

PRODUCT OVERVIEW



A full range...

EYEFEEDER SYSTEM:

The system consists of an EYEFEEDER®, a vision system and a robot. Products are fed from a lift conveyor or a bulk feeder on the belt / surface of the EYEFEEDER®. The shaking system of the EYEFEEDER spreads or turns the products in the detection range of the vision system . The vision system detects well positioned products and passes the coordinates of those to the robot that picks the products and places when necessary with high precision . If there are not enough well-positioned products the vision system gives the EYEFEEDER® the command to shake / spread . If there are no or few products , the vision system gives the bulk feeder to supply new products.

EYEFEEDER®:

The EYEFEEDER® is a patented flexible feeder based conveyor belt with a shake system both driven by servomotors. Belt speed, shake-intensity and shake-patterns are easy to set on the DENSO Teaching Pendant which allows a quick product change. The software and hardware (controller / drivers / servomotors) are fully integrated in the DENSO robot controller which makes additional drivers , PLC's or IPC's unnecessary. The EYEFEEDER® is available in three sizes (800 / 1000 / 1200) and can be equipped with different belt types or with back-light to facilitate easier detection.



MINI EYEFEEDER®:

The MINI EYEFEEDER® is a patented feeder with a pneumatic shaking system . The software of the MINI EYEFEEDER® is integrated in the DENSO robot controller and communication take place via parallel I/O's. Optimal spreading of the products can be obtained by selecting different shaking patterns on the DENSO Teaching Pendant. Its small dimensions make compact applications setup possible. The MINI EYEFEEDER® comes standard with backlight.



VISION SYSTEM:

Depending on the kind of product to be handled, any kind of vision system can be used. It can be connected to the DENSO robot controller via Ethernet. The DENSO robot controller has libraries (providers) of different vision system manufacturers standard available. This allows an easy communication setup via TCP/IP and commands are mutually defined in a protocol which reduced programming time significantly. The vision system can be displayed via the DENSO Teaching Pendant and makes additional HMI's unnecessary.



DENSO DENSO

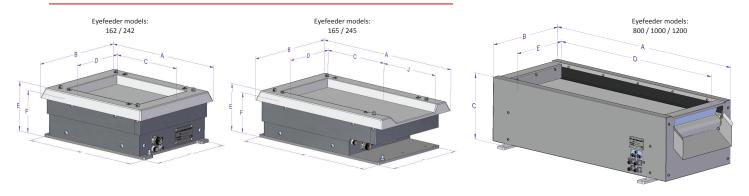
ROBOT:

DENSO offers a wide range of 4- and 6-axis robots with payloads from 3 to 20kg and reaches from 350 to 1300mm . The full range can be used in combination with the EYEFEEDER®. Thus simple positioning with a 4-axis (SCARA) robot is possible, or direct assembly with a 6-axis robot . The powerful PLC function in the DENSO RC8 robot controller allows direct operation of the EYEFEEDER®, vision system or other components via its Teaching Pendant. Additional HMI's, PLC's or controllers are unnecessary.



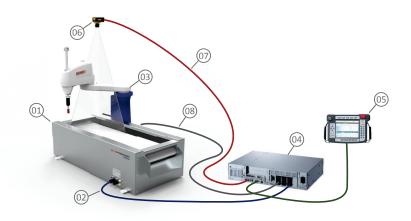
... of flexible feeders.

SPECIFICATIONS:



Model		Eyefeeder 162	Eyefeeder 165	Eyefeeder 242	Eyefeeder 245	Eyefeeder 800	Eyefeeder 1000	Eyefeeder 1200	
	Α	325	463	405	544	800	1000	1200	
	В	270	270	330	330	327	417	507	
	С	160	160	240	240	295	295	295	
	D	120	120	180	180	697	897	1097	
Dimensions (mm)	E	155	155	155	155	198	295	385	
	F	133	133	133	133	-	-	-	
	Н	325	433	405	513	-	-	-	
	1	234	234	294	294	-	-	-	
	J	-	228	-	220	-	-	-	
Drive	Drive		Pneumatics				Servomotors		
Air pressure (bar)		1 ~ 3 bar				max. 6 bar (purge valve)			
Communication		Parallel I/O's				Servomotors integrated in DENSO RC8 controller			
Degree of Protection	1				IP40				
Backlight		Yes				Optional			
Weight		7,6 kg	8,6 kg	10,5 kg	11,5 kg	20 kg	25 kg	30 kg	
IR-backlight / Pick zone (3:4)		120 x 160 mm	120 x 160 mm	240 x 180 mm	240 x 180 mm	± 200 x 280 mm	± 300 x 400 mm	± 400 x 533 mm	
Product dim. (min. / max.)		0,5 - 15 mm	0,5 - 15 mm	0,5 - 25 mm	0,5 - 25 mm	3 - 150 mm	3 - 200 mm	3 - 250 mm	
Max. product weight		~ 15 gr				~ 300 gr	~ 300 gr	~ 300 gr	

CONFIGURATION:



Pos.	Qty.	Description	Lenght	Remark
1	1	EYEFEEDER / MINI EYEFEEDER		-
2 1		EYEFEEDER Motor / Encodercable	2,3,5,10 m	Only with Eyefeeder 800/1000/1200
		EYEFEEDER I/O cable	8 m	Only with Mini Eyefeeder 162 / 165 / 242 / 245
3	1	DENSO robot		4- or 6-axis
4	1	DENSO RC8 robot controller		Is included with DENSO robot
5 1	1	DENSO Teaching Pendant with cable	4,8,12 m	Displays vision system
	1	DENSO Mini Pendant with cable	4,8,12 m	No display vision system possible
6	1	Vision camera		-
7	1	Ethernet cable vision camera	5 , 10 m	-
8	1	DENSO Motor & Encoder cable	2,4,6,12 m	-

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FEATURES:

• Flexible separation:

Programmable system allowing multiple products on one system, consisting of EYEFEEDER, a robot and a vision system. One system replaces multiple bowl and linear vibration feeders.

• Compact:

The thoughtful design allows compact applications. No return system or conveyor tracking so easy to integrate. The MINI EYEFEEDER® is available in a 162/165 and 242/245 version, and the EYEFEEDER in a 800, 1000 and 1200mm version.

• Smart:

Makes full use of the intelligence of the robot and is widely applicable: assembly, handling, machine loading, packaging, quality control.

Simplicity:

Software and hardware are fully integrated in DENSO robot controller. Belt speed and shake patterns can easily be adjusted through DENSO Teaching Pendant. No additional HMI's, PLC's or controllers required.

• Short cycletimes:

Products are quickly fetched in detection area of camera by high belt speed and continuous supply from bulk feeder which makes very fast cycle times possible.

Various product handling:

Product size: 0,5 to 250mm (diagonal), product weight from 0,01 to 300g. Handling of not solid products possible.

CONTACT:



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