

















MARKET SURVEYS







|                |   | Augen Opticos  | Coburn   |   |   |   |
|----------------|---|--|--|---|---|---|
|                |   | www.augenopticos.com   | www.coburntechnologies.com   |   |   |   |
| Generators     |   |   |                 |                                   |    |    |
|                |   | Victor IV  | SGX Pro Surface Lens Generator   | CTL65 Compact Lens Generator  | Cobalt N Lens Generator   | Cobalt NX Lens Generator  |
| Application    | Small labs (< 100 L/shift)  |  | x  | x   |   |   |
|                | Medium sized labs (100 - 3000 L/shift)  | x  | x  | x   | x   | x   |
|                | Mass production labs (> 3,000 L/shift)  | /  |  |   |   |   |
|                | Freeform  | x  |  |   |   | x   |
|                | Prismatic lenses  | x  | x  | x   | x   | x   |
|                | Lens materials  | all organic materials  | CR39, Polycarbonate, Trivex, High-Index  |   |   |   |
|                | Lens Diameter (mm)  | 50 - 100   | 90   | 90  | 90  | 90  |
|                | Curve range concave (dpt) [Milling/Turning]   | NA / -20 with no tool change   | -30  | -20   | -20   | -20   |
|                | Curve range convex (dpt) [Milling/Turning]  | NA / +20 with no tool change   | +8   | +7  | +7  | +7  |
| Technical data | Productivity (lenses/hour) [MR8, 1.6, Ø 70, sph. -3.0, cyl. 2.0, Add. 2.5, private label] | 30   | 30   | 75  | 75  | 75  |
|                | Speed of motor spindle (RPM)  | 3,000  | 3,000  | 3,500   | 4,000   | 4,000   |
|                | Axis  | 4  | 3  | 4   | 4   | 4   |
|                | Axis cooling needed   | /  | /  | /   | /   | /   |
|                | Port/Interface configuration<br>M = Multiple   OA = Open architecture                     | M: Augen XML / OMA   | OA   | OA  | OA  | M / OA  |
|                | Weight (kg / lbs)   | 550 / 1210   | 125 / 275  | 590 / 1300  | 590 / 1300  | 622 / 1372  |
|                | Dimensions [w x d x h] (mm/inches) [without conveyor]                                     | 1100 x 1100 x 1200<br>43 x 43 x 47   | 762 x 711 x 788<br>30 x 28 x 31  | 1194 x 787 x 1295<br>47 x 31 x 51   | 1245 x 914 x 1473<br>49 x 36 x 58   | 1245 x 914 x 1473<br>49 x 36 x 58   |
| Process        | Milling   | /  | x  | o   | o   | o   |
|                | Turning (single or twin tool holder)  | pivoting with twin tool holder   | milling  | turning - single cutter   | turning - single cutter   | turning - two cutters   |
|                | Automatic lens loading/unloading  | /  |  |   |   |   |
| Features       | Chamfering  | x  | x  | x   | x   | x   |
|                | Pre-shape   | /  | /  | /   | /   | /   |
|                | Auto calibration  | Calibration only needed on diamond change  |  |   |   | o   |
|                | Barcode scanner   | x  | o  | o   | o   | o   |
|                | Data protection/encryption design and macros  | x  | /  | /   | /   | /   |
|                | Process data information  | x  | x  | x   | x   | x   |
|                | Laser engraving   | external   |  |   |   | x   |
|                | Further Information   | Robust plug and play generator. Easy touch screen. Quiet, efficient unit. Process freeform (NURBS), spheric and atoric surfaces. | Tabletop generator. Upgraded user interface on Windows 7 platform, with USB loading and backups. | Compact turning lathe with Coburn's patented single-point technology for conventional lenses. Fastest in its class. | Combines features (CTL65 & Cobalt) including drive A-axis, linear Y-axis with single X-axis cutting. Upgradable to a free-form Cobalt NX. | Freeform generator producing high quality lenses in terms of form and finish. Expandable platform that can grow with your business. |

