

PrestaShop Product Properties Extension Smart Price plugin

User Guide

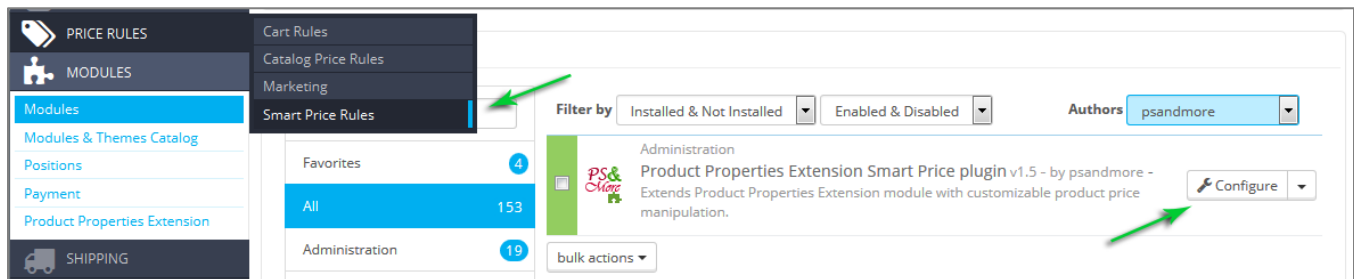
Introduction

The PS&More Product Properties Extension Smart Price plugin adds additional functionality to the Product Properties Extension module. The plugin allows you to specify rules that affect the product price calculations. You can also add quantity and price dependent explanations for the customer, making the shopping experience more attractive.

The Smart Price plugin comes with the rich set of built-in configuration options and rules. It also allows user defined expressions and customizations, giving endless possibilities for complex price calculations.

Access the Smart Price plugin

You access the module configuration either through the "Modules" tab in the PrestaShop back-office or through the "Smart Price Rules" menu item in the "PRICE RULES" menu.



Using the Smart Price plugin

You start working with the plugin by creating the Smart Price Rules. Just press the “Add new rule” button. You can edit, duplicate or delete the rule at any time by pressing the “Edit”, “Duplicate” or “Delete” buttons.

PRICE RULES / SMART PRICE RULES
Smart Price Rules

SMART PRICE RULES 4

ID	Name	Description	Position	Status	
--				-	Search
1	Brochure A-5 colour	Brochure cover adds extra to the total price	+	0	✓ Edit
3	HEA Beam	Beam cutting adds different values to the price depending on the beam thickness	+	1	✓ Edit
4	Stickers	with cutting	+	2	✓ Edit
5	Stickers	no cutting	+	3	✓ Edit

Bulk actions

- Duplicate
- Delete

Settings

When working with the plugin you can enable the debug mode. When enabled, the module displays additional information about the active rules and built-in variables. This information is visible to your customers in the Front Office, so it is a good idea to put your shop in the maintenance mode.

SETTINGS

Enable debug mode **YES** NO

Enable or disable debug mode. When enabled, the module displays additional information about the active rules. This information is visible to your customers in the Front Office, so it is a good idea to put your shop in the maintenance mode.

Save

The Smart Price Rule configuration

The Smart Price Rule configuration page has several sections giving access to different rule settings.

Rule Information

You specify general rule configuration information in the “Rule Information” section.

The screenshot shows the 'Edit: HEA Beam' configuration page. At the top, there is a breadcrumb trail 'PRICE RULES / SMART PRICE RULES' and a 'Help' icon. Below this, the page title is 'Edit: HEA Beam'. The main content area is titled 'SMART PRICE RULE' and contains a tabbed interface with 'RULE', 'CONDITIONS', 'ACTIONS', and 'TEXT'. The 'RULE' tab is active, showing the 'RULE INFORMATION' section. This section includes:

- Name:** HEA Beam (mandatory field, marked with an asterisk). Language: en.
- Description:** Beam cutting adds different values to the price depending on the beam thickness. Language: en.
- Currency:** Dollar (mandatory field, marked with an asterisk).
- Expressions:** A toggle switch currently set to 'ENABLED'.
- Customization:** A toggle switch currently set to 'ENABLED'.
- Status:** A toggle switch currently set to 'ENABLED'.

