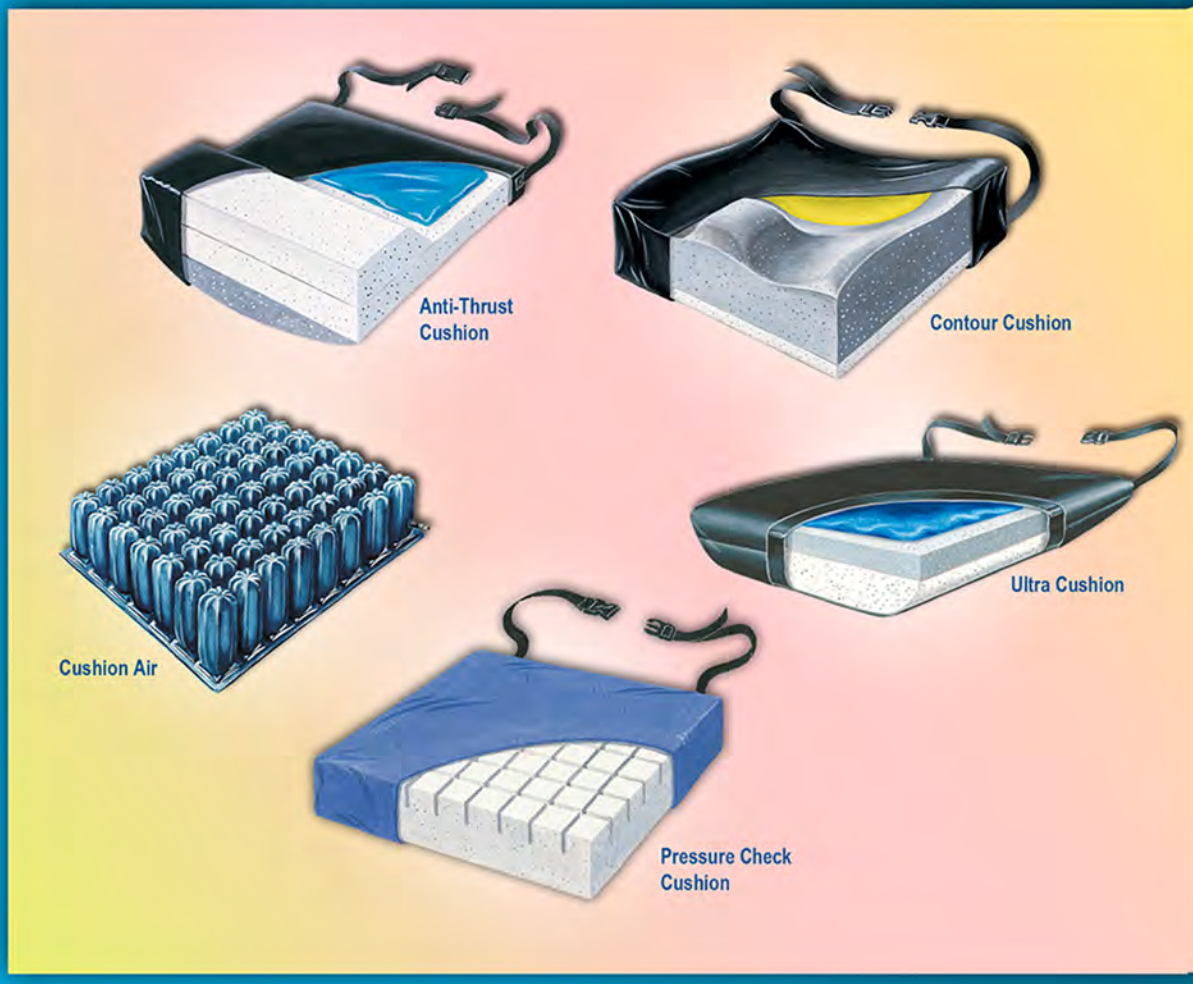
Skil-Care™ CORPORATION

Innovative products for nursing and therapy
Designed and manufactured with a difference

CUSHION SELECTION CHART

A Clinical Reference



Designed for the long-term care, acute care, and homecare clinician, this chart:

- **Provides** guidance for cushion selection based on Braden Scale assessment.
- **Validates** cushion selection with clinical rationales
- **Identifies** cushions that provide positioning interventions.

The Cushion Selection Chart was developed for Skil-Care Corporation by Cathy Thomas Hess, BSN, RN, CWOCN, president of Wound Care Strategies, Inc.

