

Technology

Canonical: <https://directory.collinsstreetspecialistcentre.com.au/about/technology/>

Description:

Collins Street Specialist Centre prides itself on being one of Australia's most technologically sophisticated dental clinics. Each item of equipment is designed for specific clinical purposes, supporting the delivery ...

Details:

Collins Street Specialist Centre – Our Technology

Collins Street Specialist Centre is recognised as one of Australia's most technologically advanced specialist dental practices. Every piece of equipment has been chosen for a specific clinical reason — accurate diagnosis, precise treatment planning, and specialist care tailored to each patient. These technologies also make a real difference to patient comfort throughout treatment.

Diagnostic imaging

Planmeca ProMax 3D Max (Cone Beam CT) The Planmeca ProMax 3D Max cone beam computed tomography (CBCT) unit produces highly detailed three-dimensional dental imagery whilst keeping radiation doses to a minimum. Using the accompanying software, the clinical team generates three-dimensional images of exceptional resolution — capturing fine anatomical detail that underpins precise, well-informed treatment planning. This clinically validated technology is a valuable diagnostic tool across endodontics, periodontics, orthodontics, implantology, dental and maxillofacial surgery, paedodontics, and temporomandibular joint (TMJ) analysis.

Planmeca ProMax 2D S3 with One Shot Lateral Cephalogram The Planmeca 2D digital imaging system produces high-quality orthopantomograms (OPGs) and lateral cephalograms with exceptional precision. Having these images available during appointments is particularly useful when treatment planning decisions need to be made in real time — whether for general dentistry or orthodontic assessment. The system supports both open- and closed-mouth image capture, with patient positioning guided by a triple laser beam. A dedicated child mode ensures the lowest appropriate radiation exposure for younger patients, and the one-shot function captures the full X-ray in a single image, minimising discomfort and the need for repeat exposures.

Intraoral digital radiographs Intraoral digital radiography delivers high-resolution images at significantly lower radiation levels than conventional X-ray film. Images appear immediately on screen, allowing clinicians to review findings with patients directly during the appointment — supporting clear, informed discussion about diagnosis and treatment options.

Collins Street Imaging (Level 9, Manchester Unity Building) Collins Street Specialist Centre has access to Collins Street Imaging, located at Level 9 of the Manchester Unity Building, which operates in partnership with MFI Radiology. This dedicated imaging centre provides advanced radiology services to support specialist assessment across all clinical disciplines.

CAD/CAM and digital scanning

CEREC CAD/CAM CEREC CAD/CAM (Chairside Economical Restoration of Esthetic Ceramics) is a sophisticated chairside system that enables the fabrication and placement of all-ceramic veneers,

onlays, inlays, crowns, and bridges — often within a single appointment. There's no need for conventional impressions or waiting on an external dental laboratory. Teeth are digitally scanned, the data goes directly to the CEREC milling unit, and the ceramic restoration is prepared and fitted with a high degree of precision, all in one visit.

CEREC Primescan intraoral scanner The CEREC Primescan captures tooth anatomy rapidly and accurately in true three-dimensional colour, eliminating the need for traditional impression materials. It integrates directly with the CEREC system, streamlining the fabrication of personalised prosthodontic restorations and reducing overall treatment time.

CEREC Primemill milling machine Digital scan data is transmitted directly to the on-site CEREC Primemill unit, where precisely matched tooth inlays and onlays are milled to specification. This closed-loop digital workflow supports consistent, high-quality outcomes without relying on external laboratory turnaround times.

3Shape TRIOS 3 intraoral scanner The 3Shape TRIOS 3 provides detailed digital capture of tooth and soft tissue anatomy, recording shape, colour, and occlusal information in a single workflow. This data replaces traditional impressions and communicates all necessary specifications to the laboratory for the fabrication of custom-fit crowns, bridges, and veneers.

iTero scanners (orthodontics) The iTero Element Intraoral Scanner generates accurate virtual impressions of the dentition chairside. Scan data is transmitted digitally to dental laboratories for the manufacture of orthodontic appliances — including Invisalign aligners — and restorations. The iTero scanner is a reliable diagnostic and treatment planning tool, and scan data can be integrated with ClinCheck, Invisalign's treatment simulation software, allowing patients to see projected tooth movement and anticipated final outcomes before treatment begins.