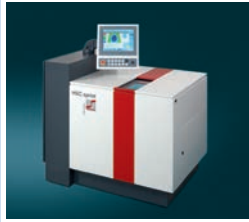



Legend: Yes = x, No = /, Optional = o

|   | Comes<br>www.comes.it/en   |  |   |   | OptoTech<br>www.optotech.de/en   |   |   |
|---|--|--|---|---|--|---|---|
|   |    |   |  |  |  |  |  |
|   | Cobalt NXT/NXT+ Lens Generator   | HDG  | Impact series   | Small Impact  | Labor-2Evo   | FLASH store   | FLASH Plus  |
|   |  | x  | /   | x   | /  | x   |   |
| x   |  | x  | x   | x   | /  |   | x   |
| x   |  | /  | x   | x   | x  |   |   |
| x   |  | x  | x   | /   | /  | x   | x   |
| x   |  | x  | x   | x   | /  | <2°   | <2°   |
|   |  | all organic materials  |   | all materials   | mineral  | Mineral, CR39, Polycarbonate, Trivex, Tribid, High-Index plastic                    |   |
| 90  |  | up to 85   | up to 85  | up to 85  | up to 125  | 51-85   | 51-85   |
| -20   |  | -30 / -30  | -30 / -30   | -30 / -   | -9 / -   | +25   | +30   |
| +7  |  | +30 / +30  | +30 / +30   | +30 / -   | +9 / -   | -25   | -30   |
| 130   |  | 30   | 20  | 60  | 20   | depends on production mix   |   |
| 4,000   |  | 3,000  | 3,000   | 3,000   | 3,000  | 30,000  | 30,000  |
| 4   |  | 4  | 4 (5 optional)  | 3   | 4  | 4   | 4   |
| /   |  | /  | /   | /   | /  | x   | x   |
| M / OA  |  | /  | /   | /   | /  | M / OA  | M / OA  |
| 642 / 1415  |  | 800 / 1760   | 2000 / 4400   | 620 / 1370  | 1400 / 3090  | 1,050 / 2,315   | 1,450 / 3,195   |
| 1422 x 914 x 1651<br>56 x 36 x 65   |  | 965 x 1300 x 1500<br>38 x 51 x 59  | 1700 x 1700 x 1550<br>67 x 67 x 61  | 1190 x 1660 x 1585<br>/ 47 x 65 x 62  | 1560 x 1550 x 1890<br>/ 61 x 61 x 74   | 1250 x 1500 x 1620<br>49 x 59 x 64  | 1310 x 1620 x 1620<br>52 x 64 x 64  |
| o   |  | x  | x   | x   | x  | x   | x   |
| turning - two cutters   |  | twin   | single<br>(twin optional)   | /   | /  | twin  | twin  |
| o   |  | /  | x   | /   | o  |   |   |
| x   |  | x  | x   | x   | /  | x   | x   |
| /   |  | o  | x   | x   | /  | x   | x   |
| o   |  | /  | /   | /   | o  |   |   |
| o   |  | o  | o   | o   | o  | x   | x   |
| /   |  | /  | /   | /   | /  | /   | /   |
| x   |  | x  | x   | x   | x  |   |   |
| x   |  | /  | /   | /   | /  |   |   |
| Freeform generator producing high quality lenses with the option for automation, as well as the option for automated calibration. | Optional: mechanical engraving and or milling tool for preshaping. Calibration required when changing tool insert. Not required for PCD. | Manual version can be upgraded to automatic; engraving optional; calibration required when changing tool insert. Not required for PCD. |   | RX toric generator  |  | Precision toric generator, for mould production.                                    |   |

