user manual

BP 6 GT

Pani

The Company for Stage Lighting and Projection

Version of July 2010

CONTENTS

Slide projection is also a philosophical issue:

Slides can produce images to linger, relax and rest.

**In times, when fast moving video clips are consumed daily,
a large and fully detailed image slide projection –
often using handpainted or handcolored artwork –
can represent a sensible antipole.**

**It can transport messages and contents to reach inner layers
of human beings and so decrease
today's contemporary thrill and agitation.**

**We therefore strongly believe in its right to have
a leading role in today's cultural happening.**

Sincerely your PANI-Team.

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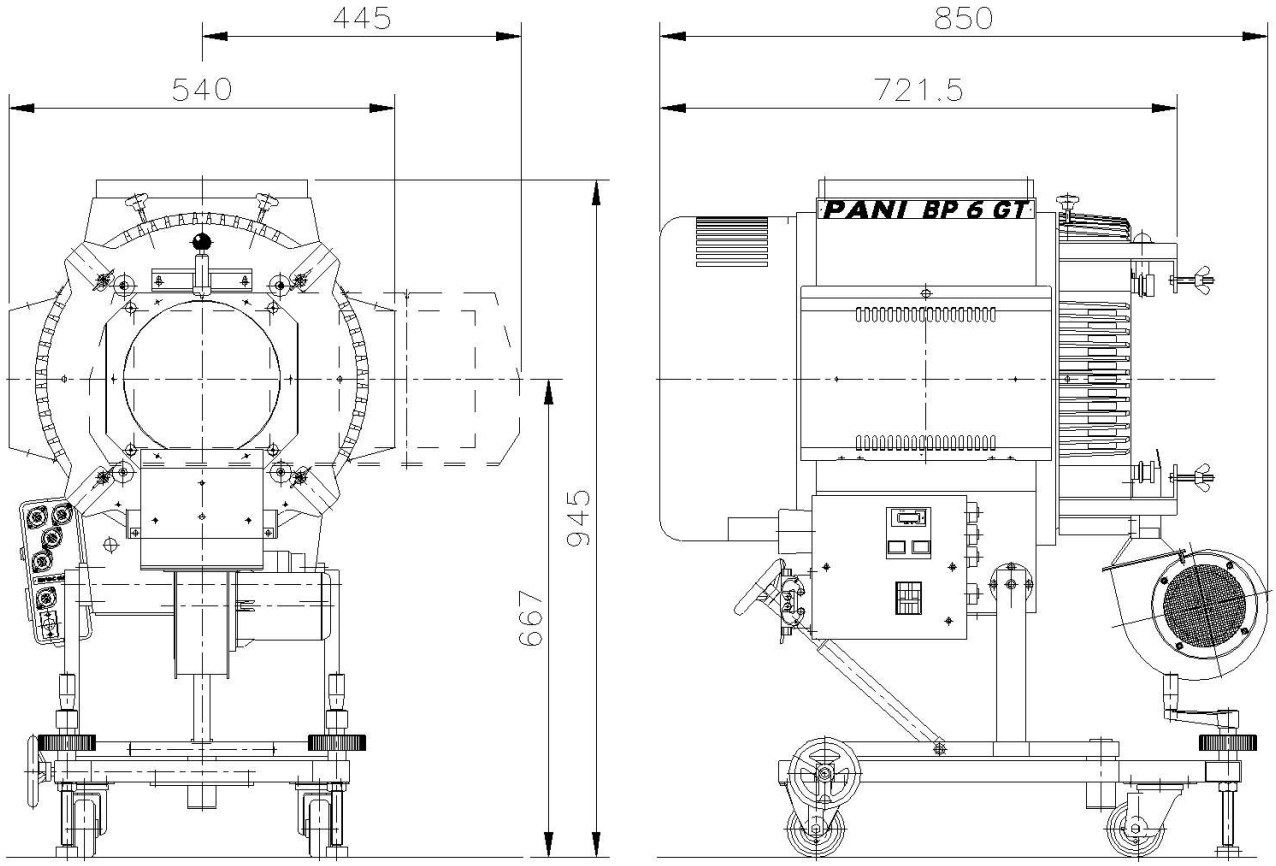
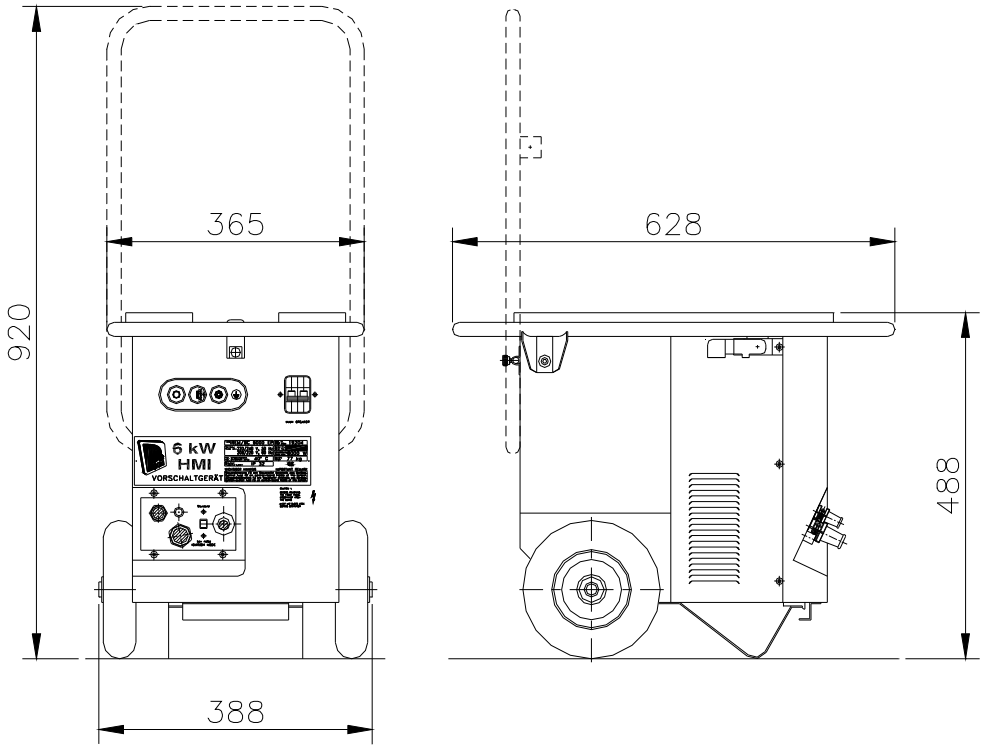
1) Dimension Drawing