About Skil-Care's Cushion Selection Chart

Many factors must be considered when selecting a wheelchair cushion for a particular resident or patient. Among these factors are the wheelchair user's:

- pressure ulcer risk-assessment score,
- skin condition,
- weight, and
- positioning requirements.

These and other variables make it impossible to design one cushion that can meet the needs of all wheelchair users. Therefore, Skil-Care offers a broad selection of cushions that includes models with a variety of features and benefits that address seating needs ranging from the most basic to the most complex. The question then is, How do you select the cushion that best meets the needs of your resident or patient? This chart was developed to help you answer that question.

Skil-Care's Cushion Selection Chart provides the clinician with the guidance he/she requires in order to select a cushion that addresses the seating needs of a wheelchair user based on information compiled from a comprehensive assessment of that individual's current condition.

Using this Chart

Skil-Care's Cushion Selection Chart is divided into six columns:

1. Product Name, Model and Dimensions. The first column identifies each cushion by name, illustration, model number, and available sizes.

2. Product Description and Infection Control Consideration. Noted in this column are the features that each cushion offers and the information the clinician requires in order to establish an infection control protocol for the cushion.

3. User Weight Range. This third column provides guidance as to the maximum user weight for each cushion. The pressure-reducing effectiveness of a cushion is compromised if a user's weight compresses it to the point where it "bottoms-out".

4. Braden Scale Pressure Ulcer Risk Score. The fourth column is divided into four sub-columns that correspond to the four risk levels derived from the Braden Scale. The bullet points in these sub-columns indicate if a cushion is appropriate for use at each risk level. All cushions may be used at the No Risk and Low Risk levels; several are appropriate for No Risk, Low Risk, and Moderate Risk users; and others are recommended for all levels, including High Risk.

We elected to use the Braden Scale as one of our criteria for cushion selection because our research determined that it is the most frequently cited in the professional literature as a validated assessment tool. Indeed, the Agency for Healthcare Research and Quality (AHRQ) guideline titled *Pressure Ulcers* states:

> The Braden Scale, a screening and risk assessment tool for pressure ulcers should be completed on admission and quarterly for patients at high risk or following a significant temporary or permanent change in condition.[1]

The AHRQ publication titled *Guideline for Prevention and Management of Pressure Ulcers* notes:

> Bed- and chair-bound individuals or those with impaired ability to reposition should be assessed for additional factors that increase the risk of developing pressure ulcers. These include immobility, incontinence, nutritional factors such as inadequate dietary intake and impaired nutritional status, and altered level of consciousness. Individuals should be assessed on admission to acute care and rehabilitation hospitals, nursing homes, home care programs, and other health care facilities. A systematic risk assessment can be accomplished by using a validated risk assessment tool such as the Braden Scale. . . .[2]

5. Clinical Rationales. Column five is divided into nine sub-columns, each with a number keyed to one of the nine clinical rationales included at the bottom of the chart. These rationales (with the exception of # 9) were developed from the Centers for Medicare and Medicaid Services (CMS) *State Operations Manual* (SOM) regulatory guidelines and support the use of the cushions with which they are associated. We recommend that you note the clinical rationales in your care plans. Clinical Rationale # 9 is based on an article by Charles Lachenbruch, PhD titled "Skin Cooling Surfaces: Estimating the Importance of Skin Temperature" which appeared in the February 2005 issue of *OstomyWound Management*. The author's research determined that a 3-degree Celsius reduction in skin temperature might be equivalent to a 14 percent reduction in interface pressure.

6. Positioning Interventions. The last column is divided into three sub-columns that describe the positioning interventions that some Skil-Care cushions provide. These are:

- **Lateral Leaning Control.** Lateral leaning increases pressure on the left or right ischial –depending on the side to which the wheelchair user leans. Several Skil-Care cushions control left-right leaning, thereby making the ischials less vulnerable to pressure sores.
- **Forward Sliding Control.** A wheelchair user who slides forward places extraordinary pressure on his/her coccyx. Skil-Care offers a number of cushions that control forward sliding and reduce the risk of pressure ulcers on the coccyx.
- **Postural Symmetry.** Asymmetrical sitting posture results in pressure "hot spots" on the spine, scapula, coccyx, and ischials. Those Skil-Care cushions identified as providing postural symmetry assist the wheelchair user in achieving a more balanced seating position that distributes his/her weight more evenly, thereby reducing spot pressure.

