

# MODULAR LUMINAIRES



*Quattro - Norweb Head Office*

# Quattro

Quattro is a range of high quality, high performance surface-mounted and recessed modular luminaires. The extensive choice of optical attachments and the attention that has been paid to styling detail mean that an ideal Quattro luminaire can be found for the vast majority of commercial interiors.

## Recessed

These are designed to fit metric grid ceilings, and fall into two categories:

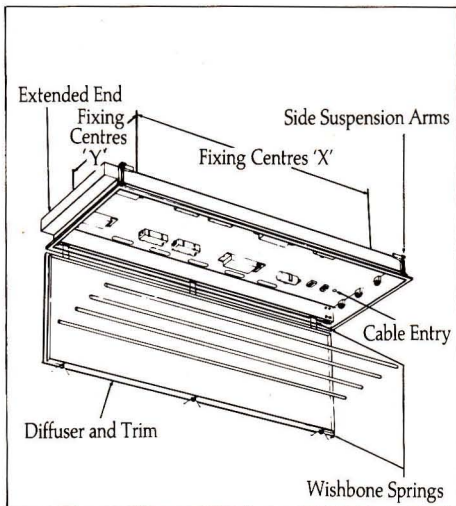
- a those using 26mm/38mm, and 3 x 40W 2L compact fluorescent tubes.
- b those using twin 36W or 40W compact fluorescent tubes.

## Bodies

Fabricated in one piece from zintec steel, and therefore resistant to corrosion, each body is finished in stove-enamelled high-reflectivity white paint. Vivatronic start control gear is standard; Switch-start and high frequency electronic ballast versions are also readily available.

Three and four tube models are wired such that the outer tubes may be switched separately from the inner by removing a connecting link on the terminal block.

Versions using U-tubes are supplied complete with 40W



White tubes, and the 3 x 40W 2L version complete with Polylux 3500 tubes. All linear tube versions are supplied less lamp.

The twin 2L model uses two types of body: one for exposed T ceilings (both 15mm and 24mm grid) and one for concealed-fix and spring T ceilings. These are supplied complete with Polylux 3500 tubes. Both body types are available with switch-start and 36W 2L lamps, or electronic ballast and the higher output 40W 2L lamp.

## Attachments

There are eight standard types of attachment for the 26mm/38mm and 3 x 40W 2L versions, and two for the twin lamp 2L model (with variations depending on the type of ceiling into which the luminaire is to be installed).

All except exposed T versions for twin 2L affix to the body with wishbone springs, providing secure, positive location.

26mm/38mm and 3 x 40W 2L:

FRD	Opal sides, flat opal base, polystyrene
FRE	Opal sides, flat prismatic (TL12) base, polystyrene
FRF	Aluminium air-handling frame, flat prismatic (TL19) panel, acrylic
FRO	Shallow aluminium frame, flat opal panel, polystyrene
FRP	Shallow aluminium frame, flat prismatic (TL19) panel, acrylic

FRV VDU reflector, aluminium [Note: reflectors with cross-vanes at twice the pitch, giving a 'wedge' appearance, can be supplied to order. Catalogue No. FRW]

FRX Low brightness reflector, aluminium

FRY General purpose reflector, aluminium

Twin 2L:

FRVC 16 cell specular aluminium reflector with 55° cut-off angle for VDU areas. Variants are for concealed fix/spring T (FRVC), exposed T narrow grid (FRVN), and exposed T standard grid (FRVS) ceilings.

FRWC As above but with 65° cut-off angle for general areas requiring a low brightness appearance

FRWN

FRWS



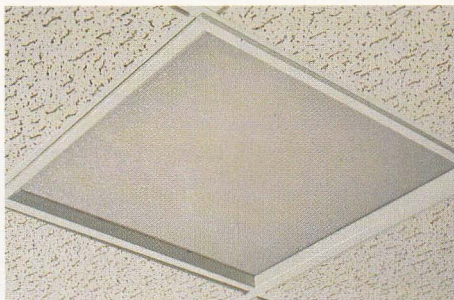
FRD



FRE



FRF



FRO



FRP



FRV



FRX



FRY



FRBZT 240 2L FRWS

## Air-handling

The backs of the luminaire bodies incorporate several elongated slots through which air may travel in air-handling applications. The FRF attachment allows the wide versions to offer air-handling facilities whilst still retaining the acrylic prismatic diffuser favoured in some situations. Equally, all of the reflector attachments permit full air-handling capability in both the narrow and wide versions.

The standard method of operation is with negative pressure return plena, although ducted extract systems can be made to order as special items.

## Fixing Details

Three methods of suspension may be used:

- i) Rod suspension (Cat. No. KL4601; set of 4 rods)
- ii) 6mm studding
- iii) Side arm suspension (Cat. Nos. FR1001; set of 4 arms for 26mm/38mm and 3 x 40W 2L bodies; FTR 1001; set of 4 arms for twin 2L bodies in conealed fix/spring T ceilings). Twin 2L bodies for use in exposed T ceilings rest directly on the ceiling grid with no need for additional support.

The first two methods support the luminaire directly from the structural ceiling; the third uses the load-bearing gridwork of the suspended ceiling, allowing it to be fully installed before the lighting is fitted. In addition such a system offers a significant degree of flexibility in layout, since it is possible to rearrange the luminaire positions with a minimum of disturbance to the suspended ceiling.

Quattro luminaires fit the majority of suspended ceilings; when using the 26mm/38mm etc. body in spring T ceilings please contact your regional THORN Lighting office to check details.

## Range

- a) 26mm/38mm and 3 x 40W 2L (electronic ballast only).

## RANGE

Body c/w Vivotropic gear	Nominal Dimensions	Lamps	Opal-Sided		Diffusers/Controllers			Reflectors		
			Opal FRD	Prismatic FRE	Air- Handling FRF	Opal FRO	Prismatic FRP	Low Brightness FRX	VDU FRV	General Purpose FRY
FRAV 136	●▶ 300 x 1200	1 x 36W	312	312	—	312	312	1312	—	1312
FRAV 158	●▶ 300 x 1500	1 x 58W	315	315	—	315	315	1315	—	1315
FRAV 170	●▶ 300 x 1800	1 x 70W	318	318	—	318	318	1318	—	1318
FRAV 236	●▶▼ 300 x 1200	2 x 36W	312	312	—	312	312	2312	2312	2312
FRAV 258	●▶▼ 300 x 1500	2 x 58W	315	315	—	315	315	2315	2315	2315
FRAV 270	●▶▼ 300 x 1800	2 x 70W	318	318	—	318	318	2318	2318	2318
FRBV 236	●▶▼ 600 x 1200	2 x 36W	612	612	612	612	612	—	—	—
FRBV 240U	●▶▼ 600 x 600	2 x 40WU	66	66	66	66	66	—	—	—
FRBV 270	●▶▼ 600 x 1800	2 x 70W	618	618	618	618	618	—	—	—
FRBV 318*	● 600 x 600	3 x 18W	66	66	66	66	66	366	366	—
FRBV 336	●▶ 600 x 1200	3 x 36W	612	612	612	612	612	3612	3612	3612
FRBV 340U	●▶ 600 x 600	3 x 40WU	66	66	66	66	66	—	—	—
FRBV 370	●▶ 600 x 1800	3 x 70W	618	618	618	618	618	3618	3618	3618
FRBV 418*	600 x 600	4 x 18W	66	66	66	66	66	466	466	466
FRBV 436	●▶▼ 600 x 1200	4 x 36W	612	612	612	612	612	4612	4612	4612
FRBV 470	●▶▼ 600 x 1800	4 x 70W	618	618	618	618	618	4618	—	4618
FRBZM 32L	▶ 600 x 600	3 x 40W2L	66	66	66	66	66	366	366	366

\*18W luminaires are not available with electronic ballast.

