

### Import statement

```
use
Magento\Catalog\Model\ResourceModel\Product\CollectionFactory
as ProductCollectionFactory;
```

### Constructor

```
/**
 * @var ProductCollectionFactory
 */
private $productCollectionFactory;
/**
 * @param ProductCollectionFactory $productCollectionFactory
 */
public function __construct(
    ProductCollectionFactory $productCollectionFactory
) {
    $this->productCollectionFactory =
    $productCollectionFactory;
}
```

### Product Types

```
\Magento\Catalog\Model\Product\Type::TYPE_SIMPLE
\Magento\Catalog\Model\Product\Type::TYPE_BUNDLE
\Magento\Catalog\Model\Product\Type::TYPE_VIRTUAL
\Magento\Catalog\Model\Product\Type::TYPE_DOWNLOADABLE
\Magento\Catalog\Model\Product\Type::TYPE_CONFIGURABLE
\Magento\Catalog\Model\Product\Type::TYPE_CODE
\Magento\Catalog\Model\Product\Type::TYPE_CODE
```

### Visibility filter

```
/**
 * Visibility filter
 */
protected $productVisibility;
public function __construct(
    \Magento\Catalog\Model\Product\
    \Visibility $productVisibility,
) {
    $this->productVisibility = $productVisibility;
}
[...]
$collection->setVisibility($this->productVisibility->getVisibleIds());
[...]
```

### Filters

```
// Is Equal To
$collection->addAttributeToFilter('status', ['eq' => 1]);
// Is Not Equal To
$collection->addAttributeToFilter('visibility', ['neq' => 1]);
// Greater Than
$collection->addAttributeToFilter('price', ['gt' => 3]);
// Less Than
$collection->addAttributeToFilter('price', ['lt' => 3]);
// Greater Than or Equal To
$collection->addAttributeToFilter('price', ['gteq' => 4]);
// Less Than or Equal To
$collection->addAttributeToFilter('price', ['lteq' => 4]);
// Contains - with % wildcards
$collection->addAttributeToFilter('sku', ['like' => 'DVD%']);
```



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Page 1 of 4.

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### Filters (cont)

```
> // Does Not Contain – with % wildcards
$collection->addAttributeToFilter('sku', ['nlike' => 'ABC%']);
// In Array
$collection->addAttributeToFilter('entity_id', ['in' => [1,3,12]]);
// Not In Array
$collection->addAttributeToFilter('entity_id', ['nin' => [1,2,12]]);
// Is NULL
$collection->addAttributeToFilter('description', 'null');
$collection->addAttributeToFilter('description', ['null' => true]);
// Is Not NULL
$collection->addAttributeToFilter('description', 'notnull');
$collection->addAttributeToFilter('description', ['notnull' => true]);
```

### Add Price Data

```
$collection->addPriceData();
```

### Simple filter

```
$collection->addAttributeToFilter('type_id',
$typeFilter);
```

### More complex filter

```
$collection->addAttributeToFilter(
    'status',
    ['in' => 'processing']
);
```

### Or filter

```
// Or
$collection->addAttributeToFilter([
    [
        'attribute' => 'download -
_link',
        'null' => true,
    ],
    [
        'attribute' => 'download -
_link',
        'eq' => '',
    ],
]);
```

### In Stock Filter

```
/**
 * @var \Magento\CatalogInventory\Helper -
\Stock
 */
protected $stockHelper;
public function __construct(
    \Magento\CatalogInventory\Helper -
\Stock $stockHelper
) {
    $this->stockHelper = $stockHelper;
}
[...]
$this->stockFilter->addInStockFilter -
ToCollection($collection);
[...]
```



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Page 2 of 4.

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### Get Price Data

```
$collection->getMaxPrice();  
$collection->getMinPrice();  
$collection->getPriceStandardDeviation();  
$collection->getPriceCount();
```

### Create

```
$collection = $this->productCollectionFactory->  
create();
```

### Filter by Product ID

```
$collection->addIdFilter($productId);
```

### Filter by Store ID

```
$collection->addStoreFilter($storeId);
```

### Select Attribute

```
$collection->addAttributeToSelect($attributeCode);
```

### Get first item

```
return $collection->getFirstItem();
```

### Get raw attribute value

```
return $collection->getFirstItem()->  
getData($attributeCode);
```

### Status Filter

```
/**  
 * @var Magento\Catalog\Model\Product -  
 * Attribute Source Status  
 */  
protected $productStatus;  
public function __construct(  
    \Magento\Catalog\Model\Product -  
    $attributeSource $status $productStatus  
) {
```

### Status Filter (cont)

```
> $this->productStatus = $productStatus;  
}  
[...]  
$collection->addAttributeToFilter(  
    'status',  
    ['in' => $this->productStatus->getVisibleStatusIds()  
]);  
[...]
```

### Category Filter

```
$collection->addCategoryFilter($category);
```

### Return only IDs

```
return $collection->getAllIds();
```

### Debug Query

```
echo (string) $collection->getSelect();  
$collection->printLogQuery(true);
```

### Add Media

```
$collection->addMediaGalleryData();
```

### Add Tier Price Data

```
$collection->addTierPriceData();  
$collection->addTierPriceDataByGroup -  
Id($customerGroupId);
```



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Page 3 of 4.

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### Add Category IDs

```
$collection->addCategoryIds();
```

### Add Website Names

```
$collection->addWebsiteNamesToResult();
```

### Join Stock Qty to collection

```
$collection->joinField(
    'qty',
    'cataloginventory_stock_item',
    'qty',
    'product_id=entity_id',
    '{{table}}.stock_id=1',
    'left'
);
```

### Generic Collection

```
// Sort Collection
// Order by Attribute Ascending
$collection->setOrder('price', 'ASC');

// Order by Attribute Descending
$collection->setOrder('name', 'DESC');
// Random Order
$collection->setOrder('rand()');
// Limit Collection
$collection->setPageSize(10);
$collection->setCursors(1);

// Count Results
$collection->count();
```

### Add URL data

```
$collection->addUrlRewrite($categoryId);
```

### Add Tax Percents

```
$collection->addTaxPercents();
```

### Add Options

```
$collection->addOptionsToResult();
```

### Add Sort

```
$collection->addAttributeToSort('name', 'DESC');
```

### Free Up Memory

```
$collection->clear();
```



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Page 4 of 4.

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