 At the bottom of the configuration area, there are three buttons: 'Cancel', 'Save and stay', and 'Save'. A 'user guide' icon is also visible in the top right corner of the configuration area.

Field	Description
Name	Rule name is an internal name and not visible in the shop. Rule name is mandatory .
Description	Rule description. Any text to help you to identify the rule. If you do not give any description, the one will be auto generated for you.
Currency	Currency used to specify the amount related values in the rule’s action section. Currency exchange rates used for calculations the amount related values in other currencies. Currency is mandatory .
Expressions	You can enable or disable expressions for the rule. If you do not use expressions, for performance reasons leave this option disabled. See the “Using expressions” section in this document.

Field	Description
Customization	You can enable or disable customizations for the rule. If you do not create user defined customizations, for performance reasons leave this option disabled. See the “User defined customizations” section in this document.
Status	You can enable or disable the rule. The disabled rule not used for price calculations.

Rule Conditions

The “Rule Conditions” section specifies conditions when to perform the rule actions. The rule applied to any product when all of the enabled conditions met, meaning that many different products can share the same rule.

RULE
CONDITIONS
ACTIONS
TEXT

RULE CONDITIONS

? In this section you specify conditions when the actions of the rule are performed. The rule applied to any product when all of the following enabled conditions met.

Products selection ENABLED DISABLED

Templates selection ENABLED DISABLED

The rule applied to any product with the template in the selection assigned to the product.

Choose

Attributes selection ENABLED DISABLED

The rule applied to any product when any one of the following conditions in the group met.

The rule applied to any product when the combination of all specified attributes selected by the customer. The product can have more attributes.

Choose

The rule applied to any product when the combination of all specified attributes selected by the customer. The product can have more attributes.

Choose
✕

The rule applied to any product when the combination of all specified attributes selected by the customer. The product can have more attributes.