(Also available with switch start or electronic ballast – replace “V” in catalogue number of body with “S” or “Z”, e.g. 3 lamp 600 x 1200 switch start body with low-brightness reflector: FRBS 336 + FRX 3612).

■ **Emergency Lighting** versions – details see Emergency Lighting section.

● **Dimmable** versions – details see Dimming Systems section.

▶ **H.F. Electronic Ballast (EB)** versions – details see Fluorescent Control Gear section.

▼ **Controllable H.F.** versions – details see Lighting Management Systems section.

# Quattro

## b) Twin 2L

The two variants of body are for concealed fix/spring T, and exposed T ceilings; 'C' and 'T' respectively are included in the catalogue numbers. The three variants of reflector are for concealed-fix/spring T, narrow grid exposed T, and standard grid exposed T ceilings; 'C', 'N', and 'S' are included in the catalogue numbers.

### RANGE

Ceiling type	Circuit	Nominal dimensions	Lamps	Body	Reflectors	
					VDU	Low-brightness
Concealed fix/spring T	SS	600 x 600	2 x 36W 2L	FRBSC236 2L	FRVC266	FRWC266
	▶ ▼ EB	600 x 600	2 x 40W 2L	FRBZC240 2L	FRVC266	FRWC266
Exposed T 15mm grid	SS	600 x 600	2 x 36W 2L	FRBST236 2L	FRVN266	FRWN266
	▶ ▼ EB	600 x 600	2 x 40W 2L	FRBZT240 2L	FRVN266	FRWN266
Exposed T 24mm grid	SS	600 x 600	2 x 36W 2L	FRBST236 2L	FRVS266	FRWS266
	▶ ▼ EB	600 x 600	2 x 40W 2L	FRBZT240 2L	FRVS266	FRWS266

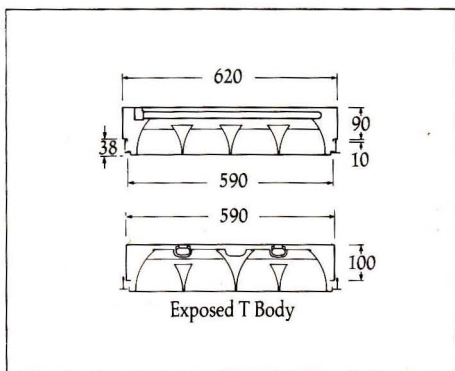
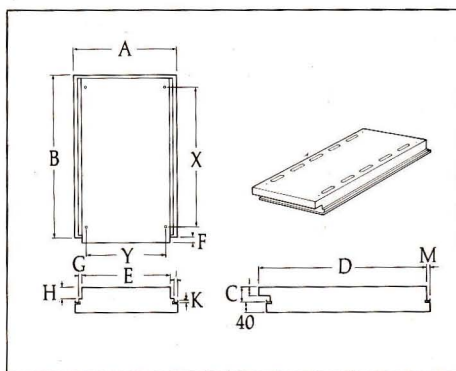


Quattro – Shearson Lehman Trading Floor, Broadgate, London

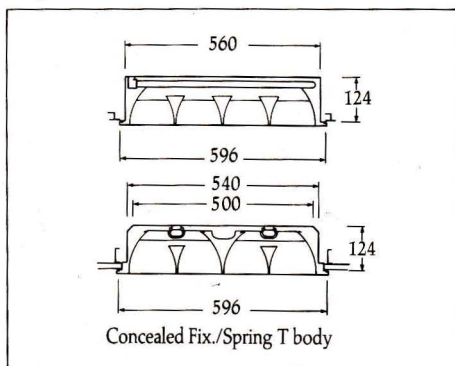
# Quattro

## DIMENSIONS

Nominal dimensions	FRAZ/FRAV/FRAS			FRBZ/FRBV/FRBS			
	136/ 236	158/ 258	170/ 270	240U/ 340U	318/ 418	236/ 336/ 436	270/ 370/ 470
a	300 x 1200	300 x 1500	300 x 180	600 x 600	600 x 60	600 x 1200	600 x 1800
b	297	297	297	597	597	597	597
c	1197	1497	1797	597	597	1197	1797
d	104	104	104	104	104	104	104
e	1224	1524	1788	561	614	1224	1788
f	238	238	238	538	538	538	538
g	45	45	9	—	35	45	9
h	16	16	16	16	16	16	16
i	79	79	79	79	79	79	79
j	15	15	15	15	15	15	15
k	8	8	8	8	8	8	8
l	52	52	52	—	52	52	52
m	19	19	19	19	19	19	19
x	900	1125	1350	516	516	900	1350
y	200	200	200	500	500	500	500



2L Quattro



## RANGE

No. of Lampways	Nominal body dimensions mm.	Weight of Body c/w S/S or vivatronic gear	Weight to be deducted if Electronic ballast is used	Vivatronic luminaire with Opal-sided diffusers (FRD + FRE)	Vivatronic luminaire with framed diffusers (FRO + FRP)	Vivatronic luminaire with air-handling diffusers (FRF)	Vivatronic luminaire with general purpose reflector (FRY)	Vivatronic luminaire with low-brightness reflector (FRX)	Vivatronic luminaire with VDU reflector (FRV)
1 x 36W	300 x 1200	4.8	0.2	6.0	6.2	8.2	5.5	5.6	
1 x 58W	300 x 1500	5.6	0.5	7.2	7.3	9.9	7.0	7.1	
1 x 70W	300 x 1800	6.3	0.5	8.8	8.9	11.5	8.3	8.5	
2 x 36W	300 x 1200	5.4	0.7	6.6	6.8	8.8	6.3	6.4	6.7
2 x 58W	300 x 1500	6.6	1.4	8.2	8.3	10.9	7.7	7.9	8.3
2 x 70W	300 x 1800	7.8	1.4	9.8	9.9	12.5	9.2	9.4	9.8
2 x 36W	600 x 1200	8.2	0.7	10.2	10.6	12.4			
2 x 40W U	600 x 600	5.0	0.7	6.2	6.3	7.4			
2 x 70W	600 x 1800	10.3	1.4	13.1	13.8	16.2			
3 x 18W	600 x 600	6.1	—	7.3	7.4	8.5	7.0	7.1	7.4
3 x 36W	600 x 1200	8.9	0.9	10.9	11.3	13.1	10.5	10.8	11.3
3 x 40W U	600 x 600	5.7	0.9	6.9	7.0	8.1			
3 x 40W 2L	600 x 600	4.8*	—	6.0	6.1	7.2	5.7	5.8	6.1
3 x 70W	600 x 1800	11.3	1.9	14.1	14.8	17.2	13.8	14.2	14.9
4 x 18W	600 x 600	6.8	—	8.0	8.1	9.2	7.6	7.8	8.1
4 x 36W	600 x 1200	8.6	1.4	11.6	12.0	13.8	11.4	11.7	12.2
4 x 70W	600 x 1800	12.4	2.8	15.2	15.9	18.3	15.1	15.5	

\*40W 2L is only available with electronic ballast.