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[1] Pressure Ulcers, American Medical Directors Association (Columbia, MD: 1996), p.16.

[2] Pressure Ulcers in Adults: Prediction and Prevention, Clinical Practice Guideline Number 1, AHCPR Publication No. 92-0047 (May 1992), pp. 13 – 14.

FABRIC CLEANING INSTRUCTIONS

Wipe Cleanable Products:

Low Shear II **Vinyl (Unsupported)** **Sewn Vinyl (Supported)**

Cleaning

- Wipe fabrics with either soap and water, liquid disinfectant or PDI wipes.
- Rinse throughly to remove any residual chemicals or soap.
- Make sure fabric is completely dry before using.
- Disinfect blood contamination with a 1:10 dilution of household bleach (5.25% sodium hypochlorite) as recommended by the CDC (Center of Disease Control, US Department of Health and Human Services, February 1989).

Caution

- DO NOT use cleaners that contain Phenol or Benzyl.
- DO NOT use iodophor type disinfectants, such as Betadine, because they will stain the fabrics listed above.
- DO NOT use household bleach or concentrated cleaning agents, disinfectants or germicides without diluting the product according to the manufacturer's instructions.
- DO NOT allow any cleaning agent to remain in contact with the fabrics for an extended time

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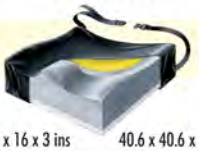
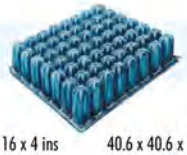
Laundered Products:

Low Shear I **Polyester** **Cozy Cloth** **Nylon**

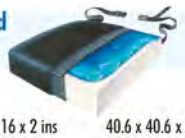
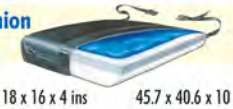
Cleaning

- The fabrics above can be laundered at a temperatures below 180^{O}F (82^{O}C).
- Use lower temperature during the dry cycle to extend product life.

DISPOSAL: If the fabric has been contaminated, properly dispose of per facility policy for BIOHAZARDOUS material

Product Name, Model and Dimensions	User Weight Range (Pounds & Kilograms)	Braden Scale Pressure Ulcer Risk Score				Clinical Rationale(s)									Positioning Intervention(s)		
		No Risk	Low Risk	Moderate Risk	High Risk	1	2	3	4	5	6	7	8	9	Lateral Leaning Control	Forward Sliding Control	Postural Symmetry
Pressure Check™ Foam Cushion  **#753180** 18 x 16 x 3 ins 45.7 x 40.6 x 7.6 cm	Up to 250 lbs/550 kg	•	•			•	•		•	•		•					
Conform Cushion  **#753150** 18 x 16 x 2 1/4 ins 45.7 x 40.6 x 5.7 cm	Up to 250 lbs/550 kg	•	•			•	•	•	•	•		•			•	•	•
Contour Cushion  **#753610** 16 x 16 x 3 ins 40.6 x 40.6 x 7.6 cm **#753615** 18 x 16 x 3 ins 45.7 x 40.6 x 7.6 cm **#753620** 20 x 16 x 3 ins 51 x 40.6 x 7.6 cm	Up to 300 lbs/660 kg	•	•	•		•	•	•	•	•		•			•	•	•
Cushion Air (Standard Models)  **#751540** 16 x 16 x 4 ins 40.6 x 40.6 x 10 cm **#751550** 18 x 16 x 4 ins 45.7 x 40.6 x 10 cm	Up to 400 lbs/880 kg	•	•	•	•	•	•	•	•	•		•		•			•
Cushion Air (Thin-Line® Models) **#751545** 16 x 16 x 2 ins 40.6 x 40.6 x 5 cm **#751560** 18 x 16 x 2 ins 45.7 x 40.6 x 5 cm	Up to 250 lbs/550 kg	•	•	•	•	•	•	•	•	•		•		•			•
Econo-Gel Pad (Standard Models)  **#751150** Vinyl with Polyester 16 x 16 x 2 ins 40.6 x 40.6 x 5 cm **#751151** Vinyl with Polyester 18 x 16 x 2 ins 45.7 x 40.6 x 5 cm **#751154** Vinyl Only 16 x 16 x 2 ins 45.6 x 40.6 x 5 cm **#751155** Vinyl Only 18 x 16 x 2 ins 45.7 x 40.6 x 5 cm	Up to 250 lbs/550 kg	•	•	•		•	•		•	•		• *					
Econo-Gel Pad (Thin-Line® Models) **#751171** Vinyl with Polyester 18 x 16 x 1 1/2 ins 45.7 x 40.6 x 3.8 cm **#751173** Vinyl Only 18 x 16 x 1 1/2 ins 45.7 x 40.6 x 3.8 cm	Up to 200 lbs/440 kg	•	•	•		•	•		•	•		• *					

* Clinical Rationale 7 "Prevention and elimination of friction and shearing" is only an applicable with a polyester cover.

