

<h2>Spin hard coating machines</h2>	Coburn Technologies		
	www.coburntechnologies.com		
			
	Velocity LTE Spin Coating System	Velocity Manual Spin Coater	Velocity Automated Spin Coater

Technical data	Lens materials	all materials (except glass)		
	Typical productivity (lenses/hour)	90	120	140
	Lenses in process	3	4	6
	Tank capacity (ml/fl. oz.)	266 / 9	266 / 9	266 / 9
	Suitable for solid based lacquer	x	x	x
	Suitable for solvent based lacquer	/	/	/
	Weight (kg/lbs)	260 / 573	204-227 / 450-500	363-386 / 800-850
	Dimensions (w x d x h) / [mm/inches] (machine without conveyor)	946 x 711 x 1778 / 37.25 x 28 x 70	864 x 864 x 1753 / 34 x 34 x 69	1728 x 1448 x 1829 / 68 x 57 x 72

Process	Fine cleaning	x	x	x
	Drying	x	x	x
	Coating application range (µm)	4.5 - 6.5	4.5 - 6.5	4.5 - 6.5
	UV-curing with integrated energy control	x	x	x
	Off-the-block processing	x	x	x
	On-the-block processing	/	/	/
	Automatic lens loading/unloading	/	/	x

Features	Barcode scanner	/	/	x
	Remote diagnostic	o	o	o
	LMS connectivity	/	/	x
	Further information	Smaller footprint Velocity system with recipe-driven environment for customized coating and curing.	Backside spin coater with wash, coat, UV cure stations. Coating is thermally controlled, keeping viscosity consistent.	Second generation automated Velocity coater with the option of adding a second coating station.

Legend: Yes = x, No = /, Optional = o

Satisloh www.satisloh.com		Schneider www.schneider-om.com
		
Magna-Spin	Magna-Spin-Auto	SHC-Nano

all organic up to 1.67	all organic up to 1.67	all organic materials
Up to 90 with solvent based chemistry, up to 100 with all solids chemistry.	Up to 110 with solvent based chemistry, up to 120 with all solids chemistry.	60
3	6	4
1500 / 50	1500 / 50	0,375 / 12,68
x	x	x
x	x	o
400 / 882	600 / 1336	300 / 661
956 x 1100 x 1800 / 38 x 43 x 71	3210 x 1302 x 1808 / 126 x 51 x 71	840 x 620 x 1960 / 33 x 24 x 77

x	x	x
x	x	x
1.8 - 8	1.8 - 8	3-8
x	x	x
x	x	x
x (ART blocks only)	x (ART blocks only)	/
	x	o

o	x	x
x	x	x
x	x	x
		2 HC-solutions can be handled at the same time.

<h1>Spin hard coating machines</h1>	SDC Technologies	Ultra Optics	
	www.sdctech.com	www.ultraoptics.com	
			
	CrystalSpin	Mini2	MR3

Technical data	Lens materials	CR39, Polycarbonate, High-Index	all materials	
	Typical productivity (lenses/hour)	50	40	80
	Lenses in process	2	1	3
	Tank capacity (ml/fl. oz.)	all solids: 120 / 4 solvent based: 500 / 16.9		
	Suitable for solid based lacquer	x	x	x
	Suitable for solvent based lacquer	x		
	Weight (kg/lbs)	182 / 400	136 / 300	293 / 645
	Dimensions (w x d x h) / [mm/inches] (machine without conveyor)	889 x 812 x 1676 / 35" x 32" x 66"	635 x 533 x 914 / 25 x 21 x 36	635 x 762 x 2,032 / 25 x 30 x 80

Process	Fine cleaning	x	x	x
	Drying	x	x	x
	Coating application range (µm)	2.5 - 8	3-7	3-7
	UV-curing with integrated energy control	x	x	x
	Off-the-block processing	x	x	x
	On-the-block processing	o		
	Automatic lens loading/unloading	/		

Features	Barcode scanner	/		
	Remote diagnostic	x		
	LMS connectivity	/		
	Further information		Bench-top model back side machine. For small labs/practices with their own surfacing equipment.	The long-running work-horse in back side hard coating.

