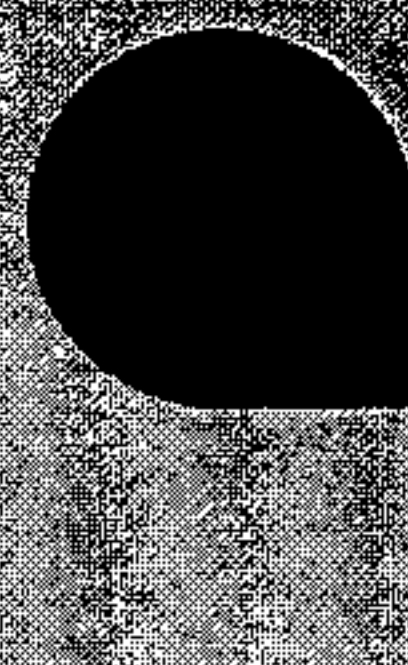




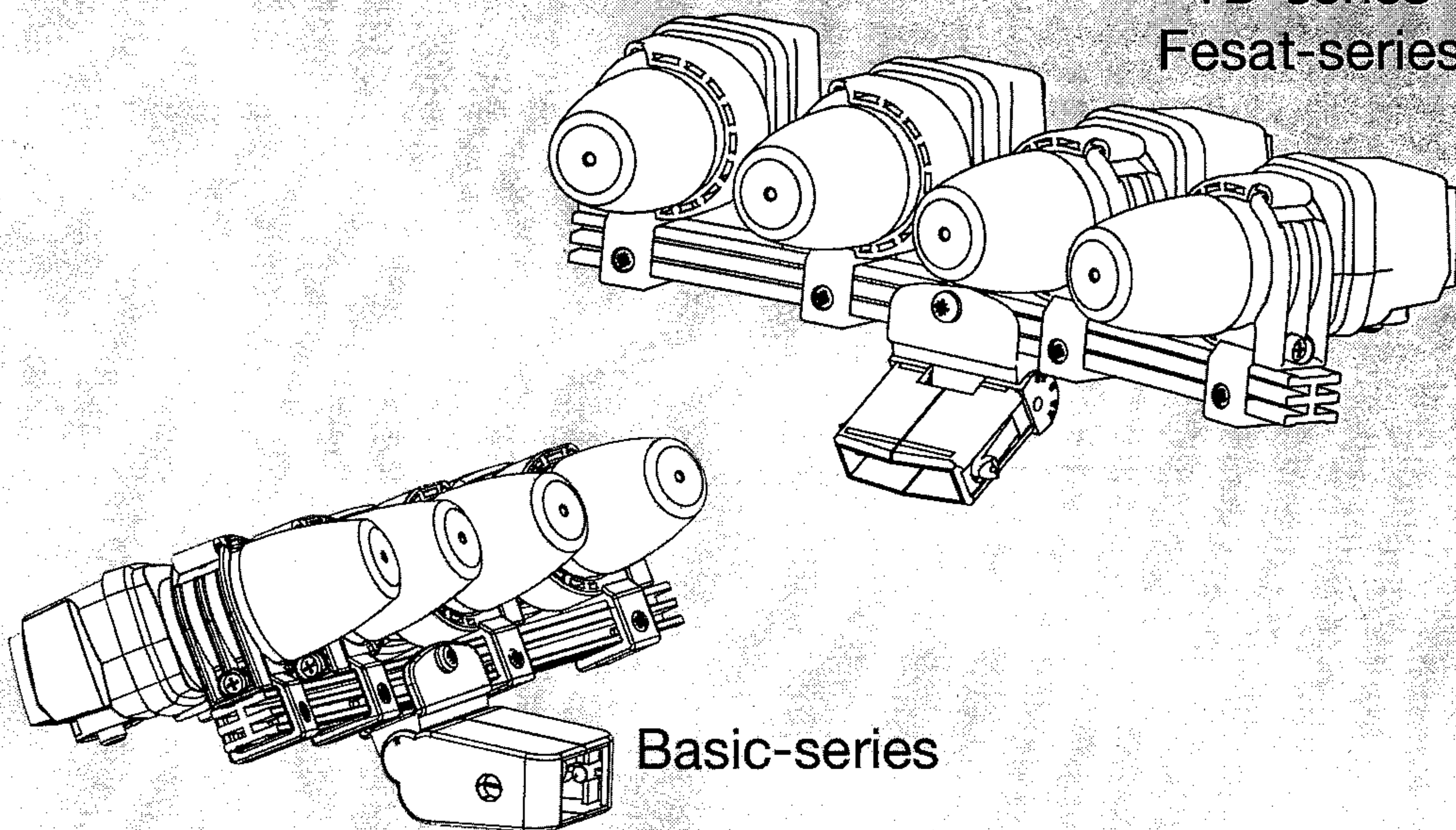
HIRSCHMANN



TRIAX

Multi Block

TD-series
Fesat-series



Basic-series

Assembly and mounting instructions

Montagevejledning
Monterings anvisning
Käyttöohje
Montageanleitung



TRIAX - your ultimate connection

Reception from 4 satellites

With a TRIAX MultiBlock for 4 LNBs it is possible to receive programmes from 4 satellite positions with one TRIAX TD/Basic dish, e.g. from the positions 1°W, 5°E, 13°E and 19°E.

