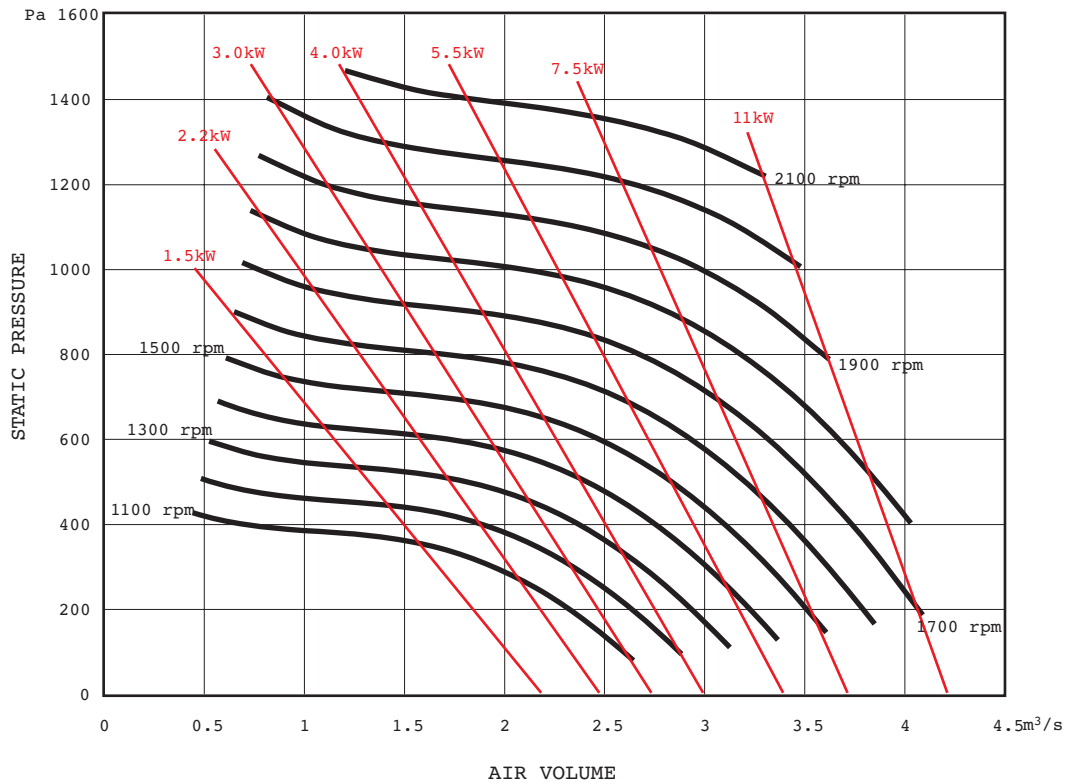
## Sound Power Level Spectra dB (re 10<sup>-12</sup>Watts)

r.p.m		63	125	250	500	1k	2k	4k	8k	@3m
1200	Inlet	81	82	83	83	82	78	76	69	66
1200	Outlet	87	81	81	80	79	77	74	69	64
1200	Breakout	73	74	67	53	52	45	43	36	42
1300	Inlet	82	83	84	84	83	79	77	70	67
1300	Outlet	88	82	82	81	80	78	75	70	65
1300	Breakout	74	75	68	54	53	46	44	37	43
1400	Inlet	84	85	86	86	85	81	79	72	69
1400	Outlet	90	84	84	83	82	80	77	72	67
1400	Breakout	76	77	70	56	55	48	46	39	45
1500	Inlet	85	86	87	87	86	82	80	73	70
1500	Outlet	91	85	85	84	83	81	78	73	68
1500	Breakout	77	78	71	57	56	49	47	40	46
1600	Inlet	86	87	88	88	87	83	81	74	71
1600	Outlet	92	86	86	85	84	82	79	74	69
1600	Breakout	78	79	72	58	57	50	48	41	47

