

# CleanCase





NC-Automation GmbH Ludwigstraße 86 D-87437 Kempten

# NC<sup>4</sup>Automation

# CleanStar

#### **Description of function**

The CleanStar enables your CNC-machine to selfclean, thus saving you in many cases an expensive mechanism for washing up machine base.

Cooling lubricant or oil is directed through the spindle as a medium for removing chips. The way this tool operates ensures that the chips does not swirl around randomly in the chip-forming space, but is instead washed away precisely into the chip conveyor.

The rotation and the resulting repeated impact with the medium result in an excellent cleaning effect for pallets, large components especially workpieces and machine interiors.

#### **Universally applicable**

The area to be cleaned can be adjusted by means of jets that can be opened individually. Adaptation to the quantity of fluid passing through the machine spindle is effected in the same way. The side-mounted CleanStar boasts a cleaning range far in excess of 360° and even cleans the spindle nose.

The CleanStar-control additionally allows to check the condition of the pump, filter and the whole supply line in a matter of seconds.

#### Advantages by utilization of this tool

- Faster than manual cleaning
- No effort required on the part of the user
- Protects the machine guideways
- Reduced cleaning and ancillary expenses
- Lifetime > 5 years
- No risk of injury from swarf and chips

#### **Technical data**

Working range	up to 360°
Pressure range	5 to 120 bar
Number of jets	13 - 15
Minimum rotational speed	5 rpm
Maximum rotational speed	100 rpm
Working medium	Fluids

## CleanJet

#### **Description of function**

The CleanJet gives your CNC-milling-machine the ability automatically to clean its components, mounting clamps and machining table using cooling lubricant or pressurised air.

A tool that is indispensable for the automation of machine tools. The spindle rotations and movements make this tool a flexible and effective aid in chip removal processes.

The use of cooling lubricant instead of pressurised air lowers operating costs and reduces noise levels.

#### Flexible range of uses

The modular construction of the CleanJet allows for a wide variety of tool combinations. All cleaning tools may additionally be mounted in 16 mm boreholes.

The cleaning tool may be adapted to specific conditions for optimal effectiveness using a rotating tool applied from different specific positions. The Clean-Jet has a rapid-motion cleaning action and may easily be integrated into automated processes by means of a short sub-program.

#### Advantages of this tool

- Faster than manual cleaning
- No effort required on the part of the operator
- No risk of injury from swarf and chips
- Reduced manufacturing costs
- Lifetime >5 years

#### **Technical data**

Working range with UD Pressure range Fluid Pressure range Gas Minimum rotational speed Maximum rotational speed Working medium up to 360° 5 to 120 bar 5 to 10 bar 30 rpm 400 rpm Fluids and pressurised air

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### Ordersystem

### **Automatic - Cleaning - Tools**

Order-Example for a filled CleanCase:

#### ARW-CS-UV, -CS-UH-50-C, -CJ30-UD40, -CJ100-UD45, -CJ180-UD50, -CC, -K

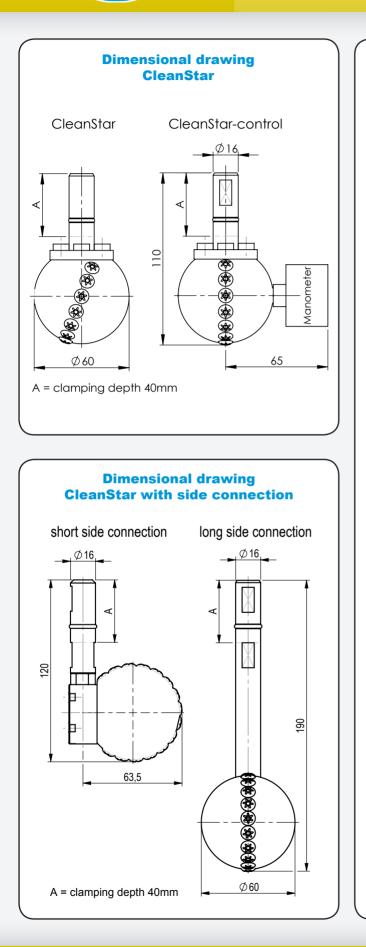
Detail	Description	Code	Example
Tool Type	Cleaning tool	ACT	ACT
Series	CleanStar with circular arranged nozzles	CS-UV	CS-UV
	CleanStar with nozzles arranged for H and V spindle	CS-HV	
	CleanStar-control, with circular nozzles and manometer	CS-UV-C	
	CleanStar-control, with H and V nozzles and manometer	CS-HV-C	
	CleanStar CS-UV but with short side connection	CS-UH-50	
	CleanStar CS-UV but with long side connection	CS-UH-120	
	CleanStar CS-UV with short side connection and manometer	CS-UH-50-C	CS-UH-50-C
	CleanStar CS-UV with long side connection and manometer	CS-UH-120-C	
Series	CleanJet tube with 30 mm throat and nozzle UD40	CJ30-UD40	CJ30-UD40
	CleanJet tube with 30 mm throat and nozzle UD45	CJ30-UD45	
	CleanJet tube with 30 mm throat and nozzle UD50	CJ30-UD50	
	CleanJet tube with 100 mm throat and nozzle UD40	CJ100-UD40	
	CleanJet tube with 100 mm throat and nozzle UD45	CJ100-UD45	CJ100-UD45
	CleanJet tube with 100 mm throat and nozzle UD50	CJ100-UD50	
	CleanJet tube with 180 mm throat and nozzle UD40	CJ180-UD40	
	CleanJet tube with 180 mm throat and nozzle UD45	CJ180-UD45	
	CleanJet tube with 180 mm throat and nozzle UD50	CJ180-UD50	CJ180-UD50
	CleanJet tube with 250 mm throat and nozzle UD40	CJ250-UD40	
	CleanJet tube with 250 mm throat and nozzle UD45	CJ250-UD45	
	CleanJet tube with 250 mm throat and nozzle UD50	CJ250-UD50	
	Additional CleanJets e.g. with ø8 mm available on request		
Accessories	CleanCase	CC	СС
	Tube extension 30	V30	
	Tube extension 100	V100	
	Tube extension coupling	К	К
	Ball joint for cleaning range extension	KG	
	Special nozzle UD55 - for large machines	UD55	
	Radial-nozzles RD40, RD45, RD50	RD40, -45, -50	

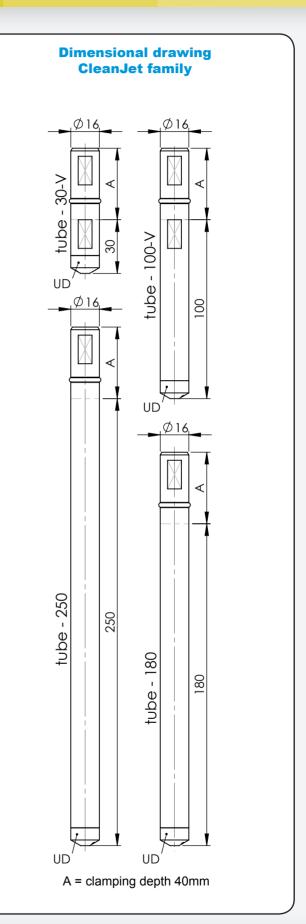
#### **Optional: The following tool holding fixtures are available for ACT:**

Tool fixtures	Tool fixtures Tool fixtures with 16 mm or 5/8" bore for insertion CleanStar or CleanJet	SK30, SK40, SK50	SK40
		BT30, BT40, BT50	
		HSK50, HSK63, HSK100	
		KM40 - KM80	
		Capto C5, C6	
		VDI 16 - VDI50	

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