Product Name, Model and Dimensions	User Weight Range (Pounds & Kilograms)	Braden Scale Pressure Ulcer Risk Score				Clinical Rationale(s)									Positioning Intervention(s)		
		No Risk	Low Risk	Moderate Risk	High Risk	1	2	3	4	5	6	7	8	9	Lateral Leaning Control	Forward Sliding Control	Postural Symmetry
Gel-Foam Pad (Standard Models) 	Up to 250 lbs/550 kg	•	•	•	•	•	•	•		•		•	•	•			
#751010 16 x 16 x 2 ins 40.6 x 40.6 x 5 cm **#751011** 18 x 16 x 2 ins 45.7 x 40.6 x 5 cm **#751012** 20 x 16 x 2 ins 50.1 x 40.6 x 5 cm																	
Gel-Foam Pad (Thin-Line® Model)	Up to 200 lbs/440 kg	•	•	•	•	•	•	•		•		•	•	•			
#751040 18 x 16 x 1 1/2 ins 45.7 x 40.6 x 3.8 cm																	
Bariatric Gel-Foam Pad Available in sizes up to 30 x 20 inches (76.2 x 51 cm). See catalog or cushion brochure for details.	Up to 500 lbs/1,100 kg	•	•	•	•	•	•	•		•		•	•	•			
Ultra Cushion (Standard Models) 	Up to 250 lbs/550 kg	•	•	•	•	•	•	•	•	•	•	•	•	•		•	
#754330 18 x 16 x 4 ins 45.7 x 40.6 x 10 cm																	
Ultra Cushion (Thin-Line® Model)	Up to 200 lbs/440 kg	•	•	•	•	•	•	•	•	•	•	•	•	•		•	
#754340 18 x 16 x 2 1/2 ins 45.7 x 40.6 x 6.3 cm																	
Position-Plus+ Cushion 	Up to 250 lbs/550 kg	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
#751420 16 x 16 x 2 1/2 ins 40.6 x 40.6 x 6.3 cm **#751435** 18 x 16 x 2 1/2 ins 45.7 x 40.6 x 6.3 cm **#751155** 20 x 16 x 16 x 2 1/2 ins 51 x 40.6 x 6.3 cm																	
Anti-Thrust Cushion 	Up to 250 lbs/550 kg	•	•	•	•	•	•	•	•	•	•	•	•	•		•	
#757115 (Soft Base) 16 x 16 ins 40.6 x 40.6 cm **#757125** (Firm Base) 18 x 16 ins 45.7 x 40.6 cm																	

* Clinical Rationale 7 "Prevention and elimination of friction and shearing" is only an applicable with a polyester cover.

Clinical Rationales

The clinical rationales provided below support our recommendations for the use of Skil-Care cushions based on their ability to address various concerns related to the prevention of pressure sores or aid in the healing of existing ones. Each rationale includes a "short identification" which summarizes the support information. We suggest that you note these short identifications in your care plans as part of the substantiation for your decision to use a particular cushion based on your assessment of a patient's needs.

1. Prevention of pressure ulcer development and healing of pressure ulcers that are present. (Short identification: Preven-tion of pressure ulcer.)

A determination that a resident is at high risk to develop a pressure ulcer has significant implications for prevention and treatment. The care process should include efforts to stabilize, reduce or remove underlying risk factors; monitor the impact of the interventions; and modify the interventions as appropriate to prevent or provide healing for pressure sores.

2. Prevention of infection to the extent possible. (Short identification: Avoidance of infection.)

Products that can be cleaned and disinfected decrease the risk of infection. Infection control practices should reflect current standards of practice.

3. Implementation of interventions that are consistent with resident needs such as positioning and repositioning. (Short identification: Positioning assistance.)

Assessment of a resident's skin integrity after pressure has been reduced or redistributed should guide the development and implementation of the repositioning plan. Positioning and repositioning is a critical intervention for the individual with a pressure ulcer or who is at risk of developing one. Severe flexion contracture also requires special attention to effectively reduce pressure on bony prominences or prevent breakdown resulting from skin-to-skin contact.

