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QF9140/A1/MGR/CW

17th August 2017

The Watts Group Ltd
1 Great Tower Street
London
EC3R 5AA

For the attention of Mr Matt Jeeves

Dear Sirs,

Re: 196-198 Haverstock Hill, London NW3

Following the issue of our recent noise report and receipt of details of the proposed fresh air Air Handling Units, we have pleasure in attaching herewith our quotation for the supply of silencers and an acoustic enclosure for the kitchen extract fan.

The silencer selections are based upon the sound power level data below and achieving the following noise levels from duct borne noise:-

Internally: Kitchen NR45
Restaurant NR35

Externally: No more than 47.5 dBA at 1 metre from adjacent residential windows

System Description	Manufacturer/ Airflow	Sound Power Level (dB ref 10 ⁻¹² watts)							
		63	125	250	500	1k	2k	4k	8k
Kitchen Supply	Swegon	77	72	73	74	74	70	68	68
Kitchen Fresh Air	(1.66 m ³ /sec)	72	72	74	61	54	52	47	50
Restaurant Supply	Swegon	75	73	69	66	67	65	59	55
Restaurant Fresh Air	(0.85 m ³ /sec)	79	75	72	72	65	68	66	68
Kitchen Extract	Ferrari FP561P	82	79	78	76	74	68	63	56
Kitchen Exhaust	(2 m ³ /sec)	85	82	81	79	77	71	66	59

Note: The above data was taken from Swegon's technical specification and Ferrari's quotation specification KC17037.

The attached sketch No. QF/9140/FE1 gives details of the kitchen extract fan acoustic enclosure with a side inlet and vertical discharge. The fan orientation can be changed to suit the final layout of the equipment but the attached sketch gives an indication of the overall size of the enclosure.



Reg. No. 3164658. VAT Reg. No. GB675017042
Directors: I.J.Marchant MIOA (Managing) – J.R.Tait B.Eng, AMIMechE, MIOA
M.G.Roberts BSc., C.Eng., MIMechE, MIOA – R.T.H.Roberts FCA. (Co.Sec.)

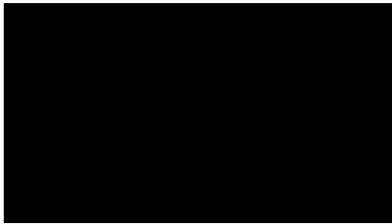


The attached sketches No. QF/9140/S1 and -/S2 give details of the atmospheric side silencers.

We attach herewith our bulletins No. 103/03; 104/03; 105/03 and 110/03 give details of the equipment included in our quotation.

We trust that the above is in line with your requirements, but should you have any queries with regard to our proposals, please do not hesitate to contact the undersigned.

Yours faithfully



M G Roberts
Director

QF9140/A1/MGR/CW

Client: The Watts Group Ltd

SILENCER SCHEDULE

Date: 17th August 2017

Project: 196-198 Haverstock Hill, London

Ref.	Location	Type	Dimensions (mm)			Vol	P.D	Dynamic Insertion Loss (dB)								No.Off	Total	
			W	H	L	(m ³ /s)	(Pa)	63	125	250	500	1k	2k	4k	8k	(£)		
S1	Kitchen Supply (Roomside)	RAAC/38/1200	1000	400	1200	1.66	35	6	12	22	36	45	46	40	28	1	£248.00	
S2	Kitchen Fresh Air (Atmospheric)	RAAC/43/600CL	1000	400	750	1.66	25	3	5	11	19	23	22	17	9	1	£292.00	
S3	Restaurant Supply (Roomside)	RAAC/33/1500	600	550	1500	0.85	35	6	17	28	44	47	47	42	29	1	£196.00	
S4	Restaurant Fresh Air (Atmospheric)	RAAC/38/600CLC	600	550	800	0.85	13	3	5	11	19	23	22	17	9	1	£242.00	
S5	Kitchen Extract (Roomside)	RAAC/38/1200M	650	650	1200	2.00	45	5	11	12	11	14	15	14	14	1	£230.00	
S6	Kitchen Exhaust (Atmospheric)	RAAC/38/1200PMC	650	650	1450	2.00	45	5	11	12	11	14	15	14	14	1	£332.00	
S7	Kitchen Extract Fan Enclosure	PAC 30	1300	1350	1350	-	-	18	20	28	32	40	41	44	38	1	£3,488.00	
Total price (supply only, ex works)																	...	£5,028.00
Delivery in one load																	...	£160.00
Total price (delivered to site)																	...	£5,188.00

Notes: - Silencers S2 and S6 to have an inlet cowl as per our attached sketch No. QF/9140/S1.

- Silencer S4 to have a circular spigot connection on outlet and an inlet cowl as per our attached sketch No. QF/9140/S2.

- Silencers S5 and S6 to have melinex lining to acoustic infill.

- Acoustic fan enclosure to be general as per our attached sketch No. QF/9140/FE1. Price for fan enclosure assumes that the Ferrari fan will be free issued to us for us to fit into enclosure prior to delivery to site.