Legend: Yes = x, No = /, Optional = o

Ultra Optics

www.ultraoptics.com



OTB



44R



54R

all materials

80

130

175

3

4

4

x

x

x

293 / 645

1034 / 2280

907 / 2000

635 x 762 x 1,930 /
25 x 30 x 76

1854 x 1626 x 1803 /
73 x 64 x 71

1067 x 1168 x 2108 /
42 x 46 x 83

x

x

x

x

x

x

3-7

3-7

3-7

x

x

x

x

x

x

x

x

x

x

x

x

x

x




x

x

The OTB coats the lens while still on the block, which provides many quality advantages.




Fully-automated back side coating machine. Keeps work throughput consistent, reduces lens breakage.

This back side coating machine integrates with the LMS to customize the coating process job by job.

<h1 style="text-align: center;">Dip hard coating machines</h1>		Bühler, powered by Shyre		
		www.buhlergroup.com / www.shyre.co.uk		
				
		HCS20	HCS60	HCS200
Application	Small labs (< 100 L/shift)	x		
	Medium sized labs (100 - 3000 L/shift)		x	x
	Mass production labs (> 3.000 L/shift)			x
	Lens materials	all organic materials		
Technical data	Typical productivity (lenses/hour) index 1.5	20	60	200
	Typical productivity (lenses/hour) index 1.6	20	60	200
	Batch size	1 pair	3 pairs	8 pairs
	Cleaning steps	6 (etch, spray, sonic clean, spray, double DI, dry)	6 (etch, rinse, sonic clean, rinse, double DI, dry)	8 (etch, etch, rinse, sonic clean, rinse, DI, DI, dry) note DI separate circuits not same water in 2 tanks
	Coating tanks	3 standard (primer/HC/AFC)	3 standard/4 option (primer/HC/AFC), swappable tanks and storage station as option	4 - swappable as standard (primer/HC/AFC), 4 position storage stations as option.
	Tank capacity (liter)	Cleaning - single 2.5 l - double 5 l coating 2.5 l	Cleaning - single 3.5 l - double 7 l coating 3.5 l	Cleaning - single 8 l - double 17 l coating 9 l
	Weight (kg/lbs)	750 / 1650	1000 / 2200	1800 / 3960
Process	Dimensions (w x d x h) / [mm/inches] (machine without conveyor)	1720 x 1000 x 2000 mm	2420 x 1000 x 2000 mm	5720 x 1080 x 2000 mm
	Cleaning	x	x	x
	Priming	x	x	x
	Photochromic process option		o	o
	Hard coating	x	x	x
	Pre-polymerization	x	x	x
	Number of separate handling systems for batch movement	1	1	2
Features	Automatic lens loading/unloading	/	x	x
	Solvent refilling (automatic)		semi-auto; full auto as option	semi-auto; full auto as option
	Detergent refilling (automatic)	x	x	x
	DI Water refilling (automatic)	x	x	x
	Recycling and filtration of detergent	x	x	x
	Dip coating control by servo-driven programmable motor	x	x	x
	Barcode scanner	o	o	o
	Remote diagnostic	x	x	x
	Camera monitoring system	o	o	o
	LMS connectivity	o	o	o
Further information	Highly compact system without compromising on quality or functionality.	Advanced dip coating for the modern lab. Providing superior quality, functionality and process control.	The most advanced dip coating system for the larger lab.	