## b) Twin 2L

### RANGE

Body	Lamps	Weight of body inc. lamps kg.	Weight of body & VDU reflector lamps (FRV*) kg.	Weight body & low-brightness reflector (FRW*) kg.
FRBSC 236 2L	2 x 36W 2L	5.7	7.6	7.4
FRBST 236 2L	2 x 36W 2L	5.4	7.3	7.1
FRBZC 236 2L	2 x 40W 2L	5.0	6.9	6.7
FRBZT 240 2L	2 x 40W 2L	4.7	6.6	6.4

## Replacement Control Gear

Replacement control gear and accessories for 240V 50Hz supply.

Lampholder	— linear tubes	: GB 1668
	— U-tubes	: GB 1694
	— 2L tubes	: GB1696
Vivatronic Starter	— All models	: G.69577.4
Starter Switch	— 70W models	: 155/801
	— 36W/58W models	: 155/500
	— 18W models	: 155/200
	— Lampholder clip	: GY5333
	2L tubes	

## RANGE

Body	Ballast	Quantity	Capacitor(s)	Quantity	Body	Electronic Ballast	Quantity
FRAS136	GCS36/40	1	GC2417	1	FRAZ136	G81014	1
FRAS158	GCS58/65	1	GC2435	1	FRAZ158	G81015	1
FRAS170	GCS70/75	1	GC2435	1	FRAZ170	G81016	1
FRAS236	GCS36/40	2	GC2419	1	FRAZ236	G81004	1
FRAS258	GCS58/65	2	GC2409	1	FRAZ258	G81005	1
FRAS270	GCS70/75	2	GC2409	1	FRAZ270	G81006	1
FRBS236	GCS36/40	2	GC2419	1	FRBZ236	G81004	1
FRBS240U	GCS36/40	2	GC2419	1	FRBZ240U	G81004	1
FRBS270	GCS70/75	2	GC2409	1	FRBZ270	G81006	1
FRBS318	GCS18/20	3	GC2428	2	FRBZ336	G81014 + G81004	1 + 1
FRBS336	GCS36/40	3	GC2417 + GC2419	1 + 1	FRBZ340U	G81014 + G81004	1 + 1
FRBS340U	GCS36/40	3	GC2417 + GC2419	1 + 1	FRBZM 32L	G81034 + G81035	1 + 1
FRBS370	GCS70/75	3	GC2409 + GC2435	1 + 1	FRBZ370	G81016 + G81006	1 + 1
FRBS418	GCS18/20	4	GC2417	2	FRBZ436	G81004	2
FRBS436	GCS36/40	4	GC2419	2	FRBZ470	G81006	2
FRBS470	GCS70/75	4	GC2409	2	FRBZC240 2L	G81034	1
FRBSC236 2L	GCS36/40	2	GC2419	1	FRBZT240 2L	G81034	1
FRBST236 2L	GCS36/40	2	GC2419	1			

# Surface Quattro

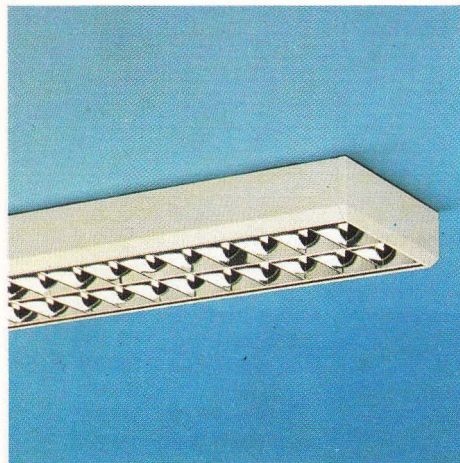
## Bodies

These are essentially rectangular in shape and shallow (the underside of the luminaire is 93mm from the ceiling). All edges are softened, and there is in addition a bevel on the lower edge which gives the luminaire a neat and attractive appearance. Mounting may be either direct to the ceiling or by rod suspension (refer to your regional THORN Lighting office for details). The material is steel coated with stove-enamelled white paint. Switch-start control gear is standard, and Vivatronic start and high frequency electronic ballast versions are available to order. Bodies accept 26mm lamps only, and are supplied less lamp.

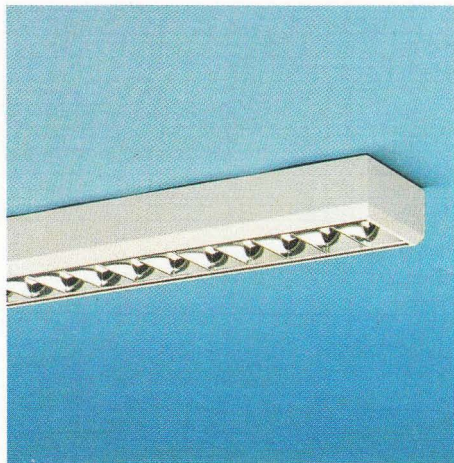
## Attachments

There are six types of attachment which affix to the body with versatile retaining/earthing clips.

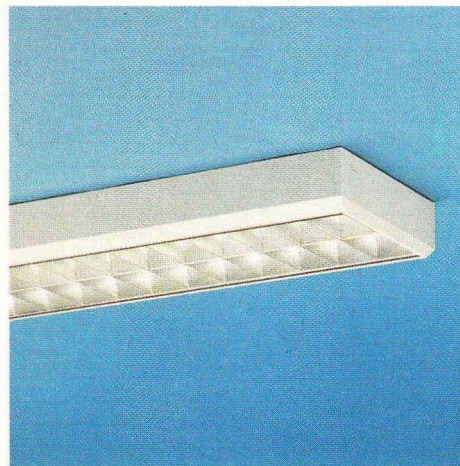
- FSV VDU reflector with 50° cut-off angle
- FSW Specular "wedge" reflector with 60° cut-off angle
- FSWA As FSW, but with asymmetric distribution
- FSX Low brightness reflector with semi-specular sides and ribbed cross-blades
- FSXA As FSX, but the asymmetric distribution
- FSY White reflector for general purpose use.