Choose
✕

+ Add another "Attributes selection" group

✕
Cancel

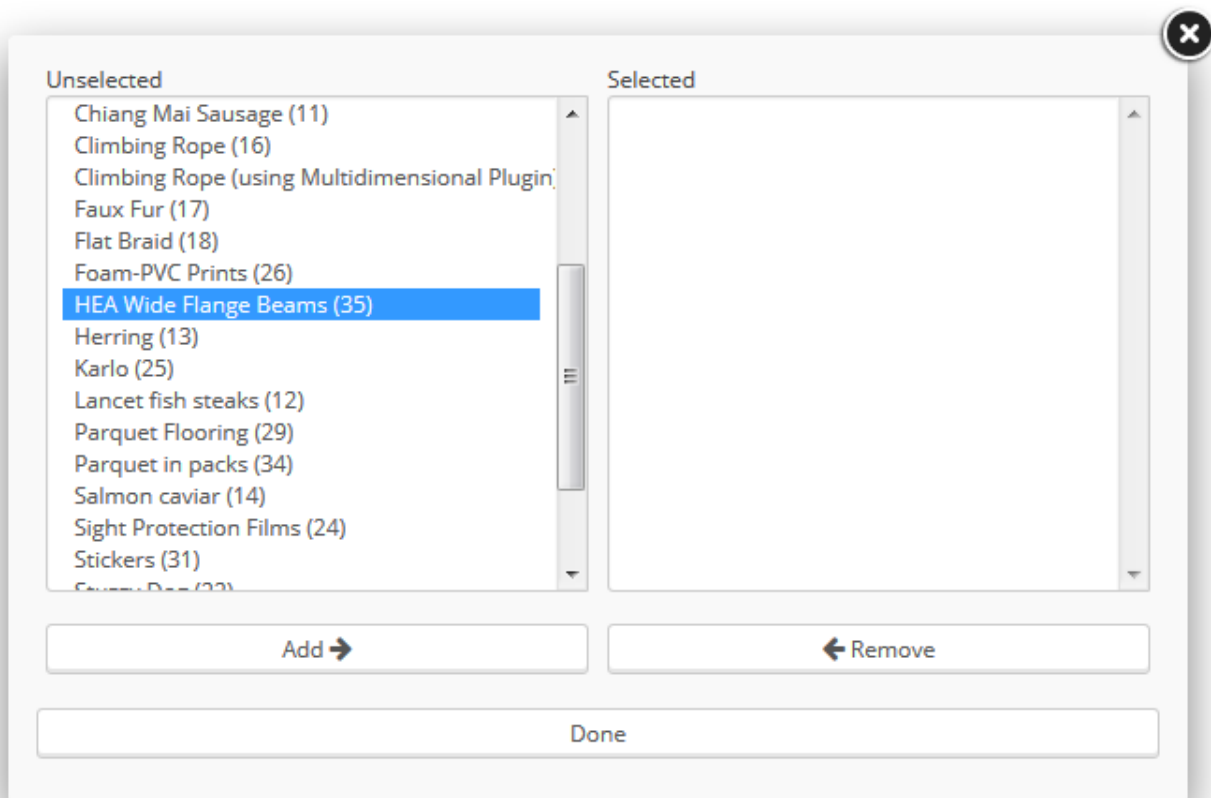
Save and stay

Save

Products selection condition

The product selection condition applied to any product specified in the condition. You select products by using the “Choose” button.

The list of available products appears in new window. Move the products from the left panel to the right one by selecting products and clicking on the "Add" button, and close the window by clicking on the “Done” or on the "X" at the top right.

**Templates selection condition**

The template selection condition applied to any product with the template in the selection assigned to the product. You manage templates and assign them to the products using the Product Properties Extension module.

Attributes selection condition

The attributes selection condition consists of one or many groups. Each group specifies the attributes combination. The group applied to any product when all specified attributes in the group selected by the customer. You do not need to specify all available product attributes. The product can have more attributes.

The attributes selection condition applied to any product when any one of the attribute group conditions met. You can create as many groups as you need.

Rule Actions

The “Rule Actions” section is a collection of all actions performed by the rule and specifies how the product total price is calculated. You can specify two different types of impacts that affect the total price. If you have enabled expressions for the rule, you can also create the expression. See the “Using expressions” section in this document.

RULE ACTIONS

In this section you specify how the product total price is calculated.

Fixed impact: None
The specified fixed amount added to the total price.

Quantity impact: None (dropdown menu open showing None, Increase, Decrease)
The product quantity entered by user multiplied by the specified value and the result added to the total price.

Template impact: ENABLED DISABLED

Attributes impact: ENABLED DISABLED
Attributes selected in the rule conditions.

▼ show less HEA Beam - HEA100 (44)

Fixed impact: None
The specified fixed amount added to the total price.

Quantity impact: Increase \$ 3.98
The product quantity entered by user multiplied by the specified value and the result added to the total price.

▶ edit HEA Beam - HEA120 (45)

▶ edit HEA Beam - HEA140 (46)

Cancel Save and stay Save

The **fixed impact** specifies the fixed amount added to (or subtracted from) the total price. This amount does not depend on the quantity.

The **quantity impact** depends on the quantity. The product quantity entered by user multiplied by the specified value and the result added to (or subtracted from) the total price.

Impact can be global and applied on the product or can depend on template or attribute. The “Template impact” action is available when the rule conditions define one or more templates in the "Template selection" section. The “Attributes impact” action is available when the rule conditions define one or more attribute groups in the "Attribute selection" section.

If your product has template that uses the multidimensional feature, the “Template impact” action will include the template related multidimensional attributes.

Template impact

ENABLED

DISABLED

Templates selected in the rule conditions.

▼ show less
#105 HEA Beam

Fixed impact

None ▼

The specified fixed amount added to the total price.

Quantity impact

None ▼

The product quantity entered by user multiplied by the specified value and the result added to the total price.

Template multidimensional attributes

length

Quantity impact

None ▼

The quantity entered by user for "length" multiplied by the specified value and by the product quantity. The result added to the total price.

Rule Text

The “Rule Text” section defines optional text used as explanation or price qualification. Different explanation can appear on product page, on the shopping-cart summary and order, and on the invoice. The text is translatable to any language.

RULE
CONDITIONS
ACTIONS
TEXT

RULE TEXT

? In this section you specify optional text used as explanation or price qualification.

You can use macros to substitute the following values:

- {T} - total price
- {Q} - quantity used in calculation
- {C} - calculated price added to the total price by all rules
- {c} - calculated price added to the total price by this rule
- {U} - unit price (total price divided by quantity)
- {W} - calculated product weight

Example: handling fee is {C}

See documentation for detailed explanation and examples.