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		FISA				
		www.fisa.com				
						
Umbra60	Umbra200	FISALABS One	CC20	CC40	CC/s	
		x				
x	x		x	x		
	x			x	x	
all organic materials						
40-60	150-200	32-96	80-336	224-772		TBD
40-60	150-200	32-96	32-96	32-96		TBD
3 pairs	8 pairs	4 to 8	28	56		TBD
6 (etch, rinse, sonic clean, rinse, double DI, dry)	8 (etch, etch, rinse, sonic clean, rinse, DI, DI, dry) note DI separate circuits not same water in 2 tanks	7 (ultrasonic DI water rinsing, drying, etc...)	5 -7 (ultrasonic DI water rinsing, drying, etc...)			
3 standard/4 option (primer/HC/AFC), swappable tanks and storage station as option	4 - swappable as standard (primer/HC/AFC), 4 position storage station as option.	up to 4 coating tanks				TBD
Cleaning - single 3.5 l - double 7 l coating 3.5 l	Cleaning - single 8 l - double 17 l coating 9 l	3 l	10 l	20 l		TBD
1000 / 2200	1800 / 3960	300 / 661	TBD	TBD		TBD
2420 x 1000 x 2000 mm	5720 x 1080 x 2000 mm	800 x 600 x 2000 / 31 x 23 x 79	800 x 600 x 2000 / 31 x 23 x 79	800 x 600 x 2000 / 31 x 23 x 79	800 x 600 x 2000 / 31 x 23 x 79	
x	x	x	x	x	x	x
x	x	x	x	x	x	x
x	x	x	x	x	x	x
x	x	x	x	x	x	x
x	x	x	x	x	x	x
1	2	1 to 2	1 to 3	1 to 4		max. 16
x	x	o	o	o		o
semi-auto; full auto as option	semi-auto; full auto as option	x	x	x		x
x	x	x	x	x		x
x	x	x	x	x		x
x	x	o	o	o		o
x	x	x	x	x		x
o	o	o	o	o		o
x	x	x	x	x		x
o	o	o	o	o		o
o	o	x	x	x		x
The photochromic coating system for Rx labs.	Comprehensive fully functional dip coating including photochromic for larger production.	Customized process based on standard			100% customized process	


<h1 style="text-align: center;">Dip hard coating machines</h1>		Optimal Technologies		
		www.optimal-technologies.com		
				
		CHC60-S4	CHC80-S4+	CHC150-S4 XL
Application	Small labs (< 100 L/shift)	x	x	x
	Medium sized labs (100 - 3000 L/shift)	x	x	x
	Mass production labs (> 3.000 L/shift)			
	Lens materials	all lens materials		
Technical data	Typical productivity (lenses/hour) index 1.5	60	80	150
	Typical productivity (lenses/hour) index 1.6	60	80	150
	Batch size	6	8	16
	Cleaning steps	7 (ultrasonic cleaning, rinsing, DI cleaning and rinsing, drying)		
	Coating tanks	2 primer and 2 top coat	2 primer and 2 top coat (optional additional coating stage available)	2 primer and 2 top coat
	Tank capacity (liter)	4	4.5	7
	Weight (kg/lbs)	750 kg	820 kg	2090 kg
Dimensions (w x d x h) / [mm/inches] (machine without conveyor)	2800 x 1162 x 2041 mm	2801 x 1162 x 2041 mm	4081 x 1389 x 2059 mm	
Process	Cleaning	x	x	x
	Priming	x	x	x
	Photochromic process option	o	o	o
	Hard coating	x	x	x
	Pre-polymerization	x	x	x
	Number of separate handling systems for batch movement	1	2	1
	Automatic lens loading/unloading	o	o	o
Features	Solvent refilling (automatic)	x	x	x
	Detergent refilling (automatic)	o	o	o
	DI Water refilling (automatic)	x	x	x
	Recycling and filtration of detergent	x	x	x
	Dip coating control by servo-driven programmable motor	x	x	x
	Barcode scanner	o	o	o
	Remote diagnostic	x	x	x
	Camera monitoring system	o	o	o
	LMS connectivity	o	o	o
Further information				