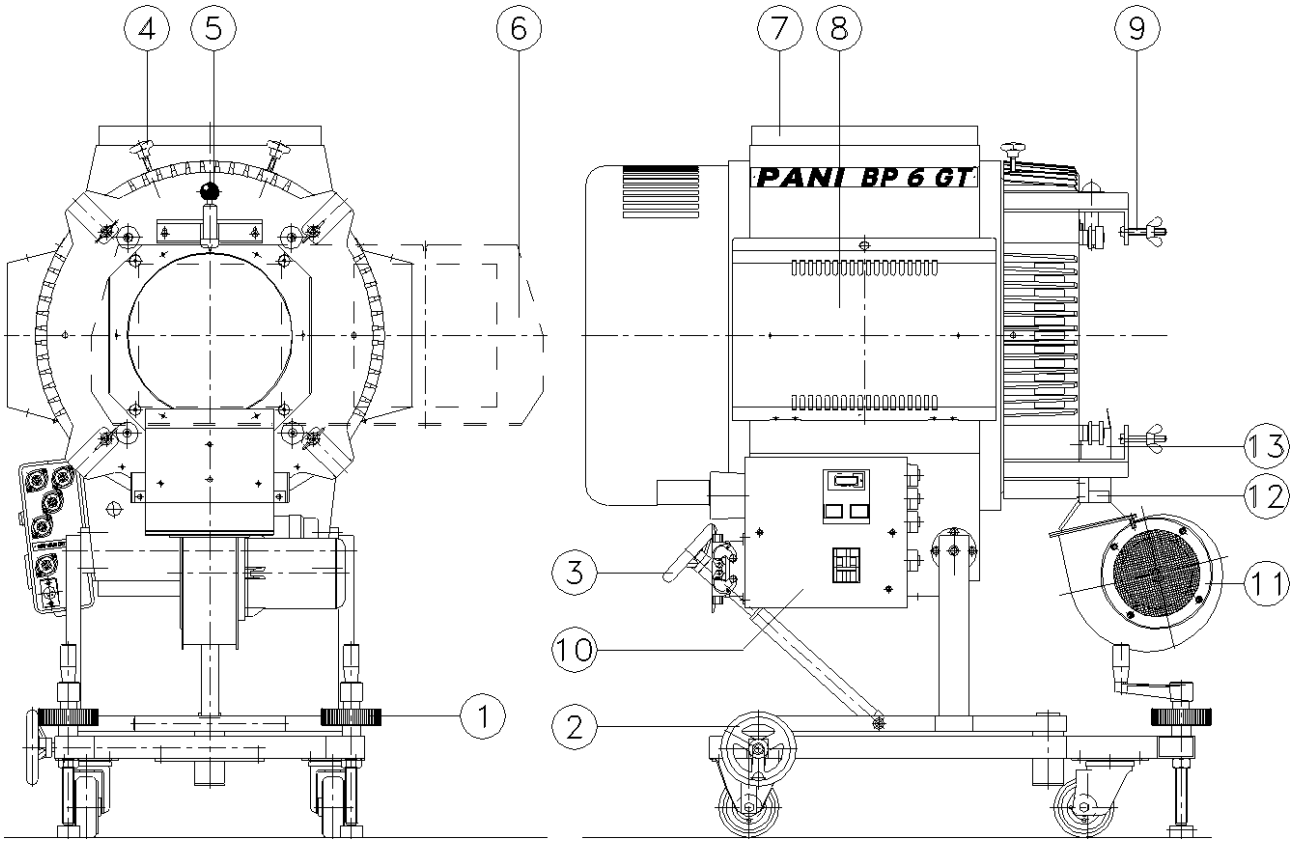
High Performance HMI Stage Projector BP 6 GT



Ballast



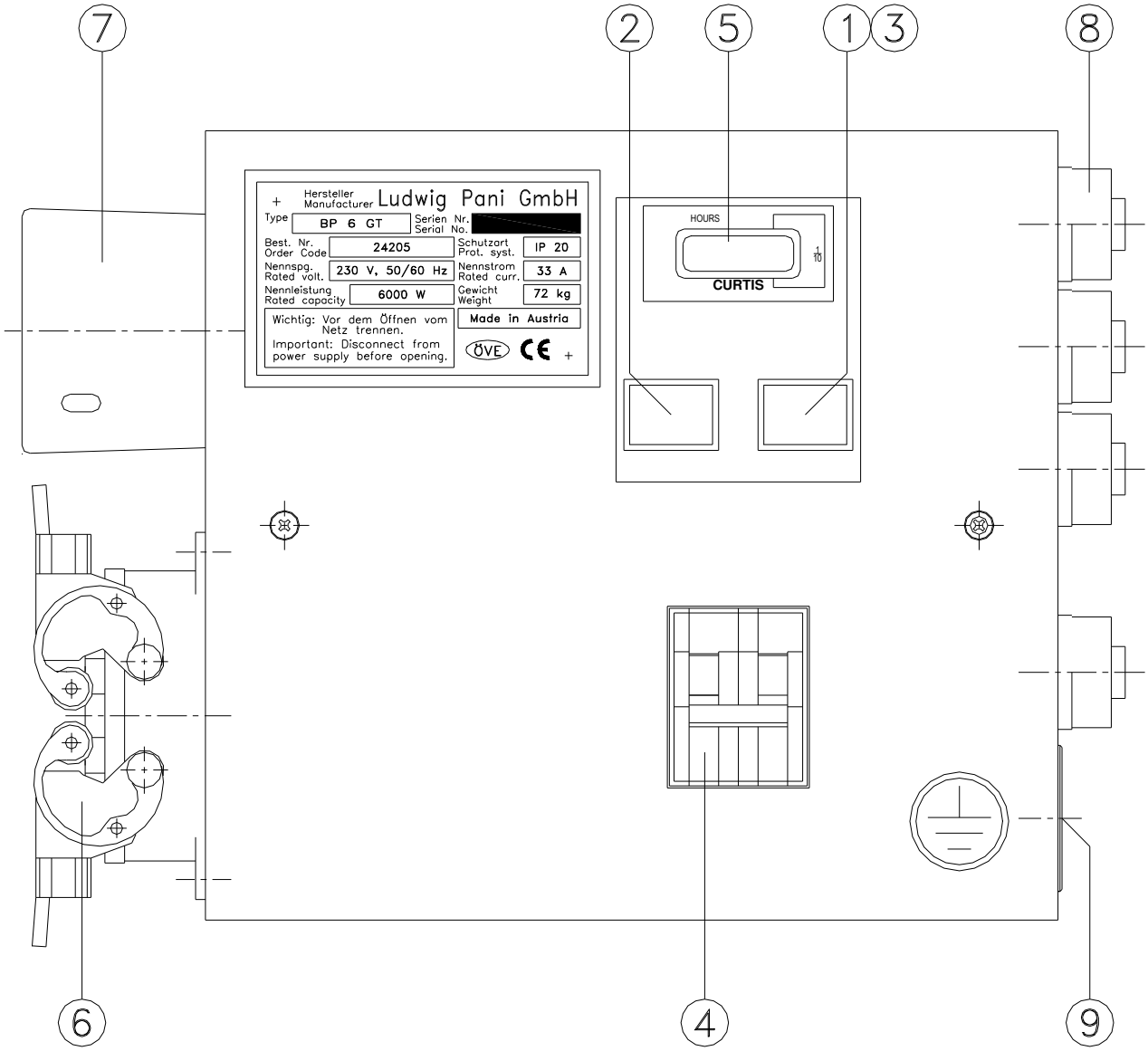
2.1) Position Drawing – Projector



Legend

(1) Lockdown Spindles
(2) Side Adjustment (Pan)
(3) Height Adjustment (Tilt)
(4) Locking Bolts for Front Condenser Lens Support
(5) Slide Carrier Position Locking Pin
(6) Slide Carrier
(7) Housing Cover
(8) Lamp Access Cover
(9) Objective Lens Support Bolts
(10) Control Panel on the Projector
(11) Centrifugal Blower
(12) Slide Ventilator Duct
(13) Mounting Yoke for Slide Ventilator Duct