Text displayed on the product page.

Text

Edit Insert View Format Table Tools

</> B I U S ≡ ≡ ≡ Paragraph ” A ≡ ≡ ≡ ≡ 🔗 🌟 📍 📄 🖼️

Text displayed on the shopping-cart summary and order.

Text

Edit Insert View Format Table Tools

</> B I U S ≡ ≡ ≡ Paragraph ” A ≡ ≡ ≡ ≡ 🔗 🌟 📍 📄 🖼️

Text displayed on the invoice.

Text

Edit Insert View Format Table Tools

</> B I U S ≡ ≡ ≡ Paragraph ” A ≡ ≡ ≡ ≡ 🔗 🌟 📍 📄 🖼️

✖
Cancel

💾
Save and stay

💾
Save


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Page 8 of 17

You can use macros in the text string to substitute the results of the price calculation. All price related macros formatted according to the currency currently used by the customer and include the currency sign. You do not need to specify the currency. For other values, you can use `formatWithCurrency` ^(since 2.4) built-in function to format a value with the currency sign. The following macros are available.

Macro	Description
{T}	The resulting product total price for the quantity specified by user.
{Q}	Quantity used in the calculation.
{C}	The calculated price added to the total price by all rules (uppercase C).
{c}	The calculated price added to the total price by the rule, where this text is defined (lowercase c).
{U}	Calculated unit price (the total price divided by quantity).
{W}	Calculated product weight (depends on quantity). ^(since 2.0)
<code>formatWithCurrency</code>	Built-in function to format a value with a currency sign. You do not need to use braces. ^(since 2.4) For example, <code>formatWithCurrency(Q)</code>

Multiple Rules behavior

You can create as many rules as you need. When several rules configured and applied to the same product the rules processed in the order defines by the rule position. The sequence usually does not matter for the price calculation. However, if several rules define texts the resulting text is a concatenation of all texts from all applied rules. In this case, the order of the rules is important. You can easily change the rule position by dragging the  anchor in the position column in the rules list and dropping the rule in the new position. See the picture “Using the Smart Price plugin” section in this document.

Rule Analysis

The “Rule Analysis” is a handy tool where you can verify rule conditions and analyze what products match the conditions.

RULES ANALYSIS

You can verify rule conditions and analyze what products match different rules conditions.

Just press the “Run analysis” button and review the results.

Rules analysis results [▶ show more details](#)

ID	Product	Template	Combinations	Summary
31	Stickers ✓ Stickers (with cutting) ✓ Stickers (no cutting)	#113 stickers	#87 Cutting - No cutting, Thickness - 0.4mm (49, 40) ✗ Stickers (with cutting), ✓ Stickers (no cutting)	✓ Stickers (no cutting)
			#88 Cutting - Yes, with cutting, Thickness - 0.4mm (50, 40) ✓ Stickers (with cutting), ✗ Stickers (no cutting)	✓ Stickers (with cutting)
			#89 Cutting - No cutting, Thickness - 0.5mm (49, 41) ✗ Stickers (with cutting), ✓ Stickers (no cutting)	✓ Stickers (no cutting)
			#90 Cutting - Yes, with cutting, Thickness - 0.5mm (50, 41) ✓ Stickers (with cutting), ✗ Stickers (no cutting)	✓ Stickers (with cutting)
			#91 Cutting - No cutting, Thickness - 0.8mm (49, 42) ✗ Stickers (with cutting), ✓ Stickers (no cutting)	✓ Stickers (no cutting)
			#92 Cutting - Yes, with cutting, Thickness - 0.8mm (50, 42) ✓ Stickers (with cutting), ✗ Stickers (no cutting)	✓ Stickers (with cutting)
33	Brochure A-5 colour	#115 brochures ✓ Brochure A-5 colour	#78 Brochure cover - 170 g matt art paper, Brochure paper - 100 g matt art paper (46, 43) ✓ Brochure A-5 colour,	✓ Brochure A-5 colour
			#79 Brochure cover - 220 g matt art paper, Brochure paper - 100 g matt art paper (47, 43) ✓ Brochure A-5 colour,	✓ Brochure A-5 colour
			#81 Brochure cover - 170 g matt art paper, Brochure paper - 120 g matt art paper (46, 44) ✓ Brochure A-5 colour,	✓ Brochure A-5 colour
			#82 Brochure cover - 220 g matt art paper, Brochure paper - 120 g matt art paper (47, 44) ✓ Brochure A-5 colour,	✓ Brochure A-5 colour
			#84 Brochure cover - 170 g matt art paper, Brochure paper - 170 g matt art paper (46, 45) ✓ Brochure A-5 colour,	✓ Brochure A-5 colour
#85 Brochure cover - 220 g matt art paper, Brochure paper - 170 g matt art paper (47, 45) ✓ Brochure A-5 colour,	✓ Brochure A-5 colour			