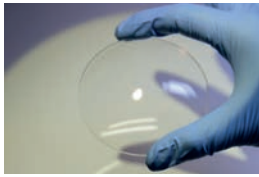
Legend: Yes = x, No = /, Optional = o

Optimal Technologies www.optimal-technologies.com			OptoTech www.optotech.de/en	
				
CHC200-S4	CHC360-S4+	CHC-1000 S2	OHC-20	OHC-60
x	x	x	x	
x	x	x		x
	x	x		
all lens materials			all organic materials	
200	360	1000	20	60
200	360	1000	20	60
20	36	112	1 pair	3 pairs
7 (ultrasonic cleaning, rinsing, DI cleaning and rinsing, drying)		9 (ultrasonic cleaning, rinsing, DI cleaning and rinsing, drying)	4 cleaning (etch, rinse, neutralize, DI) 1 drying oven	7 cleaning (2 etch, rinse, clean, rinse, 2x DI) 1 drying oven
2 primer and 2 top coat (optional additional coating stage available)		1 primer and 1 top coat	1 primer 2 hard coating	
10	17	26	Etching 4.7 l / cleaning 2 l / rinsing 2 l / coating 2.5 l	Cleaning 9 l / coating 4 l
2340 kg	2570 kg	9000 kg	depending on configuration	
5941 x 1620 x 2170 mm	5942 x 1620 x 2170 mm	14879 x 1680 x 2186 mm	2380 x 1000 x 2000 mm	3480 x 1000 x 2050 mm
x	x	x	x	x
x	x	x	x	x
o	o	o	o	o
x	x	x	x	x
x	x	x	x	x
2	2	2	1	1
o	o	o	o	o
x	x	x	o	o
o	o	o	o	o
x	x	x	x	x
x	x	x	x	x
x	x	x	x	x
o	o	o		
x	x	x	x	x
o	o	o		
o	o	o		

Dip hard coating machines		OptoTech	
		www.optotech.de/en	
			
		OHC-150	OHC-200
Application	Small labs (< 100 L/shift)		
	Medium sized labs (100 - 3000 L/shift)	x	
	Mass production labs (> 3.000 L/shift)		x
	Lens materials	all organic materials	
Technical data	Typical productivity (lenses/hour) index 1.5	150	200
	Typical productivity (lenses/hour) index 1.6	150	200
	Batch size	8 pairs	
	Cleaning steps	7 cleaning (2 etch, rinse, clean, rinse, 2x DI) 1 drying oven	7 cleaning (2 etch, rinse, clean, rinse, 2x DI) 1 drying oven
	Coating tanks	2 primer 2 hard coating	
	Tank capacity (liter)	cleaning 15 l / coating 8 l	cleaning 13 l / coating 10.5 l
	Weight (kg/lbs)	depending on configuration	
	Dimensions (w x d x h) / [mm/inches] (machine without conveyor)	3920 x 1200 x 2000 mm	5028 x 1425 x 2170 mm
Process	Cleaning	x	x
	Priming	x	x
	Photochromic process option	o	o
	Hard coating	x	x
	Pre-polymerization	x	x
	Number of separate handling systems for batch movement	1	1
	Automatic lens loading/unloading		o
Features	Solvent refilling (automatic)	o	o
	Detergent refilling (automatic)	o	o
	DI Water refilling (automatic)	x	x
	Recycling and filtration of detergent	x	x
	Dip coating control by servo-driven programmable motor	x	x
	Barcode scanner		
	Remote diagnostic	x	x
	Camera monitoring system		
	LMS connectivity		
	Further information		

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Satisloh		Schneider	
www.satisloh.com		www.schneider-om.com	
			
DC-4S	DC-6S	DHC 20	DHC40
		x	x
	x (1 shift = 8 hours)	x	x
	all organic lenses	all organic materials	
48	72	20	40
48	72	20	40
2 pairs	3 pairs	2	4
7 steps (detergent tanks, rinsing tank with tap water, rinsing tank with DI water, drying with infrared)	7 steps (detergent tanks, rinsing tank with tap water, rinsing tank with DI water, drying with infrared)	7	7
3 (1 primer and 2 varnishes)	3 (1 primer and 2 varnishes)	1 primer 2 hard coat	2 primer 2 hard coat
3 (varnish tanks capacities)	3,8 (varnish tanks capacities)	1,5 l (coating)	3,7 l (coating)
720 / 1587	720 / 1587	1200 / 2646	1330 / 2933
3311 x 1215 x 2266 / 130 x 48 x 89	3311 x 1215 x 2266 / 130 x 48 x 89	2120 x 1000 x 2120 / 84 x 40 x 84	3015 x 1100 x 2105 / 119 x 39 x 83
x	x	x	x
x	x	x	x
/	/		
x	x	x	x
x	x	x	x
1	1	1	1
/	/	/	/
o	o	x	x
o	o		
x	x	x	x
x	x	x	x
/	/	x	x
/	/	o	o
x	x	x	x
/	/		
o	o	x	x