As the signals from the satellites are reflected in the dish, the LNBs must be placed opposite to the position of the satellites in the sky and at a distance between them corresponding to the angle between the satellite positions. See fig. 1.

The MultiBlock can be adjusted to receive satellites signals with a satellite spacing from 3 to 20°. The MultiBlock can be used with TRIAX TD78/Basic75, TD88/Basic85 and TD110 dishes.

Assembly and setting

The four LNB-holders are factory set for reception of 1°W, 5°E, 13°E and 19°E in Denmark/Vejle with a TD78 dish.

The LNB-holders are not fixed to the carrier beam, as the LNBs must be mounted first (if they are not already premounted).

First the LNB-holders for the LNBs 1 and 4 are removed from the carrier beam (it may be a good idea to mark their position).

The LNBs are mounted in the LNB-holders for 2 and 3, and in the two loose LNB-holders.

Then the LNB-holders 1 and 4 with LNBs are put back on the carrier beam. See fig. 2.

The distance between LNB 1, 2, 3 and 4 and centre is indicated in table 1 (for TD78 and Basic 70), table 2 (for TD88 and Basic 85) and table 3 (for TD110). A precision positioning may be required. See fig. 3.

The slope (Y) of the carrier beam is set according to table 1, 2 and 3. This position is locked by means of a self-tapping screw. See fig. 4.

The entire MultiBlock including LNBs can now be mounted on the dish arm.

Setting of dish

If you are a Viasat customer, LNB 2 is connected directly to the receiver by means of a cable or to a satellite meter.

If you are a Canal Digital customer, LNB 1 is connected directly to the receiver or to a satellite meter.

Subsequently a program which is transmitted via the provider is selected on the receiver (preferably with level indication). The dish is now set to optimum reception, and then both azimuth and elevation are securely tightened. The elevation is shown in table 1 to 3.

It is a good idea to check the remaining 3 satellite positions. A final adjustment may be required and can be done by carefully pushing the LNB-holders slightly too either side. Then the 4 LNB-holders are screwed on by means of self-tapping screws. See fig. 3.

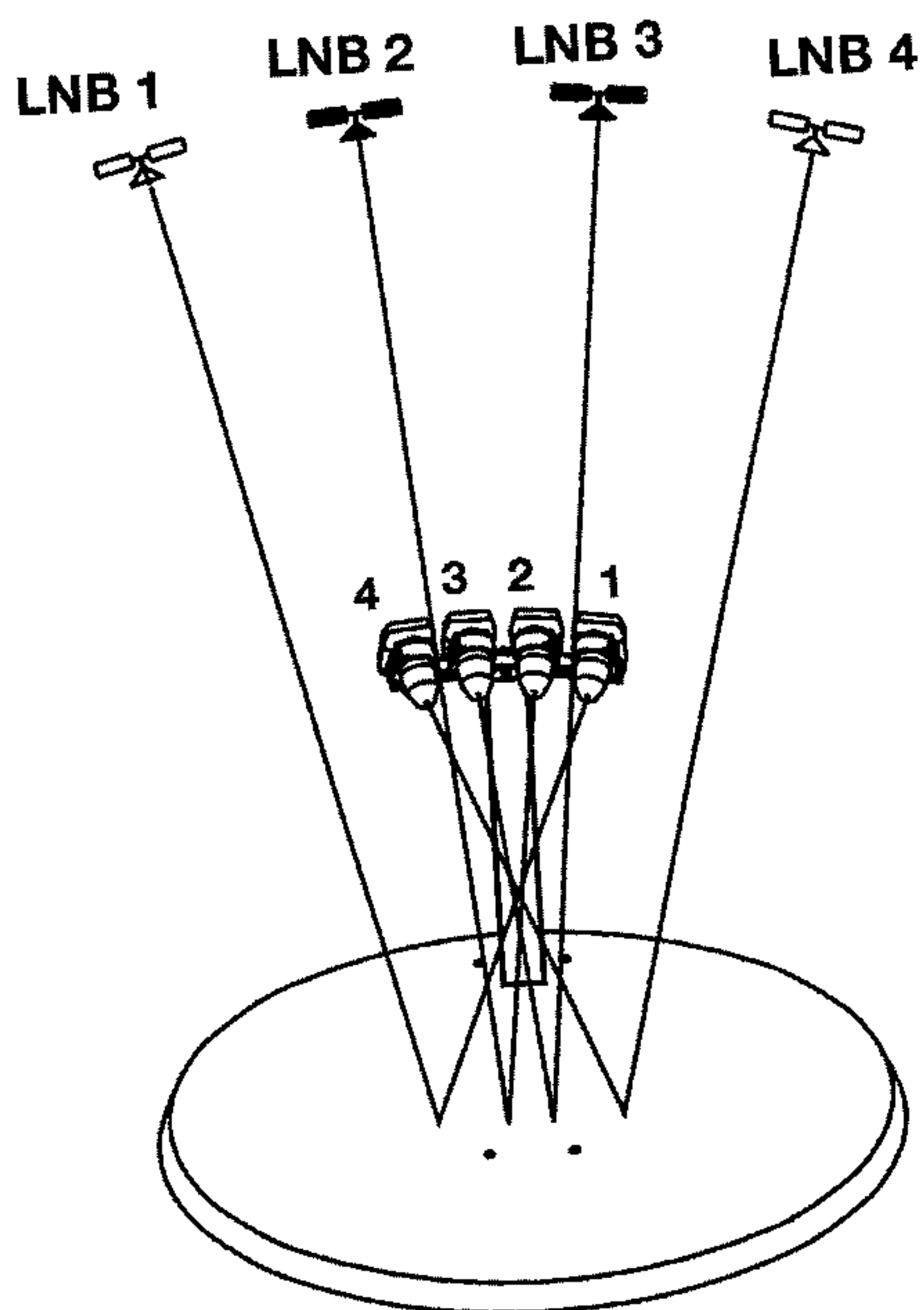
IMPORTANT.