4. Implementation of appropriate chair positioning to promote postural alignment, weight distribution, sitting balance, and pressure redistribution. (Short identification: Redistribution of pressure with proper positioning.)

Pressure intensity and duration and tissue tolerance significantly affect the potential for the development and healing of pressure ulcers. For example, slouching in a chair may predispose an at-risk resident to pressure ulcers of the spine, scapula, or elbow.

5. Implementation of interventions consistent with resident needs such as eliminating or reducing pressure on body sites prone to pressure ulcer formation. (Short identification: Reduction of pressure on bony prominences.)

Diminished subcutaneous tissue and lean muscle mass, decreased skin elasticity, and impaired circulation increase the risk of pressure sore development. The skin and its sustaining structures must be supported to enable the resident to endure pressure with experiencing adverse effects.

6. Wheelchair modifications that provide a more stable surface and reduce pressure. (Short identification: Modification of wheelchairs.)

Sling-seat wheelchairs severely limit repositioning options and do not provide the support needed for prolonged sitting. Appropriate modifications are therefore needed to redistribute weight and prevent pressure ulcer development.

7. Prevention and elimination of friction and shear. (Short identification: Reduction of friction and shear forces.)

Although friction and shear are not primary causes of pressure ulcers, they are important contributing factors. Measures must be taken to prevent or reduce the potential for friction and shear during transfer, elevation, and repositioning. Consideration must also be given to reducing shear and friction caused by such support surfaces as cushions and mattresses.

8. Elimination of exposure to urine and/or feces as well as exposure to moisture from perspiration. (Short identification: Elimination of exposure to urine, feces, and moisture.)

Irritation or maceration resulting from prolonged exposure to urine and feces may hasten skin breakdown. Moisture resulting from perspiration may make skin more susceptible to damage from friction and shear.

9. Elimination of heat build-up as a contributing cause to skin breakdown. (Short identification: Reduction of skin temperature.)

"...an increase in skin temperature is undesirable because there is an accompanying increase in metabolism, which will increase the oxygen requirements in an area of tissue already suffering from poor circulation due to pressure. Also, at elevated skin temperatures, the rate of sweating increases and will create additional problems in maintaining a dry, cushion-skin interface." (Stewart, Eng, Palmieri, and Cochran "Wheelchair Cushion Effect on Skin Temperature, Heat Flux, and Relative Humidity" in Achieves of Physical Medicine Rehabilitation, Vol 61, May 1980, pp.229 – 233.)

Skil-Care's *Cushion Selection Chart, F314 Compliance Guide,* and on-line CE program titled *"Modifying Wheelchairs for Pressure Relief and Reduction"* were developed by Cathy Thomas Hess, RN, BSN, CWOCN. Skil-Care Corporation is delighted to have had the opportunity to work with her on these projects.

About Cathy Hess

Cathy Thomas Hess RN, BSN, CWOCN is a nationally recognized skin and wound care expert. Ms. Hess is the founder and president of Wound Care Strategies, Inc., a company that provides clinical and operational wound care consulting services to nursing homes, hospitals, rehabilitation facilities, physicians' offices, home care agencies, non-physician practitioners, and governmental agencies. As a leading forecaster and strategist in the skin and wound care industry, Ms. Hess provides professional consulting services in such areas as independent skin and wound care systems development, clinical processes, seminars, workshops, clinical trial monitoring, and regulatory and compliance issues. She is among the nation's foremost authorities on F314 compliance.

Ms. Hess has authored more than 100 skin and wound care articles and has written several chapters for medical textbooks. She is the author of *The Clinical Wound Management Manual Series,* a comprehensive wound care procedure system, as well as *The Clinical Guide to Wound Care, 5th Edition,* a product reference guide. She is the creator of the Wound Care Strategies Documentation System, for paper documentation of skin and wound care. Ms. Hess also developed the TriAssess suite of software programs for electronic medical record documentation to accommodate all sites of service. Ms. Hess is a clinical consultant for *Advances in Skin and Wound Care's* Infolink, where she serves as the department editor. She is also the marketing chair for the Wound, Continence, Ostomy Certification Board. A guest speaker in national and international forums, Cathy Hess developed the innovative New Directions in Chronic Wound Care Management Workshop.

For more information about Cathy Thomas Hess and Wound Care Strategies, contact:



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