



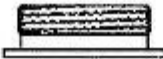
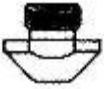
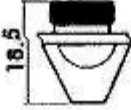
Consommable pour machine laser

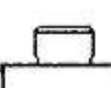
AMADA / 2009

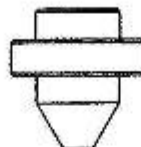
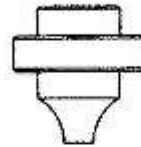
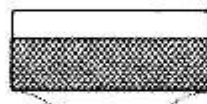
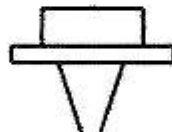
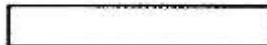


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Ref.-No.	Order-No.		
4690802	HG 10.617	 Ceramic part.....	
Consumables suitable for Amada Quattro			
6551218-1.4 6551218-1.5 6551218-2.0 6551218-2.5 6551218-3.0 6551218-3.8 6551218-4.0	HG 10.529 HG 10.522 HG 10.523 HG 10.524 HG 10.525 HG 10.528 HG 10.530	Nozzles with hard chromium plating  HS-WACS Double nozzle Ø 1,4 mm (71341682-1.4)..... HS-WACS Double nozzle Ø 1,5 mm (71341682-1.5)..... HS-WACS Double nozzle Ø 2,0 mm (71341682-2.0)..... HS-WACS Double nozzle Ø 2,5 mm (71341682-2.5)..... HS-WACS Double nozzle Ø 3,0 mm (71341682-3.0)..... HS-WACS Double nozzle Ø 3,8 mm (71341682-3.8)..... HS-WACS Double nozzle Ø 4,0 mm (71341682-4.0).....	
Consumables suitable for Amada Laser AHS 100			
	HG 10.511	 Nozzle adapter.....	
	HG 10.508 HG 10.509 HG 10.510 HG 10.506 HG 10.507	 Nozzle Ø 1,3 mm M10 x 1 chromium plated..... Nozzle Ø 1,5 mm M10 x 1 chromium plated..... Nozzle Ø 1,7 mm M10 x 1 chromium plated..... Nozzle Ø 2,0 mm M10 x 1 chromium plated..... Nozzle Ø 3,0 mm M10 x 1 chromium plated.....	
Consumables suitable for Amada HS 95			
	HG 10.561	 Disc head protection - VESPEL®.....	
	HG 10.562	Disc head protection - teflon 21,00mm.....	
1664545U-1.0 1664545U-1.2 1664545U-1.5 1664545U-2.0 1664545U-2.5 1664545U-3.0 1664545U-3.5 1664545U-4.0	HG 10.551 HG 10.555 HG 10.552 HG 10.553 HG 10.559 HG 10.554 HG 10.566 HG 10.550	Nozzles with hard chromium plating  Nozzle Ø 1,0 mm M12 x 1 Hard chromium plating... Nozzle Ø 1,2 mm M12 x 1 Hard chromium plating... Nozzle Ø 1,5 mm M12 x 1 Hard chromium plating... Nozzle Ø 2,0 mm M12 x 1 Hard chromium plating... Nozzle Ø 2,5 mm M12 x 1 Hard chromium plating... Nozzle Ø 3,0 mm M12 x 1 Hard chromium plating... Nozzle Ø 3,5 mm M12 x 1 Hard chromium plating... Nozzle Ø 4,0 mm M12 x 1 Hard chromium plating...	
	HG 10.548 HG 10.549	 Nozzle Ø 2,0 mm M12 x 1 Hard chromium plating... Nozzle Ø 3,0 mm M12 x 1 Hard chromium plating...	
1669864-1.2 1669864-1.4 1669864-1.5 1669864-2.0 1669864-2.5 1669864-3.0 1669864-3.8 1669864-4.0	HG 10.588 HG 10.589 HG 10.580 HG 10.582 HG 10.584 HG 10.587 HG 10.615 HG 10.586	Double nozzles with Hard chromium plating:  Double nozzle Ø 1,2 mm (7134162-1.2)..... Double nozzle Ø 1,4 mm (7134162-1.4)..... Double nozzle Ø 1,5 mm (7134162-1.5)..... Double nozzle Ø 2,0 mm (7134162-2.0)..... Double nozzle Ø 2,5 mm (7134162-2.5)..... Double nozzle Ø 3,0 mm (7134162-3.0)..... Double nozzle Ø 3,8 mm (7134162-3.8)..... Double nozzle Ø 4,0 mm (7134162-4.0).....	