For additional support of the dish arm, a hole is drilled through back structure and arm in which the enclosed screw is mounted. See fig. 5. Remember to put some fat/paintwork into the hole so that moisture has no access.

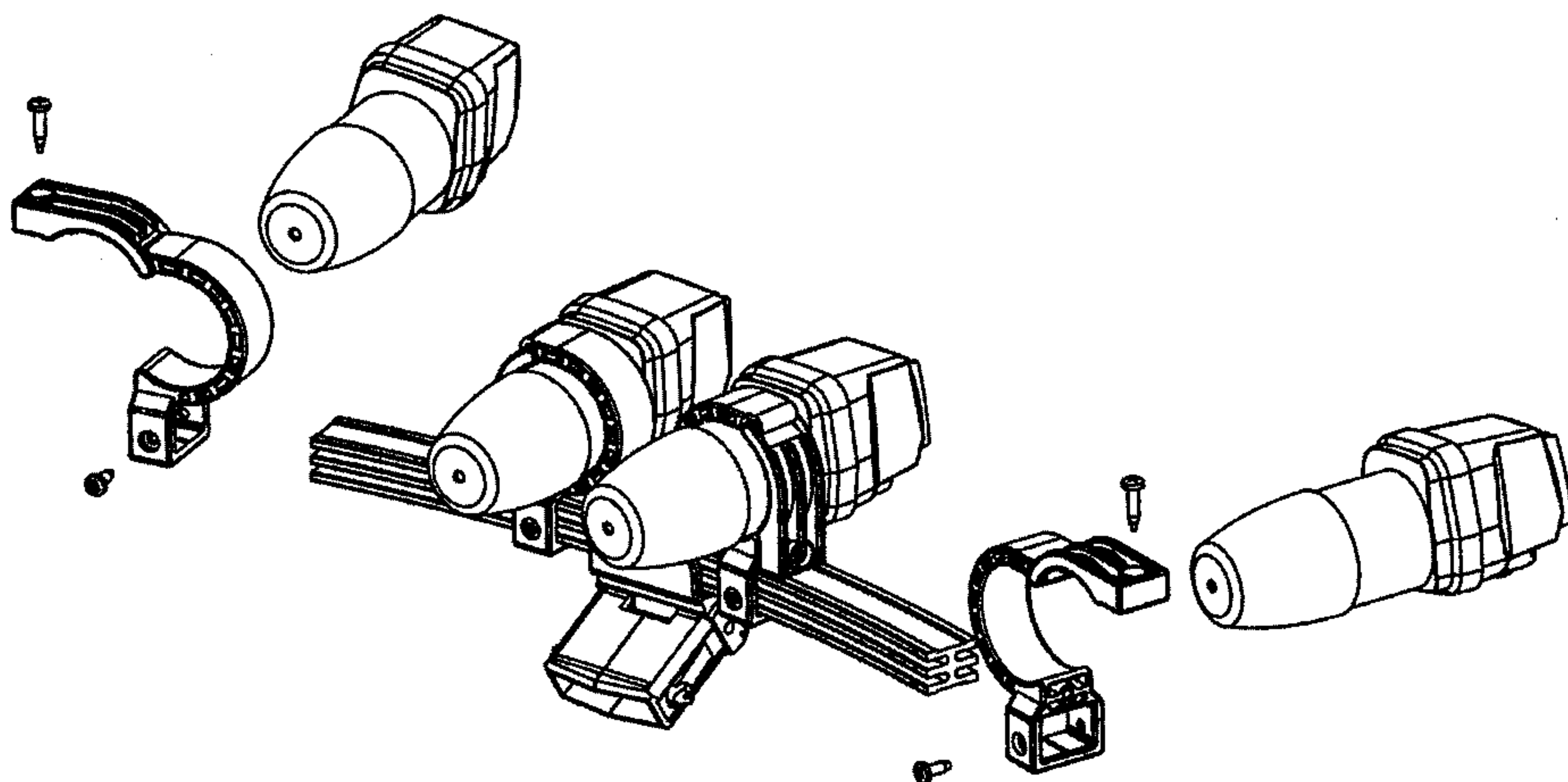
We recommend that **only** the LNB's delivered with the Multiblock are used.