|  |   | OptoTech  |   |   |   |
|--|---|---|---|---|---|
|  |   | www.optotech.de/en  |   |   |   |
| Generators                                 |   |  |  |  |  |
|  |   | FLASH-A NG  | FLASH Twin-A  | ESM Twin-A  | VFT-orbit-2   |
| Application                                | Small labs (< 100 L/shift)  |   |   |   | /   |
|  | Medium sized labs (100 - 3000 L/shift)  | x   |   |   | x   |
|  | Mass production labs (> 3,000 L/shift)  | x   | x   | x   | x   |
|  | Freeform  | x   | x   | x   | x   |
|  | Prismatic lenses  | <2°   | <2°   | <2°   | x   |
|  | Lens materials  | Mineral, CR39, Polycarbonate, Trivex, Tribrid, High-Index plastic                 |   |   |   |
|  | Lens Diameter (mm)  | 51-85   | 51-85   | 51-85   | 90  |
|  | Curve range concave (dpt) [Milling/Turning]   | +30   | +15   | +15   | -14.5 / -30   |
| Curve range convex (dpt) [Milling/Turning] | -30   | -25   | -12   | +30 / +30   |   |
| Technical data                             | Productivity (lenses/hour) [MR8, 1.6, Ø 70, sph. -3,0, cyl. 2.0, Add. 2.5, private label] | depends on production mix   |   |   | up to 100 (up to 120 with performance package)                                      |
|  | Speed of motor spindle (RPM)  | 32,000  | Turning only  | 32,000  | 35,000  |
|  | Axis  | 4   | 5   | 5   | 5   |
|  | Axis cooling needed   | x   | x   | x   | x   |
|  | Port/Interface configuration<br>M = Multiple   OA = Open architecture                     | M / OA  | M / OA  | M / OA  | M   |
|  | Weight (kg / lbs)   | 2,750 / 6,063   | 2,200 / 4,850   | 1,900 / 4,190   | 2200 / 4850   |
|  | Dimensions (w x d x h) / [mm / inches] (machine without conveyor)                         | 1731 x 1972 x 1739<br>68 x 78 x 68<br>(with automation)                           | 1787 x 2375 x 1940<br>70 x 94 x 76<br>(with automation)                           | 1885 x 1885 x 1940<br>74 x 74 x 76<br>(with automation)                             | 1771 x 1624 x 1734<br>70 x 64 x 68  |
| Process                                    | Milling   | x   | Turning only  | x   | x   |
|  | Turning (single or twin tool holder)  | twin  | twin  | twin  | single  |
|  | Automatic lens loading/unloading  | x   | x   | x   | x   |
| Features                                   | Chamfering  | x   | x   | x   | x   |
|  | Pre-shape   | x   | x   | x   | x   |
|  | Auto calibration  |   |   |   | x   |
|  | Barcode scanner   | x   | x   | x   | x   |
|  | Data protection/encryption design and macros  | /   | /   | /   | x   |
|  | Process data information  | x   |   |   | x   |
|  | Laser engraving   |   |   |   | only mechanical   |
| Further Information                        |   |   |   |   |   |

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

| Satisloh<br>www.satisloh.com   |   |   | Schneider<br>www.schneider-om.com  |   |   |
|--|---|---|--|---|---|
|  |  |  |                                    |                          |    |
| VFT-orbit-2E   | VFT-macro   | VFT-macro-E   | DSC Prolab   | HSC nano X  | HSC nano XP   |
| /  | x   | x   | x  | x   | x   |
| x  | x   | /   |  | x   | x   |
| /  | /   | /   |  |   |   |
| x  | x   | x   | x  | x   | x   |
| x  | x   | x   | x  | x   | x   |
| all organic materials  |   |   | CR39, Polycarbonate, Trivex, Tribid, High-Index plastic  |   |   |
| 90   | 85  | 85  | up to 85 mm  | up to 85 mm   | up to 85 mm   |
| -14.5 / -30  | -14.5   | -14.5   | -30  | -30   | -30   |
| +30 / +30  | /   | /   | +30  | +30   | +30   |
| 70   | 50  | 25  | Please consult with Schneider  | Please consult with Schneider   | Please consult with Schneider   |
| 24,000   | 12,000  | /   |  | 9,000   | 9,000   |
| 5  | 4   | 3   | 4  | 4   | 4   |
| x  | -   | -   | /  | /   | /   |
| M  | M   | M   | various  | various   | various   |
| 2200 / 4850  | 800 / 1764  | 800 / 1764  | 1,500 / 3,300  | 705 / 1,554   | 750 / 1,653   |
| 1771 x 1624 x 1736<br>70 x 64 x 68   | 1100 x 1200 x 1500<br>43 x 47 x 59  | 1100 x 1200 x 1500<br>43 x 47 x 59  | 1684 x 900 x 1830<br>66 x 35 x 72  | 900 x 1120 x 1030<br>35 x 44 x 41   | 900 x 1120 x 1030<br>35 x 44 x 41   |
| x  | x   | /   | /  | /   | x   |
| single   | twin  | twin  | twin   | twin  | twin  |
| o  | /   | /   | /  | /   | /   |
| x  | x   | x   | x  | x   | x   |
| x  | x   | -   | /  | /   | x   |
| x  | x   | x   | x  | /   | /   |
| o  | x   | x   | x  | x   | x   |
| x  | x   | x   | design   | design  | design  |
| x  | x   | x   | x  | x   | x   |
| only mechanical  | only mechanical   | only mechanical   | x  | x   | x   |
|  |   |   | The all-in-one surfacing center combines generator, polisher, laser marker and measuring unit in one compact system. | The extra small and economically priced generator provides everything needed for independent freeform labs. | The HSC nano XP offers a higher performance, offering full milling capabilities for fast PC machining and a high-speed laser. |

