Steelcase Think Chair or Equal
Salient Characteristic

1. General Requirments:

- Backrest
  a. Backrest height from seat must be a minimum of 22.75”.
  b. Backrest width must be a minimum of 19” (at narrowest point).
  c. Chair must include an adjustable lumbar with a minimum height adjustment range of 4-1/4” from 6” to 10-1/4”.
  d. Chair design shall not constrain user's torso to a position forward of vertical, but achieves a position that is vertical or the rear of vertical.
  e. Backrest design shall provide structural support for the entire length of the spine from the lower back through the thoracic area.
  f. Back support shall be constructed to allow heat to dissipate from the body through the seat to offer the user thermal comfort.
  g. Backrest shall not have hard edges which can create pressure points that lead to discomfort.
- Seat
  a. A pneumatic cylinder shall be used to accomplish seat height adjustment range between 16”-21” (per HFES 100) with an optional 15”- 19” range for petite users. Stool seat must have an adjustment in a 9-3/4” range between 22-3/4” – 32-1/2”.
  b. Seat width must be a minimum of 19-3/4”.
  c. Seat must include a 2” seat depth adjustment within a range of 15” to 17” to better accommodate the 5th percentile female and 95th percentile male (multiple sized chairs to meet this range will not be accepted).
  d. Passive seat edge angle must allow the front edge of the seat to flex 1-1/2” relieving pressure behind the thighs, allowing proper blood circulation to the user’s legs and feet.
  e. Seat pan (fabric and cushion) must be designed to be easily replaced in less than 5 minutes by a manufacturer trained installer to lengthen your products lifecycle.
  f. Seat pan angle shall not cause the user's torso-thigh angle to be less than 90 degrees.
  g. Seat shall not have hard edges which can create pressure points that lead to discomfort.
  h. Contour of seat shall allow dynamic side-to-side motion.
  i. Seat pan and foam shall be constructed to allow heat to dissipate from the body through the seat to offer the user thermal comfort.
- Mechanism
  a. The angle between the seat and back shall fall between 94° and 115°.
  b. Seat pan must not rise more than 1/2" when user reclines minimizing pressure beneath the user’s thighs.
  c. Chair shall swivel 360 degrees.
  d. Controls must be visible, labeled with text, and easy to reach from a seated position on both sides of the chair.

- Arm
  a. Chair is available with arm.
  b. Each arm must have a 4” height adjustment range between 7” and 11”.
  c. Each armcap must have a minimum of 2-1/4” width adjustment that allows the arm cap to come inside the seat pan this allows users of all sizes, arms to be supported naturally by their side rather than in an extended “chicken wing” position.
  d. Width between the arms must measure from 14-1/2” to 19-1/2”.
  e. Each armcap must have a fore/aft depth adjustment of 3” enabling users to get closer to their work.
  f. Each armcap must pivot at least 27° inward and outward.
  g. Arm adjustments must be made without the use of any tools.
  h. User must be able to make all arm adjustments while seated.
  i. The height of the armrest shall allow users to sit in a variety of postures while supporting their forearms and/or elbows in a manner that avoids lifting the shoulders or leaning to the side to reach armrest. The armrest height shall allow accessibility to and performance of tasks.
- Base / Caster
  a. Product must have a five-star base and have a minimum dimension of 25”.
  b. Casters should be at least 65mm (2-1/2”) diameter for ease of mobility.
  c. Soft, roll control wheels shall be offered as an option. These casters shall look the same but have a slight braking action when there is minimal or no weight in the seat, so the chair will not roll away from a person trying to sit down or lean against a chair.
  d. Dual caster wheels shall feature steel axles.
  e. Casters shall swivel on freely rotating steel pintles.
  f. Casters on chair base shall contact the floor on a minimum 27-1/4” diameter for optimal balance of stability and floor space.
- Upholstery
  Each pillow style cushion must be made from a color-matched polyester fabric foundation sewn to the customer's fabric choice. This pillow must be filled with a foam pad assembly for the seat or a PETE fiber pad for the back. The cushion must be held in place with two hook-type extrusions at each end of the assembly. To maintain a tight fit to the chair, elastic webbing must be used at the rear of the seat and the bottom of the back. The cushions shall be designed to be replaceable by the end user.

