

# Progress-Bar

<https://playdocs1.orangeriver-ad055946.westus2.azurecontainerapps.io/play-docs/docs/ui-components/Feedback/Progress-Bar>

## Progress Bar

The provides a comprehensive progress indicator solution with both circular and linear variants. It supports multiple modes including determinate, indeterminate, buffer, and query states, with smooth animations, customizable colors, and full accessibility support.

```
<aava-progressbar>
```

## How to use

Import the component and configure it with your desired properties.

```
import { AavaProgressComponent } from "@aava/play-core";
```

```
import { AavaProgressComponent } from "@aava/play-core";
```

## Circular Progress

Circular progress indicator with customizable size, color, and animation.

```
<aava-progressbar [percentage]="25" label="25% Complete" type="circular" [svgSize]="100"></aava-progressbar>
<aava-progressbar [percentage]="50" label="50% Complete" type="circular" [svgSize]="100"></aava-progressbar>
<aava-progressbar [percentage]="75" label="75% Complete" type="circular" [svgSize]="100"></aava-progressbar>
<aava-progressbar [percentage]="100" label="100% Complete" type="circular" [svgSize]="100"></aava-progressbar>
```

```
<aava-progressbar [percentage]="25" label="25% Complete" type="circular" [svgSize]="100"></aava-progressbar>
<aava-progressbar [percentage]="50" label="50% Complete" type="circular" [svgSize]="100"></aava-progressbar>
<aava-progressbar [percentage]="75" label="75% Complete" type="circular" [svgSize]="100"></aava-progressbar>
<aava-progressbar [percentage]="100" label="100% Complete" type="circular" [svgSize]="100"></aava-progressbar>
```

## Linear Progress

Linear progress bar with support for determinate, indeterminate, and buffer modes.

```
<aava-progressbar [percentage]="25" type="linear" mode="determinate"></aava-progressbar><aava-progressbar
[percentage]="50" type="linear" mode="determinate"></aava-progressbar><aava-progressbar [percentage]="75"
type="linear" mode="determinate"></aava-progressbar><aava-progressbar [percentage]="100" type="linear"
mode="determinate"></aava-progressbar>
```

```
<aava-progressbar [percentage]="25" type="linear" mode="determinate"></aava-progressbar><aava-progressbar
[percentage]="50" type="linear" mode="determinate"></aava-progressbar><aava-progressbar [percentage]="75"
type="linear" mode="determinate"></aava-progressbar><aava-progressbar [percentage]="100" type="linear"
mode="determinate"></aava-progressbar>
```

## Features

### Multiple Progress Types

- Circular Progress: SVG-based circular indicator with smooth animations
- Linear Progress: Horizontal progress bar with customizable height and styling
- Responsive Design: Automatically adjusts size based on screen dimensions

## Progress Modes

- Determinate: Shows exact progress percentage with smooth animations

- Indeterminate: Animated loading indicator for unknown progress
- Buffer: Shows both progress and buffer values (linear only)
- Query: Animated indicator for querying operations

## Customization Options

- Custom colors and themes
- Configurable sizes and positions
- Smooth animations with easing
- Accessibility features with ARIA support

## Performance Optimized

- OnPush change detection strategy
- Efficient SVG animations
- Optimized rendering and memory management
- Responsive resize handling

## API Reference

### Inputs

Property	Type	Default	Description
percentage	number	0	Progress percentage (0-100)
bufferValue	number	0	Buffer value for buffer mode (0-100)
label	string	' '	Label text displayed with the progress bar
type	'circular'   'linear'	'circular'	Type of progress indicator
color	string	'#2E308E'	Color of the progress indicator
mode	'determinate'   'indeterminate'   'buffer'   'query'   'determinate'		Progress mode
svgSize	number	' '	Custom SVG size (overrides responsive sizing)
position	'12'   '3'   '6'   '9'	number	Starting position for circular progress (clock positions)
percentage			
number			
0			
bufferValue			
number			
0			
label			
string			
' '			
type			
'circular'   'linear'			
'circular'			

color
string
'#2E308E'
mode
'determinate'   'indeterminate'   'buffer'   'query'
'determinate'
svgSize
number
' '
position
'12'   '3'   '6'   '9'   number
'12'