Please note that the total weight of the Multi-block with LNBs must not exceed 1.1 kgs.

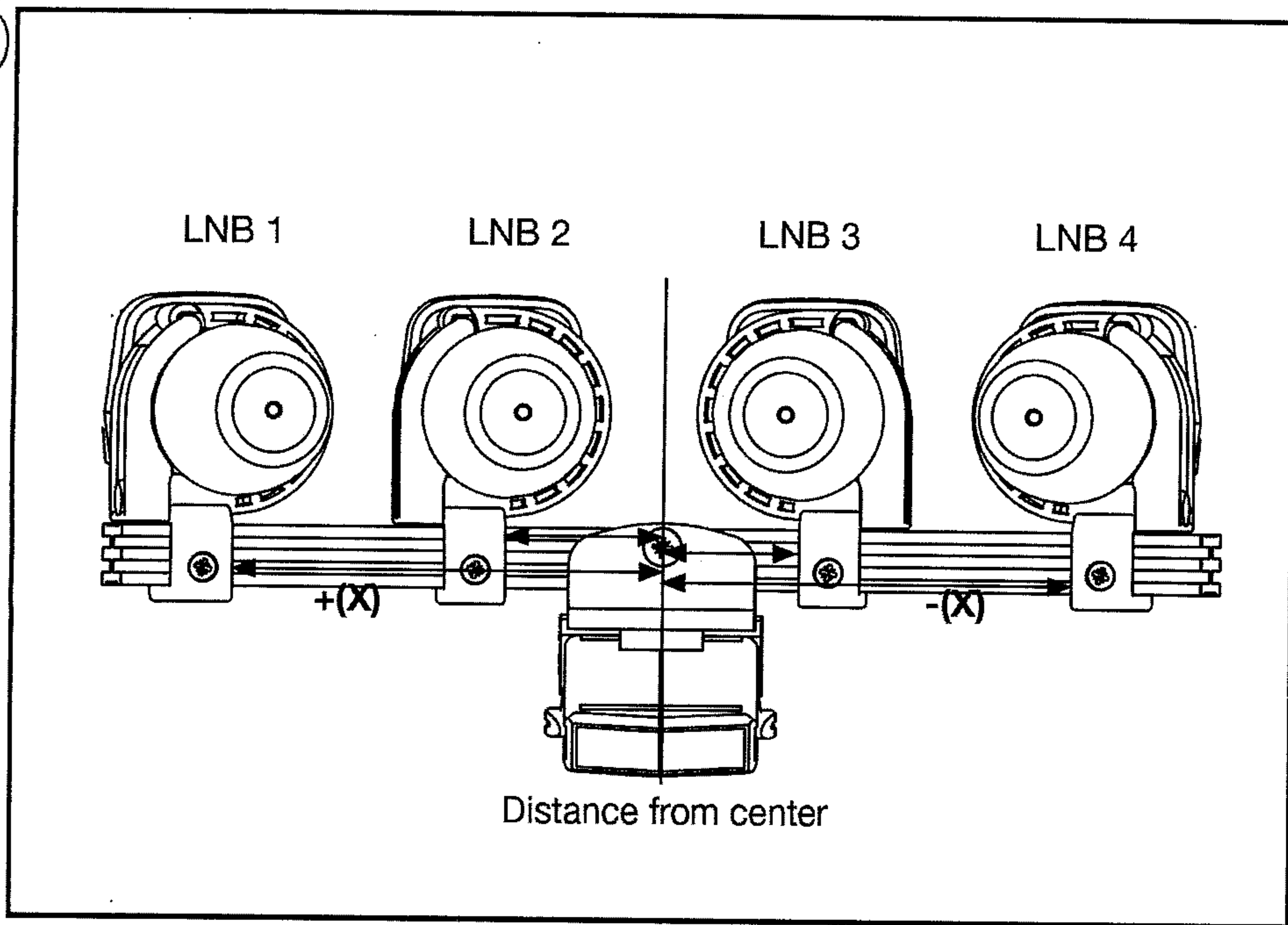
1 LNBs and dish



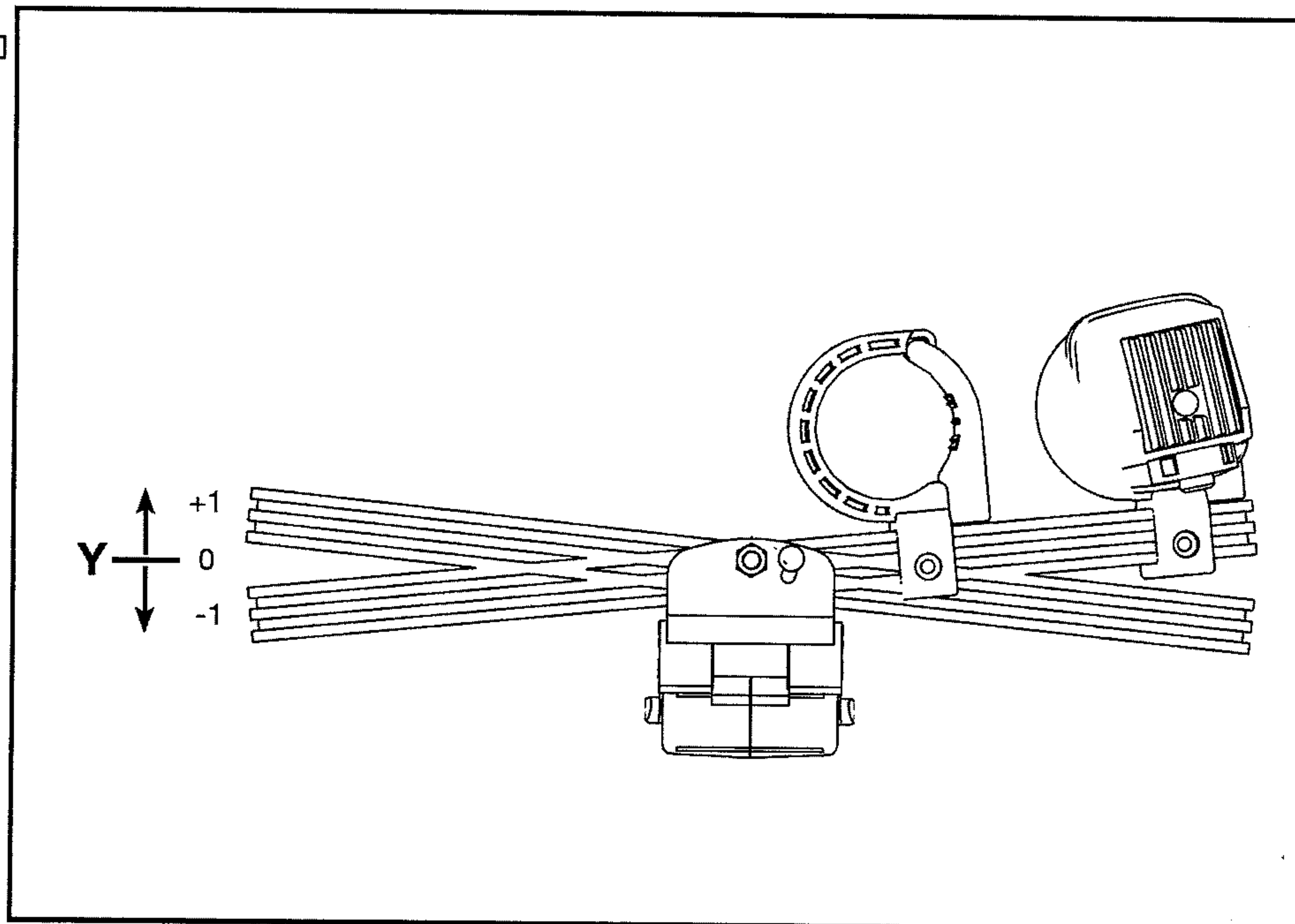
2 Multiblock assembly



3 Adjustment



4 Slope of the beam



5 For additional support, hole and screw.

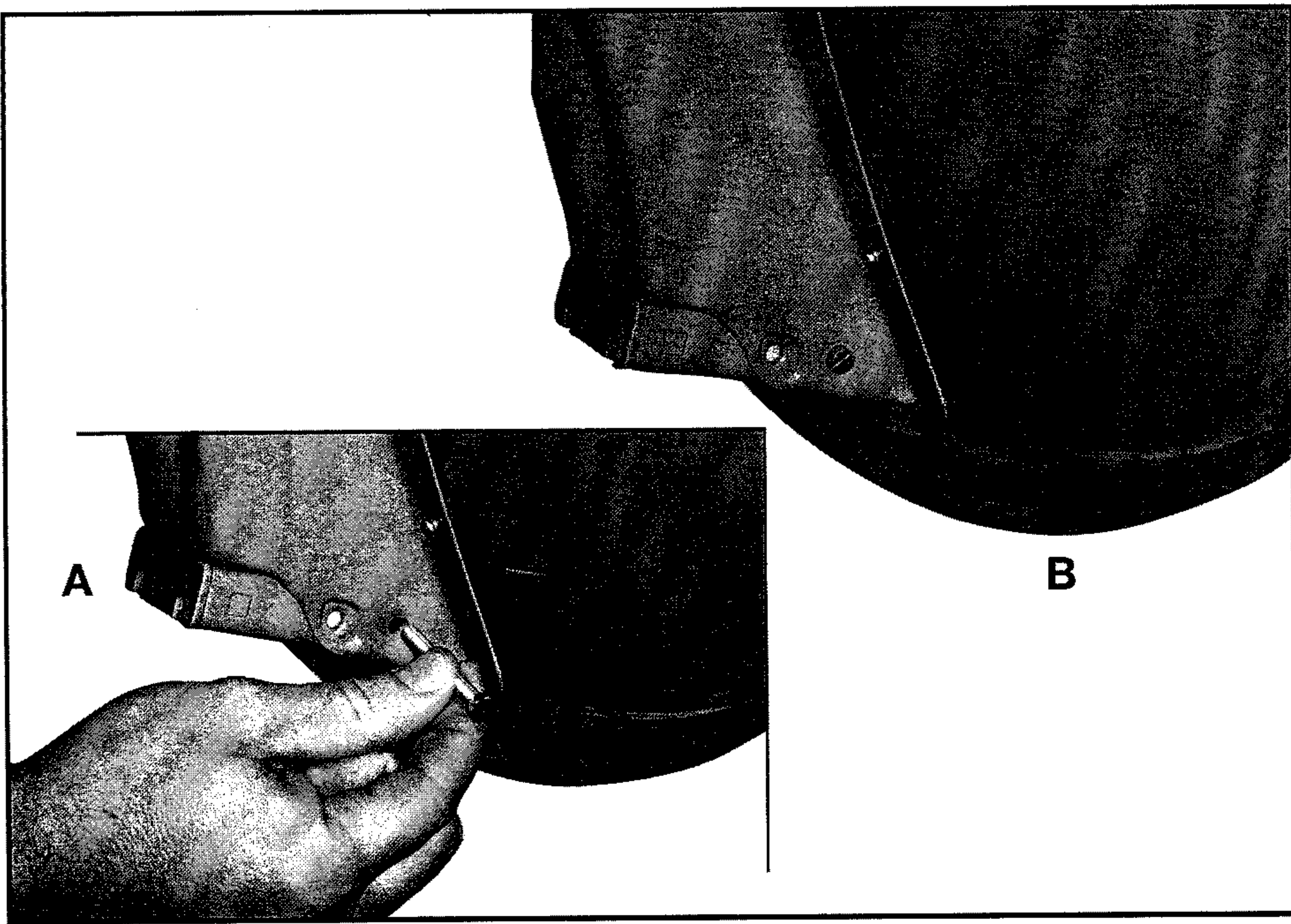


Table 1**TD 78/Basic 75****X [mm] = LNB mounting distance from the center of the Multiblock**

Country/City	Elevation EL [°]	LNB 1 1°W	LNB 2 5°E	LNB 3 13°E	LNB 4 19.2°E	Y
