

# DROP-IN or CAP SYSTEM VERTICAL HOOK?

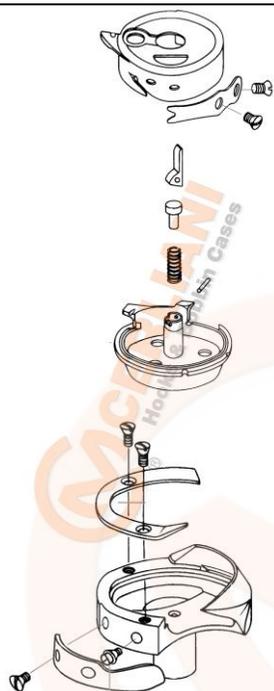
As known to sewing machine technicians and those who have to deal with in this field, two different systems for housing the bobbin onto vertical axis rotary hooks have been developed over the years: the DROP-IN system and the CAP system. On the opposite, for horizontal axis rotary hooks, the only working system is that with the traditional bobbin case and which, for example, is found on all flat bed, single-needle lockstitch sewing machines, including buttonhole, zig-zag and embroidery units.

The following explains in detail the comparison between the two systems for vertical axis rotary hooks:

## CAP SYSTEM

## DROP-IN SYSTEM

### STRUCTURE OF THE HOOK AND HOUSING OF THE BOBBIN



The hook consists of three main components: hook body, basket and cap.

The bobbin is housed in the cap, the bobbin thread is drawn under the adjustable tension spring mounted on the cap.



The hook consists only of two main components: hook body and basket. There is no cap.

The bobbin is directly put into the basket, the bobbin thread is drawn under the adjustable tension spring mounted on the basket.

### PROCEDURE FOR THE BOBBIN CHANGE WHEN THE THREAD IS USED UP

To change the bobbin the operator must:

- 1 - open the latch on the cap
- 2 - pull out from the basket the cap with the empty bobbin
- 3 - extract the empty bobbin from the cap
- 4 - eventually clean the cap and specially the tension spring dislodging any lint and fuzz
- 5 - insert the new bobbin into the cap and run the bobbin thread first through the thread guides on the cap and then beneath the tension spring
- 6 - --
- 7 - check the tension of the bobbin thread
- 8 - put the cap with the full bobbin into the basket

To change the bobbin the operator must:

- 1 - open the latch on the basket
- 2 - pull out the empty bobbin from the basket
- 3 - --
- 4 - eventually clean the basket and specially the tension spring dislodging any lint and fuzz
- 5 - insert the new bobbin into the basket and run the bobbin thread first through the thread guides and then beneath the tension spring
- 6 - close the latch on the basket
- 7 - check the tension of the bobbin thread
- 8 - --

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## CAP SYSTEM

## DROP-IN SYSTEM

### ADVANTAGES

- + the operator can more easily check and adjust the tension of the bobbin thread, as the cap can be hold in hand, rather than having to adjust the screw of the tension spring mounted directly on the basket in the sewing machine.
- + during the bobbin change, the operator, who is holding the cap, can more easily run the bobbin thread and better clean the tension spring from lint and fuzz, as well adjust and check much better the bobbin thread tension
- + the operator can keep ready more pre-adjusted caps depending on the different bobbin thread types that have to be used, so avoiding at each change of the bobbin thread size to find the right tensions, making some stitching tests first
- + if the cap becomes damaged or wear in thread's passageways (in particular with thick and abrasives threads), it is possible to replace only the cap, without having to replace the basket (which is longer and more expensive to replace) or even the whole hook
- + only the cap system allows some particular solutions of thread passages for special cases: for example, the use of the thread recovery spring required on two needles machines for performing corner stitching.

- + the bobbin change is faster
- + since there is not the cap, there is a component less to manage. The cap can get lost, damaged or stolen more easily, because anyone can remove it from the hook without the need for tools.



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CAP SYSTEM	DROP-IN SYSTEM
<b>PREFERRED AREAS OF APPLICATION</b>	
<ul style="list-style-type: none"> <li>- Fashion design studios</li> <li>- Couture Ateliers</li> <li>- Workshops for manufacturing prototypes and small series</li> <li>- Sewing on leather, in particular high quality purses and handbags</li> <li>- Corsetry</li> <li>- Special applications (e.g. machines with two needles for corners)</li> </ul> <p>In general, the CAP system is required where a high and utmost high quality stitching level is demanded, when it is frequently necessary to change kind of bobbin thread and for all the critical applications.</p>	<ul style="list-style-type: none"> <li>- Denim</li> <li>- Automotive interiors and seats</li> <li>- Medium and heavy threads</li> <li>- For applications that generate little down and do not require frequent cleaning beneath the tension spring.</li> </ul> <p>The DROP-IN system is generally preferred for large productions in well proven and very reliable applications, i.e. that do not present any particular quality problems, nor require frequent adjustments of the bobbin thread tension.</p>

It is important to point out that, from the technical and functional point of view regarding the real stitching issue, the two systems work equivalently well! The differences are relevant instead on the level of the process management, cleaning, adjustment and maintenance procedures.