<h1 style="text-align: center;">Dip hard coating machines</h1>		Schneider		
		www.schneider-om.com		
				
		DHC60	DHC60-SR	DHC200
Application	Small labs (< 100 L/shift)	/	/	/
	Medium sized labs (100 - 3000 L/shift)	x	x	x
	Mass production labs (> 3.000 L/shift)			x
	Lens materials	all organic materials		all organic materials
Technical data	Typical productivity (lenses/hour) index 1.5	60	72	200
	Typical productivity (lenses/hour) index 1.6	60	72	200
	Batch size	6	8	20
	Cleaning steps	7	7	7
	Coating tanks	1 primer 2 hard coat	2 primer 2 - 3 hard coat	2 primer 2 hard coat
	Tank capacity (liter)	3,7 l (coating)	3,7 l (coating)	9 l (coating)
	Weight (kg/lbs)	1350 / 2977	1550 / 3417	1900 / 4189
	Dimensions (w x d x h) / [mm/inches] (machine without conveyor)	2880 x 1000 x 2050 / 114 x 39 x 81	3480 x 1050 x 2050 / 137 x 41 x 81	5475 x 1424 x 2042 / 215 x 56 x 80
Process	Cleaning	x	x	x
	Priming	x	x	x
	Photochromic process option			
	Hard coating	x	x	x
	Pre-polymerization	x	x	x
	Number of separate handling systems for batch movement	1	1	2
	Automatic lens loading/unloading	/	/	/
Features	Solvent refilling (automatic)	x	x	x
	Detergent refilling (automatic)			
	DI Water refilling (automatic)	x	x	x
	Recycling and filtration of detergent	x	x	x
	Dip coating control by servo-driven programmable motor	x	x	x
	Barcode scanner	o	o	o
	Remote diagnostic	x	x	x
	Camera monitoring system			
	LMS connectivity	x	x	x
Further information				

Legend: Yes = x, No = /, Optional = o

		SCL				
		www.scl-intl.com/fr				
						
DHC300		CDS2000	CDS1000	CDC1000	CDC500	
/	/	/	/	/	/	
x	/	/	x	x	x	
x	x	x	/	/	/	
all organic materials						
300	330 to 380 (max. average)	160 to 190 (max. average)	140 to 160 (max. average)	60 to 80 (max. average)		
300	330 to 380 (max. average)	160 to 190 (max. average)	140 to 160 (max. average)	60 to 80 (max. average)		
28	14 to 16 pairs	7 to 8 pairs	7 to 8 pairs	3 to 4 pairs		
7+	8 steps (detergent tanks, rinsing tank with tap water, rinsing tank with DI water, drying with infrared)	8 steps (detergent tanks, rinsing tank with tap water, rinsing tank with DI water, drying with infrared)	7 steps (detergent tanks, rinsing tank with tap water, rinsing tank with DI water, drying with infrared)	7 steps (detergent tanks, rinsing tank with tap water, rinsing tank with DI water, drying with infrared)		
3 primer 3 hard coat	3 tanks (1 primer and 2 varnishes)					
7 l or 14 l (coating)	18,4 l (coating tank)	10 l (coating tank)	9,5 l (coating tank)	5 l (coating tank)		
5000 - 6000 / 11023 - 13227	2800 kg	1450 kg	1020 kg	750 kg		
10850 x 1900 x 2270 / 427 x 75 x 89	8540 x 1850 x 2700 mm	4888 x 1657 x 2318 mm	3591 x 1555 x 2087 mm	3591 x 1362 x 2047 mm		
x	x	x	x	x		
x	x	x	x	x		
	/	/	/	/		
x	x	x	x	x		
x	x	x	x	x		
2	2	1	1	1		
/	x	x	/	/		
x	x	o	o	o		
x	x	o	o	o		
x	x	x	x	x		
x	x	x	x	x		
x	/	/	/	/		
x	/	/	/	/		
x	x	x	x	x		
	/	/	/	/		
x	o	o	o	o		