		+X [mm]	+X [mm]	-X [mm]	-X [mm]	
Denmark						
København	26.4	106	42	-40	-106	0
Skagen	24.4	105	42	-40	-106	0
Sønderborg	27.4	106	43	-40	-106	0
Rønne	27.0	105	42	-40	-106	0
Ringkøbing	26.1	106	43	-40	-106	0
Vejle	26.5	106	42	-40	-106	0
Norway						
Bergen	21.5	105	42	-40	-104	0 - (+1)
Bodo	14.2	103	41	-39	-103	0
Oslo	22.0	105	42	-40	-105	0
Tromsø	11.5	102	41	-39	-102	0
Trondheim	18.2	104	42	-40	-104	0
Haugesund	22.5	105	42	-40	-105	0 - (+1)
Sweden						
Goteborg	24.3	105	42	-40	-106	0
Kiruna	13.3	102	41	-39	-103	0 - (-1)
Lulea	15.4	102	41	-39	-103	0 - (-1)
Malmo	26.6	106	42	-40	-106	0
Stockholm	22.2	104	42	-40	-105	0
Sundsvall	19.1	103	42	-40	-104	0
Ostersund	18.5	104	42	-40	-104	0
Linköping	23.4	104	42	-40	-105	0
Finland						
Helsinki	20.5	102	41	-39	-104	0 - (-1)
Turku	20.6	103	41	-40	-104	0 - (-1)
Tampere	19.3	102	41	-39	-104	0 - (-1)
Oulu	15.6	102	41	-39	-103	0 - (-1)
Iisalmi	16.7	101	41	-39	-103	0 - (-1)
Jyväskylä	18.3	102	41	-39	-104	0 - (-1)
Lappeenranta	19.0	101	41	-39	-104	0 - (-1)