r.p.m		63	125	250	500	1k	2k	4k	8k	@3m
1700	Inlet	87	88	89	89	88	84	82	75	72
1700	Outlet	93	87	87	86	85	83	80	75	70
1700	Breakout	79	80	73	59	58	51	49	42	48
1800	Inlet	88	89	90	90	89	85	83	76	73
1800	Outlet	94	88	88	87	86	84	81	76	71
1800	Breakout	80	81	74	60	59	52	50	43	49
1900	Inlet	86	88	89	88	89	87	83	79	73
1900	Outlet	93	88	87	86	85	85	82	77	71
1900	Breakout	78	80	73	58	59	54	50	46	48
2100	Inlet	87	89	90	89	90	88	84	80	74
2100	Outlet	94	89	88	87	86	86	83	78	72
2100	Breakout	79	81	74	59	60	55	51	47	49
2300	Inlet	88	90	91	90	91	89	85	81	75
2300	Outlet	95	90	89	88	87	87	84	79	73
2300	Breakout	80	82	75	60	61	56	52	48	50

## Performance Curve

BT4 F31



## Sound Power Level Spectra dB (re 10<sup>-12</sup>Watts)

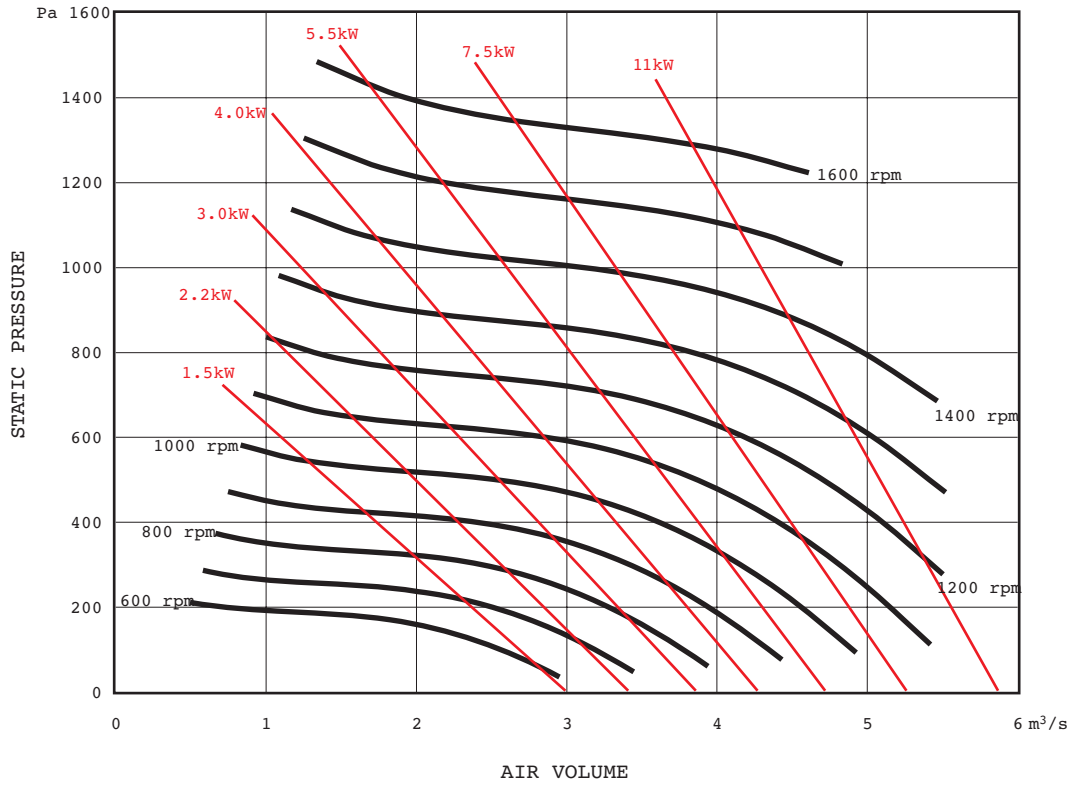
r.p.m		63	125	250	500	1k	2k	4k	8k	dBA @3m
1100	Inlet	81	82	83	83	82	78	76	69	66
1100	Outlet	87	81	81	80	79	77	74	69	64
1100	Breakout	73	74	67	53	52	45	43	36	42
1200	Inlet	83	84	85	85	84	80	78	71	68
1200	Outlet	89	83	83	82	81	79	76	71	66
1200	Breakout	75	76	69	55	54	47	45	38	44
1300	Inlet	85	86	87	87	86	82	80	73	70
1300	Outlet	91	85	85	84	83	81	78	73	68
1300	Breakout	77	78	71	57	56	49	47	40	46
1400	Inlet	87	88	89	89	88	84	82	75	72
1400	Outlet	93	87	87	86	85	83	80	75	70
1400	Breakout	79	80	73	59	58	51	49	42	48
1500	Inlet	88	89	90	90	89	85	83	76	73
1500	Outlet	94	88	88	87	86	84	81	76	71
1500	Breakout	80	81	74	60	59	52	50	43	49
1600	Inlet	89	90	91	91	90	86	84	77	74
1600	Outlet	95	89	89	88	87	85	82	77	72
1600	Breakout	81	82	75	61	60	53	51	44	50