Terms and Conditions of Quotation

Validity : Prices are fixed for acceptance for 60 days.

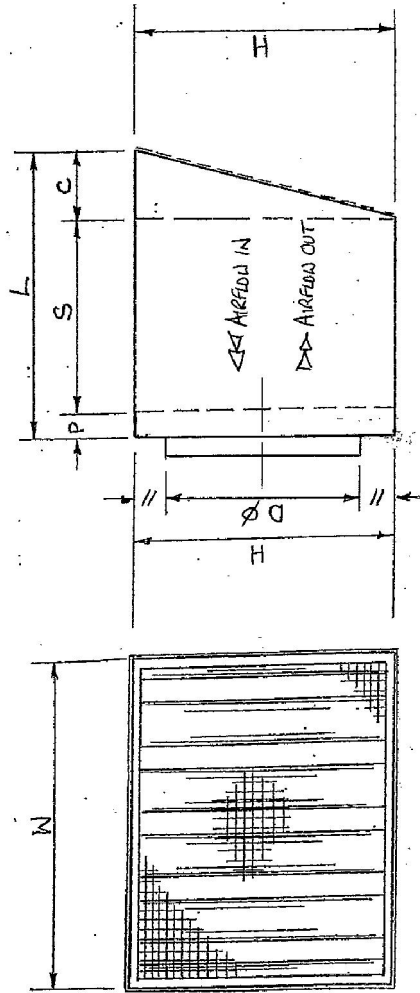
Drawings : 2-3 weeks from receipt of order.

Delivery : 4-5 weeks from approval of drawings.

Carriage : Included above.

V.A.T. : Chargeable extra at the appropriate rate.

Payment : Nett 30 days from date of invoice subject to credit clearance.

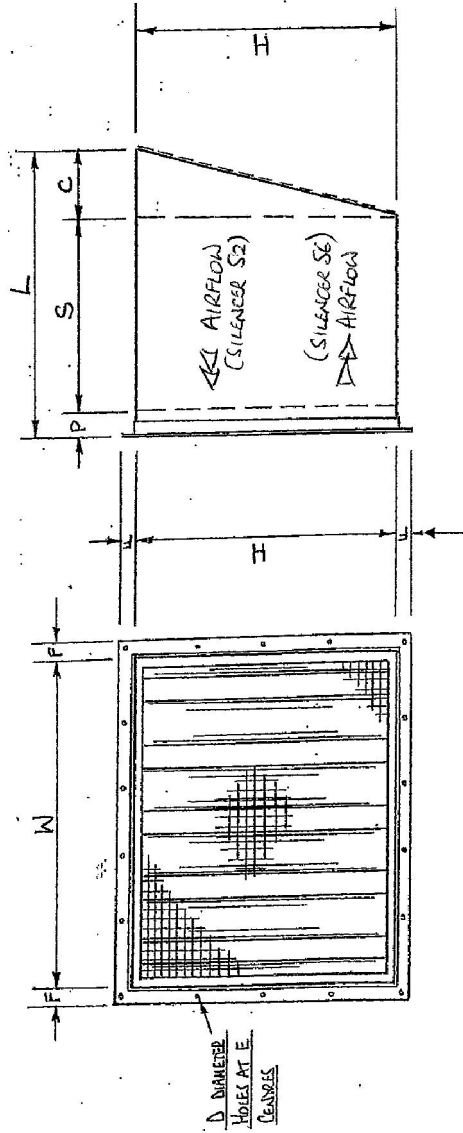


Ref	Model	No. Off	W	H	L	D	P	S	C	Airflow IN	Airflow OUT
S4	RAC/38/600HC	1	600	550	800	505	-	600	150	✓	-

TITLE: Details of Silencer Cowling Assemblies		ISSUE DATE: 17/8/2017		DRAWN BY: MGR		A		B		C		D		E		F		G		H	
CLIENT: THE WATTS GROUP LTD.		PF No:		APPROVED BY: MGR		Q		A		M		J		I		H		G		F	
PROJECT: 196-198 HAVESLOCK HILL		DESIGN AUTH: MGR		DESIGN BY: MGR		Q		A		M		J		I		H		G		F	
		SKETCH No. QF/9440/S2																			