## Outputs

Property	Type	Description
None	-	This component doesn't emit events

## Properties

Property	Type	Description
progressId	string	Unique identifier for the progress element
circumference	number	Circumference of the circular progress (readonly)
dashOffset	number	Current dash offset for circular progress
errorMessage	string	Error message for invalid inputs
displayPercentage	number	Animated display percentage for linear progress
rotationAngle	number	Rotation angle for circular progress position
progressId		
string		
circumference		
number		
dashOffset		
number		
errorMessage		
string		

displayPercentage
number
rotationAngle
number

## Methods

Method	Parameters	Description
updateProgress()	None	Updates the progress display and animations
writeValue()	value: number	Sets the progress value (ControlValueAccessor)
registerOnChange()	fn: (value: number) => void	Registers change callback (ControlValueAccessor)
registerOnTouched()	fn: () => void	Registers touched callback (ControlValueAccessor)
updateProgress()		
writeValue()		
value: number		
registerOnChange()		
fn: (value: number) => void		
registerOnTouched()		
fn: () => void		

## CSS Custom Properties

The component uses CSS custom properties for dynamic styling:

## Circular Progress Properties

Property	Description
--progress-text-weight	Font weight for progress text
--progress-text-color	Text color for progress display
--progress-text-font	Font size for progress text
--progress-label-font	Font size for progress label
--progress-label-color	Color for progress label
--progress-label-line-height	Line height for progress label
--progress-label-weight	Font weight for progress label
--progress-transition	Transition timing for progress animations
--progress-indeterminate-animation	Animation for indeterminate mode
--progress-text-weight	
--progress-text-color	
--progress-text-font	
--progress-label-font	
--progress-label-color	
--progress-label-line-height	

--progress-label-weight

--progress-transition

--progress-indeterminate-animation

## Linear Progress Properties

Property | Description  
--progress-linear-height | Height of the linear progress bar  
--progress-linear-border-radius | Border radius for linear progress

--progress-linear-height

--progress-linear-border-radius

## CSS Classes

The component uses CSS classes for styling and state management:

### Container Classes

Class | Description  
.progress-container | Main container for circular progress  
.linear-progress-container | Main container for linear progress

.progress-container

.linear-progress-container

### Progress Classes

Class | Description  
.progress-background | Background circle for circular progress  
.progress-bar | Main progress circle/bar  
.progress-text | Text display inside circular progress  
.progress-label | Label text for progress  
.linear-bar | Container for linear progress bar  
.linear-progress | Main linear progress element  
.buffer-bar | Buffer progress element  
.indeterminate-bar | Indeterminate progress element  
.progress-percentage | Percentage display for linear progress

.progress-background

.progress-bar

.progress-text

.progress-label

.linear-bar

.linear-progress

.buffer-bar

.indeterminate-bar

.progress-percentage

## State Classes

Class	Description
.indeterminate	Indeterminate animation state
.progress-error	Error message styling

.indeterminate

.progress-error

## Best Practices

### Progress Mode Selection

- Usedeterminatemode when you know the exact progress
- Useindeterminatemode for unknown loading times
- Usebuffermode for operations with both progress and buffer (e.g., video loading)
- Usequerymode for search or query operations

### Color and Styling

- Choose colors that provide good contrast with the background
- Use consistent colors across your application
- Consider using semantic colors (success, warning, error) for different states
- Ensure accessibility with proper color contrast ratios

### Performance

- Avoid frequent percentage updates for smooth animations
- Use appropriate animation durations based on the operation
- Consider using indeterminate mode for very short operations

### Accessibility

- Always provide meaningful labels
- The component includes proper ARIA attributes
- Ensure sufficient color contrast
- Test with screen readers

### Responsive Design

- The component automatically adjusts size on different screens
- Test on various device sizes
- Consider custom sizing for specific use cases

### Accessibility

### ARIA Support

- Properrole="progressbar"attribute
- aria-valuenowfor current progress value
- aria-valuemin="0"andaria-valuemax="100"for value range
- Screen reader announcements for progress updates

```
role="progressbar"
```

```
aria-valuenow
```

```
aria-valuemin="0"
```

```
aria-valuemax="100"
```

## Keyboard Navigation

- Focus indicators for interactive elements
- Proper tab order
- Keyboard-accessible progress controls

## Visual Accessibility

- High contrast color options
- Clear visual indicators
- Scalable text and graphics
- Support for reduced motion preferences

## Browser Support

- Modern Browsers: Full support for all features
- SVG Support: Required for circular progress
- CSS Animations: Required for smooth transitions
- ES6+ Features: Required for component functionality
- Change Detection: OnPush strategy support