r.p.m		63	125	250	500	1k	2k	4k	8k	dBA @3m
1700	Inlet	89	90	91	91	90	86	84	77	74
1700	Outlet	95	89	89	88	87	85	82	77	72
1700	Breakout	81	82	75	61	60	53	51	44	50
1800	Inlet	90	91	92	92	91	87	85	78	75
1800	Outlet	96	90	90	89	88	86	83	78	73
1800	Breakout	82	83	76	62	61	54	52	45	51
1900	Inlet	88	90	91	90	91	89	85	81	75
1900	Outlet	95	90	89	88	87	87	84	79	73
1900	Breakout	80	82	75	60	61	56	52	48	50
2000	Inlet	89	91	92	91	92	90	86	82	76
2000	Outlet	96	91	90	89	88	88	85	80	74
2000	Breakout	81	83	76	61	62	57	53	49	51
2100	Inlet	89	91	92	91	92	90	86	82	76
2100	Outlet	96	91	90	89	88	88	85	80	74
2100	Breakout	81	83	76	61	62	57	53	49	51

# High Pressure Galaxy™ Twin Fans (BT)

## Performance Curve

BT5 F40

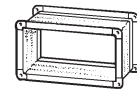
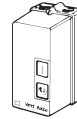
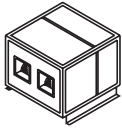


## Sound Power Level Spectra dB (re 10<sup>-12</sup>Watts)

r.p.m		63	125	250	500	1k	2k	4k	8k	dBA @3m
600	Inlet	77	78	77	76	76	72	69	63	60
600	Outlet	82	76	75	73	74	70	68	63	58
600	Breakout	69	70	61	46	46	39	36	30	37
700	Inlet	80	81	80	79	79	75	72	66	63
700	Outlet	85	79	78	76	77	73	71	66	61
700	Breakout	72	73	64	49	49	42	39	33	40
800	Inlet	83	84	83	82	82	78	75	69	66
800	Outlet	88	82	81	79	80	76	74	69	64
800	Breakout	75	76	67	52	52	45	42	36	43
900	Inlet	84	85	86	86	85	81	79	72	69
900	Outlet	90	84	84	83	82	80	77	72	67
900	Breakout	76	77	70	56	55	48	46	39	45
1000	Inlet	86	87	88	88	87	83	81	74	71
1000	Outlet	92	86	86	85	84	82	79	74	69
1000	Breakout	78	79	72	58	57	50	48	41	47