2.2) Position Drawing – Control Panel on the Projector

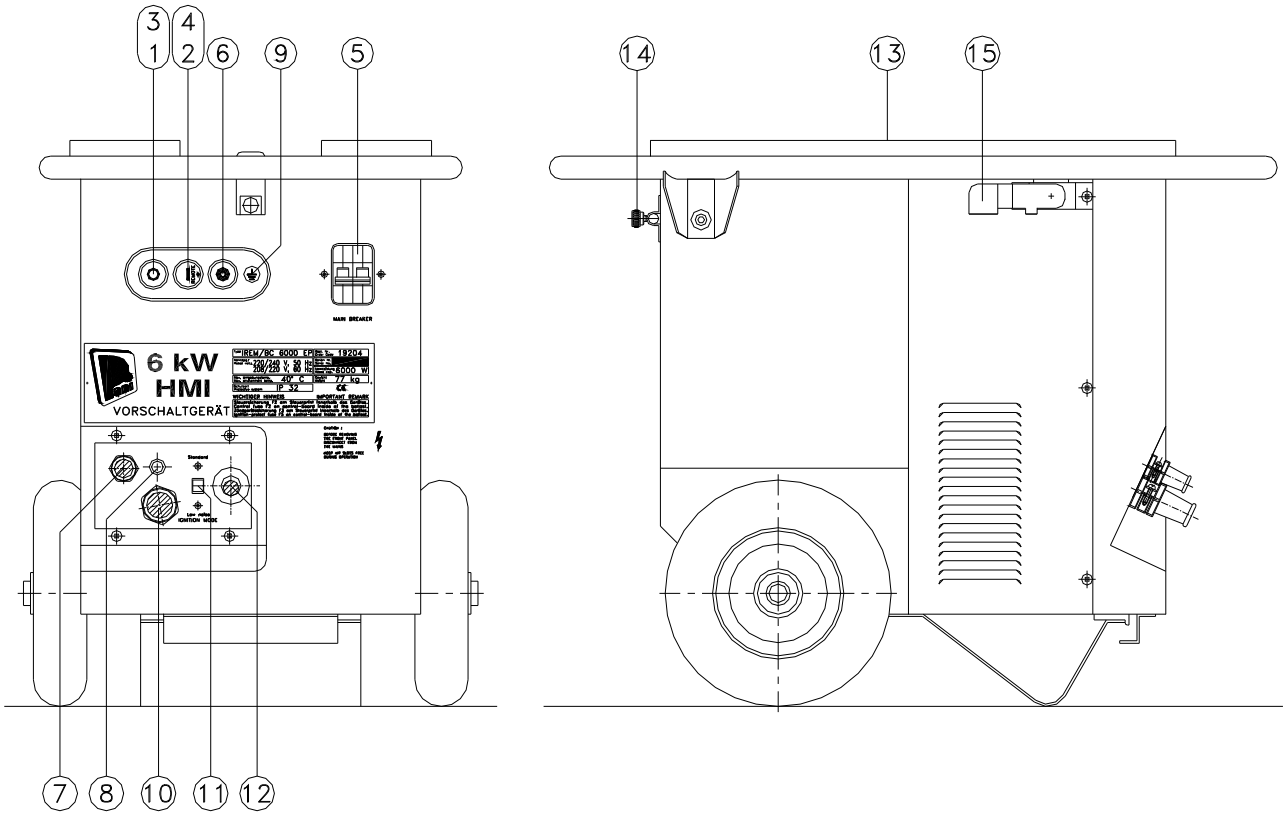


Legend

(1) Power Indicator Lamp
(2) “ON” - Pushbutton (Green)
(3) “OFF” – Pushbutton (Red)
(4) Circuit Breaker 2 pole 10A for Fans and Accessories (Air Conditioner)
(5) Hour Counter
(6) Control Connector
(7) Lamp Power Connector
(8) Accessory Connectors (Phase, Neutral, Groand) 4 pole Amphenol
(9) Remote Ignition (4 – pole XLR)

3) Ballast

3.1) Position Drawing – Ballast



Legend

(1) Power Indicator Lamp
(2) “ON” - Pushbutton (Green)
(3) “OFF” – Pushbutton (Red)
(4) Remote Mode Switch (Remote Ignition)
(5) Main Circuit Breaker
(6) Ground Test Pushbutton
(7) Control Cable to Projector
(8) Control Fuse F1
(9) Ground Indicator Lamp
(10) Lamp Power Cable to the Projector
(11) Low Noise Ignition Mode Switch
(12) Main Power Cable
(13) Voltage and Frequency Selector for Ballast BC 6000/E
(14) Vertical Transport Grip Release
(15) Horizontal Transport Grip Release Clip

3.2) Control Panel on the Ballast

(1) **Power Indicator lamp**
Illuminated when power is connected to the ballast

(2) **ON- Push-button (green)**
When the "ON" - Push-button is momentarily pressed, the ignition cycle is activated and high voltage is applied to start the HMI lamp

(3) **OFF- Push-button (red)**
Lamp voltage is interrupted. It is recommended that the unit be allowed to cool down a few moments before re-ignition

ATTENTION: Re-ignition within 10 seconds of shut down is not possible.

(4) **Remote Switch** (remote ignition)
When the switch is rotated 90°
(remote mode) ignition is automatic, when power is applied

(5) **Main Circuit Breaker**
2-pole Magnetic Circuit Breaker

(6) **Ground Test Indicator**
When depressed the indicator glows yellow indicating correct polarity and grounding.

(8) **Control Fuse** F1, 10 AT

(9) **Ground Indicator Lamp**
see 6.)

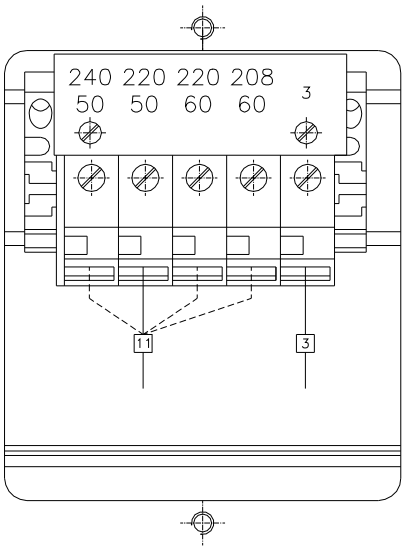
(12) **Low- Noise Switch**
In Low-Noise mode, silent ignition of the lamp is possible

(13) **Main Connection Cable**
3x 6^2, 2m long with open leads.

3.3) Voltage and Frequency Selection on the Ballast BC 6000/ E

ATTENTION: Disconnect Power to the Ballast

The cover on the top of the Ballast [Pos.3.1/ (13)] can be opened to change the operating voltage and frequency by connecting the wires to the appropriate terminals (11)



POSITION NUMBERS SEE PAGE 6

4) Construction

4.1) Mechanical Construction of the Projector

The sheet metal housing is supported in a stable, mobile Undercarriage. When the unit is moved into position, the front casters may be lifted off of the floor by means of two front spindle jacks (1), which prevent the unit from moving. For horizontal adjustment, a hand-wheel (2) is provided at the right rear side of the Undercarriage, The hand-wheel for tilt adjustment (3) is located at the back of the unit. The image plane with slide carrier can be rotated +/- 45° , by loosening the two clamping bolts (4) +/- 45°. The 18x 18 cm slide individually can be exactly adjusted with the aid of adjustment screws on the slide carrier (6). The slide carrier is held in exact position by means of a spring loaded locking pin (5). By lifting the ball knob (5), the slide may be freely moved into the new position where it locks into position automatically.