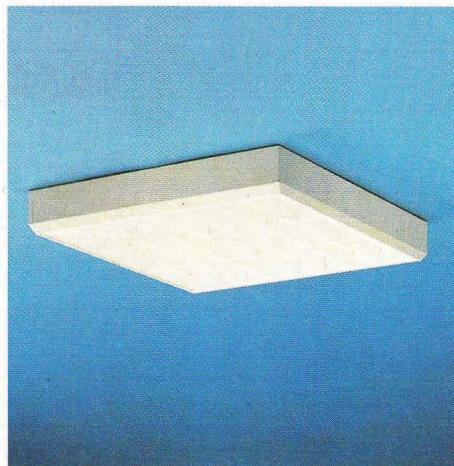
FSV



FSW



FSX



FSY



# Surface Quattro

## RANGE

Body c/w S/S gear	Nominal dimensions mm.	Lamp	VDU FSV	Wedge FSW	Reflectors		Asymmetric Low- Brightness FSXA	General Purpose FSY
					Asymmetric Wedge FSWA	Low- Brightness FSX		
FSAS118	200 x 600	1 x 18W		1206				1206
FSAS136	200 x 1200	1 x 36W	1212	1212	1212	1212	1212	1212
FSAS158	200 x 1500	1 x 58W	1215	1215	1215	1215	1215	1215
FSAS170	200 x 1800	1 x 70W		1218		1218		1218
FSAS218	300 x 600	2 x 18W		2306		2306		2306
FSAS236	300 x 1200	2 x 36W	2312	2312	2312	2312	2312	2312
FSAS258	300 x 1500	2 x 58W	2315	2315	2315	2315	2315	2315
FSAS270	300 x 1800	2 x 70W		2318		2318		2318
FSBS318	600 x 600	3 x 18W		3606		3606		3606
FSBS418	600 x 600	4 x 18W		4606		4606		4606

e.g. Single lamp 58W luminaire and low-brightness reflector. FSAS158 + FSX1215. If Vivatronic start of electronic ballast are required, substitute "V" or "Z" respectively for second "S" in body number e.g. FSAV158.

## DIMENSIONS

Body	Lamps	L	Dimensions in mm.	
			W	S
FSAS 118	1 x 18W	638	189	400
FSAS 136 ▶	1 x 36W	1249	189	850
FSAS 158 ▶	1 x 58W	1549	189	1150
FSAS 170 ▶	1 x 70W	1813	189	1450
FSAS 218	2 x 18W	639	313	400
FSAS 236 ▶ ▼	2 x 36W	1249	313	850
FSAS 258 ▶ ▼	2 x 58W	1549	313	1150
FSAS 270 ▶ ▼	2 x 70W	1813	313	1450
FSBS 318	3 x 18W	639	613	400/515
FSBS 418	4 x 18W	639	613	400/515

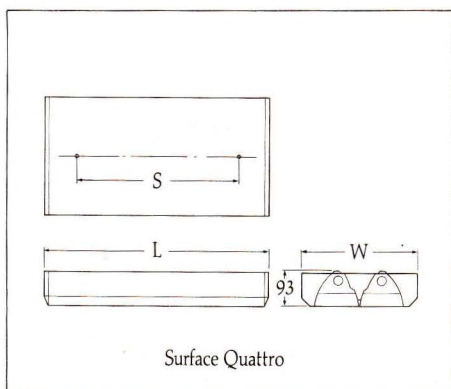
## Weights

All weights are in kg for body and attachment together.

Nominal Dimensions mm.	Lampways	FSC	FSW	FSWA	FSX	FSXA	FSY
200 x 600	1 x 18W			3.1			3.5
200 x 1200	1 x 36W			5.3			5.8
200 x 1500	1 x 58W			7.0			7.7
200 x 1800	1 x 70W			9.3			9.6
300 x 600	2 x 18W			4.5			4.8
300 x 1200	2 x 36W			7.5			8.5
300 x 1500	2 x 58W			10.0			11.0
300 x 1800	2 x 70W			12.5			13.5
600 x 600	3 x 18W			7.8			8.8
600 x 600	4 x 18W			8.0			9.0

## Replacement Control Gear

See replacement gear for the recessed version. The "R" in the body catalogue number is replaced by an "S" for the surface version.





*Arena 175, CAS 1288*



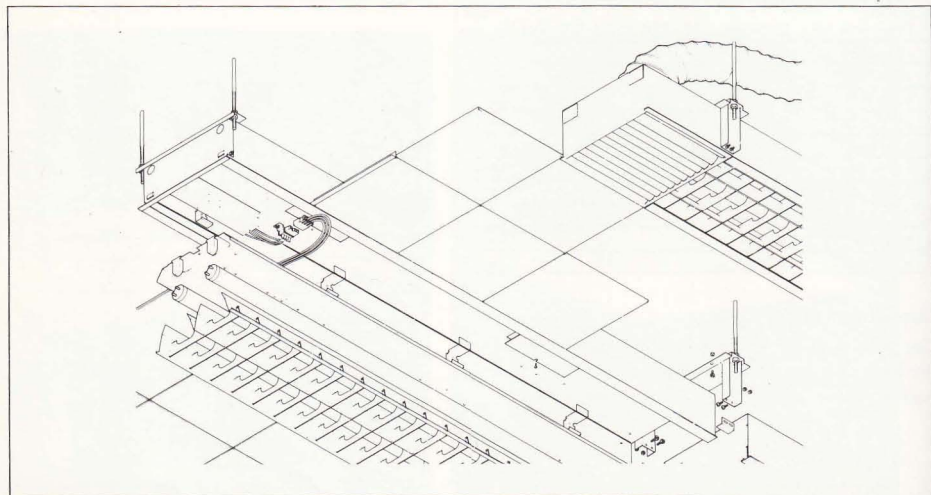
*Arena 300, CAS 1085*

Arena is a lighting system for integrated ceiling projects, featuring unparalleled air handling functions. Significant gains have been made in lighting performance, and the system has far more flexibility in application. Main structural components are 300mm or 175mm bodies, into which gear trays can be fitted at modular or random locations to provide the required scheme. Standard body lengths are 1200, 1500 and 1800mm. The system is based on the use of 26mm fluorescent tubes.

Arena 300 is available with Vivatronic start control gear as

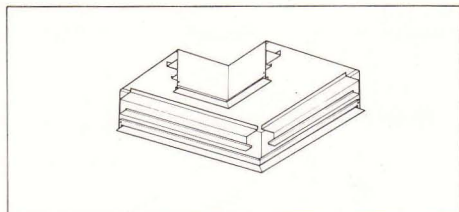
standard, switch-start and electronic ballast gear trays are available to order. Arena 175 has switch-start control gear as standard with Vivatronic start and high frequency electronic ballasts available to order.

The range of light-control attachments includes three sets of reflectors designed to meet the diverse requirements of modern office specifications. The VDU louvre in particular finds application in those areas where lighting must be unobtrusive and yet still effective and elegant.