Table 1	TD 78/Basic 75/FESAT 80 S					
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X [mm] = LNB mounting distance from the center of the Multiblock

Country/City	Elevation EL [°]	LNB 1	LNB 2	LNB 3	LNB 4	Y
		13°E	19.2°E	23.5°E	28.2°E	
		+X [mm]	+X [mm]	-X [mm]	-X [mm]	
Germany						
Berlin	29,5	86	21	-24	-73	0-(+1)
Bonn	30,4	86	21	-23	-71	0-(+1)
Hamburg	28	86	21	-24	-72	0-(+1)
Hildesheim	29,4	86	21	-24	-72	0-(+1)
Leipzig	30,7	86	21	-24	-73	0-(+1)
Munchen	34	87	21	-24	-73	0-(+1)
Stuttgart	32,8	87	21	-24	-72	0-(+1)

Country/City	Elevation EL [°]	LNB 1 13°E	LNB 2 19.2°E	-X [mm]	LNB 4 28.2°E	Y
		+X [mm]	+X [mm]		-X [mm]	
UK						
Belfast	22,8	90	27		-60	(+1)
Birmingham	26	92	28		-60	(+1)
Cardiff	26,6	91	28		-60	(+1)
Glasgow	22,2	91	28		-60	(+1)
London	27,5	92	28		-61	(+1)
Manchester	25	91	28		-61	(+1)
Newcastle	23,2	90	27		-60	(+1)

Country/City	Elevation EL [°]	LNB 1 13°E	LNB 2 19.2°E	-X [mm]	LNB 4 28.2°E	Y
		+X [mm]	+X [mm]		-X [mm]	
Ireland						
Dublin	23,8	90	27		-60	(+1)

Table 2		TD 88/Basic 85/Fesat 90 S				
X [mm] = LNB mounting distance from the center of the Multiblock						
		LNB 1	LNB 2	LNB 3	LNB 4	
	Elevation	1°W	5°E	13°E	19.2°E	
Country/City	EL [°]	+X [mm]	+X [mm]	-X [mm]	-X [mm]	Y
Denmark						
København	26.4	128	51	-49	-129	0
Skagen	24.4	128	51	-49	-128	0
Sønderborg	27.4	129	52	-49	-129	0
Rønne	27.0	128	51	-49	-129	0
Ringkøbing	26.1	129	52	-49	-129	0
Vejle	26.5	129	52	-49	-129	0
Norway						
Bergen	21.5	127	51	-48	-127	0 - (+1)
Bodo	14.2	125	50	-48	-125	0
Oslo	22.0	127	51	-49	-127	0
Tromsø	11.5	123	49	-47	-124	0
Trondheim	18.2	126	50	-48	-126	0
Haugesund	22.5	128	51	-48	-127	0 - (+1)
Sweden						
Goteborg	24.3	128	51	-49	-128	0
Kiruna	13.3	124	50	-47	-125	0 - (-1)
Lulea	15.4	124	50	-48	-125	0 - (-1)
Malmo	26.6	128	51	-48	-129	0
Stockholm	22.2	126	51	-48	-128	0
Sundsvall	19.1	126	50	-48	-127	0
Ostersund	18.5	126	50	-48	-126	0
Linköping	23.4	127	51	-49	-128	0
Finland						
Helsinki	20.5	124	50	-48	-127	0 - (-1)
Turku	20.6	125	50	-48	-127	0 - (-1)
Tampere	19.3	124	50	-48	-126	0 - (-1)
Oulu	15.6	123	50	-47	-125	0 - (-1)
Iisalmi	16.7	123	50	-47	-125	0 - (-1)
Jyvaskyla	18.3	124	50	-48	-126	0 - (-1)
Lappeenranta	19.0	123	50	-48	-126	0 - (-1)

Table 2
TD 88/Basic 85/FESAT 90 S

X [mm] = LNB mounting distance from the center of the Multiblock

Country/City	Elevation EL [°]	LNB 1 13°E	LNB 2 19.2°E	LNB 3 23.5°E	LNB 4 28.2°E	Y
		+X [mm]	+X [mm]	-X [mm]	-X [mm]	
Germany						
Berlin	29,5	105	25	-29	-88	0-(+1)
Bonn	30,4	104	25	-28	-87	0-(+1)
Hamburg	28	104	25	-29	-87	0-(+1)
Hildesheim	29,4	104	25	-29	-87	0-(+1)
Leipzig	30,7	105	25	-29	-88	0-(+1)
Munchen	34	106	25	-29	-88	0-(+1)
Stuttgart	32,8	105	25	-29	-87	0-(+1)