5) Operation

5.1) Installation of the HMI- Lamp

For operation of the projector, a double ended HMI- Lamp 6000 W is required. Order Code: 37204
a) Disconnect power from the projector.
b) Open the quick fasteners for the left and right lamp access covers with a screwdriver on both sides of the housing (8). Built in safety switches prevent an accidental operation of the unit when the housing is open.
c) Remove the wing nuts and washers on the lamp cable terminals on both sides of the unit
d) Open the heat sink clamps fully with the fluted knobs on both sides of the unit
e) Guide the lamp through the open housing set it into the open heat sink lamp terminals.

ATTENTION:

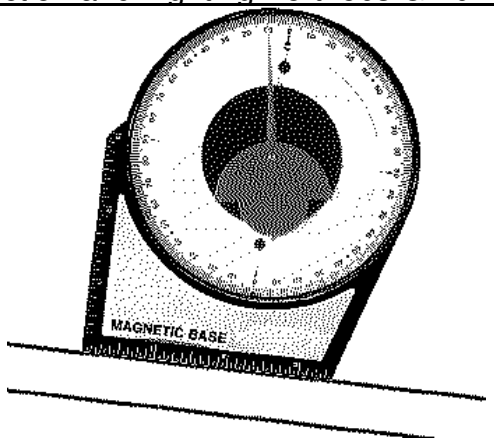
- Do not touch the quartz envelope of the lamp with your fingers during installation. Finger prints can be burned in!!
- Position the lamp such that the fill port is in the direction of the reflector.
- Lamp must be positioned along the optical axis, symmetrically in the heat sink clamps.
- Keep the triangular part beneath the lamp clean. Control frequently, at least at each changing of the lamp. In case of fouling clean with methylic alcohol.

f) Hand-tighten the terminals with the star grip bolts. Be sure that no rotational or lateral stress is placed on the quartz envelope of the lamp.
g) Place the lamp cable shoes on the lamp cable terminals, replace the washers and hexagonal nuts and securely tighten.

ATTENTION:
Be sure all connections are secure before closing the lamp access covers and check it after each transporting the projector too !!!

POSITION NUMBERS SEE PAGE 4

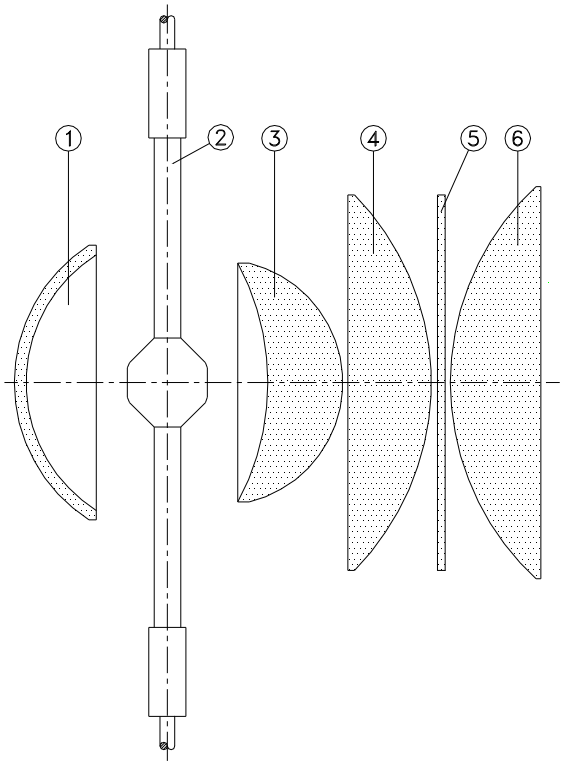
5.2) Using the Tilt Angle Meter



For safe operation it is necessary to respect the tilt range of the projector (see General Technical Data on page 16).
Use the delivered Tilt Angle Meter by applying it on the top edge of the projector (before operation). The red locator indicates the actual tilt angle.

6) Condenser System BP 6GT

Position Drawing



Legend

		Order Code:
(1)	Spherical Cold Mirror, Ø 165 mm	100-15-19
(2)	HMI-lamp 6000W GS double ended	37204
(3)	Meniscus Lens, Ø 147 mm	222-03-05
(4)	Middle Condenser Lens, PC Ø 220 mm/R 156,1	46217
(5)	PANI-Universal Filter Ø219 x 4	12046
(6)	Front Condenser Lens for Objective Lens 11-27 cm, PC Ø 230 mm, multicoated, with Mounting Plate	12440
	Front Condenser Lens for Objective Lens 33-40 cm, PC Ø 230 mm, multicoated, with Mounting Plate	12441
	Front Condenser Lens for Objective Lens 50-60cm, PC Ø 230 mm, multicoated, with Mounting Plate	12442
	Front lens for lenses 80-125 cm, PC Ø 230 mm, multicoated, with Mounting Plate	12443

7) Electrical Connection

(See Electrical Schematic 100- 05-35 on page 13)
The High Performance- HMI- Stage Projector BP 6 GT is used in conjunction with the Universal- Ballast BC 6000/ E (Order Code: 19204). The ballast incorporates a choke which limits lamp power to 60 A. Main power is interrupted when the projector housing is opened.

7.1) Main Connection

Universal- Ballast 6000 W, 220/ 240 V- 50 Hz, 208/ 220 V- 60 Hz with 2 m main power cable 3x 6 mm^2 with open leads, Hot R: brown, Neutral N: blue, Ground PE: yellow/ green. Connected to power source 50 A

7.2) Connecting Cables Ballast- Projector

On the Universal- Ballast is a lamp power cable with a PANI stage coupling 63A/250V and a control cable with a 10- pole connector installed. The standard length is 3 meters (This can be extended but must be tested if extremely long runs are required.). Both cables are connected to the projector with mating connectors on the lamp housing. The "ON" function can be performed at either the ballast or the projector. Thus, it is possible to locate the ballast away from the projector.

7.3) Remote Ignition - DMX 512

For ignition and shut down of the projector by a DMX 512 signal, a relay card and associated DMX In connector are located on the projector (Ignition Pos. 9). In addition the optional Universal DMX 512 interface and the corresponding ignition cable are necessary (for further information see the instruction manual of the Universal DMX 512 Interface).