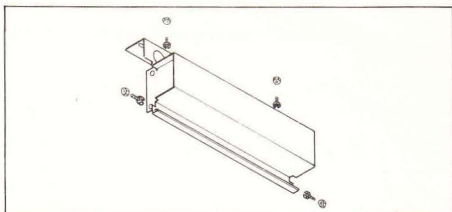


*A typical assembly of components*

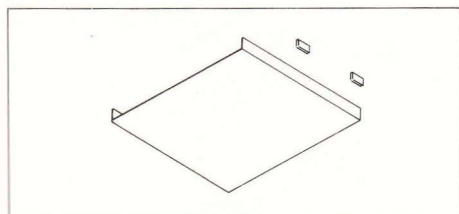
## Components



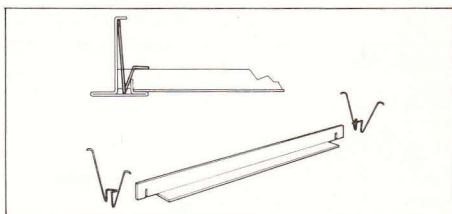
Bodies



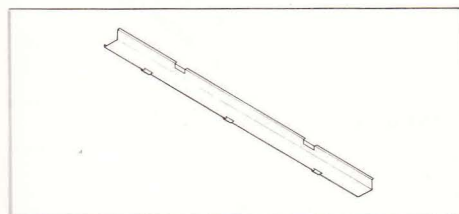
Extended end cap



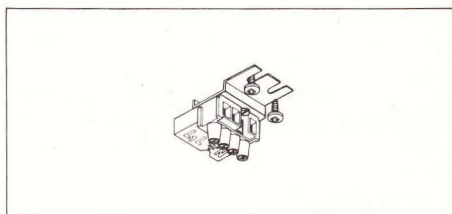
Infill panels



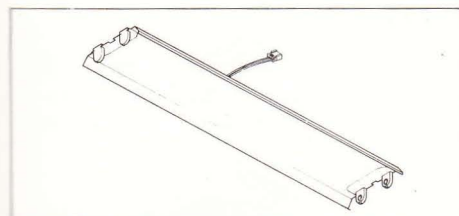
Cross-tee



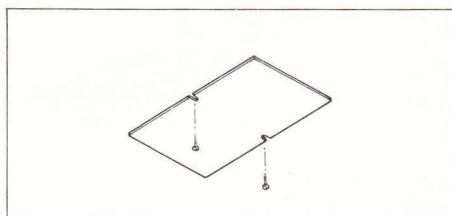
Cable covers



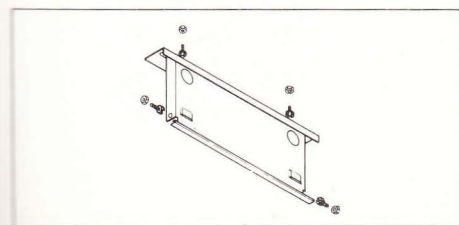
Terminal socket



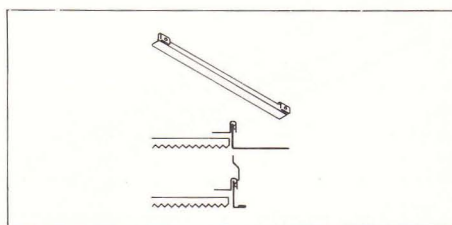
Single and twin T8 lamp gear trays



Blanking plate (fit for non air extract scheme)



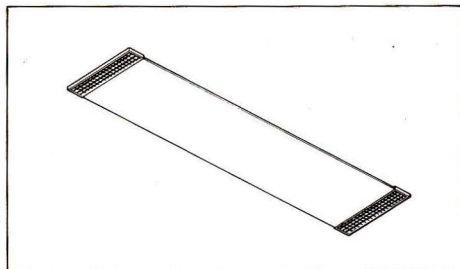
End cap



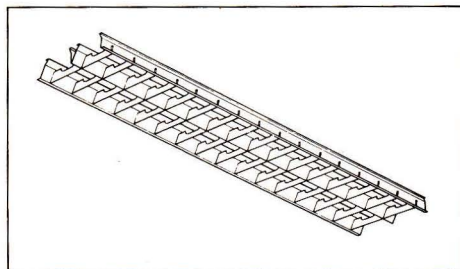
Light baffle (prismatic panel and blanking plate)



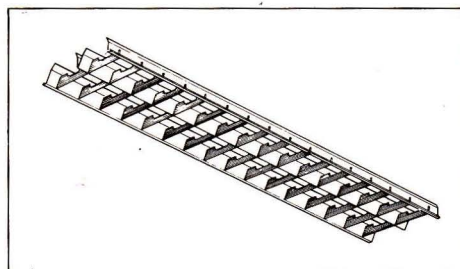
## Components (continued)



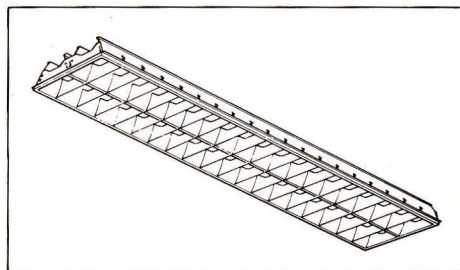
*Prismatic panels*



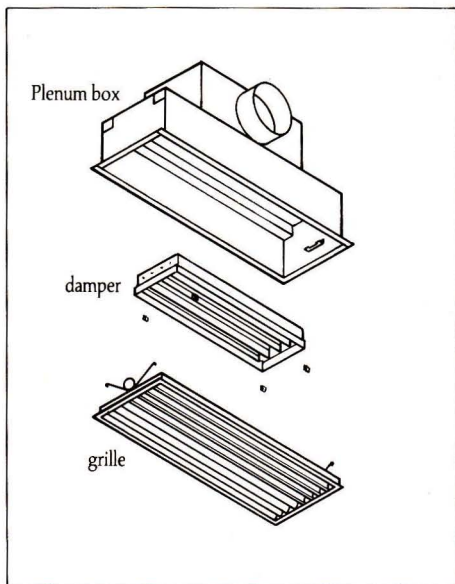
*General purpose batwing louvres*



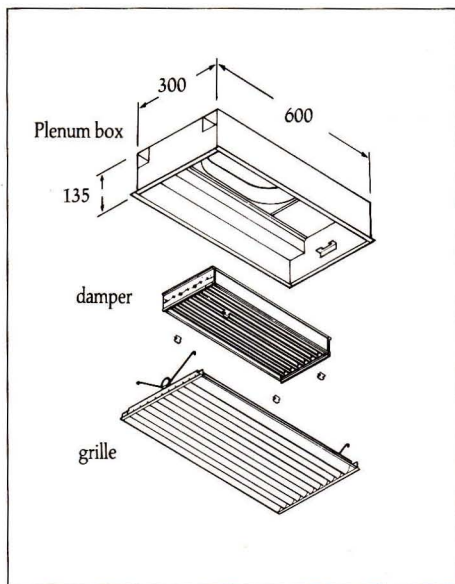
*Low-brightness batwing louvres*



*VDU louvres*



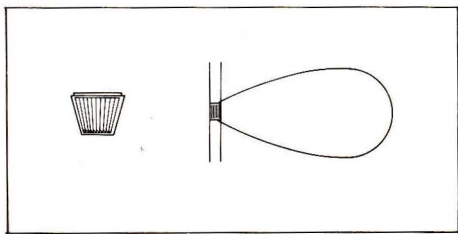
*Typical air supply configuration — 175mm*