Surgical microscopes

Carl Zeiss OPMI PROergo microscope The Carl Zeiss OPMI PROergo provides magnification of up to 20x with integrated fibre-optic illumination that eliminates shadows and improves visualisation of fine anatomical structures. This level of magnification is the current standard of care for endodontic (root canal) treatment, improving the speed and accuracy of diagnosis — including identifying additional root canals and detecting fracture lines invisible to the naked eye. For patients, that means more precise diagnosis and more targeted treatment.

Seiler Revelation microscope A second high-powered surgical microscope, the Seiler Revelation offers multiple magnification settings and additional capacity for microsurgical precision across endodontic and other specialist procedures. Having two surgical-grade microscopes available means clinical demand can be met without any compromise to quality or scheduling.

Laser technology

Fotona LightWalker AT laser The Fotona LightWalker AT is a dual-wavelength dental laser combining Er:YAG and Nd:YAG technology. This combination enables minimally invasive treatment across a broad range of applications, including cavity preparation, cosmetic procedures, gum disease management, gingival recontouring (gum lift procedures), and teeth whitening. Patients generally experience faster healing and greater comfort than with conventional treatment — an important consideration for those who experience dental anxiety.

NV Laser The NV Laser has a wireless handheld design that delivers laser energy in either continuous wave or pulsed mode. It is used for oral soft-tissue surgery — including the removal of diseased fibrous tissue and lesion excision — and for periodontal procedures requiring the removal of diseased, infected, inflamed, or necrosed soft tissue within the periodontal pocket.

VersaWave Laser The VersaWave is widely regarded as one of the most reliable fibre-delivered laser systems in clinical dentistry. It supports fast, comfortable treatment of teeth, bone, gingival tissue,

and other oral soft tissues across general dentistry, endodontics, periodontics, prosthodontics, and paediatric dentistry.

Orthodontic technology

Invisalign (Blue Diamond provider) Invisalign uses a series of clear, custom-fabricated aligners designed to progressively reposition teeth over the course of treatment. Collins Street Specialist Centre holds Blue Diamond provider status — the highest tier of Invisalign accreditation — reflecting the practice's extensive clinical experience and volume of completed cases, all delivered by Dental Board-registered orthodontists. Patients considering Invisalign are encouraged to verify their treating clinician's specialist registration via the [Australian Health Practitioner Regulation Agency (AHPRA)](<https://www.ahpra.gov.au/>) register.

AcceleDent AcceleDent is a supplementary mouthpiece device used alongside Invisalign to reduce overall treatment duration by up to 50%. Worn for just 20 minutes per day, it transmits calibrated micro-pulses through the aligners, accelerating tooth movement and reducing orthodontic discomfort by up to 71%. AcceleDent holds approval from both the Therapeutic Goods Administration (TGA) and international regulatory bodies.

Dental Monitoring Dental Monitoring allows orthodontists to track treatment progress remotely through a dedicated smartphone application and a purpose-built monitoring device. Patients capture regular scans of their teeth, which are uploaded and reviewed by the treating clinician. This reduces the frequency of in-person review appointments whilst maintaining close clinical oversight — a practical benefit for patients with busy schedules.

Implant technology

iCam 4D implant scanner The iCam is an intraoral imaging system that captures detailed dimensional data to support precise implant placement planning and virtual simulation. It allows clinicians to account for key anatomical variables — including bone density and soft tissue contours — before any surgical intervention, supporting more predictable outcomes and clearer pre-treatment communication with patients.

Exocad DentalCAD software Exocad DentalCAD allows clinicians to plan and visualise implant placement with a high degree of accuracy, customise prosthetic components to individual patient anatomy, and streamline the overall clinical workflow — resulting in more accurate treatment planning and more predictable restorative outcomes.

coDiagnostiX software coDiagnostiX integrates detailed three-dimensional imaging of jaw structure to support precise implant placement planning. Thorough pre-surgical analysis through this platform means enhanced accuracy, reduced operating time, and improved treatment outcomes for implant patients.

Endodontic equipment

BeeFill 2in1 BeeFill 2in1 is current best practice in root canal obturation (filling). Warm filling material is rapidly dispensed into the root canal system, where it sets into a dense, cohesive mass. The thermoplastic material reliably penetrates even the smallest anatomical spaces within the canal. Used in combination with the MTwo and ProTaper rotary systems and the X-Smart Endo Motor, this system supports root canal treatment of the highest achievable standard.