POSITION NUMBERS SEE PAGE 5

8) Objective Lenses

8.1) Front Condenser Lens

(see also Page 10, Pos.6) Condenser System: Position Drawing
In the BP 6 GT there are 4 different front condenser lenses to choose from, depending on the focal length Objective Lens required. These are as follows:

Front Condenser Lens for Objective Lens es 11-27 cm, PC Ø 230 mm, multicoated, with Mounting Plate	Order Code: 12440
Front Condenser Lens for Objective Lens es 33-40 cm, PC Ø 230 mm, multicoated, with Mounting Plate	Order Code: 12441
Front Condenser Lens for Objective Lens es 50-60cm, PC Ø 230 mm, multicoated, with Mounting Plate	Order Code: 12442
Front lens for lenses 80-125 cm, PC Ø 230 mm, multicoated, with Mounting Plate	Order Code: 12443

8.2) Projection Objective Lenses

Optional projection Objective Lens es (focal lengths from f=11 to 125cm and ZOOM Objective 25 – 60cm) are mounted on the four support bolts on the front of the projector. Each lens is fixed in place by four wing nuts. The focal length (f=) depends upon the projection distance and desired picture size. This is illustrated further with the aid of the projection diagram. Focus is achieved by sliding the Objective Lens forward or back along the optical axis. The focus position is fixed in place by two milled nuts located on either side of each Objective Lens .

8.3) Effect- and Vario-Objective

To enhance the system of projection Objective Lens es, effects and vario-Objective Lens are available. Effects Lenses (focal lengths of f=80/100 mm, 150 mm, 180 mm, 250mm and 310 mm) provide a strong light output with good color correction, and may be used where an increase in depth or specific distortions are desired.
With the aid of the vario-Objective Lens [focal lengths of f=20-40 cm (motorized) and f=30-60 cm manual it is possible to enlarge or reduce image size. With the f=20 – 40 cm / motorized it is possible to change the image size at different speeds.

IMPORTANT NOTES

WHEN USING WIDE ANGLE LENSES (11-18cm) TOGETHER WITH A GREY SCALE OR A BLACK OUT SHUTTER

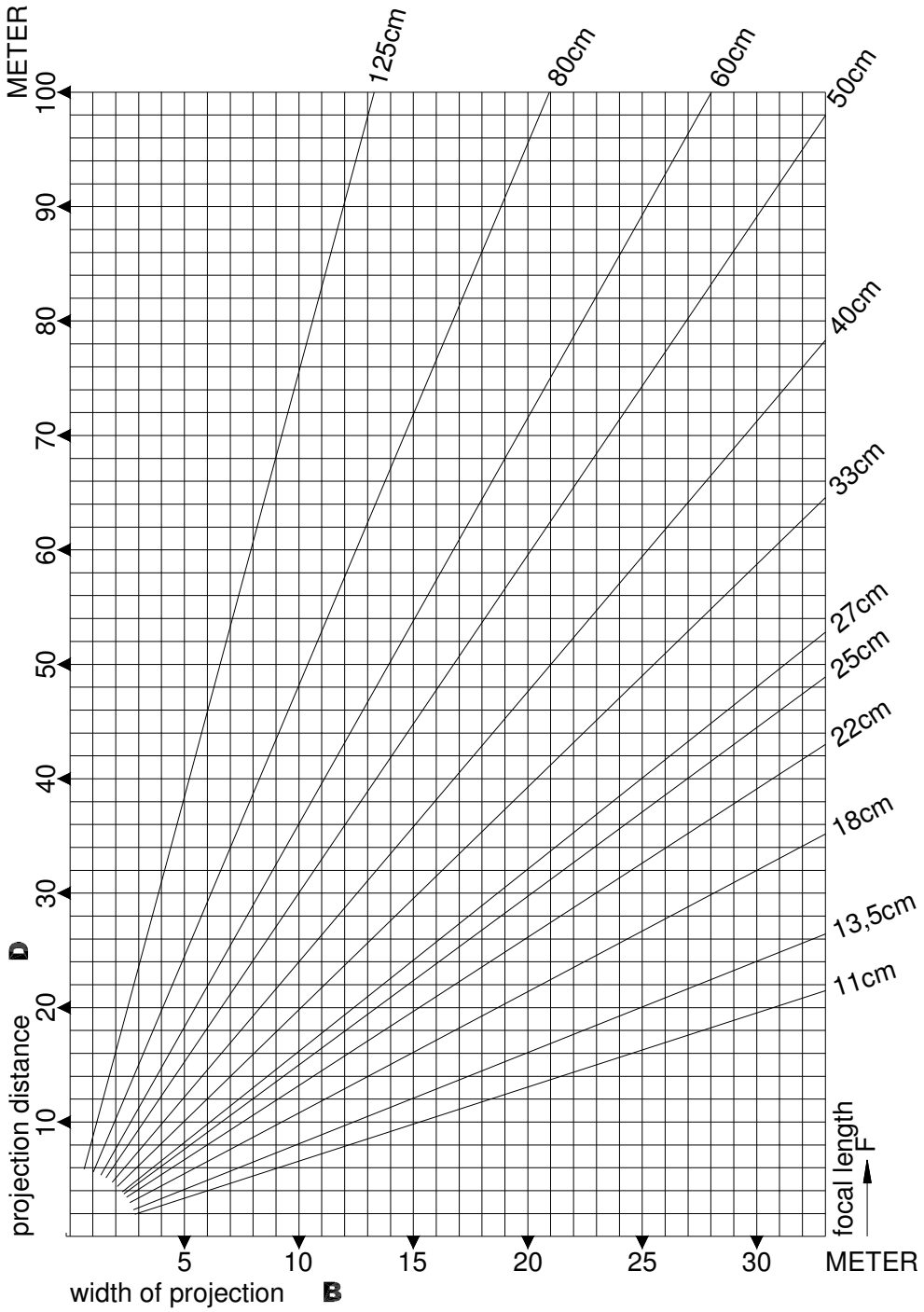
The projector must **never** be operated without a slide, with dimming shutters closed for longer than one minute

GENERAL SAFETY:NOTE

For safety reasons the projector must NEVER be used without an Objective Lens

9) Projection Diagram

for O= 17cm



calculating formulas

$F = \frac{O \times D}{B + O}$	$B = O \times \left(\frac{D}{F} - 1\right)$	$D = F \times \left(\frac{B}{O} + 1\right)$	$O = \frac{B \times F}{D - F}$

F ... focal length of projection lens
B ... width of the image
D ... projection distance (measured from the middle of the objective lens)
O ... object size (i.e. the used slide format)

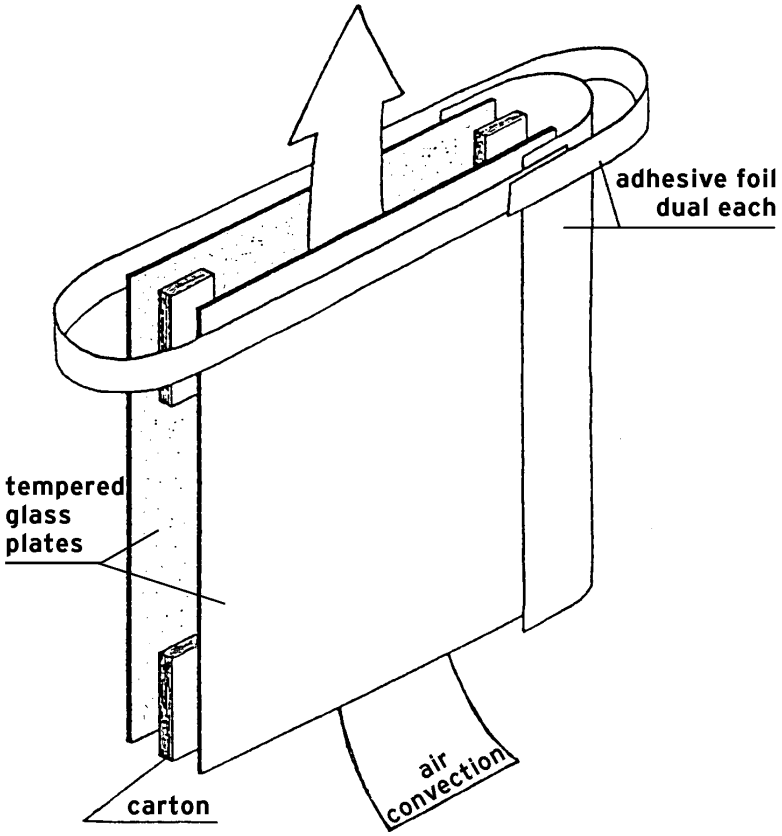
used slide format (O)= 17cm for glass slides
15,5cm for filmholder