As can be deduced from the preceding comparison, it cannot be said that one system is better rather than the other. There are users who prefer one system and users who prefer the other. Both have their own valid reasons, which are related to their technical application and the way they handle the job.

Both methods have strengths and weaknesses. It is just up to the end user to decide which one to choose between the two systems.  **MCERLIANI** Hooks & Bobbin Cases believes that the assignment of hook manufacturers is instead to propose both alternatives to the users.

In fact, only in very rare cases manufacturers of sewing machines can offer both systems for their machines: a DROP-IN hook and a CAP hook. In almost all cases the only available hook is the one chosen a priori by the manufacturer of the sewing machine.

Here are just a few examples of hooks where there was only the DROP-IN version and where  **MCERLIANI** Hooks & Bobbin Cases has developed a CAP version, which is obviously completely interchangeable:

SEWING MACHINE MANUFACTURER	SEWING MACHINE CLASS	DROP-IN HOOK		HOOK WITH CAP DESIGNED BY 
		Original Number	 Article	
Dürkopp Adler	467, 767	0467 150094	130.13.251	<b>130.13.294</b>
Dürkopp Adler	467, 767 modified for heavy material	0467 150094 for heavy material	130.13.386	<b>130.13.306</b>
Dürkopp Adler	867-190020, 868-290322, 887-160020, 888	0667 155604	130.13.350	<b>130.13.398</b>
Dürkopp Adler	867-190020, 868-290322, 868-390322	0868 150434	130.13.350DC10	<b>130.13.398DC10</b>
Dürkopp Adler	869-180020, 869-280132 ;869-280322	0869 150214 w/o Opener	130.13.375	<b>130.13.390</b>
Juki	LS-1342-7	214-35458	130.22.034R	<b>130.08.816R</b>
Juki	LU-2210, LU-2260	107-22551	130.13.251	<b>130.13.294</b>
Pfaff	2545, 2546, 2595, 2596	91-501 017-91	130.13.350	<b>130.13.398</b>
Sunstar	KM-1070BL-7	CHK-HA 107026	130.13.251	<b>130.13.294</b>
Sunstar	KM-1070BLX; KM-1070BLX-7; KM-1072BLX	CHK-HA001100	130.13.350	<b>130.13.398</b>

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Below some further hooks examples where there was available only the version with CAP and where  has developed the DROP-IN version, obviously always completely interchangeable:

SEWING MACHINE MANUFACTURER	SEWING MACHINE CLASS	HOOK WITH CAP		DROP-IN HOOK DESIGNED BY 
		Original Number	 Article	
Dürkopp Adler	167, 168, 267, 268	0167 001814	130.08.240	<b>130.22.000R</b>
Dürkopp Adler	268FA	0268 150174	130.08.658	<b>130.22.010R</b>
Dürkopp Adler	169, 269	0269 151814	130.08.662	<b>130.22.044R</b>
Juki	PLC-1660L, PLC-1760L	230-28053	130.08.240	<b>130.22.000R</b>
Pfaff	541 C/D, 542 C, 543 C, 544-944/01 C/D, 545-H3 C/D; 546-H3 C/D, 591 C/D old model, 593-944/01 C, 594-720/02, 594-944/01, 595-H3, 596-H3, 1240/1290 CD, 1244 D, 1245-706/47, 1291 C, 1293, 1294, 1295 C/D, 1296 C/D	91-018 340-91	130.08.100	<b>130.22.526</b>
Pfaff	594-900/01, 594-900/56, 1290-900 CD, 1291-900/.. C, 1293-900/.. C, 1294-900/.., 1294-944/01 C, 1295-900/.. C, 1296-900/.. C	91-018 285-91	130.08.697	<b>130.22.527</b>

To find out if in the catalog exists already the alternative to the hook of his interest, the end user can refer to the data sheet of the wanted article on [WWW.CERLIANI.IT](http://WWW.CERLIANI.IT), where he will find out whether under "Similar products" there are listed items whose description refers indeed to DROP-IN SYSTEM or CAP-SYSTEM.

Alternatively, do not hesitate to contact 's sales and marketing departments!

's philosophy is that it cannot exist a hook which is the best for all the applications, but that each application is entitled to its own best hook!

For this reason the  catalogue is so wide spreading, as the company tries to give the best solution to every problem and doesn't want to force the customer to adopt one standard hook, but prefers to tailor the hook to the customer's requirements! Flexibility has become one of the strengths of

 and allows them to provide the customers with the top-notch hooks that best suits their needs!

Also in the case of the DROP-IN or CAP system for vertical axis rotary hooks,  has designed and realized both versions in order to grant the customer the opportunity to choose the one that better suits his working conditions.