2. SURFACE MATERIALS

- Seat and Backrest – upholstery options must contain:
  a. 3D Knit (Back)
  b. Fabric (Seat)
  c. Fabric with soil retardant treatment
  d. COM (Customer’s Own Material)
  e. High Performance Textiles (commonly used in Healthcare environments)
- Back frame, outer back, arm retainer and base – must be plastic – Platinum Finish
- Arms and arm caps – must be black paint and plastic

3. WARRANTY AND TESTING INFORMATION

- Warranty:
  a. Manufacturer must offer a lifetime warranty that product shall be free from defects in materials and workmanship (includes shipping, parts and labor for the repair or replacement of defective item.)
  b. The following lifetime warranty exceptions shall be allowed:
     a. Mechanisms, pneumatic cylinders, arm caps, foam, glides and casters shall have a minimum 12 year warranty.
     b. A selection of textiles shall have a minimum 12 year warranty.
  c. Product line must be warranted for users up to 300 lbs.
  d. Product line must be warranted for 24/7 application.
- Testing:
  a. Chair must meet or exceed all ANSI/BIFMA X5.1-2002 American National Standard for Office Furnishings-General Purpose Office Chairs-Tests.
  b. Chair padding materials and fabric shall comply with the BIFMA First Generation Voluntary Upholstered Furniture Flammability Standard.
  c. Chair padding materials and fabric shall comply with the State of California Technical Information Bulletin 117.

4. ENVIRONMENTAL FEATURES

- Material chemistry
  a. Must be constructed free of environmentally hazardous materials such as PVC, CFC, solvent-based adhesives, heavy metals (chrome, lead and mercury) and benzene.
  b. Shall be constructed free of environmentally hazardous processes such as those that produce VOC's and deplete ozone.
  c. Painted components must be coated with powder coat paint.
  d. Upholstery fabrics shall be available which meet MBDC Cradle-to-Cradle Gold sustainable design certification. These fabrics contain less than 100 parts per million of any heavy metals of concern, which includes antimony, which is traditionally found in polyester fabrics.
- Life Cycle Assessment
  a. Manufacturer must provide opportunities for the Customer to recycle resell or refurbish their used furniture.
  b. A KD ("knock down") version of the chair shall be available to reduce the amount of packaging produced, used and recycled. KD versions also allow more chairs to fit in the shipping container or trailer, reducing carbon emissions associated with all aspects of distribution.
- Recycled Content and Recyclability
  a. Plastic base chairs shall be constructed of up to 20% recycled content.
     a. 14% post consumer content
     b. 6% pre consumer content
  b. Aluminum base chairs shall be constructed of up to 38% recycled content.
     a. 34% post consumer content
     b. 4% pre consumer content.

c. Chair must be easily disassembled into readily recyclable materials in 5 minutes or less using common hand tools.
d. Chair must be up to 97% recyclable at end of life.

- Certifications
  a. Furniture must be certified to meet the emissions requirements of the California DPH Standard Practice for the Testing of Volatile Organic Emissions from Various Sources-2004 (CA Section 01350) and ANSI/BIFMA X7.1 Standard for Formaldehyde and TVOC Emissions of Low-emitting Office Furniture Systems and Seating using either the open plan or private office exposure scenarios defined in ANSI/BIFMA M7.1 Standard Test Method for Determining VOC Emissions from Office Furniture Systems, Components, and Seating. Testing must be conducted in accordance with ANSI/BIFMA M7.1. Certification must be provided by an organization independent of the manufacturer as well as from the testing laboratory, in accordance with the requirements of ISO/IEC Guide 65 General requirements for bodies operating product certification systems.
  b. The above requirement is covered by SCS Indoor Advantage™ Gold Certification for indoor air quality.
  c. Product shall be at least Level™ 2 Certified with the BIFMA e3-2008 Furniture Sustainability Standards to meet or exceed the most current environmental standards in the furniture industry. In addition, Manufacturer shall also offer Level™ 3 Certified versions.

5. AWARDS

- Industrial Design Excellence (IDEA) Gold Award for design, functionality and innovation (BusinessWeek Magazine and Industrial Designers Society of America)
- Red Dot Award for Product Design, selected from among more than 4,000 entries from 40 countries (Germany)
- Good Design Award (The Chicago Athenaeum Museum of Architecture and Design)
- iF Design Award (Germany)
- Enterprise & Environment Award for best French eco-product designed for the environment, awarded by the French Minister of Ecology and Sustainability (Pollutec)
- Editor's Choice Award (NeoCon)
- Sustainable Design: Gold Award (IIDEX)
- Innovative Product: Gold Award (IIDEX)
- Workstation Seating: Silver Award (IIDEX)

6. MISCELLANEOUS

- Chairs shall have the option to be specified as KD ("knock down") at no extra cost.
- Manufacturer must offer the choice of boxed- or blanket-wrapped shipment of chairs and stools (doesn't apply to KD models).
- Overall dimensions of the chair must not exceed 27" in order to accommodate smaller work stations and conference room applications.
- All adjustments must be made without the use of tools and no regular maintenance should be required.
- An electronic user guide must be readily available to the end-user.

- Product must be guaranteed in writing to be available for a minimum of 10 years after first order entry.
- Product must ship fully assembled with an option of boxed or blanket wrapped and an additional option of ready to assemble to minimize packaging and transportation waste.
- Select models and finishes must be available for 12 business day delivery.