






**Table RR-A** provides a quick guide to front and side reach ranges that are explained in detail throughout the chapter.

Type of reach	Front reach			Side reach	
	Unobstructed	Over a shallow counter <b>20 in. max</b> (510 mm)	Over a deep counter <b>20 to 25 in.</b> (510 to 635 mm)	Unobstructed or shallow obstruction <b>10 in. max</b> (255 mm)	Over a deep obstruction <b>10 to 24 in.</b> (255 to 610 mm)
Upper (adult)	<b>48 in. max</b> (1220 mm)	<b>48 in. max</b> (1220 mm)	<b>44 in. max</b> (1120 mm)	<b>48 in. max</b> (1220 mm)	<b>44 in. max</b> (1120 mm)
	<b>43 in. preferred</b> (1090 mm)	<b>43 in. preferred</b> (1090 mm)	<b>43 in. preferred</b> (1090 mm)	<b>43 in. preferred</b> (1090 mm)	<b>43 in. preferred</b> (1090 mm)
Lower (adult)	<b>15 in. min</b> (380 mm)	*	*	<b>15 in. min</b> (380 mm)	*
	<b>18 in. preferred</b> (455 mm)	*	*	<b>18 in. preferred</b> (455 mm)	*
Upper (children age 9 to 12)	<b>44 in. max</b> (1120 mm)	*	*	<b>44 in. max</b> (1120 mm)	*
Lower (children age 9 to 12)	<b>16 in. min</b> (405 mm)	*	*	<b>16 in. min</b> (405 mm)	*
Upper (children age 5 to 8)	<b>40 in. max</b> (1015 mm)	*	*	<b>40 in. max</b> (1015 mm)	*
Upper (children age 5 to 8)	<b>18 in. min</b> (455 mm)	*	*	<b>18 in. min</b> (455 mm)	*
Upper (children age 3 to 5)	<b>36 in. max</b> (950 mm)	*	*	<b>36 in. max</b> (950 mm)	*
Upper (children age 3 to 5)	<b>20 in. min</b> (510 mm)	*	*	<b>20 in. min</b> (510 mm)	*

\* not specified by ADAAG, or not applicable

**RR-A** ADAAG reach ranges for adults and children

- A2** Provide the minimum clear floor space in front of all controls and objects. For additional information on minimum clear floor space, **see RT Routes and Spaces.** 
- A3** Locate controls and objects at least 18in. (455mm) away from inside corners of walls so that people using wheelchairs can get close enough to access them. 
- A4** Locate controls and objects that require manipulation (such as keypads, dials, and switches) between 36in. (915mm) minimum and 43in. (1090mm) maximum above the floor. 
- A5** Locate similar controls and objects at consistent heights throughout spaces. 
- A6** Install light switches at the same height wherever possible. 

**B Front Reach**

Heights for a front reach apply where the clear floor space allows *only* a forward approach to an object by a person using a wheelchair.


Keep in mind that a forward approach (front reach) is more limited than a parallel approach (side reach).

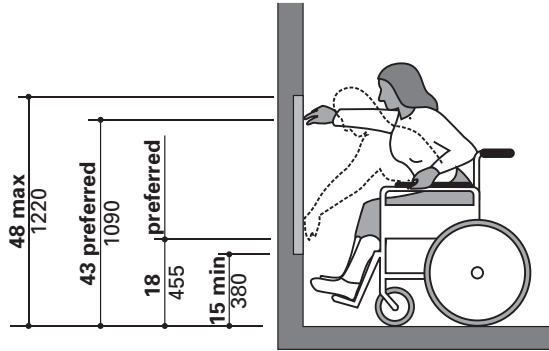
**B1** Where the forward approach (front reach) is unobstructed, locate objects no higher than 48in. (1220mm) above the floor.

**ADAAG: 1998 4.2 & 2004 308**

A height of 43in. (1090mm) is preferred. 

**See Figure RR.2**

**B2** Wherever possible, locate objects, switches, outlets, and controls between 36in. (915mm) and 43in. (1090mm) above the floor. 



**RR.2** Reach range for an unobstructed front reach

**B3** Where the front reach is unobstructed, locate objects no lower than 15in. (380mm) above the floor. ADAAG: 1998 4.2 & 2004 308

A height of 18in. (455mm) is preferred. **ae**

**B4** Wherever possible, locate outlets and other objects that are normally closer to the floor at a consistent height of 18in. (455mm) above the floor measured to the centerline of the outlet or object. **ae**

**C Reduced Front Reach**

When people need to reach over an obstruction to access another object or control, the distance they can reach is reduced.

**C1** Ensure that an obstruction below an object or control does not extend horizontally more than 25in. (635mm) into the clear floor space. ADAAG: 1998 4.2 & 2004 308

**C2** Where a front reach is over an obstruction that extends horizontally 20in. (510mm) or less into the clear floor space, locate objects no higher than 48in. (1220mm) above the floor. ADAAG: 1998 4.2 & 2004 308

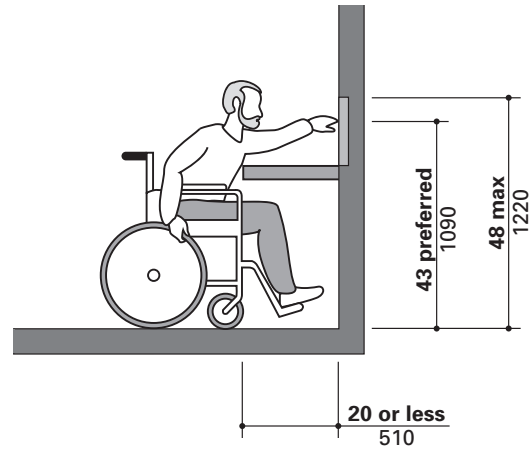
A height of 43in. (1090mm) is preferred. **ae**

See Figure RR.3

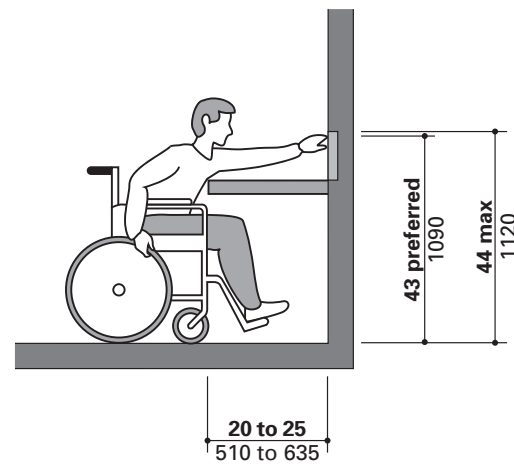
**C3** Where a front reach is over an obstruction that extends from 20in. (510mm) to a maximum of 25in. (635mm) horizontally into the clear floor space, locate objects no higher than 44in. (1120mm). ADAAG: 1998 4.2 & 2004 308

A height of 43in. (1090mm) is preferred. **ae**

See Figure RR.4



**RR.3** Reach range for a front reach over a 20in. (510mm) maximum deep obstruction



**RR.4** Reach range for a front reach over an obstruction between 20in. (510mm) and 25in. (635mm) deep

**C4** Provide clear floor space for legroom below an obstruction that is at least equal to the reach length above the obstruction. ADAAG: 1998 4.2 & 2004 308

**Example:** If a 20in. (510mm) deep shelf is mounted below an ATM, the clear space below the shelf should be at least 20in. (510mm) deep.

See RT Routes and Spaces, RT-Q for additional information on legroom.