

## Sickle Series Fan Blades

•Low Noise •Low Speed •High Efficiency



Ideal for Virtually Any Air-Moving Application



## The Answer in Air-Moving Applications

•Engineered Solutions •Perfect Pricing •Unsurpassed Turnaround

### The Challenge

*The European Parliament and Council adopted Directive 2000/14/EC on environmental noise on May 8, 2000, setting stringent guidelines for sound-power limits on 22 of the 57 types of equipment used outdoors. The Directive outlined provisions for noise mapping, action plans for reduction, and set new noise emission standards worldwide for any industry working in the global market. Compliance is mandatory, and Multi-Wing may have your solution.*

### Solution 1

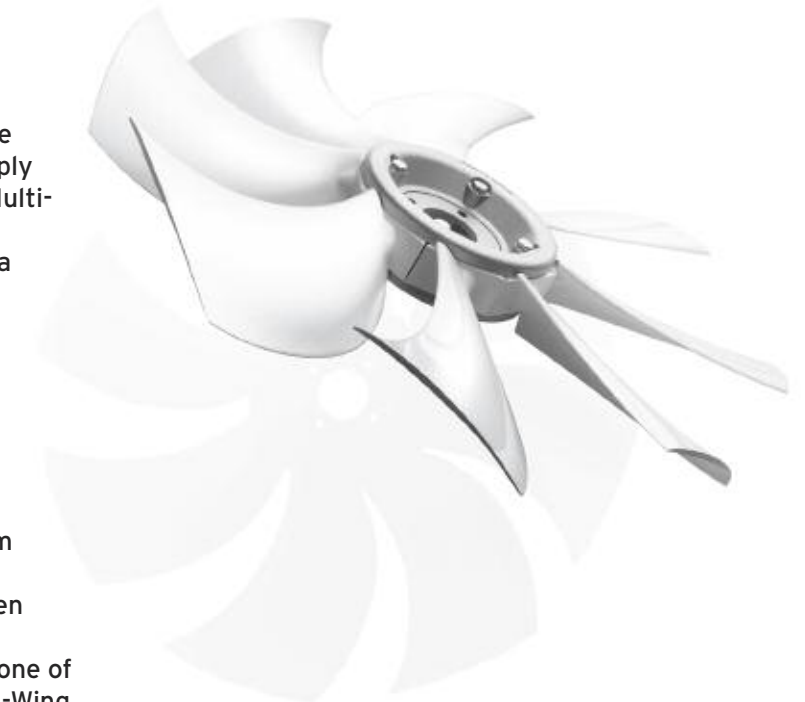
When a major Midwest manufacturer of construction equipment needed to reduce the engine noise on a large crane to comply with Directive 2000/14/EC, they called Multi-Wing America for help. Our engineers analyzed their situation and customized a 7-bladed 2Z Sickle Series Fan for their application. The Multi-Wing solution allowed them to reduce their operating speed from 2,750 RPM to 2,400 RPM while cutting their noise in half (3 dBA).

### Solution 2

Multi-Wing has designed countless custom impeller applications for stationary and portable compressor manufacturers. When one of the country's largest called on our engineering team to reduce the noise on one of their popular portable compressors, Multi-Wing answered. Our 9-bladed 2Z Sickle Series Fan reduced their compressor noise by an amazing 7 dBA!

### Solution 3

Few outdoor locations are more sensitive to noise than a golf course, and one of the leading ventilation companies in the nation asked our engineers to make their equipment "quiet please." Their fans are used to dry out golf course greens, and they needed a quiet, efficient alternative. The Multi-Wing team designed a custom solution - a 3-bladed 1W Sickle Series Fan - that exceeded their expectations and cut their fan noise by 4 dBA!



P.O. Box 425 • 15030 Berkshire Industrial Parkway • Burton, Ohio 44021  
Toll Free: 800-311-8465 • Phone: 440-834-9400 • Fax: 440-834-0449  
Web Site: [www.multi-wing.net](http://www.multi-wing.net) • E-Mail: [applications@multi-wing.net](mailto:applications@multi-wing.net)

ISO 9001-2000



# The Sickle Blade Profiles

•W Series •Z Series •H Series

## Features

- Low noise emission
- Maintain performance at lower speeds
- 11-77.8" customized diameters
- High solidity due to a large chord length

## Applications

- Evaporative Cooling
- Radiator/Heat Exchanger
- Engine Cooling
- Ventilation
- Refrigeration

Multi-Wing's sickle series blades are the answer for virtually any air-moving application.

The blades' large chord length and thin trailing edge combine to generate greater pressure at slower speeds while significantly reducing noise levels. In fact, Multi-Wing America engineers have offered fan impeller solutions for applications that have reduced noise by 3, 4, even 7 dBA! Imagine cutting your noise levels in half while generating more pressure at slower speeds. And with companies at all levels working to comply with the European Union's directive on noise emission, our sickle-blade impellers can help you compete here and around the world. Let our engineers build a custom sickle-blade solution for your air-moving application.