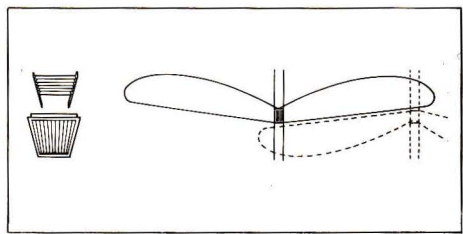
*Typical air supply configuration — 300mm*



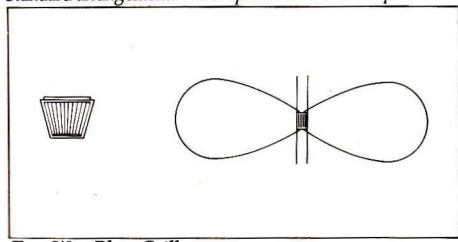
## Air Supply Performance Characteristics



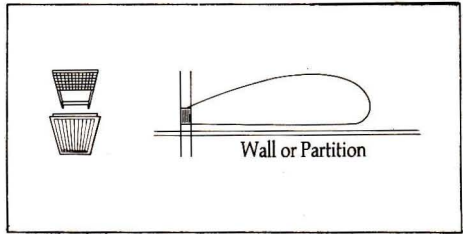
**One Way Blow Grille**  
Standard arrangement. Wide 'spread'. Shallow 'drop'.



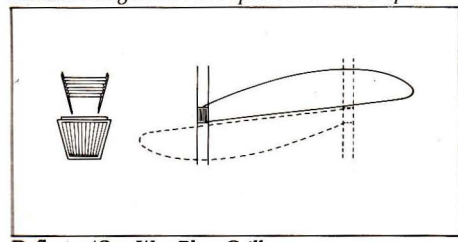
**Deflector/Two Way Blow Grille**  
Air 'envelopes' deflected to avoid obstacles or opposing air streams.



**Two Way Blow Grille**  
Standard arrangement. Wide 'spreads'. Shallow 'drops'.



**Half Straightener/One Way Blow Grille**  
Air envelope straightened on one side only to cope with side walls or partitions.



**Deflector/One Way Blow Grille**  
Air supply 'envelope' deflected to avoid colliding with obstacles or with opposing air streams.

These air control components may easily be relocated or adjusted if the office layout is changed.

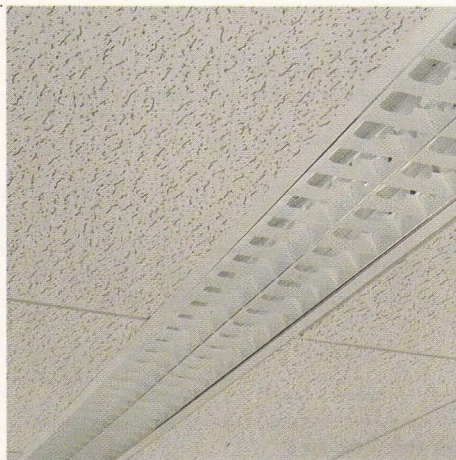
### RANGE — ARENA 300

Module Length	1200mm	Weight (kg)	1500mm	Weight (kg)	1800mm	Weight (kg)
Ceiling body	CAS 1020	5.5	CAS 1050	6.8	CAS 1080	8.2
Gear Tray — single	● ● ▶ CAS 1021	3.6	CAS 1051	5.0	CAS 1081	5.5
	1 x 36W		1 x 58W		1 x 70W	
Gear Tray — twin	● ● ▶ ▼ CAS 1022	4.5	CAS 1052	6.8	CAS 1082	7.3
	2 x 36W		2 x 58W		2 x 70W	
Prismatic panel (TL12)	CAS 1024	0.9	CAS 1054	1.0	CAS 1084	1.2
Batwing reflector — single	CAS 1225	1.3	CAS 1255	1.6	CAS 1285	1.8
Batwing reflector — twin	CAS 1226	1.3	CAS 1256	1.5	CAS 1286	1.7
Low brightness batwing reflector — single	CAS 1025	1.3	CAS 1055	1.5	CAS 1085	1.7
Low brightness batwing reflector — twin	CAS 1026	1.3	CAS 1056	1.5	CAS 1086	1.7
VDU reflector — twin	CAS 1326	1.3	CAS 1356	1.5	CAS 1386	1.7

Continued over.

RANGE — ARENA 175

Module Length	1200mm	Weight (kg)	1500mm	Weight (kg)	1800mm	Weight (kg)
Ceiling body	CAS 5020	5.5	CAS 5050	6.8	CAS 5080	8.2
Gear Tray — single	▶ CAS 5021	3.4	CAS 5051	4.7	CAS 5081	5.2
Prismatic panel (TL12)	CAS 1329	0.6	CAS 1359	0.7	CAS 1389	0.9
Batwing reflector	CAS 1228	1.0	CAS 1258	1.2	CAS 1288	1.4
Low brightness batwing reflectors	CAS 1028	1.0	CAS 1058	1.1	CAS 1082	1.3
VDU reflector	CAS 1328	1.0	CAS 1358	1.1	CAS 1388	1.3



300, CAS 1286

- **Emergency Lighting** versions – details see Emergency Lighting section.
- **Dimmable** versions – details see Dimming Systems section.
- ▶ **H.F. Electronic Ballast (EB)** versions – details see Fluorescent Control Gear section.
- ▼ **Controllable H.F.** versions – details see Lighting Management Systems section.



175, CAS 1388



300, CAS 1086

## ACCESSORIES

Description	Arena 300 Cat. No.	Weight (kg)	Arena 175 Cat. No.	Weight (kg)
Cable cover – 1200mm	CAS 1023	0.7	CAS 5023	0.7
Cable cover – 1500mm	CAS 1053	0.9	CAS 5053	0.9
Cable cover – 1800mm	CAS 1083	1.0	CAS 5083	1.0
Space terminal socket	CAS 1101	—	CAS 5101	—
End cap	CAS 1102	0.7	CAS 5102	0.5
End cap (Extension 1200/1500mm)	CAS 1103	1.0	CAS 5103	0.7
Suspension bracket	CAS 1104	0.7	CAS 5104	0.5
Blanking plate	CAS 1105	0.2	CAS 5105	0.2
Light baffle	CAS 1106	—	CAS 5106	—
Cross tee	CAS 1107	—	CAS 5107	—
300mm Infill panel	CAS 1108	0.5	CAS 5108	0.3
Earthing cords	CAS 1109	—	CAS 1109	—
300mm Supply air grille single throw	CAS 1110	1.0	—	—
600mm Supply air grille single throw	CAS 1111	2.1	CAS 5111	1.5
300mm Supply air grille two way throw	CAS 1112	1.0	—	—
600mm Supply air grille two way throw	CAS 1113	2.1	CAS 5113	1.5
300mm damper kit	CAS 1114	0.5	—	—
600mm damper kit	CAS 1115	0.9	CAS 5115	0.7
300mm deflector kit	CAS 1116	0.1	—	—
600mm deflector kit	CAS 1117	0.3	CAS 5117	0.2
300mm air extract louvre	CAS 1118	0.3	CAS 5118	0.2
300mm Plenum box for grille and damper	CAS 1120	2.1	—	—
600mm Plenum box for grille and damper	CAS 1121	3.7	CAS 5121	2.9
300mm half air straightener	CAS 1122	0.3	—	—
600mm half air straightener	CAS 1123	0.6	CAS 5123	0.6
90° corner junction box (body)	CAS 1125	5.0	CAS 5125	5.0
600mm infill panel	CAS 1131	1.0	CAS 5131	0.6
Infill panel earth cord	CAS 1133	—	CAS 1133	—
90° Corner junction infill panel	CAS 1134	1.5	CAS 5134	0.4