The results organized in the table. Rules that match the conditions indicated by green ✓ sign. Rules that do not match the conditions indicated by red ✗ sign. If you would like to see more detailed analysis results, you can press the “show more details” link.

The **ID** column specifies the product id used in the analysis.

The **Product** column shows the product name and list all the rules that have “Products selection” condition enabled and match the product.

The **Template** column shows the template name and list all the rules that have “Templates selection” condition enabled and match the product.

The **Attributes** column shows the product combinations together with the attribute names and list all the rules with “Attributes selection” condition enabled and have the “Attributes selection” groups match the product.

The **Summary** column is the most interesting column. The rules match all conditions and apply to the product indicated by green  sign.

Using expressions

The Smart Price plugin supports mathematical expressions defined by user. To use expressions you need to enable this option in the “Rule Information” section. When enabled, the “expression” input field appears in the “Rule Actions” section together with the impact fields.

RULE ACTIONS

? In this section you specify how the product total price is calculated.

Expressions
Use mathematical expressions to calculate price. The calculated result added to the total price.
Expressions support order of operation, parentheses, negation, built-in functions. You can define your own variables and functions.

Use build-in variables to substitute the following values:
Q - product quantity entered by user
W - calculated product weight

Example: $Q*0.1+1.25$
[See documentation for detailed explanation and examples.](#)

Fixed impact ▼
The specified fixed amount added to the total price.

Quantity impact ▼ € ▼
The product quantity entered by user multiplied by the specified value and the result added to the total price.

Expression Test

Template impact ENABLED DISABLED

Attributes impact ENABLED DISABLED

You define expressions to calculate price. The calculated result is added to the total price.

Expressions can use +, -, *, /, ^ mathematical operators. Expressions support order of operation, parentheses, negation, built-in functions. You can define your own variables and functions. When using variables and functions, separate your definitions by semicolons.

Here are several simple examples:

$2+2$
$-8(5/2)^2*(1-\text{sqrt}(4))-8$

You can create your own variables:

$a = e^{(\ln(\pi))}$

or functions:

$f(x,y) = x^2 + y^2 - 2x*y + 1$

and then use them:

$3*f(42,a)$

When using variables and functions, separate your definitions and calculations by semicolons:

$$a = e^{(\ln(\pi))}; f(x, y) = x^2 + y^2 - 2x*y + 1; 3*f(42, a)$$

You can use built-in variables that hold user input. For example, variable **Q** refers product quantity entered by user, and you can create expression using this variable:

$$Q*0.2+1.3$$

Note: always use dot as a decimal separator in numbers.

If your product uses template with the multidimensional feature, built-in variables **Q1**, **Q2** and **Q3** hold user input for each dimension in the order the dimensions defined in the template. For convenience, expression for each multidimensional attribute shows the name of the built-in variable that holds user input for this dimension. You can use the attribute related variables in any expression for products with this template. This works even if you do not specify templates in the rule conditions "Template selection" section.

$$Q1*Q2+0.6$$

Template impact

ENABLED
DISABLED

Templates selected in the rule conditions.

show less
#10 by length (area)

Product uses multidimensional feature (height x width)

Fixed impact

None

The specified fixed amount added to the total price.

Quantity impact

None

The product quantity entered by user multiplied by the specified value and the result added to the total price.

Expression

Test

Template multidimensional attributes

length

You can refer to the quantity entered by user for "length" as **Q1** in expressions and use **{Q1}** as a macro to build a text string.

Quantity impact

None

The quantity entered by user for "length" multiplied by the specified value and by the product quantity. The result added to the total price.