10) Slide (Transparency) Material

Because of the ever changing available film materials, we do not wish to suggest any specific type. Our best recommendation however comes from our own experience with film type Agfaclear (from Agfa), type Duraclear (from Kodak) and type Ilfochrome (from Ilford). We can suggest that only professional photo labs who will care for your work be used. Not only for which development process is used but also the quality.
Since short times also budget-priced ink jet printed foils are used to make slides.
Please infourm yourself about actuals on our homepage (www.pani.com). In the download area you´ll find the latest information.

Photographic transparencies should not be mounted between glass. The heat build-up will be such that the slides will be destroyed. Necessary cooling of photographic transparencies can only be guaranteed when using Special Slide Frames (Order code: 12802 for 18 x 18 cm).
For simple and fast mounting in these frames we recommend the use of the Special Slide Punching Machine (Order code: 12801 for 18 x 18 cm slides).

With hand painted slides, two glass plates are required such that the hand painted side is protected by a cover glass. An air gap of 1mm is achieved by placing 4 cardboard strips between the plates at the corners. The assembly is held together with two strips of tape as shown below.



General remark:
If possible, insert the slide with the layer averted from the projector to protect the layer!

11) Ventilator Cooling

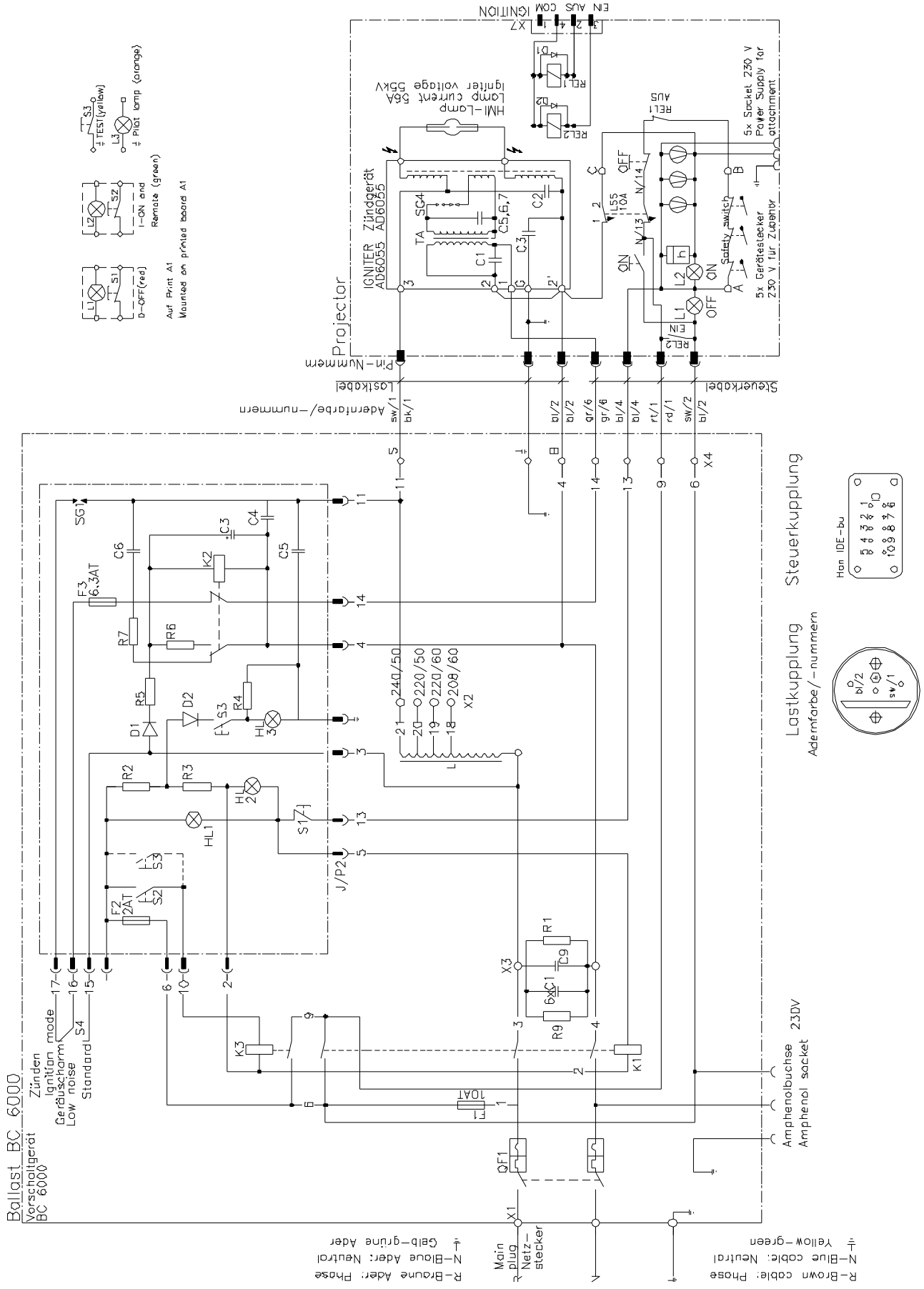
POSITION NUMBERS SEE PAGE 4

The slide cooling ventilator– consisting of a centrifugal blower (11) and a slide cooling air duct (12) – is mounted by two screws using standard position. But there are two more holes below.
Use this holes to mount the cooling unit in the case of using the following accessories:
Slide -changers AMD 15 and AMD 32, Film Scroller AS 100 and Rotation Attachment.

The new Film Scroller CS 70 has its own integrated film cooling. In this case it is necessary to remove the standard ventilator cooling from the unit.

