**Supplementary table 1. Databases and search strategies**

|  |  |  |
| --- | --- | --- |
| Databases of published trials | Search strategy used | Hits  |
| MEDLINE searched via Ovid(1950- 8th of February 2018)<https://www.nlm.nih.gov/bsd/pmresources.html> | (MH "Malocclusion, Angle Class III") OR (MH "Malocclusion") OR (Class III) OR (Class III malocclusion) OR (deficient maxilla) OR (retrognathic maxilla) OR (crossbite) AND (MH "Extraoral Traction Appliances") OR (Reverse pull headgear) OR (Reverse headgear) OR (protraction headgear) OR (Maxillary protraction) OR (Face mask) OR (Facemask) AND (MH "Palatal Expansion Technique") OR (Alt-RAMEC) OR (alternat\*) OR (Activation deactivation rapid palatal expansion) OR (rapid maxillary expansion) OR (RME) | 309 |
| Cochrane Database of Systematic Reviews and Cochrane Central Register of Controlled Trials searched via the Cochrane Library Up to 8th of February 2018www.thecochranelibrary.com | (MeSH descriptor: [Palatal Expansion Technique] explode all trees OR Alt-RAMEC) OR (alternat\*) OR (Activation deactivation rapid palatal expansion) OR (rapid maxillary expansion) OR (RME)) AND (MeSH descriptor: [Extraoral Traction Appliances] explode all trees OR Reverse pull headgear) OR (Reverse headgear) OR (protraction headgear) OR (Maxillary protraction) OR (Face mask) OR (Facemask)) AND (MeSH descriptor: [Malocclusion, Angle Class III] explode all trees OR MeSH descriptor: [Malocclusion] explode all trees OR (Class III) or (Class III malocclusion) or (deficient maxilla) or (retrognathic maxilla) or (crossbite)  | 191 |
| Scopus Up to 8th of February 2018Search: Title/Abstract/keywordswww.scopus.com |  (TITLE-ABS-KEY ((alt-ramec) OR (alternat\*) OR (activation AND deactivation AND rapid AND palatal AND expansion) OR (rapid AND maxillary AND expansion) OR (RME) OR (palatal AND expansion AND technique)) AND TITLE-ABS-KEY ((reverse AND pull AND headgear) OR (reverse AND headgear) OR (protraction AND headgear) OR (maxillary AND protraction) OR (face AND mask) OR (facemask) OR (extraoral AND traction AND appliances)) AND TITLE-ABS-KEY ((class AND iii) OR (class AND iii AND malocclusion) OR (deficient AND maxilla) OR (retrognathic AND maxilla) OR (crossbite) OR (angle AND class AND iii) OR (maloccliusion)))  |  389 |
| LILACS (Latin American and Caribbean Center on Health Sciences Information) searched Up to 8th of February 2018www.bireme.br/local/Site/bireme/I/homepage.htm | (Orthodontic AND (“crossbite” OR “Class III” OR “Maxilla” OR “RME” OR “rapid maxillary expansion”)) | 308 |
| US National Institutes of Health Trials Register Up to 8th of February 2018www.ClinicalTrials.gov | (Orthodontic AND (“crossbite” OR “Class III” OR “Maxilla” OR “RME” OR “rapid maxillary expansion”)) | 0 |
| WHO International Clinical Trials Registry PlatformUp to 8th of February 2018http://apps.who.int/trialsearch/AdvSearch.aspx | (Orthodontic AND (“crossbite” OR “Class III” OR “Maxilla” OR “RME” OR “rapid maxillary expansion”)) | 1 |

**MEDLINE searched via Ovid**

|  |  |
| --- | --- |
|   | Search Terms |
| S11 | S8 AND S9 AND S10 | 309 |
| S10 | S3 OR S5 | 613,000 |
| S9 | S2 OR S6 | (5,222) |
| S8 | S1 OR S4 OR S7 | 46,246 |
| S7 | (Class III) OR (Class III malocclusion) OR (deficient maxilla) OR (retrognathic maxilla) OR (crossbite) | 25,472 |
| S6 | (Reverse pull headgear) OR (Reverse headgear) OR (protraction headgear) OR (Maxillary protraction) OR (Face mask) OR (Facemask) | 3,714 |
| S5 | (Alt-RAMEC) OR (alternat\*) OR (Activation deactivation rapid palatal expansion) OR (rapid maxillary expansion) OR (Al-Mozany et al.) | 611,359 |
| S4 | (MH "Malocclusion") | -22,687 |
| S3 | (MH "Palatal Expansion Technique") | -2,436 |
| S2 | (MH "Extraoral Traction Appliances") | -1,823 |
| S1 | (MH "Malocclusion, Angle Class III") | (3,267) |

**Additional search methodology**

|  |  |
| --- | --- |
| Sources | Number of identified reference |
|  |  |
| 1. Journals searched manually from January 2004 until January 2018
* American Journal of Orthodontics and Dentofacial Orthopedics
* Angle Orthodontist
* European Journal of Orthodontics
* Journal of Orthodontics (and its predecessor, the British Journal of Orthodontics)
* Clinical Orthodontics and Research
* Australian Orthodontic Journal
* Korean Journal of Orthodontics
 | **0** |
| 1. Manual search in the reference lists of all eligible articles
 | **6** |
| 1. Conference proceedings and abstracts from British, European and Australian Orthodontic
 | **0** |
| 1. Google scholar ([www.scholar.google.com)](http://www.scholar.google.com))
 | **1** |
| 1. OpenGrey Up to 8th of February 2018 ([http://www.opengrey.eu/)](http://www.opengrey.eu/%29)
 | **1** |