## REPLACEMENT CONTROL GEAR

	1200mm	1500mm	1800mm
Capacitor (single)	GC2417	GC2435	GC2435
(twin)	GC2419	GC2409	GC2409
Ballast	GCS 36/40	GCS 58/65	GCS 70/75
Starter Switch	155/500	155/500	155/800
Vivatronic Starter	G69577.4	G69577.4	G69577.4
Electronic Ballast			
(single)	G81014	G81015	G81016
(twin)	G81004	G81005	G81006
Lampholder	GB1671	GB1671	GB1671



Arena. GBE International

# Troffer Pack

Troffer Pack luminaires offer an inexpensive route to functional recessed lighting with a quality appearance. They fit either standard (24mm table) or narrow (15mm table) exposed T-grid, resting on the upright of the T-section. Location and support is provided by the ends of each luminaire, which should therefore be positioned over the main runner of the ceiling.

## Bodies

These are formed in one piece from zinc steel coated with high reflectivity white paint and are thus resistant to corrosion in all normal commercial atmospheres.

Control gear is high power factor, switch start.

Luminaires are supplied less lamp. Two widths are offered:

- i) FTAS: 300mm wide; 2 tube.
- ii) FTBS: 600mm wide; 2, 3, and 4 tube.

## Attachments

There are six types of optical attachment, of which all except the flat panel types are available in two versions, for standard and narrow grid ceilings. Flat panels are not suitable for mounting onto narrow grid.

FTD/FTDN: Dished plain opal diffuser (polystyrene)

FTE/FTEN: Dished prismatic controller (polystyrene)

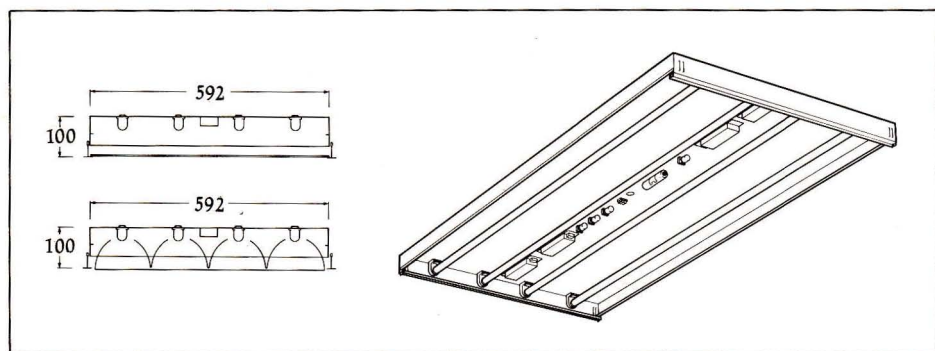
FTO: Flat stippled opal diffuser (polystyrene)

FTP: Flat prismatic controller (polystyrene)

FTT/FTTN: Opal edged prismatic controller to match regular tiles (polystyrene)

FTX/FTXN: Low brightness reflector (aluminium)

Gear covers are available if required for use with diffusers/controllers and are supplied with screws for fixing to the body. The low-brightness reflectors cover the gear automatically.



## RANGE

Body c/w Gear	Nominal Dimensions mm	Lampways	24mm grid 15mm grid	Diffusers/Controllers						Reflector Low Brightness	Gear Covers
				Dished		Flat		Regular	FTX		
				FTD	FTE	Opal FTO	Prismatic FTP	FTT	FTX		
				FTDN	FTEN			FTTN	FTXN		
FTAS 236	300 x 1200	2 x 36W				312	312		2312		1200
FTAS 270	300 x 1800	2 x 70W				318	318		2318		1800
FTBS 236	600 x 1200	2 x 36W		612	612	612	612	612			1200
FTBS 270	600 x 1800	2 x 70W				618	618				1800
FTBS 318	600 x 600	3 x 18W		66	66	66	66	66	366		600
FTBS 336	600 x 1200	3 x 36W		612	612	612	612	612	3612		1200
FTBS 370	600 x 1800	3 x 70W				618	618		3618		1800
FTBS 418	600 x 600	4 x 18W		66	66	66	66	66	466		600
FTBS 436	600 x 1200	4 x 36W		612	612	612	612	612	4612		1200
FTBS 470	600 x 1800	4 x 70W				618	618		4618		1800

For example: a) Twin lamp 300mm x 1200mm body and low-brightness reflector for a 15mm grid ceiling:  
FTAS 236 + FTXN 2312.

b) Four lamp 600mm x 600mm body and dished prismatic controller for a 24mm grid ceiling:  
FTBS 418 + FTE 66.



# Troffer Pack



*FTD*



*FTE*



*FTO*



*FTP*



*FTT*



*FTX*

# Troffer Pack

Minimum void depth required for installation: 160mm.

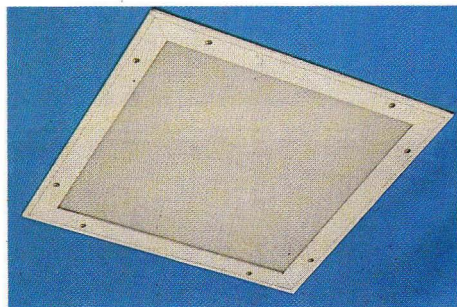
WEIGHTS kg

Bodies		Attachments					
FTAS 236	3.6	FTD/FTDN 66	0.6	FTP 312	0.5	FTX/FTXN 2312	0.9
FTAS 270	5.3	612	1.3	318	0.8	2318	1.4
FTBS 236	5.3	FTE/FTEN 66	0.7	66	0.5	366	0.7
FTBS 270	8.3	612	1.4	612	1.0	3612	1.4
FTBS 318	4.2	FTO 312	0.5	618	1.5	3618	2.1
FTBS 336	6.3	318	0.8	FIT/FITN 66	0.8	466	0.9
FTBS 370	9.3	66	0.5	612	1.5	4612	1.8
FTBS 418	4.9	612	1.0	FTG 600	0.8	4618	2.7
FTBS 436	6.9	618	1.5	1200	0.8		
FTBS 470	10.3			1800	1.2		