12) Electrical Schematic

(Drawing No.: 100- 15-35a)



13) Basic Unit as Delivered

1HIGH PERFORMANCE HMI STAGE PROJECTOR BP 6GT
with rolling Undercarriage
1Universal-Ballast 6000W, Type: G 602 Order Code: 19204
220/ 240V-50Hz, 208/ 220V-60Hz
with 2 m power cable 3x 6 2 with open leads,
3 m lamp power cord with PANI stage connector 63A/ 250V
and 3 m control cable with 10-pole connector
HMI-lamp 6000W-GS
1 Front condenser lens, of choice for 11-27cm, 33-40cm, 50-60cm or 80-125cm
1 Dual slide carrier for 2 projection slides 18x 18 cm
Test slide with raster grid on tempered glass 18x 18 cm, Order Code: 12805
1 Adjustable slide mask-standard, Order Code: 12019
1HMI-lamp 6000W-GS Type: H 1601 Order Code: 37204
1 Raster Pad, Type: G 1583
1 Dark slide, (for the protection of the Dimming Shutter), Type: G 1581
1 Tilt Angle Meter
1 User Handbook
1 Pani "Effect " brochure

14) Accessories

Description	Type:	Order Code:
HMI-lamp 6000W-GS		37204
Interchangeable Front Condenser Lens for objective f= 11 cm - 27 cm, multicoated, Ø 230 mm		12440
Interchangeable Front Condenser Lens for objective f= 33 cm and 40 cm, multicoated, Ø 230 mm		12441
Interchangeable Front Condenser Lens for objective f= 50 cm and 60 cm, multicoated, Ø 230 mm		12442
Interchangeable Front Condenser Lens for objective f= 80 cm and 125cm, multicoated, Ø 230 mm		12443
Ventilator for Dimming Shutter G 405/II and for wide-angle lenses 11-18 cm with Dimming Shutters G 405/PCS and G405-PCS-II-DMX		12004
Dimming Shutter PCS -III-DMX with Processor Control for Grey scale plates 20,5x 22 cm, inc. Control Box 120/ 230 V- 50/ 60 Hz, external control 0 - +/- 10 VDC and 120/ 230 VAC phase clipped dimmer output voltage, DMX-control, dampening electronics for smoothing of 8 bit control voltage steps, Selectable linearity, incl. Extension Rails for use with Objectives f= 11- 27 cm	G 405/ PCS	22704
BOS Black Out Shutter for simple shutting and short shutting time incl. Extension Rails for use with Objectives f= 11- 27 cm		22705
Interchangeable - Extension Rails,		
1 Pair for use with Objective Lens f= 11- 13,5 cm (BOS)		12010
1 Pair for use with Objective Lens f= 11- 27 cm (PCS) 18-27cm (BOS)	G 405/ 27	12011
1 Pair for use with Objective Lens f= 33- 40 cm, 80 cm and 125 cm	G 405/ 40	12012
1 Pair for use with Objective Lens f= 50 cm and Vario- f= 20- 40 cm	G 405/ 50	12013
1 Pair for use with Objective Lens f= 60 cm and Vario- f= 30- 60 cm	G 405/ 60	12014

Description	Type::	Order Code:
Film Scroller CS-70 DMX-, PC- or automated driven film moving unit for up to 70 slides or scenes up to 13m usable film per cassette		12520
Automatic Slide Changer- 32/ Random Access for 32 slides in one Magazine, Interchangeable, commands forward, back and reset position, 2 speeds, 2 control possibilities: either +10 VDC, dry contact, DMX 512 or RS 232 (UMC) with Random Access capability and analog output 0 bis 10 VDC for Dimming Shutter, Power source 120/ 230 VAC, including AMD- slide frames and Universal- Mount	AMD-32	12511
Extra- Universal- Mount For mounting AMD- 15, A 32 and AS 100 on all projectors with slide format 18x 18 cm		12503
Motor Drive for Slide Carrier 18x 18 cm For remote changie of 2 slides in the standard- Slide Carrier, Control via dry closure (Dimmer Controlled Switching Unit)		12502
Dimmer Controlled Switching Unit for Endless- Slide Changer and AMD- 15 with function +1 and Reset, ie. Forward, back/ reset, controlled by a regulated circuit or 0 - +/- 10 VDC		15201
Film Mounting System for 18x 18 cm Film Slides		12801
Slide Frame 18x 18 cm for Film Slides		12802
Tempered Glass Plate 18x 18 cm		12803
13x13 cm		12804
Reducer Frame from 18x 18 cm to 13x 13 cm		12015
Test Slide with Raster on tempered glass 18x 18 cm		12805
Divertor Mirror for HMI- Projectors with Dimming Shutter G 405/ II, G 405/ PCS or G 405 PCS-II-DMX		12017
Adjustable Slide Mask for AMD- 15/ RA and motor drive for Slide Carrier		12020
Aluminum Tape for Double Glass Slides 19 mm wide, 55 m long		32812
High-performance- Objective Lens f= 11 cm/ 1: 1,8	G 903/II	12413
High-performance- Objective Lens f= 13,5 cm/ 1: 1,8	G 904/II	12414
High-performance- Objective Lens f= 18 cm/ 1: 2,4	G 918/II	12415
Objective Lens f= 33 cm/ 1: 2,8	G 907	12417
Objective Lens f= 27 cm/ 1: 3	G 908	12418
Objective Lens f= 40 cm/ 1: 3,6	G 910/II	12420
Objective Lens f= 50 cm/ 1: 3,8	G 911/II	12421
Objective Lens f= 60 cm/ 1: 3,8	G 912	12422
Objective Lens f= 80 cm/ 1: 4,5	G 913	12423
Objective Lens f= 125 cm/ 1: 7,6	G 914	12424

Description	Type::	Order Code:
ZOOM- Projection Objective Lens 25- 60 cm/ 1: 2,7- 3,9		
without motor drive		12433
Effect Lens f= 85/ 100 mm	G 951	12426
Effect Lens f= 110 mm, wide angle	G 952	12427
Effect Lens f= 150 mm	G 953	12428
Effect Lens f= 180 mm	G 954	12429
Effect Lens f= 250 mm	G 957	12430
Effect Lens f= 310 mm	G 958	12431
Effect Vario- Objective Lens f= 20- 40 cm-		
with motor drive 230 V, including Control Box	G 915	12432
Effect Vario- Objective Lens f= 30- 60 cm- manual	G 916	12425

A wide range of effect devices can be seen in our "Effects" brochure

15) General Technical Data

Tilt range of the Projector: vertically:

Limited by undercarriage	10° up
	25° down
permitted during operation	±90°
Pan adjustment (undercarriage)	±7°

Protection Class: IP 20
Ambient Operating Temperature: max. 30°

Weight:	unpacked	packed
Projector:	72 kg	93 kg
Ballast:	76, 5 kg	87 kg

Carton Dimensions:
Projector: 80x 65x 108 cm
Ballast: 75x 48x 75 cm

Ballast:

Supply Voltage:	220/ 240 V- 50 Hz
	208/ 220 V- 60 Hz
Supply Current:	37 A
Circuit Rating:	50 A

Lamp

Wattage	6000 W
Rated Life	500 hours
Color Temperature	6000 K
Lumen Output	570 000 lm
Lamp Voltage	123 V
Lamp Power	55 A
Lamp Base	S 25,5
Ignition Voltage	55 kV