Ref.- No.	Order-No.	Description	
Consumables suitable for Amada F.O. Nozzles with hard chromium plating			
1572362-0.8	HG 10.609	Nozzle Ø 0,8 mm Hard chromium plating	
1572362-1.2	HG 10.610	Nozzle Ø 1,2 mm Hard chromium plating	
1572362-1.4	HG 10.613	Nozzle Ø 1,4 mm Hard chromium plating	
1572362-1.5	HG 10.608	Nozzle Ø 1,5 mm Hard chromium plating	
1572362-2.0	HG 10.611	Nozzle Ø 2,0 mm Hard chromium plating	
1572362-3.0	HG 10.612	Nozzle Ø 3,0 mm Hard chromium plating	
1572362-4.0	HG 10.614	Nozzle Ø 4,0 mm Hard chromium plating	
1572361-1.2	HG 10.594	Double Nozzle Ø 1,2 mm Hard chromium plating	
1572361-1.4	HG 10.592	Double Nozzle Ø 1,4 mm Hard chromium plating	
1572361-2.0	HG 10.595	Double Nozzle Ø 2,0 mm Hard chromium plating	
1572361-2.5	HG 10.618	Double Nozzle Ø 2,5 mm Hard chromium plating	
1572361-3.0	HG 10.599	Double Nozzle Ø 3,0 mm Hard chromium plating	
1572361-4.0	HG 10.593	Double Nozzle Ø 4,0 mm Hard chromium plating	
	HG 10.759	Teflon ring.....	
71502039	HG 10.760	Double Nozzle Ø 2,5 mm with holes - hard chrom (Teflon ring included) (Ref. 3B1576400A)	
71502040	HG 10.761	Double Nozzle Ø 4,0 mm with holes - hard chrom (Teflon ring included) (Ref. 3B1576402A)	
	HG 10.762	WACS - Double Nozzle Ø 1,4 mm with holes..... Hard chrom (Teflon ring included)	
	HG 10.763	WACS - Double Nozzle Ø 1,7 mm with holes..... Hard chrom (Teflon ring included)	
	HG 10.764	WACS - Double Nozzle Ø 2,0 mm with holes..... Hard chrom (Teflon ring included)	
	HG 10.765	WACS - Double Nozzle Ø 2,5 mm with holes..... Hard chrom (Teflon ring included)	
	HG 10.766	WACS - Double Nozzle Ø 4,0 mm with holes..... Hard chrom (Teflon ring included)	
1576266	HG 10.767	WACS - Double Nozzle Ø 5,0 mm with holes..... Hard chrom (Teflon ring included)	
1576280A	HG 10.773	Clean Cut Double Nozzle Ø 4.0mm Hard chrom	
	HG 10.774	Clean Cut Double Nozzle Ø 5.0mm Hard chrom	
	HG 10.775	Clean Cut Double Nozzle Ø 6.0mm Hard chrom	
1576277A	HG 10.776	Clean Cut Double Nozzle Ø 7.0mm Hard chrom	
	HG 10.604	Double Nozzle to cut a perforated sheet Ø 1,4mm.....	
	HG 10.603	Nozzle to cut a perforated sheet Ø 2,0mm.....	