r.p.m		63	125	250	500	1k	2k	4k	8k	dBA @3m
1100	Inlet	88	89	90	90	89	85	83	76	73
1100	Outlet	94	88	88	87	86	84	81	76	71
1100	Breakout	80	81	74	60	59	52	50	43	49
1200	Inlet	89	90	91	91	90	86	84	77	74
1200	Outlet	95	89	89	88	87	85	82	77	72
1200	Breakout	81	82	75	61	60	53	51	44	50
1300	Inlet	89	90	91	91	90	86	84	77	74
1300	Outlet	95	89	89	88	87	85	82	77	72
1300	Breakout	81	82	75	61	60	53	51	44	50
1400	Inlet	90	91	92	92	91	87	85	78	75
1400	Outlet	96	90	90	89	88	86	83	78	73
1400	Breakout	82	83	76	62	61	54	52	45	51
1600	Inlet	91	92	93	93	92	88	86	79	76
1600	Outlet	97	91	91	90	89	87	84	79	74
1600	Breakout	83	84	77	63	62	55	53	46	52

## Accessories



Stock Ref.	Motor kW	Phase	^ ITC Man/Auto Changeover Controller Stock Ref.	^ ITC-DS 12/24hr Auto Changeover Controller Stock Ref.	Man/Auto Changeover Controller Stock Ref.	RSC Remote Visual Indicator Stock Ref.	DOL Starter & Coil (2 Required per unit) Stock Ref.	** Isolator (Factory Fitted) Stock Ref.	Flexible Connection Stock Ref.	Inlet Damper Stock Ref.
BT1F18	0.55	1	10314200	10314210	–	10314220	444744+444703	71ISOL4	FCBT1	CDBT1
BT1F18	0.55	3	10314200	10314210	–	10314220	444747+444701	71ISOL4	FCBT1	CDBT1
BT1F18	0.75	1	10314200	10314210	–	10314220	444744+444704	71ISOL4	FCBT1	CDBT1
BT1F18	0.75	3	10314200	10314210	–	10314220	444747+444701	71ISOL4	FCBT1	CDBT1
BT1F18	1.1	1	10314200	10314210	–	10314220	444744+444705	71ISOL4	FCBT1	CDBT1
BT1F18	1.1	3	10314200	10314210	–	10314220	444747+444702	71ISOL4	FCBT1	CDBT1
BT1F18	1.5	1	–	–	ACO/9.0-15.0/1	–	444744+444706	71ISOL4	FCBT1	CDBT1
BT1F18	1.5	3	10314200	10314210	–	10314220	444747+444702	71ISOL4	FCBT1	CDBT1
BT1F18	2.2	3	10314200	10314210	–	10314220	444747+444703	71ISOL4	FCBT1	CDBT1
BT1F18	3	3	–	–	ACO/9.0-15.0/3	–	444747+444704	71ISOL4	FCBT1	CDBT1
BT2F22	0.55	1	10314200	10314210	–	10314220	444744+444703	71ISOL4	FCBT2	CDBT2
BT2F22	0.55	3	10314200	10314210	–	10314220	444747+444701	71ISOL4	FCBT2	CDBT2
BT2F22	0.75	1	10314200	10314210	–	10314220	444744+444704	71ISOL4	FCBT2	CDBT2
BT2F22	0.75	3	10314200	10314210	–	10314220	444747+444701	71ISOL4	FCBT2	CDBT2
BT2F22	1.1	1	10314200	10314210	–	10314220	444744+444705	71ISOL4	FCBT2	CDBT2
BT2F22	1.1	3	10314200	10314210	–	10314220	444747+444703	71ISOL4	FCBT2	CDBT2
BT2F22	1.5	1	–	–	ACO/9.0-15.0/1	–	444744+444706	71ISOL4	FCBT2	CDBT2