Country/City	Elevation EL [°]	LNB 1 13°E	LNB 2 19.2°E	-X [mm]	LNB 4 28.2°E	Y
		+X [mm]	+X [mm]		-X [mm]	
UK						
Belfast	22,8	109	33		-73	(+1)
Birmingham	26	111	34		-74	(+1)
Cardiff	26,6	111	34		-73	(+1)
Glasgow	22,2	110	34		-73	(+1)
London	27,5	112	34		-74	(+1)
Manchester	25	111	34		-74	(+1)
Newcastle	23,2	109	33		-73	(+1)

Country/City	Elevation EL [°]	LNB 1 13°E	LNB 2 19.2°E	-X [mm]	LNB 4 28.2°E	Y
		+X [mm]	+X [mm]		-X [mm]	
Ireland						
Dublin	23,8	109	33		-72	(+1)

Table 3**TD 110****X [mm] = LNB mounting distance from the center of the Multiblock**

Country/City	Elevation EL [°]	LNB 1 1°W +X [mm]	LNB 2 5°E +X [mm]	LNB 3 13°E -X [mm]	LNB 4 19.2°E -X [mm]	Y
Denmark						
København	26.4	145	58	-55	-146	0
Skagen	24.4	145	58	-55	-145	0
Sønderborg	27.4	146	58	-56	-146	0
Rønne	27.0	145	58	-56	-146	0
Ringkøbing	26.1	146	58	-55	-145	0
Vejle	26.5	146	58	-55	-146	0
Norway						
Bergen	21.5	144	58	-55	-143	0 - (+1)
Bodo	14.2	141	56	-54	-141	0
Oslo	22.0	144	58	-55	-144	0
Tromsø	11.5	140	56	-53	-140	0
Trondheim	18.2	143	57	-54	-143	0
Haugesund	22.5	145	58	-55	-144	0 - (+1)
Sweden						
Goteborg	24.3	144	58	-55	-145	0
Kiruna	13.3	140	56	-54	-141	0 - (-1)
Lulea	15.4	140	56	-54	-142	0 - (-1)
Malmö	26.6	145	58	-55	-146	0
Stockholm	22.2	143	57	-55	-144	0
Sundsvall	19.1	142	57	-54	-143	0
Ostersund	18.5	142	57	-54	-143	0
Linköping	23.4	144	58	-55	-145	0
Finland						
Helsinki	20.5	140	57	-54	-143	0 - (-1)
Turku	20.6	141	57	-54	-144	0 - (-1)
Tampere	19.3	141	57	-54	-143	0 - (-1)
Oulu	15.6	140	56	-54	-142	0 - (-1)
Iisalmi	16.7	139	56	-54	-142	0 - (-1)
Jyväskylä	18.3	140	56	-54	-142	0 - (-1)
Lappeenranta	19.0	139	56	-54	-142	0 - (-1)

Table 3
TD 110

X [mm] = LNB mounting distance from the center of the Multiblock

Country/City	Elevation EL [°]	LNB 1	LNB 2	LNB 3	LNB 4	Y
		13°E	19.2°E	23.5°E	28.2°E	
		+X [mm]	+X [mm]	-X [mm]	-X [mm]	
Germany						
Berlin	29,5	119	29	-33	-100	0-(+1)
Bonn	30,4	118	28	-32	-98	0-(+1)
Hamburg	28	118	28	-32	-99	0-(+1)
Hildesheim	29,4	118	28	-32	-99	0-(+1)
Leipzig	30,7	119	29	-33	-100	0-(+1)
Munchen	34	120	29	-33	-100	0-(+1)
Stuttgart	32,8	119	28	-33	-99	0-(+1)

Country/City	Elevation EL [°]	LNB 1 13°E	LNB 2 19.2°E	LNB 4 28.2°E		Y
		+X [mm]	+X [mm]	-X [mm]	-X [mm]	
UK						
Belfast	22,8	124	38		-82	(+1)
Birmingham	26	126	38		-83	(+1)
Cardiff	26,6	125	38		-83	(+1)
Glasgow	22,2	125	38		-83	(+1)
London	27,5	126	38		-84	(+1)
Manchester	25	126	38		-83	(+1)
Newcastle	23,2	124	38		-82	(+1)

Country/City	Elevation EL [°]	LNB 1 13°E	LNB 2 19.2°E	LNB 4 28.2°E		Y
		+X [mm]	+X [mm]	-X [mm]	-X [mm]	
Ireland						
Dublin	23,8	124	38		-82	(+1)