Expression

Test

width

You can refer to the quantity entered by user for "width" as **Q2** in expressions and use **{Q2}** as a macro to build a text string.

Quantity impact

None

The quantity entered by user for "width" multiplied by the specified value and by the product quantity. The result added to the total price.

Expression

Test

Testing expression

You can test expression by clicking the "Test" button. When testing expression, the constant value "1" assigned to all built-in variables, like variable **Q**, that hold user input.

See "**Appendix A**" for a full list of build-in operators, variables and functions.

User defined customizations

The Smart Price plugin supports customizations defined by user. You can write your own code in PHP and the plugin will call your code when needed. You can write code that calculates the product or total price, or your own explanation text. From your code, you can call PrestaShop internal methods, access the database or perform any other designed activities. This gives endless possibilities to adjust the price calculations to your needs.

In order to use the customizations you need to install free “Product Properties Extension customization” module. Please contact our friendly customer support team at support@psandmore.com for instructions. PS&More team can also write code for you and provides paid customization service for our customers.

Installation Instructions

The PS&More PrestaShop Product Properties Extension Smart Price plugin requires the Product Properties Extension module to be available, installed and properly configured.

To install the plugin module follow the documentation how to install the PrestaShop modules available at <http://doc.prestashop.com/display/PS16/Managing+Modules+and+Themes>.

The installation procedure automatically integrates the plugin with the PS&More PrestaShop Product Properties Extension module.

Appendix A

Using expressions

The PS&More Product Properties Extension Smart Price plugin expression engine supports the following built-in operators, variables and functions.

Table 1: Mathematical Operators

Name	Description
+	plus (addition)
-	minus (subtraction) or negation operator (opposite of number)
*	multiplication (product of two numbers)
/	division (quotient of two numbers)
^	power

Table 2: Variables

Name	Description
pi	mathematical constant π , the ratio of a circle's circumference to its diameter (approximately 3.14159)
e	mathematical constant e , base of the natural logarithm (approximately 2.71828)
Q	product quantity entered by user
W	calculated product weight (depends on quantity) <small>(since 2.0)</small>
Q1, Q2, etc.	You can use macros specified in the "ACTIONS" tab for multidimensional attributes for products using template with the multidimensional feature. For example, {Q1} can refer to a quantity entered by user for the first multidimensional attribute.

Table 3: Functions

Name	Description
built-in function without arguments, for example: pi()	
pi()	mathematical constant π
rand_float()	generate a random float
built-in function with one argument, for example: sqrt(16)	
sin, sinh, arcsin, asin, arcsinh, asinh cos, cosh, arccos, acos, arccosh, acosh tan, tanh, arctan, atan, arctanh, atanh	trigonometric circular and hyperbolic functions
sqrt	square root
abs	absolute value
ln	natural logarithm (alias log can be used)

Name	Description
exp	calculates the exponent of e
round	rounds a float to zero number of digits after the decimal point (see also round with two arguments)
floor	round fractions down
ceil	round fractions up
built-in function with two arguments, for example: rand_int(0, 10)	
round(value, precision)	rounds a float to specified precision (number of digits after the decimal point)
rand_int(min, max)	generate a random integer between min and max
mod(a, b)	modulus (remainder of a divided by b)
power(base, exp)	exponential expression (base raised to the power of exp)
built-in function with multiple arguments, for example: average(2, 4.8, 6.5, 12)	
max	maximum (find highest value)
min	minimum (find lowest value)
sum	summation (find sum of values)
average	find average
logical functions	
equals(a, b) <small>(since 2.6)</small>	returns 1 if a equals b; 0 otherwise
not(x) <small>(since 2.6)</small>	negates the argument returns 1 if the arguments evaluates to zero or 0 if the argument evaluates to any other value
if(x,arg1,arg2) <small>(since 2.6)</small>	logical “if” operator returns arg1 if x evaluates to true or any non-zero value or arg2 otherwise
choice(x,arg1,arg2,...) <small>(since 2.6)</small>	logical choice returns argN based on the value of x (starting from 1) for x=1 returns arg2, for x=2 returns arg2, etc. returns 0 if x<1 or there are not enough arguments

(since 2.0) since version 2.0

(since 2.4) since version 2.4

(since 2.6) since version 2.6