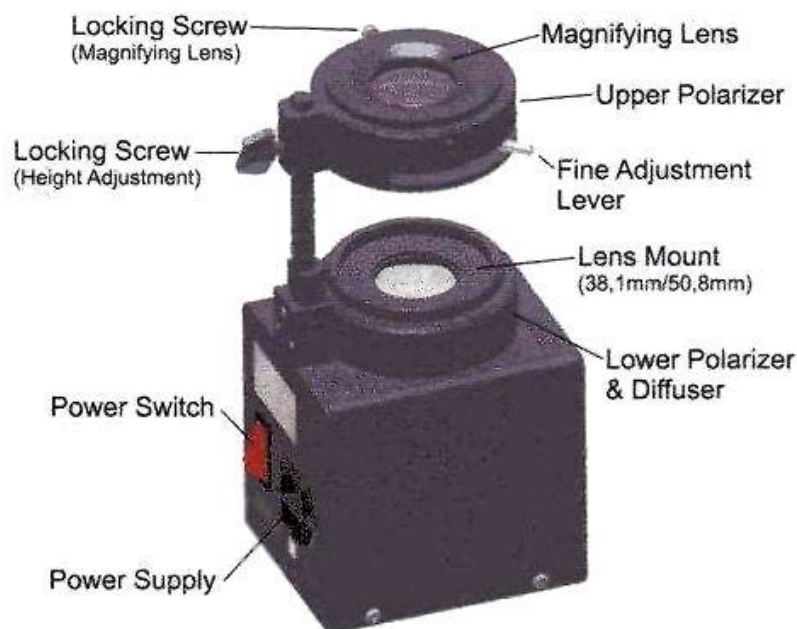
Ref.- No.	Order-No.	Description	
Consumables suitable for Amada LC-3015 X1			
BQ943D897H01 BQ943D157H01 HG12531 BQ943D157H02 BQ943D157H03 BQ943D157H04 BQ943D596H01 HG12522	HG 12.506 HG 12.507 HG 12.531 HG 12.508 HG 12.509 HG 12.510 HG 12.521 HG 12.522		Nozzle Ø 1,0 mm..... Nozzle Ø 1,5 mm..... Nozzle Ø 1,7 mm..... Nozzle Ø 2,0 mm..... Nozzle Ø 2,5 mm..... Nozzle Ø 3,0 mm..... Nozzle Ø 3,5 mm..... Nozzle Ø 4,0 mm.....
BQ933D283H01 BQ943D269H01	HG 12.532 HG 12.520		Nozzle Ø 1,0 mm..... Nozzle Ø 1,2 mm.....
BQ933D094H01	HG 12.530		Nozzle nut, short (length 15mm).....
BQ943D156H01 BQ943D156H03	HG 12.501 HG 12.504		Double nozzle insert 8-holes..... Double nozzle insert 24-holes.....
HG10740	HG 10.740		Teflon shield.....
HG10741 HG10742 HG10743 HG10744	HG 10.741 HG 10.742 HG 10.743 HG 10.744		Nozzle locking nut 1,7mm..... Nozzle locking nut 2,0mm..... Nozzle locking nut 2,5mm..... Nozzle locking nut 4,0mm.....

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Ref.- No.	Order-No.	Description
		NEW!! NEW!! NEW!! M.P.S CO₂ - Lenses Complete with mounts suitable for Amada FO-NT
3B 901216A	HG 10.790	 Lens 5" complete with mount Ø 1,5"
3B 9001215A	HG 10.791	 Lens 7,5" complete with mount Ø 1,5"
		M.P.S CO₂ - Laser - Lenses suitable for Amada LC-3015 X1
	HG 15.029/H	ZnSe-Plano-Convex Lens 5,00" High Pressure Lens (24 bar), Effective Focal Length: 127,0 mm Ø 50,8 mm, ET: 7,87 mm AR/AR for 10,6µm (Absorption <0.20%)
	HG 15.028/H	ZnSe-Plano-Convex Lens 7,50" High Pressure Lens (24 bar), Effective Focal Length: 190,5 mm Ø 50,8 mm, ET: 7,87 mm AR/AR for 10,6µm (Absorption <0.20%)
		For a laserpower above 4kW, we do recommend lenses with the special Ultra Low coating for the following reasons. These lenses do offer a lower absorption (<0.15%). The results of the lower heat absorption are less tensions and optical distortions. Furthermore the focal length is more stable. Also in case of a slightly dirty lens you can still profit from these advantages. These lenses are not black. Therefore it is not possible to differentiate them from the standard ZnSe-Meniscus lenses. Ultra Low lenses are appropriately marked on the edge.
	HG 15.029/HU	ZnSe-Plano-Convex Lens 5,00" High Pressure Lens (24 bar), Effective Focal Length: 127,0 mm Ø 50,8 mm, ET: 7,87 mm Ultra Low AR/AR for 10,6µm (Absorption <0.15%)
	HG 15.028/HU	ZnSe-Plano-Convex Lens 7,50" High Pressure Lens (24 bar), Effective Focal Length: 190,5 mm Ø 50,8 mm, ET: 7,87 mm Ultra Low AR/AR for 10,6µm (Absorption <0.15%)
	HG 10.174	Polish Polish for laseroptics, 100ml
	HG 10.173	Lens cleaning paper from Tiffen® From the producer of Kodak® paper (no longer available!!) Sheet size: ca. 70 x 115 mm, Package containing: 50 sheets
	HG 15.099	Cleaning holder (Teflon) for lenses <i>(to use on both sides)</i>
		 with Ø 38.10mm
		 with Ø 50.80mm