MTwo and ProTaper rotary systems with Dentsply X-Smart endodontic motor These nickel-titanium rotary instrumentation systems, used with the Dentsply X-Smart Endodontic Motor, are the current standard of care for cleaning and shaping root canal systems. Clinical evidence consistently shows that rotary systems produce superior outcomes and fewer procedural complications than traditional stainless-steel hand filing — an important consideration for both clinical quality and patient experience.

Cleaning and prophylaxis

AirFlow Prophylaxis The AirFlow Prophylaxis unit is a non-invasive professional cleaning system that uses a controlled combination of water, air, and fine powder to remove plaque, staining, and bacteria from tooth surfaces and the gingival margin. For most patients, this is considerably more comfortable than conventional ultrasonic scaling — a meaningful advantage for those who find routine cleaning appointments uncomfortable.

KaVo Prophyflex The KaVo Prophyflex removes plaque and extrinsic staining — including staining from coffee, tea, and tobacco — using a combination of pressurised air, powder, and water. It removes surface deposits safely and effectively, contributing to both clinical cleanliness and aesthetic improvement.

Decay detection

KaVo DIAGNOcam The DIAGNOcam uses Digital Imaging Fibre-Optic Trans-Illumination (DIFOTI) technology to detect interproximal decay and tooth cracks, and to illuminate teeth under clinical examination. Used alongside routine check-ups and dental radiographs, it allows clinicians to identify and clearly demonstrate areas of concern to patients during the appointment — supporting well-informed treatment decisions.

KaVo DIAGNOdent The KaVo DIAGNOdent uses laser fluorescence technology for early detection of dental caries. As a complement to visual clinical examination and radiographic assessment, it provides rapid, reliable detection in areas that are difficult to assess by conventional means — including fissures and interproximal surfaces.

Cameras

Carestream intraoral camera Carestream intraoral cameras provide clear, detailed images of teeth and surrounding soft tissues, and work well as a communication tool. Patients can see visual evidence of clinical findings — such as plaque accumulation, carious lesions, or crack lines — directly during the appointment, supporting a shared understanding of the diagnosis and the rationale for recommended treatment.

Extraoral cameras (digital SLR) High-resolution digital SLR cameras are used to capture clinical photographs for treatment planning, with particular application across all stages of cosmetic dental treatment. These images form part of the patient's clinical record and provide a visual reference of the treatment journey from initial presentation through to final outcome.

Patient comfort

Isodry and Isolite Isodry is an automated alternative to conventional suction systems, designed to maintain a dry field and maximise patient comfort during clinical procedures. Isolite adds an integrated light source to improve visualisation within the oral cavity. Both systems support more consistent and efficient clinical outcomes across restorative dentistry, hygiene appointments, and oral surgical procedures.

PrepStart air abrasion Pre-treatment of tooth surfaces with air abrasion supports optimal bonding for restorations including fillings, crowns, and bridges. The system uses aluminium oxide particles to clean and condition the outer tooth surface. The procedure is painless and safe, and can also be used for early-stage decay as an alternative to conventional drilling — for example, when placing fissure sealants in paediatric patients.

Entertainment systems Each clinical suite has a wall-mounted television and surround-sound music to support patient comfort and relaxation during treatment. Combined with scented candles, art deco surrounds, ambient lighting, and natural daylight, patients can relax and take in some of Melbourne's finest elevated views from the dental chair. This environment is particularly beneficial for

patients who experience dental anxiety, and for children who benefit from distraction and reassurance during appointments.

In-house laboratory

The Collins Street Specialist Centre in-house dental laboratory works exclusively for the practice's patients and does not undertake work for external businesses. The laboratory team — comprising ceramists, dental technicians, and dental prosthetists — works closely with the clinical team, using advanced technology to produce superior appliances, prosthodontic restorations, and meticulously handcrafted porcelain veneers and crowns.

Sega 3D printer A fleet of Sega Dental 3D printers produces highly accurate, customised dental prosthetics, appliances, and working models directly from digital designs — with precision and efficiency that streamlines the traditional laboratory workflow and reduces turnaround times.