| Generators                                 |   | Schneider  |   |   |  |
|--|---|--|---|---|--|
|  |   | www.schneider-om.com   |   |   |  |
|  |   |   |    |   |   |
|  |   | HSC sprint   | HSC smart XP  | HSC modulo XTS  | Modulo Center 80   |
| Application                                | Small labs (< 100 L/shift)  | x  | x   | x   | x  |
|  | Medium sized labs (100 - 3000 L/shift)  | x  | x   | x   | x  |
|  | Mass production labs (> 3,000 L/shift)  |  | x   | x   | x  |
|  | Freeform  | x  | x   | x   | x  |
|  | Prismatic lenses  | x  | x   | x   | x  |
|  | Lens materials  | CR39, Polycarbonate, Trivex, Tribid, High-Index plastic  |   |   |  |
|  | Lens Diameter (mm)  | up to 85 mm  | up to 92 mm   | up to 96 mm   | up to 96 mm  |
|  | Curve range concave (dpt) [Milling/Turning]   | -30  | -30   | -30   | -30  |
| Curve range convex (dpt) [Milling/Turning] | +30   | +30  | +30   | +30   |  |
| Technical data                             | Productivity (lenses/hour) [MR8, 1.6, Ø 70, sph. -3.0, cyl. 2.0, Add. 2.5, private label] | Please consult with Schneider  | Please consult with Schneider   | Please consult with Schneider   | Please consult with Schneider  |
|  | Speed of motor spindle (RPM)  | 12,000   | 25,000  | 35,000  | 25,000   |
|  | Axis  | 4  | 4   | 4/5   | 22   |
|  | Axis cooling needed   | /  | X   | X   | X  |
|  | Port/Interface configuration<br>M = Multiple   OA = Open architecture                     | various  | various   |   |  |
|  | Weight (kg/lbs)   | 750 / 1,654  | 1,180 / 2,600   | 2,250 / 4,960   |  |
|  | Dimensions (w x d x h) [mm/inches] (machine without conveyor)                             | 1310 x 930 x 1200<br>52 x 37 x 48  | 1120 x 1550 x 1740<br>44 x 61 x 69  | 1600 x 2020 x 1715<br>63 x 66 x 69  | 3200 x 2070 x 2430<br>12 x 81,5 x 100  |
| Process                                    | Milling   | x  | x   | x   | x  |
|  | Turning (single or twin tool holder)  | twin   | twin  | twin  | Twin   |
|  | Automatic lens loading/unloading  | /  | x   | x   | x  |
| Features                                   | Chamfering  | x  | x   | x   | x  |
|  | Pre-shape   | x  | x   | x   | x  |
|  | Auto calibration  | x  | x   | x   | /  |
|  | Barcode scanner   | x  | x   | x   | x, or optionally RFID  |
|  | Data protection/encryption design and macros  | design   | design  | design  | design   |
|  | Process data information  | x  | x   | x   | x  |
|  | Laser engraving   | /  | /   | /   | x  |
|  | Further Information   | The HSC sprint offers all the benefits of digital in a small, economical and powerful generator. Ideal for smaller and mid-sized labs. | The HSC smart XP is perfectly suited for mid-sized and large labs, supporting manual and automated production environments. | HSC Modulo XTS is the fastest generator in the market. Its extremely powerful XS-motor produces a high-quality lens in the shortest time. | The all-in-one surfacing center features all the technology to surface 80 lenses/hour, in just 7 m <sup>2</sup> . Blank in, surfaced lens out. |

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