Ref.-No.	Order-No.	Description
M.P.S CO² - Laser - Lenses suitable for Amada		
M78025	HG 10.167/H	ZnSe-Meniscus Lens 5,00" High Pressure Lens (25 bar), Ø 38,1 mm Effective Focal Length: 127,0 mm, ET: 7,4 mm AR/AR for 10,6µm (Absorption <0.20%)
M78026	HG 10.168/H	ZnSe-Meniscus Lens 7,50" High Pressure Lens (25 bar), Ø 38,1 mm Effective Focal Length: 190,5 mm, ET: 7,4 mm AR/AR for 10,6µm (Absorption <0.20%)
M78037	HG 15.002/H	ZnSe-Plano-Convex Lens 5,00" High Pressure Lens (24 bar), Ø 50,8 mm Effective Focal Length: 127,0 mm, ET: 9,7 mm AR/AR for 10,6µm (Absorption <0.24%)
M78038	HG 15.003/H	ZnSe-Plano-Convex Lens 7,50" High Pressure Lens (24 bar), Ø 50,8 mm Effective Focal Length: 190,5 mm, ET: 9,7 mm AR/AR for 10,6µm (Absorption <0.24%)
For a laserpower above 4kW, we do recommend lenses with the special Ultra Low coating for the following reasons. These lenses do offer a lower absorption (<0.15%). The results of the lower heat absorption are less tensions and optical distortions. Furthermore the focal length is more stable. Also in case of a slightly dirty lens you can still profit from these advantages. These lenses are not black. Therefore it is not possible to differentiate them from the standard ZnSe-Meniscus lenses. Ultra Low lenses are appropriately marked on the edge.		
M78025	HG 10.167/HU	ZnSe-Meniscus Lens 5,00" High Pressure Lens (25 bar), Ø 38,1 mm Effective Focal Length: 127,0 mm, ET: 7,4 mm Ultra Low AR/AR for 10,6µm (Absorption <0.15%)
M78026	HG 10.168/HU	ZnSe-Meniscus Lens 7,50" High Pressure Lens (25 bar), Ø 38,1 mm Effective Focal Length: 190,5 mm, ET: 7,4 mm Ultra Low AR/AR for 10,6µm (Absorption <0.15%)
M78037	HG 15.002/HU	ZnSe-Plano-Convex Lens 5,00" High Pressure Lens (24 bar), Ø 50,8 mm Effective Focal Length: 127,0 mm, ET: 9,7 mm Ultra Low AR/AR for 10,6µm (Absorption <0.15%)
M78038	HG 15.003/HU	ZnSe-Plano-Convex Lens 7,50" High Pressure Lens (24 bar), Ø 50,8 mm Effective Focal Length: 190,5 mm, ET: 9,7 mm Ultra Low AR/AR for 10,6µm (Absorption <0.15%)
	HG 10.174	Polish Polish for laseroptics, 100ml
	HG 10.173	Lens cleaning paper from Tiffen® From the producer of Kodak® paper (no longer available!!) Sheet size: ca. 70 x 115 mm, Package containing: 50 sheets
	HG 15.099	Cleaning holder (Teflon) for lenses (to use on both sides)
		 with Ø 38.10mm
		 with Ø 50.80mm

Dirt & Strain Viewer for Lenses and Cleaning Set



Picture 1



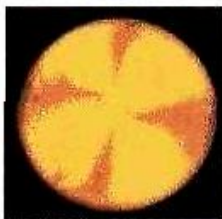
It is easily visible, that this lens is dirty.

Picture 2



Here are two small pieces of backscatter in the very center of the lens.

Picture 3



Lens was overheated (stress). This cannot be seen with the naked eye. This problem is mainly occurring with lasers with a power of 4, 5, 6 or 7KW.

Here we do recommend our M.P.S Ultra Low® - lenses with very low absorption values.

Picture 4



The bright spots at the edge of the lens show, that the lens was mounted too tight in the holder. The reason is, that the holder is dirty or was screwed too tight. Because the lens consists of soft material, it is strained, so that you have problems finding the focussing point and it is stressed very easily. You can see the stress in the middle of the lens (shadow - cross). All this is not visible with the naked eye. Because you could not see the cause without the dirt & strain viewer, every new lens would have been also damaged when built in.

C'est aussi



Mécanique de Précision Suisse

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