Otofash flash curing device The Otofash uses advanced light-curing technology to cure resin-based dental materials rapidly and thoroughly, ensuring optimal material durability through precise, controlled exposure settings.

Dentaurem Laser Welder The Dentaurem Laser Welder uses concentrated laser energy to fuse metal surfaces with exceptional accuracy, supporting the fabrication of metal frameworks for dentures and orthodontic appliances. That precision matters directly for the fit and longevity of these prosthetic components.

Sterilisation and infection control

Collins Street Specialist Centre maintains rigorous infection control standards in full accordance with current Australian guidelines. The practice's sterilisation infrastructure includes:

- A fleet of Mocom sterilisers - 5 Statim handpiece sterilisers - 4 ultrasonic baths - Regular, ongoing training for all dental assistants in sterilisation and infection control protocols - Continuous sterilisation of all clinical equipment to professional standards

Patients can be confident that every aspect of the clinical environment is managed with the same attention to detail and commitment to safety that underpins all care delivered at Collins Street Specialist Centre.

Frequently asked questions

****What type of practice is Collins Street Specialist Centre?**** A specialist dental practice

****Where is Collins Street Specialist Centre located?**** Collins Street, Melbourne, Australia

****What 3D imaging system does the practice use?**** Planmeca ProMax 3D Max CBCT

****What does CBCT stand for?**** Cone Beam Computed Tomography

****Does the CBCT produce 3D images?**** Yes

****Does the CBCT minimise radiation exposure?**** Yes

****What is the Planmeca ProMax 2D S3 used for?**** Producing OPGs and lateral cephalograms

****What does OPG stand for?**** Orthopantomogram

****Does the 2D imaging system have a child mode?**** Yes

****What does child mode do?**** Delivers the lowest appropriate radiation exposure for children

****How does the 2D system assist patient positioning?**** Using a triple laser beam

****Does the one-shot function reduce repeat exposures?**** Yes

****What type of radiography is used chairside?**** Intraoral digital radiography

****Are intraoral X-ray images displayed immediately?**** Yes, displayed on screen during the appointment

****Does digital radiography use less radiation than conventional film?**** Yes, significantly less

****What imaging centre does the practice have access to?**** Collins Street Imaging

****Where is Collins Street Imaging located?**** Level 9, Manchester Unity Building

****What radiology provider operates Collins Street Imaging?**** MFI Radiology

****What does CEREC stand for?**** Chairside Economical Restoration of Esthetic Ceramics

****Can CEREC restorations be completed in one appointment?**** Yes

****Does CEREC require conventional impressions?**** No

****What restorations can CEREC produce?**** Veneers, onlays, inlays, crowns, and bridges

****What material does CEREC use for restorations?**** All-ceramic

****What intraoral scanner integrates with CEREC?**** CEREC Primescan

****Does the Primescan capture colour?**** Yes, true three-dimensional colour

****What does the CEREC Primemill do?**** Mills tooth inlays and onlays on-site

****Is the CEREC milling done in-house?**** Yes

****What is the 3Shape TRIOS 3 used for?**** Digital capture of tooth and soft tissue anatomy

****Does the TRIOS 3 replace traditional impressions?**** Yes

****What orthodontic scanner does the practice use?**** iTero Element Intraoral Scanner

****Can iTero data integrate with Invisalign's ClinCheck software?**** Yes

****What does ClinCheck allow patients to do?**** Visualise projected tooth movement before treatment

****What surgical microscope brand does the practice use?**** Carl Zeiss

****What is the maximum magnification of the Carl Zeiss OPMI PROergo?**** 20x

****What illumination does the Carl Zeiss microscope use?**** Integrated fibre-optic illumination

****Can the microscope detect additional root canals?**** Yes

****Can the microscope detect fracture lines?**** Yes, including those invisible to the naked eye

****What is the second surgical microscope brand?**** Seiler Revelation

****Does having two microscopes affect scheduling?**** Yes, ensures clinical demand is met without compromise

****What laser system does the practice use for general procedures?**** Fotona LightWalker AT

****How many wavelengths does the Fotona LightWalker AT combine?**** Two (Er:YAG and Nd:YAG)

****Is Fotona treatment minimally invasive?