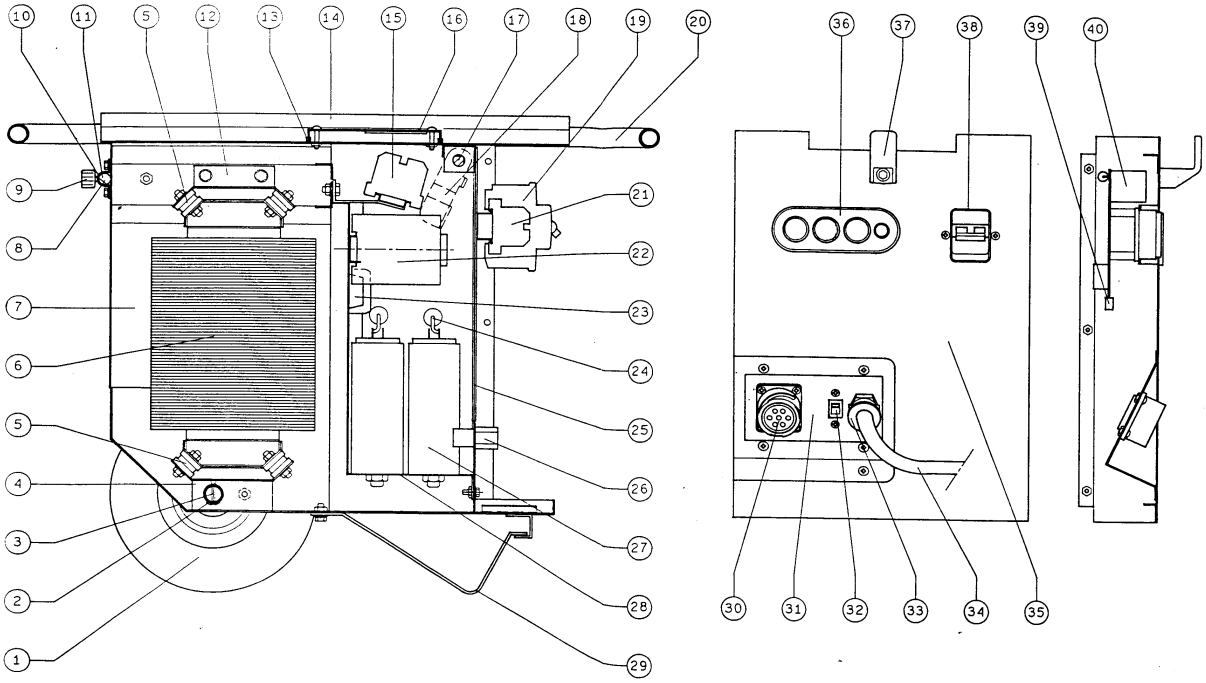
16) Spare Parts

BP 6 GT Main Assy. No.: 100-

Description	Order Code:	Qty./Unit
Undercarriage	Main Assy. No.: 68- 01-	
Casters	MD 80 KB	2
Wheels	MDF 80 KB	2
Hand Wheel	DIN 950- AL- 100- B12- A	2
Lift –off Spindle	68- 28- 04/a	2
Pressure Piece	DIN 6311- 32- S	2
Disc Grip	GN 226/80/M16	2
Complete tilt adjustment including Upper mounting bracket and lower support	68314- 6831 PN 1011, hand-wheel	1
Condenser Carrier	Main Assy. No.: 68- 02-	
Objective Lens Supports	PN 1024	4
Wing Nuts	DIN 315- M8	4
Cross Grip Bolts	GN 6335. 4- SK- 32- M6- 50	2
Flat Milled Nuts	DIN 467- M4	4
Housing	Main Assy. No.: 68- 03-	
Hinges for Lamp Access Doors	68- 05- 48	4
Side Locks (available as a set)	68- 05- 14/c	1 left + 1 right
Switch Brackets for (available as a set)	69- 05- 15/a	2
Safety Switch complete	68- 36-	2
Bracket for Control Box	68- 05- 46	1
Lamp Base	Main Assy. No.: 91- 18-	
Lamp Base left and right complete	91- 18-	1 left + 1 right
Heat Shield for Cooling Fins (half circle)	91- 18- 07	2
Heat Shield (angularly)	100-15-28	2
Cross Grip Bolts	GN 6335. 4- SK- 32- M6- 35	2

Description	Order Code:	Qty./Unit
Electrical Materials	Main Assy. No.: 100- 01-	
Igniter	22-0167/US	1
Cables for Igniter l= 320 mm 2x	1x 6^2	2
Tangential Blower (mounted left)	21-0058	1
Tangential Blower (mounted right)	21-0059	1
Tangential Blower (igniter area)	32-0053	1
Thermo switch 90°	331-528	1
Lamp Carriage	Main Assy. No.: 100- 06-	
Lamp Carriage complete	100- 06-1-	1
Reflector Springs	100-15-15/a	3
Spherical Cold Mirror - Diameter 165 mm	100-15-19	1
Lamp Supports	100-15-08	2
Optical Materials	Main Assy. No.: 100- 03-	
Plano-convex for lens 11-27 cm	Ø 230/ 300MC	1
Plano-convex for lens 33-40 cm	Ø 230/ 360MC	(1 opt.)
Plano-convex for lens 50-60 cm	Ø 230/ 390MC	(1 opt.)
Plano-convex for lens 80 -125cm	Ø 230/ 500MC	(1 opt.)
Plano-convex (middle lens)	Ø 220/ 300BS	1
Meniscus Lens	Ø 147 222-03-05	1
PANI-universal filter	Ø 219x4 12046	1
Spherical Cold MIrror Diam.165 mm	100-15-19	1
Control Housing (Projector)	Main Assy. No.: 100- 04-	
Connector Housing / Pin Unit	432522 / 431756	1
Auxilliary Connectors 3- pole	31. 11. 000	5
„ON“ Pushbutton (green)	1111 PNF B5 220V N/KV	1
„OFF“ Pushbutton (red)	1105 PN B5 220V N/KR	1
Annex Housing HB. 10. AG- VS	100- 04- 11	1
Pin Inserts	HB. 10. Sti. S	1
Elapsed Hour Counter	1900. 00005 A0 220V 50Hz	1
Cover Insulation	Main Assy. No.: 100- 11- T	
Insulation complete	100- 11- T	2

Ballast BC 6000- EP



Pos.	Description	Order Code:	Qty./Unit
1	Tires	88941295	2
2	Wheels	82950308	2
4	Lower Choke Anchors	81105535	1
5	Shock Mounts	88941401	8
6	Choke	63090137	1
7	Housing	71011134	1
8	Latch	82931450	1
9	Knob	88941014	1
10	Latch Guide	81019530	1
11	Spring	86760043	1
12	Upper Choke Anchors	81105534	1
13	Voltage Selector	87530080	1
14	Upper Cover	71012222	1
15	Clamp SAK 16/ 35	84610165	5
16	Voltage Selector Cover	72000535	1
17	Handle Stop Pins	86802092	1
18	Handle Stop Yoke	81029531	1
19	Circuit Breaker Frame	88505250	1
20	Handle	71019511	1
21	Grounding Clamp	84610162	1
22	Circuit Breaker	88472201	1
23	Clip Strip	84620085	1
24	Resistor	88205275	2
25	Heat Shield	87305995	1
26	Fuse 2AT	88521021	1
26	Fuse 6,3 AT	88521061	1
27	Capacitor 75 F	88320080	6
27	Capacitor 40 F	88320041	1
28	Capacitor Mounting Plate	71104764	1
29	Spring Loaded Feet	81019505	1
32	Slide Switch	88901500	1
33	Cable Strain Relief	87534094	1
33	Cable Strain Relief nuts	87534098	1
34	Power Cable 2 m	93643061	1
35	Front Panel	71011980	1
37	Pushbutton Unit	74140003	1
39	Circuit Breaker Frame	87435204	1
41	Printed Circuit Card	78800560	1