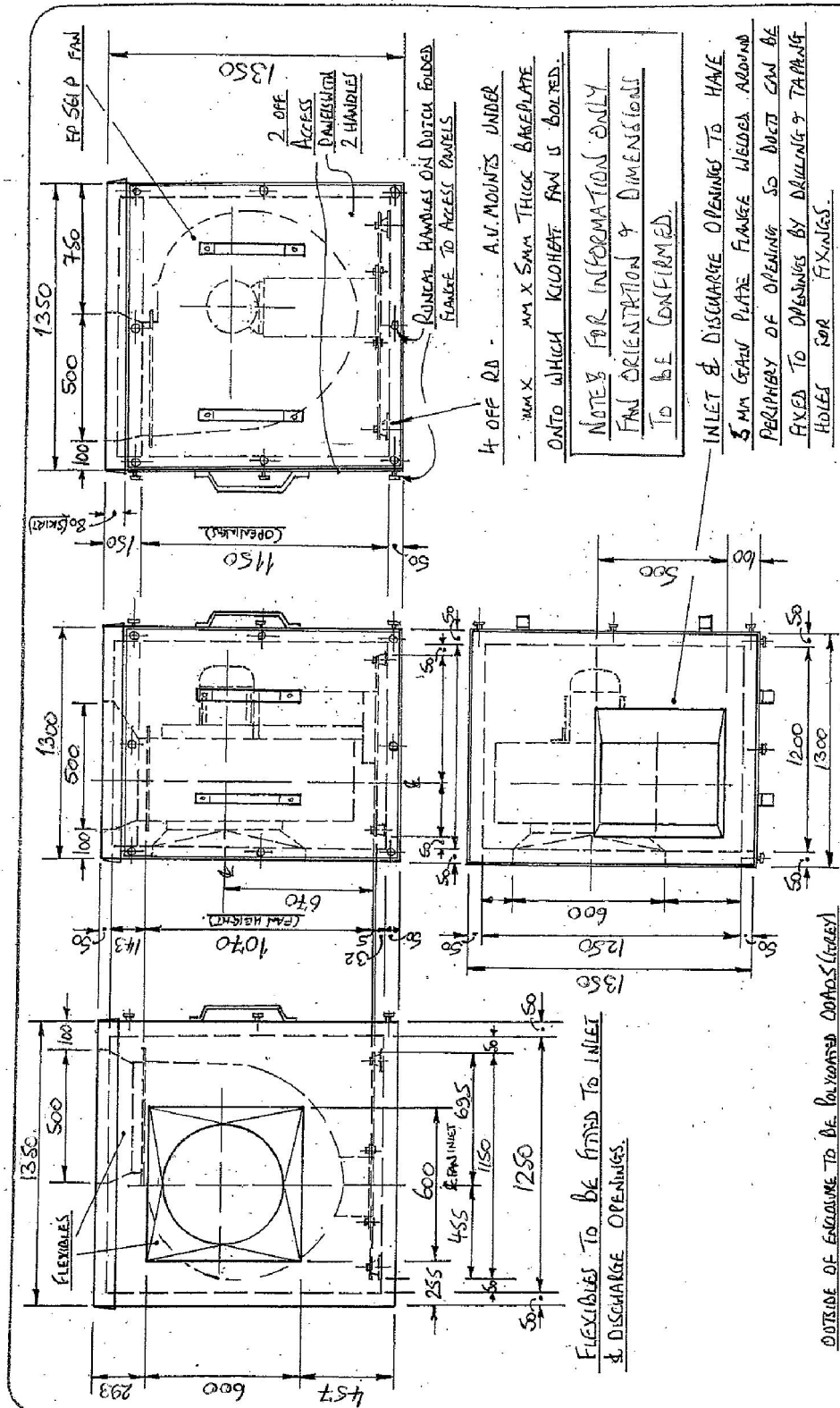


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Ref	Model	No. Off	W	H	L	F	P	S	C	D	E
S2	RAAC/43/ 600 CL	1	1000	400	750	MEZ 30	-	600	150	-	-
S6	RAAC/38/ 1200 PMC	1	650	650	1450	MEZ 30	100	1200	150	-	-

TITLE: Details of Silencer/Cowl Assemblies		ISSUE DATE: 17/8/2017		DRAWN BY: MGR		 Unit L, Tumpike Way, High Wycombe Bucks HP12 3TF Tel: 020 8848 3031 Fax: 020 8573 3605																																				
CLIENT: THE WATTS GROUP LTD		PF No:		APPROVED BY: MGR		<table border="1"> <tr> <th colspan="12">REVISION</th> </tr> <tr> <th>A</th><th>B</th><th>C</th><th>D</th><th>E</th><th>F</th><th>G</th><th>H</th> <th colspan="5">SKETCH No. QF/9140/91</th> </tr> </table>												REVISION												A	B	C	D	E	F	G	H	SKETCH No. QF/9140/91				
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PROJECT: 196-198 HAYES STOCK HILL		Q	A	M	I	DESIGN AUTH: MGR																																				



TITLE: <u>DETAILS OF FAN ENCLOSURE</u>		ISSUE DATE: <u>17/03/2014</u>	DRAWN BY: <u>MGR</u>	A B C D E F G H REVISION:							
CUSTOMER: <u>THE WATTS GROUP LTD.</u>	PF No.	APPROVED BY: <u>[Signature]</u>	DESIGN AUTH: <u>MGR</u>	SK No. <u>QF/940/F01</u>							
PROJECT: <u>196-198 HAVERSTOCK HILL</u>	STATUS: <u>[X] [X] [X] [X] [X] [X] [X] [X]</u>										



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