BT2F22	1.5	3	10314200	10314210	–	10314220	444747+444702	71ISOL4	FCBT2	CDBT2
BT2F22	2.2	3	10314200	10314210	–	10314220	444747+444703	71ISOL4	FCBT2	CDBT2
BT2F22	3	3	–	–	ACO/9.0-15.0/3	–	444747+444704	71ISOL4	FCBT2	CDBT2
BT2F22	4	3	–	–	ACO/9.0-15.0/3	–	444747+444705	71ISOL4	FCBT2	CDBT2
BT3F28	1.1	1	10314200	10314210	–	10314220	444744+444705	71ISOL4	FCBT3	CDBT3
BT3F28	1.1	3	10314200	10314210	–	10314220	444747+444702	71ISOL4	FCBT3	CDBT3
BT3F28	1.5	1	–	–	ACO/9.0-15.0/1	–	444744+444705	71ISOL4	FCBT3	CDBT3
BT3F28	1.5	3	10314200	10314200	–	10314220	444747+444702	71ISOL4	FCBT3	CDBT3
BT3F28	2.2	3	10314200	10314210	–	10314220	444744+444705	71ISOL4	FCBT3	CDBT3
BT3F28	3	3	–	–	ACO/9.0-15.0/3	–	444747+444704	71ISOL4	FCBT3	CDBT3
BT3F28	4	3	–	–	ACO/9.0-15.0/3	–	444747+444705	71ISOL4	FCBT3	CDBT3
BT3F28	5.5	3	–	–	†	–	*444748+444706	71ISOL6	FCBT3	CDBT3
BT3F28	7.5	3	–	–	†	–	*444748+444707	71ISOL6	FCBT3	CDBT3
BT4F31	1.5	1	–	–	ACO/9.0-15.0/1	–	444744+444706	71ISOL4	FCBT4	CDBT4
BT4F31		3	10314200	10314210	–	10314220	444747+444702	71ISOL4	FCBT4	CDBT4
BT4F31	2.2	3	10314200	13014210	–	10314220	444747+444703	71ISOL4	FCBT4	CDBT4
BT4F31	3	3	–	–	ACO/9.0-15.0/3	–	444747+444704	71ISOL4	FCBT4	CDBT4
BT4F31	4	3	–	–	ACO/9.0-15.0/3	–	444747+444705	71ISOL4	FCBT4	CDBT4
BT4F31	5.5	3	–	–	†	–	*444748+444706	71ISOL6	FCBT4	CDBT4
BT4F31	7.5	3	–	–	†	–	*444748+444707	71ISOL6	FCBT4	CDBT4
BT4F31	11	3	–	–	†	–	*444749+444708	71ISOL6	FCBT4	CDBT4
BT5F40	1.5	1	–	–	ACO/9.0-15.0/1	–	444744+444706	71ISOL4	FCBT5	CDBT5
BT5F40		3	10314200	10314210	–	10314220	444747+444702	71ISOL4	FCBT5	CDBT5
BT5F40	2.2	3	10314200	13014210	–	10314220	444747+444703	71ISOL4	FCBT5	CDBT5
BT5F40	3	3	–	–	ACO/9.0-15.0/3	–	444747+444704	71ISOL4	FCBT5	CDBT5
BT5F40	4	3	–	–	ACO/9.0-15.0/3	–	444747+444705	71ISOL4	FCBT5	CDBT5
BT5F40	5.5	3	–	–	†	–	*444748+444706	71ISOL6	FCBT5	CDBT5
BT5F40	7.5	3	–	–	†	–	*444748+444707	71ISOL6	FCBT5	CDBT5
BT5F40	11	3	–	–	†	–	*444749+444708	71ISOL6	FCBT5	CDBT5

^ Not suitable for use with eDemand controllers. For compatible changeover panel, see Accessories and Controllers Section

\* Overloads sized to suit a Star/Delta Starter. \*\* Two Isolators required per unit.

† Star/Delta changeover controllers are available. Please enquire. Discharge Spigots including Diffusers & Matching Attenuators available on request.