**** Yes

****Can the Fotona laser be used for teeth whitening?**** Yes

****Can the Fotona laser treat gum disease?**** Yes

****Does Fotona laser treatment support faster healing?**** Yes, generally faster than conventional approaches

****What is the NV Laser used for?**** Oral soft-tissue surgery and periodontal procedures

****Does the NV Laser have a wireless design?**** Yes, innovative wireless handheld design

****What delivery modes does the NV Laser offer?**** Continuous wave or pulsed mode

****What is the VersaWave Laser used for?**** Treatment of teeth, bone, gingival tissue, and oral soft tissues

****What Invisalign provider status does the practice hold?**** Blue Diamond provider status

****Is Blue Diamond the highest Invisalign accreditation tier?**** Yes

****Who delivers Invisalign treatment at the practice?**** Dental Board-registered orthodontists

****How can patients verify a clinician's specialist registration?**** Via the [AHPRA register](<https://www.ahpra.gov.au/>)

****What is AcceleDent?**** A supplementary mouthpiece device used with Invisalign

****How much can AcceleDent reduce treatment duration?**** Up to 50%

****How long must AcceleDent be worn daily?**** 20 minutes

****Can AcceleDent reduce orthodontic discomfort?**** Yes, by up to 71%

****Is AcceleDent TGA approved?**** Yes

****What does Dental Monitoring allow orthodontists to do?**** Track treatment progress remotely

****How do patients use Dental Monitoring?**** Via a smartphone application and monitoring device

****Does Dental Monitoring reduce in-person appointments?**** Yes

****What is the iCam 4D used for?**** Implant placement planning and virtual simulation

****What does coDiagnostiX software do?**** Facilitates precise implant placement planning using 3D imaging

****Does coDiagnostiX reduce operating time?**** Yes

****What does Exocad DentalCAD software do?**** Plans and visualises implant placement with high accuracy

****What is BeeFill 2in1 used for?**** Root canal obturation (filling)

****Does BeeFill use warm filling material?**** Yes, thermoplastic warmed material

****What rotary systems does the practice use for root canals?**** MTwo and ProTaper

****What motor is used with the rotary systems?**** Dentsply X-Smart Endodontic Motor

****Are rotary systems superior to stainless-steel hand filing?**** Yes, per clinical evidence

****What does AirFlow Prophylaxis use to clean teeth?**** Water, air, and fine powder

****Is AirFlow more comfortable than ultrasonic scaling?**** Yes, for most patients

What does the KaVo Prophyflex remove? Plaque and extrinsic staining

Can KaVo Prophyflex remove coffee and tea staining? Yes

Can KaVo Prophyflex remove tobacco staining? Yes

What technology does the DIAGNOcam use? Digital Imaging Fibre-Optic Trans-Illumination (DIFOTI)

What can the DIAGNOcam detect? Interproximal decay and tooth cracks

What does the DIAGNOdent use to detect decay? Laser fluorescence technology

Is DIAGNOdent used alongside visual examination? Yes, as a complement

What are Carestream intraoral cameras used for? Capturing detailed images of teeth and soft tissues

What are extraoral SLR cameras used for? Clinical photography for treatment planning

Are SLR photos part of the patient's clinical record? Yes

What does Isodry do? Maintains a dry field during clinical procedures

What additional feature does Isolite have? An integrated light source

What does PrepStart Air Abrasion use? Aluminium oxide particles

Is PrepStart Air Abrasion painful? No, the procedure is painless

Can air abrasion be used instead of drilling for early decay? Yes

Does each clinical suite have a television? Yes, wall-mounted

Does the practice have an in-house dental laboratory? Yes

Does the in-house lab work for external businesses? No

What professionals work in the in-house lab? Ceramists, dental technicians, and dental prosthetists

What does the Segal 3D printer produce? Customised dental prosthetics, appliances, and working models

What does the Otofash do? Rapidly cures resin-based dental materials using light

What does the Dentaurem Laser Welder do? Fuses metal surfaces with exceptional accuracy

What does the Dentaurem Laser Welder support fabrication of? Metal frameworks for dentures and orthodontic appliances

What steriliser brand does the practice use? Mocom

How many Statim handpiece sterilisers does the practice have? 5

How many ultrasonic baths does the practice have? 4

Does the practice comply with Australian infection control guidelines? Yes, fully