Pitch	Adjustable in 1° increments							
	15°	20°	25°	30°	35°	40°	45°	50°
1W	1.02	1.14	1.26	1.38	1.54	1.61	1.73	1.85
2W	1.50	1.69	1.85	2.05	2.21	2.32	2.48	2.56
3W	N/A	2.24	2.56	2.84	3.11	3.35	3.54	3.74

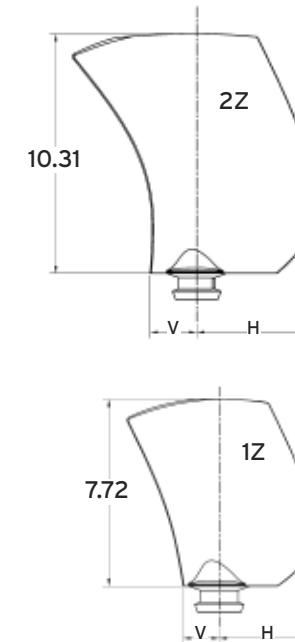
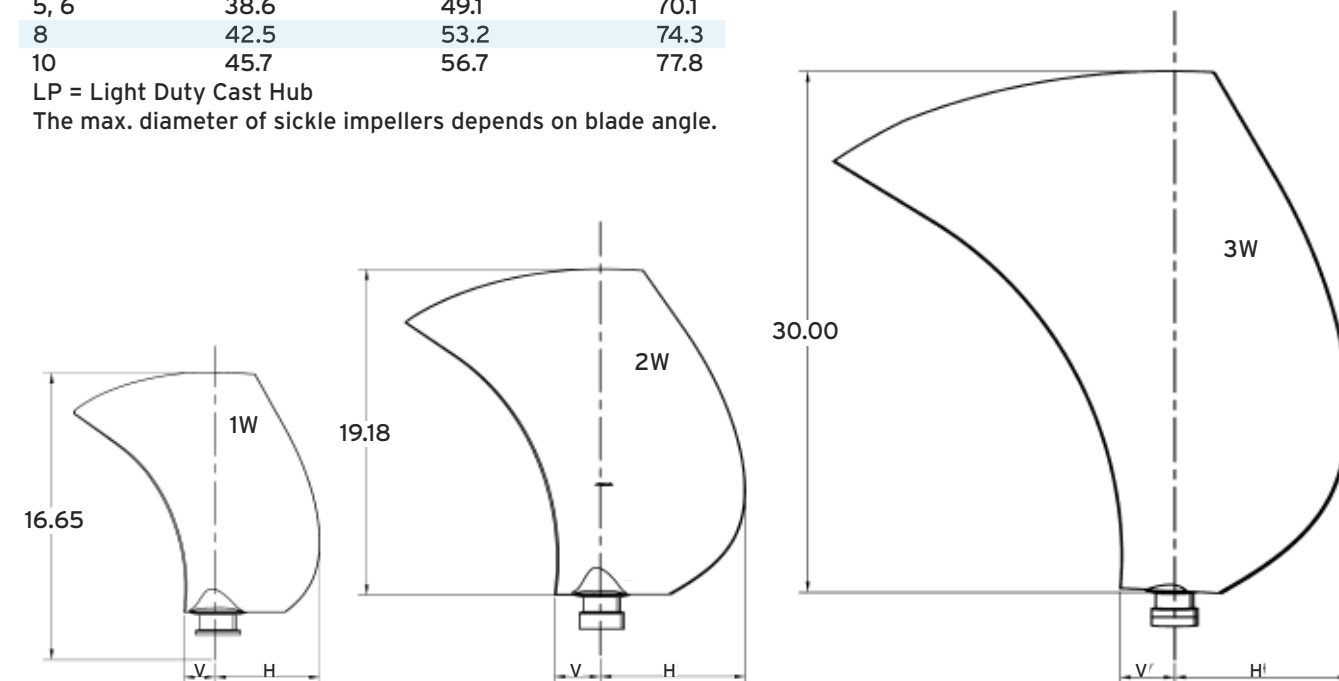
The (V) dimension is measured at the base of the blade.

Pitch	Adjustable in 1° increments							
	15°	20°	25°	30°	35°	40°	45°	50°
1W	1.69	1.97	2.28	2.64	2.91	3.35	3.74	4.09
2W	3.15	3.47	3.98	4.57	5.12	5.67	6.18	6.61
3W	N/A	4.53	5.55	6.50	7.44	8.27	9.09	9.80

No. of hub pos.	Maximum Blade Diameters		
	1W	2W	3W
3LP, 4LP, 5LP	35.7	N/A	N/A
5, 6	38.6	49.1	70.1
8	42.5	53.2	74.3
10	45.7	56.7	77.8

LP = Light Duty Cast Hub  
The max. diameter of sickle impellers depends on blade angle.

# THE W SERIES



No. of hub pos.	Maximum Blade Diameters	
	1Z	2Z
5	21.0	26.0
7	22.6	27.6
8	25.5	30.5
9	23.1	28.1
12	26.0	31.1
16	29.6	34.5

The max. diameter of sickle impellers depends on the blade angle.

# THE Z SERIES

Pitch	Adjustable in 1° increments							
	20°	25°	30°	32.5°	35°	37.5°	40°	45°
1Z	0.98	1.06	1.18	1.22	1.26	1.30	1.34	1.38
2Z	1.30	1.42	1.54	1.58	1.65	1.69	1.73	1.81

The (V) dimension is measured at the base of the blade.

Pitch	Adjustable in 1° increments							
	20°	25°	30°	32.5°	35°	37.5°	40°	45°
1Z	1.61	1.81	2.01	2.13	2.24	2.36	2.48	2.72
2Z	2.05	2.28	2.52	2.68	2.84	2.99	3.15	3.46

# THE H SERIES

No. of hub pos.	Maximum Blade Diameters
	1H
6	16.5
8	17.9
10	19.4
12	20.7
14	22.1

The max. diameter of sickle impellers depends on the blade angle.

Pitch	Adjustable in 1° increments					
	25°	30°	35°	40°	45°	50°
1H	0.55	0.67	0.75	0.79	0.83	0.91

The (V) dimension is measured at the base of the blade.

Pitch	Adjustable in 1° increments					
	25°	30°	35°	40°	45°	50°
1H	1.34	1.54	1.73	1.85	1.97	2.09