## REPLACEMENT CONTROL GEAR

Body	Choke	Qty	Capacitor	Qty	Starterswitch	Qty	Lampholder	Qty
FTAS 236	GCS 36/40	2	GC2419	1	155/500	2	GB 1634	4
FTAS 270	GCS 70/75	2	GC2409	1	155/800	2	GB 1634	4
FTBS 236	GCS 36/40	2	GC2419	1	155/500	2	GB 1634	4
FTBS 270	GCS 70/75	2	GC2409	1	155/800	2	GB 1634	4
FTBS 318	GCS 18/20	3	GC2428	2	155/200	2	GB 1634	6
FTBS 336	GCS 36/40	3	GC2417	1	155/500	3	GB 1634	6
			GC2419	1				
FTBS 370	GCS 70/75	3	GC2409	1	155/800	3	GB 1634	6
			GC2435	1				
FTBS 418	GCS 18/20	4	GC2427	2	155/200	4	GB 1634	8
FTBS 436	GCS 36/40	4	GC2419	2	155/500	4	GB 1634	8
FTBS 470	GCS 70/75	4	GC2409	2	155/800	4	GB 1634	8

## Sealed Luminaires



### Opal

These luminaires are used primarily in situations where the lit area must be isolated from external sources of dust and other contamination, or where they must withstand exposure to water due to environmental conditions or when being washed down to preserve the cleanliness of a room. Typically this is the case with food factories, operating theatres, pharmaceutical and electronics industries, exterior canopies etc.

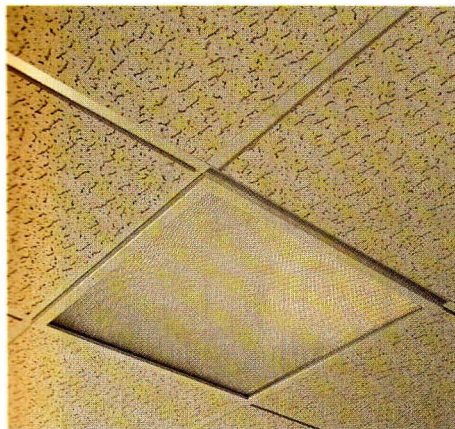


### Pyramid

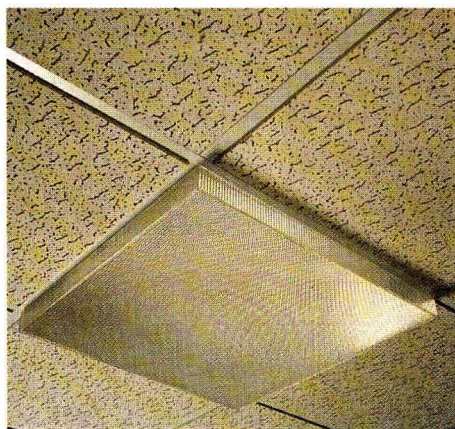
Designed to IP54, several versions are available:

- fluorescent or discharge ● recessed or surface-mounted
- front or back maintenance access ● opal or prismatic acrylic diffusers
- nominal lengths of 600mm, 1200mm, and 1500mm.

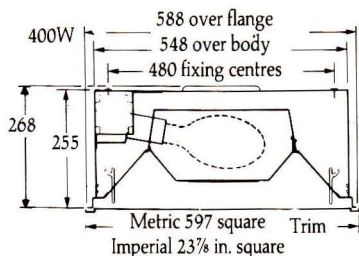
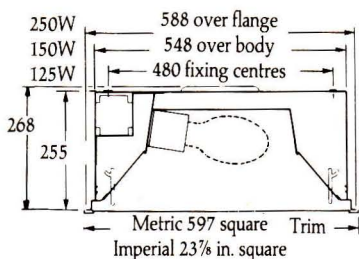
In addition the nature of areas requiring this type of luminaire often means that individual solutions are necessary, and in such situations designs can be tailored to fit specific needs.



DKC 250, TDKH



DKC 250, TDKG



A recessed modular luminaire range for discharge lamps of 150W to 400W. Available with two attachments – the DKG series of dished prismatic trimless controllers, and DKH flat prismatic (TL 19) panel in a shallow white metal frame. Three methods of suspension may be used – conduit, rod suspension, and side arm suspension. It is recommended that additional ceiling supports are fitted within 150mm of each corner of the luminaire.

The luminaire, 600mm x 600mm square (nominal) is compatible with most commercial ceiling systems and is suitable for all applications particularly where good colour rendering is required.

One standard housing accommodating the full range of lamps including 125W, 250W and 400W MBF, and 150W, 250W and 400W SON is common for imperial and metric

ceilings. Attachments must be specified to suit the ceiling module.

**Note:** MBF circuits are rectified up to and including 250W. All luminaires are supplied with lamp. Luminaires comply with BS4533-102.1 (1982) (IP20).

Indoor: luminaires in general are designed to BS4533-101 (1981) and, except where otherwise stated are 'Luminaires for use in normal atmospheres'. Where use in more onerous situations is contemplated, e.g. in part-completed buildings before drying out and made suitable for occupation – damp cellars, special processing plants etc., additional surface protection may be required. Special finishes for such applications can be agreed in consultation with your local THORN Lighting office.

Range table, see over.



**RANGE**  
HOUSING COMPLETE WITH CONTROL GEAR AND  
LAMP FOR 240V 50Hz SUPPLY

Cat. no.	Watts	Lamp	Approx. weight kg
DKC 250.T	250	MBIF	17.1
DKC 400.T	400	MBIF	19.1
DKS 150.T	150	SONDL-E	17.0
DKS 250.T	250	SONDL-E	17.0
DKS 400.T	400	SONDL-E	19.0

**ATTACHMENTS**

Description	Imperial Cat. No.	Metric Cat. No.
Prismatic (TL 19) trimless controller	DKG 22	DKG 62
Flat prismatic (TL 19) panel in shallow white metal trim	—	DKH 62

**ACCESSORIES**

Cat. No.	Description
FTR 1001	Side arm suspension set (set of 4)
KL 4601	Rod suspension set

**REPLACEMENT CONTROL GEAR FOR 240V 50HZ SUPPLY**

Cat. no.	Ballast	Ignitor	Capacitor	Terminal block (fused)	Fuse (HRC)	Lampholder
DKC 250.T	G 53398.T	G 53455	GC 2386	GT 1331	GT 1336 (10A)	GL 1196
DKC 400.T	G 53397.T	G 53455	GC 2346	GT 1331	GT 1380 (13A)	GL 1196
DKS 150.T	G 53400.T	G 53282/A	GC 2331	GT 1331	GT 1268 (5A)	GL 1196
DKS 250.T	G 53398.T	G 53282/B	GC 2386	GT 1331	GT 1336 (10A)	GL 1196
DKS 400.T	G 53371.T	G 53282/B	GC 2331	GT 1331	GT 1380 (13A)	GL 1196

For circuit diagrams see Control gear and accessories section.